MEDICAL BOTANY,
CONTAINING
SYSTEMATIC AND GENERAL DESCRIPTIONS,
WITH
PLATES OF ALL THE MEDICINAL PLANTS,
INDIGENOUS AND EXOTIC,
COMPREHENDED IN THE
CATALOGUES OF THE MATERIA MEDICA,
AS PUBLISHED BY THE
ROYAL COLLEGES OF PHYSICIANS OF LONDON AND EDINBURGH:
ACCOMPANIED WITH A
CIRCUMSTANTIAL DETAIL OF THEIR MEDICINAL EFFECTS,
AND OF THE
DISEASES IN WHICH THEY HAVE BEEN MOST SUCCESSFULLY EMPLOYED.

By WILLIAM WOODVILLE, M. D.
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OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON,
AND
PHYSICIAN TO THE SMALL-POX AND INOCULATION HOSPITALS.

IN THREE VOLUMES.

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et herbarum subjicere potestat pubis.

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TO

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

PRESIDENT OF THE LINNEAN SOCIETY,

AND

POSSESSOR OF THE LINNEAN COLLECTION.

SIR,

Not only Friendship and Gratitude, but Propriety induce me to dedicate this Volume to You; for, as the first Volume of this Work, which relates both to Medicine and Botany, has been honoured by the Patronage of the President of the Royal College of Physicians, I am happy to find a Botanical Patron, to do equal Honour to the second Volume, in the President of the Linnean Society.

I have the honour to be
With the utmost respect and esteem,
Your faithful Servant,

Wm. WOODVILLE.
JUNIPERUS COMMUNIS. COMMON JUNIPER.


THIS species usually rises much higher than the Sabina; it is covered with brownish bark, and divides into many branches; the leaves are very numerous, long, narrow, pointed, of a deep green colour, and stand in ternaries: the flowers are male and female on different plants, and answer to the description of those which we have given of Juniperus Sabina: the berries continue two years upon the tree before they become perfectly ripe, when they are of a blackish colour, round, filled with a brownish pulp, and each contain

* Of the Sabina we ought to have remarked, that the essential oil and the watery extract, are kept in the shops, and that it is an ingredient in the pulv. e myrrha compositus.
three irregular hard seeds. It grows in several healthy parts of England, and flowers in May.

Juniper is supposed to be the ágrobd of the ancients, who distinguished it into two kinds. Both the tops and berries of this plant are directed for use in our Pharmacopoeias, but the latter are usually preferred, and are brought to us chiefly from Holland and Italy. They have a moderately strong not disagreeable smell, and a warm pungent sweetish taste, which if they are long chewed or previously well bruised, is followed by a considerable bitterness. The sweetness appears to reside in the juice or soft pulpy part of the berry; the bitterness, in the seeds; and the aromatic flavour, in oily vehicles, spread throughout the substance both of the pulp and the seeds, and distinguishable even by the eye. The fresh berries yield, on expression, a rich sweet honey-like aromatic juice; if previously powdered so as to thoroughly break the seeds, which is not done without great difficulty, the juice proves tart and bitter. The same differences are observable also in tinctures and infusions made from the dry berries, according as the berry is taken entire or thoroughly bruised. They give out nearly all their virtue both to water and rectified spirit. Distilled with water they yield a yellowish essental oil, very subtle and pungent, in smell greatly resembling the berries, in quantity (if they have been sufficiently bruised) about one ounce from forty; the decoction, infused to the consistence of a rob or extract, has a pleasant, balsamic, sweet taste, with a greater or less degree of bitterness. A part of the flavour of the berries arises also in distillation with rectified spirit: the infused tincture consists of two distinct substances; one oily and sweet; the other tenacious, refulous, and aromatic."

These berries are chiefly used for their diuretic effects; they are also considered to be stomacchic, carminative, and diaphoretic.——

The odour of the Juniper-tree, though extremely fragrant, was, by Virgil, thought to be noxious:

Surgamus; solet esse gravis cantantibus umbra;
Juniperi gravis umbra: nocent & frugibus umbrae.

Ecl. x. v. 75.

* See Pliny. Lib. vii. cap. 25. Gum Sandrach, known also by the name of prunce, is the product of this species of Juniper: it exudes through the crevices of the bark, or the perforations made by insects.  
Of the efficacy of Juniper berries in many hydropical affections, we have various relations by physicians of great authority, as Du Verney, Hoffinan, Boerhaave, and his illustrious commentator, Baron Van Swieten, &c. Authors however seem not to be perfectly agreed which preparation of the Juniper is most efficacious, many prefer the rob or infusiated decoction, but Dr. Cullen observes, that this is an inert medicine, alleging that the essential oil must be almost entirely dissipated by the boiling; for to this oil, which is much the same as that of turpentine, only of a more agreeable odour, he thinks all the virtues ascribed to the different parts of Juniper are to be referred. Hoffinan, on the contrary, strongly recommends the rob, and declares it to be of great use in debility of the stomach and intestines; and he experienced it to be particularly serviceable to fleshy old people as a subject to these disorders, or labour under a difficulty with regard to the urinary excretion; from hence it appears, that the berries still retain medicinal powers, though deprived of the stimulating effects of the essential oil. But as the Juniper is now seldom if ever relied upon for the cure of dropsies, and only called to the aid of more powerful remedies, it is justly observed by a modern author, that perhaps one of the best forms under which the berries can be used is that of a simple infusion. This either by itself, or with the addition of a little gin, is a very useful drink for hydropic patients. Medical writers have also spoken of the utility of Juniper in nephritic cases, uterine obstructions, febrifuge affections, and some cutaneous diseases, and in the two last mentioned complaints, the wood and tops of the plant are said to have been employed with more advantage than the berries.

