A Botanical Arrangement

OF ALL THE

VEGETABLES

Naturally growing in GREAT-BRITAIN.

VOL II.
A Botanical Arrangement of all the Vegetables Naturally growing in Great Britain.
With Descriptions of the Genera and Species, According to the System of the celebrated Linnaeus.
Being an Attempt to render them familiar to those who are unacquainted with the Learned Languages.

Under each Species are added,
The most remarkable Varieties, the Natural Places of Growth, the Duration, the Time of Flowering, the Peculiarities of Structure, the common English Names; the Names of Gerard, Parkinson, Ray and Baubine.
The Uses as Medicines, or as Poisons; as Food for Men, for Brutes, and for Insects.
With their Applications in Oeconomy and in the Arts.

With an Easy Introduction to the Study of Botany.
Shewing The Method of Investigating Plants, and Directions how to Dry and Preserve Specimens.
The whole Illustrated by Copper Plates and a copious Glossary.

By William Withering, M.D.

Ornare res ipsa negat, contenta doceri.

In Two Volumes.

MDCCLXXVI.
JAN 1 1906

[Signature]
CLASS XV.

FOUR CHIVES LONGER.

In the flowers of this Class there are six Chives; four of them long, and two of them short.

The Orders are two, and are distinguished by the figure of the seed-vessel, which in the first Order is a Pouch; that is, a roundish flat seed-vessel furnished with a Shaft, which is frequently as long as the seed-vessel itself. In the second Order, the seed-vessel is a Pod; that is, a very long seed-vessel without any remarkable shaft.

The plants of this Class admit of the following Natural Character.
FOUR CHIVES LONGER.

NATURAL CHARACTER.

EMP. Cup oblong; of four leaves. Leaves oblong egg-shaped; concave; blunt; approaching: flanking in opposite pairs; hunched at the base.

the Honey cup is formed within the empalement, and often occasions it to be hunched at the base.

BLOSS. Cross-shaped. Petals four; equal. Claws flattish awl-shaped; upright; generally longer than the Cup. Border flat. Limbs broadest towards the end; blunt; hardly touching one another at the edges.

The petals are fixed in the same circle with the chives.

CHIVES. Threads six; awl-shaped; upright; the two opposite ones as long as the cup: the other four somewhat longer, but shorter than the blossom.

Tips rather oblong; taper; thickest at the base; upright, but with the top bent outwards.

Honey cups; glands, which differ in different genera. They grow near the chives, and are mostly fixed at the base of the shorter chives, which are generally bent outwards to prevent the compression of the glands, and therefore appear shorter than the others.

POINT. Seedbud superior; daily growing taller. Shaft the length of the longest chives; but in some genera there is no shaft. Summit blunt.

S. VESS. Pod with two valves; often with two cells; opening from the base to the point. Partition projecting beyond the points of the valves and occupying the place of the shaft.

SEEDS. Roundish; inclining downwards; lodged in the partition lengthways and alternately. Receptacle narrow, surrounding the partition, and lodged in the seams of the seed-vessel.

OBS. This Class is truly natural, and hath been considered as such by all the best Systematic Writers; nevertheles they have thrown into it one or more Genera that do not naturally belong to it; but this we have avoided. It contains the Siliquce plants of Ray, and the Cross-shaped flowers of Tournefort.

The plants of this Class are universally called Antiscorbutic; their juice is acid and watery, they lose most of their virtues by drying. None of them are poisons. In most situations and wet seafoss, they are most acrimonious. Thus the Horle-radish Scruvy-grass growing near water is so very acid that it can hardly be used; and Turnep Cabbage, whose root in a dry sandy soil is so succulent and sweet, in wet stiff lands is hard and acrimonious.

C I A S S
CLASS XV.

FOUR CHIVES LONGER.

Order I. Seed-vessel a Pouch.

* Pouch entire, not notched at the end.

162 Whitlowgrass. The Pouch with nearly flat valves. Shaft none.

163 Awlwort. - The Pouch with half egg-shaped valves. Shaft shorter than the Pouch.

164 Camline. - The Pouch with concave valves. Shaft permanent.

165 Cresset. - The Pouch with valves only half the length of the partition.

** Pouch notched at the end.

166 Rockwort. - The two outermost petals the largest.

167 Scurvygrass. The Pouch heart-shaped. Values blunt; hunched.

168 Dittander. - The Pouch heart-shaped; Values sharply keel-shaped.

169 Mithridate. The Pouch inversely heart-shaped. Values in some species bordered; keel-shaped.

B 9 Order
FOUR CHIVES LONGER.

Order II. Seed-vessel a Pod.

* Cup closed; its leaves approaching lengthways.

270 Charlock.  Pod jointed.
271 Wormseed.  Pod four-edged.
272 Wallflower. Pod marked by a small gland on each side the seed-bud.
273 Damewort.  Glands situated within the shorter chives. Petals oblique.
274 Turkeypod. Glands four, within the leaves of the cup. Summit simple.
275 Cabbage. Glands two within the shorter chives, and two on the outside the longer chives.
276 Towerfr. Petals upright.
277 Cowalwort. Pod with valves which roll back when open.

** Cup open; its leaves standing wide at the top.

278 Colewort. Pod deciduous; globular; like a dry berry. The four long chives forked at the top.
279 Woad. Pod deciduous; spear-shaped; containing one seed.
280 Rocket. Pod deciduous; circular; covered with sharp points.

† Navet Cabbage.

262 Whitlow.
SEED VESSEL A POUCH.

262 WHITLOWGRASS. 800 Draba.

EMP. Cup. with four leaves. Leaves egg-shaped; concave: open; somewhat upright; deciduous.

BLOSS. Four petals, forming a cross. Petals oblong; rather expanding. Claws very small.

CHIVES. Threads fix; as long as the cup. The four opposite chives a little longer than the other two; upright but expanding. Tips simple.

POINT. Seed bud egg-shaped. Shaft very short. Summit a flat knob.

S.VESS. Pouch oblong oval; compressed; entire; without a shaft. Cells two; Partition parallel to the valves. Values flat, but a little concave.

SEEDS. Many, small, roundish.

Obs. In the first species the petals are divided down to the claws. In the second and third species the petals are only notched at the end.

The essential character of this genus consists in the Pouch being an oblong oval; compressed; and without a shaft.

WHITLOWGRASS. The flowers naked; the leaves a little Early serrated—Blossoms white. At night the flowers hang down. It is very difficult to find fine chives when the flower is fully opened, for they drop off when the Pouch begins to enlarge.


Paronychia vulgaris alpina folio. Park. 556.

Burra pastoris minor, loculo oblongo. Bauh. piq. 168.

Common Whitlow-grafts.

On old walls and dry banks. A. March—April.

This is one of the earliest flowering plants we have. It is good to eat as a fallow.

Goats, Sheep and Horses eat it; Cows are not fond of it; Saine refuse it.

WHITLOWGRASS. The stem branched. The leaves heart-shaped; toothed; embracing the stem—Fruit-flalks horizontal.

Blossoms white. Seeds yellow.


Thalip veronicae folio. Park. 843.

ries of rocks and high pastures. A. May.

Linnaeus makes this a variety of the Draba nemorosa which differs in having yellow blossoms and egg-shaped leaves, but being grown in a garden the blossoms became white and the whole plant assumed the form of this.
FOUR CHIVES LONGER.

Whitlowgrass. The stem leaves numerous; covered with a whitish down. Pouches oblong, oblique, almost fitting.—*Flowers in a small terminating bunch; white.*

*Lunaria contorta major.* *Ray's Syn. 291.*

1. Stem creeping.

Paronychiae similis sed major, perennis alpina repens. *Ray's Syn. 298.*

Fissures of rocks and high moist places. B. May.

Goats eat it; Cows are not fond of it.

263 A W L W O R T. 799 Subularia.

Empal. *Cup* four leaves. *Leaves* egg-shaped; concave, a little expanding, deciduous.

Bloss. Petals four; forming a cross. *Petals* inversely egg-shaped; entire; rather larger than the cup.


S.Vess. *Pouch* inversely egg-shaped; somewhat compressed; entire; furnished with a very short *shaft.*

Cells two; *Partition* placed in a contrary direction to the valves, which are egg-shaped and concave.

Seeds. Several; very minute; roundish.

Water Aquatica

A W L W O R T. As there is only one species known. Linnaeus gives no description of it—*Leaves semi-cylindrical; full of pith.*

Blossoms *cubite.* *Seeds* yellow.


At the bottom of large lakes. A.

264 C A M L I N E.
264 CAMLINE. 796 Myagrum.

Emp. Cup four leaves. Leaves oblong egg-shaped; concave; opening: coloured; deciduous.
Chives. Threads six; as long as the cup. The four opposite threads rather longer than the other two.

Tips simple.

Point. Seedbud egg-shaped. Shaft thread-shaped; as long as the cup. Summit blunt.

S.Vess. Pouch inversely egg-shaped, somewhat compressed; entire; rigid; terminated at the point by a rigid conical shaft. Valves two; some of the cells often empty.

Seeds. Roundish.

CAMLINE. The pouches on fruit-flanks; inversely egg-shaped Golden ed; containing many seeds—Blossoms pale yellow or white. Seeds Sativum yellow.


Gold of pleasure.

In fields amongst flax. A. June.

It is cultivated in Germany for the sake of the expressed oil of the seeds, which the inhabitants use for Medicinal, culinary and Oeconomical purposes—the seeds are a favourite food with Geese.—Horses, Cows, Goats and Sheep eat it.

265 CRESSET. 797 Vella.

Emp. Cup four leaves; upright; cylindrical. Leaves strap-shaped; blunt; deciduous.
Bloss. Four petals; forming a cross. Petals inversely egg-shaped; expanding. Claws as long as the cup.
Chives. Threads six; as long as the cup. The four opposite threads a little longer than the other two.

Tips simple.

S.Vess. Pouch globular; entire; cells two. Partition egg-shaped, upright; twice as large as the pouch and extending beyond it.

Seeds. Several; roundish.
FOUR CHIVES LONGER.

CRESSET. The leaves with winged clefs. The pouches pendent—\textit{Blossoms pale yellow}.
\textit{Nafturtium sylvetria erucæ affine. Baub. pin. 105. Ray's Syn. 304.}
\textit{Nafturtium sylvetria valentinum Clausio. Park. 830.}
\textit{Erucæ nafturtio cognata tenuifolia. Gerard. 247.}
Crese Rocket.

266 ROCKWORT. 804 Iberis.

\textit{Empal. Cup} four leaves. \textit{Leaves} inversely egg-shaped; concave; expanding; small; equal; deciduous.
\textit{Bloss.} Four unequal petals; inversely egg-shaped; blunt; expanding. \textit{Claws} oblong; upright. The two \textit{outer petals} very large; equal. The two \textit{inner petals} small; reflected.
\textit{Chives. Threads} six; awl-shaped; upright. Two lateral threads shortest. \textit{Tips} roundish.
\textit{S.Vess. Pouch} upright; nearly circular; compressed; notched at the end; encompassed by a sharp border. \textit{Cells} two. \textit{Partition} spear-shaped. \textit{Values} boat-shaped; keeled; compressed.
\textit{Seeds.} Several; somewhat egg-shaped.

ROCKWORT. The stem naked; simple; herbaceous. The leaves indented—\textit{Blossoms white; terminating.}
\textit{Nafturtium petraeum, folii burœ pastoris.} \textit{Baub. pin.} 104.
\textit{Burœ pastoris minor folii incisis.} \textit{Baub. pin.} 108.
\textit{Burœ pastoris minor.} Park. 866.
Rock Crese.
Gravelly soil. A. May.

26; SCURVY-
SEED VESSEL A POUCH.

267 SCURVYGRASS. 803 Cochlearia.

EMP. Cup four leaves. Leaves egg-shaped; concave; opening; deciduous.

BROSS. Four petals, forming a cross. Petals inversely egg-shaped; expanding; twice as large as the cup. Claw narrow; shorter than the cup; open.

CHIVES. Threads six; awl-shaped; as long as the cup. The two opposite chives shorter than the others. Tips blunt; compressed.

POINT. Seed bud heart-shaped. Shaft simple; very short; permanent. Summit blunt.

S. VESS. Pouch heart-shaped; bunched; a little compressed; slightly notched at the end; furnished with a shaft; rough; blunt at the edge. Cells two.

SEEDS. About four in each cell.


Cochlearia folio subrotundo. Bauh. syn. 110.

1. There is a variety with smaller leaves. Park. 286.


Notwithstanding this is a native of the sea-coast, it is cultivated in gardens without any sensible alteration of its properties. It possesses a considerable degree of acrimony, and this acrimony seems to reside in a very subtil essentiel oil. Its effects as an astringent are universally known; and it is a powerful remedy in the putridous asthma, and in what Sydenham calls the scorbutic rheumatism. A distilled water and a conserve are prepared from the leaves, and its juice is prescribed along with that of oranges by the name of antiscorbutic juices. It may be eaten as salad.—Cows eat it; Horses, Goats and Sheep refuse it.

SCURVYGRASS. The leaves halberd-shaped, and angular Danish Blossoms white.

Cochlearia marina folio angulofo parvo. Ray's Syn. 303.

In the island of Walney in Lancashire. B. May.

The following varieties are the product of cultivation:

Small and upright.

Stems creeping.

Blossoms tinged with red.

Cows eat it; Horses, Goats and Sheep refuse it.

SCURVY-
FOUR CHIVES LONGER.

English

SCURVYGRASS. The leaves betwixt egg and spear-shap-
ed; indented—Blossoms white.
Common Sea Scurvygras.
Sea coast. B. May.

Greenland

SCURVYGRASS, with kidney-shaped, entire, fleshy leaves
—Root leaves very small; fleshy; very convex on the under surface;
without veins; very entire; on long leafstalks. Blossoms white.
Mountains in Wales. B. April—May.
All the above species partake more or less of the properties of
the garden Scurvygrass.

Swines

SCURVYGRASS. The leaves with winged clefts. Stem
depressed—Blossoms white; at the base of the leaves.
Ambrosia campelstris repens. *Bauh. pin. 198.
Swines cressets.
High roads. A. June—August.
This plant is acid, with something of the savour of Nasturtium.

Horse-radish

SCURVYGRASS. The root leaves spear-shaped and sco-
loped. The stem leaves jagged—Blossoms white; terminating.
301. *Bauh. pin. 98.
In ditches and amongst rubbish. P. May.
The scraped root is in common use at our tables as a condiment
for fish, roasted beef, &c, and it is used for many other culinary
purposes. An infusion of it in cold milk, makes one of the
 safest and best cosmetics. In paralytic and dropsical cases it is
an useful stimulant and diuretic. A strong infusion of it excites
vomiting. A distilled water is prepared from it.—Horses, Cows,
Goats, Sheep and Swine relish it.
The several species of Scurvygrass nourish the great white
SEED VESSEL A POUCH.

268 DITTANDER. 801 Lepidium.

LEAF. Cup four leaves. Leaves egg-shaped; concave; deciduous.

BLOSS. Four petals, forming a cros. Petals inversely egg-shaped; twice as long as the cup. Claws narrow.

CHIVES. Threads fix; awl-shaped; as long as the cup. The two opposite threads shorter than the others. Tips simple.

POINT. Seedbud egg-shaped. Shaft simple; as long as the chives. Summit blunt.

S. VASS. Pouch somewhat heart-shaped; slightly notched at the end; compressed; sharp at the edge. Cells two. Partition spear-shaped. Values boat-shaped; keeled.

SEEDS. Several; egg-shaped; tapering; narrow at the base; inclining downwards.

One. The third species hath only two chives, and no petals.

DITTANDER. The leaves winged; very entire. Petals Mountain imperfect at the margin; smaller than the cup—Blossoms white. Petraea Cup white, tips with yellow.

Nasturtium montanum annuum tenuissime divisum. Ray's

Sum. 304.

Nasturtium pumilum vernum. Bauh. fig. 105.
On St. Vincent's rock. A. April—May.

DITTANDER. The leaves betwixt egg and spear-shaped; Pepper entire; serrated—Blossoms white; numerous; terminating. Latifolium Lepidium latifolium. Bauh. fig. 97. Ray's Syn. 304.

Piperiri, feu lepidium vulgare. Park. 835.


This is one of the acrid antiscorbutics and was formerly used in the place of Horseradish Scurvygrass.

DITTANDER, with only two chives in each flower, and Narrow-leaf'd no petals. Root leaves toothed and winged: Stem leaves strap—Ruderale shaped, very entire—Nasturtium sylvetris, osyridis folio. Bauh. fig. 105. Park.

S. Ray's Syn. 303.

Thlaspi minus. Gerard. 163.

Narrow-leaved wild Cress.

Sea-coast. A. June,

269 MITH.
FOUR CHIVES LONGER.

269 MITHRIDATE. 802 Thlaspi.

EMPAL. Cup four leaves. Leaves egg-shaped; concave; nearly upright; deciduous.

BLOSS. Four petals, forming a cross. Petals inversely egg-shaped; twice as long as the cup. Claws narrow.

CHIVES. Threads six; half as long as the blossom. The two opposite threads shorter than the others. Tips tapering to a point.

POINT. Seedpod circular; compressed; notched at the end. Shaft simple; as long as the chives. Summit blunt.

S. VESS. Pouch compressed; inversely heart-shaped; notched at the end; the depth of the notch being equal to the length of the shaft. Cells two. Partition spear-shaped. Valves boat-shaped.

SEEDS. Many; inclining; fixed to the seams.

Obs. In some species the pouch is encompassed by a sharp border; in others not.

Mustard Arvense

MITHRIDATE. The pouches round and flat. Leaves oblong; toothed; smooth—Blossoms white.

Thlaspi arvense filicus latis. Baub. pin. 167.
Thlaspi drabe fidio. Park. 826.
Treacle Mustard. Penny-cress.
Corn-fields. A. June—July.

The whole plant hath something of a garlic flavour. The seeds have the acrimony of mustard. When Cows eat their milk gets a bad taste. —Cows, Goats and Swine eat it; Sheep and Horses refuse it.

Perennial Histentum

MITHRIDATE. Pouches circular; hairy. Stem leaves arrow-shaped; hairy. —Root leaves oval; a little fringed. Stem downy. Cups white. Petals white; inversely egg-shaped; entire.

Thlaspi vaccariae incano folio perenne. Roy’s Syn. 305.
Thlaspi villosum. capsulis hirsutis. Baub. pin. 166.

Perennial mithridate Mustard.

MITH-
SEEDVESSEL A POUCH.

MITHRIDATE. Pouches circular; leaves arrow-shaped; Crefes toothed; covered with a whittis down—Root leaves lyre-shaped Campestre and incurved. Blossoms white. Cups with brown spots.

Thalaspi vulgaris. Ray's Syn. 305.
Thalaspi arvense vaccaria folio majus. Baub. pin. 106.
Thalaspi vulgarissimum. Gerard. 268.
Thalaspi mithridaticum feu vulgarissimum, vaccariae folio. Park.

§35.
Mithridate Mustard. Baftard Crefes.
Sandy corn-fields. A. June—July.
Goats and Swine eat it; Sheep and Horses refuse it; Cows are not fond of it.

MITHRIDATE. Pouches inversely heart-shaped; leaves Mountain smooth. Root leaves inversely egg-shaped; fleshy; very entire. Montanum Stem leaves embracing the stem. Blossoms larger than the cups—nearly equal; white.

Thalaspi folius globularis. Ray's Syn. 305.
Thalaspi alpinum, bellidis corulea folio. Baub. pin. 106.
Mountain mithridate Mustard.
High pastures. P. July.

MITHRIDATE. Pouches inversely heart-shaped; stem Perfoliata leaves heart-shaped; smooth; a little toothed. Petals as long as Perfoliata the cup. Stem branched—Blossoms white; but little larger than the cups. Chives longer than the blossom; white. Tips yellowish.

Ray's Syn. 305.
Thalaspi minus Clufii. Gerard. 268.
Perfoliata Treacle-Mustard.
On Lime-stone rocks. A. June.

MITHRIDATE. Pouches inversely heart-shaped; root Purse leaves with winged clefts—Blossoms white. In the younger plants Burfa pastoris it is not unusual to find the leaves undivided, and the emplacement hairy.

Burfa pastoris major, folio finuato. Baub. pin 108.
Shepherds Purse. Shepherds Pouch.

This
FOUR CHIVES LONGER.

This plant is a strong instance of the influence of soil and situation, for it grows almost everywhere, and sometimes is not more than two inches high when it flowers and perfects its seeds; whilst in other situations it attains the height of two or three feet.—Horses, Cows, Goats, Sheep and Swine eat it.

The orange tip Butterfly, Papilio Cardamines; and the great yellow Underwing Moth, Phalena Pronuba, feed upon the different species.

Order II. Seed vessell a Pod.

270 CHARLOCK. 822 Raphanus.

EMPAL. Cup four leaves; upright. Leaves oblong; parallel; approaching; deciduous; hunched at the base.

BLOSS. Four petals, forming a cross. Petals inversely heart-shaped; expanding. Cisus a little longer than the cup.

Honey-cup. Glands four; one betwixt each shorter chive and the pointal, and one betwixt the longer chives and the cup, on each side.

CHIVES. Threads six; awl-shaped; upright. Two as long as the cup; the other four as long as the claws of the blossom. Tips oblong; upright; arrow-shaped.

POINT. Seedbud oblong; distended; tapering; as long as the chives. Shaft hardly perceptible. Summit a knob; entire.

S. VESS. Hunched; oblong; ending in a point; smooth; distended with several protuberances so as to appear almost jointed.

SEEDS. Roundish; smooth.

CIIAR-
SEED VESSEL A POD.

CHARLOCK. Pods with one cell: cylindrical; jointed; Corn smooth — Leaves lance-shaped. Upper leaves oblong — Spear-shaped; Raphanistrum foliolated and a little serrated; full of veins; thin and flat. Stem rough; beset with pellicid bristles. Cups covered with white woolly hairs, except at the base, which is smooth. Blossoms yellow; sometimes white and streaked with fluid lines.


Raphanistrum filicula articulata glabra, majore et minore. Ray's Syn. 296.

Rapistrum album articulatum. Park. 869.
Rapistrum flore albo, filicula articulata. Bann. Pin. 95.
Rapistrum flore luteo, filicula glabra articulata. Ray's Syn. 296.
White or yellow flowered Charlock.

Cori-ferns. A. June—July.

In wet seasons it grows in great quantity amongst the Barley, in Sweden, and the common people who eat barley bread, are afflicted with very violent convulsive complaints in those provinces and in those seasons wherein this plant abounds. Rothman de Raphania. Amoen. Acad. vol. 6. p. 430.

Horses eat it; Cows refuse it.

271 WORM SEED. 814 Erysimum.

EMPAL. Cup four leaves. Leaves oblong egg-shaped; parallel but approaching at the top; coloured; deciduous.

Bloss. four petals, forming a cross. Petals oblong; flat; very blunt. Claws as long as the cup; upright.

Honey-cup Glands double; on the inner side of the shorter chives.

CHIVES. Threads six; as long as the cup. The two opposite threads shorter than the others. Tips simple.

Point. Seedbud hump-shaped; four edged; as long as the chives. Shaft very short. Summit a small knob; permanent.

S. VES. Pod long; narrow; stiff and straight; with four edges, two valves and two cells.

SEEDS. Many; small; roundish.

WORM-
FOUR CHIVES LONGER.

Mustard

**WORMSEED.** Pods contiguous to the spike; leaves notched—**Blossoms yellow, in long spikes; terminating.**
- Erythrum vulgare. *Baub. pin. 298.*
- Irio five erythrum vulgare. *Park. 833.*
- Eruca hirtusa, filiqua caule appressa, erythrum dicha. *Ray's Syn. 298.*

Hedge Mustard. *Bank Creeses.*

Under walls, in roads and among rubbish. *A. May.*

It is warm and acrid to the taste, and when cultivated is used as a vernal pot-herb—Birds are fond of the seeds.—Sheep and Goats eat it; Cows, Horses and Swine refuse it.

Rocket

**WORMSEED.** The leaves lyre-shaped, with a circular segment at the end—**Blossoms yellow; terminating.**
- Eruca lutea, five barbara. *Baub. pin. 98. Ray's Syn. 297.*

1. There is a variety in which the leaves are smaller and more indented. *Ray's Hist. 809.* Another with double blossoms and a third with rough leaves.


Wet ditches. *P. May.*

The common people in Sweden use the leaves in fallads, early in the spring and late in the autumn: they also boil them as Cale.

—Cows eat it; Horses and Swine refuse it; Goats and Sheep are not fond of it.

Garlic

**WORMSEED.** The leaves heart-shaped—**Blossoms white; terminating.**

Jack by the hedge or fauce alone.

Ditch-banks. *P. May.*

The Puffains eat the leaves along with salted meats in the Spring. They are useful with Lettuce and the colder fallads— the seeds excite freezing.—Cows and Goats eat it; Horses, Sheep and Swine refuse it.

The Garlic Weevil, Curculio Alliaria, feeds upon it.

T: racele

**WORMSEED.** The leaves spear-shaped, very entire. The Cheiranthoides pods not pressed close to the stem—**Blossoms white; terminating.**
- Myagrum filiqua longa. *Baub. pin. 109.*

Corn-fields. *A. July.*

The country people give the seeds to destroy worms, and with good effect.—Horses, Cows, Goats, Sheep and Swine eat it.
SEED VESSEL A POD.

272 WALLFLOWER. 815 Cheiranthus.

EMP. Cup four leaves; compressed. Leaves spear-shaped; concave; upright; parallel but approaching towards the top; deciduous. The two outer leaves bunched at the base.

BLOOM. Four petals, forming a cross. Petals circular; longer than the cup. Claws as long as the cup.

CHIVES. Threads six; awl-shaped; parallel; as long as the cup. Two of them shorter than the others and bunched at the base. Tips upright; cloven at the base; sharp and reflected at the top.

The Honey-cup Gland surrounds the base of each of the short chives.

POIN. Seedbud prism-shaped; with four edges; as long as the chives: with a small tubercle on each side of the base. Shaft very short; compressed. Summit oblong; cloven; reflected; thick; permanent.

S. VESS. Pod long; compressed; two opposite angles obliterated; marked with a little tooth. Cells two; valves two; shaft very short; summit cloven; upright.

SEEDS. Many; pendant; alternate; somewhat egg-shaped; compressed; with a membranaceous border.

Obs. A little tooth on each side the seedbud is evident enough in some species, but not so in all. In the second species the pod has but three peaks at the end.
FOUR CHIVES LONGER.

WALLFLOWER. The leaves spear-shaped; sharp; smooth; branches angular. Stem somewhat woody—Blossoms yellow; in terminating spikes.
Leucojum luteum, vulgo cheiri flore simplici. Ray's Syn. 291.
Keiri, five leucojum vulgar luteum. Park. 695.
Viola lutea. Gerard. 450.

Bloody

1. There is a variety in which the blossoms are stained with a deep reddish purple.
Cultivation supplies us with the following varieties.
1. Double yellow.
2. Large yellow.
3. Large double yellow.
4. Double bloody Wallflower.
5. Purple and gold ditto.
6. Yellow striped leaved double yellow.
7. White striped leaved ditto.
8. White blossomed.
9. Double white ditto.
10. Straw coloured blossoms.
11. Double ditto.

The different varieties are very commonly found in our flower-gardens, but none have a more delightful smell than the wild ones.

WALLFLOWER. The leaves lyre-shaped. Pods with three teeth at the end—Blossoms white; terminating.
Leucojum maritimum siniuato folio. Baub. pin. 201.
Sea Stock Gillyflower.
The angle shaded Moth, Phalena Metulosa, and the great yellow underwing Moth, Phalena Pronuba feed upon both species.
SEED VESSEL A POD.

273 DAMEWORT, Hesperis.

Empat. Cup four leaves. Leaves betwixt strap and spear-shaped; parallel, but approaching towards the top, and open at the base: deciduous. The two opposite leaves hunched at the base.

Bloss. Four petals, forming a cross. Petals oblong; the length of the cup; a little bent obliquely to the left; ending in taper claws which are as long as the cup.

Chives. Threads six; awl-shaped; as long as the tube.

Two of the threads, only half as long. Tips narrow; upright; reflected at the top.

Honey-cup Glands tapering; placed betwixt the shorter chives and the seedbud; surrounding the chive.

Port. Seedbud as long as the cup; prism-shaped; with four edges. Shaft none. Summit divided; placed inwards; oblong; upright; forked at the base; approaching at the top; shrivelling.

S. Vess. Pod long; compressed and flat; scored. Cells two; valves two. Values as long as the partition.

Seeds. Many; egg-shaped; compressed.

DAMEWORT, with a simple upright stem. Leaves betwixt egg and spear-shaped; toothed. Petals with a sharp point; Matronalis imperfect at the margin.—Blossoms purplish white.

Hesperis sylvestris inodora. Ray's Sym. 293.

Hesperis pannonica inodora. Park. 628.

Unfavorable Dames Violet.

Banks of rivers. B. May.

The following varieties are the product of cultivation.

1. White blossomed.
2. Double purple.
3. Double white.
4. Double striped.

C 2 274 TURKEY-
FOUR CHIVES LONGER.

EMPAL. Cup four leaves; deciduous. Leaves parallel but approaching at the top; two opposite. Leaves large; oblong egg-shaped; sharp; a little prominent at the base; bunched; concave. The other two strap-shaped and upright.

BLOSS. Four petals forming a cross. Petals egg-shaped; expanding; ending in Claws as long as the cup.

Honey-cups four; each composed of a little reflected permanent scale, fixed to the receptacle at the bottom, and on the inner side of the leaves of the cup.

CHIVES. Threads six; awl-shaped; upright. Two as long as the cup; four twice as long. Tips heart-shaped; upright.

POINT. Seedbud cylindrical; as long as the chives. Shaft none. Summit blunt; entire.

S. VESS. Pod compressed; very long; strap-shaped; the prominencies occasioned by the seeds unequal. Values almost as long as the partition.

SEEDS. Many; roundish; compressed.

OBS. This genus is distinguished from the Wallflower by the honey-cup and from the Damefort by the summit.

Mouse-ear Thaliana

TURKEYPOD. The leaves on leaf stalks; spear-shaped and very entire—Stem leaves fitting. Blossoms white.

Turritis vulgaris ramosa. Ray's Syn. 294.

Burse pastoris similis filigosa major et minor. Bauh. 108.

Paronychia major et altera minor. Park. 556.

Leafy

1: There is a variety that is smaller and very full of leaves.

Coded Mouse-ear:

Walls, roofs, and dry pastures. A. May.
Sheep are not fond of it; Swine refuse it.
SEED VESSEL A POD.

275 CABBAGE. 820 Brassica.

Empal. Cup four leaves. Leaves betwixt spear and strap-shaped; concave; channelled; hunched at the base; upright; parallel; deciduous.

Bloss. Four petals, forming a cross. Petals somewhat egg-shaped; flat; expanding; entire; gradually tapering into claws, which are nearly as long as the cup.

Honey-cup Glands four; egg-shaped. One placed betwixt each short chive, and the seedbud; and one betwixt each pair of the longer chives, and the cup.

Chives. Threads six; awl-shaped; upright. The two opposite ones as long as the cup, the other four longer. Tips upright; tapering to a point.

Point. Seedbud cylindrical; as long as the chives. Shaft short; as thick as the seedbud. Summit a knob; entire.

8. Viss. Pod long; nearly cylindrical, but depressed on each side. Partition projecting at the end; cylindrical. Cells two, Values two; shorter than the partition.

Seeds. Many; globular.

Obs. In the second and third species the Cup is the same colour with the Blossoms. In other species it is green. In the last species the Shaft is froward-shaped.

CABBAGE. The leaves heart-shaped, smooth, and em-perforated bracing the stem. Root-leaves rough, very entire. Pods with Orientalis four edges—Blossoms white; in long spike.

Brassica campestris perfoliata, flore albo. Bauh p. 112. Ray’s Syr. 293.

Perfoliata fliquola. Gerard, 536.

Perfoliata fliquola vulgaris seu Brassica campestris. Park, 530.

On the sea-coast. A. June.
FOUR CHIVES LONGER.

CABBAGE. The root a continuation of the stem; spindleshaped.—Root leaves lyre-shaped; smooth. Stem-leaves oblong heart-shaped; embracing the stem; a little toothed. Cup expanding, Blossoms yellow.

Bunias feu Napus sylvestris nostras. Park. 865.
Wild Navew. Rape.

On Ditch Banks, and among corn. B. May.
The seeds furnish a large quantity of expressed oil called Rape Oil. The roots may be eaten like the Turnep, but they have a stronger taste.—Cows, Goats and Swine eat it.

CABBAGE. The root a continuation of the stem, round; depressed; fleshy. Root-leaves rough, deeply indented. Blossoms yellow.

Knolles. Turneps.
Ditch-banks and corn-fields. B. April.
The roots are eaten either raw, boiled, or roasted. Pepper is commonly used with them. They relax the bowels and are supposed to sweeten the blood. They are hurtful to pregnant or hysterical women, and to those who are subject to flatulencies. The rind is acrimonious.—If the roots are kept in sand, or in a cellar during the winter, they send out white shoots and yellowish leaves, which being rather sweet and not unpleasant to the palate, are used as failure, when other succulent plants are not to be had.—But the greatest use of Turneps is in feeding Oxen and Sheep in the winter.

CABBAGE. The root a continuation of the stem; cylindrical; fleshy—Blossoms yellow. Seeds dusky purple.

On cliffs on the sea-coast. B. April.

Ons. The different varieties of cultivated garden Cabbage originate from this.
SEED VESSEL A POD.

Early in the spring the Sea Cabbage is preferred before the cultivated kinds; but when gathered on the sea-coast, it must be boiled in two waters to take away the saltiness. When old, it occasions giddiness. The roots may be eaten like those of the preceding species, but they are not so tender.—The industry of the Gardener hath produced a great number of varieties, known by the names of Early Cabbage, Winter Cabbage, Kale, Red Cabbage, White Cabbage, Broccoli, Turnip-rooted Cabbage, Cauliflower, &c. as may be seen in Millar's Gardener's Dictionary. They are all of them much in use at our tables. The Red Cabbage is chiefly used for pickling. In some countries they bury the White Cabbage when full grown in the autumn, and thus preserve it all winter. The Germans cut them to pieces and along with some aromatic herbs and salt, press them close down in a tub where they soon ferment, and are then eaten under the name of Sour Crout.—The Cabbage whilst young, is food for the Chrysomela Saltatoria, and afterwards for the Papilio Brassica. The former may be kept off by strewning the ground with Soot; and it is said the latter will not touch the plants if they are whipped with the green boughs of Elder. If Cabbages are sowed or planted for several years together in the same soil, the heads become smaller and the roots knotty. This is occasioned by the Larvae of Flies.

CABBAGE. The leaves notched; and the stem covered with strong hairs. Pods smooth. Shaft sword-shaped—Blossoms Erucastrum yellow.


Eruca major lutea, caule aspero. Baub pin. 98.

Wild Rocket.

On old walls and among rubbish. P. May.

All the parts of this plant are considerably acrid, and have a rank disagreeable smell.

The different species of Cabbage afford nourishment to the following insects.

Great White Cabbage Butterfly, Papilio Brassica.

Small White ditto. Papilio Rapa.

White Butterfly with green veins. Papilio Napi.

Spotted red and white Under-wing Moth. Phalana Fuliginosa.

Cabbage Louche. Aphis Brassicae.

- - - - Chrysomela Hyoscyami.

C 4 276 TOW-
F O U R  C H I V E S  L O N G E R.

276 T O W E R E R. 819 Turritis.

Empal. Cup four leaves. Leaves oblong egg-shaped; parallel, but approaching towards the top; deciduous.

Bloss. Four petals, forming a cross. Petals oblong egg-shaped; blunt; upright; entire. Claws upright.

Chives. Threads fix; awl-shaped; upright; as long as the tube. Two of them shorter than the others. Tips simple.

Point. Seedbud as long as the blossom; cylindrical; a little compressed. Shaft none. Summit blunt.

S. Vess. Pod exceedingly long; stiff and straight; with four edges, but two of the edges which are opposite almost obliterated; somewhat compressed. Cells two. Values two. Values rather shorter than the partition.

Seeds. Very numerous; roundish; notched.

Great Glabra
TOWERER. The root-leaves toothed and covered with strong hairs. Stem leaves very entire; smooth; embracing the stem—Blossoms greenish white; in a long terminating spike.


Great Tower Mustard.
Gravelly soil, in pits and waste places. A. May.
The seeds reduced to powder are given in Sweden for pleuritic complaints.—Cows, Goats and Sheep eat it; Horses and Swine refuse it.

Hairy Hirifuta
TOWERER. The leaves all covered with strong hairs. Stem leaves embracing the stem—Blossoms white; in a terminating spike.

Turritis muralis minor. Ray's Syn. 94.
Erysimum emilis hirifuta, non incinia, alba. Baub. pin. 101.
Erysimum similis hirifuta plana. Park. 834.

Hairy Tower Mustard. Wall Cress.
On rocks and old walls. B. June.
Cows refuse it.
SEED VESSEL A POD.

277 CORALWORT, 811 Dentaria.

Emp. Cup four leaves. Leaves oblong egg-shaped; parallel but approaching towards the top; blunt; deciduous.

Blos. Four petals, forming a cross. Petals circular; blunt; slightly notched at the end; flat; ending in Claws as long as the cup.

Chives. Threads six; awl-shaped; as long as the cup.

Two of them shorter. Tips oblong heart-shaped; upright.

Pnt. Seedbud oblong; the length of the chives. Shaft very short and thick. Summit blunt; notched at the end.

S. Vess. Pod long; cylindrical; Cells two; Valves two; Partition rather longer than the valves.

Seeds. Many; somewhat egg-shaped.

CORALWORT. The lower leaves winged; upper leaves Bulbous simple.—Bulbs are formed at the base of the leaves. Blossoms Bulbifera white, or reddish. Bulbs black.

Dentaria bulbifera. Gerard. 984.


In shady places. P. April.

Swine refuse it.

It nourisheth the Chrysomela Nemorum.

97. SCOLE-
FOUR CHIVES LONGER.

278 COLEWORT. 825 Crambe.

EMPAL. Cup four leaves. Leaves egg-shaped; channelled; rather expanding; deciduous.

BLOSS. Four petals; forming a cross: Petals large; blunt; broad; expanding. Claws upright, but standing open; as long as the cup.

CHIVES. Threads six; two of them as long as the cup: the other four longer than the cup, and cloven at the end. Tips simple; fixed to the outermost division of the threads.

Honey-cup Glands placed on each side, betwixt the blossom and the longer chives.

POINT. Seed bud oblong. Shaft none. Summit rather thick.

S. VESS. Berry dry; roundish; of one cell; deciduous.

SEED. Single; roundish.

Obs. The essential character of this genus consists in the threads being cloven at the top.

Sea Maritima

COLEWORT. The leaves and stem smooth—Blossoms white.


Brassica maritima monosperma. Bauh. pin. 112.

Brassica marina monosperma. Park. 270.


1. There is one variety with jagged leaves and another with yellowish blossoms.


The young and tender leaves are boiled as Cabbage, but when full grown they occasion giddiness.—Horses, Cows, Goats, Sheep and Swine eat it.

279 WOAD.
SEEDVESSEL A POD.

279 WOAD. 824 Isatis.

EMPAL. Cup four leaves. Leaves egg-shaped; rather expanding; coloured; deciduous.

BLOSS. Four petals, forming a cross. Petals oblong; blunt; expanding; gradually tapering into Claws.

CHIVES. Threads six; upright, but expanding; as long as the blossom; but two of them not quite so long. Tips oblong; lateral.

POINT. Seedbud oblong; two-edged; compressed; as long as the shorter chives. Shaft none. Summit a blunt knob.

S. VESS. Pod oblong; spear-shaped; blunt; compressed; two-edged; with one cell, not opening; Valves two; boat-shaped; compressed; keeled; deciduous.

SEED. Single; egg-shaped; in the center of the seed-vessel.

WOAD. The root-leaves scolloped and the stem-leaves arrow-shaped. Pods oblong—Bladders yellow.

Isatis sylvetris, feu angulfifolia. Baub. pin. 113.

1. Isatis lativa, feu latifolia. Baub. pin. 113.


Corn-fields and under hedges. B. July.

With the juice of this plant the Ancient Britons painted their bodies to render themselves more terrible to their enemies,—It is much used by the dyers for its blue colour, and it is the basis of many other colours.—Cows eat it; Horses, Sheep and Goats refuse it.
FOUR CHIVES LONGER.

280 ROCKET. 823 Bunias.

Empl. Cup four leaves. Leaves oblong egg-shaped; expanding; deciduous.

Bloss. Four petals, forming a cross. Petals inversely egg-shaped; twice as long as the cup. Claws taper; upright.

Chives. Threads six; as long as the cup. The two opposite chives not quite so long. Tips upright; cloven at the base.


S. Vess. Pot irregular; oblong egg-shaped; with four sides; edges with one or two sharp points; not opening; deciduous.

Seeds. Few; roundish. One placed under each point of the pod.

ROCKET. The pods egg-shaped, smooth and two-edged

—Blooms pile purple.

Cakile quibusdam, alius Eruca marina, et Raphanus marinus,

Ray's Syn. 307.


Eruca maritima Italica, fil.qua habet cuspidi simili, Baeh.

pin. 91.

Sea-shore. A. June.

Hories eat it.
SEED VESSEL A POD.

LADY SMOK. 812 Cardamine.

EMP. Cup four leaves. Leaves oblong egg-shaped; blunt; rather open; hunched; small; deciduous.
Bloss. Four petals, forming a cross. Petals oblong egg-shaped; greatly expanded; ending in Claws, which are upright and twice as long as the cup.
Chives. Threads 8; awl-shaped. The two opposite threads twice as long as the cup; the other four still longer than them. TIPS small; oblong heart-shaped; upright.
Point. Seedbud slender; cylindrical; as long as the chives. Shaft none. Summit a blunt knob; entire.
S. Vess. Pod long; cylindrical but compressed. Cells two; Valves two. The Valves when open roll into a spiral.
Seeds. Many; roundish.

Oss. In the fifth species the two shorter chives are often wanting; and the third species is generally without petals. In the sixth species the claws of the petals are not longer than the cup, and the two shorter threads are only as long as the cup.

* Leaves simple.

LADY SMOK. The leaves simple; egg-shaped; very entire; on long leaf-flanks—Stem leaves fitting. This is about the size of the Early Whitlow-grass, but after flowering the pods shoot out and become long. Blossoms white; sometimes tinged with purple.

Cups brown.
Plantula Cardamines alterius aemula Clusii. Park. 812.
Naturarium alpinum bellidis folio minus. Bauh. pin. 105;

LADY SMOK. The leaves simple, oblong and toothed—

Stem simple. Blossoms white.
Naturarium petraeum. Ray's Syn. 300.
On the highest mountains. P. May.

* * Leaves
**Leaves winged.**

**Naked Governors.**

**LADYSMACK.** The leaves winged; jagged; with props.

Flowers without petals—Linnaeus says that in the year 1764 he found a single flower with white petals; the petals larger than those of the next species, and the plant differing therefrom.


Sium minimum, noli me tangere dictum, five impatiens Naurturii sylvestris folio. Park. 1241.

Impatient Lady-sincock.

Moit hills, and near rivulets on mountains. A. April.

Swine refuse it.

**Small-flowered Parvisora.**

**LADYSMACK.** The leaves winged; without props. Little leaves spear-shaped; blunt. Flowers with petals—Chives shorter than the blossom. Pods upright; upon horizontal fruit-stalks. Blossoms white.

In meadows, and near rivulets. A. March—May.

**Hairy Hirufata.**

**LADYSMACK.** The leaves winged; flowers with four chives—Blossoms white; in naked spikes.

Cardamine impatiens altera hirutior. Ray's Syn. 300.


Meadows and shady places. A. April—August.

**Common Pratenis.**

**LADYSMACK.** The leaves winged; little leaves of the root-leaves circular; those of the stem-leaves spear-shaped—Blossoms white, or tinged with purple.


Naurturium pratense majus, seu Cardamine latifolia. Park. 825.

1. Blossoms double white, or double purple.

Cuckow Flower.

Meadows and moist pastures. P. April.

The virtue of the flowers in Hysteric and Epileptic cases, was first mentioned by Mr. Ray, in his letters published by himself; and since then by Dr. Baker in the Medical Tracts, vol. 1. p. 444. the dose from twenty to ninety grains twice a day. Do they not act like the Treacle Wormseed in the Epilepsies of children, and cure the disease by destroying the worms in the stomach and intestines which were the cause of the fits? I have accounts of their success in young Epileptics, from good authority; but have never been fortunate enough to see them of much use in Hysterical Cases.—Goats and Sheep cat it; Horses and Swine refuse it; Cows are not fond of it.
SEED VESSEL A POD.

LADYSMOCK. The leaves winged; flowers on shoots, bitter
springing from the bosoms of the leaves—Stem leaves and root Amara
leaf of the same size. Petals more upright than in the preceding
species. Tips purple. Creeping shoots descend from the bases of the
leaves. Blossoms white.

Nasturtium aquaticum majus et amarum. *Baub. pin. 104.*
Bitter Cressles.

Near purls of water, and in moist meadows. *A. April.*
Sheep eat it; Cows are not fond of it.
The Orange Tip Butterfly, *Papilio Cardamines,* lives upon
the different species.

282 MUSTARD. 821 Sinapis.

EMP. Cup four leaves; expanding. Leaves strap-shaped;
concave; channelled; standing cross-ways and
expanding; deciduous.

BLOSS. Four petals, forming a cross. Petals circular;
flat; expanding; entire. Claws upright; strap-shaped;
rather shorter than the cup; fitting.

Honeycup Glands four; egg-shaped. One placed
betwixt each shorter chive and the pointal, and one
betwixt each pair of longer chives and the cup.

CHIVES. Threads six; awl-shaped; upright; the two op-
polite threads as long as the cup; the other four
longer. Tips upright; but expanding; tapering.

POINT. Seedbud cylindrical. Shaft as long as the seed-
bud, and as tall as the chives. Summit a knob;
entire.

S. VIS. Pod oblong; with protuberances on the lower
part; rough. Cells two; Valves two. Partition large;
compressed; generally twice as long as the valves.

SEEDS. Many; Globular.

OBS. This genus differs from the Cabbage by the expanding cup,
and the claws of the blossoms being upright.
FOUR CHIVES LONGER.

Charlock
Arvensis


Rapistrum flore luteo. Bauh. pin. 95.

Wild Mustard. Corn Cale.

Corn-fields, and under hedges. A. May.

The Scandinavians boil and eat it as Cabbage, and in Ireland the tender tops are collected for the same purpose.—Cows, Goats and Swine eat it; Sheep are very fond of it; Horses generally refuse it.

White
Alba

MUSTARD. The pods rough with strong hairs, furnished with a very long-bill; oblique and sword-shaped—Stem branched; hairy. Leaves rough, deeply incised. Blossoms yellow. Seeds white, or reddish.

Sinapi album silique hirsuta, feminea albo vel ruddo. Ray's Syn. 295.

Sinapi album. Gerard. 244.


Road-sides and ploughed-fields. A. August.

This is sown in the winter and early in the spring to supply our tables with fallaling—the seeds have nearly the same properties as those of the next species.

Black
Nigra

MUSTARD. The pods smooth; lying contiguous to the stem—Lower leaves rough, deeply incised; Upper leaves smooth; entire. Cups yellow. Blossoms pale yellow.


Common Mustard.

Corn-fields, ditch-banks and road-sides. A. June.

The seeds reduced to powder, make the common mustard, so much in request at our tables—they yield a considerable quantity of expressed oil which partakes but little of the acrimony of the plant—the seeds when unbruised impart but little taste to boiling water. Taken inwardly in the quantity of a meat-spoonful or more, they gently loosen the bowels, and are of service in chronic Rheumatisms and Palfies.—The powdered seeds curdle milk, and give a strong impregnation to boiling water. This infusion taken in considerable quantity, vomits; in smaller doses it is a useful aperient and diuretic. Cataplasmis formed with crumb of bread, vinegar and powdered mustard-seed are very commonly applied to the soles of the feet as stimulants, in Fevers that require such treatment; they are used with advantage, topically applied,
SEED VESSEL A POD.

Applied, in fixed rheumatic and sciatic pains—upon the whole, wherever we want a strong stimulus that acts upon the nervous system without exciting much heat, we know none preferable to mustard feed. Its acrimony consists in an essential oil.

The spotted red and white under wing Moth, Phalena fuliginosa, lives upon the different species.

283 WATERCRESS. 813 Sisymbrium.

Empl. Cup four leaves. Leaves betwixt spear and strap-shaped; expanding; coloured; deciduous.
Blos. Four petals forming a cross. Petals oblong; expanding; generally smaller than the cup; Claws very small.
Chives. Threads six; longer than the cup. The two opposite threads somewhat shorter. Tips simple.
S. Vess. Pod long; crooked; hunched; cylindrical. Cells two; Values two; straight; rather shorter than the partition.
Seed. Many; small.

Obs. In the second and third species the pod is hunched and very short; but in the sixth species the pod is very long and very slender.

* Pods short; declining.

WATERCRESS. The pods declining; leaves winged; Common little leaves nearly heart-shaped—Flowers subite, terminating. Nafturtium Sisymbrium cardamine, seu nafturtium aquaticum. Ray's Syn. 300.
Nafturtium aquaticum vulgare. Park. 1239.
Nafturtium aquaticum supinum. Bauh. pin. 104.
Nafturtium aquaticum seu crustae fium. Gerard. 257.
Water-cresses.

1. There are varieties in which the leaves are sometimes smaller; and in others the winged clefts are fewer. Ray's Syn. 301.
Springs, brooks and rivulets. P. May.
This is very universally used as an early and wholesome spring salad—it is an excellent Antiscorbutic and Stomachic, with less acrimony than the Scurvy graft. It is an ingredient in the Antiscorbutic Juices.

Vol. II. D WATER-
FOUR CHIVES LONGER.

ROCKET. The pods declining; oblong egg-shaped.

Eruca sylvatica minor, luteo parvoque flore. Baub. pin. 95.
Water Rocket.

Ruthe and shallow streams. P. June.

WATERCRESS. The pods declining; oblong egg-shaped.

Radish. 

Leaves with winged clefts; segments serrated—In deep waters the leaves beneath the surface are narrow and winged; those above are spear-shaped and serrated. Blossoms yellow.
Raphanus aquaticus rapidiri folio. Baub. pin. 97.
Raphanus aquaticus alter. Park. 1249.

Leaves serrated; with winged clefts. Stem rather stiff and straight.

Water Radish.

In shallow waters. P. June.
Cows refuse it; Sheep and Goats are not fond of it.

* * Stem with few leaves.

WATERCRESS. The stem with very few or no leaves. The leaves spear-shaped; indented; serrated; nearly smooth. Stalks a little rough; ascending—Stem a little rough, with a few stiff hairs. Leaves on leaf-stalks; with a few hairs on the under surface. Flowering stalks long; at first drooping; afterwards ascending. Cups half expanding; wanting at the top, fit with a very few hairs. Blossoms yellow; very bluish. Pods rather thick and compressed. Valves a little keel-shaped.
Eruca sylvacntris minor lutea, buriae palioris folio. Baub. pin. 90.

Wall Rocket.

Sandy soil near the sea. P. June.

WATERCRESS. The stem without leaves. Leaves winged and toothed; somewhat hairy—Leaves with winged clefts; the segments remote; bluish; generally few on each leaf. Flowering stalks upright, smooth. Cups closed. Petals yellow; entire.

Wall Murale

Yellow Rocket.

On the Isle of Anglesea. P. June.

* * * Leaves
SEED VESSEL A POD.

* * * Leaves winged.

WATERCRESS. The petals smaller than the cup. Leaves Flix-weed winged; doubly compound—Pods long; stiff and crooked. Seeds Sophia yellow. Blossoms yellow.

Erysetum sophia dictum *Ray's Syn.* 298.
Nasturtium sylvestre tenuissime divisum. *Baub.* pin. 105.
Flix-weed.

On roofs and among rubbish. A. July.

The pods retain the seeds all winter, and small birds feed upon them—the force of a gun is said to be augmented if the gun-powder is mixed with a tenth part of these seeds—the plant is sometimes prescribed in Hysteric and Dysenteric cases; and the seeds are given to destroy worms.—Sheep and Cows eat it; Horses and Goats are not fond of it; Swine refuse it.

WATERCRESS. The leaves notched; toothed and naked. Broad-leaved Stem smooth. Pods upright—Leaves very green. Blossoms Iris yellow.

Broad-leaved Rocket. Hedge Mustard.
On old walls and among rubbish. A. May—August.

D e  CLASS
CLASS XVI.

In this Class the Threads are all united together at the bottom, but separate at the top. The Orders are determined by the number of Chives. The Flowers admit of the following

Natural Character.

Empal. Cup always present; permanent; in many instances double.

Bloss. Petals five; inversely heart-shaped; the edge of one lying over the edge of the next, from the right to the left.

Chives. Threads united at the bottom; separate at the top. The outer ones the shortest. Tips fixed sideways to the threads.

Point. Receptacle of the fruit projecting in the center of the flower. Seedbuds upright, surrounding the top of the receptacle in a jointed circle. Shafts united at bottom into one body with the receptacle, but separated at the top into as many parts as there are seedbuds. Summits expanding, slender.

S. Vess. Capsules divided into as many cells as there are shafts; of various figures in different Genera; and often composed of the same number of seed-coats united.


Obs. The plants of this class have generally been supposed to have only one petal; but the petals are distinct at the base, although by means of the chives they seem united into one body; we may therefore more properly consider them as having five petals.

The plants with many Chives are mucilaginous and emollient; and these properties are common to every part of the plant. None of them are poisonous.
C L A S S X VI.

THREADS UNITED.

Order IV. Ten Chives.

84 CRANESBILL. One pointal. Capsule five dry berries; with a long bill.

Order VI. Many Chives.

85 VELVETLEAF. Many pointals. Outer Cup with three clefts. Seedcoats in whorls; one seed in each.

86 MAULS. - - Many pointals. Outer Cup of three leaves. Seedcoats several; in whorls; one seed in each.

87 MARSHMALLOW. Many pointals. Outer Cup with nine clefts. Seedcoats in whorls; one seed in each.

D 3  284 CRANES-
THREADS UNITED.

284 CRANESBILL. 832 Geranium.

EMPAL. Cup five leaves. Leaves egg-shaped; sharp; concave; permanent.

BLOSS. Petals five; inversely heart-shaped; or egg-shaped; expanding; large.

CHIVES. Threads ten; awl-shaped; expanding towards the top; alternately longer and shorter; shorter than the blossoms. Tips oblong, turning about like a vane.

POINT. Seedbud with five angles; furnished with a bill.

SHAFT awl-shaped, longer than the chives; permanent. Summits five; reflected.

S-VESS. None. Fruit five dry berries, furnished with a bill.

SEEDS. Solitary; kidney-shaped; often furnished with a dry bulky coat; and a very long awn which after some time rolls up in a spiral form.

OBS. In some species only every other chive is furnished with a tip. The awn of the seed in some species is hairy; in others smooth. In the three first species, the petals are not quite equal; there is a little gland between each petal; the threads are ten, but only every other thread is furnished with a tip; the flowers grow in maces; the seeds are naked and the awns hairy. In the fourteenth species, only five of the threads have tips.

* Five chives furnished with tips.

CRANESBILL. The fruit-stalks supporting more than two or three flowers. Leaves winged; jagged; blunt. Stem branched—Petals entire; elevated above the cup; the two upper ones with a spot at the base; red.


Geranium Moschatum inodorum. Park, 108.

1. There is a variety with a white flower. Gerard, 946.

On walls, road-sides, and among rubbish. A. April—June. Cows and Horses eat it; Sheep are not fond of it.

CRANESBILL.
CRANESBILL. The fruit-stalks supporting more than two Musk flowers. Leaves winged; jagged. The lateral lobe of the seed Moschatum with winged clefts—Blossoms red, or purple.


Geranium Ciutaæ folio, Moschatum. Baub. pin. 319.
Musked, or Muscovy Cranes-bill. Burnet-leaved Musk Cranes-bill.

Dry pastures. A. May.
The whole plant smells like Musk, but it loses this property when bruised.

CRANESBILL. The fruit-stalks supporting two or three Sea flowers: leaves heart-shaped; scollopéd; jagged; rough. Stems Maritimum trailing—Blossoms pale red. Petals entire. The plant lies close upon the ground.


* * Ten chives furnished with Tips. Fruit-stalks supporting two flowers.

CRANESBILL. The fruit-stalks solitary; growing opposite Spotted to the leaves, Cups generally furnished with awns; stem up: Phaum right; petals waved at the edge—Leaves downy; alternate; with five lobes; serrated. Blossoms dark purple.

Geranium maculatum ães fuscum. Gerard. 942.
Geranium pullo flore. Park. 704.
Hilly places. P. May—June.

CRANESBILL. The fruit-stalks supporting two flowers; Knotty petals notched at the end. Stem leaves with three lobes; entire; Nodorum serrated. upper leaves nearly fitting. Stems spreading, compressed—joints thick; generally red. Blossoms red.

Mountains in Cumberland. P. July—August.
CRANESBILL. The fruit-stalks supporting two flowers. Leaf-stalks nearly central. Leaves with five lobes; jagged; serrated. Stem upright; petals notched at the end—Panicle forked; nearly level. Blossom bell-shaped; expanding. Cups with awns. Shaft not longer than the chives. Cup after flowering upright, and the awns reflected. Blossoms purplish-red; sometimes white; or variegated.

Geranium batrachoides montanum nostras, Gerard. 942.
Geranium batrachoides minus, Park. 704.
Geranium batrachoides folio aconiti. Bauh. pin. 317.
High pastures in the North. P. July—August.
Cows, Goats, Sheep and Swine eat it: Horses refuse it.

CRANESBILL. The fruit-stalks supporting two flowers. Leaf-stalks nearly central. Leaves deeply divided into many parts; wrinkled, sharp: petals entire—Cups with awns. Blossom flat. Shaft longer than the chives. Cup after flowering clasped and pendant. Petals blue.

1. By cultivation the petals will become white or striped.
Geranium batrachoides flore caeruleo. Park 704.
Meadows and moift pastures. P. June—July.
Horses, Cows, Goats, Sheep and Swine eat it.

CRANESBILL. The fruit-stalks supporting two flowers. Cups hairy; with ten angles—Petals entire. The whole plant sometimes turns red. It has a rank smell. Stem branched, spreading, jointed. Blossoms red; by cultivation white.

Geranium Robertianum vulgare. Park. 710.
1. There is as a variety with shining stalks. Ray's Syn. 359.
Walls, hedges and among rubbish. B. April—June.
A decoction of this plant has been known to give relief in Calculous cæliae. It is considerably astringent, and is given to cattle when they make bloody water.
Horses and Goats eat it; Sheep and Swine refuse it.
CRANESBILL. The fruit-stalks supporting two flowers. Shining! Cups pyramidal; the angles raised and wrinkled. Leaves with Lucidum fire lobes; roundish—stem branched, reddish, glossy. Blossoms rd. Cups not quite equal.
Geranium lucidum faxatile. Baurb. pin. 318.

CRANESBILL. The fruit-stalks supporting two flowers, Soft and alternating with the floral leaves. Cups without awns. Stem Molle a little upright. Petals cloven but without a sharp point in the middle—Cups shorter than the petals. Fruit-stalks declining. Blossoms purple.
Geranium columbinum vulgare. Park. 703.
Common Doves-foot Cranes-bill.
Sheep and Goats eat it.

CRANESBILL. The fruit-stalks longer than the leaves; Doves-foot supporting two flowers. Leaves deeply divided into five segments, Columbinum and these again having several shallow clefts. Seed-coats smooth; cups with awns—Petals notched at the end; with a sharp point in the middle; reddish blue. Leaves hairy on the under surface.
Geranium columbinum dissecta foliis, pediculis florum longissi-mis. Ray's Syn. 359.
Long-stalked Doves-foot Cranes-bill.
Corn-fields and high pastures. A. July.
Sheep and Goats eat it; Swine refuse it.

CRANESBILL. The fruit-stalks supporting two flowers. Jagged Leaves deeply divided into five parts, and these again into three Difflcetum fallow segments. Petals notched at the end; as long as the cup. Seed coats covered with soft hairs—Pointed woolly. Petals of colour of blood; not longer than th cups. Props coloured. Tips violet colour. Fruit-stalks upright. Cups standing open after the petals are shed.
Geranium columbinum majus dissectis foliis. Gerard. 938.
Ray's Syn. 359.
Geranium malacoides, seu columbinum alterum. Park. 706.
Geranium columbinum maximum, foliis dissectis. Ray's Syn. 360.
Jagged-leaved Doves-foot Cranes-bill.
Meadows and pastures. A. May—July.

CRANESBILL.
CRANESBILL. The fruit-stalks supporting two flowers; petals almost entire; as long as the cup. Stem prostrate on the ground. Leaves kidney-shaped, jagged—Petals blunt, flesh coloured or purple; by cultivation white. Cups with sharp points. The whole plant rather clammy.

Geranium folio malva rotundo. Raub. pin. 318.
Geranium columbinum majus flore minore caruleo. Ray's Syn. 358.
Walls, roofs and ditch-banks. A. July.
Horses and Sheep eat it: Cows and Swine refuse it.

CRANESBILL. The fruit-stalks supporting two flowers. The lower leaves with five divisions, and these again cleft into many roundish segments. Upper leaves divided into three lobes. Stem upright—Huds. Flor. Anglic. P. 265.
Perennial Doves-foot Cranes-bill.
In hilly pastures. P. May—August.

Geranium columbinum humile, flore caruleo minimo. Ray's Syn. 359. Tab. 16. fig. 2.
Geranium malacoides, seu columbinum minimum. Park. 707.
Small flowered Doves-foot Cranes-bill.
Corn-fields and dry sandy places. A. June.

** Ten chives with tips. Fruit-stalks supporting one flower.

CRANESBILL. The fruit-stalks supporting a single flower. Leaves round; deeply divided into five or seven parts; and each of these again into three segments—Blossoms purple. After flowering the whole plant sometimes becomes purple.
Geranium fanguineum. Gerard. 945.
Geranium fanguineum maximo flore. Raub. pin. 318.
1. Leaves larger, paler and more deeply divided. Ray's Syn. 360.
3. Stems upright.
Rocks; dry pastures and hedges. 2. In the Island of Walney in Lancashire, and on the sea-coast. P. July—August.
Horses, Cows and Goats eat it: Swine refuse it.
Order VI, Many Chives.

285 VELVETLEAF. 842 Lavatera.

**Emp.** Cup double.

Outer Cup one leaf, with three shallow clefts; blunt; short; permanent.

Inner Cup one leaf; with five shallow clefts; segments sharper; upright; permanent.

**Bloss. Petals** five; united at the base; inversely heart-shaped; flat; expanding.

**Chives. Threads** numerous; united at the bottom into a cylinder; loose at the top; fixed to the blossom.

**Tips** kidney-shaped.

**Point. Seedbud** round and flat. **Shaft** cylindrical; short.

**Summits** many, (from seven to fourteen) bristle-shaped; as long as the shaft.

**S. Vess. Seedcoats** forming a whorl round the **Receptacle,** which stands in the center like a pillar. The whorl depressed; not jointed. Seedcoats deciduous, opening inwardly.

**Seeds.** Solitary; kidney-shaped.

**Oss.** Linnaeus says the petals are five, united at the base; but in the English species the blossom is more properly one petal, deeply divided into five segments, which falls off without being separated.

**VELVETLEAF.** The stem woody. Leaves with seven tree angles; downy; plaited. Fruit-stalks supporting one flower; Arbores crowded together at the base of the leaves.—**Blossoms pale purple.**


*Malva arborea veneta* dicita, parvo flore. *Bald. pin. 315.*

Sea-tree Mallow.

On the sea-shore. B. August.

286 MAULS.
THREADS UNITED.

286 MAULS. 341 Malva.

EMPAL. Cup double.

Outer Cup three leaves; narrow; heart-shaped; sharp; permanent.

Inner Cup one leaf, with five shallow clefts; large; broad; permanent.

BLOSS. Petals five; united at the base; inversely heart-shaped; bitten; flat.

CHIVES. Threads numerous; united at the bottom into a cylinder; loose at the top; fixed to the blossom.

Tips kidney-shaped.

POINT. Seedbud round. Shaft cylindrical; short. Summits many; bristle-shaped; as long as the shaft.

S. VESS. Seedcoats forming a whorl round the Receptacle, which stands in the center like a pillar. The whorl depressed; not jointed. Seedcoats deciduous; opening inwardly.

SEEDS. Solitary; kidney-shaped.

Obs. All the species are mucilaginous and emollient—The dust is a pretty microscopic object, being toothed like the wheel of a watch.

Small-leaved
Parviflora

MAULS. The stem spreading; leaves angular; flowers at the base of the leaves; sitting; congregated. Cups smooth; expanding—Purple when the fruit ripens. Blossoms purplish. Seedcoats wrinkled at the top, and toothed at the sides.

Malva minor, flore parvo caeruleo. Ray’s Syn. 251.

Small Mallow.

In sandy places. B. June.

Dwarf
Rotundifolia

MAULS. The stem prostrate. Leaves circular; but somewhat heart-shaped; with five flight lobes. Fruit-stalks with the fruit declining—Blossoms white, or tinged with purple.

Malva sylvestris pumila. Gerard. 930.

Malva sylvestris folio rotundo. Baub. pin. 314.


Dwarf Mallow.

Road sides, and among rubbish. A. June—October.

The ancients used to eat the leaves as we do Cabbage.—Sheep eat it; Goats, Horses and Swine refuse it; Cows are not fond of it.
MANY CHIVES.

MAULS. The stem upright; herbaceous; leaves with seven Common sharp lobes; fruit-stalks and leaf-stalks hairy—Blossoms pale Sylvatica purple.


Common Mallow.

Hedges, foot-paths, and amongst rubbish. B. May—Oct.
The following varieties are the effect of cultivation, soil and situation.
1. White blossomed.
2. Blue ditto—Found in the fields.
3. Purple striped.
4. White striped.
5. Leaves variegated—Found in the fields.
The young leaves when boiled are good to eat.—Cows eat it.

MAULS. The stem upright. Leaves a little rough; deeply Vervain divided into many parts—Blossoms purple; terminating: by culti- Alcea variegata white.

Alcea vulgaris. Ray's Syn. 252.
Alcea vulgaris major. Bauh. pin. 916.
Alcea vulgaris, seu Malva Verbenacea. Park. 301.
Vervain Mallow.

Ditch-banks, in the counties of Warwick, Leicester and York. P. July—September.
Horses, Cows, Sheep and Goats eat it.

MAULS. The stem upright. Root-leaves kidney-shaped; Musk jagged. Stem-leaves with five divisions, and many winged clefts Moenchata—Capsules rough with hairs. Blossoms pale purple; terminating.


Ray's Syn. 253.
Alcea folio rotundo laciniato. Bauh. pin. 316.

Jagged-leaved Vervain Mallow.

Pautures and ditch-banks. B. August.
Cows and Horses eat it; Sheep refuse it.

The Grizzle or Brown March Fritillary, Papilio Malva, and the Malows Bug, Cimex Apterus, are supported by the different species.
THREADS UNITED.

287 MALLOW. 839 Althæa.

EMERALD. Cup double.
   Outer Cup of one leaf, small and permanent; with nine unequal clefts. Segments very narrow.
   Inner Cup one leaf; with five shallow clefts. Segments broader; sharper, and permanent.

BLOSSOM. Petals five; united at the base; inversely heart-shaped; bitten; flat.

CHIVES. Threads numerous; united at the bottom into a cylinder; loose at the top; fixed to the blossom. Tips nearly kidney-shaped.

POINT. Seed-bud round and flat. Shaft cylindrical; short. Summits numerous; (about twenty) bristle-shaped; as long as the shafts.

S. VESS. Seed-coats forming a whorl round the Receptacle, which stands in the center like a pillar: the whorls depressed; not jointed. Seed-coats deciduous, opening inwardly.

SEEDS. Solitary; kidney-shaped but compressed.

Common
Marshmallow, with simple, downy leaves—Blossoms purple white.

Althæa Officinalis. Gerard. 933.

1. Leaves deeply indented.
2. Leaves more circular.
3. Leaves short, dented.

In fact marshes. P. Augusti.

The whole plant, particularly the root abounds with a mild mucilage. The root boiled is much used as an emollient cataplasm, and an infusion of it is very generally prescribed in all cases wherein mild mucilaginous substances are useful.

CLASS.
THIS Class comprehends the **Butterfly-shaped flowers**, and the **Leguminous** plants of some authors. Linnaeus takes the **Classic** character from the **disposition**, and the character of the **Orders** from the **Number** of the Chives. From the title of the Class, the young Botanist would be led to imagine, that the threads are always formed into two sets, but this is by no means the case; in many instances they are all united into one set. The **Butterfly-shape** of the blossom will therefore be a surer guide. If the student will get the flower of a Garden Pea, and compare it with the following **Natural Character**, there will no longer remain any difficulty in pronouncing at first sight, whether a plant belongs to this Class or not.
CLASS XVII.

NATURAL CHARACTER.

ENTAL. Cup one leaf, bell-shaped; shrivelling; hunched at the base; the lower part connedled with the fruit-
stalk; the upper part blunt; containing honey. Rim with five teeth; sharp; upright; oblique; unequal. The lower Tooth long, the two upper teeth shorter and flanding further aunder. The bottom of the cup inclosing the receptacle, is moistened with a liquor like honey.

BLOSS. Butterfly-shaped, unequal; each petal having a distinct name. Thus the Standard is the largest petal, lying upon and covering the others. It is flat and horizontal; fixed by a claw to the upper edge of the receptacle; that part of it which stands out of the cup is nearly circular and entire; a rising line marking it lengthways, particularly towards the end, as if it had been preflled down at the sides. That part of the petal next to the base is somewhat like half a cylinder, and incloses the parts that lie under it. The border of the petal is depressed on each side, but the sides next to the edge are turned upwards, where the half cylinder terminates. At the unfolding of the border there are two concave impressions, prominent on the under side, and compressing the wings which lie beneath them.

The wings are two equal petals, one placed on each side the flower under the standard. The borders incumbent; parallel; circular or oblong, broad-
est outwards; the upper edge pretty straight, the lower extended and rounded. The base of each wing is cloven; the lower Segment extending into a claw which is fixed to the side of the receptacle and is about as long as the cup. The upper Segment is shorter and bent inwards.

The Keel is the lowermost petal, generally divided; placed under the standard, and betwixt the wings. It is boat-shaped, concave, compressed at the sides; placed in the position of a boat upon the water. It is diminished at the base, the lower part extending into a claw as long as the cup, and fixed to the receptacle. The upper and lateral segments, which
are shorter, are interwoven with those parts of the wings which resemble them in shape. The sides of the keel are shaped like the wings, and have a similar situation only lower and more inwards. The line that forms the keel in this petal is straight as far as the middle, and then gradually rises in an arch; but the marginal line runs straight to the extremity, until it meets with, and is lost in that of the keel.

Grives. Threads united into two bodies, differing in shape. The lower Thread inclosing the pointal, the upper Thread lying upon it.

Lower Thread inclosing the seedbud; membranaceous below the middle, and cylindrical; opening upwards and length-ways; terminating in nine awl-shaped threads, bent like the keel and equal to it in length; alternately two longer and two shorter.

Upper Thread awl or bristle-shaped. Similar in situation to, and lying upon the opening of the cylindrical part of the lower thread; simple, and a little shorter than that: separated from the others at the base, so as to give a vent on each side for the honey.

Tips ten. One upon the upper thread, nine upon the lower. Small; equal in size; terminating.

Point. Single; superior.

Seedbud oblong; nearly cylindrical; slightly compressed; straight; as long as the cylinder of the lower thread, by which it is inclosed.

Shaft awl-shaped or thread-shaped; ascending; agreeing in length and situation, with the divisions of the lower thread and placed amongst them: shrivelling.

Summit downy as far as it is turned upwards: Placed directly under the tips.

S. Vess. Shell oblong; compressed; blunt; with two valves and a seam running length-ways both above and below; both seams straight, but the upper seam falling near the base and the lower seam rising towards the end. It opens at the upper seam.
Class XVII.

Seeds. Several; roundish; smooth; fleshy; pendant. Marked with a prominence caused by the young plant near the insertion of the eye. When the young plant is excluded, the side lobes retain the figure of half the seed.

Receptacles proper to the Seeds are small; very short; slender at the base; blunt at the part by which they are fixed. Inserted lengthways in the upper seam only of the pod, but alternately; so that the valves being separated, the seeds adhere alternately to each valve.

Obs. This Class is perfectly natural and the structure of the flowers extremely singular: their situation is generally obliquely pendant.

The figure of the Shell is not of so much consequence in ascertaining the Genera as some have imagined; but the Cup, which hath been hitherto thought unworthy of notice, is of the greatest use. The Leaves never should be considered in forming the characters of Genera.

The Seeds of this Class furnish food for men and other animals: they are farinaeous and flatulent. The Leaves are food for cattle. None of them are poisonous.
CLASS XVII.

THREADS in two SETS.

Order II. Six Chives.

\textit{Fumitory.} \textit{Cup} two leaves. \textit{Blossom} gaping, hunched at the base; containing honey. Three tips on each thread.

Order III. Eight Chives.

\textit{Milkwort.} \textit{Cup} with two segments like wings. \textit{Blossom} with a cylindrical standard. \textit{Chives} connected. Capsules inversely heart-shaped; with two cells.

Order IV. Ten Chives.

\textit{Broom.} \textit{Threads} adhering close to the feed-bud. \textit{Summit} woolly; growing to the upper side of the shaft.

\textit{Greenwood.} \textit{Pointal} pressing down the keel. \textit{Summit} rolled inwards.

\textit{Ladiesfingher.} \textit{Cup} swollen and turgid; inclosing the pod.

\textit{Gorze.} \textit{Cup} two leaves. \textit{Shell} hardly longer than the cup.


\textit{Summit}
THREADS IN TWO SETS.

** Summit downy. (without the marks of the former division.)

295 Peaseling. Shaft slender; cylindrical; woolly.

296 Pfa. Shaft keel-shaped above, and woolly.

297 Vetchling. Shaft flat above, and woolly.

298 Vetch. Shaft bearded under the Summit.

*** Shells with two cells. (without the marks of the former divisions)

299 Cocklewort. Shell with two cells, rounded.

*** Shells with one or two seeds. (without the marks of the former divisions)

300 Trefoil. Shell but little longer than the cup; with one or two seeds. Flowers in heads.

**** Shell with the appearance of being jointed.

301 Saintfoin. Shell with roundish compressed joints.

302 Birdsfoot. Shell jointed; bent like a bow.

303 Horseshoe. Shell compressed; membranaceous; one of the seams hollowed out with deep notches, deeper than the middle of the shell.

304 Snailshell. Shell spiral; membranaceous; compressed. Pointal pressling down the keel.

***** Shell with one cell, and many seeds. (Without the marks of the former divisions)

305 Tare. Cup with five divisions, somewhat equal; nearly as long as the blossom.

306 Clover. Shell cylindrical; filled with cylindrical seeds.
SIX CHIVES.

288 FUMITORY. 849 Fumaria.

Empal. Cup two leaves. Leaves opposite; equal; lateral; upright; sharp; small; deciduous.

Bloss. Oblong; tubular; gaping; palate projecting and filling up the mouth.

Upper Lip flat; blunt; notched at the end; reflected. (The Standard.)

The Honey-cup is the base of the upper lip; projecting backwards; blunt.

Lower Lip altogether similar to the upper lip. Towards the base it is keel-shaped. (The Keel.)

Honey-cup at the base is keel-shaped; but projecting less in this than in most other genera.

Mouth with four corners; blunt; cloven perpendicularly. (Wings.)

Chives. Threads two; equal; broad; taper; one inclosed within each lip. Tips, three at the end of each thread.

Point. Seedbud oblong; compressed; tapering. Shaft short. Summit round; compressed; upright.

S.Vess. Pod, with one cell.

Seeds. Roundish.

Oss. The Chives are almost the only invariable part in this genus.

FUMITORY. The seed-vessels in bunches, each containing Common a single seed. Stem spreading.—Leaves doubly swung; little officinalis leaves with three lobes, and these again cloven into two or three parts. Blossoms pink and deep purple; in long terminating spikes.

Fumaria vulgaris. Park. 287. Roy's Syn. 204.

Fumaria purpurea. Gerard. 1088.

Fumaria officinarum et Dioscoridis. Bamb. pin 143.


The following varieties are the product of cultivation.

1. Pale purple.
2. White blossomed.
3. Fine leaved.

The leaves are succulent, saline and bitter. The expressed juice in doses of two or three ounces is useful in hypochondriacal, scorbuteic and cachectic habits. It corrects acidity and strengthens the tone of the stomach. Hoffman prefers it to all other medicines as a sweetener of the blood. There is no doubt of its utility in obstructions of the visceras and the diseases arising therefrom.—Cows and Sheep eat it; Goats are not fond of it; Horses and Swine refuse it.
THREADS in two SETS.

Ramping C:procata
FUMITORY. The seed-vessels in bunches, each containing a single seed. Leaves climbing, furnished with a sort of tendrils—Partial fruit-stalks crooked. Blossoms pale red.

By some this is supposed to be only a variety of the former, but it is remarkable that it is not to be met with in Sweden where the former is very common.

Fumaria major scandens flore pallidiore. Ray's Syn. 204.
Woods and hedges. A. August.

Climbing Claviculata
FUMITORY. The pods strap-shaped; leaves furnished with tendrils—The tendrils grow from the ends of the leaves. Blossoms purplish white, in terminating spikes.


Fumaria claviculis donata. Fairh. Sin. 143.
Woods and moor hedges. A. June.
EIGHT CHIVES.

Order III. Eight Chives.

289 MILK WORT, 850 Polygala.

Exfl. Cup three leaves; small. Leaves egg-shaped; sharp; permanent; two placed beneath, and one above the blossom.

Bloss. Butterfly-shaped. But the number of petals uncertain.

Wings permanent; somewhat egg-shaped; flat; large; placed on the outside the other parts of the blossom, and formed by the teeth of the cup.

Standard generally cylindrical; tubular; short. Rim reflected; small; cloven.

Keel concave; compressed; distended towards the end.

Appendages; generally two; pencil-shaped; with three divisions; fixed towards the end of the keel.

Chives. Threads eight; united; inclosed in the keel. Tips eight; simple.

Point. Seed bud oblong. Shaft simple; upright. Summit terminating; thick; cloven.

S. Viss. Capsule betwixt turban and heart-shaped; compressed; sharp at the edge. Cells two; valves two. Partition placed cross-ways to the valves; opening at the edge on each side.

Seeds. Solitary; egg-shaped.

Obs. The appendix to the keel is different in different species.

The wings of the Blossom may be considered as two lateral colored leaves belonging to the emplacement, and then it will be a Cup composed of five leaves.

MILK WORT. The flowers in bunches, with pencil-shaped Meadow appendages. Stems herbaceous; simple; trailing. Leaves vulgaris betwixt strap and spear-shaped—Blossoms blue, white, or fiolet colored; in terminating spikes.


Polygala vulgaris. Park. 215.

On heaths and poor meadow ground. P. June—July.

Linnaeus found it to poffefs the properties of the Senega Raft-Seed Snake Root, (POLYGALA SENECA,) but in an inferior degree. Duhamel used it in Pleuritic Cafes with the defired fuccefs. Mem. de l'Acad. des Sc. de Par. 1740. The powdered root may be given in doxes of half a dram.—Cows, Goats and Swine refufe it; Swine refufe it.
TH E R A D S I N T W O S E T S.

Order IV. Ten Chives.

290 B R O O M. 858 Spartium.

Empal. Cup one leaf; heart-shaped, but tubular; small; coloured; the upper margin very short; the lower towards the end set with three or five little teeth.

Bloss. Butterfly-shaped; petals five.

Standard inversely heart-shaped; entirely reflected; large.

Wings egg-shaped; oblong; shorter than the standard; connected with the threads.

Keel two petals, spear-shaped; oblong; longer than the wings; connected at the keel-shaped margin by soft hairs; fixed to the threads.

Chives Threads ten; connected; unequal; the uppermost the shortest and from that growing gradually longer. The lower cloven into nine parts. Tips rather oblong.

Point. Seedbud oblong; hairy. Shaft awl-shaped; hairy; rising upwards. Summit fixed to the upper side of the shaft, near the end.

S. Vess. Shell cylindrical; long; blunt; with one cell and two valves.

Seeds. Many; globular, but somewhat kidney-shaped.

Common Scoparium

BROOM. The leaves growing by threes, and solitary.

Branches without prickles; angular—Blossom yellow.


Genista anguiflora trifolia. Ray's Syn. 475.

Genista, Gerard. 1311. vulgaris et scoparia. Park. 228.

Dry Pastures. S. May—June.

The young flowers are sometimes preserved as pickles—the plant when burnt affords a tolerably pure Alkaline Salt—Dr. Mead relates the case of a drophical patient that was cured by taking half a pint of a decoction of Green Broom tops, with a spoonful of whole Mustard-seed, every morning and evening. The patient had been tapped three times, and tried the usual remedies before. (Monita et præcept. Medica. p. 138.) An infusion of the seeds drank freely, has been known to produce similar happy effects: but whoever expects these effects to follow in every drophical case, will be greatly deceived. I knew them succeed in one case that was truly deplorable; but out of a great number of cases in which the medicine had a fair tryal, this proved a single instance.—Cows, Horses and Sheep refuse it.

The Broom Moth, Phalana Pifi feeds upon it.

291 GREEN-
TEN CHIVES.

291 GREENWOOD. 859 Genista.

EMP. Cup one leaf; small; tubular; mostly with two lips. Upper Lip with two teeth, more deeply divided than the Lower Lip which hath three teeth nearly equal.

BLOS. Butterfly-shaped.

Standard egg-shaped but sharp; distant from the keel; entirely reflected.

Wings oblong; flexible; shorter than the other petals.

Keel straight; notched at the end; longer than the standard.

CHIVES. Threads ten; connected; rising out of the keel.

Tipsimple.

POINT. Seedbud oblong. Shaft simple; rising upwards.

Summit sharp; rolled inwards.

S. VESS. Shell roundish; turgid; with one cell, and two valves.

SEEDS. Solitary; generally kidney-shaped.

GREENWOOD. The leaves spear-shaped and smooth; the Dyers branches scored, cylindrical and upright.—Blossoms yellow.

Tinctoria

Genista tinctoria vulgaris. Park. 298.
Dyers Weed. Wood Waxen.

Pastures, and cornfields. S. July.

A yellow colour may be prepared from the flowers.—A dram and a half of the powdered seeds, operates as a mild purgative. A decoction of the plant is sometimes diuretic, and therefore has proved serviceable in dropsical cases—Horses, Cows, Goats and Sheep eat it.

BROOM. Thorns simple; flowering branches unarmed; Prickly leaves spear-shaped.—Blossoms yellow.

Anglica

Genista aculeata. Gerard. 1320.
Genistella aculeata. Park. 1004.

Needle-furze. Petty-whin.

On moist heaths. S. May—June.

The Broom Moth, Phalaena Pifs, lives upon both species.

292 LADIES-
THREADS IN TWO SETS.

292 LADIESFINGER. 864 Anthyllis.

Empat. Cup one leaf; egg-shaped, but oblong; a little bladder-shaped; set with soft hairs. Rim with five unequal teeth, permanent.


Standard long; with reflected sides, and a claw as long as the cup.

Wings two; oblong; shorter than the standard.

Keel compressed; as long as the wings, and like them.

Chives. Threads ten; connected; rising upwards. Tips simple.


S. Vess. Shell roundish; inclosed in the cup; very small; with two valves.

Seeds. One or two.

Double-headed
Vulneraria

LADIESFINGER, Herbaceous: Leaves winged, unequal. Flowers in a double head—Blossoms yellow; sometimes red or scarlet; rarely white.


Kidney-Vetch.

Dry and Chalky pastures. P. July.

The country people get a yellow dye from it—it makes an excellent pasturage for Sheep.—Where the soil was a reddish clay Linnaeus observed the blossoms to be red, but in white clay the blossoms are white.—Goats and Cows eat it.
TEN CHIVES.

293 GORZE. 881 Ulex.

EMPAL. Cup two leaves; permanent. Leaves oblong egg-shaped; concave; straight; equal; a little shorter than the keel. The upper leaf with two teeth, the lower with three.

BLOSS. Butterfly-shaped, with five petals.

Standard inversely heart-shaped; notched at the end; straight; large.

Wings oblong; blunt; shorter than the standard.

Keel two petals; straight; blunt; approaching at the lower edge.

CHIVES. Threads ten; united. Tips simple.

POINT. Seedbud oblong; cylindrical; hairy. Shaft thread-shaped; rising upwards. Summit blunt; small.

S.VESS. Shell oblong; turgid; nearly inclosed by the cup; straight; with one cell, and two valves.

STIPS. Few; roundish; notched.

GORZE. The leaves woolly and sharp; the thorns scattered.

Europaean.


Gensia spinosa vulgaris, scu scoparius theophrasti, quem Gaza nepan transtulit. Park. 1003.

Furze. Whins.

Uncultivated ground. S. April—May.

It varies in the thorns being long or short.

This is a very hardy plant and will make fences upon the bleakest mountains, and close to the sea side, where the spray of the sea destroys almost every other shrub—it is cut to make faggots for heating ovens, which it does very soon, burning rapidly and with a great degree of heat—the ashes are used to make ley.—

Tea and fheese may be supported by this plant if it is cut young and bruised in a mill to break the thorns.—Goats, Cows, Sheep, and Horses feed upon the tender tops.
THREADS IN TWO SETS.

294 RESTHARROW. 863 Ononis.

**EMPAT.** Cup with five divisions; nearly as long as the blossom. **Segments** trap-shaped; taper; a little bowed upwards. The lowest segment placed under the keel.

**BLOSS.** Butterfly-shaped.

- **Standard** heart-shaped; scored; with the sides depressed more than usual.
- **Wings** egg-shaped; half as long as the standard.
- **Keel** tapering; generally longer than the wings.

**CHIVES.** Threads ten, united and forming a complete undivided cylinder. **Tips** simple.

**POINT.** Seedbud oblong; woolly. **Shaft** simple; rising upwards. **Summit** blunt.

**S. VESS.** Shell diamond-shaped; turgid; a little woolly; with one cell and two valves.

**SEEDS.** Few; kidney-shaped.

RESTHARROW, with flowers in bunches; one or two flowers standing together. Leaves growing by threes. Upper leaves solitary; branches without thorns, somewhat woolly—*In the beginning of summer it is smooth, but in the autumn it is said to become thorny. Blossoms red; purple, or white.*


Ray's Syn. 322.


1. Branches ending in thorns.


- Ononis spinosa. Hudson. 873.
- Barren ground. P. June—August.

Notwithstanding Linnaeus makes the thorny Rest-harrow only a variety of the other, and from the observations of Loffel, in the *Flora Praslica*, says it becomes thorny in the autumn; yet with us they seem to be different species; they are seldom found together, and the **Corn** Restharrow without thorns, hath never been observed to become thorny.

The smooth sort is sometimes pickled as Samphire—A decoction of the roots has been recommended in cases of Stone and Jaundice.—Cows and Goats eat it; Sheep are very fond of it; Horses and Swine refuse it.
TEN CHIVES. 449

RESTHARROW, with spreading stems and upright creeping branches. The upper leaves solitary, with egg-shaped props—Repeas flowers solitary; at the base of the leaves. Blossoms red, or almost white.

Anonis maritima procumbens; foliis hirsutis pubescentibus.

Ray's Syn. 332.


295 PEASELING. 871 Orobus.

EPAL. Cup one leaf; tubular; blunt at the base. Rim oblique; very short; with five teeth. The three lower teeth the sharpest. The two upper teeth shorter, deeper and more bluntly divided; thriving.

BLOSS. Buterfly-shaped.

Standard inversely heart-shaped; long; reflected at the end, and at the sides.

Wings two; oblong; nearly as long as the standard. Rising upwards; approaching.

Keel evidently cloven in the lower part; taper; rising upwards. Edges approaching; parallel; compressed. The bottom diffused.


POINT. Seedbox cylindrical; compressed. Shaft thread-shaped; bent upwards; upright. Summit narrow; downy from the middle to the end of the shaft, on the inner side.

S.VESS. Shell cylindrical; long; taper; with the point; ascending. One cell; two valves.

SEEDS. Many; roundish.

PEASELING. The leaves winged and spear-shaped. Props Heath half arrow-shaped; very entire. Stems simple—drooping; but Taberofus upright when in flower. Blossoms purple; three or four together.

Shells black; pendulous.

Orobus sylvaticus, foliis oblongis glabris. Ray's Syn. 334.

Affragalbus fylvefris foliis oblongis glabris. Bann. pin. 351.

Affragalbus sylvaticus. Gerard. 123.

Lathyrsus sylvaticus lignosior. Park. 1072.

Wood Peafe. Heath Peafe.

Pastures, woods and hedges. P. May.

The
THREADS IN TWO SETS.

The roots when boiled are savory and nutritious: ground to powder they may be made into bread—They are held in high esteem by the Highlanders of Scotland, who chew them, as our people do Tobacco, and find that they prevent the uneasy sensation of hunger. They imagine that they promote expectoration, and are very efficacious in curing disorders of the Lungs. They know how to prepare an intoxicating liquor from them. Pennant's Tour, 1772. p. 310. Ray's Hist. Plantar. p. 916. Horses, Cows, Goats and Sheep eat it.

Wood Sylvaticus

PEASELING. The stems branched, drooping; rough with hair—Leaves formed of about seven pair in a wing. Shell compressed. Seeds two or three. Blossom reddish on the outside; white within, with purple lines. Five or six flowers in a cluster. Orobus sylvaticus nostras. Ray's Syn. 324.


Woods and hedges. July.

296 PEA. 870 Pisum.

EMPAL. Cup one leaf; with five clefts; sharp; permanent. The two upper segments the broadest.

BLOSS. Butterfly-shaped.

Standard very broad; inversely heart-shaped; reflected; notched at the end; with a point between.

Wings two; circular; approaching; shorter than the standard.

Keel compressed; half moon-shaped; shorter than the wings.

CHIVES. Threads ten; One, simple; superiour; awl-shaped; flat. Nine, awl-shaped; united from the middle downwards into a cylinder, which is cloven towards the top. Tips roundish.

POINT. Seedbud oblong; compressed. Shaft ascending; triangular; membranaceous; keel-shaped; the sides bent outwards. Summit fixed to the superiour angle; oblong; woolly.

S. VESS. Shell large; long; somewhat cylindrical, (or else compressed below,) the point tapering upwards.

One cell; two valves.

SEEDS. Many; globular.
TEN CHIVES.

PEA. The leaf-stalks flatish on the upper side. Stems angu- Sea lar. Props arrow-shaped; fruit-stalks supporting many flowers Maritimum—Blossoms pale red and purple.

Pilum spontaneum maritimum anglicum. Park. 1659.
On the sea.shore. P. July.

In the year 1655, during a time of great scarcity, the people about Orford in Suffolk were preserved from perishing by eating the seeds of this plant, which grew there in great abundance upon the sea-coast. It has been supposed that the different sorts of garden Peas are only varieties of this, but the supposition is not well founded. —Cows, Horses, Sheep and Goats eat it.

It affords nourishment to the Broom Moth, Phalæna Pijii.

297 VETCHLING. 872 Lathyrus.

EMP. Cup one leaf; bell-shaped; with five shallow clefts.

Segments' spear-shaped; sharp; the two upper ones shortest, the lower one longest.


Standard inversely heart-shaped; large; reflected at the end and at the sides.

Wings oblong; crescent-shaped; short; blunt.

Keel half a circle; as large as the wings, but broader; opening inwardly at the middle.

CHIVES. Threads ten; rising upwards; nine united. Tips roundish.

POINt. Seedbud compressed; oblong; narrow. Shaft upright, flat, and broad towards the top; sharp at the end. Summit woolly; extending from the middle of the shaft to the end, along the fore part.

S. Vess. Shell very long; cylindrical or compressed; tapering to a point. Valves two.

SEEDS. Many; either cylindrical or nearly globular.

Obs. The chief difference betwixt this and the preceding Genus con- fi in the shaft.

* Fruit.
THREADS IN TWO SETS.

* Fruit-stalks bearing only one flower.

Yellow Aplaca

VECTHLING. The fruit-stalks supporting one flower.

Tendrils without leaves. Props between heart and arrow-shaped —The Tendrils have sometimes two spear-shaped leaves joined together at the base, but this is very rare. Blossoms yellow.


Vicia lutea foliis convolvuli minoris. Baub. pin. 345.

Corn-fields. A. June—July.

The seeds both of this and of all the other species are nutritious either eaten in broth, or made into bread—

Crimson Nittolia

VECTHLING. The fruit-stalks supporting one flower; leaves simple: prop is awl-shaped — Stem upright; without tendrils.

Shells long; pendant; bairy. Blossoms crimson.

Lathyrus sylvvestris minor. Baub. pin. 344.

Catanance leguminosa quorundam. Ray's Syn. 322.


Crimson Gruss-vetch.

Round corn-fields. A. May.

This is a very beautiful plant and merits a place in our flower-gardens.

** Fruit-stalks bearing more than one flower.

Rough Hirficus

VECTHLING. The fruit-stalks generally supporting two or three flowers. Tendrils furnished with two leaves. Leaves spear-shaped: shells hairy; seeds rough — Blossoms crimson, with yellow lines within.

Lathyrus siliqua hisfuta. Ray's Syn. 326.

Lathyrus angustifolius, siliqua hisfuta. Baub. pin. 344.

Rough-codded Chickling Vetch.

Corn-fields. A. July.

Tare Pratensis

VECTHLING. The fruit-stalks supporting many flowers. Tendrils furnished with two very simple leaves. Little leaves spear-shaped — The Tendrils are sometimes divided into three parts. Props very entire; balsead-shaped. Fruit-stalks four-cornered. Blossoms yellow. Shells black and smooth.

Lathyrus luteus sylvvestris dumetorum. Ray's Syn. 328.


Lathyrus sylvvestris luteus, foliiis Viciea. Baub. pin. 344.

Tare Everlasting. Common yellow Vetchling.

Woods, hedges, meadows and pastures. 4. July—August.

Horset, Cows, Sheep and Goats eat it: Swine refuse it.

VECTHLING.
VETCHLING. The fruit-stalks supporting many flowers: Narrow-leaved Tendrils furnished with two leaves. Little leaves sword-shaped. Sylvestris stems membranaceous betwixt the joints—Spreading wide, climbing, or drooping. Props nearly shaped; very narrow. Fruit-stalks rough at the edges. Little leaves not broader than the stems. Blossoms red, or white; sometimes by cultivation dark purple.

Lathyrus sylvestris major. Baub. pin. 344.

Lathyrus sylvestris. Park. 1061.

Lathyrus majoris species flore rubente et albido minore dumentorum seu Germanicus. Ray's Syn. 319.

Narrow-leaved Pease-everlasting.

Woods and hedges. P. July—August.

Horses, Cows, Sheep and Goats eat it.

VETCHLING. The fruit-stalks supporting many flowers: Broad-leaved Tendrils furnished with two leaves. Little leaves spear-shaped. Latifolius stems membranaceous betwixt the joints—Props almost baldered; broader than the stem. Leaves much broader than the stem. Blossoms pale purple.