We are told by Linnaeus, that the Laplanders drink infusions of the Juniper berries as we do tea and coffee, and that the Swedes pre-


† Van Swieten prescribed the following formula:— Rob. Bacc. Junip. 3ii. diui in aqua. Junip. & ex add. spirit. bacc. Junip. 3ii. Quandoque spiritus niti italicus ad stim foliandam additur. Comment. in Botan. aph. 7. 4. p. 258. Of this mixture one or two ounces were given every three hours.

‡ Duncan New Ed. Diff. p. 214.


parc
pare a beer from them, in great estimation for its diuretic and antil-
febrifuge qualities. Our Pharmacopoeias direct the essential oil and a
spirituous distillation of the Juniper berries, to be kept in the shops:
the former, in doses of two or three drops, is found to be an acti
ve and stimulating medicine; the latter contains this oil, and that of
some other aromatic seeds united to the spirit, and therefore differs
not considerably from the genuine geneva imported from Holland;
but there is great reason to believe, that the gin usually sold here is
frequently nothing but the common fomentaceous spirit, imbued with
turpentine, or other materials to give it a flavour.

VALERIANA OFFICINALIS. OFFICINAL VALERIAN.

SYNONYMA. Valeriana sylvestris. Pharm. Lodd. & Edinb.

* Foliis angustioribus.


Sp. Ch. V. floribus triandris, foliis omnibus pinnatis.

THE root is perennial, consisting of a great number of simple
fibres, which unite at their origin: the stalk is upright, smooth,
channelled, round, branched, and rises from two to four feet in
height: the leaves on the stem are placed in pairs upon short broad
sheathes; they are composed of several lance-shaped, partially den-
tated, veined, smooth pinnae, with an odd one at the end, which is
the
the largest: the radical leaves are larger, stand upon long footstalks, and the pinnæ are elliptical, and deeply serrated: the floral leaves are spear-shaped and pointed: the flowers are small, of a white or purplish colour, and terminate the stem and branches in large bunches: there is no calyx, or only a small narrow rim: the corolla consists of a narrow tube, somewhat swelled on the under side, and divided at the limb into five oblong segments: the three filaments are tapering, longer than the corolla, and furnished with round antherae: the germ is placed beneath the corolla, and supports a slender style, shorter than the filaments, and terminated by a thick bearded stigma: the capsule is crowned with a radiated feather, and contains one seed of an oblong shape. It flowers in June, and commonly grows about hedges and woods.

The narrower-leaved variety of this species of Valerian, which does not exceed two feet in height, and affects dry heaths and high pastures, is justly in more repute than the other; its roots manifest stronger sensible qualities, and consequently possess more medicinal power; their smell is strong, and has been compared to that of a mixture of aromatics with fetids; their taste unpleasantly warm, bitterish, and subacid. "The powdered root, infused in water or digested in rectified spirit, impregnates both menstrua strongly with its smell and taste. Water distilled from it smells considerably of the root, but no essential oil separates, though several pounds be submitted to the operation at once."†

Valerian is supposed to be the of of Dioscorides and Galen, by whom it is mentioned as an aromatic and diuretic: it was first brought into estimation in convulsive affections by Fabius Columna, who relates that he cured himself of an epilepsy by the root of this plant; we are told however, that Columna suffered a relapse of the disorder, and no further accounts of the efficacy of Valerian in epilepsy followed till those published by Dominicus Panarolus fifty years afterwards,

† Lewis, M. M.

* Gracis æste credo, aæ abominantis: etsi enim radix felix sum, non tamen fines gratæ odors nardæ. Hoff. "This smell is highly delightful to cats; rats are also said to be equally fond of these roots, and that rat-catchers employ them to draw the rats together," Withering, i.e.

b Phytolacca, Neapol. 1592. p. 97.

c Instrologia, i. medicin. b.'s. pentac. quæque Rom., 1643. Pentac. i. Obs. 33. p. 20.
in which three cases of its success are given. To these may be added many other instances of the good effects of Valerian root in this disease, since published by Cruger, Schuehmann, Riverius, Sylvius, Marchant, Chomel, Sauvages, Tillot, and others.