Lathyrus latifolius. Baub. pin. 344.

Lathyrus major perennis. Park. 1061.

Broad-leaved Pease-everlasting.

Woods and hedges. P. July.

VETCHLING. The fruit-stalks supporting many flowers: Marsh Tendrils furnished with many leaves. Props spear-shaped—Palustris Blossoms blue and red.

Lathyrus peregrinus, folis vicinis, flore subcaeruleo pallidine puberulente. Baub. pin. 344.

Lathyrus vicinus formis, feu vicia Lathyroides nostras. Ray's Æ. 320.

Marsh chickling Vetch.

Wet pastures. P. July—August.

Horses, Cows, Sheep and Goats eat it.
THREADS IN TWO SETS.

298 VETCH. 873 Vicia.

Emfal. Cup one leaf; tubular; upright; with five shallow clefts; sharp. The upper teeth shortest; approaching. All the teeth equal in breadth.


Standard oval; with a broad oblong claw; notched at the end, with a sharp point in the middle; reflected at the sides, compressed and raised in a line running lengthways.

Wings two; oblong; upright; in the shape of half a heart; with an oblong claw; shorter than the standard.

Ked with an oblong cloven claw; the hollow part compressed; in the shape of half a circle; shorter than the wings.

Chives. Threads ten; nine united. Tips upright; roundish; with four furrows.

Honey-cup Gland short; tapering; arising from the receptacle and situated betwixt the united threads and the seed-bud.

Point. Seed-bud narrow; compressed; long. Shaft thread-shaped; rather short; bent upwards. Summit blunt; bearded on the under-side, at the end.

S. Vess. Shell long; like leather; with two valves and one cell; terminated by a point.

Seeds. Many; roundish.

* With long fruit-stalks.

Wood Sylvatica

VETCH. The fruit-stalks supporting many flowers. Little leaves oval; props toothed—Blossoms white, with blue streaks.

Vicia sylvatica multiflora. Ray's Syn. 322.
Tusfed Wood Vetch.
Woods and hedges. P. July—August.
Horses, Cows, Sheep and Goats eat it.

VETCH.
TEN CHIVES.

VETCH. The fruit-stalks supporting many flowers, lying Tufted one over another: little leaves spear-shaped; downy. Props en—Cracca tire—Blossoms purple.


Cracca. Ray’s Syn. 322.

Woods and hedges. P. July—August.

Dr. Plot, in his Nat. Hist. of Staffordshire. p. 204, says, that this and the preceding species advance flarven or weak Cattle above any thing yet known.—Horses, Cows, Sheep and Goats eat it: Swine are not fond of it.

The Vetch Louse, Apis Craccae lives upon it.

* * Flowers at the base of the leaves; almost sifting.

VETCH. Shells sifting; generally two together; upright. Cultivated Leaves indented at the end. Props marked with a spot on the Sativa under-side—Blossoms light and dark purple. Teeth of the cup nearly equal.


Vicia sativa vulgaris feminine negro. Baub. pin. 344.

1. There is a variety in which the seeds are white. Baub. pin. 344.

Common Vetch, or Tare.

Amongst corn. A. May—June.

In Gloucestershire they sow it as pasturage for Horses, and eat it off early enough to allow of Turneps being sown the same year—The seeds are excellent food for Pidgeons.—Horses, Cows, Sheep and Goats eat it.

VETCH. Shells sifting; solitary; upright; smooth. Six Wild little leaves on each leaf-stalk; the lower ones inverely heart. Lathyrider shaped—Blossoms bright red. Shells smooth; about nine seeds in each. Teeth of the cup nearly equal.

Vicia sylvestris, seu Cracca major. Gerard. 1227.

Vicia feminine rotundo negro. Baub. pin. 345.

Aracus, seu Cracca major. Park. 1070.

1. There is a variety in which the flower is very red, and the seed-vesiell long and black. Ray’s Syn. 321.

Singly Tare.

Sandy corn-fields and dry pastures. A. May.
THREADS IN TWO SETS.

VETCH. Shells sitting; reflected; hairy; solitary; five seeds in each. Standard of the blossom smooth—There are varieties in which the leaves are dent'd; the shells almost smooth; the props alternately entire and with three teeth. Blossoms yellow.

Vicia sylvestris lutea filiqua hirsuta. Baub. pin. 345.
Meadows and pastures. A. June—July.

VETCH. Shells on little foot-stalks; generally four together; upright. Little leaves egg-shaped, very entire, growing gradually smaller towards the end—Caps rough with hair; on very short fruit-stalks. Blossoms purple.

Vicia sepium folio rotundico acuto. Baub. pin. 345.
Woods, hedges and pastures. P. May.

Horses, Cows, Goats, Sheep and Swine eat it.

299 COCKLEWORT. 892 Astragalus.

EMPAL. Cap one leaf; tubular; with five sharp teeth; the lower teeth gradually growing smaller.

BLOSS. Butterfly-shaped.

Standard longer than the other petals; reflected at the sides; notched at the end; blunt; straight.

Wings oblong; shorter than the standard.

Keel as long as the wings; notched at the end.

CHIVES. Threads ten; almost straight; nine united. Tips roundish.


S. VESS. Shell with two cells; the cells bending to one side.

SEEDS. Kidney-shaped.

COCKLEWORT. Stems prostrate. Shells nearly three cornered and bent like a bow. Little leaves oval; longer than the fruit-stalks—Blossoms pale yellow.

Glaux vulgaris, feu Glycyrhiza sylvestris. Park. 1092.
Glycyrrhiza sylvestris floribus luteo pallescensibus. Baub. pin.

358
Hedysarum glycyrrhizatum. Gerard. 1832.
Wild Liquorice. Liquorice Vetch.
Meadows and hedges. P. June—July.

Horses, Cows, Goats and Sheep eat it: Swine refuse it.

COCKLE-
TEN CHIVES.


300 TREFOIL. 896 Trifolium.

Flowers forming a little Rundle or Head, upon a common receptacle.

EMP. Cup one leaf; tubular; with five teeth; permanent.

BLO. Butterfly-shaped; generally permanent; shriveling.
    Standard reflected.
    Wings shorter than the Standard.
    Keel shorter than the wings.

CHIVES. Threads ten; nine united. Tips simple.


SV. Shell short; with one valve, not opening; deciduous.

SEED. Very few. Roundish.

Obs. Perhaps nothing is more difficult than to give an absolute and essential character to this Genus, notwithstanding the general habit and the properties of the plants which compose it shew that it is a natural one; and those who attempt to divide it, have not been able to fix any bounds to their labours.

* Shells naked, containing several seeds.


This is more fragrant when dry than when green. A water distilled from the flowers posesfes but little odour in itself, but it improves the flavour of other substances—Horres are extremely fond of: Cows, Goats, Sheep and Swine eat it.

TREFOIL.
THREADS IN TWO SETS.

Birds-foot Trefoil. Shells naked; generally three together; eight
Melilot: Orna-
rted.

Fænum gracæm humile repens, Ornithopodiis siliquis brevibus
erecis. Ray's Syn. 331.
Sandy places. A. June.

** Shells covered. Seeds four.

Dutch

TREFOIL. Flowers in heads somewhat resembling rundles.
shells with four seeds. Stem ascending—branched, furrowed;
about a foot high. Props spear-shaped; sharp; terminating in a
hair. Little leaves egg-shaped; sharp; serrated, and toothed.
Fruit-stalks not very long, but jointed. Receptacle egg-shaped,
concave. Chaff spear-shaped; narrow; very sharp; Blossoms
gaping.
It is very probable that this plant was at first produced by the
dust of the fifth species fertilizing the seedbud of the fourth
species.
Pastures. P. May—September.

White

TREFOIL. Flowers in heads, somewhat resembling rundles.
Shells with four seeds. Stem creeping—Undivided; cylindrical,
about a span long. Props round; blunt. Little leaves round; very
blunt. Fruit-stalks very long. Receptacle narrow; solid. Chaff
egg-shaped; oblong; blunt. Blossoms white. The leaves stand
upright against rain.
Ray's Syn. 327.
Trifolium minus pratense, flore albo, seu 2. Gerard. 1185.
Meadows and pastures. P. May—September.
Horset, Cows and Goats eat it; Sheep are not fond of it; Swine refuse it.

*** Cups woolly.

Subterranean

TREFOIL. Heads woolly; five flowers in each; with a
bushy substance in the middle; reflected; rigid; involving the
seedvessel—Shells frequently under the surface of the earth. Bloss-
oms white.
Trifolium pumilum supinum, flosculis longis albis. Ray's Syn.
327.
Barren pastures. A. May.
TEN CHIVES.

TREFOIL. Flowers in rather woolly spikes, inclofed by op. Honeyfuckle pædie membranaceous props. Blossoms of one petal—The spikes Pratensis of flowers are sitting between two opposite sitting leaves, whose mem-

brainaceous props expanding form a sort of common emplacement. The

Cup of the fruit is furnished with five acorns or bristles, the four

uppermost of which are expanding, but the fifth and lowermost stands

upright. Blossoms red; purple; or yellowish white.


328. Ray’s Syn. 328.

Trifolium pratense purpureum vulgare. Park. 1110.


328. Tab. 13. fig. 1

1. Large cultivated purple Trefoil. Ray’s Syn. 328.

Purple or Honey-fuckle Trefoil. 2 Clover.

Meadows and pastures. P. May—September.

The flowering heads are used in Scandinavia to dye woollen cloth green. With alum they give a light, with copperas a dark green. The variety (2) engages much of the Farmers attention in modern husbandry: it is either grazed upon the ground, or made into hay. Swine, Goats, Sheep, Horses and Cows are all

food of it.

TREFOIL. Flowers in somewhat globular spikes; terminat-Purple

ing; woolly. Stem upright. Leaves spear-shaped and a little Alpelta
termated—Blossoms a deep purple. This is distinguished from the

flowering species in having two terminating heads of flowers, whereas

that bath but one. In this the Props are green; in that they are

brown, with red veins. In this the uppermost props are spear-shaped

much fide; in that somewhat egg-shaped.

Trifolium medium. Hudson. 284.

Trifolium purpureum majus, folis longioribus et anguliori-

bus, floribus faturioribus. Ray’s Syn. 328.

Trifolium montanum purpureum majus. Bauh. pin. 328.

Long-leaved purple Trefoil.

Hilly countries and high pastures. P. July.

F 4 TREFOIL.
THREADS IN TWO SETS.

Hares-foot

TREFOIL. Flowers in woolly oval spikes. The teeth of the cups bristle-shaped; woolly: equal—Longer than the blossom; which is pale red, with a bloody spot on the inner side of each of the wings. Trifolium arvense humile spinacatum, seu Lagopus. **Baub. pin. 328. Ray’s Syn. 330.**

Lagopus vulgaris. **Park. 1107.**

Lagopodium five pes Leporis. **Gerard. 1192.**

In sandy ground and on the sea-shore. A. July—August.

1. A small elegant variety growing on the sea-coast observed by Dillenius who gives a fig. and a description of it in Ray’s Syn. 330. **T. 14. F. 2.**

Lagopus perpusillus sipinus perelegans maritimus. Ph, Br. **Ray’s ibid.**

Avense

Teasel-headed

TREFOIL. Flowers in woolly globular spikes; segments of the flower-cup equal; open. Stem ascending. Leaves wedge-shaped; hairy. **Huds. Fl. Ang. 284—Blossoms, small, purple or white.**

Trifolium stellatum glabrum. **Gerard. 1207. Ray’s Syn. 329.**

In salt marshes, and meadows near the sea-shore. **P. July.**

Maritimum

Ons. **Linnaeus has a species (the Stellatum) which corresponds pretty nearly with Hudson’s description, but they appear to be distinct plants.**

Yellow-flowered

TREFOIL. Flowers in woolly spikes. Stem upright; downy. Lower leaves inversely heart-shaped—Upper leaves narrow; very entire. Spikes on fruit-stalks; acroling. The lowermost tooth of the cup the largest. Blossoms the colour of brimstone.

Trifolium pratense hirsutum majus, flore albo sulphureo. **Ray’s Syn. 328.**

Dry pastures. **B. May—June.**

Ochroleucum

Oval-headed

TREFOIL. Flowers in heads; fitting; lateral; egg-shaped. Segments of the cups unequal; stiff; reflected—Stems but little brasiled. Little leaves oval; rather thick; somewhat scoloped at the edge. Blossoms white; slender; as long as the cup.

Trifolium capitulo oblongo aspero. **Baub. pin. 329.**

Trifolium flosculis albis, in glomerulis oblongis asperis, cauliculis proxime adnatis. **Ray’s Syn. 329.**

Ox Chalk-hills. **A. May—June.**

Scabrum

Round-headed

TREFOIL. Flowers in hemispherical rigid heads. Cups scored; open; equal—Blossoms pale red.

Trifolium cum glomerulis ad caulium nodos rotundis. **Ray’s Syn. 329.**

Sandy ground. **A. June.**

Glomeratum

TREFOIL.
TENCHIVES.

TREFOIL. Flowers in egg-shaped, almost lateral, fitting Knotted heads. Cups scored, rounded—Blossoms pale purple. Striatum
Trifolium parvum hirsutum, floribus parvis dilute purpureis, in glomerulis mollioribus et oblongis; semine magno. Ray’s Syn. 329. Tab. 12. fig. 3.
Dry pastures. A. June.

*** Cups bladder-shaped.

TREFOIL. Flowers in roundish spikes. Cups bladder-shaped; Strawberry with two teeth; reflected. Stems creeping—Fruit-stalks longer Fragiferum than the leaves. Stems sending out roots. Cups a little downy. Blossoms white
but sometimes with a reddish tinge.
Trifolium Fragiferum frificum. Baub. pin. 329. Park. 110g.
Meadows and moist pastures. P. August.
Cows eat it.

***** Standard of the blossom bent inwards.

Gravelly soil. A. June.
Horses, Cows, Sheep and Goats eat it.

TREFOIL. Flowers in oval tiled spikes. Standards of the Trailing blossoms bent downwards; permanent. Stems trailing—Flowers Procumbens about ten or twelve. Leaves not scored. Stems long and lying entirely upon the ground. Blossoms yellow.
14. Fig. 3.
Decumbent Trefoil.
Meadows and pastures. P. May—August.
Horses, Cows, Sheep, and Goats eat it.

TREFOIL.
THREADS IN TWO SETS.

TREFOIL. Flowers in spikes somewhat tiled. Standards of the blossoms bent downwards; permanent. Cups supported on little foot-stalks. Stems trailing—Little leaves notched at the end, scored. Fruit-stalks thread-shaped: longer than the leaves; not much thicker than a horse-hair; three or five distinct florets in each little head. Blossoms yellow.


Sandy pastures. A. May—June.

The flowers of all the species dried and powdered make bread, which in times of scarcity hath preferred the inhabitants of Scotland from perishing—the leaves of all the species fold up before rain.

The plantain frillitary Butterfly, Papilio Cinxia, and the Black Tuftock Moth, Phalaena Eupecelina, live upon the different species.

301 SAINTFOIN. 887 Hedysarum.

EMP. Cup one leaf; with five shallow clefts. Segments awl-shaped; upright; permanent.

BLOSS. Butterfly-shaped; scored.

Standard reflected and compressed; egg-shaped but oblong; notched at the end; long.

Wings oblong; narrower than the other petals; straight.

Keel straight; compressed; broadest at the outer part, and almost square; cloven from the base to the broader part.

CHIVES. Threads ten; with an angular bend. Tips roundish; compressed.

POINT. Seedbud slender; compressed; strap-shaped; Shaft awl-shaped; bent like the chives. Summit undivided.

S. VESS. Shell with roundish joints; compressed; with two valves, and one feed.

SEED. Kidney-shaped; solitary.

Obs. In the only British species the shell consists of one joint, but in some of the foreign species it is formed of several joints connected together like the links of a chain.

SAINTFOIN.
SAINTFOIN. Leaves winged; shells prickly, containing Cocks-head a single seed. The wings of the blossom shorter than the cup. Onobrychis stem long—Blossoms red.

Onobrychis vulgaris. Park. 1082.

Saintfoin. Cocks-head.
Meadows and pastures, particularly in chalky soils. P. July.
The following varieties arise in cultivation.
1. White blossomed.
2. Blue ditto.
3. Purple ditto.
4. Striped ditto.
5. Long-leaved hoary.
This is cultivated like Clover for feeding cattle, and is particularly advantageous in dry hilly situations, and chalky soils.

302 BIRDSFOOT. 884 Ornithopus.

Rundle simple.

EMPAL. Cup one leaf; tubular; Rim with five teeth; nearly equal; permanent.

BLOSSOM. Butterfly-shaped.

Standard inversely heart-shaped; entire.

Wings egg-shaped; straight; hardly so large as the standard.

Keel compressed; very small.

CHIVES. Threads ten; nine united. TIPS simple.

POINT. Seedbud narrow. Shaft bristle-shaped; ascending. Summit a dot at the end of the shaft.

S. VESS. Shell awl-shaped; cylindrical; bent like a bow; separated into joints; opening joint by joint.

SEEDS. Solitary, roundish.

BIRDSFOOT. Leaves winged; shells crooked—Blossoms Common yellow; purple, and white. The plant is smooth. The Leaves on Perpusillus leaf-stalks.

Ornithopodium radice nodosa. Park. 1093.
In gravelly land. P. May—August.

303 HORSE-
THREADS IN TWO SETS.

303 HORSESHOE. 885 Hippocrepis.

Rundle simple.

EMPL. Cup one leaf; with five teeth. The two upper teeth not so deeply divided, and nearly joined; permanent.

BLOSS. Butterfly-shaped.

Standard heart-shaped; with a claw as long as the cup.

Wings oblong egg-shaped; blunt.

Keel crescent-shaped; compressed.

CHIVES. Threads ten; nine united; ascending. Tips simple.

POINT. Seedbud slender; oblong; ending in an awl-shaped Shaft; ascending. Summit undivided.

S.VESS. Shell compressed; membranaceous; very long; crooked; deeply indented along one seam into roundish hollows, so that it appears as if composed of many three-edged joints connected together by the upper seam.

SEEDS. Oblong; crooked; one in each joint.

Obs. The essential character of this genus consists in the Shell being shaped like a horse-shoe.

Tufted Comosa

HORSESHOE. Shells on fruit-flalks crowded together; bowed; serpentine on the outer edge—Blossoms yellow.


Ferrum Equinum comosum. Park. 1091.


Tufted Horse-shoe Vetch.

On Chalky Hills. P. July.
TEN CHIVES.

304 SNAIL-SHELL. 399 Medicago.

Emp. Cup one leaf; straight; cylindrical, but somewhat bell-shaped; with five shallow clefts; taper; equal.


Standard egg-shaped; entire; bent inwards at the edges; the whole petal reflected.

Wings oblong egg-shaped: fixed to the appendage of the keel; approaching at the sides under the keel.

Keel oblong; cloven; expanding; blunt; bent downwards by the pointal, and with the standard forming a gaping mouth.

Chives. Threads ten; united almost the whole length. Tips small.

Poin. Seedbud standing on a little foot-stalk; oblong; bowed inwards; compressed; inclosed by the threads; burting out of the keel and pressing back the standard; ending in a shaft which is short; awl-shaped; generally straight. Summit terminating; small.

S.Vess. Shell compressed; long; bent inwards.

Seeds. Many; kidney-shaped, or angular.

Obs. The shell in some species is rolled up spirally like a snail-shell; in others it is bent like a bow or a sickle.

SNAIL-SHELL. Fruit-stalks in bunches; shells twisted in Lucern a wreath: Stem upright; smooth. Leaves numerous; serrated; Sativa three on each leaf-stalk. Blossoms purple.

Meadows and pastures. P. June—July.

The modern writers upon husbandry strongly recommend the cultivation of this plant for the purpose of feeding cattle, but it is not yet generally adopted.

SNAIL-SHELL. Fruit-stalks in bunches. Shells crescent—Yellow flapped; stem prostrate—Blossoms yellow. Falcata

Medica fylveftris. Ray's Syn. 333.

Medica trufecens flavo foio clutii. Park. 1114.

Trifolium luteum filiqua cornuta, Gerard. 1191.


Yellow Medick. Butterjags.

Roads, and foot-ways in Norfolk. P. July.

In hot, dry, barren sandy places it is well worth the trouble of sowing for the purpose of making hay. A practice long since adopted in some parts of Sweden.—Cows, Horfes, Goats, and Sheep eat it.
THREADS IN TWO SETS.

Melilot
Lupulina

SNAIL-SHELL. Flowers in oval spikes. Shells kidney-shaped; one seed in each. Stems trailing—Shells scores; wrinkled; set with stiff hairs. Blooms yellow.

Trifolium montanum lupulinum. Park. 1105.
Trifolium pratense luteum, capitolo breviore. Bauh. pin. 328.
Melilot Trefoil.

Corn-fields and sandy pastures. A. May—August.

Cows, Horses, Goats and Sheep eat it; but it is less grateful to them than the other species.

Wreathed
Polymorpha

SNAIL-SHELL. With shells resembling a snail-shell; prop toothed; stem spreading—

The varieties of this species are often cultivated in our flower gardens for the sake of the curiously formed feed-vessels, which bear some resemblance to green Caterpillars, Snail-shells, Hedge-hogs, &c. The following are the principal varieties.

With prickly shells; generally three together. Little leaves heart-shaped—With a brown spot upon each. Props fringed. Blooms yellow.

Trifolium coxleatum folio cordato maculato. Bauh's pin. 329.
Ray's Syn. 333

Trifolium Cordatum. Gerard. 1190.
Meadows, dry pastures; and near the sea-shore. A. May.

With prickly shells; prickles hooked; alternate. Props entire—Shells sereeral together.

Medica echinata minima. Ray's Syn. 333.
Smallest Hedge-hog Trefoil.
In sandy places. A. May.

With shells rather compressed, and covered with soft prickles.

Trifolium coxleatum modiolus spinosus. Ray's Syn. 333.
Hedge-hog Trefoil with small fruit like the segment of a cone, or navel of a cart-wheel.
Near the sea-shore. A.

With prickly shells; and the upper leaves covered with soft hair.

Medica marina supina nostra foliis ad summus ramulos villosis. Ray's Syn. 334.
On the sea-shore. A.

With rough shells covered with small tubercles; without prickles; slightly compressed; about ten growing on a fruit-stalk.

Medica polycarpus fructu minore compresso scabro. Ray's Syn. 333.

Trifolium coxleatum polycarpon five medica racemosa. Park. 1114.
In corn-fields. A. May.

305 TARE.
Ten Chives.

305 TARE. 874 Ervum.

Emp. Cup with five divisions; nearly as long as the blossom. Segments narrow; tapering; nearly equal.


Standard flat; a little reflected; circular; large.

Wings blunt; half as long as the standard.

Keel shorter than the wings; tapering.

Chives. Threads ten; rising upwards; nine united.

Tips simple.

Point. Seedbud oblong. Shaft simple; rising upwards; summit blunt; without a beard.

S. Vess. Shell oblong; blunt; cylindrical; with protuberances formed by the seeds.

Seeds. Four; nearly round.

Obs. The chief difference between this Genus and the Vetch consists in the summit. In the Smooth Tare the cup is cut into five unequal teeth; and the summit when viewed through a microscope appears bearded, so that it is ought to have been arranged with the Vetches.

TARE. With about two flowers on a fruit-stalk. Seeds globose; four in each shell — Little leaves about ten; generally alternate. Fruit-stalks hair-like; very slender; supporting one or two flowers. Flowers small; violet or blood-coloured. Shell oblong oval; smooth.

Vicia fegetum, singularibus filiquis glabris. Bauh. pin. 345.

Cracca minor filiquis singularibus, florulcis caerulecentibus.

Ray's Syn. 322.

Corn-fields. A. June.

Horset, Cows, Goats and Sheep eat it.

TARE. With many flowers on a fruit-stalk. Seeds globular, hairy; two in each shell — Blossoms blue and cobaltic. Hirsutum

Vicia fegetum cum filiquis plurimis hirsutis. Bauh. pin. 345.

Vicia sylvaticus, seu cracca minima. Gerard. 1028.

Arachus, seu cracca minor. Park. 1070.

Cracca minor. Ray's Syn. 322.

Corn-fields. A. June.

Horset, Cows, Goats and Sheep eat it.

TARE—
THREADS IN TWO SETS.

TARE. The fruit-stalks supporting about two flowers, with awns. Leaf-stalks tapering. Little leaves blunt—Stem seven or eight inches high; a little downy. Fruit-stalks longer than the leaves; terminated by a tendril, under which are one or two flowers on little fruit-stalks; alternate. Blossoms purple.


In chalky soils. A. April—May.

306 C L A V E R. 897 Lotus.

Rundle simple.

EMPAL. Cup one leaf; cylindrical; with five shallow clefts. Teeth sharp; equal; upright; permanent.


Standard circular; bent downwards; with an oblong concave claw.

Wings circular; shorter than the standard; broad; approaching upwards.

Keel hunched in the lower part; closed above; taper; ascending; short.

CHIVES. Threads ten; ascending; nine united; rather broad at the ends. Tips small; simple.

POINT. Seedbud cylindrical; oblong. Shaft simple; ascending. Summit a dot, bending inwards.

S. VESS. Shell cylindrical; stiff and straight; full; longer than the cup; with two valves, one cell, and as if transversely divided into many.

SEEDS. Many; cylindrical.

Birds-foot CLAVER. Flowers in depressed heads. Stems drooping.

Shells cylindrical; expanding—Blossoms yellow. Seeds numerous.


Lotus, seu melilotus pentaphyllos minor glabra. Baub. pin. 332.

Trifolium filicum minus. Gerard. 1191.

Birds-foot Trefoil.


Leffer, bushy, narrow-leaved Birds-foot Trefoil.

2. Flowers large; yellow; shining. Baub. pin. 332.

Greater Birds-foot Trefoil.

3. A larger variety, but little hairy. Ray's Syn. 334.

4. Leaves white with down on the under surface. Ray's Syn. 334.


In Hertfordshire it is cultivated as pastureage for sheep—The flowers become greenish when dried, and in this respect they resemble the flowers of the plants that produce Indigo.—Cows, Goats and Horses eat it; Sheep and Swine are not fond of it.

The Skipping Thrips, Thrips Physiopus is found upon it.

CLASS
CLASS XVIII.

THREADS in many SETS.

This Class comprehends the Plants whose Flowers have the Chives united by the Threads into three or more Sets.

Order IV. Many Chives.

307 TUTSAN. - Cup with five divisions: beneath. Bloss: five Petals. Shaft one, three or five. Capsule with one or more Cells.

Vol. II. G 307 TUTSAN.
THREADS IN MANY SETS.

307 TUTSAN. 902 Hypericum.

EMPAL. Cup with five divisions. Segments somewhat egg-shaped; concaeve; permanent.

BLOSS. Petals five, oblong egg-shaped; blunt; expanding; bending from the left to the right.

CHIVES. Threads numerous; hair-like; connected at the base into three or five sets. Tips small.

POINT. Seedbud roundish. Shafts three (sometimes one or two or five) simple; distant; as long as the chives.

S. VEES. Capsule roundish; with as many cells as there are shafts.

SEEDS. Several; oblong.

TUTSAN. Flowers with three shafts. Fruit like a berry.

St. Peter's Quadrangulum. TUTSAN. Flowers with three shafts. Fruit like a berry.

Androænum. Stem somewhat woody, two edged—Blossoms yellow.

Hypericum maximum Androænum vulgare dictum. Ray's Syn. 343.

Androænum vulgare. Park. 575.

Androænum maximum frutescens. Baub. pin. 250.

Clymenium Italorum. Gerard. 548.


Woods and moist hedges. P. July.

This plant is not uncommon in our flower-gardens.

TUTSAN. Flowers with three shafts. Stem four-cornered; herbaceous—Blossoms yellow.

Hypericum Alcyron dictum, Caule quadrangulo. Ray's Syn. 344.


St. Peter's-wort.

Moist hedges. P. July.

Cows, Goats and Sheep eat it; Horses and Swine refuse it.

TUTSAN. Flowers with three shafts. Stem two edged; Leaves blunt; with semi-transparent dots—Flowers open at night as well as in the day. Blossoms yellow. When cultivated, the dots on the leaves are sometimes red. Tips double; yellow; furnished with a small black gland.


Saint John's wort.

In rough uncultivated grounds and hedges. P. July.

This
MANY CHIVES.

This plant has long held a place in the Medicinal catalogues, but its use is very much undetermined. The semi-transparent dots on the leaves are the receptacles of an essental oil. The leaves given in substance are said to destroy worms. The flowers tinge spirits and oils of a fine purple colour, which is probably derived from the little glands upon the tips, and upon the edges of the petals. Cows, Goats and Sheep eat it; Horses and Swine refuse it.

TUTSAN. Flowers with three shafts; at the base of the Trailing leaves; solitary. Stems two-edged; prostrate; thread-shaped. Humifolium leaves smooth.—Greatly resembling the preceding species; but the leaves have no transparent dots. Blossoms yellow.

Hypericum minus supinum. Park. 572. Ray’s Syn. 343.
1. Leaves growing by threes.
Gravelly soil. P. July.

TUTSAN. Flowers with three shafts. Cups serrated, and Mountain glandular. Stem cylindrical; upright. Leaves egg-shaped; Montanum smooth. Floral leaves at the top of the Stem, small, and fringed with glands. Blossoms yellow.

Hypericum elegantissimum non tamosium, folio lato. Ray’s Syn. 343.
Aleyron feu Hypericum bifolium glabrum non perforatum. Bauh. pin. 280.
Mountain St. John’s-wort.
Woods and rough hilly ground. P. July.


Androsemum hirfutum. Bauh. pin. 280.
Hairy St. John’s-wort.

1. Leaves oblong egg-shaped; on short leaf-stalks. Segments oblong of the cup oblong; sharp.

Hedges and rough grounds. P. July.
Sheep eat; Horses refuse it.
TUTSAN. Flowers with three shafts. Stem cylindrical; creeping. Leaves circular; woolly—Blossoms yellow. 
574. Ray's Syn. 344. 
Marsh St. John's wort. 
In putrid bogs and amongst Peat. July.

TUTSANE. Flowers with three shafts. Cups serrated, and glandular. Leaves heart-shaped; smooth; with semi transparent dots. Stem cylindrical—Blossoms yellow, with a tinge of red. 
Hypericum minus erectum. Baub. pin. 279. 
Hypericum pulchrum Tragi. Ray's Syn. 342. 
Hypericum quintum seu pulchrum Tragi. Gerard. 540. 
Upright St. John's-wort. 
Woods, hedges and heaths. P. July.

CLASS.
CLASS. XIX.

This Class comprehends those Flowers which Mankind have very generally agreed to call Compound. The essential character of a Compound Flower consists in the Tis being united so as to form a Cylinder, and a single Seed being placed upon the Receptacle under each Floret. The Dandelion and the Thistle are compound Flowers; that is, each of these Flowers are compounded or compounded of a number of smaller Flowers, called Florets.

Character of the Flower.

It is composed of many Florets, sitting upon a Common Receptacle, and inclosed by one Common Empalement. The Surface of the Receptacle is either concave; flat; convex; pyramidal; or globular. It is either Naked, that is, marked only with little dots, as in Dandelion; or Hairy; covered with soft upright hairs as in Thistle; or Caffy; beset with awl-shaped, narrow, compressed, upright chaffy substances, separating the Florets, as in Chamomile or Yarrow.

The Common Empale is a Cup which surrounds the Florets and the common Receptacle. (When the Florets have blossomed it contracts; but when the Seeds are ripe it expands and falls back.) It is either Scape; when formed with only a single row of scales or Leaves.

Tid; when the scales are numerous, the outer ones gradually growing shorter and lying upon the inner ones, like the Tiles upon a House.

Leaff; when a single row of equal and longer segments stands next to the florets, and another row of very small scales surrounds the base of those segments.
Tips United.

The structure of the Florets that compose a compound flower, will be best understood by pulling to pieces the flower of a Thistle, or of Dandelion, or of the Sunflower, and comparing the Florets with the following.

Natural Character of a Floret.

Empal. None but the crown of the seed sitting upon the top of the seedbud.
Bloss. One petal. Tube very slender and long; sitting upon the seedbud. (it is either)
2. Narrow. Border strap-shaped; flat; turned outwards; lopped at the end, which is either entire, or marked with three or five teeth.
3. None. Border wanting; and sometimes the petal is altogether deficient.

Chives. Threads five; hair-like; very short; fixed to the neck of the blossom. Tips five; upright; strap-shaped; connected at the sides so as to form a hollow cylinder, as long as the border of the blossom, and marked at the top with five teeth.

Point. Seedbud oblong; standing under the blossom upon the common receptacle. Shaft thread-shaped; upright; as long as the chives; passing through the hollow cylinder formed by the tips. Summit cloven; the segments rolled back and expanding.

S. Vess. Properly speaking, none; though in some foreign Genera there is a sort of leathery crust over the seed.

Seed. Single; oblong; frequently with four edges; generally narrower towards the base.

Crowned with a Feather, which either consists of many Undivided hair-like spokes, placed in a circle; or of spokes that are Branched or radiated. This Feather again is either supported upon a little Pillar, or else Sitting immediately upon the seed.

- - - with a small Curl which hath generally five teeth, and is permanent.
- - - neither with a Cup nor with a feather.

Ons. In examining the minute Florets, the dissecting Needles, and the Botanic Microscope, will be found extremely useful.
The disposition of the Chives and Pointals varying, occasions the following

Distinctions of Florets.

1. Furnished with chives and a pointal.
2. Furnished with chives, but no pointal.
3. Furnished with a pointal, but no chives.
4. Without either chives, pointal or summits.

Bloss. Tubular

1. Furnished with chives and a pointal.
2. Furnished with chives, but no pointal.
3. Furnished with a pointal, but no chives.
4. Without either chives, pointal or summits.

Bloss. Narrow
From considering the different structure of the Florets, it is evident that the compound Flowers may be composed either

1. Florets Tubular in the center, with chives and pointals. Tubular in the circumference, with chives and pointals.
2. Florets Tubular in the center, with chives and pointals. Tubular in the circumference, with only pointals.
4. Florets Tubular in the center with chives and pointals. Narrow in the circumference, with chives and pointals.
5. Florets Tubular in the center, with chives and pointals. Narrow in the circumference, with only pointals.
6. Florets Tubular in the center, with chives and pointals. Narrow in the circumference, with neither chives nor pointals.
9. Florets Narrow in the center, with chives and pointals. Narrow in the circumference with chives and pointals.
TIPS UNITED.

The Orders therefore, according to the system we have adopted, will be as follows.

I. Chives and Pointals equal. That is, when all the Florets are furnished with Chives and Pointals. (9. 1. 4. of the preceding table.)

II. Superfluous Pointals. That is, when the Florets in the center have both Chives and Pointals; but the florets in the circumference have only Pointals. (8. 5. 7. of the preceding table.)

III. Barren Florets. That is, when the Florets in the center have both Chives and Pointals; but the Florets in the circumference neither. (3. 6. of preceding table.)

IV. Necessary Pointals. That is, when the Florets in the center have both Chives and Pointals, but from some defect in the Pointals produce no Seed. The Florets in the circumference have Pointals only and produce perfect Seeds. (8 of the preceding table.)

V. Separated Florets. That is when several Cups filled with florets, are contained in another larger cup, so as to form but one flower.

VI. Flowers simple. That is, when there is only one flower in a cup, and these not inclosed by another larger cup so as to form but one flower.

Observations.

This is a Natural Class except the last Order, which from the principles of the System is necessarily introduced here.

The plants of this Class are supposed to have various specific virtues. Most of them are bitter. None of them are poisonous, except perhaps the strong scented Lettuce when growing in shady situations.

The elasticit of the Empalement in the Ox tongue, Thistle, and many other Genera, is too remarkable to pass unnoticed by the slightest observer. It seems as if the expansion of the florets first burst the Empalement open, and when these wither, it closes again. The downy hairs that crown the Seeds, before upright, now begin to expand, and by this expansion again open the leaves of the Empalement, and bend them quite back. The Seeds now escape, and the Empalement becoming dry and withered, no longer retains its elastic power.

The hairy appendages of the Seeds are very properly called Feathers; for by means of these, the Seeds are wafted about in the air and disseminated far and wide. The structure of these feathers deserve our notice: there is hardly a child that is insensible to their beauty in the Dandelion.

Class
Order I. Chives and Points equal.

*All the Florets Narrow.*

308 Endive. - Receptacle a little chaffy. Feather with about five teeth. Cup double.


314 Succory. Receptacle naked. Feather hairy. Cup double; with scales of different shapes.

315 Ivyleaf. Receptacle naked. Feather hairy. Cup double; containing about five florets.

316 Lettuce. Receptacle naked. Feather hairy. Cup tiled; scales skinny at the edge.


318 Nipple-
TIPS UNITED.


** Flowers in globular heads.

320 Twinsewort. Cup radiate. The Rays coloured.

321 Burdock. - Cup with the scales bent inwards at the points, and hooked.

322 Thistle. - Cup with thorny scales; distended. Receptacle hairy.

323 Argentine. Cup with thorny scales; distended; Receptacle like a honey-comb.

324 Sawwort. Cup with scales tiled; sharp, but without thorns; nearly cylin-
drical.

*** All the Florets Tubular.


327 Doubletooth. Receptacle chaffy. Feather with awns-Cup tiled.

† Common Groundsel. † Common Tansy.

Order II. Superfluous Pointals.

* All the florets Tubular.

328 Southernwood. Receptacle almost naked. Feather none. Blossoms in the circum-
ference none.

329 Tansey. Receptacle naked. Feather only a sort of bristle. Blossoms of the circumference with three clefts.


† Common Groundsel. * * Florets
TIPS UNITED.

* * Florets of the circumference Narrow.


341. Starwort. - Receptacle naked. Feather hairy. Cup a little rough and scurfy.


Order III. Barren Florets.


Order IV. Necessary Pointals.


† Fleabane.

Order
Order VI. Flowers Simple.

346 Scabious. Cup common. Blossom five petals; regular. Capsule beneath; with two cells.

347 Cardinalflower. Cup with five teeth. Blossom one petal; irregular. Capsule beneath; with two cells.

348 Violet. Cup five leaves. Blossom five petals; irregular. Capsule superior; with three valves.

349 Weathercock. Cup two leaves. Blossom five petals; irregular. Capsule superior; with five valves.

308 ENDIVE.
ENDIVE. 921 Cichorium.

Empl. Common, double; cylindrical. Scales eight; narrow; spear-shaped; equal; forming a cylinder. Five scales shorter than and lying upon the others, form the outer cup.

Bloss. Compound, flat; uniform. Florets with chives and pointals about twenty; placed in a circle.

Individuals; one petal; narrow; lopped; deeply divided into five teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder, with five edges.

Point. Seed-bud oblong. Shaft thread-shaped; as long as the chives. Summits two; rolled back.

S. Vess. None; but the cylindrical cup closing at the point.

Seeds. Solitary; compressed; with sharp angles. Crown of the seed an imperfect margin, with about five teeth;

Recept. Chaffy.

Wild

ENDIVE. The flowers in pairs; sitting. Leaves notched. Scales of the outer cup fringed. Blossoms lateral; blue: by cultivation roe-coloured. They open at eight in the morning and close at four in the afternoon.


Cichorium sylvestre, seu officinarum. Baub. pin. 185.

Wild Succory, or Cichory.

Borders of corn-fields. B. July—August.

The leaves when blanched are eaten early in the spring in falliads. They lose their bitterness by cultivation—The roots gathered before the stem shoots up are eatable, and when dried will make bread.—Sheep, Goats and Swine eat it; Cows and Horses refuse it.
CHIVES and POINTALS Equal.

309 HAWKSEYE. 918 Hypochæris.

EMPL. Common, oblong; tiled; distented at the base.
Scales spear-shaped; sharp.

BLOSS. Compound tiled; uniform. Florets with chives and pointals, numerous; the inner ones gradually shorter.

 Individuals one petal; narrow; strap-shaped; lopped; with five teeth.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud egg-shaped. Shaft thread-shaped; as long as the chives. Summits two; reflected.

S. VES. None: the Cup becoming globular but tapering, closes on the seeds.

SEEDS. Solitary; oblong. Feather standing on a pillar; downy.

RECEPT. Chaffy. Chaff spear-shaped; narrow; as long as the seeds.

HAWKSEYE. The stem almost naked, generally with a Spotted single branch. Leaves oblong egg-shaped; entire; toothed.—Maculata Cup hairy; composed of large scales. Blossoms yellow; they open at six in the morning and close at four in the afternoon.

Hieracium I latifolium. Ray’s Syn. 167.

Hieracium alpinum latifolium hirtutic incanum, flore magno. Baub. pin. 128.

Spotted Hawkweed. Broad-leaved Hungarian Hawkweed. 
On high grounds. P. July.

The leaves are boiled and eaten like Cabbage—Horves are fond of this plant when green, but they do not like it when dry.—Cows, Goats and Swine eat it; Sheep are not fond of it.

HAWKSEYE. Smooth. Cups oblong; tiled. Stem Smooth branched; naked. Leaves toothed and indented.—Glabra very small, yellow. Scales of the Cup smooth. Fruit-stalks thickest towards the top. The flowers open at nine in the morning and close again at twelve or one.

Hieracium minus, denis Leonis folio oblongo glabro. Baub. pin. 127.

Hieracium parvum in arenosis nascens, feminum pappis densis radiatis. Ray’s Syn. 166.

Smooth Hawkweed.

High gravelly pastures. B. July.

HAWKS-
TIPS UNITED.

Long-rooted Radicata

HAWKSEYE. The leaves notched; blunt; rough. Stem branched; naked; smooth. Fruit-stalks scaly—Blossoms large; yellow within; reddish green on the outsides. They close at three in the afternoon. Scales of the Cup fringed on the back. At the base of the leaves, and in the angles formed by the branches, are certain long yellow hairs.

Long-rooted Hawkweed.

In Pastures. P. May—September.

310 GOATSBEARD. 905 Tragopogon.

EMPAL. Common, simple; leaves eight; spear-shaped; equal; every other leaf standing more inwards; but all united at the base.

BLOSS. Compound, tiled; uniform. Florets with chives and pointals numerous; the outer ones rather longest.

Individuals one petal; narrow; lopped; with five teeth.

CHIVES. Threads five; hair-like; very short. Tips forming a cylinder.

POINT. Seedbud oblong. Shaft thread-shaped; as long as the chives. Summit two; rolled back.

S. VESSE. None; the cup closing; tapering; as long as the seeds; a little dilated.

SEEDS. Solitary; oblong; tapering towards each end; angular; rough; terminated by a long awl-shaped pillar supporting the Feather, which is downy and flat; with about thirty-two spokes.

RECEPT. Naked; flat; rough.

Obs. In some species the seeds are straight and the cup longer than blossoms. In others the seeds are crooked and the cup shorter than the blossoms.

GOATSBEARD. The cup equal with the florets in the circumference. Leaves entire, stiff and straight—The blossoms expand early in the morning but close again before noon. Yellow.

Tragopogon pratensis luteum magius. Bauh. Pin. 274.
Go to Bed at Noon.
Corn-fields and pastures. B. June.
Before the stem shoots up, the roots boiled like Paragus have the same flavour, and are nearly as nutritious—Cows, Sheep and Horses eat it; Swine devour it greedily; Goats are not fond it.

GOATS-
CHIVES and POINTALS Equal.

GOATSBEARD. The cup longer than the florets in the purple circumference. Leaves entire; stiff and straight. Fruit-stalks Portulifoliun thickeft towards the top—Blossoms purple.
Tragopogon purpuro-caeruleum portulifolium good Artifi vulgo.
Baub. pin. 274.
Tragopogon purpureum. Gerard. 735. Park. 412. Ray’s
Sym. 172.
Salsafa.
Meadows and marshes. B. June.
The roots are sculent, and when cultivated in gardens are
called Salsafe—

311 OXTONGUE. 997 Picris.

EMPAL. Common, double. The Outer Cup large; with five
heart-shaped, flat, flexible, approaching leaves. The
Inner Cup tiled; egg-shaped.
Bloss. Compound, tiled; uniform. Florets with chives and
pointals; numerous.
Individuals one petal; narrow; strap-shaped; loped;
with five teeth.
Chives. Threads five; hairlike; very short. Tips forming
a hollow cylinder.
Point. Seedbud nearly egg-shaped. Shaft as long as the
chives. Summits two; reflected.
S. Vess. None. The Cup unchanged contains the seeds.
Seeds. Solitary; distended; blunt; furrowed transversely. Feather downy.
Recept. Naked.

OXTONGUE. The outer cup with five leaves; larger than Common
the inner cup, which is furnished with awns—Leaves undivided; Echioides
embracing the Stem. Blossoms yellow. They expand at four or five in
the morning and never close before noon; sometimes they remain open till
nine at night.
Hieracium Echioides, capitulis Cardui benedicti. Baub. pin.
198. Ray’s Sym. 166.
Corn-fields. A. July—August.
This is an agreeable pot-herb when young. The juice is
milky, but not too acrid.
OXTONGUE. Cups flexible. Leaves entire—The outer cup consists of about ten leaves, only half as long as the inner one. The Inner Cup hath about the same number of leaves, covered with strong hair. Blossoms yellow.

Hieracium asperum, major et sordidum, in agrorum limitibus. Ray's Syn. 167.

Hieracium asperum. Gerard. 298.
Cichorium pratense luteum hirsutum asperum. Baub. Pin. 156.
Cichorium pratense luteum asperum. Park. 777.
Yellow Succory. Rough Hawk-weed.
Borders of corn-fields. A. July.

1. There is a variety with toothed and indented leaves.
   Near the sides of brooks. A. September.

312 DANDELION. 912 Leontodon.

Empal. Common, tiled; oblong. The Inner scales strap-shaped; parallel; equal. The Outer scales fewer, and generally reflected down to the base.

Bloss. Compound, tiled; uniform. Florets with chives and pointals numerous; the inner ones gradually shorter.

Individuals one petal; narrow; lopped; with five teeth.

Chives. Threads five; hairlike; very short. Tips forming a hollow cylinder.

Point. Seedbud nearly egg-shaped. Shaft thread-shaped; as long as the central blossoms. Summit two; rolled back.

S. Vess. None. Cup oblong; straight.

Seeds. Solitary; oblong; rough. Feather supported on a little pillar; downy.

Recept. Naked; dotted.

Obs. In the second species the feather is fitting.

DANDELION. The scales of the cup reflected downwards. Leaves smooth, notched, and edged with little teeth—Sometimes in moist situations the leaves are without the little teeth. Blossoms yellow. They generally expand at five or six in the morning and close again early in the afternoon.


Dens Leonis latiore folio. Baub. Pin. 156.
Pilslabed.


Road-sides, pastures, Ditch-banks. P. April—September.

Early
CHIVES and POINTALS Equal.

Early in the spring whilst the leaves are yet white, and hardly unfolded, they are an excellent ingredient in salads. The French eat the roots and tender leaves with bread and butter. Children that eat it in the evening experience its diuretic effects, which is the reason that other European nations as well as ourselves, vulgarly call it Piss-a-bed. —When a swarm of Locusts had destroyed the Harvest in the Island of Minorca, many of the inhabitants subsisted upon this plant —The expressed juice has been given to the quantity of four ounces three or four times a day, and Boerhaave had a great opinion of the utility of this and other lactescient plants in vesical obstructions —Goats eat it; Swine devour it greedily; Sheep and Cows are not fond of it; Horses refuse it. Small Birds are fond of the seeds.

The Black Tussock Moth, Phalæna Fascelina, and the Thrips Phasypus, feed upon it.

DANDELION. Stem branching; fruit-stalks scaly. Leaves Autumnal spear-shaped; toothed; very entire; smooth —The root appears as Autumnale if bitten off. Blossoms yellow. They open about seven in the morning and close about three in the afternoon.
Hieracium minus praemorsa radice. Park. 794. Ray’s Syn. 163.
Hieracium minus; seu Leporinum. Gerard. 290.
Hieracium Chondrillæ folio glabro, radice succina majus Baub. pin. 197.
Yellow Devils-bit.
1. There is a variety with jagged leaves.
2. Horses, Goats and Swine eat it; Cows and Sheep refuse it.

DANDELION. Cup quite upright. Leaves toothed; hairy; Rough very entire. Hairs-forked —Blossoms yellow: greenish on the out: Hippidium flóre. They open at four in the morning and close at three in the afternoon.
Hieracium hirsutum, leptocaulus, Hieracium dictus. Ray’s Syn. 171.
Hieracium, Dentis Leonis folio hirsutum. Gerard. 303.
Hieracium asperum floræ magnæ Dentis Leonis. Baub. pin. 127.
TIPS UNITED.

DANDELION. Cup quite upright. Leaves toothed; hairy hairs undivided—Blossoms yellow on both sides.
Hieracium pumilum saxatile aperum, præmorsa radice. Ray’s Syn. 167.
Hieracium Dentis Leonis folio, hisfutie aperum, minus laciniam.
Baub. pin. 127.
Leontodon hispidum. B. Hudson. 297.
Pastures. P. June—September.

313 SOWTHISTLE. 908 Sonchus.

EMPAL. Common, distended and hunched; with many strap-shaped; unequal scales.
BLOOM. Compound, tiled; uniform. Florets with chives and pointals, numerous; equal.
Individuals, one petal; narrow; lopped; with five teeth.
CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.
POINT. Seedbud somewhat egg-shaped. Shaft thread-shaped; as long as the chives. Summits two; reflected.
S.VESS. None; the Cup closing forms a compressed globe, but tapering.
SEEDS. Solitary; rather long. Feather hairy.
RECEPT. Naked.

SOWTHISTLE. Flowers in a sort of ruddle; fruit-stalks and cups rough with hair. Leaves notched; with awns at the base—Blossoms deep yellow. They expand at six or seven in the morning and close at two in the afternoon.
Sonchus tricubitalis, folio cupidato. Ray’s Syn. 163.
Sonchus asper arborescens. Baub. pin. 124.
Banks of rivers. P. Auguft.

SOWTHISTLE. Flowers in a sort of ruddle; fruit-stalks and cups rough with hair. Leaves notched; heart-shaped at the base—Blossoms yellow. They expand between six and seven and close again between eleven and twelve in the morning.
Sonchus repens; multis Hieracium majus. Ray’s Syn. 163.
Hieracium majus, folio Sonchi. Baub. pin. 126.
Corn-fields and ditch-banks. P. Auguft.
The flowers follow the course of the Sun, very regularly.
Cows and Goats eat it: Horses are very fond of it.
CHIVES and POINTALS Equal.

SOWTHISTLE. Fruit-stalks downy; cups smooth—Leaves Common compressed and embracing the stem. The Fruit-stalks when old become Oleraceous smooth. Blossoms pale yellow. They open about five in the morning and close again at eleven or twelve.
Sonchus laevis laciniatus latifolius. Raub. pin. 124.
1. There are some varieties in the roughness or smoothness of the plants, and in the leaves being more or less jagged, which depend upon the soil, situation and time of growth.
The leaves are good amongst other pot-herbs—They are a very favorite food with Hares and Rabbits—Sheep, Goats and Swine eat it: Horses are not fond of it.
The Sowthistle Louse, Aphis Sonchi, lives upon it.

They open at seven in the morning and close at noon.
Sonchus laevis laciniatus cæruleus, seu Sonchus Alpinus cæro-leus. Raub. pin. 124.
Blue Mountain Sow-thistle.
On the sides of mountains. A:
The Laplanders get the stems before the flowers expand; strip off the bark and eat them; but they are much improved by the addition of Oil and Vinegar—It communicates a bitter taste to the milk of Cattle that are fed with it.—Cows, Goats and Swine eat it: Horses and Sheep are very fond of it.
Most of the species nourish the Sow-thistle Louse, Aphis Sonchi.
TIPS UNITED.

314 SUCCORY. 914 Crepis.

Empal. Common double.
Outer Cup very short; open; deciduous.
Inner Cup egg-shaped; simple; furrowed; permanent. Scales strap-shaped; approaching.

Bloss. Compound, tiled; uniform. Flores many; equal; with chives and pointals
Individuals one petal; narrow; lopped; with five teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbox nearly egg-shaped. Shaft thread-shaped; as long as the chives. Summits two; reflected.

S.Vess. None. Cup roundish.


Recept. Naked.

Obs. In the smooth Succory the Feather of the seed is fitting.

Stinking Fætida

Succory. Leaves hairy; notched, and almost winged. Leaf-stalks toothed—The flowers before they open hang down. Leaves smell like bitter almonds. Blossoms purplish on the outside; yellow within.

Hieracium Caftorei odorifer monspeliencium. Ray’s Syn. 165.
Senecio hirfutus, Baub. pin. 131.
Stinking Hawk-weed.
On chalky soil, B. June—July.

Smooth Teftorum

Succory. Leaves smooth; fitting; spear-shaped; notched. The lower leaves toothed—Stem angular and furrowed. Cups furrowed and set long-ways with clammy hairs. This plant varies greatly in its appearance according to the place of its growth. Blossoms yellow. They expand at four in the morning and close about noon.

Hieracium luteum glutrum, five minus hirfutum. Ray’s Syn. 165.

Smooth Succory Hawk-weed.
The variations are chiefly in the leaves which are
1. Large and sharp.
2. Small and sharp.
4. Like Lettuce leaves.
5. It is sometimes considerably branched.
Cows, Goats, Sheep and Swine eat it: Horses are not fond of it.

Succory.
CHIVES and POINTALS Equal.

SUCORY. Leaves notched with winged clefts; rough; Rough spotted above the base. Cups covered with sharp points—Stem Biennis angular; rough; four feet high or more; brittle. Blossoms yellow.
Hieracium maximum Chondrillae folio, asperum. Bauh. 94.
12. Ray's Syn. 166.

Rough Scurrory Hawk-weed.
Fields and hedges. B. July—August.

315 IVYLEAF. 911 Prenanthes.

EMPAL. Common, double; cylindrical; smooth. The Scales of the cylinder equal in number to the florets. The Scales of the base few; unequal; very short.

BLOSS. Compound, generally consisting of a single row of florets. Florets from five to eight; with chives and pointals; equal; standing in a circle.


Individus one petal; narrow; lopped; with four teeth.

CHIVES. Threads five; hairlike; very short. Tips forming a hollow cylinder.

POINT. Seedbud nearly egg-shaped. Shafi thread-shaped; longer than the chives. Summit cloven; reflected.

S.VES. None. Cup cylindrical; closing a little at the rim.

SEEDS. Solitary; heart-shaped. Feather hairy.

RECEPT. Naked.

IVYLEAF, with five florets in each compound flower. Lettuce Leaves notched.—Blossoms yellow. Feather of the seed supported by Murals, a little pillar.

Lactuca fylvestris murorum flore luteo. Ray's Syn. 152.
Sonchus laevis muralis. Gerard. 293.
Sonchus laevis alter, parvis floribus. Park. 805.
Sonchus laevis laciniatus muralis parvis floribus. Bauh. pin.

124.

Ivy-leaved wild Lettuce.
Cows, Goats and Horses eat it; Sheep are very fond of it.
TIPS UNITED.

316 LETTUCE. 909 Lactuca.

EMPAL. Common, tiled; somewhat cylindrical. Scales many, tapering to a point.

BLOSS. Compound, tiled; uniform. Florets with chives and pointals, many; equal.

Individuals one petal; narrow; lopped; with four or five teeth.

CHIVES Threads five; hairlike; very short. Tips forming a hollow cylinder.

POINT. Seedbud somewhat egg-shaped. Shaft thread-shaped; as long as the chives. Summits two; reflected.

S. VESS. None. Cup closing; betwixt egg-shaped and cylindrical.

SEEDS. Solitary; egg-shaped; taper; compressed. Feather hairy; simple. Pillar long, tapering at the bottom.

RECEPT. Naked.

Strong-scented Virosa

LETTUCE. Leaves pointing horizontally; toothed. The middle rib set with prickles on the under-side—Root leaves entire. Blossoms numerous; yellow. Seeds black. The blossoms open about seven and close about ten in the forenoon.


Lactuca sylvetris odore viroso. Baub. pin. 123.

Lactuca virosa. Park. 813.

Strong-scented wild Lettuce.

1. There is a variety in which the leaves are not indented.


The juice smells like Opium, and upon tryal has been found to possess similar properties. If it is caught in shells, and dried by a gentle heat, it may be formed into pills.

Leaff Saligna

LETTUCE. Leaves narrow but somewhat halberd-shaped, and fitting. The middle rib prickly on the under-side. The lower leaves with winged clefts. Blossoms yellow.


The Lambda Moth, Phalena Gamma; the great Tyger Moth, Phalena Caja; and the Lettuce Loufe Aphis Lactuca, live upon these species.
CHIVES and POINTALS Equal.

317 HAWKWEED. 913 Hieracium.

EMP. Common, tiled; cylindrical. Scales many; strap-shaped; very unequal; lying lengthways one over another.

BLOS. Compound, tiled; uniform. Florets with chives and pointals, numerous; equal.

INDIVIDUALS one petal; narrow; lopped; with five teeth.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud nearly egg-shaped. Shaft thread-shaped; as long as the chives. Summits two; bent backwards.

S. VESS. None. Cup closing; egg-shaped.

SEEDS. Solitary: with four blunt edges; short. Feather hairy.

RECEPT. Naked.

* Stalk naked; supporting a single flower.

HAWKWEED. Leaves oblong; entire; toothed. Stalk Mountain nearly naked, supporting one flower. Cup hairy—Leaves with Alpinum white upright hairs. Stalk thick, set with white hairs, which are brown at the base; and with one or two small floral leaves towards the top. Blossoms yellow.

Hieracium alpinum pumilum, folio lanuginoso. B. PIN. 130.

Hieracium villosum alpinum, flore magno singulari. Ray's Syn. 169. Tab. 6. fig. 2.


HAWKWEED. Leaves very entire; egg-shaped: downy Mouse-ear underneath. Stalk supporting one flower. Suckers creeping—Pilosella Blossom red on the outer-side; pale yellow within. Cups set thick with black hairs. The flowers open at eight in the morning and close about two in the afternoon.

Pilosella minor vulgaris repens, Park. 690.

Common creeping Mouse-ear.

Dry pastures. A. May—July.

This
TIPS UNITED.

This differs from the other laceloscent plants, being less bitter and more astringent—It is esteemed hurtful to Sheep—An in-
fect of the Cochineal genus (Coccus Polonicus) is often found
at the roots. Aa. Upsal. 1752, Goats eat it; Sheep are not
fond of it; Horses and Cows refuse it.

** Stalk naked, supporting several flowers.

Green

** HAWKWEED. Leaves entire; oblong egg-shaped; Stalk
naked; supporting several flowers. Suckers creeping—Blossoms
pale yellow.

Pilosella major repens, minus hirsuta. Baub. pin. 262.
On hills in Westmoreland. P. July—August.
Sheep eat it.

Dubium

Narrowleaved

** HAWKWEED. Leaves very entire, spear-shaped. Stalk
naked; supporting several flowers. Suckers creeping—Stem and
Cups beset with black hairs. Hairs on the leaves very small. Blo-
soms pale yellow.

Pilosella major erecta altera. Baub. pin. 262.
Hilly pastures. P. July.
Sheep eat it; Cows refuse it.

Auricula

** Stalk leafy.

Golden

HAWKWEED. Stem branched. Root-leaves egg-shaped;
Toothed. Stem leaves one or two; smaller—Toothed; sharp;
reddish on the under surface. Flowers few; yellow. They open
about six in the morning and close about two in the afternoon.
Hieracium murorum foliis pilosissimis. Baub. pin. 129. Ray's
Syn. 168.
Hieracium murorum Bauhini, quod est Pulmonaria Gallorum
Lobelii. Park. 801.
Pulmonaria Gallica, seu aurea latifolia. Gerard. 304.
Woods, old walls, and rough shady places. P. July.
1. Narrow-leaved, Pulmonarium dictum angustifolium. Ray's
Syn. 168.
2. Round-leaved, Hieracium macrocaulon hirsutum folio ro-
tundore. Ray's Syn. 169.
3. Long-leaved, Leptocaule hirsutum folio longiore. Ray's
Syn. 169.
Horses eat it.

Murorum

HAWK-
CHIVES and POINTALS Equal.

HAWKWEED. Stem supporting a panicle of flowers. Marsh Leaves embracing the stem; toothed; smooth. Cups rough Paludofum with hair—The hairs of the cups black. Blossoms yellow. They expand at six in the morning and close at five in the afternoon.
Hieracium montanum latifolium glabrum minus. Bauh. pin. 129.
Hieracium montanum Cichorei folio. Ray's Syn. 166.
Sucory-leaved Hawkweed.
Moist meadows and banks of rivulets. B. July.
1. Cups and fruit-stalks set with yellow hairs.

HAWKWEED. Stem upright; supporting many flowers. Broad leaved Leaves bartyx egg and spear-shaped; toothed; half embracing Sabaudum the stem—The receptacle in this and the following species is more rough than in the others. Blossoms yellow. They continue expanded from seven in the morning until one or two in the afternoon.
Hieracium fruticosum latifolium hirsutum. Bauh. pin. 129.
Part. 802. Ray's Syn. 167.
1. There is one variety with smooth leaves.
Broad-leaved bushy Hawkweed.
Woods and hedges. P. July—August.

HAWKWEED. Leaves strap-shaped; somewhat toothed; Bushy scattered. Flowers in a sort of rundles—Blossoms yellow. Seeds Umbellatum purple. The blossoms open about six in the morning and close at five in the afternoon.
The appearance of this plant varies in different situations. In woods it is more branched, more leafy, the leaves broader, of a darker colour and the blossoms paler, than in open airy places.
Hieracium fruticosum angustifolium maurus. Park. 801.
Bauh. pin. 129. Ray's Syn. 168.
Hieracium intybacum. Gerard. 298.
Narrow-leaved bushy Hawkweed.
Woods and hedges. P. July—August.
It tinges wool with a beautiful and elegant colour. Iter. Scan.

Horfes, Cows, Goats, Sheep and Swine eat it.
TIPS UNITED.

318 NIPPLEWORT. 919 Lapfana.

Empal. Common, double; egg-shaped; angular. Scales of the Tube eight; equal; strap-shaped; with a hollow channel; keeled; sharp. Scales of the Base six; tiled; small. Every other scale smaller.

Bloss. Compound, tiled; uniform. Florets with chives and pointals; about sixteen; equal.

Individuals one petal; narrow; lopped; with five teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud rather oblong. Shaft thread-shaped; as long as the chives. Summit cloven; reflexed.

S. Vess. None. The Scales of the tube of the cup close upon the seeds.

Seeds. Solitary; oblong; cylindrical; but with three edges. Feathers various; sometimes wanting.

Recept. Naked; flat.

Common NIPPLEWORT. The cup angular when the seed is ripe.

Fruit-stalks slender; very much branched—Blossoms yellow; terminating.


Soncho affinis Lampfana domestica. Baub. pin. 124.

Dock Creffes.

Ditch-banks and uncultivated places. A. June—July.

Before it goes into flower it is eaten raw at Constantinople. Boiling increases its bitterness.—Horses, Cows, Sheep and Swine eat it; Goats refuse it.

319 YELLOW-
CHIVES and POINTALS Equal.

319 YELLOW EYE. 916 Hyoseris.

Empal. Common, of ten leaves. Scales spear-shaped; upright; equal; set with very short scales at the base. Proper Cup superiour; with five divisions; very short; sharp; permanent. It often supplies the place of the feather.

Bloss. Compound, somewhat tiled; uniform. Florets with chives and pointals, disposed in one or two rows.

Individuals one petal; narrow; lopped; with five teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud rather oblong. Shaft thread-shaped; as long as the chives. Summits two; reflexed.


Seeds. Solitary; nearly oblong; compressed; as long as the cup; crowned with a hair-like Feather, or with the Proper Cup.

Recept. Naked.

YELLOW EYE. • Stem divided; naked. Fruit-stalks thickest Hawkweed towards the top—Blossoms yellow. Minima

Hyoseris macleula. Gerard. 988.
Small Swine's Succory.
Corn-fields, and in gravelly soil. A. May—June.
TWINGEWORT. 929 Carлина.

Empal. Common, distended; radiate; tiled. Scales numerous; flexible; sharp. The inner scales placed in a circle, very long; expanding; shining; coloured; forming rays to the compound flower.

Bloss. Compound; uniform; tubular. Florets with chives and pointals, equal.

Individuals one petal; funnel-shaped. Tube slender. Border funnel-shaped; with five clefts.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud short. Shaft thread-shaped; as long as the chives. Summit oblong; cloven or entire.

S. Vess. None. Cup unchanged.


Recept. Flat; set with cloven Chaffy substances three of which grow together.

TWINGEWORT. Stem supporting several flowers in a sort of broad topped spike. Flowers terminating. Rays of the empalement white—Or yellowish. Leaves toothed; with two yellow thorns on each tooth. Blossoms purple.

Carлина sylvestris major. Gerard. 1150.
Carлина sylvestris quibusdam, alis atraebrisia. Ray's Syn. 175.

Wild Carline Thistle.

Dry pastures. B. June.

The flowers expand in dry, and close in moist weather. They retain this property a long time and therefore are employed as Hygrometers—It is said to be an excellent remedy in Hysterical cases. Amst Acad, V. 3. p. 64.—Goats eat it; Cows refuse it.
CHIVES and POINTALS Equal.

321 BURDOCK. 923 Arctium.

Emp. Common, globular; tiled. Scales spear-shaped; ending in awl-shaped prickles; long and hooked at the points.

Blos. Compound, tubular; uniform. Florets with chives and pointals equal.

Ind. one petal; tubular. Tube slender; very long. Border egg-shaped; with five clefts. Segments strap-shaped; equal.

Chives. Threads five; hair like; very short. Tips forming a hollow cylinder, as long as the blossoms; with five teeth.

P. Seedbud oblong; with soft hairs at the end. Shaft thread-shaped; longer than the chives. Summit cloven; reflexed.

S. V. None. Cup closing.

Seeds. Solitary; like an inverted pyramid; the two opposite angles imperfect; hunched on the outside. Feather simple; shorter than the seed.

Ricc. Chaffy; flat. Chaff like bristles.


Lappa major. Gerard. 809.

Lappa vulgaris major. Park. 1222.

B. Flowering heads large and smooth. Ray’s Syn. 195.
2. Flowering heads small and smooth. Ray’s Syn. 197.
3. Flowering heads large and downy. Bauh. pin. 198.
4. Flowering heads small, globular and downy.
5. The whole plant small; flowering heads covered with an elegant network.

Clott-bur.

Road-sides, and among rubbish. B. July—August.

Before the flowers appear, the stems deprived of the bark, are boiled and eat like Spargus. When raw they are good with Oils and Vinegar—A decoction of the roots, is esteemed by some very sensible Physicians, as equal, if not superior to that of Sarraparilla—Boys catch Bats, by throwing the prickly heads up into the air.—Cows and Goats eat it; Sheep and Horses refuse it; Swine are not fond of it.

The Ghost Moth, Phalena Hamuli, feeds upon the roots, and the mottled Orange Moth upon the italks.

322 THISTLE.
322 THISTLE. 925 Carduus.

EMP. Common, distended; tiled. Scales numerous; spear-shaped; tapering; thorny.

BLOSS. Compound, tubular; uniform. Florets with chives and pointals, nearly equal; reflected. Individuals one petal, funnel-shaped. Tube very slender; Border upright; egg-shaped at the base; with five clefts. Segments strap-shaped; equal; one more deeply divided.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder as long as the blossom; with five teeth at the mouth.

POINT. Seedbud egg-shaped. Shaft thread-shaped; longer than the chives. Summit simple; awl-shaped; naked; notched at the end.

S. VESS. None. Cup closes a little.

SEEDS. Solitary; inversely egg-shaped; with four angles, but the two opposite ones imperfect. Feather fitting; very long.

RECEPT. Hairy; flat.

* Leaves running along the stem.

Spear Lanceolatus

THISTLE. Leaves running along the stem; with winged clefts; rough with hair; segments straddling. Cups egg-shaped; thorny; woolly. Stem hairy—The inner scales of the cup are bristly; dry, and without thorns. Blossoms purple.


1. The size of the whole plant differs considerably according to the soil and situation. Ray's Syn. 195.

Road-fides. B. July.

Few plants are more disregarded than this, and yet its use is very considerable. If a heap of clay is thrown up, nothing would grow upon it for several years, if the seeds of this plant, wafted by the wind, did not fix and vegetate thereon. Under the shelter of this, other vegetables appear, and the whole soon becomes fertile. The flowers, like thistle of the Artichoke, have the property of Rennet in curdling milk.—Sheep and Swine refucre it; neither Horses, Cows or Goats are fond of it. The painted Lady Butterfly, Papilio Cardui, and the Thistle Ermine Moth, feed upon it.

THISTLE
CHIVES and POINTALS Equal.

THISTLE. Leaves running a little way along the stem; Musk thorny. Flowers on crooked fruit-stalks. The scales of the Nutans cup expanding upwards—Shaits bent side-ways. Leaves with a white rib. Blossoms purple. Seeds brown and glossy.

Cirsium majus singuliari capitulo magnno. Ballb pin. 377.

1. Blossoms white.

Very dry soil. B. July.

Horses eat it; Cows are not fond of it; Goats and Sheep refuse it.

THISTLE. Leaves running along the stem; indented; Welled thorny at the edge. Cups on fruit-stalks; solitary; upright; Acanthoides woolly—The inner scales of the cup expanding. The Blossoms with five clefts, but the lower segment is almost divided down to the base, so that the blossom may be considered as composed of two lips; with the upper lip cloven into four parts and the lower lip undivided. Shafts twice as long as the florets. Leaves barbard-shaped; with curved clefts; the under-side, set with white straight hairs. Blossoms pale red.

Carduus spinosissimus, Capitulis minoribus. Ray's Syn. 194.

Road-fides and ditch-banks. A. June—July.

THISTLE. Leaves running along the stem; indented; thorny at the edge. Flowers incorporated; terminating. Scales Crispus standing open; not thorny, but ending in a sort of awn—Leaves with a viscid down and green veins on the under surface. Florets sometimes proliferous; purple.

Carduus caule crispus. Ray's Syn. 194.
Carduus spinosifolius angustifolius vulgaris. Baub. pin. 385.

Thistle upon Thistle.

Road-fides and ditch-banks. A. June.

1. There is a variety with white flowers, growing in marshy places. Horses, Cows, Goats and Sheep eat it.

THISTLE. Leaves running along the stem; toothed; Marsh thorny at the edges. Flowers in bunches, upright. Fruit-stalks Palustris without thorns—Cups closely tiled; smooth; the sharp points being hardly discernible. Blossoms purple.


Marshy shady places. P. July.

This, and almost all the other species of this genus, may be eaten like the Burdock, before the flowers are formed.—Swine eat it; Horses are very fond of it; Cows refuse it.

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I

THISTLE.
THISTLE. Leaves running along the stem: spear-shaped; with little teeth; without thorns. Cups thorny—Blossoms purple; or white.


Cirsium majus singulares capitulo magno, five incanum varie diffusum. Baub, pin. 377.

English soft Thistle.

In marshes. P. June—July.

** Leaves soft.

THISTLE. Leaves embracing the stem; helmet-shaped; with winged clefts; thorny. Cups without any leaves near it. Thorns channelled and fet with other little thorns—Leaves with white flecks, or spots. Blossoms purple.


Carduus albus maculatus vulgaris. Baub pin, 281.

Ladies Thistle.

1. There is a variety that is hairy and not spotted. Ray’s Syn. 194.

Road-sides, ditch-banks, and the borders of corn-fields. A. July.

This is eaten when young as a salad. The young stakes peeled, and soaked in water to take out the bitternes, are excellent. The scales of the cup are as good as Artichokes. The root is good to eat early in the spring.

THISTLE. Leaves soft; divided into winged clefts pointing two ways. Every other segment upright. Cups globular; woolly—Scales of the cup ending in a yellow thorn. Blossoms purple; or white.

Carduus Eriocaulus. Gerard, 1152.

Carduus capite rotundo tomentoso. Baub, pin. 582.

Carduus tomentoicus Corona fratrum diclus. Park, 978.

Friars Crown.

Hilly pastures. B. July.

THISTLE. Leaves embracing the stem; spear-shaped; toothed. Little thorns unequal; fringed; stem unarmament. Five or six feet high. Leaves all undivided; white on the under surface. Stem furrowed. Floral leaves aspica-shaped. Blossoms purple.

Cirsium Britannicum Clusii, repens. Ray’s Syn. 193.

Cirsium alius Anglicum. Park, 901.

Cirsium singulare capitulo squamato, vel incanum alterum. Baub pin. 377.

Hilly countries. P. June—July.
CHIVES and POINTALS Equal.

THISTLE, without a stem. Cup smooth—Blossoms purple. Dwarf  
Carline acaulis, minore purpureo flore. Bubh. pin. 380. Acaulis  
Gard. 1158. Ray’s Syn. 195.  
Carline acaulis Septenttrionalium. Park. 969.  
Dwarf Carline Thistle.  
Dry hilly countries. P. July.  
Cows refuse it.  
The different species of THISTLES affords nourishment to the  
following insects.  
Green Tortoise Beetle. Caffida viridis—Caffida nebulosa.  
Painted Lady Butterfly. Papilio Cardui.  
Horned Froghopper. Cicada Cornuta.  
Thistle Bug. Cimex Cardui.  
Thistle Fly. Musca Solitialis.  
Thistle Loufe. Aphis Cardui.

323 ARGENTINE. 927 Onopordum.

Emal. Common, roundish; distended; tiled. Scales numerous; thorny; prominent every way.  
Bloss. Compound, tubular; uniform. Flores with chives and pointals, equal.  
Individuals one petal; funnel-shaped. Tube very slender. Border upright; distended; with five clinfs. Segments equal; but one more deeply divided than the rest.  
Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder as long as the blossom, with five teeth.  
Point. Seedbud egg-shaped. Shaft thread-shaped; longer than the chives. Summit crowned.  
S. Vess. None. The Cup closes a little.  
Recepr. Divided like a honey-comb into four-cornered membranaceous cells.
ARGENTINE. Cups scurfy; scales expanding; awl-shaped. Leaves oblong egg-shaped; indented.—Blaffomis purple. The whole plant of a whitish green colour; the stem furnished with a membrane on each side, running along it up to the cup.

Carduus tomentosus, acanthium dictus, vulgaris. Ray's Syn. 196.

Acanthium album. Gerard. 1145.
Acanthium vulgare. Park. 979.
Spina alba tomentosa latitolia fylvestris. Bauh. pin. 382.
Cotton Thistle.

Among rubbish and in uncultivated places. B. July.

The central part of the flower, (the Receptacle) and the young items are boiled and eaten like Artichokes—The ancients thought this plant a specific in cancerous cases.—Cows, Sheep and Horses refuse it.

324 SAW-WORT. 924 Serratula.

EMPAL. Common. oblong; rather cylindrical; tiled. Scales spear-shaped; without awns; sharp.

BLOSS. Compound, tubular; uniform. Flowrets with chives and pointals; equal.

Individuals one petal; funnel-shaped. Tube bent inwards. Border with five clefts; dis tended.

CHIVES. Threads five; hair like; very short. Tips forming a hollow cylinder.

POINT. Seedbud egg-shaped. Shaft thread-shaped; as long as the chives. Summit two; oblong; reflected.

S. VEss. None. Cup unchanged.

SEEDS. Solitary; invercly egg-shaped. Feather sitting.

RICHT. Naked, or chaffy.

OES. The seater in some species is downy; but in others hairy. The Thistle is distinguished from the SAW-WORT by the receptacle being hairy; the cup dis tended; its scales thorny; and the summit less cleft.

SAW-WORT. Leaves lyre-shaped; with winged clefts. The terminating segment very large. Flowrets uniform.—Blaffomis purple, sometimes white. Feather of the seed glappy, with a yellow tinge.

Serratula. Ray's Syn. 196.

Serratula purpurea. Gerard. 713.

Serratula vulgaris flore purpureo. Park. 474.

Woods and pastures. P. July.

This is very much used by the Dyers to give a yellow colour; but it is interior to the YELLOW-WEEED, therefore its use is confined to the coarser woolen cloths.—Goats eat it; Horses are not fond of it; Sheep, Swine and Cows refuse it.

SAW-WORT.
CHIVES and POINTALS Equal.

SAW-WORT. Cups somewhat hairy; egg-shaped. Leaves Mountain undivided—Blossoms purple. Alpina

Citrium humile montanum Cynoglossi folio, polyanthemum, Ray's Syn. 193.

1. There is a variety with narrower leaves. Ray's Syn. 193.

On the highest mountains. P. July.

SAW-WORT. Leaves toothed; thorny.—Blossoms pale pur- Corn

Feather of the seed very long. Arvensis


Carduus ecanthus five viarum et vinearum repens. Park. 959.


Way-thistle.

Corn-fields and road-sides. P. July.

It is said to yield a very pure vegetable alkali when burnt,

Goats eat it; neither Cows, Horses, Sheep or Swine are fond

of it.

325 LIVERHEMP. 935 Eupatorium,

Empal. Common, oblong; tiled. Scales betwixt strap and spear-shaped; upright; unequal.

Bloss. Compound, uniform; tubular. Florets with chives and pointals. equal.

Individuals funnel shaped. Border with five clefts; open.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud very small. Shaft thread-shaped; very long; cloven down to the chives; straight. Summits slender.

S. Vess. None. Cup unchanged.


Recept. Naked.

LIVERHEMP. Leaves fingered. Five florets in each cup. Water

—Blossoms pale red.

Eupatorium Cannabinum. Bauh. pin. 320. Park. 595. Ray's

Syn. 179.

Eupatorium Cannabinum mas. Gerard. 711.

Eupatorium Cannabinum folio integro, feu non digitato. Ray's

Syn. 180.


Banks of rivers and brooks. P. July—August.
TIPS UNITED.

An infusion of a handful of it vomits and purges smartly. An ounce of the root in decoction is a full dose. In smaller doses the Dutch peasants take it as an alternative and an antiscorbutic.—Goats eat it; Cows, Horses, Sheep and Swine refuse it.

326 CUDWORT. 943 Athanasia.

EMPAL. Common, tilled; egg-shaped. Scales spear-shaped; contiguous.

BLOSS. Compound, uniform; longer than the cup. Flores with chives and points equal; numerous. Individuals funnel-shaped. Border with five clefts, sharp; rather upright.

CHIVES. Threads five; hair-like; short. Tips forming a hollow cylinder.

POIN T. Seedbud rather oblong. Shaft thread-shaped; a little longer than the chives. Sumit cloven; blunt.

S. VES S. None. Cup unchanged.

SEEDS. Solitary; oblong. Feather set with very short bristles.

RECEPT. Chaffy; Chaff spear-shaped; longer than the seeds.

Ons. In the British Species the seeds have no feather.

CUDWORT. One flower upon a fruit-flake, forming a kind of broad-topped spike. Leaves spear-shaped; scollop ed; blunt; downy—Blossoms yellow and white. As the seeds have no feather it might perhaps have been arranged under the Genus Santolina, (Lavender Cotton.)


Filago maritima. Hudson. 328.

Sea Cudweed.

CHIVES and POINTALS Equal.

327 DOUBLETOTH. 932 Bidens.

EXHA. Common, upright; segments generally equal; oblong; concave and channelled.

BLOSS. Compound, uniform; tubular. Florets with chives and pointals, tubular.

INDIVIDUALS tunnel-shaped. Border with five clefts; upright.

CHIVES, Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud oblong. Shaft simple; as long as the chives. Summit two; oblong; reflected.

S. VESS. None. Cup unchanged.

SEEDS. Solitary; blunt; angular. Crown of the Seed two or more awns, oblong; straight; sharp; rough with hooks turned backwards.

RECEPT. Chaffy; flat. Chaff deciduous.

DOUBLETOTH. Leaves cloven into three segments. Hemp-leaved Cups somewhat leafy; seeds upright—Blossoms yellow; termini Tripartite.


Cannabina aquatica folio tripartito diviso. Baub. pin. 321.

Eupatorium Cannabinum feminum Gerard. 711.

Eupatorium aquaticum dubrum generum. Park. 595.

Trifid Water Hemp Agrimony.

Marshy places. A. July—August.

It dyes a tolerably good yellow.—Cows and Sheep eat it; Horses, Swine and Goats refuse it.

DOUBLETOTH. Leaves spear-shaped; embracing the Nodding fæm. Flowers on crooked fruit-stalks. Seeds upright—Blossom Cernua duco yellow.

Verbena pulchriore flore luteo. Ray’s Syn. 187.

Cannabina aquatica folio non diviso. Baub. pin. 321.

Eupatorium Cannabinum feminum, varietas alters. Gerard, 711.

Eupatorium aquaticum folio integro. Park. 596.

Whole-leaved Water hemp Agrimony.

Ditches and marshes. A. July—August.

Goat eat it; Horses refuse it.

DOUBLETOTH. Leaves spear-shaped; sitting. Flowers Small Minima,

and seeds upright—

Verbena minima. Ray’s Syn. 188. Tab. 7. fig. 2.

Least Water Hemp Agrimony.

Shallow Waters. A. July—August.

I 4

328 SOUTH. 
TIPS, UNITED.

Order II. Superfluous Pointals.

328 SOUTHERNWOOD. 945 Artemisia.

Empal. Common, roundish; tiled. Scales rounded; approaching.

Bloss. Compound. Florets with Chives and Pointals. many; tubular; placed in the center. Florets with only Pointals and almost without any petal, in the circumference.

Individuals with Chives and Pointals, funnel-shaped.

Border with five clefts.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud in those that have chives and pointals, small. Shaft thread-shaped; as long as the chives. Summit cloven; rolled back.

In the florets that have only pointals the Seedbud is very small. The Shaft thread-shaped, and longer than in the other; the Summit the same.

S. Vess. None. Cup hardly changed.

Seeds. In all the florets solitary; naked.

Recept. Flat; naked, or woolly.

Field Campestris

SOUTHERNWOOD. Leaves with many clefts, strap-shaped. Stems with long slender shoots, trailing.—Bunches simple; alternate. Flowers solitary. Receptacle naked. Whist in flower it stands more upright. Summits globose-shaped. There are about nine florets with only Pointals, and eight with Chives and Pointals in each common cup. Blossoms brown.


94. Ray's Syn. 191.

High dry mountainous pastures. P. August.

Sheep refuse it.

Sea Maritima

SOUTHERNWOOD. Leaves deeply divided into many parts; downy. Bunches on crooked fruit-stalks. Florets with only Pointals, three.—Receptacle naked. The whole plant is white; except the Blossoms which are brown. The leaves are more or less divided in different situations.

Ablinthium marinus album. Gerard. 1099. Ray's Syn. 188.

Ablinthium seripicum Belgicum. Baub. pin. 159.

Ablinthium marinus nostras. Ray's Syn. 189.

Sea-Wormwood. Roman Worm-wood.


This in its wild state smells like Marum or Camphor, but in our gardens it is less grateful, though still much more grateful than the next species. It is used as an ingredient in distilled waters, and beat with thrice its weight of fine sugar it is formed into
SUPERFLUOUS POINTALS.

into a conserve. Its virtues are the same with those of the next species, but in a weaker degree.—Horses eat it; Cows, Goats and Sheep refuse it.

** Stems upright; herbaceous.

SOUTHERNWOOD. Leaves compound, with many clefts. Wormwood Flowers somewhat globular; pendant. Receptacle woolly.—Abinthium Leaves dark green on the upper, but white on the under surface. Blossoms brownish white.

Abinthium vulgare. Park. 98. Ray’s Syn. 188.

Common Worm-wood. Mug-wort.
Road sides. Rocky places and among rubbish. P. August.
The leaves and flowers are very bitter; the roots are warm and aromatic. A considerable quantity of effuent oil rises from it in distillation. This oil is used both externally and internally to destroy Worms—The leaves put into sour beer, soon destroy the ascendency—They refit purgation, and are therefore a principal ingredient in antiseptic fomentations. An infusion of them is a good stomachic, and with the addition of fixed alkaline salts, a powerful diuretic in dropsical cases—The ashes afford a more pure alkaline salt than most other vegetables, excepting Bean-stalks, Broom, and the larger trees.—In the Ann. Acad. v. 2. p. 160. Linnaeus mentions two cases, where-in an essence prepared from this plant and taken for a considerable time, prevented the formation of stones in the kidneys or bladder; the patients forbearing the use of wine and acids. It may, like other bitters, weaken the action of the nervous system, but in these infances no such effect took place—An infusion of it given to a woman that fuckles, makes her milk bitter—It gives a bitterness to the flesh of Sheep that eat it; Horses and Goats are not fond of it; Cows and Swine refuse it.

SOUTHERNWOOD. Leaves with winged clefts; flat; jag—Mugwort; downy on the under side. Flowers in branches; simple; Vulgaris much curved. Five florets in the circumference of each flower.


major. Bauh. pin. 137.

Mugwort. Mother-wort.
In some countries it is used as a culinary aromatic—A decoction of it is taken by the common people to cure the Ague. Sheep and Swine refuse it; neither Horses, Cows or Goats are fond of it. The Wormwood Loufe, Aphis Abintonii and the Lambda Moth, Phalena Gamma, live upon the several species.

329 TANSEY.
TIPS UNITED

329 TANSEY. 944 Tanacetum.

EMP. Common, hemispherical; tiled. Scales sharp; compact.

BLOSS. Compound, tubular; convex. Florets with Chives and Points, numerous; tubular; placed in the center. Florets with only Points, a few in the circumference.

Individuals with Chives and Points, funnel-shaped. Border with five clefts; reflected.

Individuals with only Points, with three clefts; more deeply divided on the inner side.

CHIVES. Threads live; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud, where there are chives and points, oblong; small. Shaft thread-shaped; as long as the chives. Summit cloven; rolled back. Seedbud, where there are only points, oblong. Shaft simple. Summit two; reflected.

S.VISS. None. Cup unchanged.

SEEDS. Solitary; oblong; naked.

RECEPT. Convex; naked.

Common

Tanacetum luteum. Banb. pin. 132.

1. There is a variety with curled leaves called double Tansey.

2. Another with variegated leaves; and a third with larger leaves and but little smell.

High pastures. P. August.

This is a warm deoblitrent bitter, and its flavour not ungrateful—The tender leaves are sometimes used to give a colour and flavour to puddings.—If a dead animal substance is rubbed with this plant, the flesh will not attack it.—The Finlanders obtain a green dye from it.—Cows and Sheep eat it; Horses, Goats and Swine refuse it. It gives nourishment to the Tansey, Loule, Aphis Tanacetii; and to the Chrysomela Tanacetii.
SUPERFLUOUS POINTALS.

330 SPIKENARD. 950 Conyza.

Emp. Common. tiled; oblong; scurvy. Scales sharp; the outer ones a little expanded.

Blos. Compound, tubular. Florets with Chives and Pointals numerous; tubular; in the center. Florets with only Pointals and without petals, circular; in the circumference.

Individuals with Chives and Pointals funnel-shaped. Border with five cleits; open.

Individuals with only Pointals funnel-shaped. Border cloven into three segments.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud, where there are chives and pointals, oblong. Shaft as long as the chives; thread-shaped. Summit cloven.

Seedbud, where there are only pointals, oblong. Shaft thread-shaped; as long, but more slender than the other. Summits two; very slender.

S. Vess. None: the cup closing.

Seeds. In all the florets, solitary; oblong. Feather simple. Recurt. Naked; flat.


Conyza major vulgaris. Baub. pin. 265.


Great Fleabane.

High Grounds and road-sides. B. July—August.

331 CATS.
TIPS UNITED.

CATSFoot. 946 Gnaphalium.

EMPAL. Common, roundish; tiled. Scales egg-shaped; approaching; the upper ones more flexible.

BLOSS. Compound. Florets with Chives and Pointals, tubular; sometimes mixed with the other florets without either chives or petals.
Individuals, with Chives and Pointals, funnel-shaped. Border with five clefts; reflexed.
Individuals with only Pointals, without petals.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud, where there are chives and pointals, egg-shaped. Shaft thread-shaped; as long as the chives. Summit cloven.

Seedbud, where there are only pointals, egg-shaped. Shaft thread-shaped; as long as the other, Summit cloven; reflexed.

S. VESS. None. Cup permanent; shining.

SEEDS. In all the florets solitary; oblong; small; crowned with a Feather.

RECEPT. Naked.

Ons. In some species the feather is hair-like; in others downy.
In one species the Chives and Pointals are an distinct plant.

Jersey Luteo-album

CATSFoot. Stem herbaceous. Leaves sword-shaped; half embracing the stem; serpentine at the edge; blunt; downy on both surfaces. Flowers crowded close together—The whole plant is very woolly. Cups yellowish white; soft; with scales between egg and spear-shaped. Florets with only pointals, in the circumference; numerous.

Gnaphalium majus lato oblongo folio. Bawe. pin. 263.
Jersey Cudweed.

In the Isle of Jersey, on walls and dry banks— A. July—August.
SUPERFLUOUS POINTALS.

CATSFoot. Stem herbaceous. Leaves betwixt strap and Pearly spear-shaped; tapering; alternate. Stem branched towards he top. Margaritace-Flowers in broad-topped level spikes—Blossoms yellowish green. um

Gnaphalium Americanum latifolium. Baub. pin. 263.
Argyrocome, seu Gnaphalium Americanum. Park. 690.
American Cudweed.
Meadows, pastures, and banks of rivers. P. Auguft.

CATSFoot. Runners trailing. Stem undivided. Flowers Mountain in a simple broad-topped spike. Chives and pointals on distinct Dioicum plants—In the barren forests the cups are almost globular; but in the fertile ones nearly cylindrical. Blossoms white; purple or reddish; terminating.

Gnaphalium montanum, flore rotundiore. Baub. pin. 263.
The above are the synonyms of the plant bearing only barren flowers—The following those of the other bearing fertile flowers.

Gnaphalium montanum five Pes Catii. Park. 690.
Gnaphalium longiore folio et flore. Baub. pin. 263.
It is somewhat remarkable that no one of our Botanists appear to have observed both these plants, tho both it is evident, are absolutely necessary to perpetuate the species.
Mountain Cudweed.
On heaths and dry hilly pastures. P. May.
Horses, Sheep and Swine eat it; Cows and Goats refuse it.

CATSFoot. Stem herbaceous; undivided; upright. Upright Flowers scattered—Leaves narrow; sharpe; discoy on the under Sylvaticum surface, Cups subite; ibining. Blossoms yellowish.

Gnaphalium Anglicum vulgare majus. Park. 685.
Gnaphalium majus, angusti oblongo folio, alterum. Baub.

pin. 267.
Upright Cudweed.
Sandy woods and pastures. B. Auguft.
Goats eat it.

CATSFoot. Stem herbaceous; with spreading branches. Black Flowers crowded together; terminating—Blossoms yellowish; Ulignorum Cups brown, or black.

Gnaphalium longifolium humile ramosum capitulis nigris.
Ray's Syn. 181.
Gnaphalium med um. Baub. pin. 263.
Filago minor. Park. 686.
Black-headed Cudweed.
In watery places. A. Auguft.
Goats and Cows refuse it.

332 DAISIE.
TIPS UNITED.

332 DAISIE. Bellis.

*Empal.* Common simple; upright. Little Leaves from ten to twenty, placed in a double row; spear-shaped; equal.

*Bloss.* Compound, radiate. *Florets with chives and Pointals,* tubular; numerous; placed in the centre. *Florets with only pointals,* narrow; more in number than the leaves of the cup; placed in the circumference.
  *Individuals with chives and pointals funnel-shaped;* with five clefts.
  *Individuals with only pointals narrow;* spear-shaped; very slightly marked with three teeth.

*Chives.* Threads five; hair-like; very short. *Tips* forming a hollow cylinder.

*Point.* *Seedbud* where there are chives and pointals, egg-shaped. *Shaft* simple. *Summit* notched at the end.
  *Seedbud* where there are only pointals, egg-shaped. *Shaft* thread-shaped, *Summits* two; standing wide.

*S.Vess.* None. *Cup* unchanged.

*Seeds.* In all the florets, solitary; inversely egg-shaped; compressed. *Feather* none.

*Recept.* Naked; conical.

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**Common Perennis**

DAISIE. Stalk naked.—*Leaves oblong; blunt; notched; spread upon the ground. Florets in the center yellow; those in the circumference white above, pink beneath. By cultivation the blossom becomes double and either all red, or red and white.*


Pattures. *P. March—September.*

The leaves are slightly acid. The roots have a penetrating pungency. No attention is paid to it except what it claims from the beauty of its flowers—The flowers close at night—Horses, Sheep, and Cows refuse it.
SUPERFLUOUS POINTALS.

333 FEVERFEW. 967 Matricaria.

Exp. Common, hemispherical. Scales spiral-shaped; tiled; not quite equal.

Blos. Compound, radiate. Florets with chives and pointals tubular; numerous; placed in the center; which is hemispherical. Florets with only pointals many; placed in the circumference.

Individuals with chives and pointals, funnel-shaped; with five clefts; expanding.

Individuals with only pointals, oblong; with three teeth.

Chives Threads fine; hair-like; very short. Tips forming a hollow cylinder.

Poin. Seedbud, where there are chives and pointals, oblong; naked. Shaft as long as the chives; thread-shaped. Summit cloven; expanding.

Seedbud, where there are only pointals naked. Shaft thread shaped; as long as the other. Summits two; rolled back.

S.Vess. None. Cup unchanged.

Seeds. In all the florets, solitary; oblong. Feather none.

Recept. Naked; convex.

FEVERFEW. Leaves compound; flat. Little leaves egg-shaped jagged. Fruit-stalks branched.—Naked. Florets yellow in Parthenium in center; subite in the circumference; double by cultivation.


Matricaria vulgaris feu fativa. Bady. pin. 132

Ditch-banks and amongst rubbish. P. or B. June.

The whole plant has a strong smell, and a bitter taste; it yields an essential Oil by distillation.

FEVERFEW. Receptacles hemispherical. Leaves doubly Sea-winged, and somewhat fleshy; convex on the upper side, and Maritima bared beneath.—Florets in the center yellow; those in the circumference white.

Chamæmelum marisimum perenne humilis, foliis brevibus crassis, obscure virentibus. Ray's Syn. 136. Tab.7. fig. 1.

On the coast of Sussex. P. July.
Sweet-scented Feverfew. Receptacles conical; rays bent downwards.
Suaedens
Scales of the cup equal at the edge—Florets in the centre yellow; those in the circumference white.
Sandy ground. A. May.
Goats, Sheep and Horses eat it; Swine refuse it.

Chamomile Feverfew. Receptacles conical; rays expanding. Scales of the cup equal at the edge.—Leaves more than doubly compound, with slender segments. Florets in the centre yellow; those in the circumference white.
Park. 85.
Chamæmelum vulgare, Leucanthemum Dioscoridis. Bamb.
pin. 135.
Corn Feverfew.
Corn-fields. A. June.
Its properties resemble those of the Sweet-scented Chamomile.
The Finlanders use an infusion of it in Consumptive cases.—
Cows, Goats and Sheep eat it; Horses are not fond of it; Swine refuse it.
SUPERFLUOUS POINTALS.

334 GOLDINS. 966 Chrysanthemum.

EMPAL. Common, hemispherical; tiled. Scales lying close upon each other. The Inner Ones becoming gradually larger; the very innermost terminating in a skinny substance.

Bloss. Compound, radiate. Florets with Chives and Pointals numerous; tubular; placed in the cleft. Florets with only Pointals, twelve or more; placed in the circumference.

Individuals with Chives and Pointals, funnel-shaped; with five clefs; open; as long as the cup.

Individuals with only Pointals narrow; oblong; with three teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder; generally shorter than the blossom.

Point. Seedbud, where there are chives and pointals, egg-shaped. Shaft thread-shaped; longer than the chives. Summits two; rolled back.

Seedbud where there are only pointals, egg-shaped. Shaft th read-shaped; as long as the other. Summits two; blunt; rolled back.

S. Vess. None. Cup unchanged.

Seeds. In all the florets solitary; oblong. Feather none.

Reeds. Naked; dotted; convex.

Oss. In the first division of the species, the florets that have only pointals are spear-shaped, and the membranes of the cup are narrow.

But in the second division they are egg-shaped and lopped, and the membranes of the cup are egg-shaped.

* Radiate Florets white.

GOLDINS. Leaves embracing the stem; oblong; upper leaves serrated; lower ones toothed—Florets in the center yellow; Leucanthemum vulgare. Roy's Syn. 184.

Bellis major. Gerard. 634.

Bellis major vulgaris, seu sylvatica. Park. 528.

Bellis sylvatica caule folioso major. Baub. pin. 261.

Greater Daisie. Ox-Eye.

Corn-fields and dry pastures. P. May.

The young leaves may be eaten in fallads.—Horses, Sheep and Goats eat it; Cows and Swine refuse it.

Vol. II. K GOLDINS.
TIPS UNITED.

GOLDINS. Leaves winged; with many clefts. Stemm branched; spreading—Cups skinny at the edge. Florets in the center yellow; those in the circumference white. Seeds black. Chamemelum inodorum annuum humilis, foliis obscure virentibus. Ray's Syn. 186.
Matricaria inodora. Hudson. 322.
Field Feverfew.
Road-sides. A. August.

* * Florets all yellow.

GOLDINS. Leaves embracing the stem; upper leaves jagged; lower ones toothed and serrated.—Blossoms yellow.
hostras. Park. 1370.
Bellis lutes, foliis profunde incisis, major. Bough. fin. 262.
1. It varies in the leaves being more or less jagged.
Corn-fields. A. June—July.

335 ELECAMPANE. 956 Inula.
EMPAL. Common, tilled: Little Leaves flexible; open: the outer ones the largest; equal in length.
BLOSS. Compound, radiate; broad. Florets with Chives and Pointals, equal; very numerous; placed in the center. Florets with only Pointals narrow; numerous; crowded; placed in the circumference.
Individuals with Chives and Pointals funnel-shaped;
Border with five clefts; somewhat upright.
Individuals with only Pointals, narrow; strap-shaped; very entire.
CHIVES. Threads five; thread-shaped; short. Tips five; narrow; united; forming a hollow cylinder; each tip ending at the base in two straight bristles, as long as the threads.
POINT. Seedbud, where there are both chives and pointals, long. Shaft as long as the chives; thread-shaped. Summit cloven; a little upright.
Seedbud, where there are only pointals, long. Shaft thread-shaped; a little cloven. Summits upright.
S. VESS. None. Cup unchanged.
SEEDS. In all the florets, solitary; narrow; with four angles. Feather simple; as long as the seed.
RECEPT. Naked; flat.
OBS. The essential character of this genus consists in the two bristles fixed to the lower part of each tip.

ELECAM-
SUPERFLUOUS POINTALS. 515

ELECAMPANE. Leaves embracing the stem; egg-shaped; Common wrinkled; downy underneath. Scales of the cup egg-shaped. Helenium—Blooms yellowish green.


Helenium five Enula campana. Park. 674.

Moist meadows. P. July—August.

The root is esteemed a good pectoral. Dr. Hill says he knows from his own experience, that an infusion of the fresh root sweetened with Honey, is an excellent medicine in the Hooping Cough—A decoction of the root cures Sheep that have the Scab.

—Horses and Goats eat it; Cows, Sheep and Swine refuse it.

ELECAMPANE. Leaves embracing the stem; oblong heart-shaped. Stem woolly; flowers in panicles. Scales of the cup Dysenterica brittle-shaped—The scales of the cup are somewhatawl-shaped; j.eft; bent back; coloured at the edges. Blooms yellow.


Middle Fleabane.

Banks of rivers. P. August.

It hath a peculiar acid smell—The Russian Soldiers, in the Persian expedition under General Keit, were much troubled with the Bloody Flux, which was cured by the use of this plant.

—Cows are not fond of it; Goats and Sheep refuse it.

ELECAMPANE. Leaves embracing the stem; waved at Small the edges. Stem prostrate. Flowers nearly globular; rays Pulicaria very short—Blooms yellow.


Conyza minima. Gerard. 482.


Small Fleabane.

1. There is a variety still smaller.

Where waters stagnate in winter. A. August—September.

Sheep eat it; Horses, Cows and Goats refuse it.

ELECAMPANE. Leaves strap-shaped; fleshy; three-pointed Samphire—Blooms yellow; terminating. Crithmoides


Golden Samphire.

On the sea-coast. P. August.

K 2

FLEABANE.
TIPS UNITED.

336 FLEABANE. 951 Erigeron.

EMP. Common, oblong; cylindrical; tiled. Scales awl-shaped; upright; gradually longer; nearly equal.

BLO. Compound, radiate. Flores that have both Chives and Pointals, tubular; placed in the center. Flores that have only Pointals, narrow; placed in the circumference.

Individuals with Chives and Pointals, funnel-shaped.

Border with five clefts.

Individuals with only Pointals, narrow; betwixt strap and awl-shaped; upright; generally very entire.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud, where there are chives and pointals, very small; crowned with a feather, longer than its blossum. Shaft thread-shaped; as long as the feather. Summits two; oblong; rolled back.

Seedbud, where there are only pointals, very small; crowned with a feather; nearly as long as its blossum. Shaft hair-like; as long as the feather. Summits two very slender.

S. VESS. None. Cup closing.

SEEDS. In all the florets, oblong; small. Feather long.

RECEPT. Naked; flat.

Obs. There are sometimes florets in the central part that have only chives and no pointals.

In one species the florets with only pointals have no blossums.

FLEABANE. Stem supporting panicles of flowers—Florets in the center yellow; those in the circumference white with a tinge of red.

Conyza canadenis annua, acris, alba, Linarie folii. Ray's Syn. 175.

Among all rubbish. A. August.

FLEABANE. Fruit-stalks alternate; each supporting a single flower—Florets in the center yellow; those in the circumference purple.


Conyza odorata carulea. Park. 126.

After arvensis, caruleus, acris. Ray's Syn. 175.

Blue-flowered Fleabane.

Dry pastures. P. July—September.

The Germans take a decoction of it to attenuate viscid Phlegm.

—Cows and Goats refuse it.
SUPERFLUOUS POINTALS.

EMPAL. Common, oblong; tiled. Scales oblong; narrow; tapering; straight; approaching.

Bloss. Compound, radiate. Florets with Chives and Pointals, tubular; numerous; placed in the center. Florets with only Pointals, narrow; from five to ten; placed in the circumference.

Individuals with Chives and Pointals, funnel-shaped;
Border with five clefts; open.

Individuals with only Pointals, narrow; spear-shaped; with three teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud, where there are both chives and pointals, oblong. Shaft as long as the chives; thread-shaped. Summit cloven; expanding.

Seedbud, where there are only pointals, oblong; Shaft thread-shaped; as long as the other. Summits two; rolled back.

S. Vess. None. Cup but little changed.

Seeds. In all the florets; solitary; oblong; inversely egg-shaped. Feather hair-like.

RECEP. Flat; naked.

GOLDENROD. Stem somewhat zigzag; angular. Flowers Common crowded in panicked bunches; upright—Leaves betwixt egg and Virga-aurea spear-shaped. Blossoms yellow.


Virga aurea latifolia ferrata. Bauh. pin. 268.

Woundwort.

Woods, hedges and heaths. P. August.

Varies.

1. With leaves narrower, and more slightly ferrated. Virga aurea IV, five angustifolia minus ferrata. Bauh. pin. 998.

2. With leaves narrower; slightly ferrated; growing on long leaf-stalks; and flowers larger, rising from the base of the leaves, and collected into a kind of spike. Ray's Syn. ib. Virga aurea vulgaris humilior. Ray's Syn. 176.

In Ireland, and on Hampstead-heath.

Horses, Cows, Sheep, Goats and Swine eat it.

K 3

GOLDEN.
TIPS UNITED.

GOLDENROD. Leaves between strap and spear-shaped; somewhat serrated; hoary; with flowers growing in a panicle like a sort of broad-topped spike, and terminating the stem. Hud. Fl. Angl. 319. Mart. Cat. Cant. 158.
Virga aurea montana, folio angusto sub incano, floresculis con-globatis. Ray's Syn. 177.
In mountainous pastures in Wales. P. June.

338 FLEA WORT. 957 Cineraria.

EMPAL. Common, simple; of many leaves. Little Leaves equal.

BLOSS. Compound, radiate. Florets with Chives and Pointals, equal; numerous; in the center. Florets with only Pointals narrow; equal in number to the leaves of the empalement; in the circumference.
Individuals with Chives and Pointals, funnel-shaped; with five clefts; upright.
Individuals with only Pointals, narrow; spear-shaped; with teeth at the end.

CHIVES. Threads five; thread-shaped; short. Tips forming a hollow cylinder, with five clefts at the top.

POINT. Seedbud, where there are both chives and pointals, oblong. Shaft thread-shaped; as long as the chives. Summits two; a little upright.
Seedbud, where there are only pointals, oblong. Shaft thread-shaped; short. Summits two; oblong; rather blunt; rolled back.

S. VESS. None. Cup unchanged.

SEEDS. In all the florets, solitary; narrow; with four angles. Feather hairy; in large quantity.

RECEPT. Naked; rather flat.

FLEA WORT. Flowers in broad-topped spikes. Leaves broad; spear-shaped; toothed and indented. Stem woolly—The Leaves cover the stem quite up to the flowers. Blossoms yellow.

Conyza helenitis foliis laciniatis. Park. 156.
Othonna palustris. Hudson. 337.
Marth Fleabane.

1. There is a variety in which the leaves embrace the stem; and the teeth and indentures are not very evident.
In Marshes and wet ditches. P. August.

FLEA WORT.

Marth
Palustris
SUPERFLUOUS POINTALS.

FLEA WORT. Flowers in rundles. Leaves spear-shaped Mountain woolly; furnished with little teeth—Fruit-stalks not leafy. Blof Integrifolia soms yellow.

Jacobea montana lanuginosa angustifolia non laciniata, Baumb.

Jacobaea pannonica folio non laciniata. Ray's Syn. 178.
Jacobaea angustifolia, Gerard. 280.
Jacobaea angustifolia pannonica non laciniato. Park. 668.
Othonna integrifolia. Hudson. 327.
Mountain Rag-wort.
Hilly pastures. P. June,

339 GROUNDSEL. 953 Senecio,

EMPALL. Common, double; conical; lopped. Scales awl-shaped; numerous; contiguous; equal; dead at the ends; parallel; contracted above into a cylinder; the base tiled by a few scales.

BLOSS. Compound, taller than the cup. Florets with Chives and Pointals tubular; numerous; in the center. Florets with only Pointals, (if any such there are) narrow; in the circumference.

Individuals with Chives and Pointals, funnel-shaped.
Border reflected; with five clefts.
Individuals with only Pointals, (if any) oblong; with three imperfect teeth.

CHIVES. Threads five; hair-like; very small. Tips forming a hollow cylinder.

POINT. Seedbud, in both sorts of florets, egg-shaped.
Shaft thread-shaped; as long as the chives. Summits two; oblong; rolled back.

S. VESS. None. Cup closing so as to form a cone.

SEED. In both sorts of florets, solitary; egg-shaped.
Feather hairy; long.

RECEP. Naked, flat.

Obs. In some species the florets are radiate in the circumference; in others they are all tubular.
TIPS UNITED.

Flowers without Rays.

Common Vulgaris

GROUNDSEL. Flowers not radiate. Leaves indented into wings; embracing the stem. Flowers scattered.—Blossoms yellow; terminating.

Senecio minor vulgaris. Baub. pin. 131.
Erigeron. Gerard. 279.
Simpson.

In gardens and among rubbish. A. May.

The bruised leaves are a good application to Boils.—The seeds are very acceptable to Linnets and Gold-finchies when confined in cages.—Cows are not fond of it; Goats and Swine eat it; Horses and Sheep refuse it.

** Flowers with Rays ; the Rays rolled backwards.

Cotton Vulcoenus

GROUNDSEL. Blossoms in the circumference rolled backwards. Leaves with winged clefts; clammy. Scales of the envelope flexible; as long as the cup.—The whole plant is furnished with hairs, which pour out a clammy juice. Fruit-stalks lateral; supporting two or three flowers. Blossoms yellow.

Senecio inanus pinguis. Baub. pin. 131.
Senecio hirsutus vilicidus major odoratiss. Ray's Syn. 178.
Senecio satidus. Park. 671.
Stinking Groundsel.
Sandy places. A. June.

Wood Sylvaticus

GROUNDSEL. Blossoms in the circumference rolled backwards. Leaves with winged clefts, and little teeth. Stem upright; supporting a broad-topped spike of flowers.—Blossoms yellow.

Senecio minor latiore folio, five montanus. Baub. pin. 131.
Ray's Syn. 178.
Erigeron. Gerard. 279.
Mountain Groundsel.
Woods, hedges and heaths. A. July.

*** Flowers with expanding Rays. Leaves with winged Clefts.

Hoary Erucifolius

GROUNDSEL. Flowers with rays. Leaves with winged clefts and toothed; a little hairy. Stem upright—Downy; white. Blossoms yellow.

Jacobaea senecionis folio inano perennis. Ray's Syn. 177.
Hoary perennial Rag-wort.
Woods and hedges. P. July.
SUPERFLUOUS POINTALS.

GROUNDSEL. Flowers with rays. Leaves lyre-shaped; Ragwort almost winged. Segments jagged. Stem upright—Blossoms yellow; on branched fruit-stalks.
1. Flowers without rays.
Jacobaea vulgaris flore nudo. Ray's Syn. 177.
Grows in great plenty near the sea-shore about three or four miles from Drogheda. Some few however amongst them, are found with radiated flowers. Perhaps this variety is only the effect of the sea-air, as it is well known how destructive that is to the more tender parts of vegetables.

If this plant is gathered before the flowers open, and used fresh, it dyes wool of a full green, but the colour is apt to fade. If woolen cloth is boiled in Alum-water, and then in a decoction of the flowers, it takes a beautiful deep yellow.

Road-sides; pastures. P. July.

Horses and Sheep refuse it. Cows are not fond of it.

GROUNDSEL. Flowers with rays; leaves toothed: those Water at the root egg-shaped; those of the stem with winged clefts; Aquaticus the outer segments larger than the rest. Hudf. Fl. Ang. 317.
Jacobaea latifolia palustris five aquatica. Ray's Syn. 178.
Jacobaea latifolia pannonica prima. Park. 658.

Broad-leaved Rag-weed.

Mossy in watery places. P. July—Augulf.


GROUNDSEL. Flowers with rays. Leaves sword-shaped, Marsh sharply serrated; a little woolly on the under-side. Stem stiff Palaudosus and straight—Sometimes the leaves are downy on both surfaces. Blossoms yellow.

Virge aurea five solidagini angustifolia affinis; lingua avis Dilechampii. Ray's Syn. 176.

Coryza paludiflora. Park. 1231. ferratifolia. B.ub. pin. 266.


Ditches and Marshes. P. Augulf.

GROUNDSEL.
TIPS UNITED.

Broad-leaved Sarracenicus

GROUNDSEL. Flowers with rays; in broad-topped spikes. Leaves spear-shaped; serrated; almost smooth—Roots creeping very much. Blossoms yellow.


Broad-leaved Rag-wort.

Wet pastures, hedges, and woods. P. July—August.


340 BUTTERBUR. 952 Tussilago.

EMP. Common, cylindrical. Scales spear-shaped; narrow; equal; fifteen or twenty in number.

BLO. Compound, various. Florets with Chives and Pointals, in some species are all tubular, in others only tubular in the center.

Florets with only Pointals, in some species narrow; in others entirely wanting.

Individuals with Chives and Pointals, funnel-shaped. Border with four or five clefts; sharp; reflected; longer than the empalement.

Individuals with only Pointals either none at all, or very narrow; entire; longer than the empalement.

CHIVES. Threads five; hair-like; very short. Tips forming a hollow cylinder.

POINT. Seedbud, where there are chives and pointals, short. Shaft thread-shaped; longer than the chives. Summit thickish.

Seedbud, where there are only pointals, short. Shaft thread-shaped; as long as the other. Summit thickish; cloven.

S. VESS. None. Cup but little changed.

SEEDS. In all the florets, solitary; oblong; compressed. Feather hairy; standing on a pillar.

RECEPT. Naked.

OBS. In the second and third species there are no narrow florets in the circumference, but there are florets with only pointals, without blossoms. The first species hath always narrow florets in the circumference, furnished only with pointals.

BUTTERBUR.
SUPERFLUOUS POINTALS.

BUTTERBUR. Stalk tiled; supporting a single flower. Coltsfoot leaves somewhat; heart-shaped; angular; toothed—**Appearing Farfara a ter the flower.** Blossoms yellow.


Common Coltsfoot.

Moist sliff marly lands, and amongst lime-stone rubbish. P. March.

The downy substance on the under surface of the leaves, makes good Tinder. The leaves are the basis of the British Herb Tobacco. They are somewhat astringe, bitterish, and mucilaginous to the taste. They were formerly much used in Coughs and Consumptive complaints; and perhaps not without reason, for Dr. Cullen has found them to do considerable service in Scrophulous cafes. he gives a decoction of the dried leaves, and finds it succeed where sea-water has failed—**Cullen. Mat. Med. p. 458.**—Goat and Sheep eat it: Cows are fond of it: Horses and Swine refuse it.

BUTTERBUR. Flowers in an oblong cluster. Florets with tall only pointals numerous; without blossoms—**Florets tubular. Hybrida Petales major, floribus pediculis longis insidentibus. Ray's Sym. 179.**

Long stalked Butter-bur.

Moist pastures. P. March.

BUTTERBUR. Flowers in an egg-shaped cluster. Florets with only pointals few, and without blossoms—**Florets all tubular. Common The flowers appear before the leaves, which is likewise the case with Petales the first species.** Blossoms pale red.


Moist sandy places. P. March—April.

The roots abound with a resinous matter. They have a strong smell and a bitterish acrid taste.—Horses, Cows, Goats and Sheep eat it.

341 STARWORT.
TIPS UNITED.

STARWORT: 954 After.

Empat. Common, tiled with scales. The inner scales standing out at the points.

Bloss. Compound, radiate. Florets with Chives and Pointals, numerous; placed in the center. Florets with only Pointals, ten or more; narrow; placed in the circumference.

Individuals with Chives and Pointals, funnel-shaped.

Border with five clefts; open.

Individuals with only Pointals, narrow; spear-shaped; with three teeth.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud, where there are both chives and pointals, oblong. Shaft thread-shaped; as long as the chives. Summit cloven expanding.

Seedbud, where there are only pointals, oblong. Shaft the same as the other. Summits two; oblong; rolled back.

S.Vess. None. Cup but little changed.

Seeds. In all the florets, solitary; oblong; egg-shaped.

Feather hairy.

Recept. Naked; almost flat.

Sea Tripolium

STARWORT. Leaves spear-shaped; very entire; holly smooth. Branches flatted. Flowers in broad topped spikes.—

Florets in the center yellow: those in the circumference blue.

After maritimus caeruleus Tripolium dicit. Ray's Syn. 175.

Tripolium vulgaris, majus et minus. Gerard. 413.

Tripolium majus caeruleum et minus. Barn. pln. 267.

Tripolium majus, feu vulgare et minus. Park. 673.

1. It varies in being smaller, and in the florets being sometimes white.

Sea Starwort.

On the sea-shore, and in salt marshes in the interior parts of the Kingdom, (viz) near Inglesfree in Staffordshire. P. August.

Goats and Horses eat it: Cows and Swine refuse it: Sheep are not fond of it.

348 CHAMÔMILE.
SUPERFLUOUS POINTALS.

342 CHAMOMILE. 970 Anthemis.

**Emp. Common.** Hemispherical. **Scales** strap-shaped: nearly equal.

**Bloss. Compound, radiate.** Florets with Chives and Pointsal tubular; numerous; placed in the center, which is convex. Florets with only Pointsal, many; placed in the circumference.

- Individuals with Chives and Pointsal, funnel-shaped; with five teeth upright.
- Individuals with only Pointsal, narrow; spear-shaped; sometimes with three teeth.

**Chives. Threads** five; hair-like; very short. **Tips** forming a hollow cylinder.

**Points. Seedbud, where there are both chives and pointsal, oblong. Shaft as long the chives; thread-shaped. Summits two; reflected.**

**Seedbud where there are only pointsal, oblong. Shaft** the same as the other. **Summits two; rolled back.**

**S.Vess. None.** Cup unchanged.

**Seeds. In all the florets, solitary; oblong. Feather none.**

**Recess. Chaffy; conical.**

* Rays white.*

**Chamomile.** Leaves winged, edged with little teeth; Marine telly: naked; dotted. Stem prostrate; cups a little downy.— **Maritima.** Florets in the center yellow; those in the circumference white.

Chamaemelum maritimum latifolium ramotissimum, flore albo.

**Ray's Syn. 186.**

**Marricaria maritima.** Bane. pin. 194.

Sea Chamomile.

Pastures near the sea. P. August.

**Chamomile.** Leaves winged and compound; strap; sweet-scented banded; sharp; somewhat hairy— Florets in the center yellow; those Nobilis in the circumference white; bent outwards and downwards.

**Chamaemelum nobile feu Leucanthemum odoratissimum.** Bane.

**p. 193.**

Chamaemelum odoratissimum repens, flore simplici. **Ray's Syn. 185.**

Chamaemelum Romanum. Gerard. 735.

Trailing perennial Chamomile. **Roman Chamomile.**

1. By cultivation the flowers become double: that is the flowers of the circumference become more numerous, and those in the center disappear in proportion.

Warm pastures. P. July. August.

The
The leaves and flowers have a strong, not ungrateful smell, and a bitter nauseous taste. They afford an essential oil. An infusion of the flowers is often used as a stomachic and as an antispasmodic. In large quantities it excites vomiting. The powdered flowers, in large doses, have cured Agues, even when the Bark had failed. Both the leaves and flowers possess very considerable antiseptic properties, and are therefore used in antiseptic fomentations, and poultices. From their antispasmodic powers, they are frequently found to relieve pain, either applied externally, or taken internally.

Corn Arvensis

CHAMOMILE. Receptacles conical. Chaff briskly. Seeds crowned with a border. The whole plant is hoary, and spreads wide. The inner scales of the cup broad at the end, and mem. anaceous. Florets in the center yellow; those in the circumference white.

Corn-field and road-sides. B. July.
Cows and Sheep eat it: Horses are not fond of it.

May-weed Cotula

CHAMOMILE. Receptacles conical. Chaff briskly. Seeds naked. The chaff is very small. The florets are sometimes prolificous; those in the center yellow; those in the circumference white; with three teeth.


1. The variety with double blossoms. Ray's Syn. 185.

Stinking May-weed.
Corn-fields and road-sides. A. June—July.
Toads are said to be fond of this plant. It is very ungrateful and displeasing to Bees—Goats and Sheep are not fond of it: Horses, Cows and Swine refuse it.

** Ray's yellow

Ox-eve Tincutia

CHAMOMILE. Leaves doubly winged; serrated, downy underneath. Stem supporting a broad-topped spike of flowers. Blossoms yellow.

Bupthalum Matthioli, seu vulgare Millefolii foliis. Park.

157v.

Common Ox-eve.
Sunny pastures. P. July.
The flowers afford a remarkably clear and good yellow dye.
The flowers of the yellow Goldins resemble them much in appearance, but experience proves they cannot be sublimated in their place.
Horses and Goats eat it: Sheep are not fond of it: Cows and Swine refuse it.

343 YARROW.
SUPERFLUOUS POINTALS.

343 YARROW. 971 Achillea.

Empal. Common, oblong; egg-shaped; tiled. Scales egg-shaped; sharp; approaching.

Bloss. Compound; radiate. Flores with Chives and Pointals, from five to sixteen; tubular; placed in the center. Flores with only Pointals, from five to ten; narrow; placed in the circumference.

Individu4als with Chives and Pointals, funnel-shaped; with five clefts; open.

Individu4als with only Pointals narrow; inversely heart-shaped; expanding. cloven into three segments, the middlemost the smallest.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder.

Point. Seedbud, where there are both chives and pointals, small. Shaft thread-shaped; as long as the chives. Summit blunt; notched at the end.

Seedbud where there are only pointals, small. Shaft thread-shaped; as long as the other. Summits two; blunt; reflexed.

S.Vess. None. Cup but little changed. The Receptacle thread-shaped; lengthens out into the disc of the seeds; egg-shaped, and twice as long as the empalement.

Seeds. In all the florets, solitary; egg-shaped; woolly. Feather none.

Recept. Chaffy; elevated. Chaff spear-shaped; as long as the florets.

YARROW. Leaves spear-shaped; tapering; sharply serrated. Goose-tongue. 

-Blussom white; sometimes double.


Moist woods, P. August.

The roots have a hot biting taste—The young tops are sharp and pleasant in spring salads—The powdered leaves excite sneezing—Horses, Cows, Sheep, Goats and Swine eat it.
TIPS UNITED.

Milfoil (Millefolium)

YARROW. Leaves doubly winged; naked. Segments strap-shaped; toothed. Stem furnished towards the top—Blossoms white; sometimes tinged with red or purple.


Common Yarrow or Milfoil.

1. There is a variety with purple blossoms.


The flowers yield an essential oil. The leaves are celebrated by the Materia Medica writers for a variety of purposes, but they are little attended to at present.—Sheep and Swine eat it. Horses, Cows and Goats are not fond of it.

Order III. Barren Florets.

344 KNAPWEED. 984 Centaurea.


Bloss. Compound, florets all tubular; but of different shapes. Florets with Chives and Pointals, many; placed in the center. Florets with only Pointals, not so many; larger; more flexible; placed in the circumference.

Individuals with Chives and Pointals, one petal. Tube thread-shaped; Border dilated; oblong; upright; terminating in five strap-shaped, upright segments.

Individuals with only Pointals, one petal. Tube slender; gradually becoming wider; bent backwards. Border oblong; oblique; unequally divided.

Chives. Threads five; hair-like; very short. Tips forming a hollow cylinder as long as the blossom.

Point. Seedbud, where there are chives and pointals, small. Shaft thread-shaped; as long as the chives. Summit very blunt; (in many cloven;) with a projecting point.

Seedbud, where there are only pointals, very small. Shaft, next to none. Summit none.

S. Vess. None. Cup unchanged, closing.

Seeds. In the fertile florets of the center, solitary. Feather generally downy, or hairy.

Recept. Brittle.

Obs. The scales of the cup, and the feather of the seeds are different in different species.
BARREN FLORETS.

* Scales of the cup fringed.

KNAPWEED. Cups ferrate. Leaves strap-shaped; very blue-bottle entire. The lower leaves toothed—Blossoms generally blue, some—Cyanus times red, or white, or purple, or flesh-colour.

Corn-fields. A. July.
The varieties are very numerous if they are estimated by the colour of the blossom, *viz.*
1. White.
2. Flesh coloured.
3. Purple.
4. Red.
5. Pale violet.
6. Dark purple.
7. Blue and white.
8. Flesh colour and white.
9. Violet colour and white.
10. Purple and white.
11. Purple and blue.
12. Double blue.
14. Double purple and white.
The expressed juice of the petals is a good blue ink, it stains linen of a beautiful blue, but the colour is not permanent in the mode it has hitherto been applied. *Mr. Boyle* says, the juice of the Central Florets with the addition of a very small quantity of alum, makes a lasting transverse blue not inferior to ultramarine. *Gent. Mag.* 1748.
Cows, Goats and Sheep eat it; Horses and Swine refuse it.

KNAPWEED. Cups fringed. Leaves with winged clefts. Great Segments spear-shaped.—Blossoms purple, sometimes white; on long Scabiosa naked fruit stalks.

Scabiosa major, squamatis capitulis. *Baub.* *pin.* 969.
Marfellon.
Horses, Sheep, Goats and Swine eat it; Cows refuse it.

L

KNAP-
Common Jacea

—The leaves sometimes are white with down. Blossoms purple.
Jacea nigra pratensis latifolia. Baub. pin. 271.
1. There is a variety with downy leaves. Ray’s Syn. 199.
Meadows and pastures. P. July—August.
The following varieties are produced by cultivation;
1. White blossomed.
2. Small, with jagged leaves.
3. Stems rough; leaves narrow.
4. Stems smooth; leaves narrow.
This plant affords a yellow dye, but inferior to that from the
Dyers Sawwort.—Cows, Goats and Sheep eat it; Horses and
Swine refuse it.
The Knapweed Loufe, Aphis Jacea is found upon it.

Starry Calcitrapa

* * Scales of the Cups thorny.

KNAPWEED. Cups with thorns, somewhat double; sitting. Leaves with winged clefts; strap-shaped; toothed. Stem hairy—Blossoms purple; several upon the same stem; sometimes deep purple; rarely white.
Caudius stellaris, seu Calcitrapa vulgaris. Park. 989.
Caudius stellatus, foliis Papaveris erratici. Baub. pin. 387.
Star Thistle.
Road-sides and barren ground. A. July.

Thistle Sollstitialis

KNAPWEED. Cups with double thorns; solitary. Leaves spear-shaped, without thorns; running along the branches. Root-leaves lyre-shaped, with winged clefts—Fruit-stalks very long; leafy. Thorns of the cup only toothed at the base. Blossoms yellow.
Caudius stellatus luteus, foliis Cyanii. Baub. pin. 387. Ray’s
Syn. 196.
St. Barnaby’s Thistle.
Hedges. A. July.
Necessary Pointals.

Order IV. Necessary Pointals.

345 Cudweed. 995 Filago.

EMP. Common, composed of chaffy scales; tiled; containing in the center many florets with chives and pointals, and amongst the lower scales solitary florets with only pointals.

BLO. Individuals with Chives and Pointals, funnel-shaped. Border with four clefts. upright.

Individuals with only Pointals, not very conspicuous; thread-shaped; very slender; mouth cloven.

CHIVES. Threads four; hair-like; small. Tips forming a hollow cylinder, with four teeth at the top.

POINT. Seedbud, where there are chives and pointals, hardly perceptible. Shaft simple. Summit sharp; cloven.

Seedbud, where there are only pointals, inversely egg-shaped; rather large; deprested. Shaft thread-shaped. Summit cloven; sharp.

S. VESS. None.

SEEDS. In those florets that have both chives and pointals, none. In the florets with only pointals, inversely egg-shaped; compressed; smooth; small. Frazier none.

RECEPT. The center naked; but at the sides the chaffy scales of the emplacement separate the florets.

Cudweed. Flowers in a forked panicle; round; in the Common divisions of the branches; hairy. Leaves sharp—Cups with four Germanica corners; the scales glossy and sharp. Blossoms brown.


Chatweed.

Barren pastures and road-sides. A. June—July.

It is given to cattle that have the bloody flux; and hath been tried with success in similar complaints of the human body.
TIPS UNITED.

CUDWEED. Stem upright; a little forked. Flowers conical; some terminating; others in the divisions of the branches.
- Leaves numerous; downy. Blossoms yellowish brown.
  Gnaphalium minimum. Ray's Syn. 181.
  Gnaphalium minus repens. Baub. pin. 363.
  Sandy pastures. A. June—July.
  Sheep eat it; Cows and Goats refuse it.

CUDWEED. Stem upright; forked. Flowers awl-shaped; in the divisions of the branches. Leaves thread-shaped—Leaves not hairy, but smooth and a little downy.
  Gnaphalium parvum ramosissimum foliis angustissimis polypermone. Ray's Syn. 181.
  Sandy corn-fields. A. June—July.

Order VI. Flowers simple.

346 SCABIOUS. 1005 Jasiono

EMPAL. Common Cup of many leaves; permanent; alternate; the inner ones narrower; including several flowers upon very short fruit-flalks.
  Proper Cup with five clefts; superior; permanent.

Bloss. Individuals with five petals. Petals spear-shaped; upright; connected at the base.

CHIVES. Threads five; awl-shaped; short. Tips five; oblong; connected at the base.

POINT. Seedbud beneath; roundish. Shaft thread-shaped; as long as the blossom. Summits cloven.

S.VESS. Capsule roundish; with five angles and two celled crowned by the proper Cup.

SEEDS. Many; somewhat egg-shaped.
  Ovs. The central flowers are frequently barren, and the summit club-shaped and undivided.

SCABIOUS. As there is only one species known, Linnæus gives no description of it—Blossoms blue. Fruit-flalks naked.
  Rapunculus scabiosa capitulo caeruleo. Baub. pin. 36. Park
  646. Ray's Syn. 278.
  Scabiola minima hirsuta. Gerard. 723.
  Hairy Sheeps Scabious.
  Heaths and hilly pastures. A. June—July.
  The flowers are very grateful to bees.

347 CARDINAL.
FLOWERS SIMPLE.

347 CARDINALFLOWER. 1006 Lobelia.

Leaf. Cup one leaf; with five teeth; very small; embracing the seedbud; shrivelling. Teeth nearly equal; the two upper ones a little raised.

Bloss. One petal; rather gaping. Tube cylindrical; longer than the cup; divided on the upper part lengthways. Border with five divisions. Segments spear-shaped; the two upper ones smaller; more reflexed; more deeply divided; forming the upper lip. The three lower ones generally larger, and more expanding.

Chives. Threads five; awl-shaped; as long as the tube of the blossom. Tips connected so as to form an oblong cylinder, opening at the base in five different directions.

Point. Seedbud beneath: tapering to a point. Shaft cylindrical; as long as the chives. Summit blunt; rough with hair.

S. Vess. Capsule egg-shaped; with two cells; opening at the top; encompassed by the cup.

Seeds. Many; very small.

CARDINALFLOWER. Leaves strap-shaped; very entire; Water with a double hollow running lengthways. Stem almost naked—Dortmann. The whole plant, and even the leaves that lie beneath the surface of the water are milky. Blossoms pale purple, or bluish white.

Gladeolus lacustris Dortmanni. Ray's Syn. 387.

Gladeolus lacustris Clausii, seu Leucojum palustre, flore subcruleo. Part. 1250.
Leucojum palustre flore subcruleo. Baub. pin. 41.

In lakes in hilly countries. P. July—August.

L 3  148 Viola,
TIPS UNITED.

348 VIOLET. 1007 Viola.

**Empal.** Cup five leaves; short; permanent. Little leaves oblong egg-shaped; rather sharp at the end; blunt below; fixed above the base; equal; but variously disposed. Two support the upper petal; two support the two lateral petals; and one supports the two lower petals.

**Bloss.** Petals five; irregular unequal; the Upper Petal straight; facing downwards; broader and more blunt than the rest; notched at the end: Terminating at the base in a blunt Honey-cup resembling a horn, and projecting betwixt the leaves of the cup.

Lateral Petals two; opposite; blunt; straight.

Lower Petals two; larger; reflexed upwards.

**Chives.** Threads five; very small. The two near the uppermost petal, are furnished with little appendages which enter the honey-cup. Tips generally united; blunt; with membranes at the end.

**Point.** Seedbud roundish. Shaft thread-shaped; extending beyond the tips. Summit oblique.

**S. Vess.** Capsule egg-shaped; three-edged; blunt; with one cell and three valves.

**Seeds.** Many; egg-shaped; furnished with appendages fixed to the valves. Receptacle narrow; running like a line along each valve.

**Obs.** In some species the summit is a simple reflexed hook; in others it is a little conic round knob, perforated at the end.

* Without Stems.

**Hairy**

VIOLET, without a stem. Leaves heart-shaped; rough with hair.—Blossoms pale blue.

Viola martia major hirsuta inodora. Roy's Syn. 365.

Woods and hedges. P. March.

Horset, Cows, Goats and Sheep eat it.

**Hirta**

VIOLET, without a stem. Leaves kidney-shaped—Fruit-stalks cylindrical, or only a little flattened upon one side. The upper petal is marked with black lines which extend quite to the top of it. Blossoms pale blue.

Viola palustris rotundifolia glabra. Roy's Syn. 364.

1. There is a variety in which the blossom is striped with purple.

Park. 755.

Cows eat it; Sheep are not fond of it.

VIOLET
FLOWERS SIMPLE.

VIOLET, without a stem. Leaves heart-shaped. Suckers Sweet
creeping along—Blossoms deepish purple.
Viola Martia purpurea. Ray's Syn. 364. flore simplici.
Baub. pin. 199.
Viola simplicex Martia. Park. 755.

1. There is a variety with white blossoms. Baub. pin. 199.
2. Cultivation produces double flowers, blue and white, or pale
purple.
The flowers and the seeds are said to be mild laxatives. The
petals give the colour to the syrup of Violets. This syrup is
very useful in many Chemical enquiries, to detect an acid or an
alkal: the former changing the blue colour to a red, and the
latter turning it green—Slips of white paper stained with the
juice of the petals, and kept from the air and the light, answer
the same purpose.

* * With Stems.

VIOLET. Stem ascending as it attains its full growth. Leaves Dogs
oblong heart-shaped—At the first opening of the flower it hath no Canina
stalk, but afterwards the stalk grows up and fruit-stalks proceed from
it. Blossoms pale blue.
364.
Viola sylvestris. Park. 755.
2. Very small Violet. Ray's Syn. 364. Tab. 24. fig. 1
smaller in every respect, and the spur of the blossom of a pale
yellow.
On heaths and ditch-banks. P. April.
Cows, Sheep, Swine and Goats eat it; Horses refuse it.

VIOLET. Stem supporting two or three flowers. Leaves Welch
kidney-shaped, serrated—Blossoms yellow.
Viola alpina rotundifolia lutea. Baub. pin. 199.
Viola alpina. Hudson. 331.
On mountains in Wales. P.
Goats eat it.
**TIPS UNITED.**

* * *

**VIOLET.** Stem three cornered; spreading. Leaves oblong; jagged. Props with winged clefts—Fruit-falls compressed. Floral leaves two; half-horseshaped; with two teeth on each side. Summit globular, open and hollow; fringed on the lower part, so that the little fibres of the fringe are nearly in contact with the tips. Blossoms purple, yellow, and light blue.


*Viola tricolor hortensis repens.* Naub. pin. 199.

1. With only two colours, *Baub.* pin. 200.

 Hearts-eaie. Panbies. Three Faces under a Hood.

Ditch-banks and corn-fields. A. May—September.

This is very frequently cultivated in flower gardens. The dust appears angular in the Microscope, but when wet with water it becomes globular. This alteration in figure is not peculiar to the dust of this plant only—Cows and Goats eat it; Swine are not fond of it; Horses and Sheep refuse it.

**Yellow Grandiflora**

**VIOLET.** Stem upright; three cornered. Leaves somewhat oblong; props with winged clefts—Blossoms very large; yellow. Petals egg-shaped; as long as the lower. Spur twice as long as the cup, but shorter than the petals. Summit globular, open and hollow.

*Viola montana lutea grandiflora nostras.* *Ray's Syn.* 365.

*Viola flammea lutea.* Gerard. 851.

*Viola montana lutea grandiflora.* *Baub.* pin. 200.

*Viola lutea.* Hudson. 231.

**Yellow Panlies.**

In bogs upon mountains, and hilly pastures. P. May—August.

The different species of Violets afford nourishment to the great Fritillary Butterfly with silver spots; *Papilio Argaja*; and to the high brown Fritillary Butterfly, *Papilio Adippe.*
FLOWERS SIMPLE. 537

349 WEATHERCOCK. 1008 Impatiens.

Emp. Cup two leaves; very small. Little Leaves circular, but tapering towards a point; equal; placed at the sides of the blossom; coloured; deciduous.

Bloss. Petals five; gaping; unequal; the:

Upper Petal circular; flat; upright; with three shallow segments; tapering to a point; forming the Upper Lip.

Lower Petals two; reflected; large; broadest on the outer part; blunt; irregular; forming the Lower Lip.

Intermediate Petals two; opposite; arising from the base of the upper petal.

Honey cup one leaf like a hood, receiving the bottom of the flower. Mouth oblique; riling outwards. Base ending in a horn.

Chives, Threads five; very short; narrower towards the base; bent inwards. Tips five; united; but separate at the base.

Point. Seedbud egg-shaped; but tapering. Shaft none.

Summit simple; shorter than the tips.

S. Ves. Capsule one cell, with five valves, which opening with a spring, roll up into a spiral.

Seeds. Many; roundish; fixed to a pillar-like receptacle.

Obs. In some species the intermediate petals are wanting; in others the honey-cup base no horn. The figure of the capsule is variable.

WEATHERCOCK. Fruit-stalks supporting many flowers; Impatient solitaries. Leaves egg-shaped. Stem swelling at the joints—Noli tangere. When the seeds are ripe, upon touching the capsule, they are thrown out with considerable force. In the day time the leaves are expanded; but at night they hang pendant. Blossoms yellow; the lateral petals spotted with red; by cultivation they are changed to pale yellow or purplish.


Mercurialis sylvatica, Noli me tangere dicta, five persicaria filicufo. Part. 296.


The whole plant is considerably acrid—Goats eat it; Horses, Cows and Sheep refuse it.

The Elephant Moth, Sphinx Elenor, lives upon it.

CLASS.
CLASS XX.

This Class is distinguished by the Chives being placed upon the Shaft, or upon the Receptacle lengthened out into the form of a Shaft, supporting both the Pointal and the Chives, and entering into part of the pointal.

The first Order of this Class is natural, and its Genera are distinguished by the Honey-cup alone. The structure of the flowers is very singular.

Seedbud always below the blossom, twirled like a screw. Petals five; the two inner ones generally approaching so as to resemble a helmet. A Honey-cup forms the lower lip and occupies the place of the pointal, and of a sixth petal. Shaft fixed to the inner edge of the honey-cup, so as to be scarce distinguishable; as is likewise the Summit. Threads always two; very short; supporting two Tips; more slender below; without any coat; divisible like the pulp of Citron. They are inclosed in little cells opening downwards, and fixed to the inner edge of the honey-cup. Capsule one cell, with three valves; opening at the angles under the keel-shaped ribs. Seeds like saw-dust; very numerous; fixed to a narrow receptacle upon each valve.
The reader in examining and comparing the characters of this class, should always attend to the Pointal before the Chives, in order to attain a distinct idea of the situation of the latter.

The flowers of this class have a very singular appearance, owing to the unusual disposition of their component parts.

A very ingenious gentleman at Worcester, to whose judgment and accuracy I have been much indebted in the course of this work, has favoured me with the following remarks upon the structure of the Chives in the first Order of this class.—The Chives are, evidently two: but each of them appears to be composed of a number of elastic Fibres united together; each Fibre supporting its own proper Top. These Fibres I call elastic; for if you press down the bottom of the Chive with a needle or any other instrument, and draw another needle along the Chive, pressing it with some force, you may extend the Chive to twice its former length: but no sooner do you remove the force applied, than the fibres contract with an elastic force, and the Chive returns to its former shape. This you may repeat, and the effect will be constantly the same.

These fibres branch out into lesser ones, each supporting at its point an extremely minute Top. These tips I have examined in the microscope, and found some of them roundish and others nearly triangular. The Dust which these probably contained I was not able to discover.
CHIVES on the POINTAL

Order I. Two Chives.

350 Orchis. - Honey-cup like a little horn.
351 Satyrion. - Honey-cup shaped like a double purse.
352 Twayblade. Honey cup somewhat keel-shaped.
353 Helleborine. Honey-cup egg-shaped; hunched on the under-side.
354 Slipper. - Honey-cup dilated and bladder-shaped.

Order VIII. Many Chives.


† Gatteridge Spindle.

350 ORCHIS.
TWO CHIVES.

350 ORCHIS. 1009 Orchis.

Emp. Sheaths scattered. Fruit stalk simple.

Cup none.

Bloss. Petals five; three outer ones; two inner ones, approaching upwards so as to form a helmet.

*Honey-cup* one leaf, fixed by the lower side to the receptacle betwixt the division of the petals. *Upper Lip* upright; very short. *Lower Lip* large; expanding; broad. *Tube* standing behind, shaped like a horn; hanging a little down.

Chives. *Threads two*, very slender and very short; fixed on the pointal. *Tips* inversely egg-shaped; upright; covered by a fold of the upper lip of the honey-cup, forming two cells.

Point. *Seedbud* beneath; oblong; twilled. *Shaft* fixed to the upper lip of the honey-cup; very short. *Summit* compressed; blunt.

S. Ves. *Capsule* oblong; with one cell; three keels; three valves; opening in three places under the keels; connected at the base and at the end.

Seeds. Numerous; very small; like law-duft.

* Bulbs of the root undivided.


*Orchis alba-bifolia minor, calcari oblongo.* Busb. pin. 83.

*Ray's Syn.* 380.

**Orchis pychodes.** Gerard. 311.


**ORCHIS.** Bulbs undivided. *Lip of the honey-cup* with *Pyramid* two horns; cloven into three segments; equal; very entire. *Pyramidalis* Horn long. *Petals* somewhat spear-shaped—Bulbs joined together.

*Stem about a foot high; jointed; with five or six sharp, spear-shaped, membranaceous leaves. Floral Leaves spear-shaped; colored; as long as the seedbuds. Two petals expanding, three approaching. Blossoms pale purple.*

*Orchis purpurea, Ipica congeta pyramidali. Ray's Syn. 377. tab. 1*.

Purple late-flowering Orchis.

Dry pastures. P. June—July.
CHIVES on the POINTAL.

**Lizard**

**CORIOPHORA**

ORCHIS. Bulbs undivided. Lip of the honey-cup cloven into three segments; reflexed; scolloped. Horn short. Petals approaching. — Blossoms greenish white or tinged with purple.

Orchis odor e hirci minor. *Lau*b. p. 82.


Lesser Lizard Flower.

**Fool's**

**MORIO**

ORCHIS. Bulbs undivided. Lip of the honey-cup cloven into four segments; scolloped. Horn blunt; ascending. Petals blunt; approaching. — Blossoms white, or red mottled with white, or violet coloured.


Female Fool's-loves.


Goats eat it; Horses refuse it.

**Bulbous**

**MASCOLA**

ORCHIS. Bulbs undivided. Lip of the honey-cup divided into four lobes; scolloped. Horn blunt. Petals on the side reflexed. Blossoms purple. This differs from the preceding species by the outer petals being longer and more sharp, and the middle lobe of the lip cloven and longer than the lateral lobes. The flowers are likewise more numerous, and the stem twice as tall. Floral leaf coloured.


Male Fool's-loves.

Meadows and pastures. P. April—May.

Mr. Moult, in a letter to Dr. Percival inserted in the *Philos. Trans.* vol. 59. p. 1, describes his method of making Salep. The best time to gather the roots, he observes, is when the seed is formed, and the flalk is going to fall; for then the new bulb, of which Salep is made, is arrived at its full size. This new root being separated from the flalk, is to be washed in water, and the outer thin skin taken off. They are then to be set on a tin plate in an oven heated to the degree of a bread-oven. In six, eight or ten minutes they will have acquired a transparency like horn, but without being diminished in size. They are then to be removed into another room to dry and harden, which will be done in a few days: or they may be finished in a very slow heat in a few hours.

Salep thus prepared, may be sold for less than a shilling a pound, and affords a mild nutriment which in times of scarcity, in cases of Dysentery and Strangury, and on ship board may be extremely useful. *See Percival's Essays.* part. 2. p. 37.

Mr. Moult made his experiments upon the roots of this species only. The preceding species is undoubtedly equally proper for
for the purpose, and it is highly probable that every species of Orchis may be used indiscriminately. Salep has been hitherto imported from Turkey at a considerable price, but it is to be hoped we shall no longer be supplied from foreign markets, with an article that our own country can supply us with in almost any quantity. If ever plantations of it are made, the plants must be propagated by roots, for the seeds seldom come to perfection. Dr. Percival observes that he got some seeds to all appearance perfect, but yet they would not vegetate. Is it that the warmth of our climate being insufficient fully to expand the blossom, the tips are never released from their confinement in the cells formed by the upper lip of the honey-cup, and therefore the dust can never escape to fertilize the seedbud?

ORCHIS. Bulbs undivided. Lip of the honey-cup cloven Purple into four segments, with rough dots. Horn blunt. Petals Uftulata distinct.—Blossoms purple; mottled with white.

Cynoforchis militaris pratenis humilior. Bauh. pin. 81.
Cynoforchis militaris panonnica. Park. 1345.
Cynoforchis minor pannonica. Gerard. 207.
Little purple-flowered Orchis.
Dry barren pastures. P. May—June.

ORCHIS. Bulbs undivided. Lip of the honey-cup cloven Soldier into five segments, with rough dots. Horn blunt. Petals thronging. Militaris ing together.—Blossoms dark purple, or greyish white.

Cynoforchis latifolia hiante cucullo major. Bauh. pin. 80.
Cynoforchis latifolia minor. Park. 1344.
Cynoforchis major altera. Gerard. 205.
Man Orchis.

1. Bulbs undivided. Lip of the honey-cup bearded; divided Purple into five lobes; the lateral ones blunt, and a little scolloped; the middlemost very short, and sharp. Petals thronging together;—purple.

Orchis purpurea. Hudson. 354.
Chaik hills. P. June.

** Bulbs
CHIVES on the POINTAL.

** Bulbs of the root hand-shaped.

* Broad-leaved ORCHIS. Bulbs somewhat hand-shaped; straight. Horn of the honey-cup conical. Lip divided into three lobes; the lateral ones reflexed. Floral leaves longer than the blossoms—stem hollow. Roots not much branched, being divided only into two or three fingers. Leaves, especially the lower ones, a little spotted. The two lateral petals bent upwards. Blossoms purple, or flesh-coloured and sometimes white.

  Orchis palmata mas, feu Palma Christi mas. Park. 1356.
  Palmia Christi mas. Gerard. 220.
  Male-handed Orchis.
  Moist meadows and marthy ground. P. May—June.
  Cows eat it; Horses refuse it.

* Spotted ORCHIS. Bulbs hand-shaped; expanding. Horn of the honey-cup shorter than the seedbud; lip flat. Petals on the back upright.—Stem not hollow. Lateral lobes of the honey-cup large, and scolloped; the middle lobe very narrow and acute. Leaves spotted with black. Blossoms purplish red; sometimes yellow-coloured, or white.

  Orchis palmata pratensis maculata. Baub. pin. 385. Ray's Syr. 381.
  Orchis palmata femina, feu Palma Christi femina, foliis maculatis. Park. 1357.
  Palmia Christi femina. Gerard. 220.
  Female-handed Orchis.
  Woods, rich meadows, and sometimes in barren pastures. P. June.
  Sheep eat it; Goats and Horses refuse it; Cows are not fond of it.

* Red Conopsea ORCHIS. Bulbs hand-shaped. Horn of the honey-cup thread-shaped; as long as the seedbud. Lip cloven into three segments; very entire. The two outer petals greatly expanded.—The others approaching. Spike of flowers very long. Blossoms red; sometimes white.

  Orchis palmata rubella cunt-longis calcaribus rubellis. Ray's Syr. 381.
  Orchis palmata minor, calcaribus oblongus. Baub. pin. 85.
  Orchis palmata minor, flore rubro. Park. 1358.
  Serapias minor, nitente flore. Gerard. 222.
  Red-handed Orchis.
  Meadows and pastures. B. June.
  Goats and Cows eat it; Horses refuse it.

** Root
TWO CHIVES.

** Roots bundled.**


Orchis abortiva violacea. *Baub.* pin. 85.
Nidus avis purpureus. *Park.* 1362.
Purple Birds Neck.
Dry pastures. *P.* May.

351 SATYRION. 1010 Satyrium.

**EMPAL.** Sheaths scattered. Fruit-stalk simple. Cup none.

**Bloss.** Petals five; oblong egg-shaped. Three outer ones; and two inner ones, which approach so as to form a helmet.

Honey-cup one leaf; connected by the lower side to the receptacle betwixt the division of the petals.

Upper Lip very short; upright. Lower Lip flat; pendant; with a bag like a double purse projecting behind.

**CHIVES.** Threads two; very slender; very short; fixed on the pointal. Tips inversely egg-shaped; covered by a fold of the upper lip of the honey-cup forming two cells.

**Point.** Seedbud beneath: oblong; twirled. Shaft very short; fixed to the upper lip of the honey-cup. Summit compressed; blunt.

**S.Vess.** Capsule oblong; with one cell; three keels; three valves; opening in three places under the keels; connected at the base and at the end.

**Seeds.** Numerous; very small; like saw-dust.

SATYRION. Bulbs undivided. Leaves spear-shaped. Lip of the honey-cup cloven into three segments: the middle segment strap-shaped; oblique; bitten—Blossoms greenish white; purple within.

Orchis barbata odore hirci, breviore latioereque solio. *Baub.* pin. 82.

Lizard flower or Goatstones.
In chalky soil. *P.* June—July.

Vol. II. SATYRION.
CHIVES on the POINTAL.

SATYRION. Bulbs hand-shaped. Leaves oblong; blunt. Lip of the honey-cup strap-shaped; cloven into three segments; the middle segment imperfect—Stem angular; leafy. Leaves spear-shaped; alternate; downy; embracing the stem. Floral leaves spear-shaped; longer than the blossom. Blossom greenish yellow.

Orchis palmata flore viridi. Baub. pin. 56.
Orchis palmata minor, flore luteo-viridi. Ray's Syn. 381.
Frog Satyrion. Frog Orchis.
Dry pastures. P. May—June.
Goats eat it.


SATYRION Bulbs bundled. Leaves spear-shaped. Lip of the honey-cup cloven into three segments; sharp; the middle segment blunt—Spur very short. Petals, three white; two greenish yellow.

Orchis palmata thyrfo speciofo, longo, dense stipato, ex viridibus albent. Ray's Syn. 382.
Moist pastures. P. June.


Pseudo-Orchis. Baub. pin. 84.
TWO CHIVES.

352 TWAYBLADE. 1011 Ophrys.

EMP. Sheaths scattered. Fruit-stalk simple. Cup none.
Bloss. Petals five; oblong; approaching upwards; equal. two of them placed outswards.
Honey-cup longer than the petals; hanging down; keeled on the back part only.
CHIVES. Threats two; very short; fixed to the pointal. Tips upright; covered by the inner edge of the honey-cup.
Point. Seedpod beneath; oblong; twisled. Shaft fixed to the inner edge of the honey-cup. Summit imperfect.
S. Vessels. Capsule somewhat egg-shaped; three edged; blunt; scored; with three valves; and one cell opening at the keel-shaped angles.
Seeds. Numerous; like saw-dust. Receptacle strap-shaped; growing to each valve of the seed-vessel.

* Bulbs branched.

TWAYBLADE. Bulbs fibrous and bundled. Stem sheath - Birds-Necked; but without leaves. Lip of the honey-cup cloven - Blossoms Nidus avis som brown.
Orchis abortiva tusca. *Baub. f. in. 86.*
Orchis abortiva rufa, seu Nidus avis. *Park. 1352.*
Satyrion abortivum, seu Nidus avis. *Gerard. 223.*
Woods and shady places. *P. May.*

*Park. 1354.*
Triple Ladies Traces.
Barren pastures. *P. August.*

Woods and moist rough grounds. *P. May - June.*
Cows and Goats eat it.

M 2 TWAY-
CHIVES on the POINTAL.

Leaf

TWAYBLADE. Bulb fibrous. Stem with two leaves. Leaves heart-shaped—The cloven lip of the honey cup hath a little tooth on each side, which dOTH not exist in the preceding species. Blossoms subtilly.

Ophrys minima. Bamb. pin. 8.
Bifolium minimum. Ray's Syn. 385.
Moist Heaths and Turf Bogs. P. July.

* * Bulbs round.

Dwarf

TWAYBLADE. Bulb roundish; stalk naked; leaves spear-shaped; lip of the honey-cup entire. Petals on the back of the flower strap-shaped—Bulbs pear-shaped; encompassed with a leafy sheath. Stalk naked; three cornered. Root-leaves stiffly. Blossoms red; but the three narrow petals strap-shaped and greenish.

Chamaorchis lilifolia. Bamb. pin. 84.
Chamaorchis latifolia Zelandica. Park. 1354.
Dwarf Orchis.
Marshes. P. July.

Marsh

TWAYBLADE. Bulb roundish; stalk nearly naked; with five edges. Leaves rough at the end. Lip of the honey-cup entire—Bulb egg-shaped; crooked; with a root at the bottom. Root—Leaves three or four; Spatula shaped; alternate. Flowers greenish yellow; several in a bunch. The two lateral petals bent back; upright; oblong egg-shaped. The two inner petals lateral; narrow; crooked. The upper petal straight.

Orchis minima bulbosa. Ray's Syn. 378.
Ophrys Palustris. Hudson. 339.
Leaf Orchis.
Turf Bogs. P. July—August.

Yellow

TWAYBLADE. Bulb globular; stalk naked. Lip of the honey-cup cloven into three segments; cross-shaped.—Root-leaves two or three. Blossoms greenish yellow; without a spur.

Orchis odorata molchata, five Monorchis. Bamb. pin. 84.
Ray's Syn. 378.
Orchis pudilla odorata. Park. 1354.
Yellow Orchis. Mufl. Orchis.
Barren pastures. P. July.
TWO CHIVES.

TWAYBLADE. Bulbs roundish. Stalk leafy. Lip of Green the honey-cup strap-shaped; divided into three segments; the Anthropo-longest in the middle cloven.—Blossoms greenish; without a spur. phora Orchis anthropophora orcadensis. Ray’s Syn. 379. femina.

Park. 1348.

Orchis flore nudi hominis effigiam representans, feminina.

Baub. pin. 82.

Green Man Orchis.

Chalky and gravelly soils. P. June.

TWAYBLADE. Bulbs roundish. Stalk leafy. Lip of Insect the honey-cup divided into four or five lobes—Insectifera 1. Resembling a fly; the lip of the honey cup cloven into four Fly segments; helmet and wings greenish.

Orchis myodes galea et alis herbidis. Ray’s Syn. 379.

Orchis muscicera corpus referens minor, vel galeae et alis herbi-dis. Baub. pin. 82.

Orchis myodes minor. Park. 1352.


Common Fly Orchis.

In meadows and on chalky hills. P. May.


Greater Fly Orchis.

In pastures and chalk-pits. P. May.

1. Resembling a bee; the lip of the honey-cup divided into Bee five lobes, bent inwards underneath. (Hudson)—Outermost petals of the blossom large; expanding; of a purplish colour; the two innermost green. The lower lip of the honey-cup large, but shorter than the petals, of a brownish purple, mixed with yellow; divided into three lobes; the innermost the largest, and divided again into three lobes, bent downwards. Upper lip of the Honey-cup longer than the lower; narrowing upwards to a point; of a green colour. Threads long; tips very large. Seed bud longer than the petals, but shorter than the floral leaves. Martyn Cat. Cant. 171.

Orchis fuciflora galea, et alis purpurascenibus. Ray’s Syn. 379.

Orchis sphegodes feu fucum referens. Park. 1350.

Orchis, five Tefficulus vulpinus duo, sphegodes. Gerard.

212. Orchis fucum referens major folioli superioribus candidis et purpurascenibus. Baub. pin. 83.


Common Humble Bee. Satyrion, or Bee-flower.

In dry pastures. P. June.
CHIVES on the POINTAL.

2. Helmet and wings green; lip of the honey-cup hairy; without any mixture of yellow,—the whole blossom of a darker colour, and more resembling a dronce than a bee. Orchis, five Tesculicus sphegodes birtuto flore. Ray's Syn. 380.

Orchis fucum referens colore rubiginoso. Baub. pin. S3.
Orchis sphegodes altera. Park. 1351.
Tesculicus vulpinus major sphegodes. Gerard. 912.
Humble-Bee Satyrion with green wings, or Wasp Orchis.
In chalk and gravel. P. April.

353 HELLEBORINE. 1012 Serapias.

EMPAL. Sheaths scattered. Fruit-flask simple. Cup none.
BLOSS. Petals five; oblong egg-shaped; open but rather upright; approaching upwards.
Honey-cup as long as the petals; hollowed at the base; filled with honey; egg-shaped; hunched beneath; cloven into three segments; sharp: the middle segment heart-shaped; blunt; cloven at the seam of the base; with three teeth.
CHIVES. Threads two; very short; fixed to the pointal.
Tips upright; placed under the upper lip of the honey-cup.
POINT. Seedbut beneath; oblong; twisted. Shaft growing to the upper lip of the honey-cup. Summit indistinct.

S. VESS. Capsule inversely egg-shaped; with three blunt edges; three keels, growing to it; three valves; opening under the keels, and one cell.
SEEDS. Numerous; like saw-dust. Receptacle strap-shaped; growing to each valve of the seed-veil.

HELLEBORINE. Bulbs fibrous; leaves egg-shaped; embracing the stem. Flowers pendant.—Blossoms brownish green, with a purple spot at the bottom of the honey-cup. Lip of the honey-cup blunt, scolpended, equal to the petals. Petals egg-shaped. Flowers forming a long spike. Fruit-flasks long.


Helleborine. Gerard. 448.

Helleborine, flore viridante. Park. 918.
2. Flowers purple on the outside; white within.


Broad-leaved baird Hellebore.

Woods and moist hedges. 2 in marshes. P. July.—Aug. HELLE-
TWO CHIVES.

HELLEBORINE. Bulbs fibrous. Leaves sword-shaped; Long-leaved sitting. Flowers pendant — Stem taller than the preceding species; Longitolia Flowers twice as large. Honey-cup adhering to the other petals; marked with purple lines. Petals white on the outside, with yellowish spots and lines within; spear-shaped. Floral leaves longer than the flower.

Eleborine minor flore albo. Park. 218.
1. With broader leaves and white blossoms. Ray’s Syn. 384.
2. With very long, narrow, pointed leaves. Ray’s Syn. 384.
White flowered bastard Hellebore.
Woods and rough grounds. P. August.

354 SLIPPER. 1015 Cypripedium.

EMPAL. Sheath scattered. Fruit-stalk simple. Cup none.
Bloss. Petals four or five; narrow and spear-shaped; very long; expanding; upright.
Honey-cup within the lower petal; shaped like a slipper; blown up; blunt; hollow; flatter and broader than the petals; the upper lip small; egg-shaped; flat; bent inwards.

CHIVES. Threads two; very short; fixed to the pointal. Tips upright; covered by the upper lip of the honey-cup.

POINT. Seed bud beneath: long; twisted. Shaft very short; growing to the upper lip of the honey-cup. Summit indistinct.
S. VESS. Capsule inversely egg-shaped; with three blunt edges; and three seams, under which it opens at the angles; Values three; Cell one.

SEEDS. Numerous; very small. Receptacle strap-shaped; growing lengthways to each valve of the seed-vessel.

M 4 SLIPPER.
CHIVES on the POINTAL.

SLIPPER. Roots fibrous; leaves on the stem betwixt egg and spear-shaped—Petal purple; honey-cups pale yellow.

By cultivation the colour of the blossoms are changed to
1. Pale purple.
2. Golden yellow.
3. Large yellow.
4. Red.
5. Various coloured.

Elleborine major seu Calceolus Mariae. Park. 217.

Woods and rough grounds. P. July.

Goats eat it.

Order VIII. Many Chives.

355 CUCKOW PINT. 1028 Arum.

EMPAL. Sheath one leaf; very large; oblong; lapped round at the base; approaching at the top; compressed in the middle; coloured on the inside.

Sheathed Fruit-stalk club-shaped; undivided; a little shorter than the sheath; coloured; set round with feedbuds on the lower part; above the feedbud thriving.

BLOSS. None.

CHIVES. Threads none; unless the honey-cups, which are thick at the base, and terminated in thread-shaped tendrils, growing in two rows round the middle of the fruit-stalk. Tips many; sitting; four-edged; fixed to the fruit-stalk, and disposed between the two rows of tendrils.

POINT. Seedbuds many; inversely egg-shaped; covering the base of the fruit-stalk beneath the chives. Shafts none. Summits bearded with soft hairs.

S. VESS. Berries numerous; globular; with one cell.

SEEDS. Many; roundish.

OBS. The wonderful and unparalleled structure of this flower hath given rise to many disputes among the most eminent Botanists.

The Receptacle is long; in shape of a club; with the feedbuds surrounding its base. The Chives are fixed to the receptacle among the feedbuds, so that there is no occasion for the tips to be supported upon threads. For what use are those tendrils mentioned above?

CUCK-
MANY CHIVES.

Cuckowpint. Without a stem. Leaves halberd-shaped; Spotted very entire. Fruit-stalk club-shaped.—Leaves generally spotted. Maculatum Spreath conical; pale green. Berries red when ripe; growing in a naked cluster.

Arum vulgare maculatum et non maculatum. Park. 373.
Arum vulgare maculatum. Baub. pin. 195.
Shady places, ditch banks and rough grounds. P. May.
It is susceptible of the following variations.
1. Spotted with white.
2. Spotted with black.
3. Leaves circular and spotted.
4. Leaves with white streaks and black spots.
5. Leaves not spotted.

The root and the leaves when recent, are so extremely acrid that is highly disagreeable to taste them. The root has been employed in medicine as a stimulant, but when reduced to powder it loses much of its acrimony, and there is reason to suppose that the compound powder which takes its name from that plant, owes its virtues chiefly to the other ingredients. There is no doubt but this acrid quality may be turned to very useful purposes, but we must first learn how to ascertain its dose.—The root dried and powdered, is used by the French to wash their skin with. It is sold at a high price under the name of Cypress Powder. It is undoubtedly a good, and an innocent cosmetic.—When the acrimony of the roots is extracted either by boiling or baking, they certainly will afford a very mild and wholesome nourishment. Many nations prepare the only bread they have, from plants as acrimonious as this; first dissipating the noxious qualities by the force of heat.—Starch may be made from the roots.
CHIVES on the POINTAL.

GRASSWRACK. 1032 Zostera.

EMPAL. Leaves forming a sheath at the base; approaching length-ways; notched at the upper part on each side; including the fruit-flalk. Sheathed fruit-flalk strap-shaped; flat; furnished with chives on one side upon the upper, and pointals on the lower part. Cup none.

BLOSS. None,

CHIVES. Threads alternate; many; very short; fixed upon the fruit-flalk above the seed-buds. Tips oblong egg-shaped; nodding; blunt; awl-shaped upwards and backwards; crooked.

POINT. Seed-buds not so numerous as the chives; egg-shaped; compressed; two-edged; standing upon little foot-flalks fixed to the end; nodding; alternate. Shafts none. Summits hair-like; simple.

S. VESS. Membranaceous; unchanged; opening length-ways at the side-edge.

SEED. Single; egg-shaped.

GRASSWRACK. Seed-vessels sitting.—Leaves growing under water and floating with the tide.

Alga. Gerard. 15.69. Ray’s Syn. 52.

Alga angustifolia Vitriariorum. B. Aub. pin. 564. Ray’s Syn. 53.

Fucus marinus, five Alga marina graminea. Park. 1242.

Fucus five Alga marina graminea angustifolia feminifera ramalior. Ray’s Syn. 58.

1. Item branching, about two ells or more in length, Leaves about half a foot long, and half an inch broad. Branched grafs-leaved, Seeding Seawrack.

Fucus marinus five Alga marina graminea minor. Ray’s Syn. 52.

2. Smaller in every respect than the common species—Scarce a foot high.

Leffer Grafs-wrack.

Potamogeton marimum inarticulcis epiphyllolsperrmon minus. Ray’s Syn. 53.

3. Very much resembling variety 1, but much smaller seldom above a foot high.

This plant is thrown upon the sea-shore by the tide, in great plenty. Exposure to the weather bleaches it white. It is of great use as a manure. Buildings are thatched with it, and it endures a long time.—Horses and Swine eat it; Cows are not fond of it.

CLASS
ALL the Classes hitherto mentioned, are composed of Plants, whose Flowers contain the Chives and the Pointals within the same empalement; but the plants of this Class have the Chives in one flower, or in one empalement, and the Pointals in another. The flowers that contain the Chives are Barren; those that contain the Pointals are Fertile. The Barren and the Fertile flowers of this Class, are always found upon the same plant.

From this account it is evident, that in giving the Generic characters, it is necessary to describe both the Barren, and the Fertile Flowers. Therefore B signifies the Barren Flower or that with Chives only; and F signifies the Fertile Flower, or that with only Pointals.

Obs. Flores included in a Common Empalement, though agreeing in the disposition of the Chives and Pointals; are not to be referred to this Class. This caution is necessary in order to exclude some of the Rundle bearing Plants of the fifteenth, and some of the Compound Flowers of the nineteenth Class.
CLASSES XXI.

Chives and Pointals Separate.

Order I. One Chive.

357 Stonewort. B. Cup none. Blof. none.
F Cup four leaves. Blof. none. Sum-
mit with five clefts. Seed one.

F Cup one leaf. Blof. none. Point.
four. Seeds four.
† Vernal Stargrass.

Order II. Two Chives.

359 Duckleat. B Cup one leaf. Blof. none.
F Cup one leaf. Blof. none. Shaft
one. Capsule one cell.

Order III. Three Chives.

360 Sedge. B Catkin with one flower in each
scale. Blof. none.
F Catkin with one flower in each
scale. Blof. one. Shaft one
Seed one; coated.

361 Burrreed.
CHIVES and POINTALS Separate.

361 Bur Reed. B Cup three leaves. Bloss. none.
    F Cup three leaves. Bloss. none. Summits two; seed one.

    F Cup hair-like. Bloss. none. Shaft one. Seed one; with a feather.

† Everlasting Brite.

Order IV. Four Chives.

    F Cup two valves. Bloss. none. Summits hairy. Seed one; egg-shaped.

364 Box. - B Cup three leaves. Bloss. two petals.
    F Cup four leaves. Bloss. three petals. Summits three. Capsule three cells.

365 Birch. - B Catkin with three flowers in each scale. Bloss. with four divisions.
    F Catkin with two flowers in each scale. Bloss. none. Shafts two. Seed one; egg-shaped.

† Tree Holly. † Grass-leaved Plaintain.

Order V. Five Chives.

366 Ditchbur. B Cup common; with many leaves. Bloss. five clefts. Threads connected.

367 Everlasting. B Cup individual, five leaves. Bloss. none. Chives three or five.
    F Cup individual, five leaves. Bloss. none. Shafts three. Cups cut round.

Order
Chives are es. Bloff. none.
s. Seeds four.
about seven divisions.
one. Chives about eigh-

B Cup three or four leaves. Bloff.
with four divisions. Chives about thirty two.

F Cup three or four leaves. Bloff.
four petals. Pointals two. Seeds
two; inclosed.

B Cup with five clefts. Bloff. none
Chives about twelve.

F Cup with four clefts. Bloff. none.
Shaftis three. Capsule with two
seeds.

B Cup with five clefts. Bloff. none.
Chives about ten.

F Cup entire. Bloff. none. Shafts five.
Seed an Acorn.

B Catkin tiled. Bloff. none. Chives
eight.

F Cup two leaves. Bloff. none. Shafts
two. Fruit a Nut.

B Catkin tiled. Bloff. none. Chives
ten.

F Cup with six clefts. Bloff. none.
Pointals two. Fruit a Nut.

Order
CHIVES and PEA

Order IX.

NICKLE AT THE JOINTS; FAMI-SMETH

Lengs long; Tender; Elesile

357 STONE.

Cap with five
 five divisions.

Cap with five
 teeth, five
 divisions. Staff with
dents; fruit a Berry.

Order IX.

NICKLE AT THE JOINTS; FAMI-SMETH

Lengs long; Tender; Elesile

353
Order VIII. Many Chives, (more than Seven.)

F Cup three leaves. Blooff. three petals. Pointals one hundred. Seeds numerous.


F Cup with about seven divisions. Blooff. none. Pointal one. Seed one.

371 Ironwort. B Cup three or four leaves. Blooff. with four divisions. Chives about thirty-two.
F Cup three or four leaves. Blooff. four petals. Pointals two. Seeds two; inclosed.

F Cup with four clefts. Blooff. none. Shafts three. Capsule with two feeds.

F Cup entire. Blooff. none. Shafts five. Seed an Acorn.

F Cup two leaves. Blooff. none. Shafts two. Fruit a Nut.


Order
CHIVES and POINTALS. Separate.

Order IX. Threads United.

356 Fig. B Cup four leaves. Blows none.

Chives many.

F Catkin like a cone. Blows none.

Point. two. Nuts two; winged.

Order X. Tips United.


F Cup with five teeth. Blows with five divisions. Shaft with three clefts; fruit a Berry.
CHIVES and PONTALS Separate.

357 STONEWORT. 1203 Chara.

B. Fertile Flowers.

**Empal.** Cup four leaves; awl-shaped; upright; permanent. The two outer ones opposite, and longer than the other two.

**Bloss.** None.

**Point.** Seedbud turban-shaped. **Shaft** none. **Summit** with five clefts; oblong; deciduous.

**S. Vess.** The **Coat** egg-shaped; of one cell; adhering to the seed.

**Seed.** Single; egg shaped; marked with spiral lines.

**F. Barren Flower** at the base of the seedbud, on the outward side of the empalement.

**Empal.** Cup as above.

**Bloss.** None

**Chive.** **Threads** none. **Tip** globular, placed before and below the seedbud, without the empalement.

**Brittle Tomentosa**

STONEWORT. Prickles on the stem egg-shaped—The root fibrous. The whole plant is brittle and gritty in the mouth. While growing it is of a flesh colour; but when dry it turns of an ash colour.

Chara major, sub-cinerea fragilia. **Ray's Syn. 132.**

Equisetum seu Hippuris coralloides. **Gerard. 1115.**

Brittle Chara **Hudson 465.**

Ditches and stagnant waters. P. ?

**Common Vulgaris.**

STONEWORT. Stems smooth; leaves toothed on the inner side—Flowers in the divisions of the stem. The whole plant is yellowish or reddish green.

Chara vulgaris fistula. **Ray's Syn. 132.**

Equisetum fistulum sub aqua repens. **Gerard. 1115.** Bauh. bin. 16. **Park. 1201.**

Stinking Water Horsetail.

Common Chara. **Hudson 465.**

Ditches and stagnant waters. P. ?

**Prickly Hispida**

STONEWORT. Prickles on the stem, hair-like and crowded together—Whirlyb green.

Chara major caulibus spinosis. **Ray's Syn. 132.**

Prickly Chara. **Hudson 465.**

Ditches and turf bogs. P. ?

STONE-
STONEWORT. Stems without prickles at the joints; semi-Smooth transparent; broadest towards the top—Leaves long; slender; Flexilis axile. Flowers at the base of the leaves; generally eight together.
Chara transluents minor flexilis. Ray's Syn. 133
Ponds, Ditches and Bogs. P.

STONEWORT. Stems and leaves very fine and slender—Creeping Longer than those of the common STONEWORT, of a deeper green, Repens and more flexible. Seeds roundish, shining, of a reddish brown.—It appears to float under water.
Creeping Water Horsetail.
Ponds and ditches. P.
This though evidently a different species does not appear to have been noticed by Linnaeus or Hudson. The specific character is therefore formed from Ray's description.

358 LAKEWEED. 1034 Zannichellia.

B. Barren Flower.
Empal. None.
Bloss. None.

Chive. Thread single; simple; long; upright. Tip egg-shaped; upright.
F. Ferile Flower standing near the other.
Empal. Cap one leaf; hardly perceptible; distended; with two teeth.
Bloss. None.

Point. Seedbuds four; like little horns; approaching. Shafts four; simple; rather expanding. Summits egg-shaped; flat; expanding outwards.
S. Vess. None.

Seeds. Four; oblong; tapering at each end; hunched on one side; covered with a bark; crooked; reflected.

LAKEWEED. As there is only one species known Linnaeus Horned gives no description of it—Stems jointed; branched; floating in Palustris the water. Leaves opposite. Flowers at the base of the leaves.
Aponogiton aquaticum gramini folium, staminibus singularibus.
Ray's Syn. 135.
Horned Pondweed
Ditches and stagnant waters. A. July.

Vol. II. N 359 DUCK-
CHIVES and POINTALS Separate.

Order II. Two Chives.

359 DUCKMEAT. 1038 Lemna.

B. Empal. One leaf; circular; opening at the side; obliquely dilated outwardly; blunt; expanding; depressed; large; entire.

Bloss. None.

Chives. Threads two; awl-shaped; crooked; as long as the cup. Tips double; globular.


F. Fertile Flowers.

Empal. Cup as above.

Bloss. None.


S. Vess. Capsule globular, with a point at the end; and with one cell.

Seeds. Several; oblong; sharp at each end; nearly as long as the capsule; scored on one side.

Obs. If the pointals in the B. flower had been perfect and produced perfect seeds, this genus must have been referred to the twenty-third class.

Ivy-leaved

Trifolca

DUCKMEAT. Leaves spear-shaped; on leaf stalks.—Stems flattened and proliferous; crossing each other.


Hederula aquatica. Gerard. 830.

Ranunculus hederaceus aquaticus. Park. 1260.

Ditches and stagnant waters. P. May—June.

Leaf

Mindr

NDUCKMEAT. Leaves flattened on each side. Roots solitary—

Lens palustris. Gerard. 829. Ray’s Syn. 129. tab. 4. fig. 1.


Lens palustris feu aquatica vulgaris. Park. 1262.

On stagnant waters. P. June.

Greater

Polyrhiza

DUCKMEAT. Leaves sitting; roots crowded together.—

Leaves green on the upper, purple on the under surface.

Lenticula palustris major. Ray’s Syn. 129. tab. 4. fig. 2.

Ditches. A. June—July.

All the species are acceptable food for Ducks and Geese.

Order
THREE CHIVES.

Order III. Three Chives.

360 SEDGE: 1046 Carex.

B. Barren Flowers forming a Spike.

EMPAL. Catkin oblong; tiled; consisting of Scales, each including a single flower; spear-shaped; sharp; concave; permanent.

Bloss. None.

CHIVES. Threads three; bristle-shaped; upright; longer than the enclosing scale. Tips upright; long; strap-shaped.

F. Fertile Flowers the same, but sometimes on distinct Plants.

EMPAL. Catkin as above.

Bloss. Petals none.

Honey-cup blown up; oblong egg-shaped; with two or three teeth at the end; contracted towards the upper part; mouth open; permanent.

Point. Seedbud three-cornered; within the honey-cup. Shaft very short. Summits three or two; awl-shaped; bent inwards; long; tapering; downy.

S. Vess. None. The Honey-cup enlarging contains the seed.

Seed. Single; egg-shaped but sharp; three-cornered; one of the angles smaller than the other two.

Obs. In some species the two kinds of flowers are found upon the same spike; but in others they are upon different spikes (See the Plate of Grasses).

* Spikes single; simple; with fertile and barren flowers on distinct plants.

SEdge. Spike simple. The flowers with only chives Small and the flowers with only points on distinct plants.—Leaves Dioica and straw three-cornered.

Gramen cyperoides minus ranunculi capitulo longiore. Ray's

Sym. 425.

Turf bogs. P. June.
CHIVES and POINTALS Separate.

* * Spike simple; composed of fertile and barren flowers.

Round-leaved SEDGE. Spike simple; egg-shaped; the flowers with only chives forming the upper part of the spike. Capsules tiled, but not lying close.—Spikes exactly egg-shaped.

Gramen cyperoides minimum ranunculi capitulo rotundo. Ray’s Syn. 425.

Turft bogs. P. June.

Flea SEDGE. Spike simple; the flowers with chives forming the upper part of the spike. Capsules straddling; reflected backward.—Stem cylindrical, but flatish on one side. When out of blossom the barren flowers fall off. The Seeds sharp and hooked at the end.

Gramen cyperoides minimum, feminibus doorfum reflexis puliciformibus. Ray’s Syn. 424.

Muddy Marshes. P. June.

** Spike composed of both fertile and barren flowers.

Sea SEDGE. Spike compound. Little spikes composed of fertile and barren flowers; the lower ones more remote and furnished with a leaf longer than the spike. Straw three cornered—Root creeping; thread-shaped; simple; horizontal; jointed; about four inches beneath the surface of the ground; joints rather distant, and from each joint rises a jointed Stem, which beneath the surface is covered with a brown sheath; even with the surface it sends out many Leaves, the outer ones short; the inner ones narrow and as tall as the Straw which is naked, without knots; supporting the spike at the end. Spike of a rusty iron colour.

Gramen cyperoides ex monte Ballon simile humilium; in maritimis et arenosis nascens. Ray’s Syn. 423.

Gramen cyperoides elegans multifera spica. Park. 1172.


Naked SEDGE. Spike compound. Little spikes sitting; egg-shaped; growing near each other; alternate; composed of barren and fertile flowers not furnished with a leaf—Spikes composed of five or six little spikes. Florets separated by grey chaff, longer than the seeds. Stalks crooked. Stalks twelve or sixteen inches high; hollow.

Gramen cyperoides spica e pluribus spicis brevibus mollibus composita. Ray’s Syn. 422.


In marshes and watery places. P. June—July.

SEDE.
THREE CHIVES.

SEEDGE. Spike compound; little spikes round; crowded; Marsh composed of barren and fertile flowers; each furnished with a Divisa little leaf longer than the spike; straw nearly cylindrical—Taller than the preceding; leafs longer and narrower; straw not so evidently hollow; little Spikes smaller; each supported by a leaf which rising above the spike gives it a resemblance to the straw of the Rush.
Gramen cyperoides palustris majus spica divisa. Baub. pin. 6.
Gramen cyperoides palustris minus. Park. 1287.
In marshes and low meadows. P. August.

SEEDGE. Spike compound; nearly two-rowed; little spikes soft egg-shaped, tilled, composed of barren and fertile flowers, each Disticha furnished with a leaf longer than the spike; straw three corn need—Taller than either of the preceding; hollow, but less so than the former species; Spike of a rusty iron colour, and as sharp soft to the touch.
Gramen cyperoides elegans multifera spica. Park. 1172.
In marshes and watery places. P. May—June.

SEEDGE. Spike more than doubly compound; leaf compact Great in the lower part. Little spikes egg-shaped; congregated; com- Vulpina posed of fertile and barren flowers; the barren flowers placed above—Straw thick; firm. Spike thick; rough on every side.
Sheath of the leaves terminated on the inner side by a sharp tongue, as in the grasses.
Gramen cyperoides palustre majus. Park. 1266.
Banks of rivers. P. July.
Horses and goats eat it; Swine refuse it.
CHIVES and POINTALS Separate.

SEDGE. Little spikes roundish; near together: composed of barren and fertile flowers; seed vesseIs egg-shaped; sharp. (Hudfon)—Smaller than the preceding, which in many respects it very much resembles. Spikes smaller and less compact. Straw less upright. Leaves narrow, and shorter than the straw.

Gramen cyperoides spicis minus compactis. Park. 1268.
Gramen cyperoides parvum. Gerard. 18.
Gramen cyperoides spicis minoribus minusque compactis. Baub. pin. 6.
Leaff spicid cyperus-grafs.
In watery places, and on the banks of rivers. P. May—June.

SEDGE. Spike compound; pointing from two opposite lines; naked. Little spikes oblong; contiguous; composed of fertile and barren flowers. Straw without leaves—

In pools and marshes. A. June.

SEDGE. Little spikes somewhat egg-shaped; sitting; at a distance from each other; composed of fertile and barren flowers. Capsules sharp; diverging; thorny.—Straw naked; three cornered; six or eight inches high. Leaves narrow; barb;/ as long as the straw.

Gramen cyperoides spicatum minimum, spica divulsa aculeata. Ray's Syn. 424.
Gramen nemorosum spicis parvis asperis. Baub. pin. 7.
Gramen cyperoides echinatum minimum. Park. 1272.
Marshes and moift woods. P. June.
Horses and Goats eat it.

SEDGE. Spikes egg-shaped; almost sitting; at a distance from each other; composed of fertile and barren flowers. Floral leaves as tall as the straw.—Leaves narrow; Straw three cornered. Scales of the spike white, with a greenish line.
Gramen cyperoides angulifolium, spicus parvis efflisibus, in foliorum alis.
Ditch banks and moift woods. P. June—August.

SEDGE. Little spikes somewhat round; at a distance from each other; sitting; blunt; composed of fertile and barren flowers. Capsules egg-shaped; rather blunt.—
—Hedges and moift woods. P. May—August.

SEDGE.
THREE CHIVES.

SEDGE. Flowers in a compound bunch, little spikes Paniced composed of fertile and barren flowers.—Straw three cornered; Paniculata burs; three feet high. Leaves burs; narrow. Panicle brown.

Gramen cyperoides palustre elatius, spica longiore laxa. Ray’s Syn. 422.

Putrid bogs and marshes. P. June—July.

**** Barren and fertile Flowers on different spikes; the fertile spikes fitting.

SEDGE. Spikes crowded together; nearly fitting; some. Yellow what roundish. The barren spike narrow; capsules sharp; bent Flava back.

Gramen cyperoides aculeatum Germanicum, vel minus. Bauh. pin. 7.


Gramen aculeatum Germanicum. Park. 1187.

1. There is a variety that is larger.

Gramen cyperoides echinatum majus. Ray’s Syn. 421.

Marsh Hedge-hog Gras.

Marshes and wet meadows. P. June.

SEDGE. Spikes with fertile flowers fitting; oblong. The Birds-foot flower spike at the base of the leaves. Leaves nearly thread Pedata shaped.—Straw naked, six inches long: about seven florets in each fer-
sile spike. Fertile spikes two; alternate; dark rusty brown. Barren spike single: terminating: paler.

Gramen caryophyllatum nemorosum, spica multiplici.

Gramen caryophylleum angustiflimis foliis. Bauh. pin. 4.

Spicis sessilibus brevioribus arenatis: non compactis. Ray’s Syn. 418.

In woods and moist pastures. P.

SEDGE. Spikes terminating; crowded; roundish. Barren Globular spike oblong.—Leaves very slender, short and stiff; fertile Spikes Pilulifera from two to four. Straw about a foot high.

Gramen cyperoides tenuifolium spicis ad summum caulem sessilibus globulorum arenulis. Ray’s Syn. 429.

1. Fertile Spikes mostly two, each supported by a leaf.

Gramen cyperoides angustifolium majus spicis sessilibus in foliis anis. Ray’s Syn. 422.

Dillenius makes this a variety of the preceding—it is said to be larger, and with short thick spikes, one smaller than the rest, seated at the base of one of the leaves. Ray’s Syn. 422.

Gramen cyperoides spicis brevibus congestis, folio molli, Ray’s Syn. 421.

N 4 2. This
CHIVES and POINTALS Separate.

2. This variety seems to answer more exactly to Linnaeus's character than the former. The female Spiza, which are three or four in number, being crowded nearer together.—They do not appear to be supported by a leaf as in the preceding variety, which seems to form one of the principal distinctions between them.

In marshes and wet pastures. P. June—July.

Vernal Saxatilis

SEDGE. Spikes three; egg-shaped; fitting; alternate. Barren spike oblong—Terminating; roundish; yellow. Tips yellow. Vernal spikes black; flowers separated by scales, as long as the pointals. Seedbuds three-cornered; black. Shafts black; long; cloven. Under the lowest spike there is a slender leaf, shorter than the spike.

Mr. Ray says the spikes are three or four, and sometimes one longer than all, rising from the base of one of the leaves.

Grämen cyperoides vernum minimum. Ray's Sym. 421.
Grämen cyperoides spicatum. Gerard. 29.
Grämen caryophylleum foliis, spicis divultis. Baud. pin. 3.
Grämen spicatum. foliis caryophyllaeis. Parkinson. 1660.

Mountainous and barren pastures. P. April—May.

*** Barren and fertile flowers on different spikes. The fertile spikes on fruit-stalks.

Pale Palleceens


Gràmen Cypieroides Polyflachonis flavicents, spicis brevis brevibus prope summittatim Caulis. Ray's Sym. 419.

Moist pastures. P. May.

Pink Panicea

SEDGE. Spikes on fruit-stalks; upright; at a distance from each other; fertile spikes strap-shaped; capsules rather blunt; bladder-shaped—

Grämen cyperoides foliis Caryophylleis, spicis e rarioibus et tumidioribus granis compostis. Ray's Sym. 418.

Turfy bogs. P. June—July.

Cows, Sheep and Goats eat.
THREE CHIVES.

SEDGE. Spikes pendant. Fruit-stalks in pairs—Capsules Bastard when ripe, oval-shaped; scored; tapering and ending in a double Pseu-
dus, which is bent back at the end. Floral leaves bristle-shaped. 

Gramen cypereoides spica pendula breviore. Bauh. pin. 6.

Ray's Syn. 419.

Cyperus, seu Pseudo-Cyperus spica pendula breviore. Park. 
1866.


Banks of wet ditches. P. July.

Cows, Sheep and Goats eat it.

SEDGE. Spikes pendant; barren spike upright. Fertile Pendulous 
cylindrical; longer than the fruit-stalks. Capsules tapering to Pendula 
a point. (Hudson)—Spikes yellowish, fertile spikes mostly five, 
or more.

Gramen cypereoides, spica pendula longiore. Park. 1267.

Ray's Syn. 420.

Gramen spica pendula longiore et angustiore. Bauh. pin. 6.

Gramen cyperoides polyathochion majusculum latifolium, spicis 
multis, longis, filigibus. Ray's Syn. 419.

Woods and moist hedges. P. June—July.

SEDGE. Spikes upright; cylindrical, growing by threes; 
nearly fitting; barren spike terminating. Straw three-cornered Turfy 
—Leaves narrow; long; of a fine green. The even fertile spikes Coeciptofa 
always black; inclined yellowish; egg-shaped; blunt; upright 
capsules. Straw naked; with three equal, flat sides. Under the 
lower spike is a little leaf longer than the spike. The leaves under 
the other spikes are shorter.

Gramen cypereoides foliis caryophylliacis, spicis erectis sessili-
buis, e feminibus confertis compositus. Ray's Syn. 419.

Gramen cyperoides angustifolium, spica spadiceo-viridi minus. 
Bauh. pin. 6.

Meadows and moist woods. P. May—June.

This plant as well as the Dwarf Bulrush, begins sponta-

eously to grow upon boggy mosses, and forming compact hil-

locks, affords a support for men to walk upon; to that in the 
course of time, the most dangerous bogs are changed into firm 
and useful land.—Cows, Sheep, Goats and Horses eat it.

SEDGE. Spikes on short fruit-stalks; at a great distance from 
each other; sheathed by a floral leaf. Capsules angular; sharp-

pointed—Leaves soft. Spikes not hanging down. Scales of the 
flower-cup sharp.

Gramen cypereoides spicis parvis, longissime distantibus. 
Ray's Syn. 420.

Turfy bogs. P. June.
CHIVES and POINTALS Separate:

**Wood Sylvestica**

SEDGE. Spikes pendant; barren spike upright. Fertile spikes thread-shaped; shorter than the fruit-flaks. Capsules sharp; at a distance from each other—Hudson. 355. Spikes of a yellowish colour, as is the whole plant.


In woods, P. May—June.

Linnaeus considers it only as a variety of the Bladder Sedge.

**** **Fertile and barren flowers on different spikes; the barren spikes most in number.**

**Brown Acuta**

SEDGE. Barren spikes most numerous. Fertile spikes on very short fruit-flaks; capsules rather blunt—In dry situations blackish; in wet ones, reddish brown. Shaft cloven; hairy; subite; not permanent. Floral leaves egg-shaped; brown, with a green stripe running lengthwise.


1. Large; with narrow leaves. Park. 1267, Ray’s Syn. 417. In this variety there are sometimes more fertile than barren spikes. It is smaller than the preceding variety in every respect, except in height, in which it is equal.

2. Small, with narrow leaves.

Gramen cyperoides minus angustifolium. Park. 1266. fig. 3. a smaller variety of the preceding variety.

In watery places.

1. On the banks of brooks and rivers; sometimes growing in the water. 2. In ponds and ditches.

Hories, Cows, Sheep and Goats eat it.

**Bladder Veronica**

SEDGE. Barren spikes most numerous. Fertile spikes on fruit-flaks. Capsules bladder-shaped; tapering to a point—The shaft in this species is very short; permanent; cloven; but not evidently so. Floral leaves spear-shaped; tapering; brownish at the edges. Fertile spikes yellow. Barren spikes brown.

Gramen cyperoides majus praecoix, spicas turgidis, tertibus, flavescetibus. Ray’s Syn. 420.

Greater Bladder Carex.

Marshes and wet places. A. June.

Cows, Goats and Sheep eat it.

The Laplanders fill their shoes with it, to protect their feet from the cold in winter and from the heat in summer. For this purpose they pick, dry and card it.

SEDGE.
THREE CHIVES.

SEDGE. Barren spikes most numerous; fertile spikes fit. Inflated, Seedvessels egg-shaped; distended; tapering to a point. Infertile floral leaves twice as long as the spike. Hudson.
Gramen cyperoides palustre, spicis tribus subrotundis, vix auleatis, lati distanti. Ray's Syn. 420.
Lesser Bladder Carex. Hudson. 354.
In Marshes. P. June—July.

SEDGE. Spikes at a distance from each other. Barren spikes Hairy most numerous. Fertile spikes on short fruit stalks; upright. Hirta Capsules hairy—Leaves standing out of their sheaths; white and dry.
Gramen cyperoides polystachion lanuginosum. Ray's Syn. 418.
Gramen cyperoides Norvegicum parium lanosum. Park. 1178.
Meadows and wet pastures. P. June.

361 BUR-REED. 1041 Sparganium.

B. Barren Flowers numerous; collected into a little head.
Emp. Common Catkin roundish; tiled very closely on every side; consisting of proper Cups with three leaves; narrow; deciduous.
Bloss. None.
Chives. Threads three; hair-like; as long as the cup. Tips oblong.
F. Fertile Flowers.
Emp. As above. Common Receptacle roundish.
Bloss. None.
Point. Seedbud egg-shaped; ending in a short awl-shaped Shaft. Summits two; sharp; permanent.
S. Vess. Not very pulpy; turban-shaped, but terminated by a point; angular beneath.
Seeds. Nuts two; hard as bone; oblong egg-shaped; angular.

Obs. Sometimes there is only one, at other times two cells in the seed vessel.

Sparganium non ramosum. Baub. pin. 15.
Wet ditches and banks of rivers. 1st July.
Horses and Swine eat it; Cows are not fond of it; Sheep and Goats refuse it.
CHIVES and POINTALS Separate.

BUR-REED. Leaves drooping; flat.—Spartium minium. Ray’s Syr. 437.
Leaf Bur-reed.
Ponds and slow streams. P. July.
Cows eat it.

362 REEDMACE. 1040 Typha.

B. Barren flowers numerous; forming a cattin at the end of the stem.

EMPAT. Cattin common, cylindrical; very closely set; consisting of individual Cups with three leaves; bristle-shaped.

BLOSS. None.

CHIVES. Threads three; hair-like; as long as the cup.

Tips oblong; pendant.

F. Fertile flowers numerous; set exceedingly close; forming a cattin, which surrounds the straw.

EMPAT. Hairs feathered.

BLOSS. None.

POINT. Seedbud sitting upon a bristle; egg-shaped. Shaft awl-shaped. Summit hair-like; permanent.