The advantages said to be derived from this root in epilepsy caused it to be tried in several other complaints termed nervous, particularly those produced by increased mobility and irritability of the nervous system, in which it has been found highly serviceable. Bergius states its virtus to be antispasmodic, diaphoretic, emmenagogue, diuretic, antihelminthic. Under the head usus he enumerates Epilepsia, Convulsiones, Hyberia, Hemicrania, Vifus hebetudo. Dr. Cullen says, "its antispasmodic powers are very well established, and I trust to many of the reports that have been given of its efficacy; and if it has sometimes failed, I have just now accounted for it;" adding only this, that it seems to me, in almost all cases, it should be given in larger doses than is commonly done. On this footing, I have frequently found it useful in epileptic, hysterical, and other spasmody affections. It is said however, that in some cases of epilepsy at the Edinburgh Difpenfary, it was given to the extent of two ounces a day without effect; and our own experience warrants us in saying,


‡ Opera, p. 427.


† Pl. Ujuelles. T. i. p. 228.


l Traité de l'épilepsie, p. 310.


* He says, "Emeticae illam nuncupam vidi, nec laxantem." The latter quality is however very generally ascribed to it by medical writers.


* From the disease depending upon different causes, and from the root being frequently employed in an improper condition.


k New Ed. Difeys, by Dr. Duncan, p. 300.

that
Harrabium vulgare
that it will be seldom found to answer the expectations of the pre-
scriber. The root, in substance, is most effectual, and is usually
given in powder from a scruple to a dram: its unpleasing flavour
may be concealed by a small addition of mace. A tincture of Va-
lerian in proof spirit, and in volatile spirit, are ordered in the London
Pharmacopoeia.

MARRUBRUM VULGARE. COMMON WHITE
HOREHOUND.

SYNONYM. Marrubium. Pharm. Lond. & Edinb. Marrubium
p. 617.


lab. sup. 1-sidum, linear, rectum.


THe root is perennial, and furnished with numerous fibres: the
stalks are upright, strong, square, hairy, or downy, and rife about a
foot and a half in height: the leaves are roundish or oblong, deeply
serrate, veined, wrinkled, hoary, and stand in pairs upon thick
broad footstalks: the flowers are white, and produced in whorls at
the footstalks of the leaves: the calyx is tubular, scored, and divided
at the mouth into ten narrow segments, which are hooked at the end:
the corolla is monopetalous, gaping, compressed, consisting of a cylin-
drical tube, opening at the mouth into two lips: the upper lip is
narrow, and cloven or notched; the under lip is broader, reflexed,
and divided into three segments, the middlemost of which is broad, and slightly scolloped at the end; the lateral segments are spear-shaped and short: the filaments are two long and two short, supplied with simple anthers, which are concealed in the tube: the germen is divided into four parts, from which issues a slender style, furnished with a cloven stigma: the seeds are four, of an oblong shape. It grows near the sides of roads and rubbish, and flowers in June.

"The leaves of Horehound have a moderately strong smell of the aromatic kind, but not agreeable, which by drying is improved, and in keeping for some months is in great part dissipated: their taste is very bitter, penetrating, diffusive, and durable in the mouth." "The dry herb gives out its virtue both to watery and spirituous menstrua: on infusing the watery infusion, the smell of the Horehound wholly exhales, and the remaining extract proves a strong and almost flavourless bitter: rectified spirit carries off likewise greatest part of the flavour of the herb, leaving an extra in less quantity than that obtained by water, and of more penetrating bitterness." "

This plant is the genus of the ancients, by whom it is greatly extolled for its efficacy in removing obstructions of the lungs and other visceras. It has chiefly been employed in humoral affirmans, obstinate coughs, and pulmonary consumptions; influences are also mentioned of its successful use in scirrous affections of the liver, jaundice, cachexies, and menstrual suppressions.

That Horehound possesseth some share of medicinal power may be inferred from its sensible qualities, but its virtues do not appear to

\* Lewis, M. M. p. 411. \* Dioscorides, Lib. iii. c. 119. See also Pliny, Lib. xiv. c. 22. \* Rhenan ad Manf. 3. n. 42. Particularly, infusions of the lungs and difficulty of breathing from viscid mucus.


* Taken in considerable quantities it is said to loosen the body.
be clearly ascertained, and the character it formerly obtained is so
far depreciated, that it is now rarely prescribed by physicians. A
drum of the dry leaves in powder, or two or three ounces of the
expressed juice, or an infusion of half a handful of the fresh leaves
have been directed for a dose. This last mode is usually practised by
the common people, with whom it is still a favourite remedy in
coughs and asthma.1

1 Her. Gys. Vitis: tincia, enmenagoga, diuretica. Uyes. Cachexia, ob. mensum,
Hydria, Appetitus, putifolium.

ASTRAGALUS TRAGACANTHA. GOAT'S THORN MILK VETCH.

Ex hac planta exudat Gummi Tragacantha. Pharm. Lond. & Edinb.
SYNONYMA. Atragalus aculeatus fruticosus Massilienis. Pluk.
Tournefort, Voyage du Levant, t. i. p. 21.


Sp. Ch. A. caudice arborescente, petioli spinescentibus.