S. VESS. None. The fruit very numerous and forming a cylinder.

SEED. Single; egg-shaped; furnished with a shaft, and sitting upon a bristle. Feather hair-like; fixed to the bristle supporting the seed, and and as long as the pointal.

REEDMACE. Leaves somewhat sword-shaped. The spike of fertile and barren flowers placed near together—Spikelets two; deciduous: one placed at the base and the other at the middle of the barren spike. Spikes brown.

Typha, Gerard. 46. palustris major. Baub. pin. 20. Ray’s Syr. 436.

Typha palustris maxima. Park. 1204.
Great Cats-tail.
Banks of swamps and fish-ponds.

REEDMACE. Leaves semi-cylindrical; spikes of fertile and barren flowers placed at a distance from each other—Typha palustris media. Ray’s Syr. 435.

Typha palustris clava gracili. Baub. pin. 20.
Typha minor. Park. 1204.
Narrow-leaved Cats-tail.
Ditches and ponds. P. July.
Cows eat it; Swine remain it.

Order IV.
FOUR CHIVES

Order IV. Four Chives.

363 NETTLE. 1054 Urtica.

B. Barren flowers.

Emp. Cup four leaves. Little Leaves circular; concave; blunt.

Bloss. Petals none.

Honey-cup in the center of the flowers; glaas-shaped; entire; narrower at bottom; very small.

Chives. Threads four; awl-shaped; as long as the cup; expanding; one placed within each leaf of the cup.

Tips with two cells.

F. Fertile flowers upon the same, or upon dissimilar plants.

Emp. Cup with two valves; egg-shaped; concave; upright; permanent.

Bloss. None.


S. Vess. None. Cup closing.

Seed. Single; egg-shaped; compressed and blunt; shining.

Obs. In the Common Nettle the cup of the barren flower consists of one leaf divided into four segments; and the cup of the fertile flower consists of four valves; the two innermost and largest supplying the place of a seed vesel.

NETTLE. Leaves opposite; egg-shaped; serrated. Fruit Roman bearing Catkins globular.


Urtica pilulifera, folio profundius urticæ majoris in modum serrato, femine magnō Linn. Ray's Syn. 140.

Amongst rubbish. A. July.

NETTLE. Leaves opposite; oval—Deeply serrated.


Leaves Nettle.

Gardens and amongst rubbish. A. August.

The stings are very curious microscopic objects: They consist of an exceedingly fine pointed, tapering, hollow substance, with a perforation at the point, and a bag at the base. When the sting is pressed upon, it readily punctures the skin, and the same pressure forces up an acrimonious fluid from the bag, which instantly squirits into the wound, and produces an effect that every one has experienced.
CHIVES and POINTALS Separate.

The leaves are gathered and cut to pieces, to mix with the food of young Turkeys.—Cows, Horses, Sheep, Goats and Swine refuse it.


The chives afford a very pleasing appearance: they are rolled inwards under the segments of the cup, which fold over them 'till they are ripe; when the segments gradually expanding, the chives released from their confinement roll backwards with an elastic force, and discharge the contents of their transparent tips, which floats in the air like a cloud of dust, that it may arrive at the summits of the fertile flowers, (which grow on distinct plants,) and fertilize the seedbud.—The stalks may be dressed like Flax or Hemp, for making Cloth, or Paper—The plant has formerly been used as an astringent, but is now disregarded.—A leaf put upon the tongue, and then pressed against the roof of the mouth, is pretty efficacious in stopping a bleeding at the nose.—Paralytic limbs have been recovered by顺丰ing them with Nettles.—The young shoots are gathered early in the spring to boil in broth or gruel.—Cows eat the leaves when they are a little withered.—The leaves are cut to pieces to mix with the food of young Turkeys, and other Poultry.—The different species of Nettle afford nourishment to the following Insects:


Nettle
FOUR CHIVES.

Nettle Top Moth, Blossom Underwing Moth, Yellow Moth, Phalaena Interrogationis.
The Gothic Moth on the roots. Nettle Weevil, Curculio Scaber.

364 BOX. 1053 Buxus.

B. Barren flowers projecting from the buds of the tree.

EMPAL. Cup three leaves; circular; blunt; concave; expanding.

BLOSS. Petals two; circular; concave; resembling the cup, but larger.

CHIVES. Threads four; awl-shaped; upright but expanding, generally longer than the cup. Tips upright; double.

POINT. Seedbud only a rudiment, without shaft or summit.

F. Fertile Flowers in the same bud with the others.

EMPAL. Cup four leaves. Little Leaves circular; blunt; concave; expanding.

BLOSS. Petals three; circular; concave; resembling the cup but larger.

POINT. Seedbud roundish; with three blunt edges; ending in three very short permanent Shafts. Summits blunt; rough with hair.

S. VESS. Capsule roundish; with three bills and three cells; opening elastically in three directions.

SEEDS. Two; oblong; roundish on one side; flat on the other.

BOX. As there is only one species known Linnaeus gives no Tree description of it—Leaves oval; thick; glossy. Blossoms greenish. Sempervires white.

Buxus arborefcens. Baub. pin. 471.
Buxus arbor vulgaris. Park. 1428.
Box Tree.
Woods and hedges. P. April.

The
CHIVES and POINTALS, Separate.

The varieties are,
1. Leaves striped with yellow.
2. Leaves edged with yellow.
3. Leaves edged with white.
4. Leaves broad and striped with white.
5. Narrow leaved.
7. Leaves yellow at the ends.
8. Dwarf round-leaved.
9. Dwarf with striped leaves.

The wood is very hard and smooth; and therefore well adapted for the use of the Turner. Combs, Mathematical Instruments, Knife-handles, and button-moulds are made of it. — An empyreumatic oil distilled from the shavings is often used as a topical application for the piles, and seldom fails to procure ease.

365 B I R C H. 1052 Betula.

B. Barren flowers forming a cylindrical Catkin.

EMPL. Catkin, common; tiled on every side; loose; cylindrical; consisting of Scales, with three flowers in each; to the sides of each of which are fixed two exceedingly small scales.

BLOSS. Compound, with three florets; equal; fixed to the center of each scale of the cup.

Individuals formed of one petal; with four divisions; expanding; very small. Segments egg-shaped; blunt.

CHIVES. Threads four; very small. Tips double.

F. Fertile flowers forming a Catkin on the same tree.

EMPL. Catkin common; tiled; Scales placed by threes; opposite; fixed to the spike-flank; two flowers in each; heart-shaped; concave; short; slightly notched at the end, with a sharp point in the middle.

BLOSS. None that is perceptible.

POINT. Seedbud egg-shaped; very small. Shafts two; bristle-shaped; as long as the scales of the cup. Summits simple.

S. VESSELS. None. The seeds lie under each triple scale of the catkin.

SEEDS. Solitary; egg-shaped; bordered.

OBS. In some species the flowers form a cylindrical catkin; in others a roundish cone.
FOUR CHIVES.

BIRCH. Leaves egg-shaped; tapering to a point; serrated White
Flowers forming a cylindrical catkin. Bark white; smooth; Alba
Birch Tree. Birk.
Woods and moist hedges. S. July.
It grows in all kinds of soil, but best in shady places. It bears
cropping. It is hurtful to pasturage. The wood is firm, tough
and white: Women's shoe-heels, and packing-boxes are made of
it. It is planted along with hazel to make charcoal for forges.
In the northern parts of Lancashire, they form the slender twigs
into beehoms for exportation. (Penn. Tour.) The bark is ex-
tremely useful to the people in the north of Europe; they make
hats and drinking cups of it in Kamtschatka. The Swedth fish-
ermen make shoes of it. The Norwegians cover their houses
with it, and upon this cover, they lay turf three or four inches
thick. Torches are made of the bark sliced and twisted to-
gether. It abounds with a resinous matter that is highly inflamm-
able. If a hole is bored into the tree when the sap rises in the
spring, a sweet liquor distils from it, which properly fermented
with the addition of sugar, makes a pleasant wine.—Horses,
Cows, Goats and Sheep eat it. Swine refuse it.
It furnishes food for the following insects.
Willow Butterfly. Papilio Antiopa.
Emperor Moth. Phalana pavonia.
Large Emerald Moth. Phalana Papilionaria.
Great Egger Moth. Phalana Quercus.
Chocolate-tip Moth. Phalana Curcula.
Spotted Elm Moth. Phalana Betiscaria.
Pebble Moth. Phalana Zizac.
- - - Tentbredo lutca.
Birch Louse. Aphis Betule.
- - - Cocci Betule.
Birch Bug. Citrius Betule.
Birch Weevil. Curculio Betule.
- - - Chrysomela Betule.

BIRCH. Fruit-stalks branched.—Leaves nearly circular; Alder
dammy; serrated. Catkins brown.
Alnus rotundifolia glutinosa viridis. Bauh. pin. 428.
Common Alder. Owler.
Alnus vulgaris, sub-conis ligulis membranacea rubris donata.
Ray's Syn. 442.
1. Scarlet Alder; there are likewise the Black, the hoary-leaved,
the indented or Elm-leaved; the curled leaved; the broad curled
leaved and the white ALDERS.
Wet situations. S. July.
Vol. II.
CHIVES and POINTALS Separate.

It flourishes best in low marshy situations, in which it is frequently planted to make hedges. It will now live in a chalky soil. It is easily propagated by seeds, but not by slips or cuttings. Grass grows well beneath its shade.—The wood is soft and brittle. It endures a long time under water and therefore is used for pipes; and to lay under the foundations of buildings situated upon bogs. Women's shoe heels, ploughmen's clogs and various articles of the Turner are made of it.—The bark gives a red colour, and with the addition of copperas a black. It is principally used by fishermen to stain their nets.—In the Highlands of Scotland near Dundonnel, Mr. Pennant says, the boughs cut in the summer, spread over the fields, and left during the winter to rot, are found to answer as a manure. In March the ground is cleared of the undecayed parts, and then ploughed.—The fresh-gathered leaves are covered with a glutinous liquor; and some people drew them upon their floors to destroy fleas; the fleas are said to be entangled in the tenacious liquor like birds are by bird-lime.—The berries dye green.—The whole plant is astringent.—Horser, Cows, Goats and Sheep eat it; Swine refuse it.

The following insects live upon it.

Puls Moth. Phalena Pinkula.
Buff-tip Moth. Phalena Bucephala.
Yellow Tail Moth. Phalena Chrysoforbea.
White spot tussock Moth. Phalena antiqua.
Dagger Moth. Phalena Pfe.
- - - - Tenbredo Latea.
- - - - Chermes Alni.
Birch Weevil. Curculio Betulae.
Alder Weevil. Curculio Alni.
Two spotted Lady Cow. Coccinella 2 punyata.
- - - - - - Chrysomela Alni.
FIVE CHIVES.

Order V. Five Chives.

366 DITCHBUR. 1056 Xanthium.

B. Barren flowers compound.

Empal. Cup, common to many florets; formed of many leaves; tiled with slender scales, as long as the florets; equal.

Bloss. Compound. Uniform; tubular; equal; formed into an hemisphere.

Individual. One petal; tubular; funnel-shaped; upright; with five clefts.

Chives. Threads five; forming a hollow cylinder. Tips upright; parallel; not united.

Recept. Common, next to none; the florets being separated by chaff.

F. Fertile flowers beneath the others on the same plant; two together.

Empal. Fence containing two flowers; formed of two leaves; opposite; each divided into three sharp lobes; the middle lobe projecting farthest; set round with hooked prickles; surrounding and entirely covering the seedbuds to which they are fixed.

Little segments loose.

Bloss. None.

Point. Seedbud oval; rough with hair. Shafis two; similar; hair-like. Summits simple.

S. Vess. Berry dry; oblong egg-shaped; cloven at the end; becket closely with hooked prickles.

Seed. Nut; with two cells.

DITCHBUR. Stem without thorns. Leaves heart-shaped; Burdock three fibred.—Stem generally spotted. Flowers at the base of the Strumarium leaves.


Lappa minor; Xanthium Dioscoridis. Bauh. pin. 198.


Lesser Burdock.

On dunghills. A. August—September.

The leaves are bitter and astringent.—A decoction of the whole plant affords a showy yellow colour; but it is better if only the flowers are used. Horses and Goats eat it; Cows, Sheep and Swine refuse it.
CHIVES and POINTALS Separate.

367 EVERLASTING. 1060 Amaranthus

B. Barren flowers on the same plant with the fertile ones.

EMPAL. Cup five or three leaves; upright; coloured, permanent; little leaves spear-shaped; sharp.

BLOSS. None. Unless you consider the empalement as such.

CHIVES. Threads five or three; hair-like; upright, but flandering rather open; as long as the cup. Tips oblong; vane-like.

F. Fertile flowers in the same bunch with the others.

EMPAL. Cup the same as the other.

BLOSS. None.

POINT. Seedbud egg-shaped. Shaft three; short; awl-shaped. Summits simple; permanent.

S. VESS. Capsule egg-shaped; somewhat compressed; the size of the cup which contains it, and coloured like that. Bills three; cell one; cut round.

SEED. Single; globular; compressed; large.

EVERLASTING. Flowers in lateral clusters; each cup with three clefts. Leaves egg-shaped, dented. Stem spreading. Sometimes the leaves are of a silvery white in the middle, and with or without a brown spot.


1. There is a variety that is white.

Leaft Blite.

Amongst rubbish. A. August.
MANY CHIVES.

Order VIII. Many Chives.

368 ARROWHEAD. 1067 Sagittaria.

B. Barren flowers many.

Emp. Cup three leaves; little Leaves egg-shaped; concave; permanent.

Bloss. Petals three; circular; blunt; flat; expanding; three times as large as the cup.

Chives. Threads many, (generally twenty-four,) awl-shaped; collected into a little head. Tips upright; as long as the cup.

F. Fertile flowers few, and standing beneath the others.

Emp. Cup as above.

Bloss. Petals three as above.

Point. Seed buds numerous; compressed; forming a little head; hunched on the outer side, ending in very short Shafis. Summits sharp; permanent.

St. Vess. None. Receptacle globular; and set round with the seeds so as to form a globe.

Seeds. Numerous; oblong; compressed; encompassed lengthways by a broad membranaceous border, which is hunched on one side, and tapering towards each end.

ARROWHEAD. Leaves arrow-shaped; sharp—On Leaf Stalks.

Blossoms subite.


Sagittaria aquatica minor latifolia. Baub. pin. 194.

Sagittaria aquatica omnium minima. Ray's Syn. 258.

Wet Ditches and Banks of rivers. P. June.

There is always a bulb at the lower part of the root, growing in the solid earth, beneath the mud. This bulb constitutes a considerable part of the food of the Chines. and upon that account they cultivate it. Horses, Goats and Swine eat it; Cows are not fond of it.
CHIVES and POINTALS Separate.

369 MILFOIL. 1066 Myriophyllum.

B. Barren flowers.
EMPAL. Cup four leaves; oblong; upright; the outermost larger and the innermost smaller than the rest.
BLOSS. None.
CHIVES. Threads eight; hair-like; longer than the cup; limber. Tips oblong.
F. Fertile flowers placed under the others.
EMPAL. Cup as above.
BLOSS. None.
POINT. Seedbuds four; oblong. Shafts none. Summits downy.
S. VESS. None.
SEEDS. Four; oblong.

Obs. In the second species the chives and pointals are frequently found in the same empalement.

MILFOIL. Barren flowers in interrupted spikes.—Stems hollow; scored; jointed; branched. Fruit-bearing stalks without leaves.
Potamogeton foliis pennatis. Ray's Syn. 150.
Millefolium aquaticum pennatum Spicatum. Baub. pin. 141.
Park. 1257.
Spiked Water Milfoil.
Ponds and slow streams. P. June—July.
Sheep and Goats refuse it.

MILFOIL. All the flowers growing in whorls; frequently the chives and pointals are found in the same flower.—Myriophyllum aquaticum minus. Gerard. 828.
Pentapterophyllum aquaticum flocculis ad foliorum nodos. Ray's Syn. 316.
Millefolium aquaticum minus. Park. 1257.
Milletolium aquaticum flocculis ad foliorum nodos. Baub. pin. 141.

Verticillated Water Milfoil.
Ponds and slow streams. P. July.
MANY CHIVES.

370 HORNWEED. 1065 Ceratophyllum.

B. Barren Flowers.

ENTAL. Cup with many divisions. Segments awl-shaped; equal.

BLOSS. None.

CHIVES. Threads twice as many as there are segments in the cup (from sixteen to twenty;) hardly discernible.

Tips oblong; upright; longer than the cup.

F. Fertile flowers on the same plant with the others.

ENTAL. Cup as above.

BLOSS. None.

POINT. Seednot egg-shaped; compressed. Shaft none.

Summit blunt; oblique.

VLESS. None.

SEED. Nut, egg-shaped; of one cell; tapering to a point.

HORNWEED. Leaves twice forked; in double pairs: Horsetail Fruit with three thorns—Leaves in whorls.

Demerlium

Hydroceratophyllum folio aspero, quatuor cornibus armato.

Ray's Syn. 135.

1. Leaves smooth with eight horns. Ray's Syn. 135.

Horned Pondweed.

Slow streams and wet ditches. P. July.

The uncommon breadth of the summits is the most remarkable peculiarity in this plant; and whether they float upon the surface of the water, or are sunk beneath it, they are equally calculated to receive the dust from the chives which stand above them.
CHIVES and PONTALS Separate.

371 IRONWORT. 1069 Poterium.

B. Barren flowers forming a spike.

Empal. Cup three leaves; little Leaves egg-shaped; coloured; shedding.

Bloss. With four divisions. Petals egg-shaped; concave; expanding; united at the base; permanent.

Chives. Threads many, (from twenty to fifty;) hair-like; very long; limber. Tips roundish; double.

F. Fertile flowers in the same spike, but placed above the others.

Empal. Cup as above.

Bloss. Petal one; wheel-shaped. Tube short; roundish; closing at the mouth. Border with four divisions.

Segments egg-shaped; flat; reflected; permanent.

Point. Seedbuds two; oblong egg-shaped; within the tube of the blossom. Shafts two; hair-like; coloured; limber; as long as the blossom. Summit pencil-shaped; coloured.

S. Vess. Berry formed of the tube of the blossom, which grows thick; hard; and closes upon the seeds.

Seeds. Two.

Obs. There is one foreign species in which the berry is fleshy and globular; the seeds three; oblong; cylindrical. But in the British species the berry is dry and angular, and the seeds four cornered; tapering at each end. There are two seble pointals in each barren flower in the Burnet.

IRONWORT.

Burnet
Sanguisorba

IRONWORT. Without thorns; stem somewhat angular.

Pimpinella sanguisorba minor hirsuta. Raub. pin. 160.
Pimpinella vulgaris minor. Park. 582.

Burnet.

High chalky pastures and moist meadows. P. May—Aug. The young leaves are sometimes used in fallads, and in cool tankards.

372 BEECH.
MANY CHIVES.

372 BEECH. 1072 Fagus.

B. Barren flowers fixed to a common receptacle, somewhat like a catkin.

EMPAL. Cup one leaf; bell-shaped; with five clefts.

BLOSS. None.

CHIVES. Threads many, (about twelve) as long as the cup; bristle-shaped. Tips oblong.

F. Fertile flowers in a bud, on the same tree.

EMPAL. Cup one leaf; with four teeth; upright and sharp.

BLOSS. None.

POINT. Seed bud inclosed by the cup. Shaft three; awl-shaped. Summits simple; reflected.

S. VESS. Capsule roundish; (formed of the cup;) large; beset with soft thorns; with one cell, and four valves.

SEEDS. Nuts two; egg-shaped; three cornered; with three valves; tapering.

Obs. The barren flowers sometimes form a cylinder, at others a globe.

BEECH. Leaves spear-shaped; tapering to a point; serrated; Cheesnut naked underneath.


Caflanea sylvestriris. Laub. pin. 419.

Cheesnut Tree.

Woods and Hedges, in Kent. S. May.

1. The leaves are something striped with yellow.

Nothing will thrive under its shade—The wood is applicable to the same uses that Oak is.—If the bark is not taken off, it makes poles for espaliers, dead fences and hop yards, and pipes to convey water under ground, which will last longer than Elm or Oak.—Some of the oldest buildings in London are said to be constructed with this wood—At Tortworth in Gloucestershire there is a tree fifty-two feet round. It is proved to have stood there ever since the year 1150, and was then so remarkable as to be called the great Cheesnut of Tortworth. It fixes the boundary of the manor, and is probably near 1000 years old. See Gent. Mag. 1766 p. 321, where there is a drawing of it. Mr. Collinson, the author of this account, makes no doubt of the Cheesnut being a native of England, and assigns the great profit that arises from them when cut for hop-poles, as the reason why it is so rare to see large trees in the woods. The nuts are used for whitening linen cloth, and for making flaxich.
CHIVES and POINTALS Separate.

Common Sylvatica

BEECH. Leaves egg-shaped; indistinctly serrated.—Bark smooth; white. Catkin globular.


Woods and hedges. S. May.

1. The leaves are sometimes variegated with white or yellow stripes.

The tree is large and beautiful, but no verdure will flourish under its shade. It loves a fertile soil. Whilst young it is apt to suffer from exposure. It is difficult to transplant. It retains its old leaves through the winter. It bears lopping well, and may be trained to form very lofty hedges—the wood is brittle; soon decays in the air, but endures under water. It is formed into tool handles, planes, mallets, chairs and bedsteads. Split into thin layers it is used to make scabbards for swords. It is excellent fuel, and when burnt it affords a large quantity of potash—The leaves gathered in Autumn before they are much injured by the frosts, make infinitely better mattrasses than straw or chaff, and endure for seven or eight years—The nuts, or masts as they are called, when eaten occasion giddiness and head ache; but when well dried and powdered they make wholesome bread. They are sometimes roasted and substituted for coffee. They fatten Swine. The poor people in Silesia use the expressed oil instead of butter.—

Sheep and Goats eat the leaves.

The following insects feed upon both Species.

December Moth. Phalena Populi.


Yellow Tuffock Moth. Phalena Pudibunda.

Beech Weevil. Curculio Fagi.

Cockchafer Beetle. Scarabaeus Melolontha.

Beech Louse. Aphis Fagi.
MANY CHIVES.

373 OAK. 1070 Quercus.

B. Barren flowers forming a loose catkin.

Empal. Cup one leaf; with four or five clefts; Segments sharp; often cloven.

Bloss. None.

Chives. Threads many, (five, eight or ten;) very short, Tips large; double.

F. Fertile Flowers seated in a bud on the same tree.

Empal. Cup one leaf; like leather; hemispherical; rough; very entire; hardly discernible whilst the flower continues.

Bloss. None.

Point. Seedbud egg-shaped; very small. Shafis from two to five; longer than the cup. Summit simple; permanent.

S. Vess. None.

Seed. Nut oval; formed of a leather-like coat of one valve, which appears as if rapped at the base; fixed to a short cup; cylindrical; smooth.

Obs. The number of segments in the cup generally corresponds with the number of chives.

OAK. Leaves deciduous; oblong; broadest towards the end; English with rather sharp indentations but blunt angles.—Blossoms pale Robur green. The Cup is composed of about twenty little, spear-shaped; membranaceous; coloured leaves.

Quercus vulgaris. Gerard. 1339.
Quercus cum longo pediculo. Bauh. pin. 420.
1. There is one variety with shorter fruit stalks. Bauh. pin. 419
2. And and another with striped leaves.

Common Oak.

Woods and hedges. S. April.

It loves hilly better than boggy ground, and thrives best, while young, in large plantations. Its roots descend deep into the earth, and therefore will not bear to be transplanted. Much lopping destroys it. Graps will hardly grow beneath it.—The wood is hard; tough; tolerably flexible; not easily splintering; and therefore is preferred before all other timber for building ships of war. It it is well adapted to almost every purpose of the carpenter; but an attempt to enumerate all the uses of this well known wood, would be equally superfluous and difficult.—Oak saw-duft is the principal indigenous vegetable used in dyeing sullian. All the varieties of drabs and different shades of brown are made with Oak saw-duft, variously managed and com-
pounded—The balls, or Oak apples are likewise used in dyeing as a substitute for galls: the black got from them by the addition of copperas is more beautiful than that from galls, but not so durable.—The bark is universally used to tan leather. An infusion of it with a small quantity of copperas is used by the common people to dye woollen of a purplish blue: The colour, tho’ not very bright is durable.—The balls, or galls upon the leaves are occasioned by a small insect with four wings, called Cynips querci foli, which deposes an egg in the substance of the leaf, by making a small perforation on the under surface. The Ball presently begins to grow, and the egg in the center of it changes to a worm; the worm again changes to a nymph, and the nymph to the flyling insect with four wings.

Horses, Cows, Sheep and Goats eat the leaves; Swine and Deer fatten on the acorns.

The following insects feed upon it.

Emperor of the Woods. Papilio Iris.
Purple Hair-streak Butterfly. Papilio Quercus.
Puts Moth. Phalena Vinula.
Great Egger Moth. Phalena Quercus.
Black Arches Moth. Phalena Monacha.
Gipsy Moth. Phalena Dispar.
Yellow Tail Moth. Phalena Chrysorrhoea.
Yellow Tufflock Moth. Phalena Pudibunda.
Stollop winged Oak Moth. Phalena Oo.
Spotted Buff Moth. Phalena Lubricipeda.
Yellow July Oak Moth. Phalena Zuidra.
Willow Red-under wing Moth. Phalena Paeta.
Dagger Moth. Phalena Pfl.
Buff Tip Moth. Phalena Lucpehala.
Wild Role Moth. Phalena Locarinaria.
Small Oak Moth Phalena Varidana.
Green Silver Lined Moth. Phalena Praediana.
Buff Argus Moth. Phalena Anataria.
Red arches Moth. Broad bar Moth. Oak bar Moth.
MANY CHIVES.


- - - - Phalena Vindata.
- - - - Cynips Quercus Baccae.
- - - - Cynips Quercus Foliis.
- - - - Cynips Quercus Petioli.
- - - - Cynips Quercus Gemma.
- - - - Cermes Quercus.
Oak Louise. Aphis Quercus.
Oak Weevil. Curculio Quercus.

374 HAZLE. 1074 Corylus.

B. Barren flowers forming a long catkin,

EMPAL. Catkin common tiled on every side; cylindrical; consisting of Scales, each enclosing a single flower; narrower at the base, broader and more blunt at the end; bent inwards with three clefts. The Middle Segment as long, but twice as broad as the others, and covering them.

Bloss. None.

CHIVES. Threads eight; very short; fixed to the inner side of the scale of the cup. Tips egg-shaped; oblong; shorter than the cup; upright.

F. Fertile flowers at a distance from the others, on the same plant; sitting; inclosed in the bud.

EMPAL. Cup two leaves; like leather; jagged at the edge; upright; as long as the fruit; so small as to be hardly discernable during the time of flowering.

Bloss. None.

POIN. Seedbud roundish; very small. Shafts two; bristle-shaped; much longer than the cup; coloured. Summits simple.

S. VESS. None.

SEED. Nut somewhat egg-shaped; appearing as if rasped at the base; point rather flatted; and a little tapering toward the end.

OBS. This genus is nearly allied to the HORNEAM.
CHIVES and POINTALS Separate.

HAZLE. Props egg-shaped; blunt.—Leaves oval; pointed; serrated; wrinkled. Catkins green; afterwards brown.
Corylus, five Nux avellana sylvestris. Park. 1416.
Hafel-nut Tree.
Woods and hedges. S. March.
1. There are some varieties in the form of the fruit.

It is frequently planted in hedges, and in coppices to make charcoal for forges. The owners cut them down in equal portions in the rotation of sixteen years, and raise regular revenues out of them; often more than the rent of the land, for freeholders of fifteen or twenty-five pounds per annum are known to make constantly sixty pounds a year from their woods. Pennant’s Tour. 1772. p. 29. The wood is used for fishing rods, walking sticks, crates, hoops for barrels, &c. The shoots for springles to fasten down thatch. The roots are preferred where beautiful wood is required for inlaying or staining. It is a practice in Italy to put the chips of hazel into turbid wine to clear it, which it does in twenty-four hours; and in countries where yeast is scarce, they take the twigs of hazel, and twirl them together so as to be full of chinks; these they steep in ale during its fermentation; then hang them up to dry, and when they brew again they put them into the wort instead of yeast—Painters and engravers prepare coals for delineating their designs thus. They take pieces of Hazle about as thick as a man’s arm and four or five inches long. dry and then cleave them into pieces about as thick as one’s finger. These they put into a large pot full of sand, and then cover the top of pot with clay. This is expoed in a potter’s oven, or any other sufficient degree of heat, and when cooled again, the sticks are found converted into charcoal which draws freely and easily rubs out again. The nuts are agreeable to most people. Squirrels live chiefly upon them. An expressed oil is obtained from them for the use of painters—Goats and Horses eat the leaves; Sheep and Swine refuse them. The following insects are found upon the hazle: Brindle Moth. Spider Moth. December Moth, Phalena Populi. Emperor Moth, Phalena Pomonae. Nut-tree tussock Moth, Phalena Coryli. Dagger Moth, Phalena Pfi. Orange tussock Moth, Phalena Gonostigma. Ateiabus Coryli and Curculio Nucam.

375 HORNBEAM.
MANY CHIVES.

375 HORNBEAM. 1073 Carpinus.

B. Barren flowers formed into a cylindrical catkin.

EMERALD. Common Catkin, loosely tiled on every side; consisting of Scales, with a single flower in each; egg-shaped; concave; sharp; fringed.

BLOSSOM. None.

CHIVES. Threads generally ten; very small. Tips double; compressed; woolly at the end; with two valves.

F. Fertile flowers forming an oblong catkin on the same tree.

EMERALD. Common Catkin, loosely tiled; consisting of Scales, including a single flower; spear-shaped; woolly; reflected at the end.

BLOSSOM. Shaped like the cup; of one leaf, with six clefts. Two of the Segments larger than the others.

POINT. Seed-buds two; very short; each furnished with two Shafts; hair-like; coloured; long. Summits simple.

S. VESSEL. None. The Catkin growing very large contains the seed at the base of of the scales.

SEED. Nut egg-shaped; angular.

OBSERVATIONS. Linneus in one place says there are ten, and in another twenty chives. I have not had an opportunity to determine which of these is true. Probably the number of chives varies.

HORNBEAM. Scales of the cones flat.—Bark smooth; Smooth white. Leaves oval; pointed; sharply serrated. Betulus


Olry. five Othrya. Park. 1406.

Betulus five Carpinus. Gerard. 1479.

1. There is a variety with striped yellow leaves.

Horn-beam Tree. Hard-beam Tree. Horie or Horn-beech Tree.

In woods. S. May.

This tree loves a poor flint soil, on the sides of hills. It is easily transplanted, and bears lopping. Cattle eat the leaves, but pasturage will not flourish in its shade.—The wood burns like a candle; it is very white, very tough, harder than hawthorn, and capable of supporting a great weight. It is useful in turning, and for many implements of husbandry. It makes cogs for mill wheels even superior to yew.—The inner bark is much used in Scandinavia to dye yellow

The Plakema Ernata and Kofifulis feed upon it.

Order
CHIVES and POINTALS Separate.

Order IX. Threads United.

376 F I R. 1077 Pinus.

B. Barren flowers in bunches.

EMPAL. None, but the gaping scales of the buds.

BLOSS. None.

CHIVES. Threads many; united below into an upright pillar, divided at the top. Tips upright.

F. Fertile Flowers on the same tree.

EMPAL. Common Cone, somewhat egg-shaped; composed of Scales, with two flowers in each; oblong; tiled; permanent, inflexible.

BLOSS. None.

POINT. Seedbud very small. Shaft awl-shaped. Summit simple.

S. VESS. None. The Scales of the cone which before flood open cloving upon the feed.

SEED. Nut, enlarged by a membranaceous wing, larger than the seed, but smaller than the scales of the cone; oblong; on one side straight but hunched on the other.

Scotch

FIR. Leaves in pairs, in their first growth solitary; smooth

—Cones pendant; subrobust.

Pinus sylvestris. Lunnb. pin. 491.

Pinus sylvestris, foliis brevibus glaucis, conis parvis alvencibus.

Ray's Syn. 442.

Mountains in Scotland. S. May.

It flourishes best in a poor sandy soil. In a grove, the trunk becomes tall and naked; in sunny open places, branched. On rocks or bogs, it seldom attains a large size. In black soil it becomes diseased, and in chalky land it dies. Sometimes it will thrive near running, but never near flagrant waters. None but the terminating buds send forth branches, therefore it will not bear the least clipping. The roots spread very near to the surface of the earth, all but the central root which grows perpendicularly downwards; and if this is broken off, or interrupted in its passage by rocks, the stem ceases to shoot upwards and the tree for ever remains a dwarf. Upon this account it is apt to suffer by transplanting—This tree furnishes us with the bethel or yellow deal. It is smooth, light, and easily cloven. The bark will tan leather—The inhabitants of the North of Europe make bread from this tree in the following manner. They choose
THREADS UNITED.

It affords nourishment to the following insects.

Yellow July Oak Moth. Phalaena Quadra.
Fir Weevil. Curculio Pini.
Fir Bug. Cimex Abietis.

FIR. Leaves solitary; notched at the end.—Grey on the under Yew-leaved

surface. Cones upright. Picea

Abies conis sursum spectantibus, seu mas. Baum. fin. 505.
Mountains in Scotland.

The thirty-six fine trees of this species, mentioned by Mr.
Ray as growing at Wareton near Newport in Shropshire, are
now no more. Pitch, tar, and turpentine may be got from all
the species of Fir.

FIR. Leaves solitary; awl-shaped, sharp pointed; smooth; Pitch
pointing in two opposite directions—Leaves compressed; bi-joining on Abies
the upper surface. Bark reddish brown. Cones long; pendant.
Abies mas Theophrasti. Ray’s Syn. 441.
Picea major prima, five Abies subra. Baum. pin. 493.
Common Fir. Pitch Tree.
Mountains in Scotland.

It will grow in various situations; either in thick woods or
funny exposures; on barren commons or in rich pastures; but
in very dry or chalky soils it dies. It is difficult to transplant,
for its roots spread very wide near the surface of the earth: but
if it survives the first removal, it may afterwards be transplanted
at pleasure; for the roots that have been cut off, send out numbers
of little fibres, sufficient to supply it with nourishment; but it
must be an invariable rule always to plant it at the same
depth it stood at before, and to let the side which formerly faced
the south, be placed again in the same direction—The wood is
very light; white; rots in the air and crackles in the fire. It
CHIVES and POINTALS Separate.

is used for making musical instruments, packing boxes, &c. The Lupanders make ropes of the roots and employ them for fastening together the thin planks of their portable canoes—The inhabitants of Canada prepare a pleasant and wholesome liquor from the leaves.

Goats eat it; Sheep refuse it.

The Fir Bug, Cimex Abietis, and the Cermes Abietis live upon it.

Order X. Tips United.

377 BRYONY. 1093 Bryonia.

B. Barren Flowers.

EMPAL. Cup one leaf; bell-shaped; with five awl-shaped teeth.

BLOSS. With five divisions; bell-shaped; fixed to the cup; Segments egg-shaped.

CHIVES. Threads three; very short. Tips five; two upon each thread, and only one upon the third thread.

F. Fertile Flowers upon the same plant.

EMPAL. Cup as above; superior; permanent.

BLOSS. As above.

POINT. Seedbud beneath. Shaft with three clefts; as long as the blossom when open. Summits notched at the end; open.

S. VESS. Berry oval; smooth.

SEEDS. Several; fixed to the outer coat of the berry; somewhat egg-shaped.

White Alba

BRYONY. Leaves hand-shaped; rough with callous points on both surfaces—The flowers bearing only chives, and those bearing only pointals are sometimes, though very rarely, found on distinct plants. Root very large. Berry red. Blossoms pale green.

Obs. In many parts of England the barren and fertile flowers are always on distinct plants.


Park. 178.

Bryonia aspera five alba Baccis rubris. Baub. pin. 297.

Wild Vine.

Hedges and roughs: P. May.

1. There is a variety with black berries.

The root is purgative and acrid; a dram of it in substance, or half an ounce of it infused in wine is a full dose. A cold infusion
son of the root in water is used externally in sciatic pains. A
plastic or it is a most powerful diffusent—A decoction made
with one pound of the fresh root is the best purge for horned
cattle—The active virtues of this plant seem to claim more at-
tention than is now bestowed upon it—Some people have a me-
method of forming the roots into human figures, and selling them
for mandrakes.

Goats eat it; Horses, Cows, Sheep and Swine refuse it.
CLASS XXII.

In the preceding Class the Flowers with only Chives, and the Flowers with only Pointals were found upon the same plant; but in this they are upon different plants.

All the plants therefore of this Class are necessarily either Barren or Fertile; the Flowers of the former containing Chives only; those of the latter, only Pointals.

Both sorts are propagated from seeds, which are the product of the fertile plants.

B. signifies the barren, and

F. the fertile flowers.
CLASS XXII.

Chives and Pointals distinct.

Order II. Two Chives.


Order III. Three Chives.

379 Crowberry. B. Cup with three divisions. Bloss. three petals.

F. Cup with three divisions. Bloss. three petals. Shafts nine. Berry nine seeds.

† Small Sedge. † White Bryony. † Marsh Valerian.

Order IV. Four Chives.

380 Sallowthorn. B. Cup with two divisions. Bloss. none.

F. Cup with two clefts. Bloss. none.

Point one. Berry one seed, with a lopped seed-coat.
CHIVES and POINTALS Distinct.

381 MISLETOE. B. Cup with four divisions. Bloff. none. 

382 GALE. B. Catkin scaly. Bloff. none. 
† Purging Buckthorn. † Common Nettle. † Tree Holly.

Order V. Five Chives.

383 HOP. B. Cup five leaves. Bloff. none. 
F. Cup one leaf. Bloff. none. Shaft two. Seeds winged by the cup.

† Sweet Willow.

Order VI. Six Chives.

384 LADYSEAL. B. Cup six leaves. Bloff. none. 
F. Cup six leaves. Bloff. none. Shaft with three clefts. Berry with three cells; beneath. 
† Sorrel Dock. † Little Dock.

Order VII. Eight Chives.


386 ROSEWORT. B. Cup with four divisions. Bloff. four petals. 
CHIVES and POINTALS Distinct.

Order VIII. Nine Chives.

387 Mercury. - B. Cup three leaves. Bloff none.
Chives from nine to twelve.
F. Cup three leaves. Bloff none.
Shafts two. Capsule two berries.

397 Frog-bit. - B. Cup three leaves. Bloff three petals.
F. Cup three leaves. Bloff three petals. Shafts six. Capsule beneath; with six cells.

Order IX. Ten Chives.
† Campion Cuckoo-flower. † Catch-Bee Campion.

Order XI. Twenty Chives.
† Cloudberry Bramble.

Order XII. Many Chives.
† Mercury.

Order XIII. Threads United.

F. Cup with three divisions. Bloff three petals. Shafts three. Berry beneath; with three seeds, and three tubercles formed by the cup.

390 Yew. - B. Cup with four leaves. Bloff none.
Tips with eight clefts.
F. Cup four leaves. Bloff none.
Summit one. Berry one seed; not covered at the end with the pulp of the berry.

Order XIV. Tips United.

391 Pettigree. - B. Cup six leaves. Bloff none.
Chives five.
F. Cup six leaves. Bloff none.
Pental one. Berry with three cells and two seeds.
† Mountain Cats-foot. † White Egory.

37S WIL.
CHIVES and POINTALS Distinct.

B Barren Flowers.

EMPAL. Common Catkin. oblong; tiled on every side; inclosed by a fence formed of a bud which is composed of

Scales, inclosing a single flower; oblong; flat; expanding.

BLOSS. Petals none.

Honey-cup a cylindrical gland; very small; lopped; containing honey; placed in the center of the flower.

CHIVES. Threads two; straight; thread-shaped; longer than the cup. Tips double; with four cells.

F Fertile Flowers.

EMPAL. Catkin as above.

Scales as above.

BLOSS. None.

POINT. Seedbud egg-shaped; tapering into a Shaft hardly distinct from the seedbud but rather longer than the scale of the empalment. Summits two; cloven; upright.

S. VESS. Capsule betwixt egg and awl-shaped; with one cell, and two valves. The Valves rolling back.

SEEDS. Numerous; egg-shaped; very small; crowned with a simple hairy Feather.

Obs. In some species there are three or five chives; unequal in length. In the first species the chives and pointals are inclosed within the same empalment—There are frequently large excrescences upon the branches, leaves, and leaf-stalks of Willows, which are the habitations of different species of Cynipes—Whenever desires to shade a walk with Willows, should set those which bear only chives in the catkins, or else they will soon multiply so as to form a thicket instead of a walk. The same observation holds good of the Poplar—The flowers of all these species are delcious to Bees.

* Leaves smooth; serrated.

Shining WILLOW. Leaves serrated, smooth. Chives two; in the Hermaphroditic empalment with the pointal—Generally six leaves grow out of each bud. Catkins woolly. Branches polished; veins of the leaves hollow. The whole plant is covered frequently with little red grains, but so small that they are hardly visible to the naked eye. Salix latifolia, folio splendente. Ray's Syn. 45*.

Wet hedge-rows. S. March.

WILLOW.
TWO CHIVES.

WILLOW. Leaves serrated; smooth. Barren flowers with Sweet
five chives—Leaves yellowish green; the teeth at the edges pour out Pentandra
yellow gum, so that put fresh into a book and compressed, these
remains as many yellow dots on the paper as there are teeth in the leaf.
Catkins very yellow. It grows about five or six feet high and hath
purple or yellowish branches. The Buds consist of two opposite
values. The same buds send out both catkins and leaves.
Bay-leaved Willow.
On hills. S. April.
The wood crackles greatly in the fire—The branches are cut
to make springles—The dried leaves give out a yellow colour—
Sheep and Goats eat it.

WILLOW. Leaves serrated; egg-shaped; sharp; smooth; Yellow
grially at the edges; leaf-salks dotted with little callous points Vitellina—Perhaps if this was neither cultivated nor cut, it might degenerate
into the White Willows.
Salix fativa lutea, folio cenato. Baub. pin. 473.
Cultivated in plantations. S. April—May.
The shoots are used by crate and basket makers.

WILLOW. Leaves serrated; smooth; spear-shaped; on Almondleaf
leaf-salks. Props in shape of an irregular square—Branches first Amygdalina
green; afterwards deep purple; brittle.
Salix viminalis nigra. Park. 1431.
Banks of rivers. S. May.
Horses and Goats eat it.

WILLOW. Leaves serrated; smooth; betwixt egg and Crack
spear shaped; leaf-salks toothed and glandular—The branches Fragilis
when struck with the finger break off at the joint of the last year's shoot.
Wet marshy places. S. May.
It will thrive in most kinds of soil if they are sufficiently moist.
It is a quick grower, and bears cropping. The white lattin
moth sometimes eats all its leaves.

i. Sali
CHIVES and POINTALS Distinct.

Salix folio Amygdalino utrinque aurito corticem abjiciens. 
Ray's Syn. 448. Leaves very much resembling those of the almond-leaved, but longer and narrower, and furnished at the base with a kind of appendages, besides the props which grow at the base of the leaf-stalks. These appendages one should imagine might form a specific distinction, but Husson notwithstanding arranges it only as a variety of the Crack Willow, though Ray it is evident considered it as a distinct species, though most nearly allied to the almond-leaved. Its calling its bark forms another characteristic.

WILLOW. Leaves serrated; smooth; spear-shaped. The lower leaves standing opposite—Branches often as red as coral; extremely tough. Each bud produces three leaves. The flowering buds beneath the ends of the branches. Empalements hairy and brown.

Salix folio longo sub-luteo non auriculata, viminitibus rubris. 
Ray's Syn. 450. 
Banks of rivers. P. May.

Balkets, cradles, and all sorts of twig-work, are made of the long, slender and flexible shoots of this plant—The inner bark is of a full yellow colour.

WILLOW. Leaves serrated; smooth; betwixt strap and spear-shaped; the upper leaves opposite, but oblique—Branches angular. Leaves when full grown bluish green on the under surface. Bark yellowish. Twigs purple; not cylindrical. Catkin compact; downy; with black Hakes.

Wet marshy places. S. May.

WILLOW. Leaves serrated; smooth; round—This is the smallest of all trees. The branches hardly a fingers length, and seldom more than three leaves upon each branch. Fruit-stalks arise from the same buds with the leaves. Pointals smooth. Flowers yellow, or purplish.

Salix alpina, alni rotundo folio repens. Ray's Syn. 448.
On high mountains. P. June.

* * Leaves
TWO CHIVES.

* * Leaves smooth; very entire.


WILLOW. Leaves entire; smooth; betwixt strap and spear—Red shaped; sharp—(Hudson 364). Buds reddish. Catkins red at Rubra first, but afterwards of a greenish yellow colour. Leaves like those of the Osier Willow, but smooth on both sides. In marshes. S. April—May.

* * * Leaves very entire, woolly.

WILLOW. Leaves very entire; woolly on both sides; in—Round-leaved verely egg-shaped; furnished with appendages—This is a slender Aurita flexible tree, and sometimes rises to a considerable height. Salix folio rotundo minore. Ray's Syn. 450.

1 Variety with the leaves downy on the under surface, and sel—Dwarf dom rising to above a foot high. Salix caprea pumila folio subrotundo, subtus incano. Ray's Syn. 450.

Woods and hedges. S. May. The shoots are slender and tolerably flexible.


WILLOW.
CHIVES and POINTALS Distinct.

Creeping Repens

WILLOW. Leaves very entire; spear-shaped; somewhat hairy on each surface. Stem creeping—As thick as a man's finger. Branches in rod-shaped bundles; drooping. Little branches with a few soft white hairs. Catkins lateral. Fertile capsules reddish. But little larger than the Herbaceous Willow.

Salix pumila angustifolia inferne lanuginosa. Ray's SYN. 447.
Salix pumila brevi angustofoque folio incano. Baur. PIN. 474.
Salix humilis angustifolia repens. Park. 1434.


On turfy bogs. P. May.

The leaves are intensely bitter; but Horses eat them.

Brown Fulca

WILLOW. Leaves very entire; egg-shaped; woolly on the under surface; shining—This is a small creeping shrub. The upper surface of the leaves and the catkins generally blackish. Bark brown.

Salix pumila angustifolia prona parte cinerea. Ray's SYN. 447.
Salix pumila linifolia incana. Baur. PIN. 474.
Salix pumila angustifolia recta. Park. 1434.
Chamoitea five salix pumila. Gerard. 1391.


Rosemary Rosmarinifolia

WILLOW. Leaves very entire; betwixt spear and strap-shaped; stiff and straight; sitting; downy on the under surface—The under surface of the leaves silky and shining. Props none.

Salix pumila Romani secundi Clussi folio. Ray's SYN. 447.
Salix oblongo incano acuto folio. Baur. PIN. 159.
R. Rosemary-leaved Willow.

On boggy mountains. P. May.

Sallow Caprea

WILLOW. Leaves egg-shaped; wrinkled; downy on the under surface; waved at the edge, with little teeth towards the end—The lower buds send forth leaves; the upper buds catkins without leaves. Bark rough; grey.

Salix caprea rotundifolia. Gerard. 1319.

1. Leaves with a sharpish point at the end. Baur. PIN. 474.

Common Sallow. Broad-leaved Willow.
Woods and hedges. P. April—May.
This requires a dryer soil than any of the other species, for it will thrive upon the driest hills. It may be topped every second or third year—The wood is smooth, soft and flexible. It is converted into charcoal for making gunpowder and drawing pencils—The Laplanders make a sort of leather of the bark, which
which they manufacture into gloves. They give a deception of the leaves for the heart burn—The flowers are particularly grateful to Bees, and the leaves are eaten by Horses, Cows, Goats and Sheep. The purple Emperor Butterfly, Papilio Iris. The high flyer Moth; the scarce Silver-line-Moth, and the Copper Under-wing Moth feed upon it.

WILLOW. Leaves almost entire; betwixt spear and strap—Oiler shaped; very long; sharp; silky on the under surface. Branches Viminalis long and slender—Some buds produce only leaves; others only catkins.
Common Oiler.
In plantations, and near rivulets. P. April.
The branches are much used for making hoops and crates. It is often planted to prevent the banks of rivers from being washed away by the force of the current—Horses, Cows, Sheep and Goats eat it.

WILLOW. Leaves spear-shaped; tapering to a point; ser-White made; downy on both surfaces; with little glands at the edges Alba towards the base—Bark smooth and whitish.
Salix arborea anguillifolia, alba vulgaris. Park. 1430.
Salix vulgaris alba arborescens. Baub. pin. 473.
Common Willow.
Woods and hedges. P. April.
It loves a moist and open situation; grows quick, and bears bopping—The Reverend Mr. Stone, in the Philos. Trans. Fol. 53. p. 195. gives us an account of the great efficacy of the bark of this tree in curing intermitting Fevers. He gathers the bark in summer, when it is full of sap; dries it by a gentle heat, and gives a dram of it powdered every four hours betwixt the fits. In a few obstinate cases he mixed it with one fifth part of Peruvian bark. It is remarkable that intermittents are most prevalent in wet countries; and this tree grows naturally in such situations. Whilist the Peruvian bark remained at its usual moderate price it was hardly worth while to seek for a substitute; but now its price is more than doubled, and the supply from South America hardly equal to the consumption, we may expect to find it dearer and more adulterated every year. The White Willow Bark is therefore likely to become an object worth the attention of physicians, and if its success upon a more enlarged scale of practice proves equal to Mr. Stone's experiments, the world will be much indebted to that gentleman for his communication—This bark will tan leather—Horses, Cows, Sheep and Goats eat it.
The different species of Willow support the following insects.

Willow Butterfly, Papilio Antiope.
Great Tortoise-shell Butterfly, Papilio Polychoras.
Eyed Willow Hawk Moth, Sphinx Occulta.
Poplar Hawk Moth, Sphinx Populi.
Lappit Moth, Phalana Quercifolia.
Fox coloured Moth, Phalana Rubi.
Small Egger Moth, Phalana Lineata.
Puffs Moth, Phalana Vinula.
Dismal Moth. White Sattin Moth, Phalana Salicis.
Buff-tip Moth, Phalana Bucephala.
Black Arches Moth, Phalana Monacba.
Pebble Moth, Phalana Zizac.
Goat Moth, Phalana Cofigus.
Willow red-under-wing Moth, Phalana Pafla.
Sallow Moth, Phalana Citraco.
Cream bordered Pea-green Moth. Province Rose Moth, Phalana Salicella.
Buhy Prominent Moth. Emperor Moth, Phalana Povonia.
Furbelow Moth, Phalana Libatrix.
Grey Dagger Moth, Phalana Pfl.
Willow Beauty Moth, Tenthreda Lutea.
- - - - - - Tenthreda Caprea.
- - - - - - Tenthreda Rustica.
- - - - - - Ichneumon Glomeratus.
Willow Loufe, Aphis Salicis.
- - - - - Chryomela Polita.
- - - - - Chryomela Sericea.
Willow Weevil, Curculio Nebulosus.
White spotted Willow Lady-cow, Coccinella 14 Guttatus.
Horned Frog-hopper, Cicada Cornuta.
FOUR CHIVES.

Order III. Three Chives.

379 CROWBERRY. 1100 Empetrum.

B. Barren Flowers.

Empal. Cup with three divisions. Segments egg-shaped; permanent.

Bloss. Petals three; oblong egg-shaped; narrowest at the base; larger than the cup; thrivelling.

Chives. Threads three; hair-like; very long; hanging downwards. Tips upright; short; cloven.

F. Fertile Flowers.

Empal. Cup as above.

Bloss. Petals as above.

Point. Seedbud depressed. Shaft hardly any. Summit nine; reflected and expanding.

S. Vess. Berry round and flat; depressed; larger than the cup: with one cell.

Seeds. Nine; placed in a jointed circle; hunched on one side; angular on the other.

Obs. Sometimes though very rarely flowers have been found containing both chives and pointals.

CROWBERRY. Stems trailing—This is a small drooping Heath shrub; the outer bark brown and deciduous; the inner bark yellow. Nigrum Branches rough with the remains of leaf-stalks. The terminating bud produces five little leaves; membranaceous: hairy at the edges; standing on five little leaf-stalks; four of them placed in a whorl. Leaves somewhat three cornered, with a white line along the back rib; standing upon leaf-stalks, four together. Flowers at the base of the leaves; sitting; solitary; suffused by a floral leaf, cloven into three parts, and resembling an outer cup. Cup subtilth. Petals purple. Threads very long; purple. Tips black. The plant with flowers bearing only pointals resembles the other but the item is more of a red colour; the leaves a fuller green and growing by fives; the pointal black; the berry black.

Empetrum montanum fructu nigro. Ray's Syn. 444.


Erica baccifera procumbens. Gerard. 1383.

Erica baccifera nigra. Park. 1485.


Greedy children sometimes eat the berries; but when taken in large quantities they occasion head-ache—Grouse feed upon them—Boiled with alum they afford a dark purple dye—Goats are not fond of it; Cows, Sheep and Horses refuse it.

Order IV. Four Chives.

380 SALLOWTHORN. 1106 Hippophae.

B. Barren Flowers.

Empal. Cup one leaf; divided into two parts forming two valves. Base of the leaf undivided. Segments circular: blunt; concave; upright, but the points approaching; open at the sides.

Bloss. None.

Chives. Threads four; very short. Tips oblong; angular; almost as long as the cup.

F. Fertile Flowers.

Empal. Cup one leaf; oblong egg-shaped; tubular; resembling a club; cloven at the rim; deciduous.

Bloss. None.

Point. Seedbud roundish; small. Shaft simple; very short. Summit rather thick; oblong; upright; twice as long as the cup.

S. Vess. Berry globular; with one cell.

Seed. Single; roundish.

SALLOWTHORN. Leaves spear-shaped—The barren flowers solitary; beneath the leaves, betwixt the branches and the buds. The fertile flowers solitary and sitting at the base of the lower leaves. Rhamnoides fructifera, foliis Salicis, baccis leviter flaventibus. Ray's Syst. 445.

Rhamnus. Gerard. 1334.

Rhamnus Salicis folio angusto, fructu flavescente. Bauh. pis. 477.

Rhamnus primus Dioscoridis Lobelio, five littoralis. Pari. 1006.

Sea Buckthorn.

On the sea-coast. S. April.

Cows refuse it; Goats, Sheep and Horses eat it.
FOUR CHIVES.

381 MISLETOE. 1105 Viscum.

B. Barren flowers.

Empal. Cup with four divisions. Little leaves egg shaped; equal.

Bloss. None.

Chives. Four. Threads none. Tips oblong; tapering; one fixed to each leaf of the cup.

F. Fertile flowers mostly growing opposite the others.

Empal. Cup four leaves; egg shaped; small; sitting on the seedbud; deciduous.

Bloss. None.

Point. Seedbud beneath; oblong; three edged; indistinctly crowned with a border with four clefts. Shaft none. Summit blunt; a little notched.

S. Vess. Berry globular; with one cell; smooth.

Seed. Single; inversely heart-shaped; compressed; blunt; fleshy.

MISLETOE. Leaves spear-shaped; blunt. Stem forked; White flowers in spikes in the bosom of the leaves—This is a parasitical Album evergreen shrub. Blooms greenish white. Berries white. The root insinuates its fibres into the woody substance of the plant on which it grows.


1392.

Viscum baccis albis. Basb. pin. 423.

White Mistle. It is found upon Willows, Oaks, Hazels, Peartrees, and Apple trees, but on Crabtrees principally. S. May.

Birdlime may be made from the berries and from the bark—The Mistletoe Bird, the Fieldfare, and the Thrush eat the berries, the seeds of which pass through them unchanged, and along with their excrements adhere to the branches of trees, where they vegetate. Some authors observing that the roots are always inserted on the under side of the branches, deny this method of propagation; but they do not recollect that the rains will soon wash them into that situation, though it is highly probable that they first fell upon the upper side of the branch—No art hath yet been invented to make these plants take root in the earth—Mistletoe was formerly in great repute as a remedy for Epileptic and other complaints; but it is now very much disregarded; and indeed its sensible qualities promise but little. Some remains of Druidical superstitions probably gave birth to its medical fame, and an opinion which many people are fond to entertain, (viz.) that every climate produces remedies to counterbalance the diseases of its inhabitants, is one reason why

Vol. II.
CHIVES and POINTALS Distinct.

in these more enlightened days such ideas still continue to exist. Without entering into the discussion of a question which would give rise to much altercation, and be productive of little real advantage, it may be sufficient to observe, that whilst the inhabitants of this island were contented with the products of their own country, it is probable that the remedies of this country were equal to its diseases: but when foreign productions and foreign manners were introduced; it then became necessary to introduce foreign remedies.

382 G A L E. 1107 Myrica.

B. Barren Flowers.

EMPAL. Catkin oblong egg-shaped; tiled on every side; limber; consisting of Scales inclosing a single flower; crescent-shaped; tapering to a blunt point; concealed.

Individuated Cup none.

Bloss. None.

Chives. Threads four, (sometimes but rarely six;) thread-shaped; short; upright. Tips large; double; with the lobes cloven.

F. Fertile Flowers.

EMPAL. As above.

Bloss. None.

Point. Seedbud somewhat egg-shaped. Shafts two; thread-shaped; longer than the cup. Summits simple.

S. Vess. Berry one cell.

Seed. Single.

Obs. In the Sweet GALE the fruit is a dry berry, or rather a leather like coat, compressed at the end, and formed of three lobes.

GALE. Leaves spear-shaped; somewhat serrated. Stem somewhat woody—Smooth; of the colour of rusty iron; with subulate dots. The Buds producing flowers are placed at the ends of the branches; those producing leaves, at the sides. Each bud is composed of nine shining leathy seeds. Leaves on leaf-stalks, serrated towards the ends and beset with reflexuous dots.

GALE, frutex odoratus septemitialium; Elagnus Cordi. Roy's Syn. 443.

Rhus Myrtifolious Belgica. Bauh. pin. 414.

Rhus sylvestris, five Myrtus Brabantica vel Anglica. Park. 415.

Myrtus Brabantica, feu Elagnus Cordi. Gerard. 414.


In marshy barren ground. S. May.

The
FOUR CHIVES.

The northern nations formerly used this plant instead of hops; but unless it is boiled a long time it is apt to occasion head-ach—The catkins boiled in water throw up a waxy scum, which gathered in sufficient quantity would make candles. From another species of this plant, which is a native of warmer climates, the myrtle candles are prepared—Gathered in the autumn it dyes wool yellow—It is used to tan calf-skins. —Horses and Goats eat it; Sheep and Cows refuse it.

Order IV. Five Chives.

383 HOP. 1116 Humulus.

B. Barren Flowers.

Empal. Cup five leaves; oblong; concave; blunt.

Bloss. None.

Chives. Threads five; hairlike; very short. Tips oblong.

F. Fertile Flowers.

Empal. General Fence with four clefts; sharp.

Partial Fence with four leaves; egg-shaped; including eight florets, each of which is furnished with a

Cup of one leaf; egg-shaped; very large; flat on the outer side; approaching at the base; obliquely expanding; entire.

Bloss. None.

Point. Sealbud very small. Shaft two; awl-shaped; reflected and flandering wide. Summits sharp.

S. Vess. None. The Cup closing at the base contains the seed.

Seed. One. Roundish; covered by a coat.

HOP. As there is only one species known, Linnaeus gives Brewers no description of it.—Leaves divided into lobes; serrated. Flowers Lupulus greenish yellow. Stems climbing.

Lupulus mas et femina. Bont. pl. 298. Ray's Syn. 137.

Lupulus sylvestris. Park. 170.


Hops.

In hedges. P. June.

Soil and cultivation occasion some varieties, as the Garlic Hop: the Long White Hop and the Oval Hop; but for the common purposes of brewing they are distinguished as Kentish Hops or Worcestershire Hops.
CHIVES and POINTALS Distinct.

If the hop-yards were covered with flones, the plants would be less liable to suffer from the honey-dew or from the Otter-Moth; for the honey-dew is the excrement of a species of louse, *Aphis* but these insects seldom increase so as to endanger the plant, unless it is in a weak condition; and the larvae of the Otter-moth at the roots, first occasion the plant to be sickly. Now when the hop grows wild in stony places and in fissures of rocks, where the moth cannot penetrate to deposit its eggs, the hop is never known to suffer from the honey-dew.—The flowers of the fertile plants are very generally infused in wort or boiled along with it to prevent the ale growing sour.—The young shoots are eaten early in the spring asparagus, and are sold under the name of Hop-tops—Strong cloth is made in Sweden from the stalks. For this purpose they must be gathered in autumn, soaked in water all winter; and in March, after being dried in a stove they are dressed like flax. Horses, Cows, Sheep, Goats and Swine eat it.—The Peacock Butterfly, *Papilio Io*, the Common Butterfly, *Papilio C. album*, the Otter Moth, *Phalena Humuli* and the *Phalena Rostralis* live upon it.

Order VI Six Chives.

384 LADYSEAL. 1119 Tamus.

B. Barren flowers.

**Empal. Cup** with six divisions. **Little Leaves** betwixt egg- and spear-shaped; expanding towards the top.

**Bloss.** None.

**Chives.** Threads six; simple; shorter than the cup. **Tips** notched at the end.

**F. Fertile Flowers.**

**Empal. Cup** one leaf, with six divisions; bell-shaped; expanding. **Segments** spear-shaped; superior; shrivelling.

**Bloss. Petals** none.

**Honey-cup,** an oblong dot at the base of each segment of the cup, on the inner side.

**Point. Seedbud** beneath; oblong egg-shaped; large; smooth. **Shaft** cylindrical, as long as the cup. **Summits** three; reflected; notched at the end; sharp.

**S. Vess. Berry** egg-shaped; with three cells.

**Seeds.** Two; globular.

LADYSEAL.
LADYSEAL. Leaves heart-shaped; undivided.—Stems Bryony
Tannus racemosa, flore minori luteo pallescente. Ray’s
Syn. 262.
Bryonia nigra. Gerard. 369.
Bryonia sylvestris nigra. Park. 178.
Bryonia levis seu nigra racemosa. Baub. pin. 297.
Black Briony.
Hedges and rough places. P. June.
The young shoots are good eating when dressed like asparagus—
The root is acrid and stimulating—Horses will not eat this plant.

Order VII. Eight Chives

385 P O P L A R. 1123 Populus.

B. Barren Flowers.

Empal. Common Catkin oblong; loosely tiled; cylindrical; consisting of Scales, inclosing a single flower; oblong; flat; ragged at the edge.

Bloss. Petals none.

Honey-cup one leaf; turban-shaped beneath; tubular; ending at the top obliquely, in an egg-shaped border.

Chives. Threads eight; extremely short. Tips four-edged; large.

F. Fertile Flowers.

Empal. Catkin and Scales as above.

Bloss. Petals none.

Honey-cup as above.

Point. Seedbud egg-shaped, but tapering. Shaft hardly discernible. Summit with four clefts.

S. Vess. Capsule egg-shaped; with two cells and two valves. Valves reflected.

Seeds. Numerous; egg-shaped; furnished with a hair-like Feather.
CHIVES and POINTALS Distinct.

POPLAR. Leaves circular; toothed and angular; downy on the under surface—The flowers are altogether the same as those in next species. Leaves entirely destitute of glands.

Populus alba majoribus foliis. Baub. pin. 429.

Abele Tree.

Hedges and near brooks. S. March.

1. There is one variety with variegated, and another with smaller leaves.

It loves low situations, and flourishes best in clay. It grows quick and bears cropping, but it is unfavourable to pasturage—The wood is soft, white and firringy: it makes good wainscoting, being but little subject to swell or shrink. Floors, laths, packing boxes and turners ware are made of it.

Horses, Sheep and Goats eat it; Cows are not fond of it.

POPLAR. Leaves circular; toothed and angular; smooth on both sides—On long leaf stalks. The Leaf Stalks are compressed towards the top, from whence the leaves have a tremulous or vibrating motion. There is a double glandular substance on the inner side of the base of each leaf.

Populus Tremula. Baub. pin. 429.

Afp. Aspen Tree.

Moist woods. S. March.

It will grow in all situations, and in all soils, but worst in clay. It impoverishes the land; its leaves destroy the grass, and the numerous shoots of the roots spread so near the surface of the earth that they will not permit any thing else to grow. It is easily transplanted—The wood is extremely light, white, smooth, woolly, soft; durable in the air—The bark is the principal food of Beavers. The bark of the young trees is made into torches.

—The leaves and leaf stalks sometimes are set with red globular substances about as large as a Pea, which are the nects of the Tipula Juniperina.—Sheep and Goats eat it; Horses and Swine refuse it.

POPLAR. Leaves triangularly spear-shaped; broad; tapering; serrated—The leaves have no glands at the base; but the teeth at the edges are glandular. Leaf Stalks yellowish.


Near rivers and wet shady places. S. March.

It loves a moist black soil; grows rapidly and bears cropping—The wood is not apt to splinter—The bark being light like cork, serves to support the nets of fishermen—The red substances like berries upon the leaf-stalks, as large as a cherry, hunched on one side and gaping on the other, are occasioned by an insect called the Aphis Euphorbia.—Horses, Cows, Sheep and Goats eat it.

The
EIGHT CHIVES.

The several species support the following Insects:

Poplar hawk Moth. Spinax Populi.
Pufis Moth. Phalena Vinula.
December Moth. Phalena Populi.
Black tussock Moth. Phalena Fauctula.
Orange under-wing Moth.

Poplar Louise. Apbis Populi.

- - - - - Chrysomela Polita.
- - - - - Chrysomela Populi.

Poplar Weevil. Curculio Tortrix.

Poplar Bug. Cinex Populi.

Hornet Moth. Spinax Apiformis.

386 ROSEWORT. 1124 Rhodiola,

B. Barren Flowers.

Empal. Cup with four divisions; concave; upright; blunt; permanent.

Bloss. Petals four; oblong; blunt; upright but expanding; twice as long as the cup; deciduous.

Honey-cups four; upright; notched at the end; shorter than the cup.

Chives. Threads eight; awl-shaped; longer than the blossom. Tips simple.

Point. Seedbuds four; oblong; tapering. Shafts and Summits imperfect.


F. Fertile Flowers.

Empal. Cup as above.

Bloss. Petals four; rude; upright; blunt; equal in height to the cup; permanent.

Honey-cups as above.

Point. Seedbuds four; oblong; tapering; ending in straight simple Shafts. Summits blunt.

S. Vess. Capsules four; horned; opening inwards.

Seeds. Many; roundish.

ROSEWORT. As there is only one species known, Lin- Yellow

neus gives no description of it—Root white; with the odour of Rosea

a Ros. Stem simple; upright; leafy. Leaves serrated. Blossoms

terminating; yellow.

Anacampseros radice Rosam spirante major. Ray’s Syn. 260.


On mountains. P. June—July.

the
CHIVES and POINTALS Distinct.

The root has the fragrance of a Rose, particularly when dried; but cultivated in a garden it loses most of its sweetmeats. — Goats and Sheep eat it; Cows and Swine refuse it.

Order VIII. Nine Chives.

387 M E R C U R Y. 1125 Mercurialis.

B. Barren Flowers.

Empal. Cup with three divisions. Segments betwixt egg-and spear-shaped; concave; expanding.

Bloss. None.

Chives. Threads nine, or twelve; hair-like; straight; as long as the cup. Tips globular; double.

F. Fertile Flowers.

Empal. Cup as above.

Bloss. None.

Honey-cups, two awl-shaped pointed substances; one placed on each side the seedbud, and pressed into its furrows.

Point. Seedbud roundish; compressed, with a hollow furrow on each side; rough with hairs. Stalks two; reflexed; horned; rough with hair. Summit sharp; reflexed.

S. Vess. Capsule roundish; purse-shaped; double; with two cells.

Seeds. Solitary; roundish.

MERCURY. Stem undivided; leaves rough—Opposite serrated.


Mercurialis sylvestris Cynocrambe dicta vulgaris, mas et femina. Park. 295.

Cynocrambe mas et femina. Gerard. 333.

Woods and ditches. P. April—May.

This plant dressed like spinach is very good eating early in the Spring, and is frequently gathered for that purpose; but it is said to be hurtful to Sheep; and Mr. Ray relates the case of a Man, his Wife and three Children, who experienced highly deleterious effects from eating it fried with bacon; but this was probably
N I N E  C H I V E S.
probably when the spring was more advanced, and the plant was become acrimonious—Steeped in water it affords a fine deep blue colour.—Sheep and Goats eat it; Cows and Horses refuse it.

MERCURY. Stem branched; leaves smooth; flowers in French spikes.—
Mercurialis testiculata seu Mas. *Baub.* p. 121.
Mercurialis spicata seu fæmina. *Baub.* p. 121.
Mercurialis mas et fæmina. *Gerard.* 323.
Mercurialis vulgaris mas et fæmina. *Park.* 295.
Herb Mercury.
Amongst rubbish. A. September.
The whole plant is mucilaginous, and was formerly much employed as an emollient, but is now disregarded.—
The small old Gentlewoman Moth, and the Angleshade Moth, *Phalaena Metuculosa,* feed upon it.

388 F R O G B I T. 1126 Hydrocharis.

B. Barren Flowers.

**Emp.** Sheath of two leaves; oblong; inclosing three flowers.

Cup proper, of three Leaves; oblong egg-shaped; concave; membranaceous at the edge.

**Bloss.** Petals three; circular; flat; large.

Chives, Threads nine; awl-shaped; upright; disposed in three rows; the middlemost row in the center sends out an awl-shaped little pillar, resembling a shaft, from the inner side of the bafe. The other two rows are connected at the bafe, so that the outer and inner thread adhere together. *Tips* simple.

**Point.** Seedbud only a rudiment; placed in the center of the flower.

F. Fertile Flowers.

**Emp.** Sheath none. Flowers solitary.

Cup as above: superior.

**Bloss.** As above.

**Point.** Seedbud beneath: roundish. Shafts six; as long as the cup; compressed; cloven and furrowed. Summits cloven; tapering.

S. Vess. Capsule like leather; roundish; with six cells.

Seeds. Numerous; very small; roundish.

FROG
CHIVES and POINTALS Distinct.

Water Frogbit. As there is only one species known Linnaeus gives no description of it.—Leaves kidney-shaped; thick; smooth; brown green. Blossoms white.

Nymphaea alba minima. Pauh. pin. 193, five Morus Ranae.

Park. 1252.

Morus Ranae. Gerard. 813.

Stratiotes folis Aloe, femine rotundo. Ray's Syn. 950.

1. Variety with double flowers, of a very sweet smell.—Observed by Mr. Ray in a ditch on the side of Audrey Caufey in the Isle of Ely.

Nymphaea alba minima, flore pleno odoratissimo. Ray's Syn. 950.

Slow streams and wet ditches. P. June.

Order XIII. Threads United.

389 JUNIPER. 1134 Juniperus.

B. Barren Flowers.

Empal. Catkin conical; consisting of a common spike-stalk, in which three opposite flowers are placed in a triple row, and a tenth flower at the end. At the base of each flower is a Scale; broad; short; fixed side-ways to a little pillar like a footstalk.

Bloss. None.

Chives. Threads, (in the terminating flower) three; awl-shaped; united at the bottom into one body. The threads in the lateral flowers are hardly perceptible. Tips three; diminif in the terminating flower; but in the lateral flowers fixed to the scale of the empalement.

F. Fertile Flowers.

Empal. Cup with three divisions; very small; growing to the seedbud; permanent.

Bloss. Petals three; stiff; sharp; permanent.

Point. Seedbud beneath. Shafts three; simple. Summits simple.

S. Vess. Berry fleshy; roundish; marked in the lower part with three opposite tubercles which were formerly the cup; and marked at the top by three little teeth which were originally the petals.

Seeds. Three; hard as bone; convex on one side; angular on the other; oblong.

JUNIPER.
NINE CHIVES.

JUNIPER. Leaves growing by threes; expanding; sharp-pointed; longer than the berry.—Bark reddish. Berries blue Communis black.

Juniperus vulgaris, Baccis parvis purpureis. Ray's Syn. 444.


Juniperus vulgaris fruticosa. Baub. pin. 488.

Juniperus vulgaris arbor. Baub. pin. 488.

On Heaths and in woods. S. May.

1. With broader leaves and egg-shaped berries.—


Juniperus alpina minor. Gerard. 1372.

Juniperus minor montana, folio latiore, fructuque longiore. Baub. pin. 489.

Heaths and woods. 1. Mountains.

It grows in fertile or in barren soils; on hills or in valleys; in open sandy plains, or in moist and close woods. On the sides of hills its trunk grows long; but on the tops of rocky mountains and on bogs it is little better than a shrub. It is easily transplanted and it bears cropping. Grass will not grow beneath it, but the Meadow Oat destroys it.—The wood is hard and durable. The bark may be made into ropes.—The berries are two years in ripening. When bruised they afford a pleasant diuretic liquor, but it is not easy to prevent its growing sour. It is esteemed a good antiscorbutic. The Swedes prepare an extract from the berries which some people eat for breakfast, but it is fitter for a medicine than for food. The spirit impregnated with the essentiaoil of these berries is every where known by the name of Gin, or Juniper water.—The berries sometimes appear in an uncommon form, the leaves of the cup grow double the usual size; approaching, but not closing; and the three petals fit exactly close, so as to keep the air from the Tipula Juniperi which inhabit them.—Gum Sandarach, more commonly called Pounce, is the product of this tree.—Horses, Sheep and Goats eat it.

The Juniper Bug, Cimex Juniperinus, the Thrift Juniperina and the Coccinella 9 Punstata feed upon it.
CHIVES and POINTALS Separate.

390 Y E W. 1135 Taxus.

B. Barren Flowers.

Empal. None; except the Bud which resembles a cup with three or four leaves.

Bloss. None.

Chives. Threads numerous; united below into a column longer than the bud. Tips depressed; blunt at the edge; with eight clefts; opening each way at the base; and having parted with the dust, flat, target-shaped, and the clefts in the edge become more remarkable.

F. Fertile Flowers.

Empal. As above.

Bloss. None.

Point. Seedbud egg-shaped; but tapering. Shaft none. Summit blunt.

S. Vess. Berry an expansion of the receptacle; succulent and globular; open at the end; coloured. In course of time it grows dry; decays, and disappears.

Seed. Single; egg-shaped but oblong; standing out of the open end of the berry.

Obs. This species of berry is very singular, and strictly speaking can hardly be called a seed-capsule.

Common Baccata

YEW. Leaves growing near together—The berries come to perfection the second year. Bark reddish. Berries when ripe, red.


Yew Tree.

On mountains. S. March—April.

Varieties.

1. Leaves broad and shining.

2. Leaves variegated.

It grows best in a moist loamy soil. On bogs or dry mountains it languishes. It bears transplanting even when old. It is often planted to make hedges, and as these hedges admit of clipping, they form excellent screens to keep off the cold winds from tender plants—The wood is hard, smooth, and beautifully veined with red. It is converted into bows, axle-trees, spoons, cups, cogs for mill wheels and flood-gates for fish-ponds which hardly ever decay—The berries are sweet, and viscid. Children often eat them in large quantities without any inconvenience—The fresh leaves are fatal to the human species. Cattle are sometimes killed by browsing upon the branches that are cut off and are half withered, but when growing it is doubtful whether
MANY CHIVES.

whether such an effect would follow. Indeed from the Upsal experiments it appears that neither Cows nor Horses will eat it in a recent state. Sheep and Goats eat it, but the former are said to have been killed by browsing upon the bark.

Order XIV. Tips United.

391 PETTIGREE. 1139 Rufus.

B. Barren Flowers.

Empal. Cup with six leaves; upright, but expanding.
Leaves egg-shaped, convex; the edges at the side reflexed.

Bloss. None. Unless you consider every other leaf of the cup as such.

Honey-cup egg-shaped; as large as the cup; blown up; open at the rim; upright.

Chives. Threads none. Tips three; expanding; placed upon the end of the honey-cup; united at the base.

F. Fertile Flowers.

Empal. Cup as above.

Bloss. Petals as above.

Honey-cup as above.

Point. Seed-bud oblong egg-shaped; hidden within the honey-cup. Shaft cylindrical; as long as the honey-cup. Summit blunt; projecting through the mouth of the honey-cup.

S. Vess. Berry globular; with three cells.

Seeds. Two; globular.

Obs. In this and other genera nearly related to it, it is seldom that all the seeds come to perfection; for the most part one seed takes to enlarge and by pressure destroys the others.

PETTIGREE. Leaves bearing the flowers on the upper Prickly surface; naked.—Stem tough; woody, branched; scored. Leaves Aculeatus betwixt egg and spear-shaped; pointed. Blossoms yellowish-green. Berries red.


Rufus five Bruscus. Gerard. 907.

Knee Holly. Butcher's Broom.

Woods and roughs. S. March—April.

In Italy it is made into benefica, and the butchers use them to sweep their blocks. Hucksters place the boughs round their bacon and cheese to defend them from the Mice, for they cannot make their way through the prickly leaves.

CLASS
CLASS XXIII.

This Class consists of plants in which some of the flowers in the same species have both Chives and Pointals, and others have only Chives, or only Pointals.

H. Signifies the flowers that have both Chives and Pointals.
B. Signifies the flowers that have only Chives.
F. Signifies the flowers that have only Pointals.

It is remarkable that in trees with broad leaves, where the Chives and Pointals are in different Empalements, or on distinct trees, is the Hazle, the Poplar and the Ash, the flowers come out before the leaves are fully expanded, that the passage of the dust from the Chives to the Pointals might not be interrupted; but where the leaves are narrow, as in the Fir and the Yew Tree, no such provision takes place.
CLASS XXIII.

VARIOUS DISPOSITIONS.

Order I. Upon one Plant.

392 SOFTGRASS.  
H. Husk of two valves, containing one flower. Chives three. Shaft two. Seed one.  
B. Husk of two valves, containing one flower. Chives three.

393 HARDGRASS.  
H. Husk with three awns, containing three flowers. Chives three. Shaft two. Seed one.  
B. Husk with three awns, containing three flowers. Chives three.

394 CROSSWORT.  
B. Empal. none. Blöff. with three or four divisions. Chives three or four.

395 MAPLE.  
B. Cup with five clefts. Blöff. five petals. Chives eight.

396 PEL-
VARIOUS DISPOSITIONS:

F. Cup with four clefts. Bloss. none. Shaft one. Seed one.

F. Cup with two leaves. Bloss. none. Shaft cloven; seed one.

† Portland Spurge. † Red Spurge. † Duckmeat.

Order II. Upon Two Plants.

398 Ash.  H. Empal. none; or with four divisions. Bloss. none; or with four petals. Chives two. Point. one. Seed one.
F. Empal. none; or with four divisions. Bloss. none; or with four petals. Point. one. Seed one.

† Tree Holly.
UPON ONE PLANT.

392 SOFTGRASS. 1146 Holcus.

H. Flowers with Chives and Pointals.

EMPAL. Hufl inclining one or two florets; with two valves; stiff; without awns.

Outer Value egg-shaped; concave; large; inclining the Inner Value, which is oblong; with its sides rolled inwards.

BLOSS. Hufl of two valves; tender; beset with soft hair; smaller than the empalement. Outer Value generally furnished with a stiff awn, which is longer than the empalement. Inner Value without an awn; very small.

CHIVES. Threads three; hair-like. Tips oblong.

POINT Sedebud turban-shaped. Shafts two; hair-like. Summits pencil-shaped.

S. VESS. None. The blossom incloses, protects and adheres to the seed.

SEED. Solitary; egg-shaped; inclosed.

B. Barren Flowers smaller than the other.

EMPAL. Hufl with two valves. Values betwixt egg and spear-shaped; rolled inwards; without awns; sharp.

BLOSS. None.

CHIVES. Threads three; hair-like. Tips oblong.

Obs. See the Plate of Grasses.

SOFTGRASS. Husks inclining two florets; almost naked. Creeping Florets with chives and pointals; without awns. Florets with only chives with jointed awns.—Empalements ending in a sharp point.


pin. 1.

Pastures and ditch-banks. P. July.

SOFTGRASS. Husks inclining two florets; woolly. Flo. Meadow rets with chives and pointals, without awns. Florets with only Lanatus chives with crooked awns—The straws are not collected into a bundle but spread about.


1155.


Pastures. P. June.

Vol. II. R 393 HARD-
VARIOUS DISPOSITIONS.

393 HARDGRASS. 1150Ægilops.

H. Florets with Chives and Pointsals two; lateral.
Empal. Husk very large, with two valves; inclosing three
florets. Values egg-shaped; lopped; scored; with
awns variously disposed; gristly.
Bloss. Husk with two valves. Outer Value egg-shaped;
terminated by a double or triple awn. Inner Value
spear-shaped; upright without an awn; the edges
bent inwards length-ways.
Chives Threads three; hair-like. Tips oblong.
Point. Seedbud tufted-shaped. Shafts two; reflected;
Summits hairy.
S. Vess. None. The inner Value of the blossom adheres
to the seed and doth not open.
Seed. Oblong.

B. Placed betwixt the other two.
Empal. The blossom inclosed within the husk described
above.
Bloss. As above.
Chives. As above.
Point. Seedbud as above, but generally barren.

OBS. See the plate of GRASSES.

HARDGRASS. Spike awl-shaped; without awns; smooth;
crooked; one floret in each cup—Spike but little thicker than the
Straw; cylindrical. Cups with two valves placed outwardly.
Syn. 395.
Gramen loliaceum minus, Spica simplici. Bauh. pin. 9.
Phoenix acrofa aculeata. Park. 1145.
UPON ONE PLANT.

H. Flowers with chives and pointals solitary.

EMPAL. Hardly any; the seedbud occupying its place.

BLOSS. Petal one; flat; with four divisions. Segments egg-shaped; sharp.

CHIVES. Threads four; as long as the blossom. Tips small.

POINT. Seedbud beneath; large. Shaft as long as the chives; cloven half way down. Summit a knob.

S. VESS. Like leather; compressed; reflected.

SEED. Single; globular.

B. Barren flowers solitary; one placed on each side the fertile one.

EMPAL. As above.

BLOSS. As above; with three or four divisions.

CHIVES. As above.

POINT. Seedbud beneath; small. Shaft and summits imperfect and hardly discernible.

S. VESS. Barren; but there is a flinder oblong rudiment which adheres to the side of the fertile flower.

CROSSWORT. Barren flowers with four clefts. Fruit-Yellow stalks with two leaves—When the seeds ripen the leaves bend in. Cruciate wards and cover them so effectually that birds cannot get at them so long as the plant is entire. Blossoms yellow.


Cruciata vulgaris. Park. 566.

Cruciata hirtula. Baub. pin. 335.

CROSSWORT. Mugweed.

Roughs and ditch banks. P. May—June.
V A R I O U S  D I S P O S I T I O N S.

395 M A P L E.  1155 Acer.

H. With chives and pointals.

**Empal.** Cup one leaf; with five elefts; sharp; coloured; flat and entire at the base; permanent.

**Bloss.** Petals five; egg-shaped; broadest towards the end; blunt; but little larger than the cup; expanding.

**Chives.** Threads eight; awl-shaped; short. Tips simple. Dust crofs-shaped.

**Point.** Seedbud compressed; nearly buried in a large perforated convex receptacle. Shaft thread-shaped; daily growing longer. Summit two; tapering; slender; reflexed.

**S. Fess.** Capsules two; united at the base; roundish; compressed; each terminated by a very large membranaceous wing.

**Seeds.** Solitary; roundish.

B. Barren Flowers.

**Empal.** As above.

**Bloss.** As above.

**Chives.** As above.

**Point.** Seedbud none. Shaft none. Summit cloven.

**Obs.** At the first opening of the flower the Summit only makes its appearance and after some days the Shaft bows out.

In the Sycamore Maple the blossom is hardly separated from the cup, and the chives are long.

In some flowers in the same rindle the lower ones have tips which do not feed their dust; but the pointal brings forth perfect fruit; and the upper ones have tips which feed their dust, but the pointals fall off and perish.

**Sycamore.**

**Pseudoplata-**

**nus**

**MAPLE.** Leaves with five lobes; unequally serrated. Flowers in bunches—yellowish green.


Greater Maple. Sycamore Tree.

Hedges. S. May—June.

1. There is a variety with striped leaves.
UPON ONE PLANT.

It flourishes best in open places, and sandy ground; but will thrive very well in richer soil. It grows quick; is easily transplanted; bears cropping, and the grass flourishes under its shade. It is said to grow better near the sea than in any other situation, and that a plantation of these trees at fifty feet asunder, with three sea Sallowthorns betwixt every two of them, will make a fence sufficient to defend the herbage of the country from the spray of the sea. Gent. Mag. 1757. p. 252.

The wood is soft, and very white. The turners form it into bowls, trenchers, &c.

If a hole is bored into the body of the tree when the sap rises in the spring, it discharges a considerable quantity of a sweetish watery liquor which is used in making wine, and if insipid it affords a fine white sugar—The dust of the Tips appears globular in the microscope, but if touched with any thing moist, these globules burst open with four valves which then appear in form of a cross—The Cockchafer Beetle, Scarabaeus Melolontha, feeds upon the leaves.

MAPLE. Leaves lobed; blunt; notched—Bark rough; fur—Common Campetile

Acer minus et vulgare. Park. 1496.
Acer campetle et minus. Baub. pin. 431.
1. There is a variety with red fruit. Ray's Syn. 470.

Hedges and roughs. S. April—May.

The wood is much used for turning in the lathe, and vessels may be turned to thin as to transmit light.—Horses will eat the leaves—The Sycamore Tussock moth, Phalena Aceris, and the Maple Louise, Aphis Aceris, are nourished by both species.
VARIOUS DISPOSITIONS.

PELLITORY. 1152 Parietaria.

H. Two flowers containing both chives and pointals are enclosed within one flat fence of six leaves: the two opposite and outer leaves the largest.

EMPAL. Cup one leaf, with four clefts; flat; blunt; half the size of the fence.

BLOSS. None; without you consider the cup as such.

CHIVES. Threads four; awl-shaped; longer than the cup; burbling it open; permanent. Tips double.

POINT. Seedbud egg-shaped. Shaft thread-shaped; coloured. Summit pencil-shaped; with a knob.

S. VESS. None. The Cup becoming longer, larger, and bell-shaped, and its segments approaching, closes upon the seed.

SEED. Single; egg-shaped.

F. Flowers with only pointals. One placed betwixt the other two within the same fence.

EMPAL. As above.

BLOSS. None.

POINT. As above.

S. VESS. None. Cup slender; inclosing the fruit.

SEED. As above.

PELLITORY. Leaves betwixt spear and egg-shaped. Fruit-stalks forked. Cups with two leaves—Blossoms greenish white. Flowers with only pointals, pyramidal and four edged. Stems reddish. If you touch the Tips when ripe, with the point of a needle, they burst and throw out their dust with considerable force.


Parietaria vulgaris. Park. 437.

Parietaria officinarum et Dioecoris. Baub. pin. 121.

PELLITORY of the Wall.

On old walls and amongst rubbish. P. May—September.

This plant was formerly in repute as a Medicine, but it does not seem to possess any remarkable qualities—it is asserted that the leaves sowed in granaries destroy the Corn Weevil.

397 ORACHE.
UPON ONE PLANT.

397 ORACHE. 1153 Atriplex.

H. Flowers with chives and pointails.

Empal. Cup five leaves; concave; permanent. Segments egg-shaped; concave; membranaceous at the edges.

Bloss. None.

Chives. Threads five; awl-shaped; placed opposite to the leaves of the cup and longer than them. Tips roundish; double.


S.Vess. None. The Cup closing, hath five sides and five angles; the angles compressed. Deciduous.

Seed. Single; roundish; flattened and depressed.

F. Flowers with only-pointails, on the same plant.

Empal. Cup two leaves. Leaves flat; upright; egg-shaped; sharp; large; compressed.

Bloss. None.

Point. Seedbud compressed. Shaft deeply divided. Summits reflected; sharp.

S. Vess. None. The valves of the cup which are large and heart-shaped inclose the seed betwixt them.

Seed. Single; roundish; compressed.

Obs. There is a very great affinity betwixt the ORACHE and the BLITE, the presence of the Flowers with only pointails in the ORACHE is the only mark of distinction; for if the BLITE had these flowers it would be ORACHE and the ORACHE without them would be BLITE.


Halimus, seu Portulaca marina. Baub. pin. 120.

Halimus vulgaris, seu Portulaca marina. Gerard. 323.

Portulaca marina nostras. Park. 724.

Sea Purslane.

On the sea-shore. S. Augusti.

Cows, Sheep and Goats eat it.
VARIOUS DISPOSITIONS.

Jagged
Laciniata

ORACHE. Stem herbaceous; leaves triangularly spear-shaped; broad and toothed; of a silver white beneath—The whole plant is covered with a skin which peels off. Stem upright; cylindrical; naked; branched like a rod. Spikes with chives and pointals terminating; Tips of a pleasant red. Flowers with only pointals in pairs. When the fruit ripens the Cup is compressed, and hath five teeth; the middle tooth the largest.
Atriplex maritima. Ray's Syn. 152.
Atriplex maritima laciniata. Baub. pin. 120.
Jagged sea Orache. Shrubby sea Orache.
On the sea-shore. A. August.
Cows eat it.

Wild
Haftata

ORACHE. Stem herbaceous. In the flowers with only pointals the valves of the cup are large; triangularly spear-shaped and indented—Spikes subitius.
Atriplex erechta. Hud. 376.
Atriplex sylvelris, folio haftato, feu deltoide. Ray's Syn. 151.
Amongst rubbish; on dung-hills and on the sea-coast. A. August—September.
Varieties.
1. Perennial: with leaves not so hoary—Grows on the sea-shore.
2. With hoary angular leaves, very much indented—On the sea-shore.
Atriplex maritima nostras procerior. foliiis angulosis incaps admodum finaturas. Pluenet Alm. 60.
3. With a kind of appendages at the base of the leaves; stem trailing, and the leaves but slightly indented—On the sea-shore.
Atriplex maritima ad foliorum basin auriculata, procumbens et ne vix finaturas. Pluenet Alm. 61.
It is sometimes gathered as a potherb—Cows, Goats, Sheep and Swine eat it.

Narrowleaved
Patula

ORACHE. Stem herbaceous, spreading. Leaves triangularly spear-shaped. The cups containing the seeds toothed in the center—Spikes subitius.
Ray's Syn. 151.
Atriplex angustifo oblongo folio. Baub. pin. 119.
Ditch-banks and amongst rubbish. A. August.

Spear-leaved
Erecta

ORACHE. Stem herbaceous; leaves halberd-shaped and toothed. Hud. 376.
Atriplex angustifo folio laciniata. Ray's Syn. 151.
Amongst rubbish. A. August.

ORACHE.
UPON ONE PLANT.

ORACHE. Stem herbaceous; upright; leaves all strap-shaped; fronds-leaved; very entire.—Atriplex angustissimo et longissimo folio. *Ray's Syn.* 153.
Ray mentions the two following varieties of this plant, the second of which has a blunter leaf; but it does not appear wherein the others differ.
On dunghills; sea-coasts, and among rubbish. A. August.—September.

ORACHE. Stem herbaceous, upright; leaves strap-shaped Indented serrated. *Hudson.* 377.
Among rubbish and on the sea-shore. A. August.

ORACHE. Stem herbaceous; straddling. Leaves spear-stalked shape; blunt; entire. Flowers with only points on fruit. Pedunculata stalks—Flowers in bunches; terminating; and on lateral fruit-stalks, at the end of which is placed a cup resembling the fruit of the Purse Mithridate, composed of three lobes; the middle lobe the smallest.
Stalked sea Orache.
On the sea-coast. A. August—September.
1. There is some variety in the form of the leaves, as in the Atriplex maritima nostras, Ocyini minoris folio. *Ray's Syn.* 153.

The Sword-grafs Moth. *Phalaena Exfoliata.*
The Ealings Glory. *Phalaena Oxyacantha,* and the Orache Loue. *Apbiis Atriplicis* are found upon the different species.

Order
VARIous Dispositions.

Order II. Upon Two Plants.

398 A S H. 1160 Fraxinus.

H. With chives and pointals.

EMPAI. None: or a Cup of one leaf; with four divisions; sharp; upright; small.

BLOSS. None: or Petals four, strap-shaped; long; sharp; upright.

CHIVES. Threads two; upright; much shorter than the blossom. Tips upright; oblong; with four furrows.

POINT. Seedbud egg-shaped; compressed. Shaft cylindrical; upright. Summit rather thick; cloven.

S. VESS. Spear-shaped; compressed; membranaceous; with one cell.

SEED. Single; flat; spear-shaped.

F. Flowers with only pointals.

EMPAI. As above.

BLOSS. As above.

POINT. As above.

S. VESS. As above.

SEED. As above.

Obs. It often happens that the tree bearing flowers with both chives and pointals buds some with only pointals intermixed; and the reverse.

ASH. Little leaves serrated. Flowers without petals—The lateral buds send forth flowers; the terminating buds, leaves. The flowers with only pointals have neither petals nor empalement.


Fraxinus excelsior. Baumb. pin 410.

Woods and hedge-rows. S. May—June.

1. The leaves are sometimes variegated with white or straw-colour.

It flourishes best in groves, but it grows very well in rich soil in open fields. It bears transplanting and lopping—In the north of Lancashire they lop the tops of this tree to feed the cattle in autumn when the grass is upon the decline; the cattle peeling off the bark as food. In Queen Elizabeths time the inhabitants of Colton and Hawkheadfells remonstrated against the number of forges in the country because they consumed all the loppings and croppings, the sole winter food for their cattle.

Pennants
UPON ONE PLANT.

Pennant's Tour 1772. p. 29. The wood hath the singular advantage of being nearly as good when young as when old. It is hard and tough, and is much used to make the tools employed in husbandry. The ashes of the wood afford very good potash—The bark is used for tanning calf-skin. A slight infusion of it appears of a pale yellowish colour when viewed betwixt and the light, but when looked down upon or placed betwixt the eye and an opaque object it is blue. This blueness is destroyed by the addition of an acid, and alkalies recover it again—The seeds are acrid and bitter—In the church-yard of Lochaber in Scotland, Dr. Walker measured the trunk of a dead Ash tree which at 5 feet from the surface of the ground was 58 feet in circumference—Horses, Cows, Sheep and Goats eat it; but it spoils the milk of Cows, so that it should not be planted in dairy farms.

The following insects are found upon it.

Privet Hawk Moth. *Sphinx Ligustri.*
Scarlet Tyger Moth. *Phalena Dominula.*
Cliefden Nonpareil. *Phalena Fraxini.*
- - - - - *Chermes Fraxini.*

CLASS
CLASS XXIV.

UNDER this Class are arranged a number of Vegetables whose Flowers are either but little known, or whose Chives and Pointals are too minute to admit of that mode of investigation which prevails through the twenty-three Classes preceding. The structure too of these vegetables differs considerably from that of other plants. They are divided into four Natural Orders. (viz.) Ferns; Mosses; Thongs; and Fungusses.

F E R N S.

The plants of this order sometimes have their flowers in spikes, as in the Horse-tail (Plate I. A.) but they are generally disposed in spots or lines on the under surface of the leaves, as in the Harts-tongue, Plate I. B.

MEMPAL. A scale springing out of the leaf; opening on one side. Underneath this scale, supported upon little foot-stalks, are Globes, encompassed by an elastic ring, which bursts with violence, and scatters a powder.

OBSERVATIONS.

The seed-vessels on the under surface of the leaves are covered by a very fine, thin, semi-transparent skin, which tears open before the seeds ripen. The seed-vessels themselves are composed of three parts. First, a little fruit-stalk, by means of which they are connected with the surface of the leaf. Second, a globular Capsule standing upon the fruit-stalk. Third, an elastic cord, fixed to the top of the fruit-stalk and surrounding the Capsule. When the Seeds are ripe, the cord endeavours
CLASS XXIV.

to become straight, and by its elasticity tears open the Capsule. The Capsule opens like that of the Pimpernel, as if it had been cut round with a knife, forming two hollow hemispherical caps. The elastic force which tears it open, disperses the seeds abroad. These are so minute as hardly to be visible to the naked eye. In the months of September and October this curious mechanism is very evident in the Common Brakes or in the Harts-tongue Spleenwort, by the assistance of a good single Microscope with a reflecting Speculum. The sudden jerk of the springing cord frequently carries the object out of the field of view, so that it requires some patience to observe the whole of the process.

As there are no certain distinctions in the Flowers themselves sufficient to establish the Genera, we are guided by their disposition under their covers.

Few of the Ferns are efficac. They have a heavy disagreeable smell. In large doses they destroy worms, and are purgative.

M O S S E S.

This Order is subdivided according as the Tips have a Veil or no Veil: as they are upon the same plant with the Pointal, or upon different plants; and as the Pointals are solitary or incorporated. The Seeds consist only of a Heart without any Coat or Seed-lobes. The Tips according to Linnaeus are rather to be considered as Capsules, and the Dust which they contain as the real seeds; for within the cover of some of them he thinks he has observed real Tips hanging by threads, opening at the end, and letting fall a Dust upon the hairs of the fringed ring, which he seems to consider as so many Pointals.

O B S E R-
It has been doubted whether the powder in the heads of Mosses is the Dust or the Seeds. But as the dust of all plants explodes in water and flashes in the flame of a candle; and as this powder possesses these properties, there can no longer be a doubt what to call it. These Mosses then with heads or tips furnished with dust, are the barren plants; and except in the Genus Clusia, they have no Threads, but a Tip only; which in many of them is covered with a Veil or Lid. The Seeds of Mosses are therefore to be sought for in the Fertile Plants, and are sufficiently evident in the Fir Clusia.

The Fringe that surrounds the mouth of the tip in most of the Mosses, seems to answer the same, or at least a similar purpose to the down which crowns the seeds of the compound flowers in the nineteenth Class. Before the veil and the lid fall off, the little hairs which compose the fringe lie flat over the mouth of the tip, meeting in the center like the spokes of a wheel. If the lid is taken off by force when the tip is nearly ripe, these hairs immediately rise up and expand horizontally. Now in the natural progress of things as the tip becomes mature, is it not the expansion of this fringe which throws off the lid and opens a passage for the dust? I am indebted for this remark to a young gentleman who will probably one day clear up much of the darknets in which this numerous and neglected tribe of plants are still enveloped; and consequently reduce them to a system something more scientific than what we now can boast of.

The Fertile Flowers, or rather Seeds, in several Genera are totally undiscovered; but in others they are supposed to exit on the inside at the base of the leaves, in certain hairy or cone-like shoots. In plate I. C is a shoot of one of the Mosses. D is a flower-bearing stalk; (a) the veil; (c) the tip; (b) the lid.

Mosses thrive best in barren places. Most of them love cold and moisture. Trifling and insignificant as many people think them, their iles are by no means inconsiderable. They protected the more tender plants when they first begin to expand in the spring, as the experience of the Gardener can testify, which teaches him to cover with Moss.
Moss the soil and pots that contain his tenderest plants; for it equally defends the roots again the scorching sun-beams and the severity of the frosts. In the spring, when the sun has considerable power in the day-time and the frosts at night are severe; the roots of young trees and shrubs are liable to be thrown out of the ground, particularly in light spongy soils. But if they are covered with Moss, this accident never can happen. Those who are fond of raising trees from seeds, will find their interest in attending to this remark.

Mosses retain moisture a long time without being disposed to putrefy. The angler takes advantage of this circumstance to preserve his worms, and the gardener to keep moist the roots of such plants as are to be transported to any considerable distance.

It is a vulgar error to suppose that Mosses impoverish land. It is true they grow upon poor land that can support nothing else; but their roots penetrate very little, in general hardly a quarter of an inch into the earth. Take away the Moss, and instead of more grass you will have lefs; but manure and drain the land; the grass will increase and the Moss disappear.

The Grey Bogmoss, the Triangular Marshmoss, the dwarf and water Threadmoss, the hooked, scorpion, floating and pointed Feathermoss, grow upon the sides and shallower parts of pools and marshes; and in process of time; occupying the space heretofore filled with water, are in their half decayed state dug up and used as fuel under the name of Peat. These marshes, drained partly by human industry, and partly by the long continued operations of vegetables, are at length converted into fertile meadows.

Very few Mosses are eaten by cattle. The Bishop Moth and the Brussels Lace Moth feed upon some of them. Their medicinal virtues are but little known, and less attended to. Some of the species will probably be found very active, and therefore useful medicines.

THONGS.
The plants comprised under this division scarcely admit of a distinction of root, stem and leaf; much less are we enabled to describe the parts of the flowers. The Genera therefore are distinguished by the situation of what we suppose to be the flowers or seeds, or by the resemblance of the whole plant to some other substance we are well acquainted with.

Linnaeus calls the plants of this Order Sea-weeds, but with no great propriety; for very few of the Genera have any thing to do with the sea. We rather choose to call them Thongs, because the substance of most of them is more or less like leather, and many of them are in the form of Thongs. In plate 1st. E. and F. are specimens of one of the Genera, and G. of another.

These plants, though generally looked upon as unworthy of notice, are of great consequence in the economy nature, and afford the first foundation for vegetation. Thus one species of the Powderwort, and several species of the Cupthong fix upon the barest rocks and are nourished by what slender supply the air and the rains afford them. When these die, they are converted into a very fine earth in which the tilled Cupthongs find nourishment, and when these putrify and fall to dust, various Mosses, as the Threadmoss, Feathermoss, &c. occupy their place; and in length of time when these perish in their turn, there is a sufficiency of soil in which trees and other plants take root. This process of nature is sufficiently apparent upon the smooth and barren rocks upon the sea-shore.

Some of the Oarweeds are esculent.

Many of the Cupthongs are a grateful food to Goats; and the Rein-deer, which constitutes the whole economy of the Laplanders, and supports many thousand inhabitants, lives upon one of the species. Many of the species afford colours for dyeing. One of them brought from the Canary Islands, viz. the Orchel, or Argol, makes a very considerable article of traffic. It is not improbable that some of the species growing in our own island may afford very beautiful and useful colours; but this matter hath not been sufficiently examined. Mr. Hellot
Heliot gives us the following process for discovering whether any of these plants will yield a red or purple colour.

"Put about a quarter of an ounce of the plant in question into a small glass; moisten it well with equal parts of strong Lime-water and Spirit of Sal Ammoniac; or the Spirit of Sal Ammoniac made with quick-lime will do without Lime-water. Tye a wet bladder close over the top of the vessel and let it stand three or four days.

"If any colour is likely to be obtained, the small quantity of liquor you will find in the glass will be of a deep crimson red; and the plant will retain the same colour when the liquor is all dried up. If neither the liquor nor the plant have taken any colour, it is needless to make any further trials with it."

**Fungusses.**

We know very little about the Flowers or Seeds of the Fungusses; The generic characters are therefore taken from their external form. In plate 1. at H. a species of Mushroom is represented to shew (a) the Cap; (b) the Pillar; (c) the Hat.

All the Genera under this division, particularly the Puffball and Mould, abound with a black powder, which examined with a good microscope is found to consist of globules which are supposed to be the seeds. But the Baron Otto Münchhausen says these globules are semi-transparent, containing a little black particle. He says too that if this powder is mixed with water and kept in a warm place, the globules presently swell and are changed into egg-shaped self-moving animalcules. In about two days these animalcules unite and form a mass of a pretty firm texture, or Fungus. When these Fungusses begin to grow, they appear like white veins, which are commonly supposed to be the roots; but in fact they are only tubes in which the animalcules move, and in a short time are transformed into a Fungus, which with plenty of moisture, and a proper degree of warmth grows to a very large size. The black powder found betwixt the gills of Mushrooms, produces the same phenomena.

A fact so well attested, and so very singular; could not fail to excite the attention of philosophers, and accordingly the accurate and ingenious Mr. Ellis, whose...
discoveries in many abstruse parts of the animal and vegetable kingdoms, do him the highest honour, undertook the subject; and soon demonstrated that the motion of these globules is occasioned by a number of very minute animalcula feeding upon them; but the animalcula being much smaller than the globules are difficult to detect. See Philos. Trans. vol. 59. p. 138. See also Gent. Mag. for 1773. p. 316.

Fungusses have been sought for as food, upon account of their high flavour; but nobody supposes them to yield good nourishment; and many have been killed by them. Some of them have been found of considerable use in stopping haemorrhages, and the acrimonious qualities of others will probably some day be turned to good account.
CLASS XXIV.

Flowers Inconspicuous.

F E R N S.

* Flowers in a Spike.
399 Horsetail. - Spike scattered. Flowers target-shaped; with valves at the base.
400 Adderstongue. Spike jointed. Flowers cut round.
401 Moonwort. - Spike a sort of bunch. Flowers two valves.

** Flowers on the under surface of the Leaves.
402 Rustyback. Covering the whole surface of the leaf.
403 Polyody. In distinct spots upon the surface of the leaf.
404 Spleenwort. In several nearly parallel lines, upon the surface of the leaf.
405 Brakes. - - In lines at the edge of the leaf.
406 Maidenhair. In spots, covered by the points of the leaves bent back.
407 Goldilocks. Flowers solitary; inserted in the very edge of the leaf.

S 2 *** Fertile
FLOWERS INCONSPICUOUS.

*** Fertile Flowers at the roots.
408 Peppergrass. - Capsule with four cells.
409 Quillwort. - Capsule with two cells.

M O S S E S.

* Without Veils.
410 Clubmoss. - Tip with two valves; fitting.
411 Bogmoss. - Tip with a smooth mouth.
412 Earthmoss. - Tip with a fringed mouth.

* * With Veils. Chives and Pointals distinct.
413 Bottlemoss. - Tip with a large excrescence.
† Bottle Earthmoss.
414 Hairmoss. - Tip with a very small excrescence; bordered.
† Hair Marshmoss. † Scored Threadmoss.
415 Marshmoss. - Tip without any excrescence.

*** With Veils. Chives and Pointals on the same plant.
416 Threadmoss. - Tip on a fruit-flask rising out of a tubercle at the end of the branch.
† Oval Earth-moss. † Acorn-shaped Earth-moss.
417 Feathermoss. - Tip on a fruit-flask rising out of a scaly bulb at the side of the branch.
418 Watermoss. - Tip fitting; inclosed in a tiled scaly bulb.

T H O N G S.

* Crowing on the Ground.
419 Startip. - - Flowers with a simple empalement of four valves.
420 Liverwort. - Flowers on the under-side of a common target-shaped empalement.
421 Vetchcap. - Flowers with an empalement of two valves.

422 Horn-
### FLOWERS INCONSPICUOUS.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>432 Hornflower</td>
<td>Flowers with a tubular emplacement. Tip awl-shaped, with two valves.</td>
</tr>
<tr>
<td>433 Leathercup</td>
<td>Seeds cylindrical, tubular.</td>
</tr>
<tr>
<td>434 Grainwort</td>
<td>Seeds little grains in the substance of the leaf.</td>
</tr>
<tr>
<td>435 Cupthong</td>
<td>Seeds in a smooth, shining receptacle.</td>
</tr>
<tr>
<td>436 Powderwort</td>
<td>Substance woolly.</td>
</tr>
<tr>
<td>+ Star-jelly</td>
<td>* Growing in the water.</td>
</tr>
<tr>
<td>437 Star-jelly</td>
<td>Substance like jelly.</td>
</tr>
<tr>
<td>438 Laver</td>
<td>Substance membranaceous.</td>
</tr>
<tr>
<td>439 Oarweed</td>
<td>Substance like leather.</td>
</tr>
<tr>
<td>430 Riverweed</td>
<td>Substance like hair.</td>
</tr>
</tbody>
</table>

### FUNGUSSES.

* Furnished with a Hat.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>431 Mushroom</td>
<td>Hat with gills on the underside.</td>
</tr>
<tr>
<td>432 Spunk</td>
<td>Hat with pores on the underside.</td>
</tr>
<tr>
<td>433 Pricklycap</td>
<td>Hat with prickles on the underside.</td>
</tr>
<tr>
<td>434 Morell</td>
<td>Hat smooth on the underside.</td>
</tr>
</tbody>
</table>

** Without a Hat.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>435 Turbantop</td>
<td>Shaped like a turban.</td>
</tr>
<tr>
<td>436 Funneltop</td>
<td>Shaped like a bell.</td>
</tr>
<tr>
<td>437 Clubtop</td>
<td>Shaped like a club.</td>
</tr>
<tr>
<td>438 Puffball</td>
<td>Globular.</td>
</tr>
<tr>
<td>439 Mould</td>
<td>Little bladders supported upon pillars.</td>
</tr>
</tbody>
</table>

S 3

399 HORSE
FLOWERS INCONSPICUOUS.

399 HORSETAIL. 1169 Equisetum.

Flowers disposed in an egg-shaped oblong spike.
Individually round; opening at the base with many valves connected at the top, which is flat and target-shaped.—See Plate 1. Fig. A.

Wood

HORSETAIL. Stem supporting a spike; leaves compound—All the leaves disposed in whorls; eight or ten in each whorl.

2. Equisetum sylvaticum tenuissimis setis. Baub. pin. 16.

Trailing. Hud. 2. Stem trailing, leaves pointing mostly one way.

Equisetum sylvaticum procumbens, setis uno verso dispositis Ray's Syn. 131.

Marsh. Hud. 3. Leaves very long.

Equisetum palustre tenuissimis et longissimis setis. Baub. pin. 16.
Woods and moist shady places. P. April—May.
Horses are fond of it, and in some parts of Sweden it is collected to serve them as winter food.

Corn

HORSETAIL. Fruit bearing stalk naked; barren stalk leafy—The fruit bearing stalks spring up first, but thrive in a short time; the leafy stalks continue much longer. The dust when shaken from the spike jumps about as if it was alive.


Equisetum vegetale. Gerard. 1114.

Long-leaved. Hud. 1. With very long leaves.

Equisetum pratense longissimis setis. Baub. pin. 16.
Moist cornfields. P. March.
Cows will not eat it unless compelled by hunger.

Marsh

HORSETAIL. Stem angular; leaves simple,—Composed of ten or twelve joints.

Equisetum palustre brevioribus Setis. Baub. pin. 16.

Many-headed.

1. Spikes numerous. Leaves with five or six joints. Ray's Syn. 311. tab. 5. fig. 3.
Equisetum palustre minus polystachion. Baub. pin. 16.
In watery places. P. June.

HORSE-
HORSETAIL. Stem scored; leaves generally simple.—River Fluvial.
Equisetum majus palustre. Park. 1200.
Equisetum palustre longioribus foliis. Baub. pin. 15.
Banks of rivers and pools. P. May.
In some places they mix it with the food of Cows to increase the quantity of their milk. Horses are not fond of it.

HORSETAIL. Stem almost naked; smooth.—Leafy as Smooth
the Summer advance.
Equisetum nudum laevius nostras. Ray's Syn. 131. tab. 5.
fig. 2.

HORSETAIL. Stem naked, rough; sometimes a little Shaving
branched at the bottom—The sheaths of the joints white. Spike Hyemale
brown; terminating.
   Equisetum junceum ramosum. Park. 1207.
   Equisetum foliis nudum ramosum. Baub. pin. 16.
2. Equisetum nudum minus variegatum Basilienfe. Baub. pin. 16. Variegated
3. Stem undivided.
   Equisetum foliis nudum non ramosum feu junceum. Baub.
   pin. 16.
   Shave-grafs. Pewterwort.
   In marshy places. P. July—August.
The Turners and Cabinet-makers use it to smooth their work.
—It is wholesome to Horses, hurtful to Cows and hateful to Sheep.

400 ADDERSTONGUE. 1171 Ophioglossum.
Capsules. Pointing from two opposite lines; with nu-
merous joints placed transversely, and divided into
as many cells as there are joints. When ripe every
cell opens transversely.
Seeds. Numerous; very small; somewhat egg-shaped.

ADDERSTONGUE. Leaf egg-shaped.—Spike very slender; Common
on a fruit-stalk.
serpentina. Park. 506.
Ophioglossum primum, five vulgatum. Baub. pin. 354.
Moist meadows and damp walls. P. May.

S 4 MOON.
FLOWERS INCONSPICUOUS.

401 MOONWORT. 1172 Osmunda.

Capsules, Globular, distinct disposed in a bunch; and opening horizontally.

Seeds. Numerous; very small; egg-shaped.

Common Lunaria

MOONWORT. Stalk rising from the stem; solitary.
Leaf winged, solitary.—Within the base of the stem early in the spring, may be found a compleat rudiment of the next year's plant.
Capsules yellowish.
Lunaria racemosa minor. Baub. pin. 354.

Lunaria minor foliis diffusulis. Ray's Syn. 129.
Hilly pastures. P. May.

Royal Regalis

MOONWORT. Leaf doubly winged; bearing bunches of flowers at the ends.—Root thread; bundled; black.
Osmunda regalis, feu Filix florida. Park. 1038.
Felix ramosus non dentata florida. Baub. pin. 357.
Felix florida feu Osmunda regalis. Gerard. 1131.
Flowering Fern. Osmund Royal.
In putrid marthes. P. July—August.
The root boiled in water is very slimy and is used in the North to stiffen linen instead of starch. Only some of the leaves bear flowers.

Rough Spicant

MOONWORT. Leaves spear-shaped, with winged clefts.
Segments very entire, parallel, running into each other.—The flowering leaves much narrower than the barren leaves.
Rough Spleenwort.
Groves and moor heaths. P. July.

Stone Crispa

MOONWORT. Leaves more than doubly compound; little leaves alternate; circular, but jagged—With yellow lines on the under side, parallel to the middle rib.
Adiantum album crispus alpinum. Ray's Syn. 126.
Stone Fern.
On Rocks. P. August.

402 RUSTY BACK. 1173 Acrostichum.

Flowers entirely covering the under surface of the leaf.
F E R N S.

RUSTYBACK. Leaf simply divided; naked; strap-shaped; Forked jagged. — Septentrionale
F. faxatilis cordiculata. Baub. pin. 396.
F. faxatilis Tragi. Park. 1045. Ray’s Syn. 120.
Horned Fern.
Old walls and clefts of rocks. P. August.

RUSTYBACK. Leaves almost doubly winged; little leaves Hairy opposite: united; blunt; hairy underneath; very entire at the 11vease bale. — About as long as one’s finger.
F. alpina; pedicularis rubrae foliis subtus villosis. Ray’s Syn. 118.
Clefts of rocks. P.

RUSTYBACK. Leaves winged; little leaves with winged Marth clefts; very entire—Leafstalks smooth. Barren leaves broader. Thelypteris and more blunt than the other. — Circles of flowers ten pair or more.
F. minor palustris repens. — Ray’s Syn. 122.
In turfy Bogs. P. August.

403 POLYPODY. 179 Polypodium.

FLOWERS disposed in distinct circular dots on the under surface of the leaf.

* Leaves with winged clefts. Lobes united.

POLYPODY. Leaves with winged clefts; wings oblong; Common somewhat ferrated; blunt. Root scaly, — and hairy. Flowers Vulgare yellowish brown; in rows, parallel to the rib of the little leaves.

2. Little leaves ferrated. —
Polypodium murale pinnulis ferratis. Ray’s Syn. 117.
On old walls; shady places; and at the roots of trees. P.
The root is sweetish: by long boiling it becomes bitter. When fresh it is a gentle purgative. An infusion of six drams of it in half a pint of boiling water may be taken at twice.

POLYPODY. Leaves with winged clefts; wings spear-shaped: ragged with clefts, and ferrated.
Polypodium Cambro-britannicum pinnulis ad margines laciniatis. Ray’s Syn. 117.
On rocks. P.

** Leaves.
FLOWERS INCONSPICUOUS.

** Leaves winged.

Spleenwort POLYPODY. Leaves winged; wings crescent-shaped; fringed; serrated, declining. Stalks beset with stiff flat hairs. —

Lonchitis aspera major. Gerard. 1140. Ray’s Syn. 118.
Lonchitis aspera. Bauh. pin. 359.
Lonchitis aspera major Matthiolo. Park. 1242.
Great Polypody. Spleenwort.
Clefts of rocks. P.

Rock POLYPODY. Leaves winged and jagged; wings circular, sharply and elegantly cut; stalk smooth—It resembles the Bristle Polypody but the wings stand closer together and are not so deeply subdivided; the dots of flowers are larger, and proceed not from a rounder scale, but from an oblong, white, narrow valve or chink.

Common
Elegant
2. Filix fastigiata omnium minima elegantissima. Plukenet Plut. tab. 80. fig. 3.
Old walls and clefts of rocks. P.

** Leaves almost doubly winged.

Wood POLYPODY. Leaves almost doubly winged; lower little leaves bent back in pairs; united by a four-cornered little wing.—
Felix minor Britannica, pediculo pallidior, als inferioribus deorum spectantibus. Ray’s Syn. 122.
Clefts of mossy shady rocks. P.

Sweet POLYPODY. Leaves almost doubly winged; spear-shaped.

Flagrans Little leaves crowded together; lobes blunt, serrated; stalk chaffy—Resembling Fern Polypody but much smaller.
In the clefts of mossy rocks. P.

Crested POLYPODY. Leaves almost doubly winged; little leaves egg-shaped; lobes rather blunt, sharply serrated towards the point—The flowers in this species are upon the upper, not upon the lower little leaves.

Common

Smilie. Hod. 2. Little leaves very elegantly serrated.
Felix montana ramosa minor argente denticulata. Ray’s Syn. 124.
Woods, heaths, and shady places. P.

POLYPODY.
FERNS. 651

* * * Leaves doubly winged.

POLYPODY. Leaves doubly winged; wings blunt, a little Fern scolloped; stalk chaffy—Flowers kidney-shaped; fix or seven on Filix mas.

Each wing.

Felix mas vulgaris. Park. 1036. Ray's Syn. 120.

Felix mas non ramosa dentata. Baub. pin. 258.

Felix mas non ramosa, pinnulis latis dentibus minutis dentatis

Gerard. 1129.

Male Polyppody. Male Fern.

Woods heaths and stony places. P.

The Siberians boil it in their ale, and admire the flavour of it.

POLYPODY. Leaf doubly winged; little wings spear-shaped, fringed, with winged clefts; sharp—Flowers egg-shaped, somewhat Filix femina fringed, solitary.

Felix mas non ramosa, pinnulis angustis raris profunde dentatis

Gerard. 1130. Ray's Syn. 121.

Female Polyppody.

POLYPODY. Leaves doubly winged; wings crescent—Prickly shaped, fringed and toothed; stalk befit with flat stiff hairs. Aculeatum

1. Felix mas aculeata major. Baub. pin. 358.

Felix mas non ramosa, pinnulis lateralis auriculatis spinosis

Gerard. 1130. Ray's Syn. 121.

It sometimes varies with and without ears. Ray.

2. With narrow leaves.

Felix aculeata major, pinnulis auriculatis crebrioribus foliis integris angustioribus. Ray's Syn. 121.

3. With a kind of woolliness on the leaf.

Felix mas aculeata nostras, alis expansis muscosa lanugine aspera. Phutenz Phyt. tab. 180 fig. 1.

POLYPODY. Leaves doubly winged; wings crescent—Lobed shaped, fringed and toothed, the upper ones divided into lobes Lobatum at the base; stalk befit with flat stiff hairs. Hudjon 39.

Felix lonchitidi affinis. Ray's Syn. 121.

Polypodium lobatum, Hudjon 39.

In shady places. P.

POLYPODY. Leaves doubly winged; little leaves and stone wings spear-shaped; distant from each other; teeth tapering to point.

Felix fontana major, seu Adiantum album foliis folio. Baub.

Pin. 351.

Felix pumila faxatilis altera. Ray's Syn. 122.

Stony hills. P.

POLYPODY.
FLOWERS INCONSPICUOUS.

POLYPODY. Leaves doubly winged; little leaves distant from each other; little wings circular; cut at the edges—Flowers in large, black numerous spots.

1. Stem slender and brittle.
   Filix saxatilis caule tenui fragile. Ray's Syn. 125.
2. Wings divided like Cow-wool.
   Adiantum nigrum pinnulis cicutariae divisura. Ray's Syn. 126.
   Dry stony places. P.

*** Leaves more than doubly compound.

POLYPODY. Leaves more than doubly compound; little leaves growing by threes; doubly winged.

Filix saxatilis ramosa, maculis nigris punctata. Baub. pin. 358.
Filix ramosa minor. Ray's Syn. 125.
Filix pumila saxatilis prima Clusii. Park. 1045.
Dryopteris Tragi. Gerard. 1135.
Dry stony places. P.
The Fern Moth feeds upon the different species.

404 SPLEENWORT. 1178 Asplenium.

Flowers disposed in straight lines on the under surface of the leaf.

* Leaf simple.

Harts-tongue
Scolopendrium

SPLEENWORT. Leaves simple; betwixt heart and tongue-shaped; very entire. Stalks hairy.

Phyllitis, seu Lingua Cervina vulgaris. Park. 1046
Lingua Cervina Officinarum. Baub. pin. 353.
Moist shady rocks, and in the mouths of wells. P.

** Leaf with winged clefts.

Common
Ceterach

SPLEENWORT. Leaves with winged clefts; lobes alternate, running into one another; blunt. The under surface of the leaf is covered with scales in such a manner that the flowers are scarce discernible.

Ceterach Officinarum. Baub. pin. 354.
On old walls and clefts of moist rocks. P.
SPLEENWORT. Leaves winged. Wings circular; scol. Maiden-hair
loped.—Stalk glossy, black. Roots black; fibrous. Flowers in Trichomanides.
Three, four, or five rows.
Trichomanes feu Polytrichum officinarum. Baub. pin. 356.
Trichomanes mas. Gerard. 1146.
Common Maidenhair.
On old walls and shady slaty places. P.

SPLEENWORT. Leaf winged. Wings inversely egg. Sea
shaped; -ferrated; hunched towards the end, and blunt; wedge. Marinum
shaped at the base.—Stalks shining; almost black.
Filocula petrea feminina, feu Chamaelex marina anglica.
Gerard. 1143.
Chamaelex marina anglica. Ray's Syn. 119.
Sea Maidenhair, Sea Fern.
On rocks near the Sea. P.

* * * Leaves doubly compound.

SPLEENWORT. Leaves alternately doubly compound. White
Little leaves wedge-shaped and slightly scolloped—Flowers in Rutumaria
two or three rows.
Ruta muraria feu Salvia Vitae. Park. 1050.
White Maidenhair.
Cleits of rocks. P.

SPLEENWORT. Leaves almost triply winged; little leaves Black
alternate; wings spear-shaped jagged and ferrated—The dust is Adiantum ni-
the colour of Saffron. Stalks black; glossy. Flowers in whiteish grum
rows; from three to seven together.
Adiantum nigrum Officinarum. Ray's Syn. 126.
Adiantum nigrum vulgare. Park. 1046.
Adiantum folis longioribus pulvulentis, pediculo nigro.
Baub. pin. 356.
Onopteris mas. Gerard. 1127.
1. There are some varieties in the shape of the little leaves. Some
being broader and others narrower. Ray's Syn. 197.
Black Maidenhair.
Old walls and moist shady rocks. P.

SPLEEN-
FLOWERS INCONSPICUOUS.

SPLEENWORT. Leaves doubly winged: lobes inversely egg-shaped and fcolloped; lower little leaves the smallest.—Leaf winged; wings circular, lopped at the base. Hudson 385.
Trichomanes ramosum. Ray's Syn 119.
Trichomanes insignis. Gerard. 1146.
Trichomanes ramosum majus et minus. Baub. pin. 356.
Asplenium viride. Hudson. 385.
Green Maidenhair. Moill rocks. P.

405 BRAKES. 1174 Pteris.

Flowers disposed in a line, along the edge of the leaf, on the under side.

BRAKES. Leaves more than doubly compound. Little leaves winged; wings spear-shaped; the lowermost with winged clefts; the upper ones smaller—The roots extend so deep into the earth as not to be destroyed by burning the surface, or by the Plough. When cut transversely there is a faint resemblance of the Imperial Eagle; from which circumstance Linnaeus has named it the P. Aquilina or Eagle Brakes.

Filix ramosa major, pinnulis non dentatis. Baub. pin. 357.
1. Smaller than the above.
Filicula ferox, ramosa maritima nostras. Ray's Syn. 125.
Female Fern.
Woods and heaths. P. August. (2) on rocks near the sea, and on walls.
The root dried, powdered, and given in doses of half an ounce, is a secret to kill the Tape-worm, and is supposed to be no lea efficacious in killing other Worms.—A tolerably pure alkali is obtained from the ashes. The common people in many parts of England mix the ashes with water and form them into balls: these balls are afterwards made hot in the fire and then used to make lye for scouring linen—It makes a very durable thatch; and is an excellent litter for Horses and Cows. Where coal is scarce, they use it to heat ovens and to burn limestone; for it affords a very violent heat. In the more inhospitable climates, bread is made of the roots.—The Fern Moth feeds upon it.

406 MAIDENHAIR. 1180 Adiantum.

Flowers disposed in oval spots, under the ends of the leaves, which are bent back upon them.
MAIDENHAIR. Leaves doubly compound; little leaves alternate. Wings wedge-shaped; divided into lobes and placed upon footstalks.


On rocks. P.

MAIDENHAIR. Leaves more than doubly compound; shining, little leaves alternate. Wings diamond-shaped; cut at the edges; Trapeziforme with flowers upon both surfaces.


On rocks in Scotland.

407 GOLDILOCKS. 1181 Trichomanes.

Empal. Turban-shaped, single, upright; rising from the very edge of the leaf.

Shaf. bristle-shaped; terminating the Capsule.

GOLDILOCKS. Leaves almost doubly winged; wings al-Cup ternate, crowded together, divided into lobes; strap-shaped.

Pygidiferum Felix humilis repens, foliis pellucidis et splendentibus, caule alato. *Ray's Syn.* 127. tab.3. fig. 3-4.

On dripping rocks. P.

GOLDILOCKS. Leaves winged. Wings oblong; forked; Tunbridge running along the stem; toothed.—The seed like globules are pro-Tunbridgefe ded between two leafy valves.


In leafs of moist rocks. P. Augus.

408 PEPPERGRASS. 1183 Pilularia.

Barren Flowers like dust, in a line on the under side of the leaf.

Fertile Flowers at the root.

Capsule globular; with four cells, containing many seeds.

PEPPER.
FLOWERS INCONSPICUOUS.

Globular
Globularis

PEPPERGRASS. Stem creeping. Leaves upright; slender.

Pilularia palustris juncifolia. Dillenius, 538. tab. 70, fig. 1.
Pillwort. Peppermoss.
In grounds that have been overflowed, especially in a sandy soil. P. June—September.

409 QUILLWORT. 1184 Isoetes.

Barren Flowers solitary; within the base of the inner leaves.

EMPAL. Scale heart-shaped; sharp; fitting.
BLOSS. None.
CHIVE. Thread none. Tip roundish, with one cell.
Fertile Flowers solitary, within the base of the outer leaves of the same plant.

EMPAL. As above.
BLOSS. None.
POINT. Seedbud egg-shaped, and together with the Shaft and Summit concealed within the leaf.
S. VESS. Cylindric somewhat egg-shaped, with two cells; concealed within the base of the leaf.
SEEDS. Numerous; globular.

Mountain
lacustris
Long leaved

QUILLWORT. Leaves jointed; awl-shaped; semi-cylindrical.

1. Leaves long and slender.
Calamaria folio longiore et graciliore. Dillenius, 541. tab. 80. fig. 2.
Calamaria folio breviore craffio. Dillenius 541. tab. 80. fig. 1.
Subularia vulgaris erecta folio rigidissimo. Ray's Syn. 306.
3. With more flexible leaves.
Subularia repens folio minus rigido. Ray's Syn. 306.
Leaves the same with the former variety but more flexible.
At the bottom of lakes upon mountains.

410 CLUB.
MÖSSES.

410 CLUBMOSS. 1185 Lycopodium.

Barren Flower at the base of the leaves; sitting.
Empal. Veil none.
Chive. Tip kidney-shaped; with two valves; sitting.
Fertile Flower on the same plant.
Empal. Cup with four leaves.
Point. None.
Seed. Without seed-lobes; growing to the empale-ment.

CLUBMOSS. Leaves scattered, terminating in threads. Common.
Spikes cylindrical, growing generally two on a footstalk—Though Clavatum
sometimes three, or only one.
Lycopodium vulgare pilosum anfragosum et repens. Dillenius
441. tab. 58. fig. 1.
Mucus terrestris clavatus. Baub. pin. 360.
Wolf's claw.
On heaths and mountains. P. July.
In Sweden they form it into mats or baffle, which lye at
their doors to clean shoes upon.

CLUBMOSS. Leaves scattered; fringed; spear-shaped. Prickly
Spikes single; at the ends of the branches; leafy.—Capsules at the Selaginoides
Base of the lower leaves, four together; each containing a large solid
seed; but above these, upon the same stem are others containing four
seeds. Tips round, of a yellowish colour.
tab. 65. fig. 1.
In bogs, and in wet places on mountains. P. July—August
—September.

CLUBMOSS. Leaves scattered; very entire; spikes at the Marsh
ends of the branches; leafy—Single; upright. Stem creeping. Inundatum
Lycopodium palustris repens, Clava singulari. Dillenius 452.
tab. 62. (61) fig. 7.
Mucus terrestris repens, clavis singularibus foliosis erectis.
Ray's Syn. 108.
Moist heaths. P. July.
FLOWERS INCONSPICUOUS.

CLUBMOSS. Leaves scattered; pointing eight different ways. Stem forked; upright. Branches all of the same height. Flowers scattered. *The fertile flowers evidently show us the nature of the flowers of Moss.*

Selago vulgaris, abietis rubrae facie. Dilleniis. 435. tab. 56. fig. 1.

Selago foliis et facie abietis. Ray's Syn. 106.

Mulsche erectus ramosus saturatae viridis. Bauh. pin. 560.

On heaths and mountains in the crevices of rocks. P. August. The common people use a decoction of it to kill lice upon Cows and Swine. Taken inwardly it purges.

WELSH ANNOTINUM

CLUBMOSS. Leaves scattered, pointing five different ways; a little serrated. Stem jointed at every year's shoot. Spikes at the ends of the branches; smooth; upright—Single; without foot-flanks; branches contracted at the joints. Lycopodium elatius Juniperinum, clavis singularibus fine pediculis. Dilleniis 455. tab. 63. fig. 9. Ray's Syn. 107.

On high mountains. P. July. It is made into baffes.

MOUNTAIN ALPINUM

CLUBMOSS. Leaves pointing four different ways; tiled; sharp. Stems upright; cloven; spikes fisting; cylindrical. When fully grown it becomes yellow.

Lycopodium Sabinae facie. Dilleniis. 445. tab. 58. fig. 2.

Ray's Syn. 108.

Mulsche clavatus cupressiformis. Park. 1309.


In wet places on mountains. P. August—September.

411 BOG MOSS. 1187 Sphagnum.

Barten Flowers on very short foot-flanks.

Empal. Veil none.

Bloss. None except a membrane of short duration between the receptacle and the tip.

Chive. Tip globular; mouth very entire; covered with a blunt Lid.

Recept. Exercice bordered. imperfect; under the tip. *Fertile Flower hitherto undiscovered.*
MOSSES.

BOGMoss. Branches bent downwards.—White, or reddish. Grey
Tips reddish brown, nearly globular.
1. Leaves egg-shaped; with thicker branches.
   Sphagnum palustre molle deflexum, squamis cymbiformibus.
   Dillenius. 243. tab. 32. fig. 1.
   Sphagnum caulisferum et ramosum palustre molle candicans,
   reflexis ramulis, foliolis latioribus. Ray's Syn. 104.
2. Leaves awl-shaped with finer branches.
   Finer
   Sphagnum palustre molle deflexum, squamis, capillaceis.
   Dillenius 243. tab. 32. fig. 2.
   Sphagnum caulisferum et ramosum palustre molle candicans,
   reflexis ramulis foliolis angustioribus. Ray's Syn. 104.

In turfy bogs. P. July—August.

BOGMoss. Somewhat branched; upright.—Of a beautiful Green
green. Tips egg shaped.
   Alpinum
   Sphagnum fulvulatum viridissimum, capsulis ovatis. Dillenius.
   243. tab. 32. fig. 3.

Bogs on mountains. August—September—October.

BOGMoss. Branched; creeping. Tips on the sides of the Creeping
branches pointing one way.—Harry.
   Arboreum
   Sphagnum heteromallum polycephalum. Dillenius. 248. tab.
   32. fig. 6.
   Sphagnum caulisferum et ramosum minus hirsutum, capitulis
crbris pilosis per ramulorum longiudinem adascentibus. Ray's
   Syn. 105.

Trunks of trees. Nov.—Dec.

412 EARTHMoss. 1189 Phascum.

Barren flower nearly sitting, or on a very short fruit-
stalk.
Empal. Veil none.
Chive. Tip oval; with a fringed mouth; covered with
a Lid tapering to a point.
Recept. Excrecence none.
Fertile flower hitherto undiscovered,
FLOWERS INCONSPICUOUS.

EARTHMOSS. Without a stem; tips fitting; leaves egg-shaped; sharp—tiled.

1. Sphagnum acaulon bulbilformae, majus. Dillenius 251. tab. 32. fig. 11.
   Sphagnum acaulon, foliis in bulbi formam congeflis, majus.
   Ray's Syn. 105.

2. Sphagnum acaulon bulbilformae, minus. Dillenius 252. tab. 32. fig. 12.
   Sphagnum acaulon, foliis in bulbi formam congeflis, minus.
   Ray's Syn. 105.
   Sandy ditch-banks and gardens. A. Jan.—Feb.

EARTHMOSS. Without a stem; tips fitting; leaves brilly; awl-shaped, open.—Outer leaves flat, spread upon the ground; inner leaves pale, terminating in brown hairs.

OBS. This and the preceding species, have been sometimes observed to have a veil, and might therefore with propriety be ranged with the THREADMOSSES.


2. Considerably larger than the preceding.
   Sphagnum acaulon maximum, foliis in centro ciliaribus. Dillenius 253. tab. 32. fig. 13.
   (1.) Moist sandy roads and heaths. (2.) Sandy meadows, and on rocks. A. Mar.—April.—(2.) Sept.—Oct. Dill.)

EARTHMOSS. Without a stem; tip inverfely egg-shaped; supported by a fruit-stalk.—Leaves egg-shaped, transparent.

Hudson 39?

Bryum ampullaceum, foliis serpylli pellucidis collo craftenre.
Dillenius 344. tab. 44. fig. 4.

Bryum creftis gigartinis capitulis foliis serpylli pellucidis obtusis. Ray's Syn. 90. tab. 3. fig. 2.

Moist heaths. May.

FARTHMOSS?

PHASCUM?

Ampullaceum

Without a stem; tip oblong, supported by a fruit-stalk; leaves awl-shaped, open. Shoots upright, mostly simple, but sometimes divided towards the top. Tip upright, contracted at the mouth, somewhat resembling that of the Bottlenots. From Dillenius.

Bryum ampullaceum, foliis et ampullis angustioribus. Dillenius t. 44. f. 5.

On heaths, and in old rotten cow-dung. Dill.

EARTH-
M O S S E S.

EARTHMOSS. Stem creeping; tips on the sides of the Creeping branches, sitting.—
Sphagnum vermiculare repens, capfulis intra foliorum squam-motorum alas minimis. Dillenius 550. tab. 85. f. 16. Repens
Trunks of trees. P. April.

413 BOTTLEMOSS. 1191 Splachnum.

Barren flower on a fruit-stalk.
Empal. Veil conical; smooth; shedding.
Chive. Tip cylindrical. Mouth opening with eight little reflected teeth; without a ring.
Recept. Membranaceous, coloured, very large; under the tip.
Fertile flower on a different plant.
Empal. Common, star-like; at the ends of the shoots or branches; formed of several little awl-shaped leaves pointing in rays and tiled.
Point. Many; in the centre; all of the same height; short; coloured.

*Bottle Earthmoss.*

BOTTLEMOSS. Barren flower with its excrecence; shaped Common like a glas bottle; excrecence inversely egg-shaped—Yellow. Ampullaceum leaves egg-shaped; sharp; transparent. Tips upright.
Bryum ampullaceum, foliis Thymi pellucidis, collo strictiore.
Dillenius. 343. t. 44. f. 3.
Bryum erectis gigartinis capitulis, foliis fribilli pellucidis acutis. Ray's Syn. 93.
Linnaeus observes that it is never found but where the dung of animals has lain, and conjectures that it may be only a variety of the Fountain MARSHM O S S.
Turf bogs. March—April.

T 3

4.4 HAIR-
FLOWERS INCONSPICUOUS.

414 HAIRMOSS. 1192 Polytrichum.

Barren flower on a fruit-stalk from the top of the plant.

Empal. Veil conical; generally woolly; as long as the tip.

Chive. Tip oblong; mouth fringed; covered with a circular membrane. Lid conical.

Recept. Excrecence a border under the tip.

Scalybulb. A cylindrical sheath; much shorter than the fruit-stalk.

Fertile flower on a distinguish plant.

Empal. Common, coloured; tiled; expanding in form of a little rose.

Point. Thread-shaped; jointed.

Common

HAIRMOSS. Stem simple; tip a long solid square, or parallelopipet—Veil yellow.

Commune

1. Leaves serrated.
Polytrichum quadrangularare vulgare, yuccæ foliis ferratis. Dilleniæs. 420. t. 54. f. 1.
Polytrichum vulgare et majus capsula quadrangulari. Ray’s Syn. 90.
Mufcus capillaris, seu adiantum aureum majus. Gerard. 1559.
Great golden Maidenhair.

Lesser

2. Leaves shorter and less flexible.
Polytrichum quadrangularare, juniperi foliis brevioribus et rigidioribus. Dilleniæs. 424. t. 54. f. 2.
Polytrichum montanum et minus, capsula quadrangulari. Ray’s Syn. 97.
Polytrichum aureum medium. Baub. pin. 356.

Downy

3. Leaves smaller, and terminating in fine soft hairs.
Polytrichum quadrangularare minus, juniperi foliis pilosis. Dilleniæs. 426. t. 54. f. 3.
Woods, heaths, marshy and barren ground. P. May.

1. In marshy spongy ground. 2. In wet ground on mountains. 3. In very dry sandy situations. Dilleniæs. Hence probably their different appearances.

When the Laplanders sleep all night in the woods, they make themselves beds of this moss; and the Bears collect it for the same purpose. Squirrels and birds use it in making their nests.

HAIR-
M O S S E S.

HAIRMOSS. Stem very much branched; fruit-stalks at the Mountain
ends of the branches—*Tips oval.*
Polytrichum alpinum ramosum, capsulis e summitate ellip-
tis. *Dillenius.* 427. t. 55. f. 4.
Polytrichum urnigerum, var. *Hudson.* 400.
Mountains.

HAIRMOSS. Stem very much branched; fruit-stalks from Branched
the base of the leaves—but near the ends of the branches. Tips
when ripe hanging down; hardly any Excrecence at the base.
t. 55. f. 5.

415 M A R S H M O S S. 1193 Mnium.

Barren flower on a fruit-stalk.

Empal. Veil oblong; tapering to a point; oblique; smooth.

Chive. Tip roundish. Mouth surrounded with a fringed
ring, and covered with a Lid somewhat conical.

Recept. Excrecence none.

Fertile Flower generally on a distinct plant.

Empal. Common composed of leaves disposed in form of
a flat.

Point. Many, in the centre, collected into a ball.

MARSHMOSS. Stem simple; leaves egg-shaped—Veil *yellow—
Transparent
low above, but white below.* Fertile flowers on short fruit-stalks,
at the ends of the branches.

   t. 51. f. 2.

Mnium minus non ramosum, angustioribus et pellucidis foliis,
Ray's *Syn.* 78.

Smaller, leaves much narrower.


T 4 MARSH-
FLOWERS INCONSPICUOUS.

MARSHMOSS. Stem simple, with crooked joints—Tips large; roundish; on long foot-stalks. Fertile flowers on the same plant; and sitting at the ends of the branches.

Bryum palustre, capitibus tetradibus, capulis magnis subrotundis. Dillenius. 340. t. 44. f. 2.

Marsh Bryum. Hudson. 404.


Wherever this grows, a spring of fresh water may be found without much digging.

Common Palustre

MARSHMOSS Stem forked; leaves awl-shaped—Stem purplish. Fertile stamens yellow. Tips purple, growing from the forks of the stem. Veils yellowish.

Mnium majus, ramos longioribus bisurcatis. Dillenius. 223. t. 31. f. 3. Ray's Syn. 78.


Branched

MARSHMOSS. Stem somewhat branched; upright. Fertile flowers on fruit-stalks rising from the base of the leaves.—Numerous. Hudson. 403.


In marshes.

Obs. The barren flowers do not appear to have been discovered.

Upright

MARSHMOSS. Stem branched. Barren and fertile flowers on the same plant—on fruit-stalks from the ends of the branches; upright. Fruit-stalks of the barren flowers tallish. Veils white.


Woods and moist shady places; but sometimes in dry sandy places, and heaths. March.

Yellow

MARSHMOSS. Stemless. Tips nodding; vein four edged; bent back—Tips inversely egg-shaped; bright yellow.

Bryum bulbiforme aureum, calyptra quadrangulare, capulis pyriformibus nutantibus. Dillenius. 407. t. 5v. f. 75.


Muscius capillaris, five adiantum aureum minus. Gerardi. 1559.

Polytrichon aureum minus. Park. 1052.

Yellow Bryum. Hudson. 416.

Woods, heaths, garden walks, walls, old trees, decayed wood, and where coals or cinders have been laid. April.

If the fruit-stalk is moistened at the base with a little water or steam, the head makes three or four revolutions: if the head is moistened it turns back again.

MARSH-
M O S S E S.

MARSHMOSS. Stem forked; tips upright; on fruit-Purple
stalks rising from the forks of the stem; leaves keel-shaped. Purpureum
Purple Bryum. Hudson. 412.

1. Ends of the branches star-like; fruit-stalks purple; leaves Common
sparsely-shaped; tips scored when dry.
Bryum tenue stellatum, setis purpureis. Dilleniis. 386. t. 43. f. 51.
Bryum perangustiss foliis et cauliculis, foliis et crebrioribus et
circa summitates magis congregitis, capitulis erecitis e furculis
annotinis egredientibus. Ray’s Syn. 99.

2. Ends of the branches star-like; fruit-stalks rising from near Bearded. Hud.
the root; not much longer than the branches; tips edged at
the mouth with a long tufted fringe. Leaves sparingly shaped.
Bryum unguliculatum et barbatum, tenuius et stellatum.
Dilleniis. 384. t. 48. f. 48.

the branches; tips edged with a long tufted fringe.
Bryum tenue barbatum, foliis angustioribus et rarioribus.
Dilleniis. 385. t. 48. f. 49.
Bryum perangustiss foliis et cauliculis foliis rarioribus cinetis,
capitulis erecis, e furculis annotinis egredientibus. Ray’s Syn. 99.

4. Leaves awl-shaped; distant. Fruit-stalks very long; red; Fine leaved. Hud.
tips long; scored when dry.
Bryum polytrichoides palustre, setis longioribus rubris sircleis.
Dilleniis. 387. t. 49. f. 52.
Bryum perangustiss crebrioribus foliis, capitulis erecis longi-
culcis, pediculis e furculis annotinis nascientibus. Ray’s
Syn. 99.

(t. 1.) Heath, roads, and walls. (2.) On the ground. (?.)
Loofe sandy soil, in gravelly pastures. (4.) Marshes. March,
April. Hudson. (t. 1.) January, February, April, May. Dille-
lien. (3.) Spring and Autumn. Dilleniis.

MARSHMOSS?
M N I U M?

Stem somewhat branched Lateral branches flowering at the ends. Tips upright. Leaves keel-shaped — Tips oblong; blackish.
ends of the branches star-like. From Dilleniis.
Bryum palustre brevifolium, capitulis nigriscentibus. Dilleniis.
t. 47. f. 79.
Yorkshire, in bogs.

MARSH-
FLOWERS INCONSPICUOUS.

MARSHMOSS. Tips upright; lins thread-shaped; as long as the tips—Stems upright; very short. Threads blackish purple; zigzag. Tips cylindrical; lead-coloured; Lid and Veil thread-shaped; longer and narrower than in any of the other species.

Pala Bryum. Hudfon. 409.

Red. Hud.

1. Leaves egg-shaped; of a pale green.
Bryum stellare nitidum pallidum, capsulis tenuissimis. Dil- lenius. 381. t. 48. f. 44.
Bryum trichoides exile pallidum, erectis capitulis et surculis annotinis egredientibus. Ray's Syn. 95.

2. Leaves awl-shaped, red; lins and veils rather short.
Bryum stellare lacustre foliis rubris capillaccis. Dillenius. 382. t. 48. f. 45.
Obs. This variety seems to have little affinity to the Pala Marshmoos.

(1.) Ditch banks and walls. Winter and spring. March.
(2.) In bogs on mountains. August.

Starry

10. Cirratum

MARSHMOSS. Leaves rolling back as they become dry—
Tips upright.
Starry Bryum. Hudfon. 409.

True

Bryum cirratum et stellatum, tenuioribus foliis. Dillenius.
379. t. 48. f. 48.
Bryum trichoides exile, erectis capitulis in pediculis longioribus rubris. Ray's Syn. 97.

Shirted. Hud.

2. Ends of the branches star-like; leaves very short.
Bryum perangulata et brevillimis foliis, extremitatis stellata-
is. Ray's Syn. 98.

Many-threaded? Hud.

3. Tips numerous; incorporated—Ends of the branches star-like when dry.
Bryum cirratum, fetis et capsulis brevioribus et pluribus.
Dillenius. 378. t. 48. f. 44.
Bryum trichoides erectis sublongis capitulis, extremitatis per incisatem stellatis. Ray's Syn. 98.

Obs. Is not this variety a species of the Threadmoss, and nearly allied to the Twilled Threadmoss?


MARSH.
M O S S E S.

MARSHMOSS. Leaves egg-shaped, tapering to a point; Long-leaved transparrent. Fruit-stalks rising from near the root. Tips nodding—Oblong.
  Bryum annotinum lanceolatum pellucidum, capulis oblongis pendulis. Dilleni. 399. t. 50. f. 68.
  Long-leaved Bryum. Hudson. 414.
  Woods and moist shady places. March. In summer says Dilleni.

  Rough Bryum. Hudson. 415.

  Bryum nitidum capitibus majoribus reflexis, calyptra imum virgente, pediculis oblongis et cauliculis nevis esculentibus. Ray’s Syn. 108.
  Narrow izzed.

2. With narrower leaves.
  Woods and heaths. April—May.

MARSHMOSS. Tips pendant. Leaves egg-shaped; keeled; Brilily brilily at the ends. Fruit-stalks very long—rising from near the root. Tips oblong.
  Capillary Bryum. Hudson. 414.

  Bryum capitulis reflexis, foliis latiusculis congestis. Ray’s Syn. 100.

2. Leavebroader; transparrent.
  Bryum capitulis reflexis folii sertulli laticubris et pellucidis. Ray’s Syn. 101.
  Woods and heaths in a gravelly soil. March.

  Bryum pendulum hornum molle, folii et sertellatis et gra-C reatum mineis. Dilleni. 401. t. 50. f. 70.
  Spear-leaved Bryum. Hudson. 415.

  Bryum trichoides aureum, capulis pyriformibus nutantibus. Pyrite-me Dilleni. 397. t. 50. f. 60.
  Golden Bryum. Hudson 412.
  On rocks. April—May.
MARSHMOSS. Veil woolly.—Open; larger than the tip. Shoot undivided.

Dwarf Polytricum. Hudson 400.

1. Tips roundish; leaves entire.
   Polytricum nanum, capulis subrotundis galericis, alocis folio non ferrato. Dillenius 428. t. 57. f. 6.
   Polytricum minus, capulis subrotundis, calyptra quasi lacera coronary. Ray's Syn. 91.

2. Tips oblanceolate; leaves falcate.
   Polytricum parvum, alocis folio serrato, capulis oblongis. Dillenius. 424. t. 55. f. 7.
   Moist heaths. From October to March.

MARSHMOSS. Fruit-stalks incorporated. Leaves expanding; transparent—
Thyme-leaved Bryum. Hudson 417.

1. Fruit-stalks incorporated. Leaves very entire; inversely egg-shaped; blunt; dotted.
   Bryum pendulum serpilliforme rotundiore pellucidio, capulis ovariis. Dillenius 416. t. 53. f. 81.
   Bryum nitidum serpilli rotundis et latioribus foliis pellucidis. Ray's Syn. 103.

2. Fruit-stalks incorporated. Leaves very entire; betwixt spear and egg-shaped. Tips oblong; pointed. From Dillenius.
   Bryum pendulum, serpilliforme longiore pellucidio, capulis oblongis cuspidatis. Dillenius 486 t. 53. f. 80.

3. Bryum pendulum foliis variis pellucidis capulis ovariis. Dillenius 413. t. 53. f. 79.

4. Fruit-stalks incorporated. Leaves spear-shaped; sharp; disposed in form of a rosette.—Tips egg-shaped.
   Bryum stellare rofenum majus capulis ovariis pellucidis. Dillenius 411. t. 52. f. 7.
   Bryum rofenum major, foliis oblongis. Ray's Syn. 92.

5. Smaller than the preceding; tips and fruit-stalks longer.
   Bryum stellare roficum pendulum minus, capulis et foliis longioribus. Dillenius 412. t. 52. f. 78.
   Bryum rofenum minus, foliis subrotundis. Ray's Syn. 92.

6. Fruit-stalks incorporated. Leaves oblong; waved.
   Bryum dendroides polycephalum, phyllitidis folio undulato pellucido; capulis ovariis pendulis. Dillenius 410. t. 52. f. 70.
   Bryum nitidum foliis oblongis undulatis, capulis cernuis ar-buculam referens. Ray's Syn. 103.
   Woods and moist heaths. March—April. (4. and 5. Winter Dill.)
M O S S E S.

MARSHMOSS. Leaves pointing three different ways; open; Triangular
bewixt awl and spear-shaped; keeled—Stems woolly; about the
length of one finger or longer; growing close together and forming a
Triquetrum
turf. Branches several, rising from the end of the shoot; three
square, open. Leaves small; distant; tapering to a point; when
young of a pale green, but when old brown. Fruit-stalks single,
purple; very long; rising from the end of the shoot. Tips either
upright, oblique, or pendant; very blunt at the end; yellow. Veil
awl-shaped. Fertile Flowers star-like; at the ends of the branches;
in the same plant with the barren flowers.
Triangular Bryum. Hudson 416.

1. Tips oblong, somewhat swollen. Swollen
Bryum annotinum palustre, capulis ventricosis pendulis.
Dillenius 404. t. 51. f. 72.
Bryum nitidum foliis terpilli angustioribus, majus. Ray's Syn.
102.

2. Tips oblong, narrower; branches upright, slenderer; leaves Long-stalked
more thinly fét.
Bryum lanceolatum bimum, setis et capulis longis pendulis.
Dillenius 405. t. 51. f. 73.
Bryum nitidum foliis terpilli pellucidis anguis, capulis
tumidis nutantisibus, praec. pediculis furculis anotinis egre-
dientibus. Ray's Syn. 102.

Leaves thinly fét.
Bryum palustre complicatum rubens, capulis turbinatis pen-
dulis. Dillenius 406. t. 51. f. 74.
Bryum nitidum rubens capitulis reflexis, foliis anguis pellu-
cidis, cauliculis proiferis. Ray's Syn. 102.
Bogs and marshes. April.

MARSHMOSS. Leaves pointing from two opposite lines; Fern
very entire; Fertile flowers on short fruit-stalks, at the ends of the
branches.

Mniun trichomanis facie, foliulis integris. Ray's Syn. 79.
Dillenius 230.
Wet shady places. February—March.

MARSHMOSS. Leaves pointing from two opposite lines; Forked
cloven.—Fertile flowers on short fruit-stalks, at the ends of the
branches.

Mniun trichomanis facie, foliulis bifidis. Ray's Syn. 79. Dill-
lenius 277. t. 31. f. 6.

MARSH-
FLOWERS INCONSPICUOUS.

MARSHMoss. Leaves pointing from two opposite lines, with little ear-like appendages underneath—Leaves alternate; transverse; somewhat egg-shaped; smooth; embracing the stem.

Lichenastrum alpinum purpureum foliis auritis et cochleariformibus. Dilleniis 459. t. 69. f. 1.

Lichenastrum trichomanis facie, praelongum, foliis concavis, unian parrem spectantibus. Ray's Syn. 112.

Rivulets and marshy places on mountains.

416 THREADMoss. 1194 Bryum.

Barren Flower on a fruit-flalk, rising from the end of the hoores.

EMPAL. Veil oblong; tapering to a point; oblique; mostly smooth.

CHIVE. Tip roundish, or somewhat oblong; the mouth edged with a fringed ring, and covered with a conical Lid.

RECEPT. Excrecence none.

SCALY BULB. None; but a Tubercle at the base of the fruit-flalk.

OBS. The smooth tip'd hairy; the pear-headed and the beardless Threadmoss, have no fringe round the mouth of the tip.

* Tips fitting.

Hairy

THREADMoss. Tips fitting, at the ends of the branches. Veil very small. Stem branched; Leaves terminating in hairs;—Tips indistinct by the leaves.

Red-tip

Dill. and Lin.

1. Of a dark green; tips red; oblong; mouth fringed. Spagnum subhirsutum obscurc virvens, capulis rubellis. Dill. 245. tab. 32. fig. 4.

2. Leaves membranaceous at the ends. Tips greenish, or yellowish; nearly round, but flattened at the top. Mouth not fringed. Spagnum nodosum hirsutum incanum. Dilleniis 246. t. 32. f. 5.

Spagnum cauliferum et ramosum fashabile hirsutum incanum capitis virenthibus. Ray's Syn. 105.

OBS. In Dilleniis's figure there is no appearance either of a Veil, or Fringe round the mouth of the Tip. May not this variety therefore be really a species of Bogmoss as Dilleniis has described it?


THREAD-
M O S S E S. 671

THREADMOSS. Tips mostly fitting; dispersed over the Scored branches. Veils scored, or covered with hairs pointing upwards—Nearly allied to the HAIRMoss, but has no excrecence un- Striatum der the tip. Stem branched.

Tree Polytrichum. Hudon 401.

1. Tips fitting, at the ends and sides of the branches. Leaves Greener awl-shaped.
   Polytrichum bryi ruralis facie, capsulis fissilibus majus. Dil- 
   lenius 430. t. 55. f. 8.
   Polytrichum capsulis subrotundis pediculis brevissimis insigni- 
   tibus, calyptra friata, arboreum ramolium, majus. Ray's Syn. 91.

2. Tips fitting, at the ends and sides of the branches. Leaves Lower egg-shaped. Smaller than the preceding.
   Polytrichum bryi ruralis facie, capsulis fissilibus minus. Dil- 
   lenius 431. t. 55. f. 8.
   Polytrichum capsulis subrotundis, pediculis brevissimis in- 
   sidentibus, calyptra friata, arboreum et terresire minus ramofum 
   et breve. Ray's Syn. 91.

3. Tips fitting, mostly at the ends of the branches. Leaves Slender bentwixt egg and spear-shaped.
   Polytrichum capsulis fissilibus, folis brevisibus, rectis, ca- 
   rinatis. Dillenis 432. t. 55. f. 10.

4. Tips on short fruit-flanks, mostly from the ends of the branches. Curled veils pointed and exceedingly hairy. Leaves awl-shaped and curled when dry.
   Polytrichum capillaceum crispum, calyptra acutis pilossimis. 
   Dillenis 433. t. 55. f. 11.
   Polytrichum capsulis oblongo rotundis, calyptrae pilossimis. 
   Ray's Syn. 91.

(1. 2.) Rocks. (2.) Trees, stones, walls and earth. (4) Woods.
February—March.

** Tips on fruit-flanks upright.

THREADMOSS. Tips upright; spherical—brown. Leaves Round-headed bristle-shaped; Fruit-flanks solitary; purplish towards the lower part. Veil very sharp; small; oblique; red. Pomiforme

Bryum capillaceum, capsulis sphæricis. Dillenis 339. tab. 44. fig. 1.

Bryum trichoides virescens, ereslis majusculis capitulis ma-

iliofinibus. Ray's Syn. 97.

On heaths and sandy banks. March.

THREAD-
FLOWERS INCONSPICUOUS.

THREADMOSS. Tips upright, inversely egg-shaped; veils awl-shaped; shoots without items; leaves egg-shaped, without hairs.

Bryum serpillifolium pellucidum, capsulis pyriformibus
Dilleniis. 343. tab. 44. fig. 6.
Bryum parvum erectis pyriformibus majusculis capitulis, foliis serpylli pellucidis. Ray's Syn. 92.
Sandy meadows and ditchbanks. March.
Obs. The mouth of the tip does not appear to be fringed from Dilleniis's figure.

THREADMOSS. Tip upright; oblong; smaller than the veils which is flexible; and equal at the base, and cut into six segments which are bent inwards.

Bryum capsulis longis subulatis. Dilleniis 350. tab. 45. fig. 10.
Bryum erectis longis et acutis falcatis capitulis, calyptra subfusca, foliis serpylli pellucidis. Ray's Syn. 92.
Woods and moor ditch-banks. March. (Jan.—Feb. Dill.)

THREADMOSS. Tips nearly upright. Leaves bent back. Tips bent like the claw of a bird. Leaves terminating in hoary hairs.
Bryum ruralis unguiculatum hirsutum elatus et ramosius. Dilleniis. 352. tab. 45. fig. 19.
Bryum majus erectis falcatis capitulis, foliis latiusculis extantibus, in pilum canescentem dextroturbis. Ray's Syn. 94.
Walls, roofs, and trunks of trees. March.
When this takes to grow upon thatched buildings so as to cover the thatch, instead of lulling but about ten years it will endure for an age.

Bryum minus erectis minus falcatis capitulis, foliis latiusculis congeulis in plum canececentem definentibus. *Ray’s Syn.* 94.

Roofs, tiles, stones, and walls. Nov.—March.

THREMOSS. Tips upright. Leaves not hairy; trans- Ground parent; nearly straight. Shoots mostly simple, growing close together, and forming a turf.—Green. From Dillenius. Bryum humile, pilis carens, viride et pellucidum. *Dillenius* Dill. 356. tab. 45. fig. 15.


THREMOSS. Tips nearly upright. Fruit-stalks incor- Broom porated. Leaves pointing one way; bowed back; item de- Scoparium clining.—Bryum reclinatum, foliis falcatis, scoparum effigie. *Dillenius.* 357. tab. 46. fig. 16.


Heaths, woods, and shady banks. March—April.

THREMOSS. Tips nearly upright. Fruit-stalks mostly Curved single. Leaves spear-shaped; keeled; waved; expanding; serra- Undulatum rated.—Tips redifus. Bryum phyllitidis folio rugoso acuto, capulis incurvis. *Dill.* 350. tab. 46. fig. 18.


**Vol. II.**

**U**

**THREAD-**
FLOWERS INCONSPICUOUS.

THREADMOSS. Tips rather upright. Leaves bowed back; sharp. Stem hairy.

1. Leaves bowed back. — Tips brown.
   Bryum palustre pellucidum, capitulis et foliis brevibus recurvis. *Dillenius* 364. tab. 46. fig. 23.

2. Leaves bent back.
   Marshes and moist shady places.

THREADMOSS. Tips upright. Lid needle-shaped. Leaves upright; some of them pointing one way—Bristles yellow; Veils very sharp; Lid long and slender like a needle. Tips mostly rising from short lateral branches.
   Bryum montanum hemiheterophyllum, operculis acutis. *Dillenius* 366. tab. 46. fig. 25.
   *Ray’s Syn.* 94.
   On mountains. August.

THREADMOSS. Tips upright; leaves bristle-shaped; fruit-stalks zigzag.

1. Bryum pilolum molle, fetis intortis. *Dillenius* 373. t. 47. f. 3.
   On rocks.

THREADMOSS. Tips upright; leaves bristle-shaped; pointing one way—Very long. Tips roundish.


2. Leaves curled inwards; in distinct tufts; shorter. Tips oblong.
   Bryum pilosum interrupte falcatum. *Dillenius* 376. tab. 47. fig. 38.
M O S S E S.

THREADMOSS. Tips upright; leaves bristle-shaped, with twisted out hairs, twisted back when dry.—Fruit-stalks purplish; tips ovate, oblong, with a crest of tomentous hairs.

Bryum cirratum, setis et capitulis longioribus. Dilleniis 37. tab. 48. fig. 40.

Bryum trichoides longifolium crassiusculis cauliculis, capitulis erectis aduncis acutis. Ray's Syn. 98.


THREADMOSS. Tips upright. Mouth not fringed. Beards of leaves keeled; open. Hudson 409.—Rising from near the ends of the branches.

Bryum tenue, imberbe et pallidum, foliis crebrioribus. Dilleniis 382. tab. 48. fig. 45.

Bryum perangustis folis et cauliculis, foliis crebrioribus, et circa extremitates magis congestis; capitulis erectis, ad summatam magis esquemmentibus. Ray's Syn. 99.

On sandy and gravelly places, ditch-banks and walls. March.

(Winter Dilleniis.)

THREADMOSS. Tips upright; oblong; on fruit-stalks rising Bird's-claw from the base of the leaves; leaves upright, pointed, keeled.—Of a yellowish green. Stem upright somewhat branched. Fruit-stalks short, rising from the base of the leaves, (but at the ends of the branches) Hudson 410.—Tips upright but the veins oblique, which gives it some resemblance to the claw of a bird. Mouth of the tip edged with a tufted fringe.

Bryum unguiculatum et barbatum, surculis in summitate crebrioribus. Dilleniis 383. tab. 48. fig. 47.


On walls and sandy places. March.

THREADMOSS. Tips upright; roundish; ending in a Brown sharp point.—When the lid falls off the tip appears lopped; inversely egg-shaped, and of a yellowish red.


Bryum exiguum erectis parvis subrotundis creberrimis capitulis rufis, foliolis ferspilli angustis pellucidis. Ray's Syn. 94.

2. Tips larger; brownish.

Bryum parvum erectis subrotundis majusculis capitulis subfuscis, foliis ferspilli pellucidis. Ray's Syn. 93.

Meadows and pastures. February.
FLOWERS INCONSPICUOUS.

Hasselquist observing this plant growing in great abundance upon the walls of Jerusalem, conjectures it may be the Hyssop of Holy Writ, wherein Solomon is said to have known all plants, from the Cedar of Lebanon even unto the Hyssop, that growth upon the wall.

**Green Viridulum**

THREADMOSS. Tips upright; egg-shaped. Leaves spear-shaped, tapering to a point, open but somewhat tailed.—*Of a bright green.* Tips yellowish; fringed. Leaves somewhat curled when dry.

Bryum capillaceum breve, pallide et late virens, capulis ovatis. *Dillenius.* 380. tab. 48. fig. 47.


Sandy ditch-banks, and sides of hedges, and on moist heaths. Dec.—Feb.

**Dwarf Paludofum**

THREADMOSS. Without any stem. Leaves bristle-shaped. Tips very blunt; somewhat expanding.—*Roundish; brown; leaves not curled when dry.* Extremely small if not the smallest of all the Mosses.

Bryum trichoides acaulon palustre minimum, fetis et capulis brevissimis. *Dillenius* 387. tab. 49. fig. 53.

Marches. March.

**Heath-leaved Ericafoium Dill.**

THREADMOSS. Without a stem. Leaves awl-shaped; blunt; open. Tips oblong; upright.—*Covered with a pointed Lid, and edged at the mouth with a long upright tufted fringe.* From Dillenius.

Bryum acaulon, ericae tenuifolii. *Dillenius* tab. 49. fig. 53.


**Woolly Hypnoides**

THREADMOSS. Tips upright. Shoot nearly upright. Lateral branches short; bearing flowers.—*Tips covered with a Lid, mostly pointed and edged at the base with little teeth.*

1. Tips small; fruit-stalks short. Stem not much divided. Lateral branches numerous; leaves ending in a woolly hair.

Bryum hypnoides polycephalon lanuginosum montanum. *Dillenius* 372. tab. 47. fig. 32.


**Small-headed Hud.**

2. Tips small; fruit-stalks short. Stem pretty much branched; branches long; nearly of an equal length; bearing flowers at the ends. Leaves awl-shaped.

Bryum hypnoides alpinum fetis et capulis exiguis. *Dillenius* 370. tab. 47. fig. 29.

3. Tips
M O S S E S.

3. Tips large; pointed; lids entire at the base. Stem branched. Green
Leaves ending in a short woolly hair; green.
Bryum hypnoides hirtutie virensens fasciculare alpinum.
*Dillenius* 370. tab. 47. fig. 28.

4. Tips long; mouth edged with a long tufted fringe; on long *Heath-like*
fruits-stalks rising from the upper part of the shoot. Shoot not
much branched. Leaves betwixt awl and egg-shaped.
Bryum hypnoides ericeae facie, capulis barbatis alpinum.
*Dillenius* 371. tab. 47. fig. 31.

Bryum hypnoides capitulis plurimis erectis, non lanuginosum.
Ray's Syn. 478.

5. Tips large; lids blunt at the end. Shoot branched. Leaves *Blunt-tipped*
awl-shaped.
tab. 47. fig. 50.

6. Tips rather large. Shoots mostly branched; but sometimes *Common*
simple. Leaves awl-shaped; ending in a woolly hair.
Bryum hypnoides, hirsute canicicens, vulgare. *Dillenius* 368.
tab. 47. fig. 27.

Bryum trichoides erectis capitulis, lanuginoso. Ray's Syn. 97.

leaves egg-shaped sharp.
Bryum hypnoides aquaticum calyptris nigris aculis. *Dillenius*
36. tab. 46. fig. 26.

Bryum hypnoides repens aquaticum, erectis capitulis acutis.
Ray's Syn. 94.


Oss. Future observation may determine whether several of these
are not distinct species—The fourth and fifth will probably prove so.

THREADMOSS. Tips upright; fruit-stalks crowding together when dry. Leaves hairy. Shoots all of the same height. *Verticillatum*
Leaves as if surrounding the stem in whorls.

1. Bryum pilosum verticillatum. *Dillenius* 374. tab. 47. fig. 35. *Common*

2. Leaves not in whorls; branches longer; of a bright green. *Bryomoss*
Bryum pilosum, Sphagni subulati facie. *Dillenius* 374. tab. 47. fig. 34.

Mountains and rocks.

U 3 THREAD
FLOWERS INCONSPICUOUS.

THREADMOSS. Tips upright, roundish; growing from the base of the leaves or branches. Leaves awl-shaped; distant.—Stem forked. Fruit-stalks sometimes rising from the divisions of the stem, and sometimes from the ends of the branches.

Bryum palustre ælívum conservæ facie. Dilleniús 375. tab. 47. fig. 36.
Bryum angustissimis fóliis crebráloribus, capítulis erectís brevibus pedículis e fúrculis novís et longís enaffectibus. Ray’s Syn. 91.
Bryum palustre. Hudson. 411.
Marthes. March.

Obs. This seems to have no small affinity to the slender, and fine-leaved purple MARSHMOSS.

THREADMOSS. Tips nearly upright; two growing together. Shoots forked—Tips at the ends of the branches; flowered when dry. Lids short. Blunt. From Dilleniús.

Bryum parvum, fúrculis et fótiis gerninatis. Dilleniús tab. 49. fig. 50.
On hedges in gardens, and on walls. Feb—March.

* * * Tips pendant.

THREADMOSS. Tips pendant; shoots cylindric, tiled, smooth.—Silvery; Leaves minute, numerous, triangular, compact; terminating in a short hair; Tips blackish; Lid short. Fruit-stalks rising from the base of the shoots.

Bryum capítulis subrontidis reflexís, caulículis terétibus argenteís. Ray’s Syn. 100.

2. Shoots green; leaves egg-shaped; keeled—Some of the branches with fibril-like extremities.—2. Whether it may not be a species of Marshmoos?

Bryum pendulum, fúrculis terétibus viridíbus. Dilleniús 394. tab. 50. fig. 62.
Roofs, walls, (1) sunny exposures) (2 garden walls. Dec.

THREADMOSS. Tips roundish, fruit-stalks bent back. Leaves hairy.—Fruit-stalks green, short, crooked, so that the tips almost touch the leaves.

Bryum orbiculare pulvinárum hirsútæ canecens, capítulis immersís. Dilleniús 395. tab. 50. fig. 65.
Bryum trichóides hirsútæ canecens, capítulis subrontidis reflexís, in perbrevibus pedículis. Ray’s Syn. 100.
Walls and tiles of houles. April.

THREAD-
Mosses.

Threadmoss. Tips pendant. Leaves spear-shaped, matted tapering to a bristly point. Fruit-stalks extremely long.—From the base of the shoots red about half way up; of a yellowish green above.

Bryum pendulum ovatum caespiticium et pilosum, feta bicolori. Dillenius 396. tab. 50. fig. 66.

Bryum trichoides capitulis reflexis, pediculis ima mediate rubris, summaluteo-virentibus. Ray's Syn. 100.

Old walls, roofs, and gravelly places. March. (Winter and spring. Dill.)


Bryum trichoides late vires, capitulis cernuis oblongis. Dill Dillenius tab. 50. fig. 61.

Woolwich-heath, and Snowdon. Spr. and Sum. Dill.

Threadmoss. Tips pendant; somewhat globular. Shining Leaves sharp alternate—transparent. Tips pale red, or flesh-coloured.

1. Bryum lanceolatum pellucidum. capitulis rotundis pendulis, Fleabo-coloured carneis. Dillenius 400. tab. 5. fig. 60.

Bryum nitidum, foliis serpillis pellucidis angustioribus reflexis; capitulis subrotundis carneg coloris. Ray's Syn. 102.

2. Tips green.

Bryum nitidum perangustis serpillinis pellucidis foliis, reflexis capitulis subrotundis virentibus. Ray's Syn. 102.

Wet places; drains in meadows. March.


Bryum hypnoides pendulum sericeum, coma insigni atrotubente. Dillenius 394. tab. 50. fig. 64.

On the ground, upon rocks.

Threadmoss. Tips nodding, oblong. Leaves awl-shaped. Stem undivided; fruit-stalk rising from the middle of the stem.—Tips red.

Bryum rubrum. Hudson 413.

Bryum trichoides, capitulis rubris cernuis. Dillenius 390.

t. 50. f. 59.

In gravelly places. Wint.

U 4

417 Feather-
FLOWERS INCONSPICUOUS.

417 FEATHERMOSS. 1195 Hypnum.

Barren Flower on a fruit-stalk, rising from the sides of the floots, and from the base of the leaves.

PECTAL. Vent oblong; smooth; oblique.
CHIVE. Tip rather oblong; Mouth fringed; covered with a Lid; tapering to a point.
RECEPT Excrecence none.
SCALY BULB. Scaly on the sides of the floots, surrounding the base of the Fruit-stalk.

Fertile Flower on the same plant, at the base of the leaves.

PECTAL. Common, none.
POINT. Little feather-like floots rising single from the base of the leaves.

* Leaves winged.

Yew-leaved

1 Taxifolium

FEATHERMOSS. Leaf very simple; winged; spear-shaped. Fruit-stalks rising from the base.—Tip oblong; drooping.

Hypnum taxiforme minus, basi capitulitera. Dillenius. 262. t. 34. f. 1.

Hypnum repens filicifolium non ramosum, pediculis brevioribus ad radicem egredientibus. Ray's Syn. 88.


Double-rowed

2 Denticulatum

FEATHERMOSS. Leaf simple, winged; with a double row of little leaves on each side.—Fruit-stalks rising from the base.

Hypnum denticulatum pinnatum, pinnulis duplicatis recurvis. Dillenius. 266. t. 34. f. 5.

Hypnum repens filicifolium non ramosum, pediculis et capitulis longioribus ad radicem egredientibus, foliis utrinque duplicatis. Ray's Syn. 88.

Woods, and moist shady places on the ground. April.

Fern

3 Bryoides

FEATHERMOSS. Leaf very simple; winged; spear-shaped. Fruit-stalks rising from the end.—This Moss is small, but extremely elegant. The tips are crowned with a lid of a lively red, and edged at the mouth with an elegant fringe of the same colour.

Hypnum taxiforme exiguum, versus tummitatem capituliterum. Dillenius. 262. t. 34. f. 1.

Hypnum repens filicifolium non ramosum, pediculis brevibus versus foliorum tummitatem egredientibus. Ray's Syn. 88.

Shady places and ditch-banks. Feb. (Wint. and Spr. Dill.)

FEATHER-
M O S S E S. 681

FEATHERMOSS. Leaf winged; branched; trailing. Little leaves sharp. Fruit-flasks rising from the middle. *Huds.

Hypnum denticulatum pennatum, pinnulis simplicibus rectioribus. *Dillenius 264 t. 34 f. 6.


Woods; at the roots of trees, and moist shady places on the ground. April.

FEATHERMOSS. Leaf winged; branched; upright. Upright Fruit-flasks rising from the middle.—

Hypnum taxiforme palustre ramosum majus et erectum. *Dill, Adiantoides 264 t. 34 f. 3.


In marshy grounds near water. March.

FEATHERMOSS. Leaf winged; branched; little leaves flat; sharp; folded; compressed.—*Gloey. Tips egg-shaped. Complanatum

1. Hypnum pennatum compressum et splendens, capulis ovatis. *Fern

*Dillenius 268 t. 34 f. 7.


2. Little leaves blunt; resembling Maidenhair. *Maiden-hair.

Hypnum pennatum trichomanoides, splendens ramosum. *Huds.

*Dillenius 269 t. 34 f. 8.


On trunks of trees, and (2) sometimes on the ground. Mar. —April.

* * Shoots straggling.

FEATHERMOSS. Shoots branched; branches somewhat shining winged. Little leaves dotted—*Gloey; egg-shaped.

Hypnum pennatum aquaticum lucens, longis latiflue foliis. *Lucens

*Dillenius 270 t. 34 f. 10.


On shady places, and in ditches.

FEATHER-
FLOWERS INCONSPICUOUS.

FEATHERMOSS. Shoots branched; branches somewhat winged. Little leaves waved and folded,—sharp at the ends. Tips oblong, point of the axis brownish yellow. Fruit-flasks longer than the branches.

Hypnum pennatum undulatum, Lycopodi in staris spinul. 
Biilieiuim 271. t. 56. f. 11.

Hypnum repens crispm, cauliculis compressis, Lycopodi in morem per terram spinulis. Ray's Syn. 88.

In woods and shady ditches. May.

FEATHERMOSS. Shoots branched; branches somewhat winged; little leaves waved; flat,—blunt at the ends. Tips roundish. Fruit-flasks shorter than the branches.

Hypnum pennatum undulatum crispm, fets et capsulis brevibus. 
Biilieiuim 273. t. 36. f. 12.

Hypnum repens crispm raminulis compressis, filicinorum more diffusis. Ray's Syn. 80.

Rocks, chalk-hills, and on the banks of the Thames. Mar.

FEATHERMOSS. Branches straggling; bowed backwards. Leaves egg-shaped; bent back; expanding.—If a pale green.

Hypnum vulgare triangulum, maximuin et pallidum. 
Dill. 297. t. 38. f. 28.

Hypnum repens, triangularibus majoribus et pallidioribus foliis. 
Rav's Syn. 80.

Woods and hedges. Feb.

FEATHERMOSS. Shoots straggling; very much branched; branches thread-shaped. Tips oblique—Lid, pointed.

Hypnum sericeum ramo situs et tenuis capsulis acuminatis. 
Dill. 397. t. 42. f. 52.

Hypnum repens trichoide terrestris, priori viridis et minus, capsulis cernuis minus tumidis. Ray’s Syn. 84.


On trunks of trees; bones; and rotten-wood. Feb.
FEATHERMOSS. Branches straggling; partly creeping. Toothed
leaves egg-shaped; sharp; pointed; tiled.—Veil long, shining. Lid blunt.
1. Hypnum dentatum vulgarissimum, operculis obtusis. Dill. 12
Rutabulum
90. t. 38. f. 23.
Hypnum repens triangularibus angustioribus foliis. Ray's
Syn. 80.
2. Lids pointed and hooked like the beak of a bird.
Hypnum vulgare dentatum, operculis cuspidatiss. Dilleni
207. t. 38. fig. 30.
Hypnum repens, triangularibus minoribus foliis pediculis
et capitulis brevioribus et tumidioribus, minus. Ray's Syn. 80.
3. Short; upright. Leaves short; narrow; set close together. Marsch?
Ray.
Hypnum palustre erectum breve, foliis brevibus angulis
stenibus conflentis. Ray's Syn. 83.
Oss. Are not the two latter varieties distinct species?
Woods, (1 2) and hedges; about the roots and trunks of

FEATHERMOSS. Branches straggling; shoot trailing. Butchers-
Leaves egg-shaped; blunt; tiled—keeled. Tips roundish; oblique. Broom
Lids pointed; somewhat hooked. Branches mostly upright; some-
what cylindrical. From Dilleni. 13
Ruficifolium
Hypnum folius rufiformibus, capsulis subrotundis. Dilleni
1. 38. f. 31.
In rivulets and waters in Yorkshire. Dill.

FEATHERMOSS. Shoots straggling; trailing. Leaves yellow
Hypnum fertileum, furculis longioribus et rectioribus, capsulis
incurvis. Dilleni 325. t. 42. f. 00.
Chalk hills. Jan.—Feb.

FEATHERMOSS ?

HYPNUM ?

Branches straggling, either floating or ascending. Leaves awl-
shaped; open.—No flowers appear to have been discovered, but
Dillenius has arranged it as a species of the Feathermosf. From
Dilleni.

Hypnum erectum, aut fluitans, foliis oblongis perangustis
acris. Dill. t. 38. f. 33.
In the bogs in Ireland. In a ditch going to Marlton near

* * * Shoott
FLOWERS INCONSPICUOUS.

* * * Shoots winged.

FEATHERMOSS. Shoots winged; little branches distant; leaves tiled, bent inwards; sharp—pointing one way.


2. Leaves narrower, mostly straight; in some of the branches pointing one way.


_Brown._ Hod.

2. Tips bowed inwards.

_Hypnum repens trichoides palustre vernum fuscum capitulis oblongis incurvis._ _Ray's Syn._ 85.

_Weat._ marshy places. March. (1) Sum. (2) early in the Spr. _Dill._

PROLIFICOUS 17

_Proliferum._

FEATHERMOSS. Shoots prolificous; nearly flat and winged; fruit-stalks incorporated—This species is of a very singular structure, one shoot growing out from the center of another. Veil yellow shining. Lid with a kind of long bill. Leaves not shining, sometimes of a yellowish, and sometimes of a deep green.

_Hypnum f lineatum, tamarisci folii minoribus non splendentibus._ _Dillenius._ 276. t. 35. f. 14.

_Hypnum repens f lineatum minus, luteo-virens._ _Ray's Syn._ 86.

_Woods and heaths._ Feb. _Hud._ (Aut.—March and April. _Dill._)

This Moss covers the surface of the earth in the thickest woods through which the sun never shines, and where no other plant can grow.

PROLIFICOUS 18

_Parleicum._

FEATHERMOSS. Shoots nearly flat and winged, undivided for a considerable length; fruit-stalks incorporated._Leaves shining. The old shoots do not branch out into new shoots as in the preceding species.

_Hypnum f lineatum tamarisci folii majoribus splendentibus._ _Dillenius._ 276. t. 35. f. 14.

_Hypnum repens f lineatum, velutii spicatum._ _Ray's Syn._ 86.

_Matucus f lineatus major._ _Gerard._ 1591. _Park._ 1599. _Baub._

_Pun._ 519.

_Woods and dry places._ March.

Both this and the preceding species are used to fill up the chinks in the walls of wooden houses.

FEATHER
MOSSES.

FEATHERMOSS. Shoots somewhat winged; drooping. Trailing. Little branches remote; leaves egg-shaped; tips on crooked fruit-stalks.—

_Hyphnum fuscum, triangularebus parvis foliis, praetorgunc._

_Ray’s Syn. 80. Dilleniis. 278. t. 35. f. 15._

Trunks of trees: rotten wood; and on the ground. Feb.—March.

FEATHERMOSS. Shoots winged. Little branches near Crested together; bent back at the ends—shining; yellowish.

_Hyphnum fuscum, cristanum calletemeae presentans._ Dill. Crita Castrensis 284. t. 36. f. 20.

Mustus fuscifolius luteus, folio crasso et undulato. _Ray’s Syn._ 86. sub num. 32.

On walls and chalk cliffs.

FEATHERMOSS. Shoots winged; compressed. Leaves Shrubby sharp; bowed inwards; tips nearly upright, egg-shaped.—Leaves shining, Hudson 423.

_Hyphnum fuscum, sfericum, molle et pallidum mucronibus._

_Hod._ aduncis Dilleniis 280. t. 36. f. 22.

On sticks and roots in woods. April.

FEATHERMOSS. Shoots winged; somewhat cylindrical; Fir remote; unequal.—Leaves egg-shaped yellowish. Fruit-stalks from the middle of the rib of the shoot: single; purple; straight; as long as Abietinum the shoot. Veil upright; awl-shaped; pale. Tips yellowish; red, more bowed in than any of the rest; edge of the mouth entire, with a short open fringe within.

_Hyphnum lutecens, alis fabulatis tenacibus._ Dilleniis 280. t. 35. f. 17.

_Hyphnum repens fuscinum trichoides montanum, ramulis terribus fuscifolius, non divisis._ _Ray’s Syn._ 50.

On hills.


_Hyphnum repens fuscinum plumosum._ _Ray’s Syn._ 50. Dilleniis 280. t. 25. f. 16.

Trunks and roots of trees, brick-walls and tiles.
**FLOWERS INCONSPICUOUS.**

* * * Leaves bent back.

**FEATHERMOSS.** Shoots somewhat winged. Leaves pointing one way; bowed back; awl-shaped towards the points.—


   In woods, at the roots of trees. Feb.

**Hooked**

**Aduncum**

**FEATHERMOSS.** Shoots nearly upright; somewhat branched. Leaves pointing one way; awl-shaped; bowed back; branches hooked at the ends.

   Marshy places. May.

**Scorpion**

**Scorpioides**

**FEATHERMOSS.** Branches straggling; trailing; bowed back; leaves pointing one way, tapering to a point.—Branches brown; hooked; and yellow at the ends.

   Marshes.

**Threadmoos.** Shoots creeping. Branches straggling; cylindrical. Leaves expanding; tapering to a point.—Tips and branches upright.

   Stumps of trees; heaths, and chalk hills. March.

**Common**

**Squarrosum**

**Larger**

**Smaller**

**FEATHERMOSS.** Branches straggling. Leaves spear-shaped, keeled, and almost folded; pointing five different ways, bent back.—Branches scurfy all over.

   Moir's Meadows.
M O S S E S.

FEATHERMOSS. Shoots creeping, branches crowded; Marsh upright. Leaves egg-shaped; pointing one way. Tips nearly 29 upright.—
Hypnum heterophyllum aquaticum, polycephallum, repens. Dillenius 293. t. 37. f. 27.
Hypnum repens filicifolium ramosum ramulis surrectis et minus complanatis. Ray's Syn. 87.
Banks of rivers. Jan.—Feb.

FEATHERMOSS. Shoots taking root. Branches straggling; Ground upright. Leaves pointing one way. Tips roundish—
Hypnum repens, furculis magis erectis, folis reflexis longioribus cinchis, operculo capituli magno. Ray's Syn. 52.
On hills.

*** *** Shoots shrub-like; or the branches collected into bundles.

FEATHERMOSS. Shoots upright. Branches in bundles, Tree terminating; the shoot rather simple. Tips upright.—Leaves
yellowish; fiding.
Hypnum dendroides fericum, fetis et capsulis longioribus erectis. Dillenius 213. t. 40. f. 48.
Hypnum erectum arbusculum referens, ramulis subrotundis, confertim nascientibus. Ray's Syn. 81.
Moist woods. March.

FEATHERMOSS. Shoot upright. Branches in bundles; Foxtail terminating the shoot; sub-divided; tips rather nodding.—In 32 this species the stem-leaves stand open, but in the preceding they lie Alopecurus clave to the stem. Leaves dark-green.
Hypnum dendroides obscurius, fetis et capsulis brevioribus
mutanibus. Dillenius 215. t. 41. f. 49.
Hypnum palustris erectum, arbusculam referens, ramulis sub-
rotundis. Ray's Syn. 81.
Woods, and moist shady places at the roots of trees. April.

*** *** Shoots nearly cylindrical.

FEATHERMOSS. Shoots straggling; cylindrical. Leaves Pendulous egg-shaped; sharp; open. Tips pendant.
Hypnum dentatum curtipendulum, vitriculis rigidis. Dillenius Curtipendu-
lum 353. t. 42. f. 60.
Hypnum arboreum repens, capsulis reflexis, brevibus pedicu-
lis inadentibus. Ray's Syn. 79.
Roots of trees and stony places. February.
FLOWERS INCONSPICUOUS.

FEATHERMOSS. Shoots winged and scattered; awl-shaped. Leaves egg-shaped; blunt; approaching.—Tips oblique; on long Fruit-italks.

   Hypnum terrestre erectum, ramulis teretibus, foliis inter rotundata et acuta medio modo se habentibus. Ray's Syn. 81.

2. Branches slender and slattern; points of the leaves open.
   Hypnum cupreiforme tenuius et compressius. Dillenius 312. t. 40. f. 47.
   Hypnum longum erectum, foliis angustis caulibus appressis. Ray's Syn. 82.

   Woods and pastures. February.

FEATHERMOSS. Shoots and branches stragling; cylindrical; nearly upright; blunt.—Leaves egg-shaped; tined; sbitisfs.

Genticulated 35

Illecebrum

From Dillenius.

Hypnum cupreiforme rotundius, vel illecebræ ænumulum. Dillenius 311. t. 40. f. 46.
   Hypnum terrestre erectum, ramulis teretibus, foliis subrotundis albo-virentibus cinctis. Ray's Syn. 81.
   Heath. March, April.

FEATHERMOSS. Shoots and branches upright; cylindrical.

White 36

Albicaris

Dill.

Leaves awl-shaped; tips roundish; oblique—Leaves obtusis.

On a loose sandy soil, on heaths, and where little grass grows.

Dillenius.

FEATHERMOSS. Shoots cylindrical; branched. Leaves sharp; open; distant—Some of the shoots are very long; others not more than an inch; very slender; red. Tips red; hooked; very short.

Floating 37

Riparium

Hypnum aquaticum, flagellis et teretibus et pennatis. Dillenius 308. t. 40. f. 44.
   Hypnum ramulofum fuitans pennatum. Ray's Syn. 81.
   In rivers and on the banks of rivers. December—February.

Pointed 38

Cuspidatum.

FEATHERMOSS. Shoots scattered; the ends tapering to a point, formed by the edges of the leaves rolled inwards.—Leaves egg-shaped; open; shining; of a pale yellowish green inclined to white. Fruit-italks long. Tips oblong; oblique. Lids blunt.

Hypnum palustris extremitatis cuspidatis et pungentibus. Dillenius 300. t. 29. f. 34.
   Hypnum repens palustris, foliis triangularibus per caules expansis, extremitatis conflatas et acuminatis. Ray's Syn. 82.
   Marshy places. March.—April. (spring and summer. Dill.)

Soots
M O S S E S.

* * * * * Shoots crowded together.


Hypnum repens trichoides terrestre, luteo-virens, vulgare majus, capitulis erecis. Ray's Syn. 84.

On walls, trunks of trees and pastures. Dec.—Jan.
For a microscopic observation of its flowers, see Martyn's Philof. Trans. vol. x. p. 758.


   tab. 42. fig. 61.

Hypnum repens trichoides terrestre viridius minus, capitulis tubidioribus cernuis. Ray's Syn. 84.

2. Smaller and shorter, and of a paler green.
Hypnum repens trichoides terrestre minimum et breve, capitulis tubidioribus cernuis. Ray's Syn. 84.

Shady places and hedges. Feb.

FEATHERMOSS. Shoots creeping. Branches thread-shaped. Leaves hardly perceptible.—Tips upright, oblong; on long fruit-stalks. Serpens

Hypnum trichoides serpens, setis et capsulif longis erecis. Dillenius 329. tab. 42. fig. 64.

Hypnum repens trichoides terrestre minimum, capitulis majusulis oblongis erecis. Ray's Syn. 85.

On the ground; in hedges; at the roots of trees, on old wood, stones, and bones. April.

FEATHERMOSS. Shoots upright; branched; bent in—Squirrel-tail wards.—Fruitstalks when ripe twisted like a rope. Fertile flowers on distinct shoots. Leaves shining. Sciuroides

Hypnum arboecum sciuroides. Dillenius 319. tab. 41. fig. 54.

Hypnum trichoides erectum, ramulis recurvis, obscuri coloris. Ray's Syn. 87.

Trunks of Trees. Feb.—April.

Vol. II. X FEATHER-
FLOWERS INCONSPICUOUS.

Mousetail

43 Myosuroides

Slender

   Hypnum polyanthon, triangularibus angulis folii. Ray's Syn. 83.

   Hypnum myosuroides brevius et crassius, capsulis cernuis. Dillenius 318. tab. 41. fig. 52.

3. Branches long; thick, pointed at the ends; tips upright; lids tapering, sharp-pointed; leaves egg-shaped, blunt.
   Hypnum myosuroides crassius, capsulis erectis. Dillenius 316. tab. 41. fig. 50.
   Hypnum repens triangularibus angulis folii, ramulis subrotundis. Ray's Syn. 83.

Hooked

4. Branches slender; shining; somewhat hooked at the points. Leaves awl-shaped, hooked, mostly pointing one way. Tips upright.
   Hypnum myosuroides fericeum tenuius, capsulis erectis. Dillenius 318. tab. 41. fig. 53.

Bird'sfoot

43 Ornithopoides

44

Clavellatum

45

FEATHERMOSS. Shoots creeping. Branches in bundles; cylindrical; nearly upright. Tips upright; egg-shaped, Hudson.

Hypnum gracile ornithopoides. Dillenius 320. tab. 41. fig. 55.

On beech-trees and rocks. April. (Feb. D.i.)


Hypnum clavellatum parvum repens, fetis brevibus. Dillenius 551. tab. 85. fig. 17.

Trunks of trees and rotten wood. Dec.
M O S S E S.

** Obsolete Species.**

FEATHERMOSS. Shoot upright; somewhat branched. Woolly Leaves betwixt awl and bristle-shaped; points bowed back; — 46 Shoot yellow above, but blackish below. Flowers not discovered. *Trichoides* From Dillenius.

*Hypnum palustre erectum, coma lutea, buli nigriscante. Dilleniustab. 59. fig. 36.*

In bogs, in the northern parts of Yorkshire, and in moist places on Mount Glyder. *Dillenius.*

Oss. It seems to have a greater affinity to the Threadmoss.*

HYPNUM ?