THE root is perennial, long, tapering, and fibrous: the stems
are slenderly, stout, thick, branched, procumbent, clothed with brown
No. 20. 3 Y rigid
rigid fibres, and beset with long sharp spines: the leaves are pinnated, consisting of about eight pairs of small oblong pinnules, or leaflets, which are attached to a strong spinous persistent footstalk, or midrib; the flowers are large, of a pale yellow colour, and terminate the branches in close clusters; the calyx is tubular and divided at the rim into five sharp teeth; the corolla is of the papilionaceous kind, consisting of a vexillum or upper petal, which is longer than the others, straight, blunt, reflected at the sides, and notched at the end; two alae or lateral petals, which are of an oblong form, and a carina or keel-shaped under-petal: the filaments are ten, nine of which are united, and one separate: the anthers are small and round: the germen is long and roundish: the style tapering, and furnished with a blunt stigma; the seeds are kidney-shaped, and contained in a twocelled pod. It flowers from May till July.

This plant was cultivated in England in the time of Parkinson, (1640): it is a native of Asiatic Turkey, and the Southern parts of Europe, particularly of Italy, Sicily, and Crete. Tournefort discovered it growing plentifully about Mount Ida,* where he examined the plant in the month of July, when both the bark and wood were found distended with gum Tragacanth, which by the intensity of the sun's heat forces its way through the bark, and concretes into irregular lumps, or long vermicular pieces, bent into a variety of shapes, and larger or smaller in proportion to its quantity, and the size of the wounds from whence it issues. This gum is imported here chiefly from Turkey: it varies in its colour; but that most esteemed is white, semitransparent, dry, yet somewhat soft to the touch.

M. de la Billardiére's late account * of the production of this gum differs in some respects from that of Tournefort's. He says, that he visited Mount Lebanon in August, 1786, the season when the gum Tragacanth is collected: he then found the species of Alfragalus which afforded it, to be different from that figured and described by

* *Voyage, T. i. p. 21.

* See Description d'une nouvelle espece d'altragale, qui produit au Liban la gomme adrargant, HJJt. de l'Acad.R. des Scien. du 16 Dec. 1788, & Rouyer, Observ. sur la physique, pour Janvier, 1790.
Tournefort, and consequently not the Tragacantha of Linnaeus.* He also contradicts the opinion of Tournefort, who attributes the flowing of the gum to the contraction of the fibres of the bark, occasioned by the intensity of the solar heat; observing that it is only during the night, or when the sun is obscured by clouds, that the gum issues from the plant, and that the same has been remarked at Crete.

"Gum Tragacanth differs from all other known gums, in giving a thick consistence to a much larger quantity of water; and in being much more difficultly dissoluble, or rather dissolving only imperfectly." Put into water, it slowly imbibes a great quantity of the liquid, swells into a large volume, and forms a soft but not fluid mucilage: if more water be added, a fluid solution may be obtained by agitation, but the liquor looks turbid and wheyish; and on standing the mucilage subsides, the limpid water on the surface retaining little of the gum:"† nor does the mixture of gum arabic promote their union.

The demulcent qualities of this gum are to be considered as similar to those of gum arabic: it is seldom given alone, but frequently in combination with more powerful medicines, especially in the form of troches, for which it is peculiarly well adapted. It gives name to an officinal powder, and is an ingredient in the compound powder of cerufs.

He makes the following distinctions: The stem of the Cretan Atragalus is blackish, that of Libanon is yellow; the leaves of the first are downy, of the second they are smooth. The flowers of one are red, those of the other are of a pale yellow. From hence he infers that there are various species of Atragalus which produce gum tragacanth.


† Rutty afferit, that in five or six hours it will dissolve in cold water. Observ. on the Lond. & Edin. Diffus. p. 179.

‡ Lewis's M. M.


PANAX QUINQUEFOLIUM.
PANAX QUINQUEFOLIUM. GINSENG.


THE root is perennial, small, wrinkled, branched, of a pale yellowish colour, and sends off many short slender fibres: the stalk is erect, smooth, round, simple, tinged of a deep purple colour, and above a foot in height: the leaves arise with the flower stem from a thick joint at the extremity of the stalk; they are generally three, but sometimes more, of the digitated kind, each dividing into five simple leaves, which are of an irregular oval shape, serrated, veined, pointed, smooth, of a deep green colour above, and stand upon short footstalks proceeding from a common petioliis, which is long, round, and almost

* The plant formerly known by this name is now understood to be the Sion Ninis, of Linnaeus.
erect: the flowers are white, produced in a roundish terminal umbel, and are hermaphrodite or male on separate plants: the former, which we have figured, stand in close simple umbels: the involucrum consists of several small, tapering, pointed, permanent leaves; the proper calyx is tubular, and divided at the rim into five small teeth: the corolla consists of five petals, which are small, oval, equal, and reflexed: the filaments are five, short, and furnished with simple anthers: the germén is roundish, placed below the corolla, and supports two short erect styles, crowned by simple stigma: the fruit is an umbilicate two-celled berry, each containing a single irregularly heart-shaped seed. The flowers appear in June.