FEATHERMOSS ? Shoots branched; somewhat winged. Leaves sharp; pointing from two opposite lines; of a jelly-like substance. — No flowers hitherto discovered. Further observation may perhaps determine whether it be a Feathermoss, Livermoss, or Jellywort.

*Tremella palustris gelatinosa tenerrima, Musci silicifolii facie. Dillenius, tab. 10. fig. 11.*

In the ditches of a field near Chichester in Suffolk, towards the last gate. June.

418 WATERMOSS. 1190 Fontinalis.

Barren Flower nearly fitting.

Emp. Veil smooth; conical; fitting.

Chive. Tip oblong; fringed at the mouth; covered with a Lid; tapering to a point.

Recept. Excrecence none.

Scalybulb. Swelling out; tilled; inclosing the tip and the veil.

Fertile Flower.

WATERMOSS. Leaves keeled; almost doubled; pointing Greater three ways; sharp. Tips on the sides of the branches.—*Stalks* Antipyratica purple.

*Fontinalis triangularis major, complicata e foliorum alis capsulari.* Dillenius 254. tab. 35. fig. 1.

*Fontinalis major, folis triangularibus complicatis capitulis in foliorum alis sefiliibus.* Ray's *Syn.* 9.

Brooks, rivulets, flow streams and ponds. P. May.

The Scandinavians line the inside of their chimneys with this to defend them against the fire, for contrary to the nature of all other Mols, this is hardly capable of burning.

X 3 WATER-
FLOWERS INCONSPICUOUS.

WATERMOSS. Leaves egg-shaped; concave; pointing three ways; sharp; often in pairs. Tips at the ends of the branches.—Leaves keeled and almost doubled; on the thicker branches in pairs.

Fontinalis triangularis minor carinata, e cymis capsumiferis. Dillenius 257. tab. 33. fig. 2.

Fontinalis minor, foliis triangularibus minus complicatis, capitulis in summis ramulis sessilibus. Ray's Syn. 70.

On the brinks and sides of rivers. P. Oct.—Nov.

Scaly

3

Squamosa

WATERMOSS. Leaves tiled; betwixt awl and spear-shaped. Tips on the sides of the branches.—Leaves shining; of a blackish green.

Fontinalis squamosa tenuis sericea atrovirens. Dilleniis 250.

Tab. 33. fig. 5.

In rivulets in mountainous countries. P. Aug.—Sept.

Feathered

4

Pennata

Common

WATERMOSS. Leaves pointing two ways; expanding. Tips on the sides of the branches—tawny yellow.

1. Leaves waved; scaly-bulb scaly.

Sphagnum pennatum undulatum, vagina squamosa. Dilleniis 250. t. 32. f. 9.

Hairy. Hud.

2. Leaves waved, scaly-bulb hairy.

Sphagnum pennatum undulatum, vagina pilosa. Dilleniis 249. t. 32. f. 8.

Flat. Hud.

3. Leaves flat.

Sphagnum pennatum planum. Dilleniis 249. t. 32. f. 7.


Obs. Are not these rather difflent species?

419 ST A R T I P. 1196 Jungermannia.

Barren Flower on a long straight fruit-stalk rising from the empanelment.

EMPAL. Scaly Bulb tubular.

BLOSS. None.

CHIVE. Tip egg-shaped; opening into four valves; expanding; equal; permanent.

Fertile Flower mostly on the same plant; setting.

EMPAL. None, at least visible to us.

BLOSS. None.

SEEDS. Roundish, either single, or set close together.

Obs. Many species of this genus are beautiful microscopic objects.
Leaves winged; pointing one way.

STARTIP. Leaves simply winged. Little leaves egg-shaped; Spleenwort
ed; somewhat fringed—Stems purple, flowering at the ends.

Lichenantrum Asplenii facie, pinnis laxioribus. Dilleniud 482.
t. 69. f. 5.

1. Little leaves distinct from each other.

Lichenantrum Asplenii facie, pinnis laxioribus. Dilleniud 482.
t. 69. f. 5.

2. Little leaves set close to each other.

Lichenantrum asplenii facie, pinnis confertioribus. Dilleniud 483. t. 69. f. 6.

Lichenantrum trichomanis facie, capitulis e foliorum summitate
eascentibus majus. Ray's Syn. 112.

Woods and moist shady places. Feb.

STARTIP. Leaves simply winged; little leaves flat, naked, Straggling
frap-shaped—Flowering at the base and midddle of the branches.

Lichenantrum trichomanis facie, e basi et medio florens. Dil-

Viticulosa

484. t. 69. f. 7.

Lichenantrum capitulis nudis, trichomanis facie, foliolis den-
sius congestis majus. Ray's Syn. 111.

Shady woods, hedge-banks, and wet places. April.

STARTIP?

JUNGERMANNIA?

Leaf simply winged; little leaves roundish; distinct—Leaf Sweet scented
mosty simple; sometimes branched; sweet-scented. Flowers not
discovered. From Dilleniud.

Lichenantrum trichomanoides aquaticum odoratum fontis S.

Sr. Winifred's well Flintshire; Dartmure in Cornwall, and
in Devonshire. Dill.

STARTIP. Leaf simply winged, flowering at the base; Manyflowered
little leaves harp. Hudson 491.—Axol-shaped; flowers numerous;
set close together.

Lichenantrum multiflorum exile, foliis angustissimis. Dilleniud Hud.
481. t. 69. f. 4.

Woods. March.

STARTIP. Leaves simply winged; little leaves very entire; Imbricated
tiled; convex—Flowers numerous, rising from the middle of the
stem and branches.

Lichenantrum trichomanis facie, polyanthemum breve et re-
pens. Dilleniud 486. t. 70. f. 9.

In wet places, and in rivulets. April.

X 3
FLOWERS INCONSPICUOUS.

Spear-leaved
6
Lanceolata

STARTIP. Leaves simply winged; spear-shaped; flowering at the ends. Little leaves very entire—of a beautiful green.
Licheniastrum trichomanis facie minus, ab extremitate florens. Dillenius 486. t. 70. f. 10.
Licheniastrum capitulis nudis, trichomanis facie, foliolis densius congelitis, minus. Ray's Syn. 112.

Cloven
* 7
Bidentata
Large.

STARTIP. Leaves simply winged; flowering at the ends. Little leaves marked at the end with two teeth.—

1. Larger; little leaves sharper and hollow.
Licheniastrum pinnulis acutioribus et concavis, bifidis, majus. Dillenius 487. t. 70. f. 11.
Licheniastrum trichomanis facie, foliolis bifidis, majus. Ray's Syn. 113.

Small, Dill?

2. Smaller; little leaves blunter. Flowers not discovered.
Licheniastrum pinnulis obtusioribus bifidis minus. Dillenius t. 70. f. 12.

Forked
8
Bicuspidata

STARTIP. Leaves simply winged; flowering in the middle; little leaves marked at the end with two teeth.—
Licheniastrum pinnulis acutissime bifidis, minimum. Dillenius 483. t. 70. f. 15.
Licheniastrum trichomanis facie, foliolis bifidis, minimum. Ray's Syn. 113.
Moist shady places. March.

Three-toothed
9
Tridentata
Dill.

STARTIP? JUNGERMANNIA?

Leaves simply winged. Little leaves marked at the end with three teeth—The lower ones somewhat serrated. Flowers not discovered. Leaf branched. From Dillenius.
Licheniastrum ramosius, foliis trifidis. Dillenius t. 70. f. 15.
Snowden. Summer. Dill.

Toothed
10
Quinquecifeneta

STARTIP. Leaves winged; branched; flowering at the ends. Little leaves marked at the end with five teeth—Shoot sometimes simple, taking root as it creeps along. The Tips appear in autumn, and bloom in the spring.
Licheniastrum multifidum majus, ab extremitate florens. Dillenius 494. t. 71. f. 23.
Licheniastrum trichomanis facie, foliolis multifidis, capitulis e funmis ramulis nascentibus. Ray's Syn. 113.
Toothed Licheniastrum.
Woods. April.

JUNGER-
**Leaves winged; little leaves covered on the upper side, with small ear-like scales.**

**STARTIP.** Leaves doubly winged above; flowering at the Eared ends; little leaves roundish; very entire; waved. —

Lichenatrum pinnulis auriculatis majoribus et non crenatis. Undulata

Dillenius 490. t. 71. f. 17.

Shady places. March.

**STARTIP.** Leaves doubly winged above; flowering at the Wood ends. Little leaves fringed —inversely egg-shaped; somewhat tiled. —


Dillenius 490. t. 71. f. 18.

Wood Lichenatrum.

Moist woods. March.
FLOWERS INCONSPICUOUS.

White Albicans

STARTIP. Leaves doubly winged above; flowering at the ends. Little leaves strap-shaped; bowed back.—
Licheniafrutum auriculatum, pinnulis anguiflis, planis, recurvis. Dillenius 492. t. 71. f. 20.
Licheniafrutum trichomanis facie, capitulis e foliorum summate enaefentibus minus. Ray's Syn. 112.
Moist woods, and shady places. March.

Trifold Trilobata

STARTIP. Leaves doubly winged underneath. Little leaves almost square; with three imperfect lobes—Rib of the leaf jointed.
Licheniafrutum pinnulis obtuse triidis nervo geniculato. Dillenius 493. t. 71. f. 22.
Wales.

Creeping Reptans

STARTIP. Leaves doubly winged underneath; taking root at the ends. Little leaves with four teeth—flowers at the base.
Tips black; flowering.
Licheniafrutum multifidum exiguum ad basin flores, per secctatam imbricatum. Dillenius 494. t. 71. f. 24.
Licheniafrutum trichomanis facie, foliolis multifidis, capitulis ex imis cauliculis nascentibus. Ray's Syn. 113.
Wet shady places. Ditch-banks. April.

Flat Complanata

STARTIP. Shoots creeping; flowering at the ends. Leaves doubly tilted with little scales underneath. Branches of an equal breadth throughout—Leaves of a yellowish green; flat.
Licheniafrutum imbricatum majus. Ray's Syn. 111.
In shady places, at the roots of trees, damp stones and walls. March—April.

Scaly Dilatata

STARTIP. Shoots creeping; flowering at the ends. Leaves doubly tilted, with little scales underneath. Branches broader towards the ends—Leaves convex, smaller, and Shoots narrower than in the preceding species.
Licheniafrutum imbricatum minus, squamis convexo-concavis. Dillenius 497. t. 72. f. 27.
Licheniafrutum imbricatum minus. Ray's Syn. 111.
Trunks of trees, and stones. March. April.

Small Minima Dill.

STARTIP. Shoots creeping, flowering at the base. Leaves doubly tilted; with little scales underneath—flat; effloresced.
Licheniafrutum imbricatum minimum, squamis planis cinereis. Dillenius t. 72. f. 28.
Bagley wood near Oxford. Dill.

STAR-
THONGS

STARTIP. Leaves tiled in a double row. The upper leaves Tamarisk circular; convex; blunt; four times as large as the other. — Tamarisci.

Lichenastrum imbricatum tamarisci Narbonensis facie. Dillenius 490. t. 72. f. 31.

Rocks and trunks of trees. March.

STARTIP. Shoots trailing; tiled underneath. Leaves Wall heart-shaped; sharp. The little scales disposed along the rib of the shoot; wedge-shaped — Leaves dark green. Platyphylla.

Lichenastrum Arboris Vitæ facie, folis minus rotundis. Dillenius 501. t. 72. f. 32.

Walls and trunks of trees. March. April.

STARTIP? JUNGERMANNIA? Arbor Vitæ

Shoots trailing; tiled underneath. Leaves heart-shaped; the little scales disposed along the rib of the shoot; awl-shaped — Arbors Vitæ leaves rather rounder than those of the preceding species. Flowers not discovered. From Dillenius.

Lichenastrum Arboris Vitæ facie, folis rotundioribus. Dillenius t. 72. f. 33.

On trees. Dill.

STARTIP. Shoots creeping; leaves doubly tiled; with Fern little scales and fringed appendages underneath — The upper leaves Ciliaris are often cloven. The under surface appears hairy from the quantity of fringe upon the little leaves and appendages.

Lichenastrum filicinum pulchrum villosum. Dillenius 503. t. 73. f. 35.

Lichenastrum filicinum crispum. Ray’s Syn. 111.

Wet mossy places near rivulets, on heaths. April.

STARTIP. Shoots nearly upright; tiled; and pointing two Upright ways. Leaves deeply divided. — The blossoming shoots are upright, and furnished with narrow leaves pointing every way. Thoæ Varia which do n’t blossom, or the fertile shoots, creep along the ground, edged with roundish leaves pointing only two ways.

Lichenastrum foliis variis. Ray’s Syn. 113. Dillenius 505. t. 72. f. 36.

Woods, heaths, and moist shady places. March.

* * * Shoots tiled on every side, little leaves scattered.

STARTIP. Shoots cylindrical. Leaves tiled on every side; Round flowers on fruit-stalks.

Lichenastrum alpinum Bryi juliacei argentæ facie. Dillenius Julacea 506. t. 73. f. 58.

Wet rocks. Aug.—Sept.

STAR-
FLOWERS INCONSPICUOUS.

Rock 28  Rupeltris

STARTIP. Shoots cylindrical. Leaves awl-shaped, pointed one way.—This plant is extremely short; blackish; nearly upright and seldom branched. Flowers on short fruit stalks.

Lichenostomum alpinum nigricans, foliis capillaceis reflexis,
Dilleniis 507. t. 72. f. 40.
Moist rocks. April—May.

Hair 29  Tricophylla

STARTIP. Shoots cylindrical. Leaves hair-like; equal.—

Flowers at the ends of the branches.

Lichenostomum trichides minimum, in extremitate flores.
Dilleniis 506. t. 73. f. 37.
Boggy Heaths.

Mountain 30  Alpina

STARTIP. Shoots cylindrical. Leaves egg-shaped; expanding; cups tilled, dark reddish colour. Valves of the tips rolled back when out of bloom.

Lichenostomum alpinum atro-rubens teres, calcicibus squamosis. Dilleniis 506. t. 73. f. 39.
Marpath places on mountains. In the hollow parts of rocks.
Sept.—Oct.

* * * * Without stems. Leaves simple.

Broad-leaved 31  Epiphylla

STARTIP. Without a stem. A little leaf growing upon the large one.—The little leaves which arise from the middle of the large one, are hooded, and contain in their cavities a little globular substance which is the pental; and round this about seven small Chives. At length the pental is furnished with a fruit stalk and then the chives fall off. Tips globular.

Lichenostomum capitulis undatis, e foliorum medio ensiformibus,
Roy's Syn. 110. Dilleniis 74. t. 41.
Lichen petraeus, caucicudo calceato. Bauh. pinn. 506.
Lichen alpigen minor, toio calceato. Park. 11
Wet sandy places near brooks, and rivers. March.

Jagged 32  Pinguis

STARTIP. Without a stem. Leaf oblong; fleshy; great to the touch.—Fruit stalks rising from the hollos of the leaf. Sheath long; cylindrical. Tips oblong. The plant which bears the Barren Flowers is much smaller and more jagged, than that which bears the Fertile ones, which grow together, and form a close upright roset.

Lichenostomum capitulis oblongis, juxta foliorum divisarum ensiformibus, Park's Syn. 110. Dilleniis 505. t. 74. f. 42.
Marshes. April.
THONGS

STARTIP. Without a stem. Leaves with doubly winged Dwarf clefts. Valves of the tips fringed at the ends with hair,—\textit{Strap.-}\textit{Lichenastrum ambrosioides divisura. Ray's Syn. 111 Dillenius} 311. t. 74. f. 43.

Woods, and moist shady places. March—April.

STARTIP. Without a stem. Leaves with doubly winged clefts. Valves of the tips entire; spear-shaped—\textit{Tips rising from the hollow of the leaf. Leaf not so finely divided as in the preceeding species. From Dillenius.} \textit{Lichenastrum chamedryos multisidæ divisura. Dillenius} t. 74. f. 44.

At the head of Elm-cragg-well under Bill-bank. \textit{Dill.}

STARTIP. Without a stem. Leaves strap-shaped; branch-\textit{Globe ed; forked at the ends and bluntish. Scaly bulb globular; edged with teeth; hairy.} \textit{Lichenastrum tenuifolium furcatum, thecis globulis pilosis. Dill.} 512. t. 74. f. 45.

\textit{Ultra saxatilis furcata, latiusculis et tenerioribus segmentis. Ray's Syn. 63.}

Wet rocky places, on the ground, and trees in woods. April.

STARTIP. Without a stem. Leaves slighly divided into Shining winged clefts. Lobes tiled. Scaly bulb plaited—\textit{The little head before it unfolds is black and nearly globular. Valves of the. Puilla wedge-shaped.} \textit{Lichenastrum exiguum, capitulis nigris lucidis, e cotylis parvis nascantibus. Dill.} 513. t. 74. f. 46.

On heaths. March—April.

430 LIVER-
FLOWERS INCONSPICUOUS.

420 LIVERWORT. 1198 Marchantia.

Barren Flower upon a long, straight fruit-falk; rising out of a little cup.

Emp. Cup, common; target-shaped; with four, five, or ten clefts; very large; target-shaped; containing under it as many florets as there are segments. Segments equal; bent downwards at the sides.

Bloss. One petal; turban-shaped; straight; shorter than the empalement.

Chive. Thread one; longer than the blossom; simple. Tip somewhat egg-shaped; opening at the top into as many segments as there are in the common empalement. Dust fixed to a little hairy lock.

Fertile Flower upon the same plant; fitting.

Emp. Cup consisting of a membraneous margin; upright; open; entire; permanent; of one leaf.

Bloss. None, unless the cup.

Seeds. Many; roundish; compressed; naked; at the bottom of the cup.

Obs. In some species the barren and fertile flowers are upon distinct plants.

Common

LIVERWORT. Common cup with ten clefts—Leaves broad; irregular; of a dusky green. A yellowish substance resembling a lock of wool proceeds from the tips, appearing to move within them when the dust is falling out.

Polymorpha

Larger

1. Lichen fontanum major stellatus æque ac umbellatus et cyathophorus. Dillenius 523. t. 76. f. 6.


Smaller

2. Smaller.

Lichen domesticus minor stellatus æque ac umbellatus et cyathophorus. Dillenius 527. t. 77. f. 7.


1. Shady moist rocks, and near springs and wells. 2. Shady garden-walks and in the interstices of walls and stomes towards the north. August.
LIVERWORT. Common cup with four divisions; sepals crofted—Florets with four divisions. Fertile flower crescent-shaped. Leaves of a fine green.

Lichen diminutus; florifer pileatus, tandem cruciatus. Dillenius. 531. t. 75. f. 5.

Lichen pileatus parvus, capitulo crucis infar, se expandente.

Ray's Syn. 115.

Shady places. July—August.

LIVERWORT. Common cup with five clefts; hemispherical. Scaly bulb none. Florets nearly globular; edged with teeth.


In wet marshy places. April—May.

LIVERWORT. Common cup somewhat egg-shaped; divided into five cells—Leaves in large clusters; indented; bluish green; with several white tubercles.

Lichen vulgariss major pileatus et verrucosus. Dillenius 516.


Lichen petraeus cauliculio pileolum fulminente. Bauh. pin. 362.

On the banks of rivulets in shady places. April.

421 VETCHCAP. 1197 Targonia.

EMPAI. Somewhat globular; with two valves.

CHIVE. Tip bell-shaped; sitting at the bottom of the emplacement.

VETCHCAP. As there is only one species known Linnaeus Dotted gives no description of it. Leaf between heart and spear-shaped. Hypophylla green at first, afterwards dark purple; blackish underneath. Flower at the end on the under side. Cup black.

Lichen petraeus minimus, fructu orobi. Bauh. pin. 352.

Lichen petraeus minimus acaulos. Park. 1315.

In mossy places.

422 HORN-
FLOWERS INCONSPICUOUS.

422 HORNFLOWER. 1201 Anthoceros.

Barren Flower sitting.

EMPAL. One leaf; somewhat cylindrical; lopped; entire.

BLOSS. None.

CHIVE. Thread none. Tip single; awl-shaped; exceedingly long; with two valves. Dust fixed to a loose hair-like receptacle.

Fertile Flower sitting, generally upon the same, but sometimes upon a distinct plant.

EMPAL. One leaf; with six divisions; expanding.

SEEDS. About three; naked; roundish; at the bottom of the empalment.

Obs. Divisions of the empalment sometimes only four, and then there are but two seeds.

HORNFLOWER. Leaves undivided, indented, dotted.—Tip an inch long. Tip and Fruit-stalk from two to three inches. Anthoceros follics minibus magis lacinias. Lith. 476. t. 68.

f. 1.

Lichenastrum gramineo pediculo et capitulo oblongo bifurco

Ray's Syn. 109.

Moist shady places and on heaths. April.

423 LEATHER CUP. 1199 Blasia.

Barren Flower.

EMPAL. One leaf; egg-shaped at the base; somewhat cylindrical in the middle; expanded towards the end, and lopped.

CHIVES. A number of little grains lying loose in the cup.

Fertile Flower.

EMPAL. Hardly any.

S. VESS. Roundish; single; buried in the leaves.

SEEDS. Several; roundish.

Obs. It is a doubt which of these is to be called the Barren and which the Fertile flower.

LEATHER-
LEATHERCUP. As there is only one species known Dwarf Lienzus gives no description of it.—Leaves in a circle, from one Pufilla to two inches in Diameter; deep purple at the base; green at the edges; jagged. Seeds so small that their form is scarce to be distinguished by the naked eye.

Minium Lichenis facie. Dill. 237. t. 31. f. 7.
On the sides of ditches and rivers in a sandy soil.

424 GRAINWORT. 1200 Riccia.

EMP. None; except a hollow bladder within the substance of the leaf.

BLOS. None.

CHIVE. Tip cylindrical; sitting on the seedbud; opening at the end.

POIN. Seedbud turbinate-shaped. Shaft thread-shaped; perforating the tip.

S. VESS. Globular; with one cell; crowned with the shrivelled tip.

SEEDS. Many; hemispherical; on little foot-stalks.

GRAINWORT. Leaves smooth; deeply divided; sharp at small the ends—Spreading on the ground.

Lichen omnium minimus, foliolis super terram expansis. Minima Ray's Syn. 115. Dillenius 534. t. 78. f. 11.
In grounds that are overflowed and on wet heaths. Nov.

GRAINWORT. Leaves smooth; channelled, with two Marsh laves—blunt at the end.

Lichen minimus, foliis venosis bifariam vel trifariam se divi- Glaucuendo progredientibus. Dillenius 535. t. 78. f. 10.

Wet commons. March.

GRAINWORT. Leaves forked; between thread and strap—Float shaped.—Lichenastrum aquaticum fluitans tenuisfolium furcatum. Dill Fluitans

latus 54. t. 74. f. 17.

Lentic palustris furcata, angustioribus et firmioribus segmentis.

Ray's Syn. 62.

In stagnant waters.

GRAINWORT. Leaves inversely heart-shaped; fringed.—Fringed Lichen parvus vermis cordiformis, in parte fimbriatus, Lentic palustris modo aquae innatans. Ray's Syn. 110. Dill. Natans

536. t. 78. f. 18.

In stagnant waters.

GRAIN-
FLOWERS INCONSPICUOUS.

GRAINWORT. Leaves inversely heart-shaped; indented; tiled.—Broader than those in the preceding species; not fringed; of a blackish green; spreading horizontally into a circular tuft. From Dillenius.


Garden gravel walks. Spring. Dill.

GRAINWORT. Leaves branched; segments indented; broader and scolloped at the ends. Hudson 441.

Lichenoides gelatinosum, foliis latioribus tuniformibus. Dill. 142. t. 19. f. 29.

On rocks.

425 CUP THONG. 2102 Lichen.

Barren Flowers numerous; residing in a receptacle which is mostly circular; very large; shining; gummy; either flat, convex, or concave.

Fertile Flowers, and Seeds like meal, scattered over the same, or a distinct plant.

This Genus is subdivided into the

A. Tubercled; or those which consist of a ground or thin crust flutted with convex receptacles, or tubercles.

B. Saucer-like; a crust flutted with concave receptacles resembles little bowls or saucers.

C. Tiled; leaves spreading flat, and closely adhering to the substance on which they grow.

D. Leafy. Leaves loose from the substance on which they grow.

F. Leatherlike. Of a substance resembling leather.

F. Soft; adhering to the substance on which they grow only in one point; and the surface as if sprinkled with foot.

G. Glass-shaped. Receptacles expanding into the form of a drinking glass.

H. Shrubby. Shooting into branches resembling a shrub.

I. Threadlike. Shooting into long thread-like branches.

Obs. Mr. Hudson calls this Genus Liverwort, but as the Marchantia of Linneus is commonly known by the name of Liverwort, it was thought better to continue the old name to this and find a new one for this.
THONGS.

A. TUBERCLED.

CUPTHONG. A whitish ground, with black branching lines Lettered resembling written characters—
Lichenoides crusta tenusitima, peregrinis velut litteris inscripta. Scriptus
Ray's Syn. 71. Dilleniis 125. t. 18. f. 1.
On the barks of trees.

CUPTHONG. A yellowish ground, with black lines resembling a map.—
Lichenoides nigro-flavum tabulae geographicæ insula pictum. Geographicus
Dilleniis 126. t. 18. f. 5.
On rocks.

CUPTHONG. A whitish ground, diversified with simple Wrinkled black lines and dots, set thick together.—
Lichenoides punctatum et rugosum nigrum. Dilleniis 125. Rugosus
18 f. 2.
Barks of trees.

CUPTHONG. A greenish ground inclining to ash colour, Black knobbed with black tubercles—Tarse; nearly globular; not fibrous; of a deep black without, burrèd within if broken.
Lichenoides leprosum, crusta cinereo-virescente, tuberculís nigrímiss. Ray's Syn. 71. Dilleniis 126. t. 18. f. 3.
On rocks and trunks of trees.

CUPTHONG. Ground brown with black tubercles—
On old walls and rocks.

CUPTHONG. Ground a clear white, with black tubercles—
Lichenoides tartareum tinctorium candidum, tuberculís atris. Dilleniis 126. t. 18. f. 8.
On lime-stone rocks.

This species is so peculiar to limestone rocks, that wherever it occurs among others, it may be distinguished at the first view by this plant growing upon it—When dried, powdered and steeped in urine it is used to dye scarlet, by the Welsh and the inhabitants of the Orkneys. The colour is said to be very fine.

CUPTHONG. A greenish ground, with orange coloured Orange tubercles. Hudson 443.
Trunks of trees.

CUPTHONG. A whitish ground, with tubercles the colour Ruddy of rusty iron. Hudson 444.
Lichenoides leprosum, tuberculís fusci et ferruginei. Dill. Ferrugineus
Hud. 126 t. 18. f. 4. f. 55. t. 8.
On the bark of trees, and stones.
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CUP—
FLOWERS INCONSPICUOUS.

CUPTHONG. A white ground, with white mealy tubercles—
On the trunk and branches of Elm and Hornbeam (Hudson) (Linnaeus.)

CUPTHONG. An ash coloured ground, with whitish wrinkled tubercles—
On Hornbeam, Ash and Hazel.

CUPTHONG. Ground a fine powdery crust; tubercles nearly globular; on fruit-stalks.—Crust of a greenish ash colour. Tubercles resembling little Musrooms, of a bluish red at the top. Fruit-stalks subitiss.
Coralloides fungiforme ex ungula equina, livide tubescens. Dill. 78. t. 14. f. 7.
Fungi parvi globosi ex ungue equino putrescente. Ray's Syn. 13. t. 1. f. 3.
In gravelly soil, and on horse-dung.

CUPTHONG. Ground a clear white, with flesh coloured tubercles,—On fruit-stalks, resembling little Musrooms, convex at the top. Fruit-stalks flesh-coloured.
Lichenoides fungiformes, crusta leprosa candida, capitulis et pediculis incarnatis. Ray's Syn. 70.
On wet heaths. October—April.

CUPTHONG. Ground brown, with brownish flat tubercles on fruit-stalks. Hudson 443.
Coralloides fungiformes, saxatilis, pallide fulvum. Dill. 78. t. 14. f. 4.
On old walls, and rocks. December—February.

CUPTHONG. A white or ash-coloured ground; covered with a number of angular smooth warts, set chequer wise, and pierced with one or two cylindrical holes.—The ground itself is thin, but the crust formed by the warts pretty thick. Warts greenish.
Lichenoides verrucosum et rugosum, cinerum, glabrum. Dill. 128. t. 18. f. 9.
Lichens verrucosus. Hudson. 445.
Walls, stones, and barks of trees.

B. Sau.
THONGS.

B. SAUCERLIKE.

CUPTHONG. A deep yellow crust, with pale yellow saucer Yellow.

   Walls and bark of trees.
   It gives a yellow colour. In Sweden they bruise it and mix it
   with fire to make yellow candles for festivals.

2. A greenish crust inclining to yellow, with deep yellow saucer Greenish. Hudson, Candelarius.
   Wall.
   Lichenoides crustosum, orbiculis et scutellis flavus. Dillenijs,
   136. tab. 18. fig. 18.
   On walls.

CUPTHONG. A greenish crust with a tinge of white; with Stonerag Yellow
   saucers white at the edge.
   Lichenoides crustaceum et leprosum acetabulis majoribus luteis,
   Tartaearum
   limbis argenteis. Ray's Syn. 71. Dillenijs, 132. tab. 18. fig.
   12.
   Welsh Liverwort.
   On rocks.
   It is common in Derbyshire, and incrusts most of the stones at
   Utwic Mere. It is gathered for the dyers, by peasants who sell
   it for a penny a pound. They can collect twenty or thirty pound
   a day. It gives a purple colour.

CUPTHONG. A whitish crust, with wan-coloured saucers. Pale

1. Saucers small, sometimes brownish, or of a lead-colour, with
   pale
   Lichenoides crustulatum orbiculare ineanum. Dillenijs, 135.
   tab. 18. fig. 17.
   Lichenoides cinereum mere crustaceum eleganter expansum.
   Ray's Syn. 71.

2. Saucers greenish, inclining to ash-colour.
   Lichenoides crustaceum et leprosum, scutellis cinereis vire-
   centibus. Ray's Syn. 71.
   Walls and trunks of trees.

CUPTHONG. A whitish crust with black saucers; the Black
   new formed ones hollow and diffused.

1. A whitish crust with black wrinkled saucers.
   Lichenoides crustaceum et leprosum, scutellis nigricantibus
   majoribus et minoribus. Ray's Syn. 71. Dillenijs 133. tab. 18.
   fig. 15.
   On trees, walls and stones.

Y 2 CUPTHONG.
FLOWERS INCONSPICUOUS.

CUPTHONG. A whitish crust, with brownish saucers and an ash-coloured margin somewhat notched.—
Lichenoides crucifolium et leprosum, scutellis subfuscis. Ray's
Sym. 71. Dillenius, tab. 18. fig. 18.
On the bark of trees, walls and rocks.

Red-spangled

CUPTHONG. A livid coloured crust, with saucers of a reddish brown, and a fine thin margin. From Dillenius.
Lichenoides taurum lividum, scutellis ruftis, margine exilli.
Dillenius, tab. 18. fig. 17.
On Pentir rocks in Wales. Dill.

Meal-spangled

CUPTHONG. An ash-coloured crust, with white flat mealy saucers. Hudson, 443.—Crust very thin, margin edged with a greenish blue stripe.
Lichenoides candidum et farinaceum, scutellis fere planis.
Dillenius, 130. tab. 18. fig. 11.
Walls, and barks of trees.

Crab's-eye

CUPTHONG. A white crust, with hollow blunt pale targets.—
Lichenoides leprosum tinctorum, scutellis lapidum cancri figura. Dillenius, 130. tab. 18. fig. 10.
Walls, rocks, and stones; at all times. Dill. On Malvern hills.

C. TILED.

CUPTHONG. Tiled: leaves with many imperfect elefts; smooth; whitish; pointing from a center. Saucers reddish brown.—Leaves greenish, saucers chestnut-coloured. Dill. It is sometimes too, of a dark chestnut with chocolate coloured saucers, but upon putting it into water the chestnut will change in a few minutes to a brownish green, or true olive, and if suffered to remain sometime longer, the chocolate saucers will turn to a bright bay, and the whole appear exactly as Dillenius has described it.—When dry, it renews its former colour.
Lichenoides imbricatum viridans, scutellis badiis. Dillenius,
So. tab. 24. fig. 75.
On large stones.

CUPTHONG. Tiled: leaves with many imperfect elefts, pointing from a center. Saucers flat; tawny,—pretty large.
Leaves of a grizzly substance. From Dillenius.
Lichenoides cartilagineum, scutellis fulvis planis. Dillenius,
tab. 24. fig. 74.
On stones, and rocks in Anglesey, and on Glyder-hill. Dill.
CUPTHONG.
THONGS.

CUPTHONG. Tiled; leaves bluntly notched; pointing Notched
from a center. Saucers notched at the edge.—Leaves left and
thin. Has somewhat of the appearance of Agaric. From Dilkeiuis. Crenulatus.
fig. 73.
On trees near Pentir and Bangor. Dill.

CUPTHONG. Tiled; leaves indented; rough; pitted. Stone
Saucers chestnut coloured.—Leaves bluish grey; black and hairy
underneath. Saucers sometimes of a blackish hue.
Lichenoides vulgari.sinniun; cinereo-glaucum, lacunosum et Blu.
cirrosum. Dilienius, 182, tab. 24. fig. 8.
Lichenoides crusta foliosa, superne cinereo-glaucu, inferne
riga et cirrofa, scutellis nigricantibus. Ray's Syn. 72.

Leaves smooth, and purplish, with larger saucers.
Lichenoides arboreum purpurascens tenue et laxe, scutellis
majoribus. Ray's Syn. 73.
On stones, and trunks of trees.
It is used by the inhabitants of the North to dye purple.

CUPTHONG. Tiled; leaves with many clefts; smooth; Purple
blunt; hoary; sprinkled with scattered rising dots;—purple.
Lichen petraeus purpureus Derbiensis. Park. 131.
Lichenoides saxatile tinctorum, folis pilosis purpureis. Ray's
Syn. 74. Dilienius, 182, t. 24. fig. 50.
Cork, or Arcell. Kenkerig Wels.
On rocks.
It dyes wool of a dull but durable crimson or purple colour.
It has been used as a dyptic.

CUPTHONG. Tiled; leaves lobed; shining; of a livid hue; Olive
—Targets orbicular; membranaceous; raised above the surface of
the leaf, and their margins unconnected with it.
Lichenoides Olivaceum, scutellis amplioribus verrucosis. Dil-
ienius, 182, tab. 24. f. 78.

1. Targets warty; larger.

2. Targets smooth.

3. Lobes broader; of a brownish green.

On rocks, and trees.
FLOWERS INCONSPICUOUS.

CUPTHONG. Tiled: leaves lobed; indented; of a bright green. Saucers reddish yellow; downy underneath.—Leaves large; broad. Saucers numerous. From Dillenius.

Lichenoides lobata virgina, scutellis fulvis. Dillenius, tab. 25. fig 18.

On the coast in Ireland, on stones at Comb Floyd near Bishop's Castle, and on oaks between Carno and Mayne Loin in Merionethshire. Dillenius.

CUPTHONG. Tiled: leaves lobed; smooth; indented; of a pale blueish colour. Saucers reddish yellow; downy underneath.—Leaves still larger than the preceding; lobes narrower. From Hudson.


On the side of the road between Carnoe and Mayne Loin in Merionethshire. Aug. Dill.

Obs. Hudson has characterised it "Leasy, creeping," &c. and has accordingly arranged it amongst the Leafy Cupmosses. Future observation may perhaps determine whether this and the preceding may not be only varieties of one common species.

CUPTHONG. Tiled: leaves indented; sprinkled all over with a black mealineus like foot. Saucers rust-coloured; downy underneath. From Dillenius.

Fuliginosus

Lichenoides fuliginosum, scutellis rubiginosis. Dill. t. 26. f. 100.

Obs. This and the two preceding species I have ventured to arrange amongst the Tiled cupmosses. Dillenius characterises them all as closely adhering to the substance on which they grow. Perhaps too the superficial of Linnaeus might more properly find a place here, as he very justly remarks it can hardly be called leaty. Accurate examinations however of the plants themselves can alone determine it.

CUPTHONG. Tiled: leaves lobed; lopped; scolloped; blackish green. Saucers of the same colour—Of a jelly-like substance. Saucers nearly as broad as the leaves.

Lichenoides gelatinosum atro viribus, crispum et rugosum. Dill. 139. t. 19. f. 23.

Shady rocky places, and at the bottom of walls.

CUPTHONG. Tiled: leaves cloven: segments lopped; notched. Saucers smaller than the leaves.—Of a jelly-like substance.

Lichenoides tenue crispum, folii parvis depressus. Dill.

t. 19. f. 33.

Wigmore Cliffs Herefordshire. Dill.
THONGS

CUPTHONG. Tiled: edged with fringe like teeth. Tar-Crested gets larger than the leaves.—Of a jelly-like substance. Leaves narrow, of a blueish lead colour. Saucers brown. Teeth sometimes Crisatus blunt.

1. Lichenoides gelatinosum, folis imbricatis et crisatis. Dill. Common

140. t. 16. f. 96.

Lichenoides gelatinosum tenerius laciniatum, ex plumbeo colore ceruleescens, scutellis fulcis. Ray's Syn. 72.


Lichenoides foliis pilosis erasioribus, obscure virentibus scutellis fulcis. Ray's Syn. 74.
On rocks and walls.

CUPTHONG. Tiled: leaves curled; deep yellow. Tar-Gold-fringed gets the same colour—Leaves sometimes of a yellowish green, with targets of a pale yellow. And sometimes of a bright orange. Panetinus

Lichenoides vulgare fruticosum, foliis et scutellis luteis. Dill.

150. t. 14. f. 76.

Lichenoides cructa foliosa scutellata, flavescens. Ray's Syn. 72.
Common Liverwort.
On trees, wood, stones, walls, and tiles.

CUPTHONG. Tiled: segments blunt; somewhat inflated—Inflated The ends of the leaves appear frilled, and when cut transversely are hollow as if blown up. Alb coloured on the upper; black and smooth Physeides on the under surface

Lichenoides ceratophyllum obtusius et minus ramosum. Ray's
Syn. 76. Dill. 154. t. 20. f. 42.
On heaths.

CUPTHONG. Tiled: leaves oblong; ash-coloured; divided Starry into narrow segments. Saucers blackish brown.

Lichenoides cinereum, segmentis argute stellatis, scutellis Stellaris nigris. Dill. 176. t. 24, f. 76.

Lichenoides arboreum, crusta foliosa albo-cineres, tenuiter et eleganter dicensa, scutellis nigris. Ray's Syn. 74.
On ash and blackthorn.

CUPTHONG. Tiled: leaves oblong; green; divided into Distorted narrow straddling segments. Saucers blackish brown. From Dil-kenius.

Lichenoides viride, segmentis angulis distortis, scutellis pulvis. Dill. t. 24, f. 72.
About Oxford. Dill.
FLOWERS INCONSPICUOUS.

CUPThONG. Tiled: leaves oblong; narrow; betwixt indented and toothed; brown; segments blunter. Saucers brownish black; notched at the edge. From Dillenius.

Lichenoides angustifolium suseum, scutellis pullis. Dill. t. 24, f. 69.

Bungor rocks. Dill.

Circular
Orbicularis
Dill.

CUPThONG. Tiled: leaves oblong; betwixt indented and toothed; sea green; segments pretty broad. Saucers black; somewhat notched at the edge.—Expanding into a circular tuft. From Dillenius.

Lichenoides glaucum orbiculare, segmentis latiusculis, scutellis nigris. Dill. t. 24, f. 71.

On Oak, Beech, Elm, &c. Dill.

D. LEAFY.

CUPThONG. Leafy, somewhat upright; segments strap-shaped fringed; saucers on fruit-stalks; scolloped.—Black.

1. Of a brownish ash-colour, with sometimes a tinge of sea-green.

Lichenoides hispidum majus et rigidius, scutellis nigris. Dill. t. 150, f. 45.

Lichenoides arboreum foliosum cinereum, scutellis nigris, foliorum extremitatibus hispidis et pilosis. Ray's Syn. 73.

Trunks of trees.

2. Smaller, more flexible, ash-coloured; saucers more numerous, pretty entire at the edge. From Dillenius.

Lichenoides hispidum minus et tenerius, scutellis nigris. Dillenius t. 20, f. 49.

Trees and thorns.

Horny
Corneus
Dill.

CUPThONG. Leafy (or rather horny) somewhat upright; segments oblong, betwixt toothed and fringed; diversified with roundish warts. From Dillenius.

Lichenoides corneum, marginibus elegantior simbriatis. Dill. t. 29, f. 116.

On Snowdon, and on Berwyn, Derbyshire. Dillenius.

Obs. It appears to have a very great affinity with the Fringed Cupmole.
CUPTHONG. Leafy, ascending, jagged: borders raised, Eryngoleaved fringed—Targets round, entire, on the surface of the leaves; whitish, brown, or purple. Sometimes the targets are at the ends of the leaves. Islandicus.

1. Lichenoides rigidum, eryngiiolia referens. Roy’s Syu. 77. Common
   Dillenius 209. t. 28. f. 111.

2. Leaves finer, and more curled.
   Lichenoides eryngii folia referens, tenuioribus et crispioribus foliis. Dillenius 212. t. 28. f. 112.

3. Smaller branches cylindrical, hollow within, not fringed—Black lace resembling black lace—and yet notwithstanding this so remarkable a difference, they are only varieties of the same species. A variety of specimen has been [sic], how they insensibly run into one another.
   Coralloides tenuissimum nigricans, mundi muliberis infar textum. Dillenius 113. t. 17. f. 32.
   Heaths and mountains.
   The Icelanders boil it in broth, or dry it and make it into bread. They likewise make gruel of it to mix with milk; but the first decoction is always thrown away, for it is apt to purge.

CUPTHONG. Leafy, ascending, jagged, curled, smooth, Snow pitted, white; border raised;—generally of a snowy subtenuis; Nivalis.
   Lichenoides lacunolium candidum glabrum, Endiviae crispe facie. Dillenius 102. t. 21. f. 56.
   Gravelly heaths.

CUPTHONG: Leafy; jagged; blunt; smooth. Pitted Lungwort—above, downy underneath.—Targets at the edges.
   Lichenoides pulmonem reticulatum vulgare, marginibus petiiferis. Dillenius 212. t. 29. f. 113.
   Lichenoides peltatum arboricium maximum. Roy’s Syu. 76.
   Muscic pulmonarius, five Lichen arborum. Park. 1311.
   Tree Liverwort. Tree Lungwort.
   On trunk of trees, particularly Oak and Ash, on rocks, and sometimes on heaps of stones in shady places.
   It is reckoned very efficacious in consumptive cases; this opinion merits a further investigation.—Boiled with woollen cloth it gives it a brown orange colour.

CUP-
FLOWERS INCONSPICUOUS.

CUSPHTHONG. Leafy; jagged; border indented; curled; mealy; smooth above, diversified with margins, and mealy warts; downy underneath. —Of a sea green, inclining to a sulphur colour above, somewhat pitted; light brown underneath; Down of a dirty brown. The leaf appears sometimes pierced with a number of holes, as if eaten through, which seem to have been the places where former warts have grown. It has a near affinity to the preceding species. From Dilleniis.

Lichenoïdes pulmonaceum villosum, superficie scrobiculata et peltata. Dill. t. 29. f. 114.

Found by Mr Ran on Stones at Cockbush on the Sea side in Suffex,—at Dolgelle in Merionethshire. Dill. and on Rocks on Malvern-hills, just above Great Malvern (with the preceding species.) St.

CUSPHTHONG. Leafy; jagged; segments flat-shaped; blunt. Targets above; spongy underneath.—Segments very much resembling the horns of a stag. From Dilleniis.

Lichenoïdes Danzse cornua referens, subtus spongiosum.

Dill. t. 29. f. 115.

On trees. Dill.

CUSPHTHONG. Leafy; drooping; as if sprinkled with bran; segments sharp; black and pitted underneath; —White, or ash coloured above.

Lichenoïdes cornutum amarum, desuper cinereum, inferne nigrum. Dill. 157. t. 21. f. 52.

Barks of trees, and pales.

CUSPHTHONG. Leafy; drooping; jagged; segments cloven at the end into three parts. Sauces brownish. Hudson 449.—Of a jelly-like substance.

Lichenoïdes gelatinofum, fuscum, Jacobae maritimae divisura.

Dill. 140 t. 19. f. 82.

On rocks.

CUSPHTHONG. Leafy; wrinkled; lobed, of a blackish green. Sauces tawney red, set thick together. Hudson 450.—Small. Leaf between jelly-like and membranaceous; thin. Dilleniis compares it to a bet's wing.

Lichenoïdes gelatinofum membranaceae, tenue nigricans.

Dill. 138. t. 19. f. 90.

Lichenoïdes saxatilis membranaceae gelatinofum tenue nigricens. Ray's Syr. 72.

Trunks of trees, rocks, and walls.
THONGS.

CUPTHONG. Leafy; rather flat; lobed; scollopèd tar. Bladder
gers globular; inflated.—
Lichenoides tintorium glabrum vesiculofum. Dill. 188. t. 24. f. 82.
Lichenoides faxatile tintorium, foliis laiioribus non pilosis,
vesiculas proferens. Ray's Syn. 74.
In hilly pastures.

CUPTHONG. Leafy; upright; compressed; branched; Mealy
with mealy warts on the edge—dijfering a quanlity of dust.
Farinaceus

1. Leaves of a whitish ash-colour, with narrow segments.
Lichenoides segmentis anguilloribus, ad margines verrucosis
et pulverulentis. Dill. 179. t. 22. f. 63.
Lichenoides arboream ramosum, cinereo-candicans, seg-
mentis anguilloribus. Ray's Syn. 76.

2. Leaves of a greenish ash-colour, with narrow segments.
Greenish. Hud.
Lichenoides arboream ramosum, cinereo-virescens segmentis
anguilloribus, circa margines crispius. Ray's Syn. 76.

3. Leaves with broader segments; rough; with larger warts, Broad-leaved
containing a great quantity of dust.
Lichenoides non tubulofum Piatydasphyllum tuberculis pul-
verulentis donatum. Ray's Syn. 66.
Trunks of trees; white at on the floe.

CUPTHONG. Leafy; upright; strap-shaped; branched; Channeled
pitted; convex; with sharp points at the ends,—Saucers nume-
rous; terminating the branches. Leaves of a greenish ash-colour.
Calicaris
Lichenoides coralliforme rostratum et canaliculatum. Dill. 170.
t. 23. f. 62.
Lichenoides arboream ramosum, segmentis, anguilloribus
cinereo-virescenibus. Ray's Syn. 76.
Rocks, and barks of trees.

CUPTHONG. Leafy; straight; oblong; spear-shaped; some-
what jagged; pitted; smooth; saucers on short fruit-stalks,—moistly
of a pale straw colour, but sometimes of the same colour with the leaf. Fraxinæus.
Leat of a greenish ash-colour, of a rigid consistence.
Lichenoides longitudilum rugosum rigidum. Dill. 165. t. 22.
f. 59.
Lichenoides arboream ramosum scutellatum majus et rigidius,
colore virescente. Ray's Syn. 75.
Trunks of trees, on Poplar, Apple, &c. but chiefly on Oak
and Ash.

CUP-
FLOWERS INCONSPICUOUS.

CUPTHONG. Leafy; nearly straight; jagged; somewhat pitted. Segments strap-shaped; blunt.—Often chewed at the ends. Saucers scattered over the surface, and along the edges of the leaves. From Dillenius.

Lichenoides fusiforme tinctorum, corniculis longioribus et obtusiis. Dill. t. 22. f. 60.

Jersey rocks. Dill.

Blackthorn

CUPTHONG. Leafy; rather upright; pitted; white and downy underneath;—Branched like the horns of a Deer.


Lichenoides arboreum ramosum majus et mollius, coloré candidante. Ray's Syn. 72.

White

2. White; segments narrower.

Lichenoides corniculatum candidum molle, segmentis angustis. Dill. 150. t. 21. f. 54.


It has a remarkable property of imbibing and retaining odours and is therefore the basis of many perfumed powders.

Ragged

CUPTHONG. Leafy; rather upright; pitted; somewhat jagged;—Margin divided into a number of narrow segments. From Dillenius.

Lichenoides lacunosum lacerum, latius et angustius. Dill. t. 21. f. 57.

About Bedlington, and Carshalton Surry; Slimford Suffolk; and Oxford Woods. Dill. And near Worcester. St.

Lacerus

Juniper

CUPTHONG. Leafy; jagged; curled; deep yellow; with livid coloured targets.—Resembles the Gold-spangled Cupthong but it is of a yellowish green with brown targets, and the leaves loose and somewhat upright.

On boughs and trunks of trees.

The Sultans in Sweden esteem it a specific for the Jaundice.—They use it to dye their woollens yellow.

Juniperinus
THONGS.

CUPTHONG. Pale green; wrinkled, and waved at the Rosé-leaved edge,—Of a yellowish hue inclining to sea green; black and smooth underneath. Can hardly be called leathly, adhering close to the sub-flance on which it grows. Saucers seldom to be found.

Lichenoides caperatum, rofæceæ expansum, e sulphureo virens. Dill. 193. t. 3; f. 97.

Lichenoides crufa foliola, ex cinereo et luteo virescente, inferne nigra et lavi. Ray's Syu. 73.

On stones, and trees.
It dyes woolens of an orange colour.

CUPTHONG. Leafy; depressed, lobed; smooth; border Shining curled; mealy.—Leaves thinner than paper; of a mixture of white, ash-colour, and sea green; black underneath.

Lichenoides endiviae foliis crisps splendentibus, subitus nigrifantibus. Dill. 192. t. 25. f. 96.

Hilly pastures and heaths.

CUPTHONG. Leafy; depressed; of a jelly-like substance; Brownish divided into lobes thicker than the rest of the leaf. Of a brownish green.—Tubercles dispersed near the margin. From Dillenius.

Lichenoides gelatinosum lobis creniformibus fusco-viridibus. Dill. t. 19. f. 22.


CUPTHONG. Leafy; of a jelly-like substance. Tubercles Cluster turban-shaped; in clusters; larger than the leaves; root leaves very small, like clear jelly.—Tubercles on short fruit-salks; edged with a blunt border.

Lichenoides gelatinosum palmatum, tuberculis conglomeratis. Dill. 141. t. 19. f. 47.

Woods and garden walks.

E. LEATHER-LIKE.

CUPTHONG. Leathery, creeping, lobed. Targets on the Livid edge, facing downwards—Reddish brown. Leaves brown. 63


Lichenoides Saxatili fuscum, peltis in aspera foliorum superficie locatis. Ray's Syu. 77.

On trees, pebbles, and on the ground.

CUP-
FLOWERS INCONSPICUOUS.

Seagreen
Aphelotus

CUPTHONG. Leathery; creeping; flat; with blunt lobes; sprinkled with watery excrescences; targets horizontal; on the edge—black.

When dry the colour is sea-green, but when fresh a full green.

This country people make an infusion of it in milk and give it to children that have the Thruf. In large doses it operates by purging and vomiting, and destroys worms.

Liverwort
Caninus

CUPTHONG. Leathery; creeping; flat; with blunt lobes; woolly and veiny underneath. Targets on the edge, ascending.—Leaves covered with a kind of ashy-coloured mealiness.

Lichenoides digitatum cinereum, Lactuce foliis finibus.

*Dill*, 200. t. 27. f. 102.

Lichenoides peltatum terrestre cinereum majus, foliis divisis.

Ray's *Syn.* 76.

Ashy coloured ground Liverwort.

Heaths, woods and hedges.

This is the basis of the famous powder recommended by Doctor Mead to prevent madness, and recorded in our dispensatories under the name of Pulvis Antidiaph.

Lettuce-leaved
Lactuca foliis

CUPTHONG. Leathery; creeping; with blunt lobes; border curled; woolly underneath; targets on the edge, ascending.—Leaf of a reddish colour above, not veiny underneath. From Dilleniis.

Lichenoides digitatum rufescens, foliis Lactuce crispis. *Dill.*

*Smallshield*
*Sylvaticus*

CUPTHONG. Leathery; creeping; jagged; pitted. Targets on the edge; ascending—Small.

Lichenoides polyichides villorum et scabrum, peltis parvis.

*Dill.* 199. t. 27. f. 101.

In woods.

Many-fingered
Polydactylos

CUPTHONG. Leathery; creeping; jagged; veiny and wooly underneath; ends of the segments divided into many shallow clefts, supporting as many ascending targets—Leaf ashy-coloured. From Dilleniis.

Lichenoides cinereum polydaetilion. *Dilleniis* t. 27. f. 107.

About the Fervedog-Houie, near Bangor. *Dill.*

Double-fingered
Didactylos

CUPTHONG. Leathery; membranaceous; transparent; jagged; segments cloven, each segment supporting two targets—Veiny and wooly underneath. From Dilleniis.

Lichenoides membranaceum pellucidum, peltis digitatis geminatis. *Dill.* t. 27. f. 104.

Rumbles-Mere near Kelwick, Yorkshire. *Dill.*

CUP.
CUPTHONG. Leathery; creeping; flat; not veiny un-Flat shield
underneath; targets on the edge; horizontal—Brown. 70
Lichenoides subfuscum, peltis horizontalibus planis. Dill. Horizontalis
205, t. 28. f. 104.
In woods. Winter and Spring. Dill.

CUPTHONG. Leathery, creeping; lobed; smooth; black Pearl
underneath. Saucers on fruit-stalks entire.—Wooly underneath; 71
of a sea-green, or ash colour above.
Lichenoides glaucum perlatum, subitus nigrum et cirrosum.
Dill. 147, t. 20, f. 39.
Trunks of trees.

CUPTHONG. Leathery; creeping; circular; targets Pouched
funk below the surface of the leaf, forming a kind of bag 72
beneath.
Lichenoides Lichenis facie, peltis acetabulis immissis, Dill.
101, t. 30. f. 121.
Lichen immersus. Hudson 453.
On rocks.

F. Sooty,—adhering to the substance on which they grow
only in one point.

CUPTHONG. Hunched; dotted; deep yellow underneath Cloudy
—Smooth; ash coloured on the upper surface.
Lichenoides coriaceum nebulosum cinereum punctatum subitus Miniatus
fulum. Dill. 223, t. 30. f. 127.
On rocks and mountains.

CUPTHONG. Wrinkled; blackish brown; sprinkled with Black-warted
black warts; wooly underneath.—Of a rigid consistence. From 74
Dillenius.
Lichenoides rugosum durum pullum peltis albis verrucosis.
Dill. t. 30. f. 118.
Snowdon and Berwyn Derbyshire. Dill.

CUPTHONG. Very hairy underneath—Leaf very broad; Fleety
sprinkled with warts,
Lichenoides coriaceum, latissimo folio umbilicato et verrucoso. Velleus
Dill. 547, t. 82. f. 5.
On rocks.
The Canadian Indians eat it when pressed by hunger.

CUP.
FLOWERS INCONSPICUOUS.

CUPTHONG. Pitted underneath; sprinkled over with a black meal—Ash-coloured above; black underneath.

Lichenoides pullulatum cinereum et veluti ambustum. Dill. 223. t. 36. f. 131.

On rocks facing the South—Malvern Hills. This may be converted into an exceedingly black paint; and a beautiful red colour may be prepared from it.

CUPTHONG. Of an even surface on both sides.—Ash-coloured above with black flattened warts; so brittle that unless in a moist state it can hardly be separated entirely from the rocks on which it grows.

Lichenoides coriaceum cinereum, peltis atris comprissis. Dill. 218. t. 30. f. 117.

Lichenoides saxatile, foliis minus divinis, cinereo-fuscis. Ray's Syr. 75.

St. Vincent's Rock near Bristol.

CUPTHONG. Composed of several leaves; even on both sides; greenish black and scoloped—Lichenoides tenue pullum, foliis utrinque glabris. Dill. 225. t. 30. f. 129.

On high mountains.

CUPTHONG. Composed of several leaves; of an even surface on both sides; lead-coloured; downy; indented underneath.—Very much resembles the preceding species. From Dill.

Lichenoides imbricatum luridum. Dill. t. 30 f. 128.

On stones in a rivulet near a mill by Perfedged-House near Bangor, also in a rivulet in the county of Radnor. Dill.

CUPTHONG. Composed of several leaves, of an even surface on both sides; fibres numerous.—Leaves dirty brown, or greenish ash-colour; black and hairy underneath.

Lichenoides pullum suprame et glabrum, inferne nigrum et cimmerium. Dill. 226. t. 30. f. 130.

On high mountains.

G. GLASS-SHAPED.

CUPTHONG. Cup simple; imperfect; convex at the top; with a hollow in the middle; brown—Has a near affinity to the Powdered, Heath, and Brown Cupthongs, but the tubercles do not rise from a thin ground or crust, but from leaves like those of the Glass-shaped Cupthongs, to which it seems naturally to belong.

Corallides fungiforme fuscinum, balii foliacearum. Dill. t. 14. f. 2.

Hampstead Heath. Dill.
THONGS.

CUPTHONG. Cup simple; very entire; fruit-flalk cy- Red
liadrical; tubercles scarlet.—Caps greenish grey, sometimes spring-
ing out of one another.
Coralloides scyphiforme, tuberculcis coccineis. Dill. 82. t.
82. f. 7.
Lichenoides tubulosum pyxidatum, tuberculcis amene coccineis. Ray's Syn. 69.
On heaths and in shady places. November—February.
The scarlet tubercles on the affusion of Ley, strike a durable purple.

CUPTHONG. Cup simple; shorter than the leaves. Tu-
bercles scarlet.—Caps fringe'd with leaves; not always shorter than
the leaves.
Coralloides scyphiforme, marginibus radiatis et foliatis. Dill.
85. t. 14. f. 9.
Lichenoides pyxidatum, marginibus eleganter foliatis. Ray's
Syn. 69.
On heaths. Feb.

CUPTHONG. Cup simple; shorter than the leaves; brown Short-footed
within; on very short fruit-flalks;—margin entire.
Coralloides scyphis humilibus, intus tufcis. Dilleniis t. 14. Humilis
84. f. 1.

CUPTHONG. Cup simple; a little scollop'd; tubercles Common
brown.

85. Simple
14. f. 6.
Lichenoides tubulosum pyxidatum cinereum. Ray's Syn. 69.
Mucis pyxoides terrestris. Hauh. pin. 361.
Heaths, woods, walls, and ditch-banks.

2. Cups springing out of one another, sometimes from the Proliferus
edge, and sometimes from the center.
Lichenoides tubulosum pyxidatum proliferum. Ray's Syn. 69.

3. Cups springing out of one another, with brownish black tur-
Black-turf. Hud.
bercles.
Lichenoides tubulosum pyxidatum, tuberculcis fusco nigris,
proliferum. Ray's Syn. 69.
Heaths, woods, walls and ditch-banks.

Vol. II. 2. CUP.
FLOWERS INCONSPICUOUS.

CUPTHONG. Cup simple; edged with little teeth; fruit-flask cylindrical. —

Lichenoides tubulosum pyxidatum, marginibus ferratis. Ray's Syn. 69.

2. Cups springing out of one another. 
Lichenoideae pyxidatum proliferum, marginibus ferratis. 
Ray's Syn. 67. 
Woods and heaths.

Trubner 85

CUPTHONG. Cup simple; very entire; long and slender. 
Tubercles brown. Hudson 457. leaves jagged. 
Lichenoideae tubulostum pixidatum exiguum, fusco-vires. 
Ray's Syn. 70. 
Coralloides scyphus gracilis tubiformis, pedicularis folio. 
Dillenius 85. t. 14. f. 10. 
Walls and heaths.

Proteus 88

CUPTHONG. Branched; leafy—Leaves nearly upright; 
jagged; curled. From Dillenius. This plant assumes every different form, sometimes consisting of a single leaf, with a number of little cups rising from its surface. At other times it appears like a shrub, the ends of the branches running into cups, and edged with tubercles. Again, resembling each, and yet still different, it has a stem which branches into leaves. This proves them to be only varieties of one common species. From this circumstance I have ventured to call it the Lichen Polymorphos or the Proteus Cуптнгнг, though Hudson has already named one of its varieties, since Linnæus it is probable, would not allow of it, as it is the name of one of the subdivisions,—the Leafy [Policeus].

Branch. Dill.

1. Very much branched; leaves at the divisions of the stem; branches terminating in cups; cups toothed, edged with tubercles. 
Coralloides scyphiforme, foliis alcicreniformibus cartilaginosis. 
Dill. t. 14. f. 12. B. 
Snowdown. Dill.

2. Stem branched; branches running into leaves.—Leaves upright, with winged edges. 
Dillenius ib. D. 
Trowbridge. Dillenius.

Leaf: 
Dillenius 81.

3. Leaves nearly upright, jagged, curled; cups very short, conical, on the surface of the leaf. Hudson 457. 
Dillenius ib. A. 
Lichenoideae cartilaginosum, tubulis et pyxidulis exiguis. 
Ray's Syn. 70. 
CUPTHONG. Branched; thread-shaped; cups edged with Tall little teeth—Some of the branches tapering to a point, others terminated by a cup, tip with bright brown tubercles.

Lichenoides pyxidatum cinereum elatus, ramulis pyxidatum desinentibus. Ray's Syn. 69.

Mountainous heaths, and stoney places.

CUPTHONG. Branched; branches cylindrical; cups pretty Branching entire, edged with round brown tubercles—Tubercles numerosus. Ramulosus. From Dillenius.

Coralloides parum ramosum, tuberculis fuscis. Dillenius t. 15 f. 20.

CUPTHONG. Very much branched; branches cylindrical; Fingered cups entire, edged with round tubercles.—Tubercles numerosus, Scarlet. Digitatus. From Dillenius.

Coralloides ramulosum, tuberculis coccineis. Dillenius 96. t. 15. f. 10.
Lichenoides coralliforme, apicibus coccineis. Ray's Syn. 68.
Heaths and woods, and decayed roots of trees. Feb.

CUPTHONG. Very much branched; inflated; cups tooth-Crusted; tubercles brown. Hudson 457. Stem nearly cylindrical; expanding into a cup, which branches out into a number of sub-divisions, which terminate in their turn in other cups, divided into teeth, and tip with brown tubercles.

Coralloides cornucopioideis inanum, icyphis cristatis. Dill. 94. t. 15. f. 17.
Lichenoides tubulosum cinereum, valde crustaceum, ramulis brevioribus et crebroribus ex acetabulis etamcentibus. Ray's Syn. 68.
In woods.

CUPTHONG. Nearly simple; somewhat inflated; cups plain entire.—Alb-coloured. Some of the branches tapering to a point, others terminating in imperfect cups. Stems mostly of an equal thick-Cornutus fibs throughout.

Coralloides vix ramosum, icyphis obscurs. Dillenius 90. t. 15. f. 14.
Lichenoides tubulosum cinereum, non ramosum. Ray's Syn. 68.
FLOWERS INCONSPICUOUS.

CUPTHONG. Nearly simple; somewhat inflated; cups toothed;—slenderest at the base; somewhat hairy.
Coralloides crafius subincanum, calycibus dentatis. Dillenius 93. t. 15. f. 18.
Lichenoides tubulofum minus ramosum caulis peus crassoribus difformibus. Ray's Syn. 68.
On heaths.

CUPTHONG. Nearly simple; somewhat inflated; cups with many clefts;—Segments mostly oval-shaped, pretty long; upright; some tapering to a point, others tips with tubercles. Stems sometimes branched; cylindrical; tapering towards the base. From Dillenius.
Coralloides scyphiforme cornutum. Dillenius t. 15. f. 16.
In woods, in Lufield-Chace. Lill.

H. S H R U B B Y.

Reindeer

CUPTHONG. Shrubby; perforated; very much branched; little branches nodding. There is an opening or perforation between every division of the stem and branches. Soft when young, but afterwards of a stony hardness.

1. With whitish tubercles.
Coralloides montanum fruticuli specie, ubique candidans. Dillenius 107. t. 16. f. 69.
Lichenoides tubulofum ramosissimum, fruticulis specie, candidates. Ray's Syn. 66.

2. With brown tubercles.
Coralloides fruticulis specie candidans, coniculus rufuscentibus. Dillenius 110. t. 16. f. 36.
Lichenoides tubulofum ramosissimum, fruticulis specie, candidates, coniculus rufescensibus. Ray's Syn. 67.
Woods, heaths, and mountains.
The Laplanders could not exist without this plant. It is the food of the Rein-deer, and the Rein-deer supplies every necessary of life for the contented people of that inhospitable climate.
CUPTHONG. Shrubby; perforated; little branches very short; sharp—

1. Small: not much more than an Luch long, whence its Latin name. 
Coralloides perforatum minus, molle et tenue. Dillenius 99. 
t. 16. f. 92.
Lichenoides tubulosum, cauliculis mollioribus et crassioribus, 
minus. Roy's Syn. 67.

2. Considerably larger; more than twice as large; stem and branches thicker; in every other respect almost exactly similar.
Coralloides perforatum majus, molle et crassum. Dill. t. 16. 
f. 21.
Heaths and hills. (2.) Leath-hill, Surry, and Peter's-field-heath, Hampshire. Dill.

CUPTHONG. Shrubby; tubular; very much branched; Prickly thorny. Little branches with finger-like divisions, ript with 

tuberces. Hudfon 459.—Of an ash-coloured brown.
Coralloides sparsum, caulibus tortuosis et spinosis. Dillenius 
1st. t. 16. f. 25.
Lichenoides tubulosum ramosum rigidius, majus et crassius, 
cinereo-fuscum. Roy's Syn. 16.
Mucus coralloides laxatilis cervi cornua referens. Baub. 
p. 551.
Heaths.

CUPTHONG. Shrubby; tubular; branched; branches up- Forked 
right; forked. Hudfon 458.—Ash-coloured; sometimes covered 
with crassaceus leaves.
Coralloides e paniculis brevioribus et crebrioribus. Dillenius 
1st. t. 16. f. 25.
Lichenoides tubulosum cireereum, ramosus et crassaceum. 
Roy's Syn. 67.
Heaths and high hills.

CUPTHONG. Shrubby; somewhat forked: branches un Horned 
divided; awl-shaped—Tuberces small, brown, globular, at the 
ends of the branches. Stem sometimes fringed with a few scattered 
crassaceus leaves.
Coralloides corniculatus longioribus et rarioiribus. Dillenius 
t. 16. f. 16.
Lichenoides tubulosum cireereum, minus crassaceum, minus- 
que ramosum. Roy's Syn. 67.
Heaths.

Z 3 

CUP-
FLOWERS INCONSPICUOUS.

**Madrepore**

Shrubby; little branches very short; blunt.

Stems brittle, tubular, scarcely divided; growing close together, and forming a tuft resembling Organ Coral. From Dill.

Coralloides minimum fragile, madrepore infar naevens. Dill. t. 16. f. 28.

Baghot near Farnham. Spring and Winter. Dill.

**Round-headed**

CUP THONG. Shrubbery; solid; smooth. Tubercles globular; hollow; at the ends of the branches—black within, ash-coloured without. Little branches nearly cylindrical; sharp and forked at the ends. Sometimes very much branched.

Coralloides cupreisforme, capitulis globoisis. Dill. 117. t. 17. f. 35.

Lichenoides non tubulofum, ramulis scutellis nigris terminatis. Ray's Syn. 66.

Lichen globosus. Hudson 460.

Rocks and mountains.

**Globiferus**

CUP THONG. Shrubbery; solid; smooth. Tubercles flat-tish; at the ends of the branches.—Black. From Dilleniis.

Coralloides corniculatum, fuci tenuioris facie. Dill. t. 17. f. 37.

On Snowdon. Dill.

**Fucoides**

Shrubby; solid; stem and branches prickly.

CUP THONG. From Dilleniis.

Coralloides fruticuli specie fuscum, spinosum. Dilleniis t. 17. f. 31.


**Oarweed**

CUP THONG. Shrubbery; solid; covered with little crustaceous leaves—Which make a beautiful appearance, especially if viewed through a glass that magnifies a little.

Cupalooides critpum et boviforme alpinum. Dill. 114. t. 17. f. 34.

Lichenoides non tubulofum cinereum ramosum, totum crustaceum. Ray's Syn. 65.

High mountains.

**Woody**

CUP THONG. Shrubbery; solid; little branches cylindrical, blunt—So brittle as not to be gathered but when it is mossy. Branches growth brown. Tubercles black.

Coralloides alpinum, coralline minoris facie. Dill. 116. t. 17. f. 34.

Lichenoides non tubulofum ramossimum, fruticuli specie cinereum fuscum. Ray's Syn. 65.

Mountains and high moorlands.
CUPTHONG. Shrubby; solid; somewhat branched. Tufted conically, branchlets hollow; on the sides of the branches. Hudson. 460. Siliquosus
No appearance of leaves.
Corall sideles tacculat. verrucosum et veluti siliquosum. Dill. 119. t. 17. f. 32.
On rocks.

I. THREADSHAPED.

CUPTHONG. Thread-shaped; pendant: branches matted hairy together. Saucers radiated. —
Unea vulgaris, loris longis implexis. Dill. 56. t. 11. f. 1. Plicatus
Muscus arboreus, Unea officinarum. Baub. pin. 361. Ray’s Syn. 64.
Muscus quernus. Gerard. 1558.
Muscus arboreus, vulgaris et quercinus. Park. 1311.
Tree Moss.
On trees in thick woods.

CUPTHONG. Thread-shaped; pendant; somewhat jointed. Bearded
Branches expanding — Albicoloured.
Unea barbara, loris tenuibus fibrosis. Dill. 63. t. 12. f. 6. Barbatus
Muscus capillaceus longissimus. Baub. pin. 301.
On trees in woods.

CUPTHONG. Thread-shaped; pendant; compressed at Fennel
the divisions of the branches. — Blackish grey.
Unea jubata nigricans. Dill. 64. t. 19. f. 7. Jubatus
Muscus corallinus faxatalis faxiculaceum. Ray’s Syn. 65.
Wood and rocks.
It is used to cure ulcers of the skin; and it is eaten by
Reindeer.

CUPTHONG. Thread-shaped; very much branched; Woolly
dropping; matted; opake, — Like black Wool.
Unea lanze nigra inforis, faxis adhaerens. Dill. 66. t. 13. f. 8. Lanatus
Muscus coralloides lanze nigra inforis faxis adhaerens. Ray’s Syn. 65.
On rocks.

CUPTHONG. Thread-shaped; branched; drooping. Wiry
Branches straddling; serpentine and somewhat matted—
Unea rigida, horfum vorsum extensus. Dill. 65. t. 13. f. 10. Chalybeata.
Muscus caule rigido inforis fili chalybea. Ray’s Syn. 65.
Trunks of trees, stones, and decayed wood.
FLOWERS INCONSPICUOUS.

CUPTHONG. Thread-shaped; branched; drooping; rough with hair; with black saucers on the sides, and at the ends of the branches. From Dillenius.

Lichenoides subhirifutum teres, scutellis parvis nigris. Dill. t. 21. f. 51.

On the Sloe-tree near the sea, Dill.

CUPTHONG. Thread-shaped; very much branched; upright. Tubercles mcaly; scattered.

Usnea vulgarissima tenuior et brevior, fine orbiculis. Dill. 67 t. 15. f. 12.

Muscus ramulosus. Gerard. 1372, Ray’s Syn. 65.

Woods and hedges.

CUPTHONG. Thread-shaped; very much branched; upright; branches nearly of the same length; angular; angles unequal. — Of a Citron colour.

Usnea capillacea citrina, fruticuli specie. Dill. 73. t. 13. f. 15.

Muscus aureus tenuissimus. Ray’s Syn. 65.

In woods.

In Norway they mix this plant with powdered glass and strew it upon dead carcasses to poison Wolves.—It dyes woolless yellow.

CUPTHONG. Thread-shaped; jointed; little branches very slender, dotted.

Usnea capillacea et nodosa. Dill. 60. t. 11. f. 4.


Muscus arboreus nodosus, fove geniculatus, Park. 1311.

In woods, on Beech and Hazel.

CUPTHONG. Thread-shaped; branched; upright; saucers radiated.

Usnea vulgarissima tenuior et brevior, cum orbiculis. Dill. 69. t. 15. f. 13.


Muscus ramulosus floridus. Gerard. 1560.

Woods, thickets, and old hedges.
POWDERWORT. 1208 Byssus.
Fibres simple; uniform; like soft wool, or dust.

* Thready.

POWDERWORT. Threads downy; swimming upon water. Paper
—and forming a kind of thin crust upon the surface. Colour green
or white. It rises in the middle of summer, and mixes with the water Flos Aqua
so as to render it turbid and unfit to drink; at night it falls down to-
wards the bottom.
Byssus latiflora, papyri instar supra aquam exansa. Ray's
Syn. 57. Dill. 1.
Stagnant waters.

POWDERWORT. Woolly; Violet coloured; growing Violet-colour-
upon wood—

Byssus lanuginosa violacea, lignis adnascens. Dill. 4. t. 1.

Phosphorea

Byssus pulverulenta violacea lignis adnascens. Ray's Syn. 56.
On rotten wood.

POWDERWORT. Hair-like; green. Threads branched— Velvet

Byssus tenerrima viridis velutum referens. Ray's Syn. 56. Dill.

Velutina

On the barks of trees, on the ground in shady places and gravel
walks. Winter and Spring.

POWDERWORT. Hair-like; powdery; flowers scattered. Saffron-coe

Threads simple and branched.—Grows in little globular tufts. — Loured
When dry it turns of an ash colour.

Byssus petraea, croceae glomerulii lanuginosi. Dill. S. t. f. 16.

Aurca

Byssus aureus Derbienlis humifusus. Ray's Syn. 56.
On rocks.

POWDERWORT. Threads branched; of a yellowish Brown
brown. Hudson 487. Retains its colour when dry. Of a more
rigid consistence than the preceding.


Fulva

Hud.

f. 17.
On rotten moist wood.

POWDERWORT. Threads branched, stiff, black; grow— Black

ing on stone. Hudson 487.

Byssus petraea nigerrima fibrofa, Ray's Syn. 57. Dill. t. 1. Nigra

Hud.

f. 18.
On rocks.

POWDER-
FLOWERS INCONSPICUOUS.

POWDERWORT?

BYSSUS?

Threads upright; ends branched, *Hudson 488.*—Of a
tawny colour.

9. t. 1. f. 10.

On rotten wood.

POWDERWORT. Threads very much branched; branches
whitish, in bundles. *Hudson 488.*—Branching in form of a tree
or shrub. Of a substance resembling Mould; of a liquid white.

*Bysius tenerrime villosa et elegantissime ramulosae.* *Ray's Syn.*
476. t. 23. *Dill.* 7. t. 1. f. 15.

On rotten wood and leaves.

POWDERWORT. Hair-like; perennial; ash-coloured;
—adhering tenaciously to rocks or walls.

*Bysius albidus brevis ceraceus.* *Dill.* 10. t. 1. f. 20.

In vaults.

**Powdery.

**

POWDERWORT. Powdery; black—

On very old walls.

POWDERWORT. Powdery; ash-coloured; covering the
surface of rocks—

On rocks.

It will grow upon the barest rocks and stones.

POWDERWORT. Powdery; yellow. Growing upon
wood.—At first sight one might suppose it to be the Gold
spangled Cupthong in its younger state, but it has been observed to continue the
same for many years. Like that too in shady places, it is sometimes of
a greenish colour.

*Bysius pulverulenta flava lignis adnascens.* *Ray's Syn.* 56.
*Dill.* 7. t. 1. f. 4.

Barks of trees, and wood.

POWDERWORT. Powdery; green—

*Bysius botryoides satureate viresens.* *Ray's Syn.* 56. *Dill.* 3. t. 1
f. 5.

On barks of trees, walls, pales, and on the ground in damp
shady situations.

POWDER.
T H O N G S.

731

POWDERWORT. Powdery; white; like scattered meal.—Mealy
Byssus pulverulentus incana, farinæ inluar strata. Ray’s Syn. 14
Incana
Dillenius, 3. tab. 1. f. 3.
On a gravelly foil, on the sides of roads and ditches, on Mois;
and in damp shady situations, in Autumn and Winter.

POWDERWORT. Betwixt powdery and crustaceous; very White
white.
Byssus candidissima, calcis inluar Muscos vestiens. Dillenius, Laéea
1. f. 2.
On Mois, and barks of trees.

427 STARJELLY. 1204 Tremella.

SUBSTANCE. Uniform; transparent; membranaceous;
Jelly-like or leafy.
FLOWERS. Scarce perceptible, in a jelly-like substance.
Synt. Nat.

Obs. It differs from the Cupthong in having neither tubercles nor
ferns.

STARJELLY. Plaied and waved.—Greenish or yellowish.
Tremella terrestris finuola pinguis et fugax. Dillenius, 52.
1. 10. f. 14.
Ulva terrestris pinguis et fugax. Ray’s Syn. 64.
Tar-flough.
In paitures after rainy seasons, in gravelly foil, on the tops of
hills, and on gravel walks. Spring and Autumn.

Obs. Micheli describes the seeds as lying in the form of little firings
of beads coiled up within the folds of the plant, and only to be disco-
vered in the microscope.—It is supposed by the country people to be the
remains of a meteor or falling star.

STARJELLY?
TREMELLA?—A white fungous matter, of a uniform sub-
Snowy
flance, like large flakes of snow, or fleeces of the whitest wool,
—hanging down from the beams of wine-vaults. It is of a moist
nivea nature, and upon dissolving and drying it by heat, it runs
Ray
into a tough membranaceous matter of a fungous smell, which at length
turns to a substance like touch-wood, and cracks in the fire. From
Ray.
Fungus niveus aqueus, lignis cellarum vinariaum. Ray’s Syn.
75.
Common in most wine-vaults in London.

Obs. This substance seems to partake of a middle nature between
Yie fungulges and the Starjelly.

STAR-
FLOWERS INCONSPICUOUS.

STARJELLY. Pitted; blackish; of a firmer consistence, and longer duration than the preceding. *Eum likenius* Tremella arborea nigricans, minus pinguis et fugax. *Dillenius* t. 10, f. 15.

On the bark of trees. *Dill.*

STARJELLY. Curled and wrinkled; extremely tender; green. *From Dillenius.*


On the ground, on walls and hedges in the shade. Jan.—Feb.

Bluehorn 5

*Ceranoideis Dill.*

STARJELLY. Flattish; wrinkled; jagged at the edge. Segments indented, resembling *Ray's Berries*. *From Dillenius.*

*Tremella palustris gelatinosa* damæ cornuum facie. *Dillenius* t. 10, f. 10.

*Conferva gelatinosa* damæ cornua representans. *Ray's Syn.* Go.

In the ditches of a field near Chichester, Sussex, without the East gate. *Dill.*

Jagged 6

*Lacinia Dill.*

STARJELLY. Jagged; pitted; segments long; narrow; waved; somewhat resembling in form the Black Thorn Cup-thong. *From Dillenius.*


On the ground, Endfield Chace, and near Southgate. April. *Dill.*

Transparent 7

*Lichenoides Dill.*

STARJELLY. Upright; flat; curled and a little jagged at the edge; brownish, and so brittle as hardly to bear separation from the substance on which it grows.

Endrose-leaved 1


Small Lin. and Dill.

2. Leaves very small; upright; growing close together in a tuft; wedge-shaped; sometimes cloven; lopped at the ends and notched. *From Dillenius.*

*Lichenoides tenue crispmum, foliis exiguës surfectis*. *Dillenius*, t. 10, f. 54.

Frisly Lin. Dill 3. Branched; shrub-like; branches sharp; upright; growing in a tuft. *From Dillenius.*

Lichenoides tenuilimum crispmum et veluti aculeatum. *Dillenius*, t. 10, f. 35.

Woods, heaths, and shady places. (1.) On moss. (1.) All the year. (3.) Winter.
THONGS

STARJELLY. Upright; flat; jagged; segments cloven to the end, blunt; growing in a kind of tuft. Brown. From Dilleniaceae.
Heaths. Winter and Spring. Dill.

STARJELLY. Flat; strap-shaped; forked; segments broader at the ends; lopped; edged with a few imperfect teeth. From Dilleniaceae.
Lichenoides gelatinosum foliis angustioribus tuniformibus.
Dilleniaceae, t. 19. f. 28.
Malham Cove Rivulet, Yorkshire, and Snowden torrents. Summer. Dill.

STARJELLY. Solid; wrinkled, tubercled; somewhat globose; of a blackish yellow.
Tremella fluviatilis gelatinosa et uterulosa. Dilleniaceae, 54.
t. 10. f. 16.
On stones in brooks and rivers.

STARJELLY. Roundish; fall of hollows, assuming a variety of forms, of a jelly-like substance.
1. Thick and short; of a firmish jelly-like substance and of a greenish brown colour.
In the sea, and fall marishes about Delkey, Chichester, Sussex.
Dill.

Oss. Uncertain whether this plant of Dilleniaceae's be the Tremella disformis of Liu. But it seems to correspond pretty exactly to his description of it.

STARJELLY. Hemispherical; scattered. —
On sea river-weeds, and oat-weeds.

STARJELLY. Nearly globular; sitting; single; smooth; — mostly of a pale purple, or flesh-colour; but sometimes of a beautiful carmine.
On the decayed bark and branches of trees.

Horned
8 Corniculata
Dill.

Forked
9 Dichotoma
Dill.

Warty
10 Verrucosa
Dill.

Curled?
11 Disformis
Dill.

Sea
18 Hemiphtherica

Purple
14 Purpurea

Purple
FLOWERS INCONSPICUOUS.

STARJELLY?

TREMELLA?

Globular or oblong; somewhat flattened; sitting; single; black.
—Larger than the preceding, and of a firmer consistence. From Dillenius.

Lichenoides tuberculatus compressum nigrum, lignis putridis adnascens. Ray’s Syn. 71. Dill. t. 18. f. 7.

On the bark of decayed wood. Winter. Dill.

Obs. Some may be inclined, with Dillenius, to refer this and the preceding species, to the Cupthong, or with Linnaeus to the Jellywort, but they are neither transparent, nor of a jelly-like consistence. Nor do they form a ground, or crust, as the Cup-thong, but vixi distinct from each other. Do they not rather belong the Fungusses? and are they not in reality species of the Cluetops?

Juniper?

15

Juniperina?

Ray

STARJELLY. Sitting; membranaceous; ear-like; of a yellowish brown—

Fungus gelatinus dentatus, sabinæ adnascens, fulvi coloris. Ray’s Syn. 16.

On Sävine.

Flat

16

Flana

Ray

STARJELLY. Round and flat; of a jelly-like substance—

Fungus rotundus planus ligno putrido adnascens. Ray’s Syn. 47.

On rotten wood.

428 LAVER. 1206 Ulva.

FLOWERS in a semi-transparent bladder-like membrane; with no appearance of a regular leaf.

Turkey-Feather

1

Pavonia

LAVER. Flat; kidneyp-shaped; sitting; scored a-crofs and a-crofs—

Fucus maritimus gallopavonis pennas referens. Ray’s Syn. 42.

Alga maritima gallopavonis plumarum referens. Ramb. pin. 364.


On rocks and stones in the sea.

Navel

2

Umbilicalis

LAVER. Flat; round; sitting; target-shaped; of a leathery substance—somewhat bonny. Border indented; fixed only by a point in the middle, to the substance on which it grows; of a dark footy colour, flowering.

Ulva marina umbilicata. Ray’s Syn. 62.

Fucus umbilicus marinus dictus. Ramb. pin. 364.

Tremella marina umbilicata. Dillenius 46. t. 8. f. 3.

On rocks and stones in the sea.

LAVER.
THONGS

LAVER. Tubular; simple.—Floats mostly near the surface of the water, though sometimes adhering to stones. Ulva marina tubulosa, intestinorum figuram referens. Ray's Intestinalis. Syn. 62.

Fucus catus. R. 3d. pin. 354.
Tremella marina tubulosa intestinorum figuram. Dillenius 47.

1. g. f. 7.

Mostly in ditches near the sea, but sometimes in fresh water ditches.

2. Branched.


Mostly in ditches near the sea, but sometimes in fresh water ditches.

LAVER. Tubular; branched; compressed—Irregular, zigzag; cells of different sizes, but communicating with one another; branches scattered, but little divided; sometimes nearly cylindrical. Ulva marina tenuissima et compressa. Ray's Syn. 62.

Tremella marina tenuissima et compressa. Dill. t. g. f. 5.

On rocks and stones in the sea.

LAVER. Strap-shaped; branched; nearly upright; form—Cluster ing a turf;—Segments mostly eleven, rather blunt. From Dill.

Tremella marina cespitosa, segmentis tenuibus. Dill. t. 10. Cespitosa.

Side rocks Anglesey. Dill.

LAVER. Thread-shaped; jointed; joints alternately, compact Riverweed pressed; tubular.

Converva tubulosa. Hudson 480.

Converva marina filulosa. Dill. 34. t. 6. f. 32.


Ray's Syn. 65.


On the sea-shore.

LAVER. Tubular; very much branched; jointed; branches opposite—Purple. Hudson 476.

Corallina lenta purpurea compressa. Ray's Syn. 34.

On the sea-shore.

LAVER.
FLOWERS INCONSPICUOUS.

Horned

8

Ceranoide

Dill.

LAVER?

ULVA?

Nearly cylindrical; very much branched; branches irregular; tapering and forked at the ends.—Of a slippery consistence. From Dill.

Conserva marina lubrica et mucosa. Dill. t. 4. f. 24.

Branched

9

Ramosa

Hud.

LAVER. Leaf branched; flat; waved; purple. Hudfon 476.
On the sea-shore.

LAVER. Leaf forked; green. Hudfon 476.
Fucus membranaceus dichotomus graminicus. Ray's Syn. 45.
On the sea-shore.

LAVER. Oblong: flat, waved; membranaceous; green, but sometimes purple;—very long and very broad.
Alga longissimo, latissimo tenuique folio. Baub. pin. 364.
On the sea-shore.

Oyster

12

Lactuca

LAVER. Hand-shaped; proliferous; membranaceous; segments narrower towards the base.—Leaves crowded together; pale; segments waved; inversely egg-shaped; blunt; transparent; each growing into leaves.

Sea

Tremella marina vulgaris, lactuca fimilis. Dill. 42. t. 8. f. 1.
Fucus marinus, lactuca marina dictus. Park. 1293.
Mucius marinus lactuca fimilis. Baub. pin. 364.

FRESH WATER

Hud.

2. Smaller and more tender.
Ulva palustris lactuca marinae fimilis sed multo minor et tenerior. Ray's Syn. 62.
Tremella paluditis, vulgaris marinae fimilis, sed minor et tenerior. Dill. 43. t. 8. f. 2.
Green Laver. Oyster Green.
(1.) In the sea. (2) in fresh water ditches.

This is esteemed by the inhabitants of the sea-coast as a wholesome and pleasant food, being gently opening and antiscorbutic. It is frequently sent to London in earthen pots.

Leek

17

Lactecolata

LAVER. Spear-shaped; flat.
Tremella marina, polloni folio. Dill. 46. t. 9. f. 5.
On rocks in the sea.

LAVER
THONGS.

LAVER. Leaf oblong; blistered—Folded; margin curled; Ribbon

Ulva marina fasciata. Ray's Syn. 62.
Tremella marina fasciata. Dill. 46. t. 9. f. 6.
Muscus lactucae marinae similis. Raub. pin. 364.
On the sea-shore.

LAVER. Globular; growing in clusters—About the size of Bladder

bump-seed: resembling little mushrooms.

Tremella paluiris, vesicularis sphæricis fungiformibus. Dill.
55. t. 10. f. 17.
Lichenoides fungiforme, capitulis vel vesicularis sphæricis,
aqueo humore repletis. Ray's Syn. 70.
On the sides of ditches, and in ditches dried up. Autumn.

1. p. 136, appears to be a distinct species. It is found in Sweden
in great quantities on the sides of springs and marshes, floating in
the water, of a green colour, of the size of bump-seed, and full of
a viscid pulp.

429 OARWEED. 1205 Fucus.

Barren Flowers?

Little Bladders; smooth, hollow; interspersed within
with soft hairs interwoven together.

Fertile Flowers?

Little bladders; smooth; full of a jelly-like pulp;
sprinkled with grains buried in the substance of the
bladders; somewhat prominent at the points. SEEDS
foliary.

Obs. See Plate 1. fig. G.

OARWEED. Stem somewhat cylindrical; compressed;
leaves oblong; very entire. Husfon 458.
On the Yorkshire coast.

OARWEED. Leaf flat; forked; partly toothed and partly
ferrated. Flowers tubercled; at the ends of the branches.—

1. Fucus, feu Alga latifolia major dentata. Ray's Syn. 42.
Sea Wrack.

2. Fucus marina humilis, latifoliae ferratae similis. Ray's Syn. 42. Dwarf
On stones and rocks in the feo.
FLOWERS INCONSPICUOUS.

Oak-leaved

Vesiculofus

Common

1. Fucus, seu Alga marina latifolia vulgarissima. Ray's Symp. 46.
   Fucus maritimus vel Quercus maritima vesiculas habens. Bauh. pin. 395.
   Quercus marina herbacea et varietas. Park. 1293.
   Quercus marina. Gerard. 1567.

Swollen

1. With the ends of the branches swollen.
   Fucus maritimus seu Quercus maritima foliorum extremis
   tumidis. Bauh pin. 395.
   Sea Oak.
   On rocks and stones in the sea.

Shrubby

4. Divaricatus

Narrow leaved

OARWEED. Leaf flat; forked; very entire. Branches
straddling; the bladders at the divisions of the leaf in pairs—
Thinner than the preceding. The bladders at the divisions of the leaf
in pairs, the others solitary.

Sea Shore.

OARWEED. Leaf flat; forked; strap-shaped; sharp. Blad-
ders egg-shaped; scattered. Hudon 46.
   Fucus longo angusto crassoque folio. Bauh. pin. 396. Ray's
   Symp. 43.
   Fucus marinus secundus. Park. 1293.
   Quercus marina 2. Gerard. 1115.
   Sea Thongs.
   Sea-shore.
   For an elegant engraving of it see the Gent. Mag. for 1756.
   Page 64. This plant at its first appearance so much resembles a
Fungus, that some authors have mistaken it for one. Mr. Ray
seems to have described it as a distinct species under the name
of "Fucus Fungis affinis." Symp. p. 43. n. 15. from the center of
the little Fungus-like substance 3 or 4 floods arise, and extending
by degrees into branches, constitute the perfect plant. The little
Fungus still continues and forms a kind of fence or cup at the
base of the stem.

Furrowed

Excitus

OARWED. Leaf strap-shaped; forked; channelled on one
side. Branches straddling; dotted—Segments blossoved on one
side, and swelling out on the other; yellowish green.
   Fucus pumilus dichotomus, segmentis ex una parte gibbosis,
   ex alia excavatis. Ray's Symp. 45.
   Sea shore.

OAR-
OARWEED. Leaf flat; forked; very entire; dotted; Bucks-horn spear-shaped; flowers tubercled; cloven; at the ends of the branches.—

**Ceranoidea**

1. Edge of the leaf entire. True.
   *Fucus membranaceus ceranoidea ramosus, per fiscitatem ob-solete virencens*. *Ray’s Syn.* 44.
   *Fucus ceranoidea albidus, ramulorum apicibus stellatis*. *Ray’s Syn.* 44.
   Sea-shore.

OARWEED. Leaf flat; forked; very entire, dotted; twisted strap-shaped and channelled towards the base. Flowers in pairs; tubercled.—On fruit-stalks, at the ends of the branches, oblong and thickish. Whist growing in the Sea it is twisted spirally.

1. *Fucus spiralis maritimus major*. **Larger.**
2. *Fucus lspiralis maritimus minor*. **Smaller.**
   Sea-shore.

OARWEED. Leaf flat; forked: thread-shaped. *Hudson Flat 47°.*

On the Lancashire Coast.

**Filiformis**

Hud.

OARWEED. Leaf compressed; forked. Little leaves Knotted pointing two ways; very entire. Bladders in the substance of the leaf, solitary; dilated,—and egg-shaped; those in the Nodofus middle of the branches, broader. Little Leaves spear-shaped, blunt, disposed in two rows on the angles of the great one.


On rocks and stones in the Sea.
FLOWERS INCONSPICUOUS.

OARWEED. Leaf compressed; branched. Little leaves painting two ways; alternate; very entire. Flowers on fruit-flisks; oblong; sharp-pointed. Leaf thread-shaped; zigzag; compressed; marked with little teeth at the angles on each side. Flowers spindle-shaped; alternate; furnished with a bill, and larger than the little leaves, which are spear-shaped.
Fucus maritimus alter, tuberculis paucissimis. Baub. pin. 368.
Quercus marina quarta. Gerard. 1569.
On the sea-shore.

Jointed

Ahrotanifolius

OARWEED. Leaf thread-shaped; compressed; doubly winged. The ends bladder-like; dilated; terminated with flowers tubercled on one side.
On rocks in the sea, on the Sussex shore.

Fern-leaved

Fenniculaceus

OARWEED. Leaf thread-shaped; very much branched: bladders' egg-shaped; terminated with little leaves divided into many blunt segments bearing fruit at the ends.—About the length of the Hairy Cuphong. Little branches very numerous; hair-like; ending in a bladder or bladder; the last of which terminates in several little leaves with tubercles at the ends.

Common


Bearded

Barbatus

2. With oblong bladders. Little leaves at the ends strap-shaped.
Fucus foliculaceus folii abrotani. Baub pin. 367.
Fucus maritimus folii tumidis barbatis. Baub. pin. 368.
Muscus marinus abrotanoides. Park. 1200.
(t.) On the Yorkshire and Lancashire shores. (2.) On the shores of Sussex and Cornwall.

Warty

Verrucosus

Hud.

OARWEED. Leaf thread-shaped; branched. Branches undivided, with round little bladders on the sides. Hudson 470.
Fucus marinus purpurascens parvus, caule et ramulis feu foliolis teretibus. Ray's Syn. 50.
Sea-shore.

Prickly

Aculeatus

OARWEED. Leaf thread-shaped, compressed; very much branched; edged with awl-shaped, alternate, upright teeth. —Resembles a Horse's tail.
Fucus uloeoides. Hudson 469.
On the shores of Cornwall, and in the British Channel.
THONGS.

OARWEED. Leaf cylindrical; branched; little branches Black
                        tilled; segments pointing one way; bowed inwards. Hudson
                        16
                        Little branches best with bristles pointing upwards. Ray. Incurvus
                        Pinus maritima seu Fucus teres, cajus ramuli setis surfum
                        tendentious sunt oblitf. Ray’s Syn. 50.
                        Sea Pine.
                      On the Sussex shore.
                        Obs. Is not this the F. Lycopodioides Syf. Nat. p. 717. n. 35.

OARWEED. Leaf cylindrical, very much branched; branch-
                        es scattered; beset alternately with soft thorns. 17
                        On the Yorkshire Coast.
                        Mucoides

OARWEED. Leaf thread-shaped; cylindrical; forked; Hairy
                        covered over with a very fine hairinefs,—I’t is so fine as hardly to
                        be distinguishable to the naked eye. It has somewhat of the the ap-
                        pearance of Spong, and bears no small affinity to the Tamarifk
                        Oarweed. The Stems are about a foot long, of the thickness of
                        course thread; very much branched; the branches blunt, cylindrical,
                        and covered over with the hairiness above described, which is ex-
                        tremely short and thick, and very much resembles the skin of a Fason.
                        In the sea.

OARWEED. Stem cylindrical; very much branched. Tamarifk
                        Leaves awl-shaped; alternate. Bladders round; tilled; sitting in
                        the base of the leaves. Hudfon 460.
                        Thread-shaped; very much branched, rough with hair. 18
                        Linneus Sp. Plant 1631. n. 33.
                        Fucus foliis Ericæ, seu Tamarifci. Ray’s Syn. 49.
                        Fucus tamarifcæ foliis. Hudfon 459.
                        On the shores of Yorkshire and Cornwall.

Obs. The F. Ericoides is not to be found in the Syft. Nat.

OARWEED. Leaf thread-shaped; rather cylindrical; White
                        somewhat forked; joints a little swollen; branches distant,
                        sharp. Hudfon 470.—White.
                        Albus
                        Fucus teres albus tenuiffime divifus. Ray’s Syn. 50.
                        On the Sussex shore.

OARWEED. Leaf cylindrical; very much branched; lit-
                        tle branches alternate, in bundles; very short; tubercled; rough.
                        Hudfon 474.
                        On the Yorkshire coast.

A a 3
FLOWERS INCONSPICUOUS.


Matted

Plicatus

Hud.

Golden


Coral

2. Upright.

Fucus coralloides erectus. Ray's Syn. 51.

Sea-shore.

Upright

Scorpioides

Hud.

Fucus venustus fruticulorum specie, summitatibus inflexis. Ray's Syn. 58. t. 2. f. 6.

Sea-shore,—on the Sussex coast.

Round.

Rotundus

Hud.

Fucus kali geniculato similis, non tamen geniculatus. Ray's Syn. 43.

On rocks in the sea.

Forked

Fasciatus

26

27

OARWEEED. Leaf thread-shaped; forked; very much branched. Branches nearly of the same length; blunt.—Ladders at the ends of the branches, cloven.

Fucus seu alga exigua dichotomus foliorum segmentis longifolius, erasis et subrotundis. Ray's Syn. 45.

Sea shore.

OARWEEED. Leaf thread-shaped; forked; very much branched; branches tapering to a point,—equal. Nearly allied to the preceding, but longer, and the branches thicker.

Fucus parvus segmentis praelongis teretibus acutis. Ray's Syn. 45.

Fucus forcellata lambriciatis species. Baub. pin. 366.

Fucus lumbrici. Hudon 47.1.

Sea-shore,—and in the sea.

OAR-
THONGS.

OARWEED. Leaves somewhat cylindrical; branched; of jelly
a jelly-like substance. *Hudson* 471.  
Spongia *ramosa altera anglica*. *Park*. 1304.  
Sea-shore.

OARWEED. Leaf hand-shaped; flat—  
Fucus *membranaceus ceranoides*. *Ray*’s *Syn*. 46.  
Dullesh. *Irish*, *Dills*, *Scotch*, Dulls. Dulles in *Northumberland*.  
Handed  
*Palmatus*  
*Ray*.  
Sea-shore.  
After being soaked in fresh water it is eaten either boiled, or  
dried, and in the latter state has something of a violet flavour.

OARWEED. Leaf hand-shaped; little leaves sword-shaped; Fingered
stalk cylindrical—very short.  
Digitatus  
1. **Fucus phaegnoides et polyschides. *Gerard*. 1570.**  
2. **Fucus membranaceus polysphyllus major. *Ray*’s *Syn*. 46.**  
*Many-leaved*  
3. **Fucus ficticus latissimus edulis dulcis. *Ray*’s *Syn*. 46.**  
*Broad-leaved*  
1. Sea-girdle.  
On rocks in the sea.

OARWEED Leaf almost simple; sword-shaped; stalk cy—Sweet
lindrical; very short—It is often four feet long and two broad;  
early oval or oblong, of a leather-like substance, waved at the edges. *Saccharinus*  
and narrowing towards the base.  
1. **Fucus longissimo, latissimo, cerasique folio. *Ray*’s *Syn*. 39.**  
*Common*  
2. **Fucus folio singulare longissimo, lato, in medio rugoso, qui**  
*Sea-belt*. *Hud.*  
3. **Fucus latissimus et longissimus, oris crispis. *Ray*’s *Syn*. 38.**  
*Curled*. *Hud.*  
On rocks and stones in the sea.  
Washed in spring water and then hung up in a warm place,  
substance like sugar exsudes from it. Some people eat it fresh  
out of the sea.

OARWEED. Leaves membranaceous; oblong; inclining Dock-leaved  
to egg-shaped; very entire; on foot-stalks. Stalk cylindrical;  
branched—Resembling the leaves of the Bleeding Dock in size as Sanguineous  
well as form.  
On the shores of Yorkshire and Cornwall.
FLOWERS INCONSPICUOUS.

OARWEED. Leaves membranaceous; spear-shaped; proliferous; fringed.—of a reddish colour.
1. Fucus membranaceus rubens angulifolius, marginibus ligulis armatis. Ray’s Syn. 47.
2. Leaves broader, purple.
   Fucus membranaceus purpureus latifolius pinnatus. Ray’s Syn. 47.
Sea-shore.

OARWEED. Leaves somewhat membranaceous; forked; segments growing broader towards the end—which is edged with blunt teeth; curled, torn, according to Hudson cloven, with a tinge of white or purple.
   Fucus membranaceus purpureus, varie ramosus. Ray’s Syn. 47.
Sea-shore.

OARWEED. Leaves membranaceous; branched; branches growing broader towards the end; hand-shaped. On the Yorkshire coast.
   Hudson 475.

OARWEED. Leaves membranaceous; somewhat forked; stringy; segments alternate, running along the rib; cloven—purple; strap-shaped; semi-transparent; the ends somewhat toothed.
   Fucus dichotomus parvus collateral et membranaceus. Ray’s Syn. 44.
Sea-shore.

OARWEED. Leaves membranaceous; oblong; waved; indented. Stem cylindrical, branched.
On the shores of Cornwall.

OARWEED. Leaves (membranaceous) branched; branches with winged clefts, inclining to toothed; border callous. Hudson 473.
   Fucus dealensis pediculare rubra folio. Ray’s Syn. 43.
On stones and rocks in the sea.

OARWEED. Leaves membranaceous; triply winged. On the Yorkshire and Sussex coast.
   Hudson 474.

OARWEED. Leaves grizzly; branches somewhat winged; segments sharp: bearing fruit. Stem somewhat cylindrical, very much branched. Hudson 474.
   Fucus flavicans teretifolius, ramulis plenatim enaerentibus.
   Ray’s Syn. 50.
On the Devonshire coast.

OAR-
OARWEED. Leaves gristly; spear-shaped; doubly winged; Feathered feather-like; item thread-shaped; compressed; branched.—Leaves purple. It resembles the following species, but is winged Plumosus like Feathermois, and small.

Fucoides purpureum eleganter plumosum. Ray's Syn. 37.

OARWEED. Leaves gristly compressed, more than doubly Fern-leaved compound; winged; segments blunt. Hudon 473.

On the Lancashire coast—not common.

Ficinus
Hud.

OARWEED. Leaf gristly; compressed; more than doubly Scarlet compound; winged. Segments strap-shaped—coloured; Stem somewhat cylindrical; compressed; gristly; very much branched; Cartilagineous little branches alternately pointing one way. Fruit globular, on the sides of the branches. Hudon 473.

Fucoides rubens, varia dissectum. Ray's Syn. 37.

Sea-shore.

Obs. Hudon does not admit of Linneus's character but refers it as a Synonym of his Conserva rubra, though both agree in giving Ray's Synonym.

OARWEED. Leaves membranaceous, strap-shaped, com. Purple pressed, branched; fruit globular, scattered; without foot-flasks.

Thread-shaped cylindrical, very much branched; branches alternate; little branches crowded, bearing fruit; fruit globular. Hudon 471.

1. Fucus teres rubens ramosissimus. Ray's Syn. 51. Branched


Fucus teres rubens minus ramosus in longum proemnes. Ray's Syn. 51.

Fucus purpureus. Hudon 471.

On flones and rocks in the sea.

Obs. All the species of Oarweed may be used to manure land, or burnt to make Kelp, which is an impure sofit alkaly.
FLOWERS INCONSPICUOUS.

430 RIVERWEED. 1207 Conserva.

Fibres simple; uniform; like hair or thread. Gen. Plant. Unequal Tubercles, on very long, hair-like fibres. Syst. Naturaee.

* Threads simple, equal, without joints.

RIVERWEED. Threads undivided; equal; extremely long—Deep green.

1. Threads extremely fine and long, floating with the stream. Conserva fluviatilis sericea vulgaris et fluitans. Dill. 12. t. 2. f. 1.

Conversa Plinii. Ray's Syn. 58.

Threads coarser, not so long, winding in different directions, from one to two feet in length, about the thickness of human hair.


Conversa palustris sericea, crassior et varie extensa. Dill. 13. t. 2. f. 2.

(1.) Rivulets, ponds, and bogs; in all seasons, but chiefly spring and autumn. (2.) Marshy meadows, spring and summer.

Obs. Are not these distinct species?

RIVERWEED. Threads undivided; equal; shorter than one's finger.

Spring

1. Threads extremely short; sometimes not more than half an inch in length: of a brownish green.

Conversa minima Byss facie. Dill. 14. t. 2. f. 3.

Conversa fontalis susca omnium minima mollis. Ray's Syn. 58.

On stones, in flow streams and near springs. Winter.

2. Threads longer, of a slippery consistence, uniting into fleecy locks.

Conversa mucosa, confragosis rivulis inasscens. Dill. t. 2. f. 4.

(1.) On stones in flow streams, and near springs. Winter.

(2.) In rocky rivulets. Lanberis, Wales. Dill.

* * Threads
** Threads branched, equal.

RIVERWEED. Threads equal; branched at the ends. Forked Branches mostly undivided. Hudson 478. Threads pretty long, 3
dividing into two or three short branches at the ends. Furtata
Hud. 16.

Hud.

Conferva rivialarum nostras bicornis, filamentis tenuissimis.
Ray's Syn. 58.

2. Threads shorter; thicker; and more branched—green when Branched Hud.
taken out of the water, but when dry it turns to a greyish dark green.
Conferva palustris, filamentis brevioribus et crassioribus. Dill.
17. t. 3. f. 10.

Conferva palustris subhirsuta filamentis brevioribus et crass-
ioribus. Ray's Syn. 477.

Obs. This variety appears to be a different species, at least not a
variety of this. Dilleniuss speaks of it as having some affinity both to
the Common and the Mill Riverweed but he says it to be distinct from
both. The threads be jays are shorter, thicker, and more branched
than in the former; longer, thicker and less branched than those of
the latter.

(1) In rivulets. (2) In ditches. Spring—Summer—Aut.

RIVERWEED. Threads equal; somewhat branched; White
shining like white flax.—Pretty much resembles in form the Cloven
Forked Riverweed but it is not quite so long. {From Dilleniuss. Candida
Dill.}

Conferva capitacea, ferci candidi in fari nitens. Dill. t. 2. f. 7.
Penary, Wales. Anglesey rocks. Dill.

RIVERWEED. Threads equal; branched; inclosing air Cotton
bubbles.

Conferva palustris bomyicina. Ray's Syn. 60. Dill. 18. t. 3. Bullota
f. 11.


Ditches and flagrant waters. Spring—Summer and Autumn,
disappearing in the winter. On the sides of cinders in all seasons.

RIVERWEED. Threads equal; more branched toward the Mill
base.—Branches crowded; soft and herbaceous when taken out of
the water, but when dry they acquire an almost fleshy hardmess, which
Dilleniuss attributes to a sediment deposited by the watter. This may
possibly be the case, but may it not be owing rather to an earth ab-
sorbed by the plant itself in the process of vegetation, as is probably the
case in the Stonewort?

Conferva rivialorum capitacea, densissime congestis ramulis.
Ray's Syn. 58. Dill. 21. t. 4. f. 15.

Alga in tubulis aquam fontanam ducentibus. Baub. pin. 364.
Clear streams, and mill pond troughs.

RIVER-
FLOWERS INCONSPICUOUS.

Amphibious RIVERWEED. Threads equal; branched; when dry uniting into stiff sharp points—

Conserva amphibia, fibrillosa et spongiosa. Dill. 22. t. 4. f. 17.
Conserva terrestris exilis fibrillosa. Ray’s Syn. 59.
Fungus vel potius spongis viridis doliolis adnascenti, similis. Ray’s Syn. 57.

Banks of rivers; ditches; damp walls. Autumn and Winter, and in Summer in moist shady places.

Fennel-leaved Fynniculacea

RIVERWEED. Threads equal; very much branched; branches and subdivisions of the branches very long, scattered.

Hudson 479.

Conserva marina foeniculacea. Dill. 16. t. 2. f. 8.
On rocks on the sea-shore.

Rough Rough

RIVERWEED. Threads equal; very much branched; little branches very short, alternate. Hudson 479.—Distant; of a rigid consistence.

Conserva fluviatilis fibrillosa, subrigida. Dill. 21. t. 4. f. 16.
In flow rivers.

Fibrous Fibrillo/a

RIVERWEED. Threads equal; very much branched; little branches very short, numerous; crowded; very finely divided;—Soft; of a pale green. Very much resembles the preceding species. In Dillenius’s figure there appears little knots at the divisions of the branches, which are probably the flowers or fruit. From Dillenius.

Conserva fluviatilis brevis, extremis ramulis creberrime et tenuissime divisis. Dill. t. 4. f. 18.
On small stones in Hackney River. Dill.

Matted Littoralis

RIVERWEED. Threads equal; very much branched, pretty long; roughish. Larger threads jointed, branched; feifer threads very much branched, matted together. Hudson 484.

Conserva marina capillacea longa ramossilma, mollis. Ray’s Syn. 59. Dill. 23. t. 4. f. 19.
Conserva plicata. Hudson 484.
On rocks and stones in the sea.
RIVERWEED. Threads equal, very much branched; Wool branches undivided; crowded together; brown, (or whitish.) 12  Tomentosa  Hud.

1. Of a more tender substance, and of a whitish colour.  Whit
Mucicus maritimus gothipio similis.  Baud. pin. 663.
2. Of a firmer consistence, of the colour of rusty iron.  Rust-coloured
Salt ditches, and the sea-shore.

RIVERWEED. Threads branched; soft; shorter than Sea-green one’s finger; of a beautiful green.  13
Conferva marina capillacea brevis, viridissima mollis.  Dill. Æruginosæ 23. t. 4. f. 20.
On Oarweed.

RIVERWEED. Threads equal; branched; branches very Black short; in bundles.  Hudson 481.
On the Yorkshire coast.  14  Nigra  Hud.

RIVERWEED. Threads branched; equal. Little branches Sponge undivided; tided.  Hudson. 480.
Fucus teretifolius spongiosus pilosissimus.  Ray’s Sym. 43.
Spongiosa  Scæ-thore.

RIVERWEED. Threads equal; forked— Bristle
Conferva dichotoma, fetis porcinis similis.  Dill. 17. t. 3. f. 9.  15  Dichotoma
Conferva Plinii fetis porcinis similis.  Ray’s Sym. 53.
Salt marsh ditches. All the year.

RIVERWEED. Threads proliferous; of the same length; Broom rough with hair—
Conferva marina pennata.  Dill. 24. t. 4. f. 23.
Scoparia  Scæ-thore.

RIVERWEED. Larger threads branched; lesser threads Latticed alternate; short; with many finger-like divisions—
Conferva marina cancellata.  Ray’s Sym. 59.  Dill. 24. t. 4.  Cancellata

On shells and pebbles near the sea-shore.

*** Thread.
FLOWERS INCONSPICUOUS.

** * * ** Threads growing into one another.

Net

RIVERWEED. Threads uniting so as to form a sort of network.
Ditches, rivulets, and banks of rivers. Summer.

** * * * ** Threads knotted.

Horsetail

RIVERWEED. Threads undivided, bristle-shaped, straight.
Knots angular and thicker than the thread —
Conferva fluviatilis lubrica fetosa, Equisetifi facie. Dill. 39.
t. 7. f. 47.
On stones in rivers.

Flat-headed

RIVERWEED. Threads undivided ; somewhat necklace-shaped. Joints broad, flatted. From Dilleniis.
Conferva fluviatilis nodosa, sueum æmulans. Dill. t. 7. f. 48.
Near Ludlow, Shropshire; on the new bridge. Dill.

Compresa

Frogspawn

Gelatinosa

Brown

RIVERWEED. Threads branched; necklace-shaped; joints globular, of a jelly-like substancense,—jet close together.

1. Larger; brown, or mouse-colour.
Conferva fontana nodosa, fpermatia ranarum infar lubrica, major et fulica. Ray's Syn. b2. Dill. 36. t. 7. f. 42.

Green

2. Smaller, green.
Conferva fontana nodosa, fpermatia ranarum infar lubrica, minor et viridis. Dill. 37. t. 7. f. 43.

Pale green

3. Tender slimy substance; pale green.
Conferva stagnatilis, globulis virescentibus mucosis. Dill. 38. t. 7. f. 44.

4. Large; blue; pretty much branched.
Conferva alpina lubrica, filamentis nodosii caeruleis. Dill. 39.
t. 7. f. 45.

5. Threads black, fine and slender; very much branched.
Conferva fontana nodosa lubrica, filamentis tenuissimis nigris.
Dill. 39. t. 7. f. 46.
In clear springs and rivulets. (2) Spring—Summer. (4) Aug.

Pearl

Moulliformis

Dill.

RIVERWEED. Threads branched; necklace-shaped; joints globular, of a jelly-like substance: little branches straight, finely tapering to a point;—Joints distant from each other. A very elegant species. Colour of a pale red. From Dilleniis.
Conferva marina nodosa, lubrica, ramosissima et elegantissima rubens. Ray's Syn. 62. t. 2. f. 3. Dill. t. 7. f. 46.
THONGS.

RIVERWEED. Threads very much branched; branches Shrubby numerous, finely divided: little branches necklace-shaped. Fruticulosa Dilleni. 

* * * * * Threads jointed.

RIVERWEED. Threads jointed, undivided; joints alternately compressed.—Threads winding in different directions. Dill. 25. Capillaris. 

1. Threads fine; about the thickness of a horse-hair; some—Fine. Dill. times a little branched. Dill. t. 6. B. 

2. Threads considerably thicker; about the thickness of a very hair—Coarse thread. Dill. f. 25. 4. 

(1) In fresh water ditches. (2) In salt water ditches.

RIVERWEED. Threads jointed; forked; hairlike,—Rather Hair fork; dividing into forks about four or five times in the whole length. Ciliata. 

Convera ramosa, filaments geniculatis brevioribus. Dill. Dill. 

t. 5. f. 26. 

On small stones in Kenchchurch River, Herefordshire. Dill.

RIVERWEED. Branches forked; flowers surrounding the Scarlet joints—Elis Phil. Trans. vol. 57. p. 425. 

On the sea-coast near Brighthelmstone. 

RIVERWEED. Branched forked; fringed at the joints—Fringed Elis Phil. Trans. vol. 57. p. 425. 

Ciliata Coralina form. 

RIVERWEED. Threads jointed, forked—Of a jelly-like substance. 

1. Threads finer, of a reddish colour. 

Convera marina gelatinosa, corallinae infrar geniculata ten- 

Dill. 33. t. 6. f. 37. 

Corallina confervoides gelatinosa rubens, ramulis et geniculis per-augustis. Ray’s Syn. 34. 

2. Threads thicker, white; joints transparent. 

Convera marina gelatinosa, corallinae infrar geniculata, crassior. 

Dill. 33. t. 5. f. 24. 

Corallina confervoides gelatinosa alba, geniculis crassifolis 

pellucidis. Ray’s Syn. 34. 

On the sea-shore. (2) Adhering to pebbles.

RIVERWEED. Threads jointed, very much branched; Pointed lesser branches, very long, distant, sharp. Hudson 484. 

Convera marina geniculata ramossima lubrica, longis spar. Elongata. 

On the sea-shore.
FLOWERS INCONSPICUOUS.

Hand-shaped 31
Polymorpha

RIVERWEED. Threads jointed, branches in bundles. — Pretty much divided.

This plant as its Latin name implies, assumes a variety of appearances. At first it is red; it then turns of a brownish colour, and at last becomes almost black. At this stage of its growth, it changes too its form. Most of the middle, or lower branches drop off, and the upper ones alone remain, which when grown to nearly an equal length, have very much the appearance of an open hand, whence its English name.

Conserva marina geniculata nigra palmata. Dillenius 32. t. 6. f. 35.
Conserva marina geniculata ramossissima l ubrica, brevibus et palmatis congestis ramulis. Ray's Syn. 61.
Muscus capillaceus multifidus niger. B a n b. pin. 363.

On the sea-shore.

In the Philos. Trans. vol. 57. p. 424. Mr. Ellis has demonstrated, that this species ought to be considered as bearing its Chives on one plant, and its Fruit upon another. The Capsules containing the Seeds are placed in the Forks at the termination of the branches. They are almost transparent, and when magnified the Seeds are visible within them if the plant is kept moist with water. The flowers furnished with Chives are collected into Cattins, which stand on the terminations of the branches, not in the Forks.

Larch-leaved 32
Laricifolia
Dill.

RIVERWEED. Threads jointed; branched; branches in bundles; undivided; branches alternate. — From Dillenius.
Conserva fluviatilis, sericea, tenuis. Dill. t. 6. f. 31.
Munnow River near Kenchurch, Herefordshire. Dill.

Pale-red 33
plumula. Ellis


Spreading 34
Vagabunda

RIVERWEED. Threads jointed; winding in different directions; branches, and divisions of the branches rather short. — Joints hardly visible to the naked eye, especially in the finer branches; they may however be discovered with the assistance of a microscope.
Conserva marina trichoides, lance immaculosa expansa. Ray's Syn. 60. Dill. 3e. t. 5. f. 32.
Salt marshes.

Short 35
Fulva
Hud.

RIVERWEED. Threads jointed, branched; branches and divisions of the branches very short, alternate. Hudson 454 — Of a sombre colour.

Brown 36
Fulva
Hud.

RIVERWEED. Threads jointed, very much branched; little branches alternate, undivided. Hudson 456.

- On the Yorkshire coast.

RIVER-
RIVERWEED. Larger threads jointed; forked; branches Bunched mostly alternate; distinct; branching out into roundish tufts; little branches crowded. From Dilleinius. Racemosus. Ray's Syn. Dill. 60. Dill. 28. t. 5. f. 30.

On small stones, Shepey and Anglesey. Pall.

Obs. Hudson has noted it as a subject of enquiry whether it may not be a variety of the next species.

RIVERWEED. Threads jointed, little branches rather short, Cluster with many clers—Green. 38

Larger threads jointed, forked; lesser threads branched; little branches short, rough, in bundles. Hudson 483.

Conerva fontalis ramoissima, glomerata congesta. Ray's Syn. 59. Dill. 28. t. 5. f. 31.

Springs and rivers. Dill. And on the sea shore. Hudson.

RIVERWEED. Threads jointed; very much branched; Branched little branches with many divisions, in bundles. Hudson 485.

On the Yorkshire coast.

RIVERWEED. Threads jointed; branched; branches in Silk bundles; crowded; green. Hudson 485.

Conerva trichodes virgata, sericesa. Dill. 31. t. 5. f. 33. Sericea

Conerva marina trichodes, ramulis virgatis longioribus glabris. Ray's Syn. 60.

Rivers, and on stones on the sea shore.

RIVERWEED. Threads jointed; very much branched; Rock green—

Threads jointed, branched; branches alternate, subdivided, Rupestris green. Hudson 485.

1. Threads branched all the way. Sea

Conerva marina trichodes ramosior. Dill. 28. t. 5. f. 29.

Conerva marina trichodes, feu Muscus marinus virescens tenuefolius. Ray's Syn. 60.

2. Threads branched only at the ends.


(1) Sea Beard. (2) River Beard.

(1) On rocks on the sea shore. (2) In rivers; on the bottoms of boats.

RIVERWEED. Threads jointed; very much branched; Transparent joints cylindrical; branches opposite. Hudson 483.

Sea shore.
FLOWERS INCONSPICUOUS.

754

RIVERWEED. Threads jointed; very much branched; compressed; branches more than doubly compound; winged; coloured. *Hudson* 486. Sea shore.

*Obs.* *Hudson* gives the *Fucus cartilagineus* of *Linnaeus* as a synonym of this species of which it is probably only a variety. See *Dillenius*’s opinion of this matter in *Ray’s Syn.* 37.

Feathered
44
*Pennata*
*Hud.*

RIVERWEED. Threads jointed; branched; branches doubly winged, brown. *Hudson* 186. Sea shore.

*Conerva marina pennata.* *Ray’s Syn.* 59. *Compare this with No. 17.*


This species produces Chives upon one plant and Seeds upon another. The Capsules are seated in the divisions of the branches near to the principal stem. The flowers with Chives, only form spikes, which stand in the forks of the branches, partly at an equal distance betwixt the stem and the ends of the branches. *Philos. Trans.* vol. 57. p. 424.

Winged
45
*Parafitica*
*Hud.*

RIVERWEED. Threads jointed; winged—*Hudson* 486. On Oarweed.

Carmine
46
*Flosculosa*
*Ellis*


Moorball
47
*Ægagropila*

RIVERWEED. Threads jointed; very much branched; branches extremely crowded; proceeding from the center, and forming a round ball—about the size of a walnut, very much resembling those hairy balls found in the stomacks of Cows and Oxen; green; joints of the threads brown. It is found loose in the water, and not adhering to stones or any other substance, nor does there appear to be any solid body in the center from whence the threads might proceed.

*Conerva globosa.* *Phil. Trans.* vol. 41. p. 493. In lakes on mountains.
MUSHROOM. Gilis branched; running down the pillar. Champignon —Hat turban-shaped, rather flat; border angular, as if cut into segments. Gilis yellow; thick; not distinct from the substance of Chantarelles the Mushroom. Pillar yellow short and naked. It varies both in size and colour. It is mostly of a pale yellow, but sometimes of a deep, or even Saffron colour. Gerard has called them the Fungi lethaes, but very improperly, as they are not only an innocent but an excellent food, and of a fine flavour.

   Fungus luteus seu pallidus, Chantarelli dictus, se contorquens esculentus. Roy's Syn. 2.
   Fungi lethaes. Gerard. 1385.

2. Hat with the border not circular but running into angles; reflected upwards; in form of a drinking glase, or inverted cone; yellow, and when full grown, with a tinge of red. Stalk very short, thick. Fungi esculentii 14 generis species & Clusi, aut ei similia. Roy's Syn. 2.
   (1) Meadows and pastures, and in woods under trees. (2) In Woods.
   The French and Italians eat them.

MUSHROOM. Gilis all of an equal size.—Hat not fleshy; flat; rather concave; as broad as one's hand; pale tawny, or flesh-coloured; scored and dotted at the edge. Gilis pale, or white, and between them and the edge of the bat, little teeth. Pillar white; nearly half as long again as the bat, about the thickness of one's little finger.
   Fungus major pediculo longo, modice cffato, lamellis albis cereberrimis, superne ad margines apparentibus. Roy's Syn. 4.
   In Woods.

   In Chelmsford Close near Cambridge, and in the Wolds of Lincolnshire.

B b 2. MUSH.
FLOWERS INCONSPICUOUS.

Teasel-headed
4
Dipsacoides
Ray

MUSHROOM. Brown; root of the stalk bulbous. Has a near affinity to the preceding, but judged to be a distinct species by those who have examined both. From Ray.
Fungus quercinus
Ray's Syn. 3.
Fungus bulbosus fuscus duplici pileolo. Baub. pin. 371.

Navel
5
Umbilicalis

MUSHROOM. White; growing together in clusters. From Ray.
Fungi plurès simul albi, ad arborum radices, eculentes. Ray's Syn. 370.
Fungi umbilicium experimtentes, plurès simul albi. Baub pin.

At the roots of Elms near Camberwell.

Reddish
6
Muscarius

MUSHROOM. The gills that extend but half way single. Pillar furnished with a cap; thicker towards the top; egg-shaped at the base. — Hat large; almost flat; either white, red, or crim. son; sometimes heart with angular red warts. Gills white, flat, inversely spear-shaped. Pillar hollow. Cap fixed to the middle of the pillar, timber, hanging down.
Fungus minor campelbris rotundus, lamellatus, inferne albus, supernae purpureus. Ray's Syn. 2.

Obs. This species of Ray seems to correspond pretty exactly with the Muscarius. Purple above and white underneath. He describes it indeed as round, and seldom larger than a Pigeon's egg, but says he never saw it expanded. Pillar short and thick.

In pastures.

It will effectually destroy bugs if the juice is rubbed upon the walls and bedposts. The inhabitants in the North of Europe whose houses are greatly infested with flies at the decline of summer, infuse it in milk and let it in their windows, and the flies upon tainting the leaf drop of it are instantly poisoned.

Toothed
7
Dentatus

MUSHROOM. Hat convex; gills with a sharp pointed tooth at the base. — Hat yellowish, smooth, somewhat clammy. Gills parting from the pillar. Pillar slender; hollow; cylindrical; without a cap; scored towards the top. It grows in clusters, several rising from the same point.
Fungus falciculatus, pilo orbiculari luteozone, pediculo fusco tenerime villoso, lamellis ex flavo candicantibus. Ray's Syn. 9.

Hat small, from half an inch to an inch broad, of a brownish yellow. Flesh hardly any. Gills numerous; of a yellowish white. Pillar brown; covered with a fine woolly down; about the thickness of a straw, and about two inches high: Four or five grow together. Ray.

At the bottom of gate-posts. September.

MUSH-
FUNGUSES.

MUSHROOM. Hat circular; of a yellowish brown; from Purple stalked two to three inches broad. Gills light brown; pillar purple—

Fusciculusus pileo orbiculari lutecente, pediculo purpureo. Ray's Syn. 10.

On rotten wood.

Obs. This may perhaps prove to be only a variety of the Toothed.

MUSHROOM. Yellow; several rising from one point. Gold knotted from Ray.

Fungi plures ex uno pede e Prunorum radicibus enati. Ray's Nodi Aurei Syn. 9.


In thickets at the roots of trees.

MUSHROOM. Hat flat; flesh coloured, with a milky Milky juice; gills brownish-red. Pillar long, flesh-coloured.—

Fungus lactefecens non acris. Ray's Syn. 4.

In woods.

It is agreeable to the taste and not pernicious.

MUSHROOM. Hat nearly flat, containing a milky juice. Pepper border bent downwards, gills pale flesh-colour—Milky juice very acrid.

Fungus piperatus albus, lacteo succo turgens. Ray's Syn. 4.


In woods.

MUSHROOM. Hat pale red or tawny. Gills numerous; Tawny whitish; pillar short; thick; flesh extremely white. Has a peppery taste. From Ray.

Fulvus

Fungus major rubicicens pediculo brevi crusfo, lamellis crebris albentibus. Ray's Syn. 4.

Under Oaks in August.

MUSHROOM. Hat convex; sealy; whitish. Gills brownish Common red.—Hat hemis, bercital; vittis ragged scales; bent inwards at the edg. Gills canecane; entire at the edge; unequal in length. Pillar campeltris cylindrica; above the cap smooth and white; beneath off-coloured.

Fungus campeltris albus superne, inferne rubens. Ray's Syn. 4.

Fungus Esculentus. Park. 1317.

Its degree of convexity and the colour of its gills depend upon its age. When it first makes its appearance it is smooth and almost globular; the edges of the hat prets upon the pillar, and the Gills which are then almost white are covered with a white membrane extending from the edge of the hat to the summit of the
FLOWERS INCONSPICUOUS.

the pillar. In this state it is called a button. By degrees it expands; the membrane bursts, the edges of the hat recede from the pillar and the gills are exposed to view, of a bright flesh-colour: this however soon fades, and sinks at length into a dark brown or chocolate colour. The hat now loses its convexity and becomes almost flat, rough and scaly.


3. Hat yellow, convex; gills white.—Pillar firm, solid; with whitish down.

4. Hat broad, white above; gills very numerous, of a pale red or flesh-colour; stalk short, pretty thick.—Described as a distinct species, but supposed by Dillenius to be either the same or at least only a variety of the common Mushroom.

Fungus minor pileolo lato, superne candido, lamellis subtus creberrimis, pallide rubentibus, feu incarnati, ut vocant, coloris. *Ray's Syn. 3.*

In parks and lands that have been long unploughed, (1) commons and poor land. (2) In pastures. (3--4.) In woods.

This species is one of the corner stones of modern luxury; either dressed in substance, or the juice boiled up with wine and spices, taking the name of Catchup.

The seeds are contained in the substance of the Gills. Each Gill is composed of two layers, and betwixt these layers are the Seeds, which fall to the ground when ripe. Some of them in their fall catch upon the Cap, and are entangled in its woolly surface, where by the assistance of a Microscope they may easily be found.

MUSHROOM. Large; of a pale red or flesh colour. From

Flesh coloured

14

Incarnatus

Ray

MUSHROOM. Large; of a whitish green—Flesh of a fine flavour. From *Ray.*

Fungus magnus viridis. *Ray's Syn. 2.*

Green

16

Vitidis

Ray

Fungi umbilicum referentis variegati 3 species. *Baub. pin. 370.*

In Hernsey-wood. *Dill.*

MUSH-
MUSHROOM. Hat covered with a mucous viscid substance Verdigris of the colour of Verdigris. Of a moderate size. From Ray. 
Fungus medius pileo muco æruginæi coloris obducto. Ray’s Æruginosus Ray. 
Syn. 6.

In the garden belonging to the Company of Apothecaries of London, and in St. James’s Park, and observed in a gravel pit in the middle of September.

MUSHROOM. Hat full of cracks or chinks: violet coloured and downy at the border; pillar bluish, with wool the colour of rusty iron—Hat hemispherical. Gills horizontally; colour of dirt.

Fungus pileo magnus, orbicularis, sublividus, lamellis albis, pediculo brevi bulbiformi violaceo. Ray’s Syn. 3.

In meadows. December.

Hat large; broad, or orbicular; somewhat of a livid colour; of a thick substance; at first convex, by degrees becoming somewhat hollow, with the border slightly reflected. Gills quite white, numerous, contracted towards the stalk. Pillar short; thick; swelling into a kind of bulb toward the base. Cap at first pale, then turning to a livid colour, and at last brown. Ray.

MUSHROOM. Hat orbicular somewhat of a livid colour; edge ragged and tinged with purple. Gills brownish.—Fleth little or none. Hat about two or three inches in diameter. From Ray.

Amanita orbicularis sublividus, lamellis subfuscis, pilei oris leveriter purpurascens. Ray’s Syn. 5.

Near Camberwell. Aug.

MUSHROOMS. Hat of a dirty yellow; gills a brownish Brown red, inclining to yellow—Hat convex but flattened, with frequently a little sudden rising in the middle; not milky; sharp at the edge; of a Cinnamon colour. Fleth of a fine flavour. Pillar long; naked; yellowish.

Fungus ovinus. Ray’s Syn. 2.

Fungus planus orbiculatus aureus. Bamb. pin. 371.

In woods.

MUSHROOM. Hat round; of a yellowish brown, with a Singed tinge of red; about the middle of darker red, appearing as if sanded. Gills numerous, of a dirty green—Hat about two inches in diameter. Pillar not very thick, about twice as long. Several rising from the same point. From Ray.

Fungus medius magnitudinis, pileolo superne e rufo flavicanti, lamellis subfusis forside virentibus. Ray’s Syn. 10.

September.
FLOWERS INCONSPICUOUS.

MUSHROOM. Hat of a chestnut colour. Gills white. Pillar spotted.—*Of a pretty large size.* From Ray.

Fungus pilearum major, superne coloris castanei, lamellis candidis, caule maculato. *Ray's Syn. 4.*

County of Down in Ireland.

MUSHROOM. Hat of a purplish brown; clamy. Gills of a brown purplish colour.—*Hat at first convex; afterwards hemispherical; and when old turban-shaped, with the edge bent inwards. Gills distinct, remote; the sides woolly, and dusted with a powder.*

Amanita dura, ex fusco rubens quercina. *Ray's Syn. 5.*

Hat mostly flat and even, but sometimes curled and irregular; from two to four inches in diameter; of a firmer consistence than most of the other species. *Fleshy little or none. Gills pale reddish brown. Pillar about the thickness of one's finger, two or three inches high; of a pale reddish brown.* *Ray.*

In woods, mostly at the root of oaks, and single, but sometimes several together. *October. Ray.*

Excentricus

MUSHROOMS. Hat fixed to the pillar on one side—not in the center. *It is subject to great varieties in colour, form, and size. It has sometimes no pillar or at least a very short one, and that, though very rarely, inserted in the center of the hat. Colour subtis or as if daubed with soot. It always grows on trees, but is exactly of the same substance with the other Mushrooms.* From Ray.

Fungus arboresus mollis multiformis. *Ray's Syn. 5.*

On trees, in St. James's Park.

Mealy

MUSHROOM. Hat flat; white, and as if sprinkled with meal. From Ray.

Fungus fumariorum in plano orbicularis, candidus. *Baub. pin. 372.* *Ray's Syn. 6.*

On dung-hills.

Starry

MUSHROOM. Hat pale, with a yellow flare in the center. Gills brimstone colour—not clamy; Pillar naked, smooth. *Hat convex.*

Fungus parvus, parvi galeti formam exprimens, rufus. *Ray's Syn. 7.* *Baub. pin. 373.*

On heaths.

Sooty

MUSHROOM. Hat, in form nearly the same as the former; of a sooty colour; not clamy. Gills black; extending from the hat to the cap.—*Of short duration.* From Ray.

Fungus parvus lethalis gastericulatus. *Ray's Syn. 7.*

Fungus parvus galericulatus alter parvus. *Baub. pin. 373.*

In pastures near paths and hedges. Autumn.

MUSH-
MUSHROOM. Hat convex, tapering to a point in the center; grey. Gills convex; grey; sccolluped. Pillar naked—scored, very long, cylindrical. Hat blunt at the top; rather inclining to one side; of a dirty yellow subsulphur; Gills not numerous, only every fourth extending to the pillar. Pillar sometimes near six or eight inches long. Slinker though firm; scored; hairy; yellowish. A very beautiful mushroom.

Fungus pedicius tullus, capitulo in conum faltigiatu, pediculo longifusso firmo striato. Ray's Syn. 4.

In woods.

MUSHROOM. Hat convex, tapering into a sharp cone, of Sugar-loaf a dirty yellow;—very much resembling the preceding, but the Pillar shorter and slenderer, and the Gills of a blackish livid colour. From Acuminatus Ray.

Fungus forside fulvus in acutum conum faltigiatu. Ray's Syn. 6.

Obs. This is perhaps only a variety of the preceding.

MUSHROOM. Shield-shaped, of different colours. Several Cottage rising from one point; border either sccolluped or entire. From Ruralis Ray.

Fungi multi ex uno pede clypeiformes variorum colorum, per oras crenati vel non. Ray's Syn. 10.

On old ruinous cottages.

MUSHROOMS. Hat hemispherical, tapering to a point; Long-stalked clammy. Gills white. Pillar long; cylindrical; white—Gills not concave; dusted with a fine powdery substance on each side. Clypeatus Root bulbous, long, hooked at the end.

Fungus parvus, pedicubi oblongo, firma, lento, pileolo in medio faltigiatu, striis exteriis apparentibus? Ray's Syn. 8.

border of the Hat scored.

In wood-land-pastures. September.

Dr. Percival in the last vol. of his Essays page 267, relates the case of a man who was poisoned by eating a Mushroom, which Mr. Hudon thinks was one of this species.

MUSHROOM. Hat spherical; pale; spotted. Pillar grow- ing in form of a bulb. Rather small. From Ray.


Amongst the brakes in Middleton park Warwickshire.

MUSHROOM. Hat bell-shaped; whitish; ragged. Gills exceedingly white; pillar with a sort of bulb; awl-shaped; naked—In pastures and on dunghills.
FLOWERS INCONSPICUOUS.

MUSHROOM. Hat conical. Gills numerous; particoloured; the outer half of a pale red, the inner half black.—Pretty large. From Ray.

Fungus pascorum majusculus, capitulo conico, lamellis subus creberrimis, exteriore mediate rubentibus, interiore nigris. Ray’s Syn. 5.

In pastures.

MUSHROOM. Hat circular at the margin; about three inches broad; of a moule-colour; clammy; not very fleshy. Gills whitish; pretty broad. Pillar thick; short; when full grown the border of the hat somewhat reflected. From Ray.

Fungus superficialis murini coloris, lamellis albicanibus. Ray’s Syn. 5.

In the fields near Chelsea.

MUSHROOM. Hat of a yellowish brown. Gills whitish.

—The Hat assumes a variety of forms. At first it is conical, by degrees it becomes flat, and at length hollow; appearing as if inverted. Pillar of a yellowish brown; small. From Ray.

Fungus parvus ex luteo luteo, pileo per maturitatem inverso. Ray’s Syn. 6.

In damp moist places, amongst Moss in Chelsea garden and at Lambeth, and in wet marshy places on heaths, and on rotten Moss. Spring Autumn.

Scotch Bonnet

MUSHROOM. Hat broad; thin; of a leather-like substance; compressed; in form of a drinking-glass. From Ray.

Fungus lamellatus, pileo lato, tenue, coriaceo, compresso, umbilicato. Ray’s Syn. 6.

Frequent about Hyde-park the latter end of Oct. Ray.

Funnel-shaped

MUSHROOM. Hat clammy; of a pale red; when fully grown the border reflected upwards in form of a funnel or inverted cone. Gills few.—Of the smaller size. From Ray.

Fungi pratenese minores, externe visci rubentes. Ray’s Syn. 7.

In pastures, especially in wet weather. Aug.—Sept.

Meadow

MUSHROOM. Hat white, or yellow; clammy. Pillar short.—Of the smaller size. From Ray.

Fungi pratenese minores, externe visci, albi et lutei, pediculis brevibus. Ray’s Syn. 7.

With the former. Aug.—Sept.

MUSH-


Obs. This species Linnaeus inserted in some of his former pieces, but for some reason or other has omitted it in his later works. Ray's plant however is a native of England. He compares it to the Common Mushroom; from which it differs in having a longer and more slender pillar, hat broader, not so thick and fleshy, and of a poisonous disagreeable smell.


MUSHROOM. Hat conical; blunt at the top; scored. Spring Pillar slender; hollow; brittle.—Small; brown; not fleshy. 43 From Ray. Amanita parva, verna, utrinque striata, fusca, pileo obtuso coniformi, Musco palustri ramofo majori, fol. membranaceus acutis, Verna. ingrassens. Ray's Syn. 8. In Charlton Bogs, on mofs.


Obs. Ray remarks that he has observed one very like it, if not the same, in marshy places.

MUSHROOM. Hat smooth; livid colour. Gills blackish. Blackish Pillar bulbous; furnished with a cap.—Hat expanding; fleshy. 45 Gills black, as is footed. Pillar long; cylindrical; pale. Cap pen. Separatus dant; membranaceus; fixed to the middle of the pillar. Fungus parvus pediculo oblongo, galericulatus; striae lividas aut nigras. Ray's Syn. 8. On dunghills.
FLOWERS INCONSPICUOUS.

Hemispherical....MUSHROOM. Hat hemispherical; of a livid colour. Gills of the same colour; flat, —not hollow, but extending straight from the brim of the hat to the pillar, without having any cavity underneath; numerous. Pillar slender; fleshy; white; three or four inches long; twisting into a kind of bush towards the root. Several sometimes rising from the same point. From Ray.


In pastures upon horse and cow-dung. Sept.—Oct.

Cat's-Milk...MUSHROOM. Pillar very fine; long, and slender, with a milky juice;—grows single and is very small. From Ray.


In pastures amongst grass.

Brittle...MUSHROOM. Hat convex; clammy; transparent; yellow. Gills of the same colour. Pillar naked—


On heaths.

Turban...MUSHROOM. Hat turban-shaped; scored; of an ash or tawny colour above, with blackish furrowed scores underneath.

—Several growing together. Pillar white; slender. From Ray.

Hat not fleshy.


In hedges and thickets.

Bunch...MUSHROOM. Hat turban-shaped; of a clear white; smooth. Gills of the same colour,—arched, extending to the brim of the hat; pillar very slender; white; several growing from the same point. From Ray.


On rotten wood and branches of trees. Nov.

Wood...MUSHROOM. Hat plaited; membranaceous. Gills broad- off at the base.—Very small; of a clear white. Stalk long; slender.


In woods amongst rotten leaves, and on rotten wood. Latter end of Autumn.

2. Of a whitish ash-colour. Pillar very long and slender; gills few. From Ray.


On rotten wood, riling out of the very substance. MUSH-
FUNGUSSES.

MUSHROOM. Hat plaited; membranaceous; white. Pil. Black stalked; latex black. -Hair-like. Gills extremely thin; white.


On rotten sticks and leaves; and on rotten sticks at the bottom of lakes.


Fungus hæmorrhoidalis, purpureus, minimus, vilicidus. Ray's Syn. 7.

On trees that have been cut down, and on rotten wood.

† Five strunged Pricklycap.

* * Without a pillar; but but half a circle. Growing on other plants.

MUSHROOM. Gills winding like a labyrinth. — Hat woolly Oak Ageric above, with stripes of different colours. Pretty much resembling the Striped Spunk.


2. Smaller; white above.
Fungus parvus arboresus villosus albus, inferne lamellatus. Ray's Syn. 25.

On trunks of trees.

MUSHROOM. Leathery. Gills indented, simple. Hudson Comb Agaric. 495. — Divided into teeth like a comb. Hat of the colour and substance of a Cow's hide, but rather finer. Teeth about half an inch long, from a line to two lines in breadth, with a tinge of blue at the edge; distinguit, but fit close together; very numerous.

Agaricus coriaceus longifilimus, pectinatim inferne divisus. Ray's Syn. 25. t. 1. f. 5.

On rotten wood, in cellars, &c.
FLOWERS INCONSPICUOUS.

Birch Agaric
MUSHROOM. Leathery; woolly; blunt at the edge. Gills branching and growing into one another. Hat about four inches broad, and half an inch thick, white and woolly above, with oblong holes underneath. Ray. Syn. 24.

Common

Smooth

Obs. A comparison of Linnaeus's and Ray's characters will be sufficient to convince us, how the Agaric MUSHROOMS run insensibly into the Sunks.

Alder Agaric

In woods on trunks of trees, but mostly on the Alder.

Crab Agaric

On the crab.

432 SPUNK. 1210 Bolctus.

Fungus horizontal; porous underneath.

* Without a pillar; growing on other plants.

Cork
SPUNK. Cushion-like; white; smooth. Pores angular; of different shapes—Frequently divided into a number of lobes, disposed one over another.

Agaricus intybaceus. Ray's Syn. 23.

The Fungus foraminous arboresus laxis albofusmus. Ray's Syn. Ed. 2. 140. differs only in age, becoming of a dry friable substance, smooth, exceedingly white within, and of a reddish tinge without.

On trunks of trees.

It is soft like Sponge and may be made into corks.

SPUNK
FUNGUSES.

SPUNK. Cushion-like; uneven; blunt. Pores cylindrical; Spongy equal; bluish—In shape of a horse's foot; white on the upper part. 2 Fomentarius

Sometimes near a foot broad, and two inches thick, brown and marked with semicircular lines.

On the trunks of trees particularly on Elm.
It is used for tinder.

SPUNK. Cushion-like; smooth; pores exceedingly fine.—Touchwood Hut scaly, convex; but depressed in the center. When young of a light brown above and soft like velvet; white underneath and cover-
ed with a slimy kind of matter, but when come to maturity, it turns to a dark brown approaching to black. From six to ten inches in diameter; sometimes growing on a footstalk an inch or two long.

Agaricus pedis equini facie. Ray's Syn. 22.
Fungus in candidibus nascens, unguis equini figurea. Baub. pin. 372.
Fungus durus five ignarius. Park. 1323.

Touchwood, or spunk.
On trunks of trees, chiefly on Ash.—It is made use of in Germany and some parts of England for tinder. The Germans boil it in strong lye, dry it, and boil it again in a solution of saltpetre. The Laplanders burn it about their habitations in order to keep off a species of the Gaddly which is fatal to the young Reindeer. It has been used to stop the bleeding from arteries after amputations. Philos. Trans. vol. 48. p. 2 49.
p. 1. for this purpose the hard outer part is cut off, and the soft inner substance is beat with a hammer to make it still softer. It is best when gathered in August or September.

SPUNK. White above, brown underneath. From Ray. Beech
Agaricus porosus ignarius Fagi, superne candicans, inferne sulcus. Ray's Syn. 24. Faginus Ray

On trees.
This as well as the preceding species is made use of for tinder, of which it may perhaps be only a variety.

SPUNK. Cushion-like; of a fleshly substance; either simple Esculent or divided into two or three lobes.—Of a dark reddish colour without; white within; with a tinge of red. Contrary to the rest of this Esculentus division it is of a fleshly substance and of an ungrateful flavour. It is eaten by the Italians, and is even said by some to be richer than the Common Mushroom.

Agaricus porosus rubens carnosus hepatis facie. Ray's Syn. 23.
On the trunks of trees.
FLOWERS INCONSPICUOUS.

SPUNK. With stripes of different colours; white underneath; — Of a leather-like substance, growing over each other like tiles. Covered above with a fine short down. Stripes concentric; of different shades of red, orange, yellow, green, purple, grey, black, and white, and sometimes extremely devoid. Whitish, or yellowish brown underneath.

Fungus Cerasorum imbricatim alter alter in annis variagatus. Baub. pin. 372.
On trunks, and stumps of trees.

Villosum

Woofly

SPUNK. Of a leather-like substance; woolly above, somewhat striped — Pretty much resembles the preceding. Pores larger.
From Ray.

Mostly on young trees.

Obs. I have a specimen which I believe to be this of Ray, which contrary to most of the Agaric Tribe is orbicular. It did not appear to be merely an accidental variety, as there were several different stages of growth, all exactly agreeing in this respect. And what appeared equally remarkable, the porous part in all of them was uppermost.

Semicircularis

Semicircular

SPUNK. Semicircular; pores numerous; roundish; about three inches broad, and half an inch thick. From Ray.
Obs. Probably only a variety of some of the preceding.

Prolificus

Proliferus

SPUNK. Very large; spreading on the ground; growing together in large quantities. — It is said sometimes to spread over a plat of ground upwards of thirty feet in diameter. From Ray.
Agaricus multiplex porosus. Ray's Syn. 23.
In mountainous pastures.

White

Suaveolens

SPUNK. Smooth above; growing on the Willow,— Of an agreeable sweetish smell. It sometimes grows to a considerable size, weighing upwards of three pounds. Pores larger than those of the first species. Cushion-like, smooth; pores oblong. Hudson 456.
Agaricus officinalis fimbriis. Ray's Syn. 23.
Agaricus timidus Fungus divertitum arborum caudicibus adhe-res. Baub. pin. 375.
Boletus albuns. Hudson 469.
On the willow.
SPUNK?
BOLETUS?
Woolly above; dotted underneath; — Of a fine red above, covered with a soft velvet down. Underneath of a citron colour, dotted, but not pierced with holes; about six inches broad, and two thick; of a softish substance which when cut through very much resembles Rhubarb. From Ray.
Fungus arborescens major aureus, nulla membrana superne tectus. Ray’s Syn. 22.
On our trees.

Obs. This and the following will probably prove to be true species of Spunk.

SPUNK?
BOLETUS?
Divided into lobes; dotted: lobes of a pale red. From Ray.
Fungus arborescens lobis rubellis, diversi modo figuratis et punctatis. Ray’s Syn. 23.
On the stumps of old Elms.

SPUNK?
BOLETUS?
Divided into three lobes; white; small. From Ray.
Fungus albus minimum trilobatus, fine pediculo, foliis quercinis adnatis. Ray’s Syn. 22.
On Oak leaves in Madingly Wood near Cambridge.

Obs. Very uncertain to what genus it belongs. Perhaps it is a Turbantop.

Obs. Ray mentions a large cut spongy substance exuding from the trunks of Alb, which be calls the
Fungus spongiosus maximus aqueus, e Fraxinorum truncis exsudans. Ray’s Syn. 17.
Observe at Rocliffe near York, and in Surry. Probably only a species of the Spunk in an imperfect state.
He mentions too a hard fugal substance which grows on Birch and Elm called Birch-ball in the North, and Swan-ball in Surry, which the boys play with instead of balls. It is what John Bauhine calls the
Fungus solidus ex Betula & quandoque Ulmo. Ray’s Syn.

Ind. Plant. Dub.
Probably only a variety of the first species.
FLOWERS INCONSPICUOUS.

* * Standing on a pillar.

Shell

14 Telfascoceus Ray

Round

1. Fungus maximus arboreus porofus, pediculo limbo affixo. Ray's Syn. 11. n. 4.


Circular

2. Hat nearly orbicular, Ray. ib.

At the roots of decayed trees, Elms, Willows, &c. (2) On a tree near Charlton.

Perennial?

15* Perennis ?

Yellow

16 Luteus

SPUNK. Perennial: hat nearly flat on both sides. Lis. —Thin and very flexible; broad, of a black reddish colour. Pores extremely fine, scarce perceptible. Pillar very short. Ray.

SPUNK. Hat cushion-like; somewhat clammy. Pores rounded at the angles. Convex; bright yellow. Pillar whitish;—about two inches high. Hat convex; slightly; from half an inch to two inches in diameter; sometimes of a yellowish brown, or liquor colour. Pores larger than those of the following species. Boletus luteus. Ray's Syn. 11.

In woods.

Brown

17 Bovinus

SPUNK. Hat smooth; cushion-like; edged with a border. Pores compound, angular; little pores angular, shorter.—Hat convex slightly; dirty yellow; sometimes reddish-brown. Pores grey, or greenish yellow. Pillar smooth, pale, or reddish brown.

In woods. August—September.

It is eaten by the Italians. Cows eat, but it is said to make their milk nauseous.

433 PRICKLYCAP. Hydnum.

Fungus horizontal, with awl-shaped fibres on the under surface, like a Hedgehog.

Common

Imbricatum


Fungus panne candidus, prona parte erinaceus. Ray's Syn. 11.

In woods.

It is eaten in Italy, and is said to be of a very delicate taste.

PRICK-
FUNGUSSES.

PRICKLYCAP?

HYDNUM?

Hat standing on a pillar, with five fibres extending from the pillar to the edge of the hat.—Pillar tall, slender; of a pale red.

From Ray.

On dry Ivy leaves. Ray's Syn. 12. under No. 11. Obs. This species seems to form the connecting link between the Mushroom and the Pricklycap. If future observation should confirm Ray's description, will it not form a new genus, and might it not with propriety be styled the PENTANEURUS or STRINGCAP?

434 MORELL. 1212. Phallus.

Fungus smooth underneath, with a sort of network on the upper surface.

MORELL. Hat egg-shaped; full of cells. Pillar naked, Esculent wrinkled.—Esculentus

Fungus favaginosus. Park. 1317. Ray's Syn. 11.
Fungus esculentus i, feu porofus. Baub pin. 370.
Woods, groves, meadows, pastures, and about hedges, and dry ditchbanks. March—April.

MORELL. Hat full of cells; pillar with a cap.—White. Stinking The Roots consist of very long white threads, spreading under ground, Impudicus and matted together. On these grow little balls which Ray calls Volva.
Phallus hollandicus. Park. 1322.
Fungus phalloides. Ray's Syn. 12.
Fungus seridus penis imaginem referens. Baub. pin. 374.
Fungus virilis penis arrecti facie. Gerard. 1385.
Stinkhorn. Stote.
It is so putrid in autumn, when ripe, that the Common Flies devours it with great avidity.

435 TURBANTOP. 1214 Helvella.

Fungus smooth both above and underneath. Gen. Plant.

* With a Pillar.

TURBANTOP. Hat bent down; growing to the pillar; dl. Curled divided into lobes of different shapes.—Plaited; white; membranaceous; scarce broader than the pillar. Pillar white; nearly as Mitra thick as one's finger, and two or three inches long; scored; hollow, and full of cracks.
Fungus terrestris pediculo striato et cavernoso, capitello plicatili subbus plano. Ray's Syn. 5.
On rotten trunks of trees. October.
FLOWERS INCONSPICUOUS.

**TURBANTOP?**

**HELVELLA?**

Piilar cylindrical; hat small; surface uniform; without either gills or pores. *Purple.* The whole plant appears to consist only of a single pillar. From Ray.


Grows on grass floating in the water, in springs. A circumstance which seems peculiar. There is however another aquatic Fungus; See the Black-stalked Mushroom.

**TURBANTOP?**

**HELVETTA?**

White

Hat very small, about a quarter of an inch in diameter; of a clear white; without the leaf appearance of gills—About an inch high. Said to have some affinity to the Five-stemmed Pricklycap. From Ray.


In the inside of hollow Oaks, near the bottom where they are moist.

* * Without a pillar.

**TURBANTOP?**

**HELVETTA?**

Flaky

Convex, smooth without; substance within consisting of a number of concentric layers composed of a number of minute tubers or threads—pointing from the center. Substance hard; covered with a thin bark of a brownish black, somewhat wrinkled and rather glossy, grey within. Not growing horizontal, but adhering close to the substance on which it grows.

Fungus fraxinus niger, durus, orbiculatus. *Ray's Syn. 16?*

On Ash trees when rotten or in a decaying state, and observed on no other tree. *Ray.* In Worcestershire. *S.*

Fingered

**Digitata?**

Long and narrow; smooth; elegantly variegated with yellow and scarlet interpersed with black at the sides,—Ten or more grow together, as if springing from the same root, from three to six inches in length; and from 1 to 3 inches broad. Pretty thick, with an upper and a lower surface, which distinguishes it from the Clubtop to which from its form one might be inclined to refer it. Smooth, without any appearance of pores or gills. From Ray.

Agaricus digitatus maximus, ex luteo coecino et nigro colore eleganter variegatus. *Ray's Syn. 21.*

fungus 4. *Park. 1391?*

Found at the root of a Yew tree near Boxhill in May.
Fungusses.

Turbantop. Woolly above; smooth underneath.—Thin; Agaric of a leatherlike substance; horizontal; from half an inch to an inch in breadth, growing one over another. Margin lobed; bent inwards; mostly of a brownish yellow, but sometimes with a tinge of purple or variegated above with white and yellow, or purple and white. Under surface perfectly smooth; without the least appearance of either gills or pores. From Ray.

1. Agaricus villosus, tenuis, internodatus, Ray's Syn. 21. Plain

2. Margin jagged, curled inwards.—In this variety I have ob-Curled served the under surface covered with a fine soft purplish bloom like that upon the Plums, which it is not improbable may be the flowers or seed.

Ons. This species bears the same affinity to the Turbantop as the other Agarics to the Mushroom and Spunk.

(1) On trees and wood. (2) In woods at the roots of trees.

Turbantop. Wrinkled; indented; smooth underneath; Violet of a violet colour,—adhering flat to the substance on which it grows. Substance leathery but relapsious. Smell not disagreeable, Violacea somewhat resembling that of the Morell.


Turbantop. Wrinkled; membranaceous; expanding; Wrinkled margin edged all round with a soft wool underneath;—Of a substance similar to that of the Jew's Ear Funneltop, but the leaf Corrugata is expanded and not formed into little wrinkled caps like that. From Ray.


Turbantop?

Helvella?

A fungous substance, compared to the loaves which the mo-Jew's loaf dern Jews eat at the passover. From Ray.

FLOWERS INCONSPICUOUS.

TURBANTOP?

HELVELLA?

Waved; membranaceous; of a jelly-like substance; pale yellow, or saffron colour. — Form irregular, somewhat resembling the kernel of a Walnut; about a line in thickness. Stains the bands of a saffron colour.


Agaricus putridus arborum ramis inherens, plurimis similibus. Baub. pin. 372.


On rotten wood, and on dead sticks and branches of trees, particularly Hazel.

Obs. It seems to have an affinity to the Jew's Ear Funneltop. Ray describes it in one place as having gills, but they are probably no more than wrinkles in the substance of the plant.

Obs. On the Turbantop.

Ought not the limits of this genus to be extended so as to comprehend all those Fungusses which have an upper and a lower surface, and the lower surface smooth? This would comprehend that part of the Agarics which are excluded from the agarics of Linnaeus and the Boletus. In a word, ought not the Turbantop to be defined "Fungus horizontal; smooth underneath"? The network surface of the Phallus and the open network of the Clathrus will sufficiently distinguish them.

436 FUNNELTOP. 1215 Peziza.

Fungus bell-shaped. Seeds round, convex, or flat.

* Purple Starjelly. Lentil Starjelly.

FUNNELTOP. Bell-shaped; containing a number of small flat seed-like substances — all coloured. In its younger state the mouth of the cup is contracted, including the seeds surrounded with a white mucilage. When it opens the seeds appear disengaged from their mucilage, each connected by a fine thread to the bottom of the cup.

1. Fungi calyciformes feminiferi. Ray's Syn. 90.

Fungus minimus ligneis tabellis areolanum hortorum adnascens. Baub. pin. 374.

Corn-bells. Worcestershire.

2. Cup scored within; rough without; longer and narrower.

Fungus feminiser externe hirtutus, interne striatus. Ray's Syn. 90.

(1) On old wood, in plowed fields, and gardens; in barley stubble growing on the rotten stalks, whence called Corn-bells.

(2) In Gardens.

* FUN-
FUNNELTOP. Bell-shaped; without any seed-like substances; at least none could be discovered in several specimens examined for that purpose. Pretty thick, of a blackish color, scored Aserperia coben dry. About three parts of an inch long, supported by a short pillar. From Ray.


FUNNELTOP. Turban-shaped; lopped; surface dotted; Spotted Center clear white, with black rising dots. Pillar very short. The Seeds are contained in the pores, and are thrown out with a spring. Punica

Fungus minimus infundibuliformis, superne nigris punctis notatis. Ray's Syn. 12.

On horse and cow-dung, and observed no where else.

FUNNELTOP. Funnel-shaped; surface expanding; indent-Cornucopiaed; dotted—standing on a pillar; dark grey. Peziza tubae fallopiane xemula. Ray's Syn. 20. Cornucopoides

In woods.

FUNNELTOP. Glass-shaped: angular on the out-side; Cup with branching veins—of a dirty ashy color without; brownish within; standing on a pillar. Substance brittle. Peziza subfulca major. Ray's Syn. 17.

On rotten wood, Lin. and on hot-beds, Ray.

Obs. It seems doubtful whether this species of Ray's be the true Acetabulum of Linnæus. The Acetabulum of Linnæus has a pillar; Ray describes his species as having none. Possibly it is only a variety of the Agaricus Chanteiellus or Champaign Mushroom.

FUNNELTOP. Glass-shaped; of a chestnut or amber colour; Amber about an inch broad; of a thickish substance, brittle; some-what transparent.—Pillar about an inch, or an inch and a half Succinea high, solid. From Ray.


2? Cup of a rufous colour within.

Fungus arboresus pyxidatus coloris intus ferruginei. Ray's Syn. 20.

(1.) On the ground and on rotten wood. Spring. (2.) On trees.

Cc 4
FLOWERS INCONSPICUOUS.

Goblet 8
Amphoralis Ray

FUNNELTOP. Glas-shaped; contracted upwards: about four inches broad. Pillar sometimes near half a foot high. Some of the larger ones it is said will hold more than half a pint.
From Ray.
Fungus maximus pileolus pyxidatu. Ray’s Syn. 19.
Near Cambridge.
OBS. Is not this the Fungoides maximum pyxidatum of Vaillant which Linnaeus gives as a synonym of the Acetabulum, and consequently is it not the real Acetabulum?

Glas-shaped 9
Pyxidata Ray

FUNNELTOP. Glas-shaped; of a pale livid colour. From Ray.
Fungi Pezizae Plinii. Ray’s Syn. 77.
On the ground in gardens, and shady lanes.

Scarlet 10
Coccinea Ray
Common

FUNNELTOP. Glas-shaped; border upright; smooth. Beautiful crimson or scarlet within, pale red without—sometimes purple.
1. Cup entire; sitting.
Fungus membranaceus feu coriaceus, acetabuli modo con- cavus, colore intus coccineo feu cremefinos saturu. Ray’s Syn. 18.

Stalked 2

2. Cup entire; supported by a pillar—from half an inch to an inch in diameter, margin smooth and even. Pillar from half an inch to an inch high.
Peziza acetabulumformis, coccinei intus coloris. Ray’s Syn. 15.

Curled 2

3. Cup supported by a pillar; curled; wrinkled, and sometimes jagged;—pretty much resembling the Common, but a good deal larger.
Fungus membranaceus acetabuli modo cavus, coccineus cris- patus. Ray’s Syn. 19.
(1.) On rotten ficks in woods and hedge banks. Spring.
(2.) On rotten wood. Spring.

Sweet 2

4. Round; scarlet; sweet-scented.
(1.) On rotten ficks, in woods and in hedge banks. Spring.
(2.) On rotten wood. Spring. (3.) At Church Lench in Worcesterhire. Ray.

Hairbrimmed 11
Piola Ray

FUNNELTOP. Glas-shaped; margin edged with hairs.
—Scarlet. Cup supported by a pillar; about half an inch in di- ameter, with black stiff hairs on the brim. From Ray.
Peziza acetabulumformis coccineus marginibus pilosis. Ray’s Syn. 19.

FUN-
FUNGUSES.

FUNNELTOP. Glass-shaped; jagged; segments resemble leaves; edges curled inwards—of a deep orange colour. Foliacea. Peziza minuta major. Ray's Syn. 17.

At the roots of trees, lying on the ground, in Middleton Park, Warwickshire.

FUNNELTOP. Glass-shaped; border blunt; upright—Smooth Small. yellow. Pillar very short.


In woods, Dec.

FUNNELTOP. Flat; border convex; hairy.—Yellow. Hairy


2. Smaller, hollowed like a saucer at the top; of an orange colour.

Peziza minuta minor. Ray's Syn. 18.

One. Dilatata (in Ray's Syn.) makes this variety a different species from the former, probably from not having observed any hairs on the margins, but had he examined them with a microscope, it is likely he would have found them.—There is however a small species of the Funneltop of a bright yellow, or orange, seldom larger than a pin's head; that appears on cow-dung in the spring, which if examined through the microscope, appear to be surrounded at the margin with a number of straight stiff upright yellow hairs, and corresponding exactly with the Scutellata of Linnaeus. This I take to be the latter variety, and that it differs from the former only in size.


FUNNELTOP. Flat; oval; smooth—Not hollowed in the Saffron leaf; of a saffron colour; small, like Lentil seeds. From Ray.

Peziza lenticularis parva miniata. Ray's Syn. 18.


FUNNELTOP. Concave; wrinkled; shaped like an ear, Jews' ear—greenish ashy colour; covered with short down; wrinkled into little useps

Peziza auriculam referens. Ray's Syn. 18.

Fungus membranaceus auriculam referens, five unbucinum. Bauh. pinn. 372.


Tremella auricula. Hud. 464.

On rotten wood.

437 CLUB.
FLOWERS INCONSPICUOUS.

437 CLUBTOP. 1216 Clavaria.

* Undivided.

Fungus perpendicular; smooth; oblong; of one uniform surface.

Simple

CLUBTOP. Club-shaped; undivided;—yellowish or white.

Pistillaris

Common

Smaller 2 Ray

2. Slenderer, and somewhat longer.


Sharpt-pointed 2 Ray

3. Curved and bent inwards; terminating in a sharp point; of a citrus colour.


Black

CLUBTOP. Club-shaped; undivided; compressed; blunt—black.

Ophioglossoides

File

2. In woods.


Sublicia

Ray

CLUBTOP. Nearly cylindrical, ends blunt and finely notched—Rising from a flat smooth crust; from a quarter to half an inch high, like piles or little pillars, some single, others growing several together. Crust as well as pillars of a whitish livid colour; of a fungus subsance. From Ray.


Toothed

CLUBTOP? CLAVARIA?

Denticulata

Ray

Small toothed Mushroom of Parkinson. From Ray.


In pastures, sprouting out of dry horse or cow-dung in Warwickshire.

* * Branched.

Fingered

CLUBTOP. Branched; woody; black—

Digitata

5. On old planks, and half rotten wood.

Flat

CLUBTOP. Between branched, and horned; compressed—black, covered with a kind of wool, and the ends with a white mealy dust, which is probably the Flowers or Seed.

Hypoxylon


2. Branched like the horns of a Reindeer.

Reindeer

Fungus corne dorcadis facie. Hudson 501.

Awl-shaped

Ray


Fungus niger tubularis, apicibus albidis. Ray's Syn. 15.

On rotten wood; in cellars, ships, &c. and at the roots of trees.
CLUB TOP. Branched; winding in various directions,—Winding
and insinuating itself between the bark and wood of trees, sometimes:
spreading to at least two feet in length, and as much in breadth;
black without; white within, near half an inch broad. Branches
flattened, thin, sometimes running into one another. From Ray.

1. Fungus niger compressus, varie divaricatus et implexus inter
lignum et cortexem. Ray's Syn. 15.

2. Branches round and brittle; not running into one another, Round
but winding in the same manner amongst stalks and dead
leaves. From Ray. (1) On a dead Elm in St. James's Park. (2) From Ireland.

Thread

CLUB TOP. Branched, thread-like—about the thickness
of small pack-thread; black; of the same substance with the two
preceding, sometimes growing three or four inches long. From Ray.
Filiformis

1. Fungus tenuis niger ramosus. Ray's Syn. 15.

2 ? Hair-like; very small.

Fungus niger minimus ramosus capillaceus. Ray's Syn. 15.

In vaults. Obs. Both this and the preceding species may possibly
prove only varieties of the 6th species.

CLUB TOP. Branches crowded; very much divided; un-
Yellow

Fungus ramosus flavus et albidus. Ray's Syn. 16.

Fungus ramosus et imbricati. Baub. pin. 371.

Fungus corallinus ad antiquarum arborum radices. Ray's

Heaths and woods. The latter in the woods near Petersfield
in Hampshire.

CLUB TOP. Very much branched; ends of the branches
mostly forked;—about three or four inches high. Stem not forked,
but subdividing into a number of branches at every division; about
the breadth of one's hand high. Of a dirty yellow. From Ray.

Fungus ramosus minor, colore fordidre flavicante. Ray's Syn.

16.

CLUB TOP. Very much branched; branches terminat—Cauliflower
ing in round irregular heads, uniting together, and forming
little knobs of a greenish yellow—resembling those of Cauliflower. Cauliflorae
It sometimes weighs two or three pounds. From Ray.

Fungoids ramosum maximum, Brassica cauliflorae facie et
magnitudine. Ray's Syn. 16.

In meadows.

CLUB TOP. Branches crowded; very much divided; of Stinking
an equal height; blunt; yellow—

Fungoids coralliforme luteum sætidum et minus ramosum. Fstiliata
Ray's Syn. 479: t. 1.4. t. 5.

In pastures and woods. Aut.
FLOWERS INCONSPICUOUS.

CLUBTOP. Branches divided; tapering to a point at the ends; unequal; yellow. —
Fungus parvus luteus ramosus. Ray's Syn. 16. t. 24. f. 7.
Pastures, woods and heaths.

Beech

CLUBTOP. Branches divided; of an orange colour. —
Very small. From Ray.
Fungus ramosus minimum coloris suranti. Ray's Syn. 16.
On the bark of Beech; very common in England.

Faginea

White

CLUBTOP. Branches divided, of a clear white. —
Small. From Ray.
Fungus ramosus candidissimus ceraneoides, seu digitatus minimum. Ray's Syn. 16.
Fungus digitatus. Park. 1318?
In pastures, Staffordshire. Aut.

* * * Obscure species.

Candida

Oak-leather

CLUBTOP? CLAVARIA?

Broad; flat, of a soft leather-like substance, — exactly resembling tawny leather, except that it is thinner and softer.
Of no determinable form.
Fungus coriaceus quercinus hematodes. Ray's Syn. 25.
Grows in the crevices and hollows of old oaks in Ireland, and in several parts of England; sometimes on ash. — It is made use of in Ireland to dress ulcers, and in Virginia to spread plasters on instead of leather.

Obs. This remarkable substance seems to bear some resemblance to the Winding Clubtop in its mode of growth, and to the Agarics in colour and substance. Its uniform surface however seems to refer it to the former. — There are sometimes little round hard tubercles within the substance of the plant, which may be felt by the hand, but do not appear on the surface. These may possibly be the Fruit or Seed-vessels. If the Naturalists would examine them they may possibly lead to the true arrangement of this very remarkable vegetable.

438 PUFFBALL. 1217 Lycoperdon.

Fungus roundish; opening at the top; full of powdery impalpable Seeds.

* Solid; growing under ground; without a root.

Truffle

Tuber

PUFFBALL. Globular; solid; beset with a number of pointed prominences; without a root. — about the size of a prune; white, full of a number of veins or winding cells within, with a small quantity of brown powder in the center. Does not or in.

1. Tubera
FUNGIUSSES.

   Tubera terra. Gerard. 1385.
   Tubera terra edulis. Park. 1319.
   Trubs, or Truffles.

2. ? Small; about the size of a nut; purple. Ray's Syn. 28. Purple
3. ? Large; fringed; somewhat in form of a cup. Ray's Syn. 28.
   (1) Beneath the surface of the ground in parks, &c. (4) In
   Hampton-court park. (3) From Lancashire.
   This is one of the efulent Fungiusses, and one of the best of
   them. Dogs are taught to hunt it, and when they scent it they
   bark a little and begin to scratch up the earth. Pigs likewise in
   Italy root it up, and an attendant takes it from them.

   PUFFBALL. Globular; rather solid; powdery in the cen-
   ter. Without a root.—Skin thick; hard; spongy. The inner 2
   Tubera perniciosa terrestria, seu cervina. Ray's Syn. 28.
   Tubera cervina. Baumb. pin. 376. Park. 1319, 1320.
   In woods. Oct.
   Ons. Linnus arranges it as growing under ground, and we
   Dillenius in Ray's Syn. has not placed it amongst the Fungi subter-
   ranei.

* * Powdery; growing above ground; with roots.

   PUFFBALL. Nearly globular; opening with a rent; pow-
   der greenish—somewhat flattened at the top; about the size of a pi-
   geon's egg; white, sprinkled with a kind of yellowish meal, and
   Vulgarum when ripe full of a very fine powder of a dirty yellow or greenish co-
   lor. Skin very much ripe.

   28.
   Fungus rotundus orbicularis. Baumb. pin. 377.
   Fungus tertius seu orbicularis. Gerard. 1387.
   Puff-balls, Dusty Mushrooms, Puckeefils, Bullips, Puffeballs
   and Puffeballs.
   In bassen dry pastures. Aut. It is recommended by some as a
   styptic.

   PUFFBALL. Nearly globular, opening with a rent,—pow-
   der black. Sometimes as large, and even larger than a man's head; 4
   of a pretty firm substance; subtils growing, of a greyish white, and
   Bovitae
   weighing several pounds, but when ripe it turns of a brown colour,
   and becomes exceedingly light; so that one larger than a man's head
   will not weigh an ounce.
   Fungus maximus rotundus pulverulentus, dictus Germanis
   Bovitae. Ray's Syn. 28.
   Fungi rotundis orbicularis 2 species. Baumb. pin. 371.
   Bunt, Puckeefils, Frogscheele.
   In rich pastures and on dunghills.

The
FLOWERS INCONSPICUOUS.

The names of this when burnt have a narcotic quality, and on this account it is sometimes made use of to take a hive without destroying the bees. This too as well as the former is sometimes used as a styptic.

Orbicular 5
Orbiculare 6
Ray


Cup 6
Calyciforme 7
Ray

PUFFBALL. Flattened; somewhat in form of a cup; large; black; dusty only towards the top. From Ray.


Pear-headed 7
Pyriforme 8
Ray

PUFFBALL. Head in form of a pear, ash-coloured. From Ray.

Fungus pyriformis. Ray's Syn. 27.

In old pastures not far from Yarmouth, and on the north of the Isle of Wight.

Short stalked 8
Compressum 9
Ray

PUFFBALL. Head supported by a pillar; somewhat flatted; quite full of dust; skin roughish, thick and tough; pillar not more than half an inch long. From Ray.

Fungus pulverulentus compressus pediculatus, cortice crassior. Ray's Syn. 27.

Spongy 9
Spongiosum 10
Ray

PUFFBALL. Head of a spongy substance within; covered with a membranaceous skin; supported by a pillar. Pillar short, thick, extending to the edge of the head. From Ray.

Fungus pulverulentus corte membranae, subitantia intus spongiosa, pediculo brevi crassior in oras fere ducto. Ray's Syn. 27.

Observed near Packington, and Alrewas Hays in Staffordshire, near the deep spring. Ray.

Thick-stalked 10
Stipitatum 11
Ray

PUFFBALL. Head supported by a pillar; pillar pretty long; divested. From Ray. Pillar thickest in the middle; about six inches long.

Fungus pulverulentus, Crepitus Lupi dictus major, pediculo longiore ventricoso. Ray's Syn. 27.

In the north of Ireland, in orchards. Ray.

PUFF-
FUNGUSSES.

PUFFBALL. Head supported by a pillar. Pillar pretty Rough long; rough—While in its growing state, it will stick to cloaths like the flowering heads of Burdock. From Ray. Fungus pulverulentus, Crepitus Lupi dictus, pediculo longiori scabro. Ray's Syn. 27.


In pastures. March.

PUFFBALL. Cap with many clefts; expanding. Head Star smooth; mouth tapering, plaited.—Clefts of the cap expanded flat on the ground in form of a star. Head in the middle, supported by a Stellatum short pillar; mouth opening when ripe, dividing into very fine figures.

Fungus pulverulentus, Crepitus Lupi dictus, coronatus et inversae stellatus. Ray's Syn. 27, t. 1, f. 1.

In meadows, and pastures.

PUFFBALL. Cap with many clefts; expanding. Head Cullander orbicular; pierced with a number of holes like a cullander, or fir-inner,—which give a passage to the dust. Clefts of the cap of a Coliforme thicker substance than the former, expanding on the ground in form of a star. From Ray.

Fungus pulverulentus coli infrar perfosatus, cum volva stellata. Ray's Syn. 28.

Found in a lane leading from Crayford to Bexley-Common in Kent, and near Hampton-Court. Ray. Sept.

PUFFBALL. Cap with four clefts; upright; arched. Turret Head smooth; mouth blunt; fringed. Hudson, 502.


In meadows and pastures.

439 MOULD. 1218 Mucor.

FUNGUS. A roundish bladder, containing a number of Seeds fixed to cross-shaped Receptacles.

* Permanent.

MOULD. Pillar thread-shaped; black. Head globular, Round-headed 2½-coloured.—About a quarter of an inch high.

Fungus pileatus minimus, pediculo tenui capillaceo. Ray's Sphaerocephalus Syn. 12.

On rotten wood, and on dead sticks in hedges. MOULD.
FLOWERS INCONSPICUOUS.

MOULD. Permanent; pillar thread-shaped; Head like a dew-drop, marked with a black dot at the point. From 2
2
Ronidulus
Ray
On horse-dung about London.

Grey-headed
3
Lichenoides
MOULD. Pillarawl-shaped; black. Head lentil-shaped,
ash-coloured,—about as large as a poppy-seed.
Coralloides fungiforme arboireum nigrum vix crustosum. Dill.
78. t. 14. f. 3.
On rotten wood, on the bark of old oaks. Aut.—Wint.

Black
4
Embolius
MOULD. Like a black bristle, beset with soft brown hairs.
On rotten wood.

* * Of short duration.

Cotton
5
Mucedo
MOULD. Capsula globular, supported by a pillar.
Fungus bombycinus murini coloris, e simo sello, tenuissima
On various putrid substances; stale bread, plants, &c.

Yellowish
6
Leporfus
MOULD. Like bristles; seeds at the roots—As first white,
afterwards yellow. Seeds egg-shaped.
In vaults and caverns.

Greenish
7
Glaucus
MOULD. Heads nearly globular, supported by a pillar;
incorporated.—On apples, melons and other decaying substances.

Fingered
8
Crustaceus
MOULD. On pillars in fingered spikes;—White. Seeds
round.
On several sorts of food when in a decaying state.

Branching?
9
Caspitosus?
MOULD. Pillar branched, with spikes growing by threes.
Lin.
Of a snowy white, very much branched, soft. Ray.
Fungus simosus, niveus, ramostissimus, mollis. Ray's Syn.
15.
APPENDIX.

OMISSIONS.

SNOWDROP. 401 Galanthus.

EMPAL. Sheath oblong, blunt, compressed, shrivelling; opening at the flat side.

BLOSS. Petals three, oblong, blunt, concave, loose, equal; standing open.

Honeysuck cylindrical; half as long as the petals; composed of three leaves resembling petals, parallel, blunt, broken at the margin.

CHIVES. Threads six; hair-like, very short. Tips oblong, approaching, tapering to a bristle-shaped point.

POINT. Seedbud globular; beneath. Shaft thread-shaped; longer than the chives. Summits simple.

S. VESS. Capsule nearly globular, with three blunt corners, three cells and three valves.

SEEDS. Many; globular.

SNOWDROP. As there is only one species known, Lin Garden neaus gives no description of it—Roots bulbous. Nivalis Leucojum bulbosum trifolium minus. Baub. pin. 56.

Fair Maids of February.

Near Cirencester in Gloucestershire, and plentifully at the foot of Malvern Hills Worcestershire. P. February—April.

It is common in gardens and becomes double by cultivation.
PIPEWORT. 100 Eriocaulon.

EMPAL. Common, formed by several circular, concave; membranaceous scales; fringed on the upper part.

B. Barren Florets in the center; numerous.

Outer; an egg-shaped scale, fringed at the top, and tapering into a claw at the base; placed on the outer side of each floret.

Proper Cup of two concave, wedge-shaped; fringed leaves.

BLOSS. Individuals of one funnel-shaped petal; divided into two lips at the mouth, and fringed.

CHIVES. Threads four; thread-shaped; as long or longer than the blossom. Tips oblong.

F. Fertile florets in a double row round the circumference.

EMPAL. Outer; an egg-shaped scale, fringed at the top and tapering into a claw at the base; placed on the outer side of each floret.

Proper Cup of two egg-shaped concave leaves; fringed at the top and tapering into a claw at the base.

BLOSS. Individuals of two oblong, concave petals; fringed at the top and on the back; gradually tapering at the base into slender claws.

POI-N. Seedbud globular, but compressed. Shaft short.

SUMMITS two; thread-shaped.

S. VESS. Capsule globular, but compressed; cells two.

SEEDS. Smooth; dimpled at the end; one in each cell.

Wreathed
Septangulare

PIPEWORT. Stalks upright; twisted; composed of seven tubes. Leaves nearly upright—Petals white; with a black spot in the middle. Tips black.

In a small lake in the Island of Skye. P. September.

This plant was found by Mr. Robertson in the year 1768; and Doctor Hope, Botanical Professor in the University of Edinburgh, hath given us a description and an engraving of it in the Philos. Trans. vol. 59. p. 243. The Doctor inclines to think it the Eriocaulon decangulare of Linnaeus; but it neither agrees with that in the generic or specific characters; and as Linnaeus never saw a recent specimen of the plant, I should rather trust to the well known accuracy of Doctor Hope, who had an opportunity of examining it in its recent state. If it is an Eriocaulon it can never be the Decangulare; for the stalks of that are beter with black shining wool, and the leaves which are few in number spread upon the ground; nor can it be any other of the species enumerated by Linnaeus, for not to mention that they
OMISSIONS.

they are all natives of India, they differ from this in the number of angles or tubes in the stalk.

The root is slightly acrimonious when chewed.

At the end of the specific character of the Royal Moonwort (p. 618.) add—The first leaves consist only of three or five roundish little leaves, resembling some species of the Hemionitis, in which state of growth it was figured and described in the allana edition of Ray's Synopsi as a distinct species, under the name of Hemionitis pumila trifolia vel quinquefolia maritima. Ray's Syn. Ed. 1. p. 26. t. i. f. 2.

Add the following Synonym from Ray, to the Star jelly Feather moss (p. 691.)

Conserva gelatinoatae tenerima et viridissima, muscum quendam silicifoliun monumentum. Ray's Syn. 60.

After the Crab's-eye Cupthong (p. 708.) add the following species.

CUPTHONG?

LICHEN?

Of a black fungous substance, with saucers. From Ray. Fungous

Fungoides quercinum peltatum nigrum. Ray's Syn. 16.

On the trunks and branches of Oakes that have been cut down.

Dd 2

THE
THE GLOSSARY.

ABORTIVE. See Barren.

ABRUPT. When a winged leaf ends without a tendril or a little leaf.

ACORN. The seed of the Oak.

AIRBAGS. Vessels distended with air; being a sort of feed-vessel; as in some species of the Oarweed, and the Bladder Seaweed.

ALTERNATE. As the leaves of Borage. Or Chequered Daffodil. Pl. 9. f. 3. (d. d. d. d. d.) Pl. 8. f. 54.

ANNUAL. Living only one year; as the Larkspur.

ANGULAR. Stem, &c. having edges or corners; opposed to cylindrical. A stem or stalk may have 1, 2, 3, 4, or more angles or corners. The White Archangel hath 4.

——— Capsule, Flower de Luce, or Flag.

APPLE. A species of feed-vessel in which the seeds are contained in a capsule, and this again is enclosed in a fleshy substance; as the Common Apple or Pear. Pl. 5. fg. 20.

APPROACHING. Leaves: bent inwards towards the stem. Pl. 9. f. 5. (a. a.)

——— Petals converging to the center of the flower, as in the Pansy. Globe Flower.

——— Threads, as in Borage.

——— Tips, leaning towards each other; as in the White Archangel and Ivy-leaved Gilli.

ARROW-SHAPED. Leaves; shaped like the head of an Arrow, as the leaves of Sorrel; the Small or Great Bindweed. Pl. 7. f. 13.

——— Tips; as in the Crocus.

Elder.

——— Prots. Peas.

ASCENDING. Growing first horizontally and then bowed upwards. It is applicable either to Leaves, to Stalks, to Stems, as in spiked Speedwell, or to Chives as in all the Speedwells. See the Chive next below (a) in Pl. 1. f. 8.

AWL-SHAPED. Slender, and becoming finer towards the end, like an awl. Pl. 7. f. 8. Pl. 5. f. 15. (a) Leaves of Rock Stone-crop.

——— Threads of Crocus.

BORAGE. Daffodil. Hawthorn.

——— Seeds of Shepherds Needle.

AWN. The slender sharp substance growing to the valves of corn or grafs, and frequently called a beard. It is remarkable enough in Oats and Barley. It is sometimes used to signify a sharp point terminating a leaf, &c. Pl. 2. f. 21. (b. b.) f. 23. (b. b.)

D d 3 BARK.
GLOSSARY.

BARK. The universal covering of the stems, roots and branches of vegetables. It is generally spoken of as inner and outer. Blossoms are an expansion of the inner, and emplacements are a continuation of the outer bark.

BAREN Flowers, those that produce no perfect seeds. The barren flowers are generally those that have chives, but no points. Flowers that have only points are sometimes barren, owing to the absence of other flowers that have chives. In the Rundled flowers (Clas V. Order II.) it is not uncommon to have several of the flowers barren, though they are furnished both with chives and points; perhaps owing to some imperfection in the points; but future observation must determine this matter.

BASE. That part of a leaf, &c. nearest to the branch or stem.

- - - of the leaves or branches.

Flowers or fruit-stalks are often said to grow at the base of the leaves, or the branches; that is when they are placed at the bottom of a leaf or branch, and on the inner side, where it joins to the stem. Pl. 9. f. 5. (m.) the fruit-stalks of the Common Pimprenel; the Great Periwinkle and the Flowers of the Common Calamin are examples.

BEADED. Consisting of many little knobs connected by small strings. As the roots of the White Saxifrage.

BEARDED. Beset with straight parallel hairs.

BELL-SHAPED. The idea this term is intended to convey cannot well be mistaken; examples of it occur in the Cup of the Cherry; in the blossoms of the Convulvis or Lily of the Valley; and in the Honey-cup of the Wild Daffodil. Pl. 5. f. 1. (a.) Pl. 4. f. 2. f. 4. 5.

BENEATH. A Blossom is said to be beneath when it includes the seed-bud and is attached to the part immediately below it, as the blossom of Sage; Borage; Convulvis; Polyantbus.

- - - A Seed bud is said to be beneath when it is placed below the attachment of the blossom and therefore not included within it; as in the Honey-suckle; Currant; Haw-born.

BERRY. A pulpy seed-vestel without valves, in which the seeds are naked, as in the Gooseberry or Elderberry. Pl. 5. f. 14.

BIENNIAL plants or roots; are those which continue alive two years.

BIRDSFOOT. Bearing some resemblance to the feet of landfowl; as the leaves of the Passion Flower, or the seed-vestel of the Birds-foot Trefoil. Pl. 7. f. 49.

BITTEN. Not tapering to a point, or ending in any even regular form, but appearing as if bitten off; as in the root of Devil's-bit; and the petals of common and Marshmallow. Pl. 7. f. 18.

BILL. A long awl-shaped substance resembling the bill of a Wood-cock; as in Shepherd's-Needle; or Crane's-bill. Pl. 5. f. 17.

BLADDER-SHAPED. Distended like a blown bladder; as is the cup of the Bladder Campion, and the blossom of the Pigweat.

BLISTERED. When the surface of a leaf rises high above the veins, so as to appear like blisters.

BLOSSOM. One of the parts of a flower. It may consist of one or more Petals; and is formed by an expansion of the inner bark of the plant. Pl. 4.

BLUNT.
GLOSSARY

BLUNT. Opposed to sharp; as the leaves of the Spiked Speedwell; the cup of the Convulvulus and the Capsule of the Tillsiœ Rattle.

BOAT-SHAPED. Like a little keel-bottomed boat; as are the valves of the seed-vessels of the Wood and the Mithridate. Pl. 5 f. 13.

BORDER. The upper spreading part of a blossom of one Petal; as in the Primrose and Auricula. It is sometimes used to signify the thin membranaceous part of a seed or feed-vessel. Pl. 4 f. 1. (b. b.)

BRISTLES. Strong stiff cylindrical hairs.

BRISTLE-SHAPED. Slender, and nearly cylindrical; as the straw of the leaf Bulrush; the leaves and props of the Asparagus.

BROAD-TOPPED SPIKE. A spike wherein each of the flowers stand elevated upon its proper fruit-flalk so that they all rise to nearly the same height.

Exemplified in the Pear and the Common Bethlehem Star. Pl. 6 f. 7.

BUD. A protuberance upon the stem or branches, generally scaly and gummy or reflexus. It contains the rudiments of the leaves, or flowers, or both, that are to be expanded the following year.

BULB. May be considered as a Bud placed upon the root. It contains the rudiments or embryo of a future plant. Bulbs sometimes are found upon the stem, as in some species of Garlic.

Bulbous Roots are either.

Solid as in the Tulip; Pl. 11 f. 2.

Scaly as in the Lily; Pl. 11 f. 3, or

Coated as in the Onion. Pl. 11 f. 2.

BUNCH. A fruit-flalk furnished with short lateral branches. The Grape, the Currant and the Herberry are instances. Pl. 6 f. 8.

BUNDLE. When several flowers stand on their respective fruit-flalks which grow nearly from the same point and rise to the same height; as in the Sweet William.

BUNDLED. Leaves; when they arise nearly from the same point and are crowded together; as in the Larch. Pl. 9 f. 3. (f.)

- - - Roots; a sort of tuberous roots in which the knobs are connected without the intervention of threads, as in the Pome.

BUSH. A collection of Floral Leaves terminating the flowering stem; as in Sage and Crown Imperial; remarkable in the Pine Apple.

BUTTERFLY-SHAPED. From an imaginary resemblance that some blossoms bear to that insect. The Pea and the Broom furnish examples. See the introduction to the 17th class; and also pl. 4 f. 13, 14, 15, 16, 17.

CAP. The membranaceous empanement of Fungusses; surrounding the pillar. Pl. 1 fig. H a.

CAPSULE. A dry hollow feed-vessel, that opens naturally in some determinate manner; as at the Side by a small hole in Orchis and Campanula; horizontally in Pimpernel; longways in Convulvulus: at the bottom in Arrowgrass; or at the top as in most plants. See pl. 5.

CATKIN; is a composition of flowers and chaff on a long receptacle, resembling a Cats tail. The Willow the Hazel and the Redcane are instances. Pl. 6 f. 12.
GLOSSARY.

CELL. A vacuity in a capsule for lodging the seed. Capsules have either one cell as in Primrose; two as in Thornapple; three as in Lilly, four as in Spindletree; five as in Rose; six as in Ajarabacca, &c.

It also signifies the vacuity in the tips that contains the duft.

CENTRAL FLORETS; those that occupy the middle part of compound flower; as the yellow ones in the middle of a common Daisy; pl. 4. f. 24. (b.) and it likewise is used to signify the flowers in the middle part of a rundle.

--- Leaf-stalk is fixed not to the base but to the middle part of a leaf, as in the garden Naturium and Maris Pennsylvania. Pl. 9. f. 4. (a.)

CHAFF. A thin membranaceous substance growing from a common receptacle to separate the florets from each other, as in Teasel; Scabious; Willow; Burdock.

CHAFFY LEAVES the leaves of the Fir, the Yew, the Pine, and the Cedar are so called. Pl. 9. f. 3. (a.)

CHANNELLED LEAVES having a deep furrow or channel extending from the base to the end.

CHIVE. Open the blossom of a Tulip or Lily and you will see six long threads placed round the central pillar, with a tip on the top of each thread. One of these threads together with its tip is called a chive. Pl. 3. f. r. (b. b. b. b. b. f. 3. (b. r.) f. 6.

CIRCULAR. Nearly in the form of a circle, as are the leaves of the Alder, or the petals of the Strawberry and Hawthorn. Pl. 7. f. z.

CIRCUMFERENCE. The part of a circle most distant from the center. Thus in a shilling or half crown the inscription is round the circumference. It is used in botany to express the florets that are furthest from the center of a compound flower; as the white ones that surround the yellow ones in the Common Daisy, or the florets in the outer part of a rundle. Pl. 4. f. 24. (a. a. a. a.)

CLAMMY. Adhesive like bird-lime; as are the leaves of the Alder; or the stalks of Fraxinella; and Gum Cistus.

CLASS. See the introduction.

CLAV. Blossoms that are composed of several petals have frequently those petals so formed as to admit of two distinct names; the claw and the limb. The claw is the lower part, or that next the base; thus if you take a Pint, a Champion, or a Wallflower and draw out one of the petals, the lower and the slender part by which it was connected and which was included within the cup, is the part which is called the Clav. Pl. 4. f. 11. (a. a.)

CLIMBING. A term applied to plants that take the advantage of twining round some other body to support and raise themselves; as the Ivy and Honeysuckle.

CLOATHING. Every species of hairiness on the surface of plants. See Down; Hair; Wool; Bristles.

CLOSE. When a branching fruit-stalk bears its flowers closely compacted together but without regularity.

CLOVEN. Divided half way down, as are the summits of Ground Ivy and Jacob's Ladder; the petals of Campion, and the leaves of wormwood.

--- Tips see pl. 1. f. 3. (a. a. a.)

CLUSHEAP. Thin at the base and thicker upwards, as is the fruit
Glossary.

fruitstalk of the Cuckoo-pint, and of the African Marigold.

Cluster. A collection of flowers somewhat in an egg-shaped form, as those of the Lilac and Butterbur.