Ginseng was formerly supposed to grow only in Chinese Tartary, affecting mountainous situations, shaded by close woods; but it has now been long known that this plant is also a native of North America, whence M. Sarrafin transmitted specimens of it to Paris in the year 1704; and the Ginseng since discovered in Canada, Pennsylvania, and Virginia by LaSieteau, Kalm, Bartram, and others, has been found to correspond exactly with the Tartarian species, and its roots are now regularly purchased by the Chinese, who consider them to be the same as those of eastern growth, which are known to undergo a certain preparation, whereby they assume an appearance somewhat different. For it is said that in China the roots are washed and soaked in a decoction of rice, or millet-feed, and afterwards exposed to the steam of the liquor, by which they acquire a greater firmness and clearness than in their natural state.* The plant was first introduced into England in 1740 by that industrous naturalist Peter Collinson, and our figure was drawn from a good specimen, growing in the Royal Botanic garden at Kew.

The dried root of Ginseng, as imported here, is scarcely the thickness of the little finger, about three or four inches long, frequently

* Sarrafin was correspondent of the Royal Academy of Sciences, in the history of which his account was published in 1718. See p. 44.


* The Chinese value these roots in some measure according to their figure, esteeming those very highly which are regularly forked, or have a fancied resemblance to the human form.

No. 20.

3 Z forked,
forked, transversely wrinkled, of a horny texture, and both internally and externally of a yellowish white colour. “To the taste it discovers a mucilaginous sweetness, approaching to that of liquorice, accompa-
nied with some degree of bitterness, and a slight aromatic warmth, with little or no smell. It is far sweeter and of a more grate-
ful smell than the roots of fennel, to which it has by some been sup-
poded similar; and differs likewise remarkably from those roots, in
the nature and pharmacetical properties of its active principles; the
sweet matter of the Ginseng being preserved entire in the watery as
well as the spirituous extract, whereas that of fennel roots is destroycd
or diffused in the impregnation of the watery tincture. The slight
aromatic impregnation of the Ginseng is likewise in good measure re-
tained in the spirituous.”

The Chinese ascribe extraordinary virtues to the root of Ginseng,
and have long considered it as a sovereign remedy in almost all disca-
es to which they are liable, having no confidence in any medicine unless
in combination with it. It is observed by Jartoux, that the most
eminent Physicians in China have written volumes on the medicinal
powers of this plant, asserting that it gives immediate relief in extreme
fatigue, either of body or mind, that it dissolves putridous humours,
and renders respiration easy, strengthens the stomach, promotes
appetite, stops vomitings, removes hysterical, hypochondriacal, and all
nervous affections, and gives a vigorous tone of body, even in extreme
old age. These, and many other effects of this root, equally improba-
ble and extravagant, are related by various authors, and Jartoux
was so much biased by this eastern prejudice in favour of Ginseng,
that he seems to have given them full credit, and confirms them in some
measure from his own experience.1 But we know of no proofs of the

2 Lewis, M. M. p. 325.

3 L. c. See also Decker, (Exercit. prati. p. m. 670.)

1 He says, “Nobody can imagine that the Chinese and Tartars would set so high a
value upon this root, if it did not constantly produce a good effect.”—“I observed the
state of my pulse, and then took half of a root raw: in an hour after I found my pulse
much fuller and quicker; I had an appetite, and found myself much more vigorous, and
could bear labour much better and easier than before. But I did not rely on this trial
alone, imagining that this alteration might proceed from the reflexion we had that day: but
the efficacy of Ginseng in Europe, and from its sensible qualities we judge it to possess very little power as a medicine. It is recommended in decoction, viz. a dram of the root to be long boiled in a sufficient quantity of water for one dose.

four days after, finding myself so fatigued and weary that I could scarce sit on horseback, a Mandarin who was in company with us perceiving it, gave me one of these roots: I took half of it immediately, and an hour after I was not the least sensible of any weariness. I have often made use of it since, and always with the same success. I have observed also, that the green leaves, and especially the fibrous parts of them chewed, would produce nearly the same effect. *Phil. Trans. vol. xxvii.* p. 239.

Dr. Cullen says, "We are told that the Chinese consider Ginseng as a powerful aphrodisiac; but I have long neglected the authority of popular opinions, and this is one instance that has confirmed my judgment. I have known a gentleman, a little advanced in life, who chewed a quantity of this root every day for several years, but who acknowledged he never found his faculties in this way improved by it." *M. M. vol. ii.* p. 161.

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**VERATRUM ALBUM. WHITE HELLEBORE, Or, VERATRUM.**

**SYNONYMA.** Helleborus albus. *Pharm. Lond. & Edinb.*


Pfsl. 3. Calfs. 3, polyperma.