Coloured. When a leaf or cup is any other colour than green; as the floral leaves of Golden Saxifrage.

Common Empalement; including several flowers; see the introduction to the 15th class. We have a well known instance in the Dandelion and in all the Thistles. Pl. 4. f. 20.

Receptacle. A fear for several flowers or florets included within one common empalement; as is the case with most of the plants in the nineteenth class. The Dandelion is an example. Pl. 4. f. 25. (a.)

Compact. Growing close and as it were pressed together.

Compound Flowers; consist of many florets upon one receptacle or sepal, and included within one common empalement; as most of those in the 19th class; a Thistle is a familiar example. Pl. 4. f. 19. 24. 25. Sometimes; but with less propriety, the flowers that grow in bunches are called compound, as those in the second order of the 5th class; of which the Carrot is a well known instance.

--- Rundle; when each rundle, is divided into other little rundles or runlets. Pl. 6. f. 9.

--- Leaf; when each leaf-stalk supports more than one leaf; or when one leaf is inserted into a nother, as in Wood Horsetail. Pl. 7. f. 47. 49. Pl. 8. f. 58. 53. 54. 55. 56. Pl. 9. f. 3. (a.) See also Doubly compound; Triply compound.

Berry; when one large berry is composed of several small ones as for instance the Raspberry.

Compressed. A term applied to a cylindrical substance more or less flattened. Thus suppose a straw to be the cylindrical substance; if this is pressed between the thumb and finger so as to flatten it, we should then say it was compressed. The cup of the Gilliflower or the Wallflower is compressed, and so is the blossom of the Rattle and the pod of the Lady's-smock.

--- Leaf; one that is thicker than it is broad.

Concave. Hollowed out like a bowl; as are the petals of the Cherry or the Hawthorn; and the the leaves of Broad leaved Plantain.

Cone. A species of seed vessel exemplified in the Lime and Fir. Pl. 5. f. 18.

Congregated. When several little spikes or panicles are crowded together somewhat in a globular form. Examples are not uncommon amongst the Grasses; Rough Cock's-foot is one.

Conical. The shape of the Alpine Strawberiery, nearly resembling the form of a sugar loaf.

Connected Leaves or Props; those that have their upper surface at the base growing to the stem or branch.

Contiguous. When a leaf, branch, or seed vessel rises up so perpendicularly as to stand almost parallel and close to the stem. The pods of the Common Mustard furnish an example; and the leaves of the Crest Mithridate. Pl. 9. f. 6.

Convex. Opposed to concave. Rising like the surface of a globe.
GLOSSARY

GLOBE. The receptacle of the garden Tansy is convex.

CREEPING Stem, creeping along the ground and sending forth little roots; the Violet and Ivy are instances. Pl. 10. f. 8.

--- Root as in the Spear-mint. Pl. 10. f. 7.

CRESCEL-SHAPED. Shaped like a new moon; as are the tips of the Strawberry.

--- Leaf. Pl. 7. f. 11.

CROOKED Fruitstalk; so much bent that the flower faces the earth, and so stiff that it cannot be straightened without breaking, as in Crown Imperial.

CROSS-PAIRS. When leaves grow in pairs, and each pair points in a different direction to the pair next above or below it. Thus if one pair point East and West, the pair next below it point North and South; the third pair crosses the second, and the fourth the third, and so on. Pl. 8. f. 1.

CROSS-SHAPED; Flowers, are those which have four petals disposed in the form of a cross. The Gilliflower Cand tuft, and Cabbage are familiar instances. Pl. 4. f. 11. f. 12.

CROWNED Seed; is a seed to which the cup of the flower adheres, as in Vesel; or it is a seed furnished with a feather as in Dandelion. Pl. 4. f. 22. f. 27.

--- Berry; is a berry with the flower cup adhering; as in the Honeysuckle.

CUP. A species of emplacement contiguous to the other parts of the flower. It either includes one flower as in the Cornflower and Gilliflower; or several florets as in the Sunflower and Daisy. Pl. 5. f. 11. f. 16. f. 5. (a) Pl. 4. f. 7. (c.) f. 12. (b.) f. 15. 14. 15. (a. a. a.)

CURLED Leaves; as in Endive and Curled Mint. Pl. 8. f. 67.

CURVED. Bent back, so that the extremity is lower than the base. Pl. 9. f. 1. (c. c.)

CUT-ROUND. When a seed vessel does not open longways as is generally the case, but in a circle surrounding it, like a snuff box, as in Pimpernel. Pl. 5. f. 10.

CYLINDRICAL. The form of the trunk of a tree. Pl. 8. f. 64.

--- Straw; Baltrufb.

--- Stalk; Great Plantain.

--- Stem; Aparagus.

--- Leaf; Wild Garlic; Onion.

--- Cup; Fink.

--- Catkin; Reedmace.

DECIDUOUS Leaves; those that fall off at the approach of winter.

--- Cup; falling off before the blossoms; as does that of the Thorn-apple, the Cabbage, the Lady-smock and the Mustard.

--- Seed vessel; falling off before it opens, as in the Sea Rocket and Head.

DECLINING. Bent like a bow, with the arch downwards; as the seed vessel of the Watercress, the threads of the Bugle. See the lower chive in pl. 1. f. 11. f. 12.

DENTED. A blunt leaf, &c. with a dent or blunt notch at the end; as in the Broad-leaved Sea Heath.

DEPRESSED. When the surface of a leaf, &c. is in a small degree concave—pressed down—flattened.

DIAMOND-SHAPED. Applied to leaves that resemble the figure
GLOSSARY.

DOUBLE. Applied to the tips of several flowers when upon one thread there are two tips united, like a double nut; as in the Ranunculus, Anemone, Celandine Plumb, Cherry. Pl. 9. f. 6. b.)

——— Cup; when the cup of a flower hath another outer cup surrounding it, as in the Marshmallow, and Hollybuck.

——— Seedbud; when two seed-buds are united together, as in Goose-grass or Cleavers.

DOUBLE-COMPOUND Leaves, are of three different kinds,

1. Twinfork; when a forked leaf-flake bears two little leaves at the end or each division or fork. Pl. 10 f. 4.

2. Doubly threefold; when a leaf-flake with three divisions bears three little leaves upon the end of each division. Pl. 8. f. 57.

3. Doubly winged; a leaf flake having lateral ribs and each of these ribs being a winged leaf; example Tansey. Tarrown. Pl. 8. f. 56.

For leaves more thin doubly compound, see Triply compound.

DOWNY. Covered with a whitish down; as the leaves of the Marshmallow and Great Mullein.

—— Seed; the feather of seeds is sometimes downy, as in Dandelion. Pl. 2. f. 22. (l.) Pl. 6. f. 2. (b.)

DUST. A fine powder contained in the tips of flowers: it is too minute for the naked eye to examine, but by the assistance of a microscope, it appears very different in different plants: Thus in the Bloody Geranium it is a perforated globule; in the Marshmallow like the wheel of a watch; in the

In a diamond as painted on cards.

Dimple. A little hollow dot; as in the seed of the Berberry.

Distant. Far afar; as the chives of the Mint; or the whorls of the flowers in the Corn Mint.

Distended. As the cup of the Rose, or the under part of the blossom of the Foxglove. Pl. 4. f. 4.

Distinct. A term applied to chives and points when they are not only found in different flowers, but these flowers must likewise grow upon different plants. See the 22d class. Thus in the Yew Tree, if you find it in flower and one of the flowers is furnished with chives; all the flowers upon that particular tree have only chives and no points; but if you find a flower with a point and no chives, then all the flowers upon that tree will be found equally destitute of chives. Pl 1. f. 22.

DIVERGING. Spreading wide from the stem, almost horizontally. This term is opposed to Compact.

DIVISIONS. See the next article.

Divided. Applied to a leaf, a cup, or a petal, it signifies that it is parted more than half way down; as the petals of Chickweed; the cup of Comfrey or Borago. Pl. 7. f. 24.

Dotted. Marked with little hollow dots: as are the leaves of the S. a Chamomile.

Or the receptacles of some of the compound flowers. Pl. 4. f. 23.

Doubled together. As are the leaves of the Black Cherry before they unfold.
GLOSSARY.

Page it is triangular; in the Narcissus kidney-shaped, and in Comfrey the globules are double. Pl. 3. f. 5. (f.) a tip discharging its dust. f. 8. A particle of dust greatly magnified.

DUSTED. Some plants appear as if covered with a kind of dust or powder. e.g. the English Mercury.

EAR-SHAPED. Somewhat resembling a human ear.

ELLiptical. The same as oval.

EGG-SHAPED. Signifies a shape resembling the solid substance of an egg as in the seedbuds of Jacob's Ladder and the seeds of Fenest. or it implies only the form of an egg if divided longways, as in the leaves of the Beech tree or Peppermint. Pl. 7. f. 3.

EMBRACING the Stem. When the base of a leaf half surrounds a stem, as in Solomon's Seal, Poppy and Borage. Pl. 9. f. 4. (f.)

EMPALEMENT. Is a continuation of the outer bark of a plant constituting a part of the flower. It is either a

— Cup; as in Primrose; pl. 3. f. 10. a.

— Fence; as in Carrot; pl. 6. f. 9. (c. c.) a

— Catkin; as in Hazel; pl. 6. f. 17. a

— Veil. as in several Mosses; pl. 1. f. D. (a.) a

— Husk; as in Oats; pl. 9. f. 21. (a. a.) a

— Sheath; as in Narcissus; pl. 3. f. 9. (a. a.) or a

— Cap; as in several Fungi. Pl. 1. f. H. (c) See those terms.

ENTIRE Leaf or Petal. This term is opposed to cleft, gashed, indented, & c. but it does not signify that it is not serrated or scolloped. When a leaf is said to be very entire we understand that it is not so much scolloped or serrated. The leaves of a Nettle are entire, but those of a Lilac are very entire. Pl. 7. f. 31. 33. entire leaves. f. 39. 43. very entire leaves.

EQUAL. Sometimes signifies regular; all alike; as the blossoms of Angelica. The florets forming the compound flowers in the first order of the 18th class, are said to be equal; that is all are alike in being equally furnished both with chives and points.

ESSENTIAL Character. Is a single circumstance serving to distinguish a species or a genus from every other species or genus. Thus the genus Crown-foot (Ranunculus) is distinguished from other genera by the honeycup at the base of each petal; and the Colewort is known from all the other genera in the same natural order, by the four longer threads being forked at the top.

EXCRESCEnce. A substance growing from the seat of the flower of some of the Mosses.

EXPANDING. Standing in a direction betwixt upright and horizontal; as the petals of the Strawberry, the branches of many plants, and the leaves of the Brooklime Speedwell. Pl. 9. f. 5. (c. c.)

EYE. The external ear upon a seed by which it was fixed to the seedvessel; it is very remarkable in a Bran. Pl. 6. f. 8. (c.)

FEATHER. The downy or hairy substance affixed to the seeds of some plants, enabling the wind to scatter them abroad. The feather of the Dandelion is downy; that of the Sowthistle hairy. Pl. 4. f. 22. (l.) pl. 6. f. 2. (a. b.)
GLOSSARY

FENCE. The Empalement of a rundle: it is placed at some distance from the flowers. It is either General or Partial. The Carrot furnishes instances of both. The General Fence is placed under the rundle; the Partial under the rundlets. Pl. 6. f. 9. (c. c.) (d. d. d. d.)

FERTILE Flowers; those that produce seed capable of vegetation: as is very generally the case in those flowers that have both chives and pointals. Flowers that have only chives never can produce seeds; and flowers that have only pointals must be barren, if they are so situated as to be out of the dust from the tips of the barren flowers: In some instances they will indeed produce seeds to all appearance perfect, but these seeds will never vegetate.

FIBROUS Roots; composed of small threads or fibres. Pl. 10. f. 7.

FIDDLESHAPED. The shape of a leaf of one species of Dock, that is supposed to resemble a violin.

FINGERED Leaves; resembling the expanded fingers of a man's hand, e.g. those of the Wild black Hellebore, Lupine and Horse Chestnut. Pl. 7. f. 48.

FLESHY. More solid than pulpy; as the fruit of the Apple; the root of the Turnip and the leaf of the Round leaved Stonecrop.

FLEXIBLE Branches; easily bending; as those of the Barren Strawberry.

FLOATING. Applied to aquatic plants whose leaves or flowers float upon the surface of the water; e.g. Water-lily.

FLORAL LEAVES differ in shape or colour from the other leaves of the plant; they are generally placed on the fruit-stalk, and often so near the flower as in some instances to be easily mistaken for the cup; but the cup dries or withers when the fruit is ripe, whereas the floral leaves endure as long as the other leaves of the plant. Examples of floral leaves may be seen in the Pansies, the Lime-tree, the Hellebore, the Passion flower, the Sage, the wild Marjoram; and many others. Pl. 9. f. 8. (a. a.)

FLORET (a little flower) one of the small flowers composing a compound or incorporated flower. See the introduction to the 19th class. They are Tubular; that is, formed of a tube cloven into five parts at the border; as in Tansey; or Narrow when the blossom is long and strap-shaped as in Dandelion. In the Daisy and Sunflower the florets in the center are Tubular, and those in the circumference Narrow, or Radiate. Pl. 4. f. 21. f. 24. f. 26. In the second order of the fifth class the florets composing the rundles are composed of five petals. When the petals are all of the same size and shape the florets are said to be equal; as in Angelica and Celery; but when the outer petals are larger than the others, the florets are said to be Radiate; as in Shepherds Needle and Carrot.

FLOWER. A temporary part of a plant appropriated to the production of seeds. It is composed of seven parts; the Empalement; the Blossom; the Chives; the Pointals; the Seed-vestel; the Seeds; and the Receptacle. To these perhaps we may add an eighth viz., the Honey-cup. It is not necessary that all these parts should be present,
sent to constitute a flower. Imperfect flowers are deficient in one or more of the parts. The Hyacinth and Tulip have no cup. The Mistletoe, Gale, Hop, Yog, Dog's Mercury, Nettle; and the flowers of the plants bearing cakins, have no blosfoms. The Ground Ivy, the Rubiie and red Deadnettle, and all the plants in the first order of the fourteenth class have no seed-vefels.

FORKED. Dividing into forks as the branches of most of the Sparges; the fruit-stalks of the Common Calamint and the Pink; the Shaft of the Currant. Pl. 10. f. 4.

FOURCORNERED. As the stem of the Deadnettle.

FRINGED. As the blossom of the Buckbean and the Garden Nasturtium; or the leaves of the Crips-leaved Heath.

FRUIT. A part of a flower, consisting of the Seedveisel, the Seed and the Receptacle.

FRUITSTALK. A part of a stem or branch, bearing flowers but not leaves. Pl. 9. f. 8. (c.) pl. 6. f. 7. (a. a. a. a. a. a.)

FUNNEL-SHAPED. A blossom of one petal; the lower part of which is tubular, the upper part conical, as in Hounds-tongue, Buzlapi, Cowslips. Pl. 4. f. 7.

Cup; as in Thrift.

FURROWED. Marked with deep lines running length-ways.

GAPPING Blossoms; so called from their resemblance to a gaping mouth. Toadflax and Snapdragon are instances. Pl. 4. f. 8. e. 10.

GASHED. Divided nearly half way down, into lobes that are convex at the edges and distant from each other; as the leaves of Ladies Mantle and Water-elder. Pl. 7. f. 19.

GENERAL FENCE. A species of emplacement surrounding a general rundle, as in a Carrot, Angelica, or Lovage. It consists of one, or more leaves. Pl. 6. f. 9. (c. c.)

GENERIC Character, consists of an accurate description of the different parts composing a flower, and all those plants whose flowers agree with this description are species of the same genus. (See the introduction.)

GILLS. The thin plates on the under side of the Hats of the Fungusses, remarkable in Mushrooms.

GLANDS. Secretory vesseils, differently situated in different plants. In the Willow they are placed at the margins of the leaves; in the Bird's Cherry and Almond Tree at the base of the leaves; in Butterwort and the Sandwort upon the leaves, and in the Plum on the inner side of the cups. Pl. 10. f. 6. (c. c.) pl. 11. f. 1. (a. a. a. a.)

GLASS-SHAPED. Tubular but dilated towards the top like a drinking glass; as the cup of Jacob's-ladder; the fumits of the Field Southern-wood, the honey-cup of the Nettle.

GLOBULAR. Like a round ball; as the cup of the Burdock; the seedvessel of the Flax; the seed of the Pea; the capsule of the Poppy. Pl. 7. f. 7.

GLOSY. Smooth and shinning; as the seedbud of the Sweet-brier; the leaves of the Holly, Icey, and Bor.

GNAWED. As when a leaf is indented, and appears as if it had been
been gnawed or bitten at the edges. Pl. 2. f. 21.

**GRANULATIONS.** The small berries which join together and compose a large one, as in the Mulberry, Blackberry or Raspberry.

**HAIRLIKE.** Slender, undivided and cylindrical; as the threads in Plantain, Ragwrait, Reed, and most of the Grasses.

**HAIRS.** Are supposed to be secretory dufts.

**HALBERD-SHAPED.** As the floral leaves of the Pansie; the leaves of Sheep Sorrel, and Cuckoow-pint. Pl. 7. f. 17.

**HAND-SHAPED.** Resembling a human hand with the fingers expanded; as the leaves of White Briony; Passionflower; and the roots of Spotted Orchis. Pl. 7. f. 22.

**HAT.** The upper broad expanding part of Fungusses. In Mushrooms the hat is often called the flap. Pl. 1. f. H. c.

**HEADED Stalk; When a stalk supports one compact knob or head of flowers upon its extremity, as in Thrift.**

**HEADS Of Flowers; When flowers grow together in compact knobs; as in Peppermint, Watermint; Common Thyme.**

**HEART.** That part of a seed which is the future plant in miniature. Pl. 6. f. 3. (b)

**HEART-SHAPED.** A term used to express the form of a petal, a leaf, &c. the leaves of Waterlily, Deadnettle's, Burdock and Violet, are heart-shaped. Pl. 7. f. 10.

**HELMET.** A term to express the upper part of a gaping blossom, which bears some resemblance to a helmet. See the introduction to the 20th class.

**HEMISPHERICAL.** In the shape of half a globe; as the cup of the Panet.

**HERBACEOUS Stem.** One that is succulent and tender, in opposition to one that is woody: it perishes annually down to the root. The Pea and the Nettle are instances. The stem of the Gilliflower is somewhat woody.

**HONEYCUP.** A part of a flower designed to secrete and contain honey. In flowers that have only one petal the tube of the blossom contains the honey; or else it is contained in a fort of horn-shaped appendage as in the Butterwort, In the Violet, the Larpýr, the Columbine, the Fumitory, &c. it is a sort of spur, or horn. In the Ranunculus, the Lily, the Crowns Imperial, &c. it is a hollow cavity in the substance of the petals. In the Daffodil and Hellebore it is tubular. In the Fraxinella and Campanula it is fixed to chives; in the Gilliflower, Turnip, &c. it is placed on the seedbud in form of a gland. Its structure is no where more singular or beautiful than in the Grass of Parnassus. Pl. 5. f. 1. (a) f. 8. (a. a. a. a. a.) f. 9. (a. a.) f. 4. (a.)

**HOODED.** A term applied to leaves that are rolled up, as the grocers roll paper to put sugar or spices in, like a cone; as the leaves of Wall Pennywort.

**HORIZONTAL.** A leaf or branch that grows from the stem pointing to the horizon, and parallel to the surface of the earth. Pl. 9. f. 5. (d. d.)

**HORN-SHAPED.** Like the honeycup of the Larkspur. Pl. 5. f. 4. (a.)

**HUNCHED.**
GLOSSARY.

HUNCED. Swelled out, as the under part of blossom of the Foxglove, the Blossom of the Honey-suckle; the cup of the Turnep and the Wallflower. Pl. 4. f. 12. (6)

HUSK. The emplacements and the blossoms of grades are called the husks, they are thin, dry, and semi-transparent like chaff; a husk consists of one or more leaves called Valves, and when contiguous to the other parts of the flower, including the chives and pointals, answers the purpose of a Blossom: but when placed on the outer-side and inclining the inner valves, as well as the chives and pointals, it is called the emplacement. The emplacement frequently contains several florets. See the plate of Grasses.

JAGGED-Leaves; those that are variously divided into lobes and these lobes again divided in an irregular manner. The Pansie is an instance. Pl. 7. f. 24.

IMPERFECT-Flowers; those that want either the cup or the blossom. The Tulip wants a cup, and the Nettle is without a blossom.

INCORPORATED. When a number of little flowers or florets, are so disposed as to form one compound flower; all of them either inclosed within one common emplacement, or situated upon one common receptacle; so that none of them can be taken away without destroying the uniformity of the whole. Thus the flowers of Thrift, Parsley, Teasel, Scabious, Daisy, are incorporated; several small flowers, or florets, combining to form one large flower.

INDENTED-Leaf; the sides of the leaf are hollowed or deeply scalloped, the lobes standing afu-nder as if part of the leaf had been cut out. The leaf of the Turnep is a familiar example. See also pl. 7. f. 25.

INDIVIDUAL-Blossom; the blossom belonging to a single floret in a compound flower. Thus in a Carrot each floret is composed of five petals which constitute the blossom of that individual floret. The individual blossoms in Taney are all tubular; in Dandelion they are all long and strap-shaped. In the Sun-flower they are tubular in the center and strap-shaped in the circumference. Pl. 4. f. 21. f. 26.

INFLExible. Stiff; not easily bending; opposed to Limber.

INTERRUPTED. Broken in its regular form; as the spike of Woodgerony; the leaves of some species of the Ladies-finger. A spike may be interrupted by the inter-vention of leaves or smaller sets of flowers; a winged leaf is interrupted by the intervention of smaller pairs of little leaves. Pl. 8. f. 55.

INVERSELY-HEART-SHAPED. With the point of the heart next to the stem; as the seed-veielf of the Shepherds Purse; the petals of Craniun or Marshmallow; and the leaves of some of the Yrsofils. Pl. 8. f. 69.

JOINTED-Stem. A Wheat-straw is an instance familiar to every one. Pl. 10. f. 3.

--- Leaves; as in the Indian Fig. pl. 9. fig. 3; (a).

IRREGULAR. A term applied to compound flowers wherein the florets are not uniform; as in the Carrot and Coriander.

--- Blossom. See Regular.

KEEL. A name given to the lowermost petal in a butterfly-strap-ed blossom, from its supposed resemblance to the keel of a ship; see the introduction to the 17th class.
GLOSSARY

clafs. See also Pl. 4. f. 17. and f. 13. (d)

KEEL-SHAPED. Bent like the keel of a ship or boat; as the shaft of the Fca; the emplacement of Ca

mery Grass. Pl. 2. f. 10. (a. c)

KIDNEY-SHAPED. As the seed of the French Bean, the Tip of the Mallow; the leaves of the

Ground Ivy; Golden Saxifrage, and Meadow Sweet. Pl. 7. f. 9.

KNEE-JOINTED. When a straw or stem is a little bent at the joints.

KNOB See Troad.

LACTESCENT. Abounding with a milky juice.

LAMINATED. When the flat surfaces of leaves lie close one upon another.

LATERAL Branches; growing from the sides of the stem: opposed to terminating.

—— Flowers; those that grow from the sides of the stems or stalks; thus the spikes of flowers in the common Speedwell grow on lateral fruitstalks; or on fruitstalks proceeding from the sides of the stem.

LEAFSTALK. The foot- stalk of a leaf. It supports the leaves but not the flowers. In the Great Periwinkle the leaf stalks are very long. Pl. 9. f. 4. (a. b. c)

LEAFY. Furnished with leaves.

—- Cup; when the base of a cup is surrounded by a series of leaves different from those which form the cup.

—- Seed; a seed that is surrounded by a thin leafy edge, as in Cox's Malus.

LEATHERY. Tough and pliable like leather; e.g. the cup of the Corn Cockle, and most of the plants in the third division of the 24th clafs.

LEVEL. When several branch-

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es or fruitstalks grow to equal heights, so as to form a flat surface at the top; as in the flowers of the Sweet William.

LID. A cover to the tips of several of the Mosses; as in the Bog moss. Pl. 1. f. D. (b)

LIMB. The upper part of a petal, in blossoms composed of more than one regular petal. Thus in the Wall-flower, the upper flat broad part of the petals is called the limb. The lower flender part included within the cup is called the claw. Pl. 1. f. 11.

LIMBER Fruit-stalk: bending with the weight of its own flowers.

LIP. The upper or under division of a gaping blossom. The Dead-nettle and the greater part of the plants in the 14th clafs furnish examples. See the introduction to that clafs. See also pl. 4. f. 8. f. 9. and f. 10.

LITTLE Fruit-stalks; the little foot-stalks that support an individual flower, when there are several flowers upon one common fruit-stalk.

LOBES. The divisions of a Galbed leaf: see gable. The lobes are rounded at the edges and stand distant from each other. The leaves of the Hop, Aconite, Hoplandia, and Digitalis furnish examples. Pl. 7. f. 17. f. 19.

LONG. A cup is said to be long, when it is equal in length to the tube of the blossom.

LOPPED. Appearing as if cut off with a pair of scissors: the leaves of the Great Bindweed are lopped at the base, the petals of the Periwinkle are lopped at the end. Pl. 8. f. 62.

LYRE-SHAPED. As the leaves of Herb-Plant. Pl. 8. f. 62.

MATTED. Thickly interwoven.
ven together as the fibres in turf-bogs.

MEMBRANACEOUS. Thin, skinny, and tough.

— Stem; when the edges of the stem are bordered with a thin leafy substance, as in Water Figwort and Broad Leaved Pyre Everlasting.

MOUTH. The upper part of the tube of blossoms, consisting of a single petal; as Borage, Houndstongue, Deadnettle. Pl. 1. t. 9. (d. d.)

NARROW. The florets in some species of compound flowers are tubular at the bottom, but flat and narrow like a strap or fillet at the top. In Dandelion the florets are all narrow; in the common Daisy the florets in the circumference only, are narrow. Pl. 4. t. 10. f. 21. f. 27.

NAKED Stalk; destitute of leaves; as the stalk of the Tulip or Lily of the Valley.

— Mouth; when the mouth of the tube of a blossom is not closed by valves or hairs. The mouth of the blossom of Borage is closed by five valves, or teeth: but that of Grass-well is open and Naked.

— Receptacle; neither chaffy nor hairy; as that of the Daisy.

ODDING Flower; when the fruitstalk is bent near the end, as in the Cleared Daffodil, Narcissus and Jonquil. Pl. 3. f. 9.

NOTCHED at the end; as the petals of the Small camomile; and Dews-foot Cranes-bill; the little leaves of Vertic; the leaves of the common Maple. Pl. 7. f. 16.

NOTCHED Leaves. The edges cut something like the teeth of a large timber saw. Dandelion, Broad leaved Watercress, Long rooted Hawke’s-eye and Smooth Scurvy Hawkweed are examples.

NUT. A seed covered by a hard woody shell; e.g. the Hazel Nut. This woody shell is sometimes covered by a soft pulpy or flaky substance in a Peach, or Apricot and then it is called a Stone. Pl. 5. f. 21.

OBLONG. Longer than broad, and rounded at the ends; as the leaves of the Daisy; the tips of the Honeysuckle. Pl. 7. f. 5.

OPEN. Standing wide.

OPPOSITE. Growing on the opposite sides of the stem, but at the same height from the ground; as the leaves of the Nettle. In pl. 9. f. 5, all the leaves are opposite.

OVAL. As the leaves of box. Pl. 7. f. 4.

PALATE. The inner part of the mouth of gaping blossoms. Pl. 4. t. 10. (c.)

PANICLE. An assemblage of flowers growing without any very regular order, upon fruit-stalks that are variously subdivided; e. g. Oats. Pl. 6. f. 6. It is said to be spreading; when the partial fruit-stalks diverge and stand wide asunder, as in the Common and Reed Meadow-grass.

— Compound, when they stand near together as in the Sheep’s Fescue, and Purple Hair-grass.

— PANICLED Bunch; an assemblage of flowers partaking the properties of a panicle and a bunch. See those terms. Golden Rod may serve for an example.

— Spike; an assemblage of flowers partaking the properties of a panicle and a spike; as the Wall Fescue and the Manured Canary Grass, in which the collections of florets resemble a spike in their general appearance, but the florets are furnished with fruit-stalks, shorter than themselves.

PARA-
GLOSSARY.

PARASITICAL Vegetables; not taking root in the earth but growing upon other vegetables. Thus *Mistletoe* is found to grow upon the Apple Tree, the Pear, the Lime, the Elm, the Poplar, the Hawthorn and the Buckthorn, but never upon the ground.

PARTIAL. Belonging to a part, not to the whole.

--- Fence. Pl. 6. f. 9. (d. d. d. d.)

PARTITIONS. The substances dividing seed-vessels into different cells. Thus the Seed-vessel of *Jacob’s Ladder* is divided into three cells; and if you cut a Lemon across you will plainly see the partitions that divide it into nine cells. See also pl. 5. f. 14. (b. b. b. b.)

PENCIL-SHAPED. Like a camel-hair pencil; as the funnions of *Millet*, or the appendages to the blossoms of the *Meadow Milkwort*. Pl. 2. f. 14. (c. c.)

PENDANT. Hanging down; as the bunches of the Red *CURRENT*; the cones of the Scotch *FIR*; the flowers of the *Chimimbre*.

PERENNIAL. Continuing for several years.

PERFORATED Leaves; when the stem seems to go through the leaves; as in the Round-leaved *Thoroughgrass*. Pl. 9. f. 4. (g. g.)

PERMANENT Cup, remaining; till the fruit is ripe; as in Bar- rage; *CURRENT*; Pink; and Dead-nettle.

PETALS. The leaves which constitute the blossom are called *Petals*, to distinguish them from the other leaves of the plant. See pl. 3. f. 2. (a. a. a. a. a.) Pl. 4. f. 12. (a. a. a. a. a. a.)

PILLAR. The cylindrical substance that supports the hat of a fungus, e.g. the Common *Mushrooms*; also the little shaft upon which the feather of downy seeds is placed, as in *Dandelion*. Pl. 1. f. H. (b. b.) Pl. 4. f. 22. (i. i.) Pl. 6. f. 2. (d. d.)

PITH. A soft spongy substance filling up the cavity in the stems of some plants; as in the *Rush* and the *Elder*.

PLAITED. Folded in plaits; as the blossoms of *Convulvulus*; the cap of *Thrift* and the leaves of *Ladies’ mantle*. Pl. 7. f. 37.

POD. A seed-vessel of two valves, within which the seeds are fixed alternately to each seam. When long it is called a pod, as in *Gilli-flower*; when broad and short it is called a *Pouch*, as in *Honeys* and *Shepherd’s Purse*. Pl. 5. f. 10. f. 11. f. 12. f. 17.

POINTAL. A part of a flower, composed of the *Seedbud*, the *Shaft* and the *Summit*. Look into the blossom of a *Plumb* or *Cherry*, and in the center you will see the pointal surrounded by chives. In the blossom of the *Apple* or *Pear*, you will perceive five pointals in the center. In the *Deadnettle* you will find the pointal covered by the upper lip, and forked at the top. In the center of the blossom of the *White Lily*, the pointal stands surrounded by six chives. The *Seedbud*, which is the lower part of the pointal, is long, cylindrical, and marked with six furrows. Next above this part is the *Shaft*, which is long and cylindrical, and at the top of the pointal is the *Summit*, which is thick and triangular. See pl. 3. f. 2. (d. e. f.) f. 1. (i. k. l.) f. 5. (e. c. c.)

POINTING from two opposite lines; like the teeth in a double box or ivory comb. The leaves of the *Common Fir* and the flowers of *Sweet Cyperus* are examples.
GLOSSARY.

one way; as the flowers of the Foxglove, the Cockfoot, and the Sherps Esoe Grafs. Pl. 2. f. 12. (d.)

PORES. Little holes. At the inner side of the base of the petals, in all the species of Ranunculus or Crossfoot, are little pores filled with honey. See also pl. 3. f. 3. (k.)

POUCH. See Pod.

PRICKLES. Sharp-pointed weapons of defence formed from the bark, and not from the woody part of a plant. The prickles of the Rose are a familiar example. Pl. 10. f. 2.

PROLIFEROUS Blossoms: when one grows out of another, as is not uncommon in the Polianthus.

—Shoots when one shoot springs out of another, as in the Proliforous Feather-moss.

PROLIFIC. The partition of a seed-vessel is said to be prominent, when it projects beyond the valves, as in Cabbage, and many other plants of the fifteenth class.

PROPS. Small leaves or scales situated on each side of the base of a leaf-stalk or fruit-stalk, for the purpose of supporting them at their first appearance. They are sufficiently evident in the Garden Pea. Pl. 11. f. 6. (b. b.)

PROTUBERANCES in seed-vessels; occasioned by the swelling of the inclosed seeds. They are sufficiently evident in the pods of Mustard, and in some sorts of Beans.

PULPY. Soft and tenacious. A Strawberry and Cherry is pulpy; but an Apple is fibrous.

PULPY Seed-vessel: consists of a nut or stone encompassed by a pulpy substance, exemplified in the Plum, the Cherry, and the Peach. Pl. 5. f. 21.

PURSE-SHAPED. Like a purse that draws together with strings at the top; as the seed-vessel of the Purple Marshcress, or the honey-cup of the Satyrion.

RADIATE. A species of compound flowers in which the florets of the center differ in form from those in the circumference. Thus the Daisy and Sunflower are radiate flowers; the florets in the center are all tubular, but those in the circumference are narrow or strap-shaped. Pl. 4. f. 24.

—Summits: placed in a circle; as in the Poppy. Pl. 5. f. 5. (b.)

RECEPTACLE. One of the parts necessary to compose a flower. It is the base or feet upon which the other parts of the flower are placed. Pl. 4. f. 12. (c.) f. 23. (a.)

REFLECTED. Bent back, as the segments of the cup of the Currant; the petals of the Flower de Luce; the blossoms of the Hyacinth and White Lily. Pl. 4. f. 5.

REGULAR Blossom; one that is regular in the figure, size, and proportion of its parts; as the Jasmine and Spring.

REMOTE Whorls; when there is a considerable length of stem between each whorl. Pl. 6. f. 11. (a. a. a.)

RIGID. Inflexible; opposed to limber and flexible.

ROLLED BACK. As the lateral edges of the leaves of Rosemary; the ends of the leaves of Sweet William; the fumities of the Pinks. Pl. 1. f. 19. (c. c.)

ROOT may be Fibrous, Bulbous, Tuberos, Bundled, Laced, Spindle-shaped, or creeping; see those terms. See also pl. 11.

ROOT-
GLOSSARY

ROOT-LEAVES. The leaves that proceed immediately from the root without the intervention of a stem. They often differ in shape and size from the other leaves. The Field Bellflower furnishes an example. Pl. 9. f. 7.

RUNDLE. A composition of flowers in which a number of slender fruit-flasks proceed from the same center, and rise nearly to the same height, so as to form a regular surface at the top. Hemlock, Carrot, and Cowsparfuch are examples. Randles of flowers are frequently called Umbels; and the plants producing them are said to be umbelliferous plants. Pl. 6. f. 9.

RUNDLET. A little rundle. The fruit-flasks which compose a rundle are often divided at the top into several smaller fruit-flasks, and these smaller sets of fruit-flasks are called Rundlets. Hemlock, Carrot, and Angelica furnish instances. The fruit-flasks of a rundle and of a rundlet are called Spokes. Pl. 6. f. 9. (b. b. b. b.)

RUNNING along the Stem, means that a leaf has no leaf-stalk, and that its base is attached to the stem for a considerable length. The Great White Mullein and the Musk thistle are examples. Pl. 9. f. 4. (c.)

SALVER-SHAPED. The shape of a blossom of one petal, the upper part of which is tubular, the upper part flat and expanded; as the blossom of the Pervivinkle, and the Misie-car scorpion Graps. Pl. 4. f. 1.

SAUCER. A sort of flower of the Cupthong that is circular and concave like a china saucer. Pl. 1. f. P.

SCALY. Like the skin of a Fish; as the cups of Burdock. Pl. 4. f. 25. (a.)

SCATTERED. Disposed without any regular order.

SCOLLOPED. Inspect the edges of the leaves of Bird's-eye and Gill, and you will have a true idea of this term. Pl. 7. f. 32-34. 33.

SCORED. Marked with superficial lines, as the cup of a Pink, or the stems of Leather-broom.

SEAM. The line formed by the union of the valves of a seed-vessel. Thus the pod of a Pea is a seed-vessel of two valves, and the two seams where the valves join are sufficiently conspicuous. As also in pl. 5. f. 6.

SEED. A deciduous part of a vegetable containing the rudiments of a new plant. It consists of the Heart; the Seed-lobes; the Eye and the Seed-coat; See those terms. Sometimes it is crowned with the cup of the flower, and sometimes it is winged with a feather, or with a thin expanded membrane, which enables the wind to waft it abroad. See pl. 4. f. 42. and pl. 6 f. 3.

SEEDBUD. The lower part of a pointal. It is the rudiment of the embryo fruit. See Pointal Pl. 3. f. 4. (d.) f. 5. (c.) f. 7. (i.)

SEEDCOAT. The proper coat of a seed which falls off spontaneously. It is remarkable in Spindle-tree, Hound's-tongue, the Cucumber, the Fraxineela and the Mallow. Some seeds have only a dry covering or skin, as the Beauf. Pl. 6. f. 1. (c. c.)

SEEDLOBES. The perishable parts of a seed, designed to afford nourishment to the young plant when it first begins to expand. A 3 bean
bean after being soaked in water or moist earth, easily parts with its external skin, and divides into two parts called the Seed-lobes. Pl. 6, f. 3. (a. a.)

SEED-VEssel. A vessel to contain the seed. It is of several kinds; as a Capsule; a Pod; a Shell; an Airbag; Pulpy including a nut or Stone; an Apple; a Berry; and a Cone: see those terms. See also pl. 5.

SEGMENT. The small parts of a leaf, a cup, or a petal included between the incisions.

SEMI-CYLINDRICAL. If the trunk of a tree was faved lengthways through the middle, each part would be semi-cylindrical. The stalk of Ramsons is in this shape.

SEMINAL - LEAVES; those that arise immediately from a seed. SEPARATE. Chives and pointals are said to be separate when they are found upon the same plant, but within different empaleaments. Thus in the Box; the Birch; the Cucumber; and the Melon, some of the empaleaments contain chives and others contain pointals; but none of them contain both together. Pl. 1, f. 21.

SERPENTINE. The edge of some leaves is formed like a serpentine line; without any angles or corners. Pl. 7, f. 29.

SERRATED. Like the teeth of a common saw; as are the edges of the leaves of the Apple, the Pear, the Spearmint, the Dead-nettle, the Snakeroot or Gooseneck, &c. Some leaves are doubly serrated; that is, the teeth are again cut into other little teeth; the Common Elder is an example. Pl. 7, f. 51–52.

SHAFT. A part of a pointal standing upon the seed-bud and supporting the summit. See Pointal, Pl. 3, f. 2. (a.) f. 5. (d.) f. 7. (k.)

SHARP. As the leaves of the Jaffamine or the segments of the cup of the Primrose. Pl. 3, f. 10. Pl. 7, f. 40.

SHEATH. A species of empaleament, exemplified in the Cow-crus, the Iris, and the Daffodil. Pl. 7, f. 9. (a. a.)

SHEATHED Fruit-stalk. One that is furnished with a sheath. Pl. 3, f. 9/4(d.)

SHEATHING Leaves. When the base of a leaf enfolded the stem; as in most of the Grasses. Pl. 9, f. 4. 'i.'

SHEDDING. Continuing but a short time. Applied to a cup signifies that it falls off before the blossom, as in Poppy.

SHELL. A seed-vessel of two valves, wherein the seeds are fixed to one seam only; as in the Pea, and most of the plants in the fourth order of the seventeenth class. Pl. 7, f. 16.

SHORT. A cup is said to be short when it is shorter than the tube of the blossom, as in pl. 4, f. 7. (c.)

SHRIVELLING. Fading and withered, but not falling off; e.g. The blossoms of Plantain and Stitcheswort.

SHRUBBY. Somewhat woody, as the stems of the Rofe.

SIMPLE; Undivided. — Stem; one that is undivided; only sending out small branches.

— Leaf; when there is only one upon a leaf-stalk.

— Cup; one that consists of a single series of segments; e.g. Goosebeard.

— Shaft;
Glossary.

—Stalk; undivided; as the stalks of Tulips and Thrift.

SINGLE. One flower only upon a stalk; as the Tulip.

SITTING Leaves; have no leaf-stalk; as Spearmint and Hound’s-tongue.

Flowers; are those that have no Fruit-stalk, as the flowers of Mace-worm.

SKINNY. Tough, thin, and semi-transparent; as the cup of Thrift.

SOLITARY. Only one in a place; as but one flower on a fruit-stalk, and only one fruit-stalk proceeding from the same part of a plant.

SPATULA-SHOPE. The form of a leaf. Pl. 3. f. 64.

SPEAR-SHAPED. As the leaf of Ribwort Plantain and Spearmint. Pl. 7. f. 6.

SPECIFIC-CHARACTER. One or more circumstances of a plant sufficient to distinguish it from every other plant of the same genus. The specific characters are generally taken from the leaves or stem; sometimes from the flowers; but seldom from the roots.

SPIKE. A composition of flowers placed alternately on each side of a common stalk or fruit-stalk, and not standing upon little fruit-stalks, Great Mullein, Agrimony, and many of the Grasses have their flowers collected into spikes. Pl. 6. f. 5.

SPIKE-STALK. A long rough receptacle upon which the flowers composing a spike are placed. Take a spike (or as it is frequently called, an ear) of Wheat; pull off all the seeds and chaff; what remains is a Spike-stalk. Pl. 2. f. 85. (c. c.)

SPINDLE-SHAPED Root. e. g. a Carrot. Pl. 11. f. 6.

SPIRAL. Twisted like a screw. Pl. 10. f. 6. (a. a.)

SPOKES. The fruit-stalk of flowers collected into Bundles, or Rondelles, see those terms. They spring from one point and diverge like the spokes of a cart wheel. Pl. 6. f. 6. (c. c. c. c.)

SPREADING. Not rising high. But spreading wide upon the ground; as the stems of Lumbrey and Panice.

SPUR. Shaped like the sput of a cock, as the honey-cups of the Larkspur.

STALK. That species of trunk which elevates and supports the flowers, but not the leaves of a plant. It differs from the Fruit-stalk, for that springs from the stem, or branches; but this rises immediately from the root; as in Narcissus, Lily of the Valley, and Hyacinth. Pl. 6. f. 4.

STANDARD. The upright petal of a butterfly-shaped blossom; as in the Pea. See the introduction to the 17th clas. See also pl. 4. f. 15. (b. f. 14. b.) f. 15.

STARRY. Plants whose leaves grow in whorls round the stem; as the Goos-grass, Chaff-vennet, and several other plants in the fourth clas. Pl. 9. f. 3. (b. b.)

STEM. The proper trunk of a plant supporting the leaves, branches and flowers. It rises immediately from the root.

STEM-Leaves. Such as grow immediately upon the stem without the intervention of branches.

STINGS. Sharp pointed substances conveying poi on into the part they penetrate. Few people are ignorant of the sting of a Nettle.

STONE. See Nut.
GLOSSARY.

STRADDLING; Branches standing wide from each other.

STRAP-SHAPED. Long and narrow like a strap or a fillet; as the leaves of Thrift; Crow and Rosemary. Pl. 7. f. 7.

STRAW. A kind of trunk proper to Grasses. Pl. 10. f. 3.

STRINGS. Woody fibres in leaves running undivided from the base to the extremity; as in the broad and narrow leaved Plantain. Pl. 7. f. 45.

SUCKERS. Shoots that rise from the root, spread along the ground and then take root themselves; as in the Sweet Violet.

SUMMIT. The upper part of a pointal. See Pointal, pl. 3. f. 2. f. 1. f. 5. (a.) f. 7. (b.)

SUPERIOR Cup or Blossom: when the cup or blossom is situated above the seedbud it is said to be superior as in the Honeysuckle; Currant and Campsmara.

SWORD-SHAPED. As the Leaves of the Iris or Flower de Luce.

TARGET. A kind of flower in the genus Cupilbong, that is circular and convex. See Sauce.

TENDRIL. A spiral shoot or firing, by means of which some plants support themselves against the adjacent bodies. It is well known in the Vine and Pea. Pl. 10. f. 6. Pl. 8. f. 58.

TERMINATING. (Opposed to lateral) standing at the ends of the stem or branches; as the fruitstalks of Borage, the Blossoms of Groundel.

THORN. A sharp pointed projection growing from the woody substance of a plant; as in Gorze and Blackthorn. Pl. 10. f. 1.

THREAD. A part of a chive supporting the tip. See Chive.

Pl. 3. f. 3 (b.) f. 6. (g.) Pl. 1. f. 13. (a. a.)

THREAD-SHAPED. Of the same thickness from top to bottom, like a piece of packthread. Take for example the leaves of Fennel, or the shaft of the Crowe, or Honey-jack's.

THREE-EDGED. A stem having three corners or angles and the sides not flat.

THREE-CORNERED. Having three corners or angles with flat sides as the stem of the Panise.

TILED. One leaf or blade partly covering another like the tiles on a house. e.g. The cup of Dandelion or of Burdock. Pl. 4. f. 25. (a.)

TIP. A part of a chive fixed upon the thread, and containing the dust. In Dovis Mercury it hath one cell; in Hindebore two; in Orbis three; in Fritillary four; see Chive. Pl. 3. f. 2. (c.c.c.c.c.c.) f. 5. (b. b. b. b. b. b.) f. 6. (b.)

TOOTHED. When the edges of a leaf are set with little teeth, not pointing towards the end as in the serrated leaves, nor towards the base as in the inverely serrated leaves. Common Eyebright; Primrose; Cowslips; and Mountain Willowherbs, have toothed leaves. Pl. 7. f. 70.

TRAILING Stems: Lying along upon the ground, and not sending out roots. e.g. Common Speedwell; Red Pimpernel; small Sea Bindweed.

TREBLY Compound Leaves are of three different kinds.

1. Double Twnsfork; the leafstalks twice forked and two little leaves at the end of each point; or three times divided, and three little leaves upon each division. Pl. 8. f. 7.

2. Triply
GLOSSARY

2. Triply three-fold; the divisions of a triple leafstalk again subdivided into threees, and three little leaves at the end of each subdivision. Pl. 8. f. 59.

3. Triply winged; when the lateral ribs of a doubly winged leaf, have themselves other ribs with winged leaves. Pl. 8. f. 60. 61.

TRIANGULAR. Expressing the form of a leaf that hath three sides and three angles, or corners. Pl. 7. f. 12.

TRIANGULARLY spear-shaped: Leaves in this form are broad at the base and nearly triangular, but spear-shaped at the point. e.g. Black Pea. Pl. 7. f. 45.

TRIPLY WINGED. See Trebby Compound.

TRIPLY Three-fold. See Trebby Compound.

TRUNK. The main body of a plant: it is either a Stem, a Stalk; a Stem, or a Pillar: see those terms.

TUBE. The lower part of a blossom of one petal is frequently lengthened out into a tube, as in Crocus and Trilium.

TUBERCLE. A little solid pimple.

TUBEROUS Root; consisting of many roundish knobs collected into a bundle, as the root of Peony and Drosera. Pl. 11. f. 7.

TUBULAR. In the shape of a hollow tube, as the cup of Primrose; the blossom of the Honeyflick, or the honey-cup of the Helicehore.

--- Florists in compound flowers, are shaped like a hollow tube, and the top is cloven into five segments. In the Forget-me-not all the florists are tubular, but in the Sunflower and the Daisy only those in the center. Pl. 4. f. 28.

TUFT. A composition of flowers in which a number of fruit-stalks proceeding from one common center rise to the same height; and these again shoot out other little fruit-stalks, which do not proceed from one central point. The Elder, the Gilder Roë, and the Laurylichus are instances. Pl. 6. f. 16.

TURBAN-SHAPED. Like a Turkish turban; exemplified in the cup of the Elm, or French Wheat; some Pears are in this form.

TWining. Twisting round other bodies and ascending in a spiral line. Some plants twine from the left to the right C in the direction of the sun's apparent motion, as Hop, Honeyflick and Black Briony. Others twine from the right to the left D contrary to the sun's apparent motion, as Bindweed and Scarlet Kidney Bean. Pl. 10. f. 5.

TWINFORK. See Doubly compound Leaves.

TWO EDGED. As the stem of Tuscan, and the Sweet-smelling Solomon's Seal.

VALVE. The different pieces that compose a capsule are called valves. Thus in the Thornapple there are four valves. Pl. 5. f. 14. (c. c. c. c.) In the Loose stiffe ten; in Jacob's Ladder, Daffodil and Hyacinth three. Pl. 5. f. 6. f. 12. (a. a.)

The petals and empalements that constitute the flowers of Grasses are called valves; thus in the Common Meadow-Grass, the empalement is a dry chaffy husk, composed of two valves, and the blossom is formed of two other valves. See pl. 2. f. 1. (a. a.) (b. b.) and moit...
most of the other figures in that plate.

The mouth of the tube of a blossom is frequently closed by several projecting substances; thus in the blossoms of Borage and Jacob's Ladder the tube is closed by five of these substances; and they are called valves.

VANE-LIKE. Turning about like a vane or weathercock, as is the case with the tips of Geranium, and Crown Imperial.

VAULTED. Like the roof of one's mouth. The upper lip of many of the gaping blossoms is vaulted; e.g. red and white Dead-nettle.

VEIL. The empanelment of mosses, covering the tips. It is generally in a conical form like an extinguisher. Pl. 1. f. D. (a)

VIVIPAROUS. A term applied to stems or stalks producing buds that are capable of vegetation. In Toothwort and Star of Bethlehem, they are found at the base of the leaves; in small Bifort, on the lower part of the spike; in some species of Garlic at the origin of the ruddle of flowers; and on the spikes of some of the grâdes, as the Cats-tail Canary.

UMBEL. See RUNDLE.

UNARMED. Without weapons of defense. See WEAPONS.

UNEQUAL-Florets; when a rundle is not composed of equal florets, but those in the circumference are larger than those in the center; and the outer petals are larger and different in shape from the inner petals. As in the Carrot and Cabbage.

UNIFORM. A term applied to compound flowers when the florets that compose them are all alike; as those of Fennel, Lettuce, and Parsley.

UPRIGHT. Standing upright, as the cups of Primrose; the tips of Polygonum; the flanks of Tulips; the stems of Sparagus. It is also applied to leaves. Pl. 9. f. 5. (b.b.)

WARTH. Having little hard lumps or warts upon the surface.

WAIVED. When the surface of a leaf towards the edge does not lie flat, but appears waved, and full, like a man's ruffle. The leaf of the Water Caltrops is an example. Pl. S. f. 56.

WEAPONS are either Prickles, Thorns or Stings. See those terms.

WEDGE-SHAPED. As the leaves of the Garden Spurge; and the Garden Parsley. Pl. 8. f. 55.

WHEEL-SHAPED. A term used to express a blossom of one petal, with a flat border and a very short tube. Borage and Speedwell are familiar examples. Pl. 4. f. 6.

WHORLS of branches, leaves, or flowers. The branches of the Fir, the leaves of Ladies Bedstraw, and the flowers of the red and white Dead-nettle grow in whorls round their respective stems. They somewhat resemble the spikes round the nave of a wheel. Pl. 6. f. 11.

WINGS. The lateral petals of a butterfly-shaped blossom; e.g. in the Pea. See the Introduction to the seventeenth Class. See also pl. 4. f. 13. (c. c.) and f. 16.

WINGED-Leaves; when an undivided leaf itself hath many little leaves growing from each side; as in Jacob's Ladder; Bladder Senna; Aib and Pea. Pl. 8. f. 52, 53, 54, &c.

WINGED-Ciñfs; applied to a leaf that is cut and divided so deeply on each side, down towards the middle.
middle rib, as almost to resemble a winged leaf. The Corn Poppy and the Polyposy are examples; and so are the root-leaves of the Shepherd's Purse.

WINGED-Leaf-stalk; one that is not cylindrical, but flattish, with a thin leafy border at each edge.

WINGED-Shoots. When the shoots strike out from the sides, like the plumage along the sides of a quill. Instances will be found in several species of the Feathermoss.

WIREs. Barren twigs or shoots lying upon the ground, as in the Garden Strawberry and Stone Bramble.

WOODY. Opposed to herbaceous. The stems of the Wallflower or Gilliflower are woody.

WOOL. A kind of downy cloathing upon the surface of some plants. The leaves of Horehound, Great Mullin and Gorze are woolly.

WRINKLED. As are the leaves of Sage, Primrose, Wood Strawberry and Hazel.

ZIGZAG. Having many turnings and bendings, as the stems of Rough Bindweed, and Woody Nightshade; or the branches of Golden Rod.
THE

LATIN TERMS of LINNAEUS;

With the corresponding English Words.

ABBREVIATUM, short.  
Abortiens, abortive.  
Abortivi (floesuli) barren.  
Abruptum, abrupt. Pl. 8. f. 53.  
Acaulis, stem-less.  
Acerosum, chaffy. Pl. 9. f. 3. (c.)  
Acicularis, Needle-shaped.  
Acinaciformis, Scymeter-shaped.  
Acini, Granulations.  
Acotyledones, Seeds without Lobs.  
Aculei, Prickles. Pl. 10. f. 2.  
Aculeata, prickly.  
Acuminatus, taper.  
Acuminatum (fol.) tapering to a Point. Pl. 7. f. 41.  
Acutus, sharp. Pl. 7. f. 40.  
Adnatum, connected.  
Adpressa, contiguous. Pl. 9. f. 6.  
Adscendens, ascending.  
Adversum, turned towards the South.  
Æqualis, equal.  
Aggregatus, incorporated.  

A, wing. Pl. 4. f. 16.  
Alatus, winged.  
Alburnum, a soft white substance betwixt the inner bark and the wood.  
Alge, Thongs.  
Alternus, alternate. Pl. 9. fig. 3. (d. d. d. d.)  
Amentum, Catkins.  
Amplexicaule, embracing the Stem. Pl. 9. f. 4. (f.)  
Anceps, Two-edged.  
Androgynea, Chivos and Poinish separare. Pl. 1. f. 21.  
Angulatus, angular.  
Angulifolia, narrow-leaved.  
Angiopernum, covered Seeds.  
Annua, annual.  
Anomala, without Order.  
Anthera, Tip. Pl. 9. f. 3. 5. 6.  
Apetalus, without Petals.  

Aper,
LATIN TERMS

Apex, Point.
Apophysis, Excrecence.
Appendicularis, with an Appendage.
Approximata, near together.
Arborea, Woody.
Arcutatum, bowed.
Artillus, see Caliculus.
Arista, Axum. Pl. 2. f. 21. (b. b.) 23. (b. b.)
Arma, Weapons. Pl. 10.
Articulatum, jointed. Pl. 10. f. 3.
Pl. 9. f. 3. (a)
Aperifolia, rough-leaved.
Aspergentia, ribbing.
Atenuata, tapering.
Audis, leafy.
Auriculatum, Ear-shaped.
Avenis, without Veins.
Axillare, at the base of the Leaves.
Pl. 9. f. 5. (m.)
Bacea, berry. Pl. 5. f. 19.
Barba, Beard.
Barbata, bearded.
Bicapsularis, two Calisulates. Pl. 1.
Pl. f. 8.
Bicennis, biennial.
Bifarias, opposite.
Bifida, Cleft or divided.
Biflorus, two flowered.
Bigeminum, twinfork.
Bijugum, two Couple.
Blubius, Two lipped. Pl. 4. f.
8. 9. 10.
Blubium, two lobes.
Binata, in Pairs. Pl. 7. f. 50.
Bilocularis, two Cells. Pl. 5. f. 12.
Bipartita, two-Divisions.
Bipinnatum, doubly winged.
Biternum, doubly threefold. Pl. 8.
f. 57.
Bivalve, two Valves. Pl. 5. f. 9.
16.
Brachiatus, see Decussatus.
Bractea, floral Leaf. Pl. 9. f. 8.
Bulbosa, bulbous. Pl. 11. f. 2. 3. 4.
Bulbus, Bulb.
Bullata, blistered.
Caducu, shedding.
Caelitius, matted together.
Calcariatum, having a Spur. Pl. 5.
f. 4. (a.)
Caliculatum, Cup double.
Caliculas, Seed-coat. Pl. 6. f. 1.
(c. c.)
Calypta, Veli. Pl. 1. f. D. (a.)
Calyx, Empalement. Pl. 4. f. 7.
(c.) f. 20. Pl. 3. f. 10. f. 5. (a.)
Campanulata, Bell-shaped. Pl. 4.
f. 2. 3. 4.
Canaliculata, channelled.
Capillaris, hair-like.
Capitatus, growing in Heads.
Capitulum, Knob.
Capitulus, flowering Head.
Capreolus, see Cirrhosus.
Capsula, Capsule. Pl. 5. f. 6. 9.
14.
Carina, Keel. Pl. 4. f. 7.
Carinatum, Keel-shaped Pl. 5. f.
13.
Carnosa, Scler. Pl. 5. f. 50.
Cartilagea, grizzly.
Catenulata, chained.
Catulus, see Amentum.
Cauda, Tail.
Caudex, Body.
Caulefens, having a Stem.
Caulinum, belonging to the Stem.
Caulis, Stem.
Cernus, crooked, when applied to
Fruit-stalks.
Ciliatus, fringed.
Cingens, binding round.
Circumcissa, cut round. Pl. 5. f. 9.
Cirrho'um fol. terminating in a Ten-
dril.
Cirrhus, Tendril. Pl. 10. f. 6.
Clafis. Clafis.
Clavata, closed.
Clavata, Club-shaped.
Clavicula, see Cirrhosus.
Coadunatum, joined.
Coaletata, compact.

Cochlearia,
Latin Terms.

Cochleatum, Snail-like.
Colorata, coloured.
Columnella, Column. Pl. 5. f. 14. (a)
Columnata, square Pillars.
Coma, Bush.
Communis, common.
Compactum, firm.
Completi, perfect.
Compositus, compound.
Compressa, compressed.
Conca, concave.
Concupiscentia, doubled together.
Confertus, crowded.
Confluentia, spreading.
Congesta, collected into a ball.
Conglomerata, close.
Conica, conical.
Connamum, Twin-leaves. Pl. 9. f. 4.
(b. b.)
Connivens, approaching.
Connivens calyx, clasping.
Contraria, contrary.
Convexa, convex.
Convolvus, from left to right.
Corculum, Heart. Pl. 6. f. 3. (b)
Cordata, Heart-shaped. Pl. 7. f. 10.
Cornutum, Horn-shaped. Pl. 5. f. 3. (a. a.) Pl. 7. f. 4. (a.)
Coralla, Blossom. Pl. 4.
Corona, Crown. Pl. 4. f. 27.
(b) Pl. 5. f. 5. (a. b.)
Cortex, Bark.
Corypinus, broad topped Spike. Pl. 6. f. 7.
Coryledones, Seed-leaves. Pl. 6. f. 3.
(a. a.)
Crinatus, scapellus. Pl. 7. f. 34. 35.
Crispa, curled. Pl. 8. f. 67.
Crufatis, crooked.
Cruciata, Cross-shaped. Pl. 4. f. 11. 12.
Cryptogamia, Flowers inconspicuous.
Pl. 1. A. B. C. D. E. F. G. H.
Cucullata, bearded.
Culmus, SEdge. Pl. 10. f. 7.
Cuneiformis, Wedge-shaped. Pl. 8. f. 65.
Cupidatus, Spitz-pointed.
Cystithformis, Gleg-shaped.
Cylindricus, cylindrical. Pl. 8. f. 65.
Cyuma, Tuft. Pl. 6. f. 10.
Ddaelemus, beautiful Texture.
Debilis, feeble.
Decagynia, ten Points.
Decandria, ten Flowers. Pl. 1. f. 10.
Decaphyllus, ten leaves.
Decidua, deciduous.
Declinata, declining.
Decompositus, doubly compound. Pl. 8. f. 56. 57.
Decumbens, drooping.
Decurrent, running along the Stem.
Pl. 9. f. 4. (c.)
Decurvis, running along the Leaf-stalk.
Decussatus, cross Pairs. Pl. 4. f. 1.
Decussus, a little bent outwards.
Deflorata, having discharged.
Deltoidea, triangularly Spear-shaped.
Pl. 7. f. 45.
Demerum, see Submerum.
Decandroideis, flowerly.
Dentato-finiatum, toothed and indented. Pl. 7. f. 56.
Dentatus, toothed. Pl. 7. f. 59.
Denticulatum, little Teeth.
Dependens, hanging down.
Depressa, depressed.
Diadelfhia, Threads in two Sets.
Pl. 1. f. 17. (a. b.)
Diandria, two Chive. Pl. 1. f. 9.
Dichotoma, forked. Pl. 10. f. 4.
Didymus, double. Pl. 2. f. 3. 6. (b.)
Didynamia, two Chives longer, pl.
1. f. 14. (a a)
Differm, irregular and uncertain shaped.
Diffusa, spreading.
Digitata, fingered. Pl. 7. f. 18.
Digynia, two Points.
Dimidiatum, going half way round.
Dioeia, Chives and Points of
Difformia. Pl. 1. f. 29.
Diphyllus, two-leaved.
Dricus, Center.

Dissilium,
LATIN TERMS. 813

Diffusum, see Laciniatum.
Diffusum, two seeds.
Diffusum, Partition. Pl. 5, f. 12. (b. b.) f. 14. (b. b. b. b.)
Diffusum, bustling.
Diffusum, distant.
Dulicha, pointing from two opposite lines.
Divaricata, fraddling.
Divergens, diverging.
Dodecanandra, twelve Chives. Pl. 1, f. 11.
Dolabiformis, battledore-shaped.
Dorfacis, fixed to the Back.
Drupa, pulpy Seed-wessels. Pl. 5 f. 21.
Duplicata, doubly.
Echinatum, beset with Prickles.
Elliptica, see Ovata.
Emarginatus, notched at the Ends. pl. 7, f. 16. 36.
Enervis, without Strings.
Enneacaria, nine Chives, pl. 1, f. 9.
Enodis, without Joints.
Ephaliformis, Sword-shaped.
Equitans, laminated.
Erecta, upright.
Erosum, gnawed, pl. 7, f. 21.
Exsera, standing out. pl. 2, f. 18.
Extralolvaceae, beneath the Leaves.
Faciculum, tall.
Facicularis, bundled, pl. 9, f. 3.
Facicularus, f. 7.
Faciculus, a bundle.
Factigius, level.
Faux, Mouth, pl. 4, f. 9. (d, d.)
Fernicum Flos, fertile Flower, pl. 1, f. 21. (b.) 22. (b.) 23. (c.)
Fertilis, fertile.
Fibrosa, fibrous.
Fimbriatum, Thread, pl. 3, f. 6.
Filiares, Fern, pl. 1, A. B.
Fijiformis, Thread-shaped.
Fimbriata, tattered.
Fistulosa, swollen.
Flacidi, limber.
Flagellis, Wires.
Flexuosa, zigzag.
Florae, foral Leaf. pl. 5, f. 8. (a. a.)
Flores, Flower.
Flocculus, Floret, pl. 4, f. 21, f. 86.
Flocculosa, tubular Floreti, pl. 4, f. 26.
Foliatus, covered with Leaves.
Foliaceum, leafy.
Foliamentum, Leaf.
Foliscula, Airbag.
Fornicatum, vaulted, pl. 4, f. 3.
(F.)
Fruticosus, woody.
Fruticifera, Flower.
Fructus, Fruit.
Fulva, Supports.
Fungi, Fungous. pl. 1, H.
Furca, Fork.
Furcata, forked.
Fusiformis, spindle-shaped. Pl. 11, f. 6.
Galecta, Helmet.
Geminis, in Pairs. pl. 7, f. 50.
Gemmae, Bud.
Genus, see the Introduction.
Geniculatus, Kneel-jointed. pl. 2, f. 21. the Ausus.
Geniculum, Kneel-joint.
Gemen, Seed-bud. pl. 3, f. 2. (d) f. 7. (i)
Gibba, hunched. pl. 4, f. 12. (b.)
Glabra, smooth.
Glandula, Gland. pl. 10, f. 6. (c. c.) pl. 11, f. 1. (a. a. a. a.)
Globosa, globular. pl. 5, f. 5.
Glochis, Hook with many Points.
Glomerata, congregated.
Gluma, Husk, pl. 2, f. 11. (a. a.) f. 18. (a. a.)
Glutinositas, gummy.
Gramina, Grasses.
Granulata, beaded.
Gynnolpermia, Seeds naked.
Gynandria,
LATIN TERMS

Gynandria, Chives on the Pointal. pl. 1. f. 20.

Hamus, Hook.

Huftata, Half-round, pl. 7. f. 15.

Hemisphericus, hemispherical.

Heptandria, seven Chives. pl. 1. f. 7.

Herbacea, herbaceous.

Hermaphroditus, Flowers containing both Chives and Paintals.

Hexagonus, six-sided.

Hexagynia, six Pointals.

Hexandria, six Chives. pl. 1. f. 6.

Hians, gaping. pl. 4. f. 8.

Hilum, Erys. pl. 6. f. 3. (e)

Hirsutus, rough with Hair.

Hilpidius, covered with Strong Hair.

Horizontalis, horizontal. pl. 9. f. 5. (d. d.)

Hypocotylariformis, Salver-shaped. pl. 4. f. 1.

Icandria, twenty Chives. pl. 1. f. 19.

Imbricata, tiled, pl. 9. f. 2.

Ianis, pithy.

Incanum. See Tomentosum.

Incisum. See Laciniatum.

Inclinaris, leaning.

Incluia, included.

Incompletus, imperfect.

Incrassatus, thicker towards the top.

Incumbentes, fixed Sideways.

Incurvata, bowed inwards. pl. 9. f. 5. (a. a.)

Inermes, unarmed.

Inferus, beneath.

Inflata, bladder-shaped.

Inflata, bent inwards.

Inflorescentia, Mole of flowering.

Infundibuliformis, funnel-shaped, pl. 4. f. 7.

Integer, entire.

Integerrimus, very entire.

Interrupta, interrupted, pl. 8. f. 55.

Intrafoliacea, upon the Leaves.

Involucellum, partial Fince. pl. 6. f. 9. (d. d. d. d.)

Involucrum, Fence. pl. 6. f. 9. (c. c.)

Involuta, rolled inward.

Irregularis, irregular.

Labiatus, with Lips.

Labium, Lip. pl. 4. f. 8. 9. (a. a.) (b. b.) f. 10. (a. b.)

Laceratus, ragged.

Lacinia, Segments.

Lacinia, jagged. pl. 17. f. 24.

Lactescens, milky juice.

Lacunosa, pitted.

Lavis, even.

Lamella, Gill.

Lamina, Limb. pl. 4. f. 11. (b. b.) b. b. f. 12. (a. a. a. a.)

Lana, Wool.

Lanata, Cobwebbed.

Lanceolata, Spear-shaped, pl. 7. f. 6.

Laterales, lateral.

Laxus, flexible.

Legumen, Seed. pl. 5. f. 16.

Leptopus, spotted like a Leper.

Liber, the inner Bark.

Ligulatus, narrow.

Limbus, Border. pl. 4. f. 1. (b. b.)

Linearis, Strap-shaped. pl. 7. f. 7.

pl. 4. f. 21.

Lineata, streaked.

Lingulata, Tongue-shaped.

Lobata, gashed. pl. 7. f. 19.

Lobum, Lob. pl. 7. f. 17.

Loculamentum, Cell. pl. 3. f. 4.

Longum, long.

Lucidus, transparent.

Lunata, Crescent-shaped. pl. 7. f. 18.

Lyra, Lyre-shaped. pl. 8. f. 62.

Magnitudo, free.

Marcelles, shrivelling.

Marginatum, bordered.

Matriculus, barren. pl. 1. f. 21. (a) 22 (a) 23.

Membranacea, membranaceous.

Monadelphia, Threads united, pl. 1. f. 16.

Monandria, one Chive. pl. 1. f. 1.

Monoezia, Chives and Paintals separate, pl. 1. f. 21.

Monogynia,
Monogynia, one Pointal, pl. 1. f. 1. (c) f. 2. (a)
Monopetalia, one Petal, pl. 4. f. 1. 2. 3. 4.
Monophyllum, one leaf.
Mucronatum, sharp-pointed.
Multifidum, many Clefs.
Multiflori, many Flowers.
Multipartitum, deeply divided into many parts.
Muricata, covered with sharp points.
Muscii, Musci, pl. 1. f. C. D.
Mutica, without Aums.
Navigularis, boat-shaped, pl. 5. f. 13. (a, a)
Nectarium, Honey-cup, pl. 3. f. 3. (k) pl. 5. f. 1. (a) f. 2. 3. 4.
Nervosa, stringy, pl. 8. f. 46.
Nidulantia, dispersed in Pulp.
Nittida, shining.
Nuda, naked.
Nutans, nodding.
Nux, Nut, pl. 5. f. 21. (b, b)
Obcordatum, inversely heart-shaped, pl. 8. f. 69.
Obliqua, oblique.
Oblonga, oblong, pl. 7. f. 5.
Obsoleta, indistinctly.
Obtusiis, blunt.
Ostendria, right Chives, pl. 1. f. 8.
Operculum, lid, pl. 1. f. D. (b)
Operculatum, covered with a lid.
Oppositifolia, opposite the leaves.
Oppositus, opposite in Pairs, pl. 9. f. 1.
Orbiculata, round and flat, pl. 7. f. 1.
Ore Perianthii, Rim of the Cap.
Ose, hard as bone.
Ovate, oval, pl. 7. f. 4.
Ovata, ego-shaped, pl. 7. f. 3.
Pagina, Surface.
Palatum, Palate, pl. 4. f. 10. (c)
Pala, Chaff.
Paleacea, chaffy.
Palmata, hand-shaped, pl. 7. f. 22.
Panduriformis, Fiddle-shaped.
LATIN TERMS.

Persionata, gaping, pl. 4, f. 39, 10.
Petalum. Petal, pl. 4, f. 18.
(b, b, b, b)
Petaliformia, resembling Petals.
Petalarius, fixed to the Leaf-fallk.
Petelartris, fixed to the Leaf-flalk.
Petiolatus, with Leaf-flalks.
Petiolum, Leaf-flalk, pl. 9, f. 49.
Pileus, Hat, pl. 1, f. H, (c)
Pl. Hai.
Piola, hairy.
Pinna, hairy.
Pinnaatidum, with waved Clefts, pl. 7, f. 23.
Pinnaatum, winged, pl. 8, f. 59.
(d, e, f)
Planata, flat.
Plenus florus, double Blossom.
Plinata, plaited, pl. 7, f. 37.
Plumaria, plumed.
Plumofus, downy, pl. 4, f. 22, (l)
Plumula, the ascending part of the Heart, pl. 6, f. 3, (d)
Pollina, Dust, pl. 3, f. 5, (f) f. S, (a)
Polyadelphia, Threads in many Sets, pl. 1, f. 1.
Polyandria, many Chirous.
Polygama, various dispositions, pl. 1, f. 23.
Polygynia, many Pointals.
Polyphyllum, many leaved.
Polyphachius, many Spikes.
Polium, Apple, pl. 5, f. 20.
Pori, Pore, pl. 3, f. 3, (4)
Poticus, hinder part.
Praemorbus, bitten, pl. 7, f. 18.
Prismaticus, Prism-shaped.
Procumbens, trailing.
Proliker, barded Stem.
Prolikeri floros, one growing out of another.
Prominulum, prominent.
Propago, cleft.
Proprium, Individual Blossom, pl. 4, f. 21, f. 29.
Pubes, Clothling.
Pulposa, pulpy, pl. 5, f. 21.
Pulveratum, dusty.
Punefata, dotted, pl. 4, f. 23, (a)
Racemus, Bunch, pl. 6, f. 8.
Rachis, Spikes-flusk, pl. 8, f. 22.
Radiata, radiant, pl. 4, f. 24.
Radicalia, Root-leaves, pl. 0, f. 7.
Radians, striking Root, pl. 10, f. 7.
Radius, Circumference.
Radii, Spokes, pl. 6, f. 9, (c, c, c, c)
Ramum, Branch Leaf.
Ramosilinum, greatly branched.
Ramosus, branching.
Ramus, branch.
Rameum, growing on the branches.
Receptaculum, Receptacle, pl. 4, f. 11, (c) f. 23, (a).
Reclinatum, curved, pl. 9, f. 5, (c, e).
Recurratum, bent backwards.
Recta, straight.
Reflexa, reflected, pl. 4, f. 5.
Regularis, regular.
Renotus, reined.
Reniformis, Kidney-shaped, pl. 7, f. 9.
Repandus, serpentine, pl. 7, f. 29.
Repenus, creeping, pl. 10, f. 7, f. 8.
Reupinatus, lying on its back...
Retrofrutum finatum, barbed, pl. 7, f. 27.
Retrofrutum ferratum, weave by seve rated.
Retrofrutus, bent back as if broken.
Retusus, deformed.
Revoluta, rolled back.
Kholomea, Diamond shaped.
Rigidus, inflexible.
Rimofo, abounding with Chinks.
Ringens, gaping, pl. 4, f. 8, f. 9, f. 10.
Rofellatum, the descending part of the heart, pl. 6, f. 3, (c).
Rofrutm, Bill, pl. 5, f. 15, (a)
Rotata, Wheel-shaped, pl. 4, f. 6.
Rugosus, wrinkled.
Runcinata, natched.
Sagittata, Arrow-shaped, pl. 7, f. 13.
Sannen-
Sarmentosus, Runners.
Scabra, rough.
Scandens, climbing.
Scapus, Stalk, pl. 6. f. 4.
Scariola, Skinny.
Scrutiforme, Purse-shaped.
Scutellum, a Saucer, pl. 1. f. F.
Scyphifer, cup-bearing, pl. 1. f. E.
Secunda, point one way.
Securiformis, Hand-shaped.
Semen, Seed.
Semiteres, half cylindrical.
Sempervirens, evergreen.
Senis, by fixes.
Sericia, silky.
Serratus, serrated, pl. 7. f. 31.
Sefillusus, fitting, pl. 9. f. 4. (d.)
Setacea, bristly.
Seta, Bristles.
Silicula, Poucb, pl. 5. f. 10. f. 11.
Silicia, Pod, pl. 5. f. 17.
Simplex, simple.
Simplicissimus, undivided.
Sinuata, indented, pl. 7. f. 25.
Solida, solid.
Solitarius, solitary.
Spadix, Sheathed Fruit-stalk, pl. 3. f. 9. (d.)
Sparus, scuttured.
Spatha, Sheath, pl. 3. f. 9. (a. a.)
Spathulata, spatula-shaped, pl. 8. f. 64.
Spica, Spike, pl. 6. f. 5.
Spicula, a little Spike, pl. 6. f. 5. (a. b. c. d.)
Spina, Thorn, pl. 10. f. 1.
Spiniscens, thorny.
Spinosa, thorny.
Spiralis, spiral.
Squamata, scaly, pl. 4. f. 20. f. 25. pl. 11. f. 4.
Squamosus, scaly.
Squarrosus, scurfy.
Stamia, Chives, pl. 3. f. 2. (c. b.) f. 6. (g. b.) f. 3. (b. i.)
Stamineus flos, barsa Flower, pl. 1. f. 21. (a.) f. 22. (a.) f. 23. (a.)
Stellata, starry, pl. 9. f. 5. (b. b.)
Sterilis, barren.
Stigma, Summit, pl. 3. f. 2. (f.) f. 5. (c.) f. 7. (l.)
Stimuli, String.
Stipes, Pillar, pl. 1. f. H. (b.) pl. 6. f. 29. (i.)
Stipitatus, standing on a Pillar.
Stipula, Prop, pl. 10. f. 6. (b. b.)
Stoloniferus, with Shoots.
Striatius, scored.
Strictus, stiff and straight.
Strigosa, Strong Lance-shaped Bristles.
Strobilus, Cone, pl. 5. f. 18.
Stylus, Shaf, pl. 3. f. 2. (c.) f. 5. (d.) f. 7. (8.)
Subdivisus, subdivided.
Submersum, growing beneath the Surface of the Water.
Subramosus, a little branched.
Subrotundum, circular, pl. 7. f. 9.
Subulatum, Axil-shaped, pl. 7. f. 8.
Supfruticosus, somewhat woody.
Sulcata, furrowed.
Superflus, superfluous.
Superum, superior.
Supradecomposita, more than doubly compound, pl. 8. f. 57 to 61.
Sutura, Seam.
Syngenesia, Tips united, pl. 1. f. 19. pl. 4. f. 21.
Teres, cylindrical, pl. 8. f. 69.
Tergeminum, double Twinfork, pl. 8. f. 57.
Terminalis, terminating.
Ternatum, threefold, pl. 7. f. 51.
Ternis, growing by threes, pl. 7. f. 47.
Tetradynamia, four Chives longer, pl. 1. f. 15.
Tetragonus, four edged.
Tetragynia, four Pointals.
Tetrandria, four Chives, pl. 1. f. 4.
Thyrus, Cluster.
Tomentoum, downy.
Tomentum, Daven.
Toroium, protruding.
Tortilis, twisted.
Transversum, transverse.
LATIN TERMS.

Trapeziformis, irregular square.
Triandria, three Chories, pl. 1. f. 3.
Triangularis, triangular, pl. 7. f. 12.
Tricoceca, three Seeds in three Cells.
Tricuspida, three-pointed.
Trigona, three-edged.
Trigynia, three Points, pl. 1. f. 23. (e.)
Trinervata, three-fibred.
Trinervis, with three Fibres.
Tripartitum, with three Divisions.
Tripinnatum, triply, winged, pl. 8. f. 60. 61.
Triplinervis, triple Fibres.
Triquetra, three-cornered.
Triernatum, triply three-fold, pl. 8. f. 50.
Truncatus, lopped, pl. 8. f. 63.
Truncus, Trunk.
Tuberculus, Tubercle.
Tuberculato, tuberous.
Tubulosa, tubular, pl. 4. f. 26.
Tunica, Tubes, pl. 4. f. 1. (a.) f. 7. (a.)
Tunicata, coated.
Turbata, Turban-shaped.
Turgidum, fuscous.
Umbella, Rundle, pl. 6. f. 9.
Umbellula, Rundlet, pl. 6. f. 9. (b. b. b. b.)
Umbilicatum, dimpled.

Uncinatum, hooked, pl. 4. f. 95. (d.)
Undata, swayed, pl. 8. f. 66.
Unguis, Claw, pl. 4. f. 11. (a. a.)
Unicus, single.
Uniflora, having but one Flower.
Unilateralis, growing only from one Side.
Universale, general.
Ureus, stinging.
Utriculus, Bag.
Vaginans, beathing, pl. 9. f. 4. (f.)
Valvula, Valve, pl. 5. f. 6. (a. a. a.)
Valvarum, f. 12. (a. a.) f. 13. (a. a.) f. 16. (a. b.)
Venosa, full of Veins, pl. 7. f. 44.
Ventricola, fleshy, pl. 4. f. 4.
Verrucosa, warty.
Verruculosa, wartylike.
Verticillatus, wobbled.
Verticilli, Whorleds, pl. 6. f. 11. (a. a. a.)
Vexillum, Standard, pl. 4. f. 13. f. 13. (b.) f. 14. (b.)
Villi, Soft Hairs.
Villoso, woolly.
Virgatus, Rod-shaped.
Vicidus, clammy.
Vicisfitas, Clamminess.
Vivipara, viviparous.
Volubilis, revolving, pl. 10. f. 5.
Volva, Cap, pl. 1. f. H. (e.)
AN

Explanation of the Plates.

PLATE III.

PARTS composing a FLOWER.

Fig. 1. A back view of a Rose to shew the Empalement, or flower Cup, a. a. a. a. the Segments of the Cup.

Fig. 2. A figure of the CROWN IMPERIAL, to shew a. a. a. a. a. the Petals.
b. b. b. b. b. b. the Chives.
c. c. c. c. c. c. The Tips.
d. the Seed-bud.
e. the Shaft.
f. the Summit.

Fig. 3. g. a Petal of the CROWN IMPERIAL separated from the Flower.
h. i. A Chive. h. the Thread. i. the Tip.
k. A Honey-cup Pore.

Fig. 4: The Seed-vessel of the CROWN IMPERIAL cut a-cross, to shew the three Cells. During the existence of the Blossom this was called the Seed-bud.

Fig. 3

Fig.
PIATE III.

Fig. 5. A Flower with the Empalement, the Chi...the Pointal; but the Pedals taken away.
   a. The Empalement, or Cup.
   b. b. b. b. b. The Tips of the Chives.
   c. The Seed-bud.
   d. The Shaft.
   e. The Summit.
   f. One of the Tips discharging its dust.

Fig. 6. g. h. A Chive taken out of a flower.
   g. The Thread; h. The Tip, which in this instance is double.

Fig. 7. i. k. l. A Pointal taken out of a flower. i. The Seed-bud. k. The Shaft. l. The Summit.

Fig. 8. a. A Particle of Dust greatly magnified. b. The vapour escaping from it, which is supposed to pass through the Pointal to fertilize the Seed-bud.

Fig. 9. A Daffodil and its sheathing Empalement. a. a. the Sheath. d. The sheathed fruit-stalk.

Fig. 10 A Cup which is the Empalement of a Poly...anthus, with five sharp teeth in the rim.
PLATE IV.

BLOSSOMS.

Fig. 1. A Blossom of one Petal, salver-shaped.
   a. The Tube. b. b. The Border.

Fig. 2. A bell-shaped Blossom.

Fig. 3. A tubular bell-shaped Blossom.

Fig. 4. A Blossom bell-shaped but distended.

Fig. 5. A Blossom with six reflected Segments.

Fig. 6. A back view of a wheel-shaped Blossom, to shew the shortness of the Tube.

Fig. 7. A funnel-shaped Blossom. a. The Tube. b. The Border. c. The Cup.

Fig. 8. 9. Gaping Blossoms.
   a. a. The upper Lip.
   b. b. The lower Lip.
   c. c. The Tube.
   d. d. The Mouth.

Fig. 10. A gaping Blossom. a. The upper Lip. b. the lower Lip. c. The Palate.

Fig. 11. A cross-shaped Blossom with the Cup taken away, to shew a. a. the Claws of the Petals.
   b. b. b. b. The Limbs of the Petals. c. The Receptacle.

Fig. 12. A cross-shaped Blossom with the Empalement or Cup. a. a. a. a. The Petals. b. The Cup, hunched at the Base.

Fig. 13, 14. Two views of butterfly-shaped Blossoms.

Fig. 15. The Standard of a butterfly-shaped Blossom separated from the other Petals. c. The Claw.

Fig. 16. One of the Wings of a butterfly-shaped Blossom separated from the other Petals. m. The Claw.

Fig. 17. The Keel, or lowest part of a butterfly-shaped Blossom separated from the other Petals.
FIG. 18. The Cup, Chives and Pointal of a butterfly-shaped Blossom after the Petals are taken away. 

a. The Cup. h. The Chives. i. the Pointal.

COMPOUND FLOWERS.

FIG. 19. A Flower of Dandelion, as an example of a compound Flower in which all the Florets are strap-shaped.

FIG. 20. The common Empalement of a compound Flower, composed of upright Scales d d; and reflected Scales c. c.

FIG. 21. A strap-shaped Floret taken out of a compound Flower, e. the Blossom, f. the Seed-bud, g. the Tips forming a hollow Cylinder, through which pass the Pointal, with the two reflected Summits h.

FIG. 22. k. the Seed of a compound Flower. i, the Pillar supporting the downy Feather l.

FIG. 23. A naked, dotted Receptacle of a compound Flower. a. the Receptacle. b. the Empalement reflected.

FIG. 24. The Flower of a Daisy, as an example of a Radiate compound Flower, a. a. a. a. the strap-shaped Florets in the Circumference, b. the tubular Florets in the Center.

FIG. 25. The Flower of Burdock, as an example of a compound Flower in which all the Florets are tubular. a. the scaly tiled Empalement. b. one of the scales with its hooked Point. c. c. the tubular Florets.

FIG. 26. One of the tubular Florets separated from the rest. d. the Blossom. c. the Seed-bud. f. the Pointal.

FIG. 27. One of the seeds. d. the pyramidal seed, crowned by the short Feather h.
PLATE V.

HONEYCUPS.

Fig. 1. The Blossom of a Daffodil, with the bell-shaped Honeycup, a.

Fig. 2. The Blossom of the Parnassus to shew the Honey-cups a. a. a. a. a. which are little Globes supported upon Pillars, thirteen in each place.

Fig. 3. a. a. The Horned Honeycups of the Wolfsbane. b. b. the Foot-stalks that support them.

Fig. 4. a. The horn-shaped Honeycup of the Larkspur. b. c. d. e. f the Petals.

SEED-VE SEL S.

Fig. 5. c. c. The globular Capsule of a Poppy. a. a. the holes through which the Seeds escape. b. the radiate Summit.

Fig. 6. A Capsule with three Valves, opening at the top. a. a. a. the Valves.

Fig. 7. A Capsule cut open length-ways, to shew the the Receptacle, with the Seeds fixed to it.

Fig. 8. A Capsule opening by holes at the sides. a. a. holes through which the Seeds escape.

Fig. 9. A Capsule that opens like a snuff box, or as if it was cut round. a. the Capsule entire. b. the Capsule open. c. the Receptacle as it appears after the Seeds are removed.

Fig. 10. An inverfely heart-shaped Pouch, notched at the end.

Fig. 11. A circular Pouch notched at the end.

Fig. 12. A Pouch opened a little to shew a. a. the Valves. b. b. the Partition betwixt the Valves.

Fig. 13. A Capsule with two boat-shaped Valves, and one cell. a. a. the Valves opening length-ways.

Fig. 4.
PLATE V.

**Fig. 14.** A Capsule cut open horizontally to shew c.c.c.c. the Valves. b. b. b. b. the Partitions. d. the Column in the Center to which the Partitions are connected. a.a.a.a. the Receptacles and Seeds.

**Fig. 15.** Seeds of Geranium, with a long Bill. b. the Seeds. a. the Bill.

**Fig. 16.** A Shell, or Seed-vessel of two Valves, in which the Seeds are fixed to the upper Seam only. a. b. the Valves.

**Fig. 17.** A Pod, or Seed-vessel of two Valves, in which the Seeds are fixed to the two Seams alternately. a. b. the Valves. d. d. d. d. the Seeds.

**Fig. 18.** A Cone, cut through lengthways, to shew the Scales and the Seeds.

**Fig. 19.** A Berry cut across to shew a. the Seeds. b. b. the Pulp. c. c. the Coat.

**Fig. 20.** A fleshy Capsule, or Apple cut across to shew b. b. b. b. b. the five Cells.

**Fig. 21.** A pulpy Seed-vessel cut across. a. a. the pulpy part. b. b. the Nut or Seed.
PLATE VI.

SEEDS.

Fig. 1. The Seed-vessel of the Spindle to shew the seed-coat. a. a. The Valves of the Capsule. b. a Seed. c. c. the Seed-coat opened to shew the Seed.

Fig. 2. A Seed with its Feather.
   a. A hairy feather. b. a downy Feather.
   d. The pillar supporting the Feather. c. the Seed.

Fig. 3. The Seed of a Bean split in two, after being soaked a little while in water.
   a. a. The Seed-lobes.
   b. The Heart.
   c. The descending part of the Heart.
   d. The ascending part of the Heart.
   e. The Eye.

FRUITS TALKS.

Fig. 4. A Stalk. It supports the Flowers, and springs directly from the Root.

Fig. 5. A Spike. a. b. c. d. the little Spikes.

Fig. 6. A Panicle.

Fig. 7. A broad topped Spike. a. a. a. a. a. a. the little Fruit-stalks.

Fig. 8. A Bunch.

Fig. 9. A Rundle. b. b. b. Rundlets, c. c. the General Fence. d. d. d. d. the Partial Fence. e.e.e.e. The Spokes of the Rundle.

Fig. 10. A Tuft.

Fig. 11. Whorls of Flowers. a. a. a. the Whorls.

Fig. 12. A Catkin.

LEAVES
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LEAVES.
LEAVES

Fig.
1 Round.
2 Circular.
3 Egg-shaped.
4 Oval.
5 Oblong.
6 Spear-shaped.
7 Strap-shaped.
8 Awl-shaped.
9 Kidney-shaped.
10 Heart-shaped.
11 Crescent-shaped.
12 Triangular.
13 Arrow-shaped.
14 Betwixt heart and arrow shaped.
15 Halberd-shaped.
16 Notched at the end.
17 Consisting of 3 Lobes.
18 Bitten.
19 Gashed.
20 With five angles.
21 Gnawed.
22 Hand-shaped.
23 With winged Clefts.
24 Jagged.
25 Indented.
26 Toothed and indented.

Fig.
27 Barbed.
28 Divided.
29 Serpentine at the edge.
30 Toothed.
31 Serrated.
32 Doubly-serrated.
33 Doubly scoloped.
34 Sharply scoloped.
35 Bluntly scoloped.
36 Sharply notched at the end.
37 Plaited.
38 Scoloped.
39 Blunt.
40 Sharp.
41 Tapering to a point.
42 Blunt but ending in a point.
43 Fringed.
44 Venous, or full of veins.
45 Triangularely spear-shaped.
46 Stringy.
47 Growing by threes upon leaf-stalks.
48 Fingered.
49 Shaped like a bird's-foot
50 In pairs.
51 Three-fold.

LEAVES
ERRORS of the Press.

Page 37, line 5, for constitute, read constitute.
From page 36, to p. 69, add one to each number prefixed to the English Generic name.
Page 40, line 4, for Phalaris, read Phalaris.
- - - 50, in the side notes, for the upper annua, t. annual.
- - - 67, at the bottom for Dogstail, t. Dogstail.
- - - 76, line 6, for 42 t. * 42.
- - - 74, line 32, for radicea, t. radice.
- - - 81, the last line, for Spinix, t. Sphinx.
- - - 94, at the top, for THREE CHIVES, t. FIVE CHIVES.
- - - 99, line 4, for Harespong, t. Harestrong.
- - - 180, line 17, for pastinaca, t. pastinaca.
- - - 183, after the bottom line, add Honeycups.
- - - 193, at the top, for TWO POINTALS, read FIVE POINTALS.
- - - 196, for 159 Hyacinth t. 149 Hyacinth
- - - 197, the lowermost line but one, for Water Plan-
tain, t. Thrumwort.
- - - 236, line 40, for Polygnum t. Polygonum.
- - - 297, line 36, for Barbara, t. Barba.
- - - 340, line 2, for Glecoma, t. Glechoma.
- - - 388, No. 275, for Cabbage, t. Cabbage.
- - - 474, line 17, for tiled, t. tiled
- - - 539, line 7, for usual, t. unusual.
- - - 702, line 19, for anthoceros t. anthoceros.
- - - 712, in the side notes, for orbicularis, t. orbicularis.
FIG. 52 Winged, with an odd little leaf at the end.
53 Abruptly winged.
54 Winged with the little leaves alternate.
55 Interruptedly winged.
56 Doubly winged.
57 Doubly three-fold.
58 Winged and terminated by a tendril.
59 Triply threefold.
60 Triply winged, without an odd little leaf at the end.

FIG. 61 Triply winged, with an odd little leaf at the end.
62 Lyre-shaped.
63 Lopped at the end.
64 Spatula shaped.
65 Wedge-shaped.
66 Waved at the edge.
67 Curled.
68 Cylindrical.
69 Inversely heart shaped.
Disposition and Direction of Leaves.

**Fig. 1.** Leaves in cross-pairs.
**Fig. 2.** Tiled Leaves.
**Fig. 3.**
- a. a jointed Leaf.
- b. b. Starry Leaves.
- c. c. Leaves growing by fours.
- d. d. d. d. d. Leaves alternate. In fig. 5. all the Leaves are opposite.
- e. Chaffy Leaves.
- f. Leaves in a bundle.

**Fig. 4.**
- a. A Leaf with a central Leaf-flalk.
- b. A Leaf with its Leaf-flalk. c.
- d. A fitting Leaf.
- e. A Leaf running along the Stem.
- f. A leaf embracing the Stem.
- g. A perforated Leaf.
- h. h. Twin Leaves.
- i. A leaf sheathing the Stem.

**Fig. 5.**
- a. a. Leaves bent inwards.
- b. b. Leaves upright.
- c. c. Leaves expanding.
- d. d. Leaves horizontal.
- e. e. Leaves curved.
- f. f. Leaves rolled back.
- m A Fruit-flalk rising from the base of the Leaf.

**Fig. 6.** Leaves contiguous to the Stem.

**Fig. 7.** Root-leaves. a. the root. b. b. b. the leaves rising immediately out of it, without the intervention of any Stem.

**Fig. 8.** a. a. Floral Leaves, different from the other Leaves of the plant, b. b. A Fruit flalk. c.
PLATE X.

W E A P O N S.

Fig. 1.  a. a. a. a. Simple thorns.
      b. b. b. A triple thorn.

Fig. 2.  a. a. Simple Prickles.
      b. b. Forked or triple Prickles.

S T E M S, &c.

Fig. 3. A jointed Straw.  (a. a. a.) The Joints.

Fig. 4. A forked Stem.

Fig. 5. A twining Stem.

Fig. 6. a. a. A Tendril.
      b. b. Props.
      c. c. Concave Glands.

Fig. 7. A creeping Root.

Fig. 8. A creeping Stem.
PLATE XI.

Fig. 1. a.a.a.a. Glands supported upon Foot-flalks.

ROOTS.

Fig. 2. A coated bulbous Root, cut a-cros to shew the Coats which compose it.
Fig. 3. A solid bulbous Root.
Fig. 4. A scaly bulbous Root.
Fig. 5. A branching Root.
Fig. 6. A spindle-shaped Root.
Fig. 7. A tuberous Root.

INSTRUMENTS.

Fig. 8. Two Dissecting Needles, with ivory handles, belonging to the Botanical Microscope.
Fig. 9. A pair of Spring Pliers for dissection, belonging to the Botanical Microscope.
PLATE XII.

VEGETABLE CABINET.

A Section of a Cabinet for the preservation of dried specimens of plants. The numbers denote the drawers appropriated to the different Classes. The size of the drawers, is proportioned to the number of plants in each Class. They are calculated to contain specimens of all the British Vegetables.

BOTANICAL MICROSCOPE.

Fig. 2. The Botanical Microscope. a: a. The stage, upon which the objects to be viewed and dissected are placed. b. b. c. c. Circular brass cells, containing lenses of different magnifying powers. These lenses slide higher or lower, to adapt the focus to distinct vision. Either of the lenses may be taken out occasionally and held in the hand. In the stage a. a. are the holes to contain the instruments figured in the preceding plate. The best way to use the microscope is to set it upon a table, of such a height that the eye can be applied with ease, almost close to the lens. The elbows resting upon the table, the two hands will be steady, and at liberty to use the dissecting instruments. The Microscope stands upon either end, according as you want to use the greater or the lesser magnifying power.

FINIS.

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vid. brooke's complete British gardener, 1790–2
& thos. ellis's gardener's pocket calendar, 1796–2
& trote's nova genera plantarum, 1796—21.
& john miller's illustration of the sexual system, 1797—21.
& weston's universal botanist's nurseryman, 1790–2

2. mayor's lady's & gentleman's botanical pocket-book, adapted to wethering's arrangement. 8vo 4°. 1800