Sp. Ch. V. racemo supradecomposito, corollis erectis.
THE root is perennial, about an inch thick, externally brown, internally white, and befit with many strong fibres: the stalk is thick, strong, round, upright, hairy, and usually rises four feet in height: the leaves are numerous, very large, oval, entire, ribbed, plaited, without footstalks, of a yellowish green colour, and surround the stem at its base: the flowers are both hermaphrodite and male, of a greenish colour, and appear from June to August, in very long branched terminal spikes: the hermaphrodite flowers are without calyces: the corolla consists of six petals, which are oblong, or lance-shaped, veined, persistent, of a pale green colour: the filaments are six, closely surrounding the germens, shorter than the corolla, and terminated by quadrangular antheræ: the germens are three in each flower, erect, oblong, ending in short hairy styles, which are crowned with flat spreading stigmata: the capsules are three, oblong, compressed, erect, two-celled, opening inwardly, and containing many oblong compressed membranous seeds. The male flowers differ from these only in wanting the germens.

This plant is a native of Italy, Switzerland, Austria, and Russia: its first cultivation in this country is ascribed to Gerard, and of course was previous to the year 1596.

The Helleborus of the Greek writers is by many supposed to be our Helleborus albus; but this opinion, like many others respecting the identity of the ancient nomenclature of plants with that of the modern, seems drawn rather from the similarity of their effects upon the body, than from an agreement in their botanical descriptions. This will evidently appear upon comparing the plant here figured with the description given by Dioscorides: * and yet Geoffroy says, "Apud Dioscoridem hellebori albi descriptio, veratro albo nostro satis apte convenit."

* "Helleborus albus folia sunt Plantaginis aut Betæ sylvestris similis, sed brevior, nigrior, & dorso rubescens: caulem palmine altitudine, concomium, qui quidem tumide quibus convolvitur abdicat cum auresere incipit. Radices subjacentes numerot, tenues ac fibrate, ab exiguò & oblongo capitulo, cecum capa, exsectae, eademque annexae. Nascitur in montibus & aperis." Dioscorid. M. M. L. iv. c. 159. This description of the plant, though imperfect, is the only one given by the ancients.

The "Anticyran Hellebore," or famous Anticyran Hellebore, is likewise thought to be the Helleborus niger of Linnaeus, an account of which has been given at page 50; but the descriptions of the former by the ancients are so vague that their identity is equally doubtful; the application therefore of what has formerly been said of the Hellebores of the Greeks to those known to us, can only be admitted but as a matter of probability.

Hippocrates frequently mentions Hellebore simply, or generically, by which we are told the white is to be understood, as he adds the word black or purging when the other species is meant; and as the purgative powers of Veratrum are known to be weaker than those of helleborus niger, the distinction is so far applicable to the effects now experienced of the roots of our Hellebores.

It appears from various instances, that not only the roots of white Hellebore but that every part of the plant is extremely acrid and poisonous, as its leaves and even seeds proved deleterious to different animals. The dried root has no peculiar smell, but a durable nauseous acrid taste, burning the mouth and fauces; when powdered and applied to ulcers or ulcers it produces griping and purging; if snuffed up the nose it proves a violent fernautatory. Gefner made an infusion of half an ounce of this root with two ounces of water, of this he took two drams, which produced great heat about the escapulae, and in the face and head, as well as the tongue.

Hor. Sat. Lib. ii. v. 82.

It is said that both the white and black hellebore grew at Anticyra, but the latter was accounted safer, and therefore more commonly employed. Panaffias, Lib. x. p. 623.

Though Tournefort says, "Nous connûmes deux Herboristes à Prufe, l'un Emir & l'autre Armenien, qui passoient pour de grands Docteurs. Ils nous fournirent des racines du véritable Ellebore noir des anciens, autant que nous voulumes pour en faire l'extrait. C'est la même espece que celle des Anticyres & des côtes de la Mer Noir." See his account of Mount Olympus. Voyage du Levant. But his description of the plant differs widely from that of our Helleborus niger.

No. 21. 4 A and
and throat, followed with singultus, which continued till vomiting was excited. Bergius also experienced very distressing symptoms merely by tasting this infusion. The root, taken in large doses, discloses such acrimony, and operates upwards and downwards with such violence that blood is usually discharged: it likewise acts very powerfully upon the nervous system, producing great anxiety, tremors, vertigo, syncope, loss of voice, interrupted respiration, sinking of the pulse, convulsions, spasms, cold sweats, &c. Upon opening those who have died by the effects of this poison, the stomach discovered marks of inflammation, with corrosions of its interior coat, and the lungs have been found inflamed, and their vessels much distended with dark blood.

The ancients, though sufficiently acquainted with the virulence of their white Hellebore, were not deterred from employing it internally in several diseases, especially those of a chronic and obnivate kind, as mania, melancholia, hydrops, elephantiasis, epilepsy, vitiligo, lupus, rabies canina, &c. They considered it the safer when it excited vomiting, and Hippocrates wished this to be its first effect. To those of weak constitutions, as women, children, old men, and those labouring under pulmonary complaints, its exhibition was deemed unsafe; and even when given to the robust it was thought necessary to moderate its violence by different combinations and preparations; for it was frequently observed to effect a cure not only by its immediate action upon the primevisc, but when no sensible evacuations was promoted by its use.


Bergius says, "Ego vis a memet impetrare potero, ut radices, ut intus veneerat, usum usum etiam quisque purus fum, nisi summa anhibita circumficientia; etiam confitam, eam, in suis parce doct propinatam, nape horrenda symptomata excitat, ut fit, cardia, atum, tunica, singultum, suffocationes, convulsiones, tremores, inflammationes, primarum viarum, lipothymias, sudorem frigidum, innumet mortem." l. c.

Similar observations have been made of Veratrum by authors of later times: Mayerne gave from two to three grains of an extract of this root with considerable advantage in maniacal cases, where no remarkable evacuation took place; and Con. Gfner," who investigated the qualities of Veratrum by repeated experiments, and whole encomiums on its efficacy seemed for a while to restore it to the ancient character of Hellebore, expressly declares, that he did not give it as an evacuant, but to produce the more gradual effects of those medicines termed alteratives. Gfner's account of Veratrum was followed by those of several other authors," in which it is said to have been serviceable in various chronic diseases. But the fullest trial which seems to have been lately made of the efficacy of Veratrum is by Greding," who employed it in a great number of cases, (twenty-eight) of the maniacal and melancholic kind; the majority of these, as might be expected, derived no permanent benefit; several however were relieved, and five completely cured by this medicine. It was the bark of the root, collected in the spring, which he gave in powder, beginning with one grain: this dose was gradually increased according to its effects. With some patients one or two grains excited nausea and vomiting, but generally eight grains were required to produce this effect, though in a few instances a scruple, and even more, was given. We may also remark, that he sometimes used the extract prepared after Stoerck's manner.—In almost every case which he relates, the medicine acted more or less upon all the excretions:

Similar symptoms merely observed, discovers
and, with such a very powerful
ileum, tremors, sinking of
Upon opening
the stomach's
interior coat,

1 Prax. Med. Lib. i. c. 7. p. 69. fq.

He says, "non ad purgandum, sed ad referendos meatus & crafae homores attentandum, eoque a centro & interioribus corporis ad superficiem & vias excrationum varie
lam edescandum." Adding, "recreat & roberat, & hilariorum facit, & acuit ingenium, quod in me & aliis sperisse expertus scribo." Had Gfner lived long enough, he had still more to say on this subject. "Ego, si vixero, in Ellebori historia multa proferam, que medici adhumentur." l. c.

Hannemaun, Quercetanum, Serreta, Wopser, Morato, Linder.

Wendt relates a case of mania, brought on by taking pepper and spirits of wine as a remedy for the ague; the disease continued thirty-three weeks, when it was said to have been cured by a decoction of white hellebore; but as copious and repeated bleeding, with other means, were employed, the cure cannot wholly be ascribed to the hellebore. See Aga.fis. Diff. de theraopia maziae. Lelr. 1785. p. 37.
vomiting and purging were very generally produced, and the matter thrown off the stomach was constantly mixed with bile; a florid redness frequently appeared on the face, and various cutaneous efflorescences upon the body; and, in some pleuretic, symptoms with fever supervened, so as to require bleeding, nor were the more alarming affections of spasms and convulsions unfrequent. Critical evacuations, we are told, were often very evident, many sweated profusely, in some the urine was considerably incresed, in others the saliva and the mucous discharges: also uterine obstructions, of long continuance, were often removed by this drug.

Veratrum has likewise been found useful in epilepsy, and other convulsive complaints, but the diseases in which its efficacy seems least equivocal, are those of the skin, as scabies and different prurient eruptions, herpes, morbus pediculosus, lepra, scrophula, &c. and in many of these it has been successfully employed both internally and externally.

As a powerful stimulant, and irritating medicine, its use has been reported to only in desperate cases, and then it is first to be tried in very small doses, in a diluted state, and to be gradually increased, according to the effects.

\[\text{Greeching, l. c. See also Smyth in Medical Communications, vol. i. p. 207.}\]

\[\text{Its success in these complaints is mentioned both by the ancient and modern writers. Smyth relates three cases. See l. c.}\]

The Veratrum nigrum of Lin. or Helleborus albus flore atro-rubente of C. Bauh. is said to produce the same effects as the Veratrum album. See Larry, de melanch. tom. ii. p. 289. & Linnaeus, Amoen. Acad. vol. i. p. 251. Helleborus is supposed to be derived from ἄνθος ἀλούς quod opu perimit. Veratrum dicitur quod mentem vertat, or, à venare i. c. vera locul. \[\text{P. C. Bauh, l. c.}\]

\[\text{LILIMUM CANDIDUM.}\]
LILIMUM CANDIDUM. COMMON WHITE LILY.


Sp. Ch. L. foliis sparsis, corollis campanulatis: intus glabris.

THE root is a large bulb, from which proceed several succulent fibres: the stem is firm, round, upright, simple, and usually rises about three feet in height: the leaves are numerous, long, narrow pointed, smooth, without footstalks, and irregularly scattered over the stem: the flowers are large, white, and terminate the stem in clusters upon short peduncles: it has no calyx: the corolla is bell-shaped, consisting of six petals, which within are of a beautiful shining white, but without ridged, and of a less luminous whiteness: the filaments are six, tapering, much shorter than the corolla, upon which are placed tranverse large orange-coloured anthères: the style is longer than the filaments, and furnished with a feathery triangular stigma: the germen becomes an oblong capsule, marked with six furrows, and divided into three cells, which contain many flatish seeds of a semicircular form. It flowers in June and July.
This Lily, which now very commonly decorates the borders of our gardens with the beautiful whiteness of its flowers, is a native of the Levant, and has been cultivated here since the time of Gerard. The flowers of this plant have a pleasant sweet smell, and were formerly used for medicinal purposes; a watery distillation of them was employed as a cosmetic, and the oleum liliorum was supposed to possess anodyne and nervine powers; but the odorous matter of these flowers is of a very volatile kind, being totally dissipated in drying, and entirely carried off in evaporation by rectified spirit as well as water; and though both menstrua become impregnated with their agreeable odour by infusion or distillation, yet no essential oil could be obtained from several pounds of the flowers. It is therefore the roots only which are now directed by the Edinburgh College: they are extremely mucilaginous, and are chiefly used, boiled with milk or water, in emollient and suppuring cataplasms: it is probable however, that the poultices formed of bread or farina, possess every advantage of those prepared of Lily root.

Lilium à λυχνοις vel λυχνεῖς. By the Greeks it is called λυχνος.

* Alluding to this, Ovid, in the luxuriance of his imagination, ascribes its origin to the milk of Juno.

\[\text{Dum puer Alcides Divae vagus ubera fuxit}
\text{Junonis, dulci prefla sapore fuit;}
\text{Ambrotiumque alto lac distillavit Olympo-
\text{In terras fulum Lilia pulchra dedit.}}\]

Pliny says, \textit{Lilium Rofe} nobilitate proximum est; and both these flowers have furnished their share of metaphor to ancient and modern poets.

Either singly,

--- vel mixta rubent ubi ëlia multâ
Alba rosâ: tales virgo dabat ore coiores.

ÆN. lib. xii. 68.

* Particularly as an antiepileptic and anodyne.

**ERYNGIUM MARITIMUM.**
ERYNGIUM * MARITIMUM.  SEA ERYNGO, or HOLLY.


Sp. Ch.  E. foliis radicalibus semitundis plicatis spinosis, capitulis pedunculatis, paleis tricuspidatis.

THE root is perennial, long, round, tough, externally of a brown colour, internally whitish; the stalk is thick, fleshy, round, triated, white, branched, and rises from one to two feet in height: the leaves, which grow from the root, are roundish, plaited, trifid, firm, spinous like those of the holly, marked with white reticulated veins, and of a very pale bluish green colour; those proceeding from the stalk are sessile, and surround the branches: the flowers are small, of a blue colour, and terminate the branches in round heads: the common receptacle is conical, and supplied with pales, which separate the florets: the involucrum of the receptacle is composed of many pointed leaves, which are longer than the florets: the calyx consists of five erect sharp leaves, placed above the germen: the corolla is composed of five oblong petals, with their points turned inwards: the filaments are five, slender, upright, longer than the corolla, and supplied with oblong antherae: the two styyles are filiform,

* Graeci Philosophi Eryngium, quasi cyphæ, id est ruæum, dicunt putant, quidcapre que morfu furculum Eryngii preciderint vel deglutverint, eunæm gregem pone sequentem quasi stupore attonitum fitunt, donec Eryngium ruæu rejecerint.  C.  

Baub. 1.c.  

and
and furnished with simple stigmata: the germen is beset with short hairs, and stands beneath the corolla: the fruit is two oblong seeds, connected together. It grows abundantly on the sea coasts, and flowers from July till October.

In the Materia Medica of Linnaeus, and in almost all the foreign pharmacopoeias, the Eryngium campestre is considered to be the official plant: Geoffroy, however, has observed that the E. maritimum is by many thought to be a more powerful medicine; and Simon Paulli gives it the preference; but Boerhaave attributes the same virtues to both, and indeed it seems of little importance which is preferred. Eryngo is supposed to be the kerrum of Dioscorides, who with other ancient writers speak highly of its medicinal efficacy.

The root, which is the part directed for medicinal use, has no peculiar smell, but to the taste it manifests a grateful sweetness, and on being chewed for some time it discovers a light aromatic warmth or pungency. By Boerhaave this was esteemed the principal of the aperient roots, and he usually prescribed it as a diuretic and antispasmodic; it has likewise been celebrated for its aphrodisiac powers. But this and the other effects ascribed to Eryngo seem now to obtain very little credit.

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*Quadr. p. 324.*

*Hist. pl. T. i. p. 194.*

*Lib. 3. c. 24.* He recommends it ad menes obstruëtos, tormenta, inflationes hepaticos, venena, venenatos morbus, epithetonicos, & comitiales.

*Vide, l. c.*

*" Non male tum Graii florens Eryngus in hortis*  
*" Queritur: hunc gremio portet il nupta virentem*  
*" Nunquam inconcessos conjux meditabitur ignes.*

_Rapinus in Boer. Hist._

The root is frequently candied, or made into a sweet meat. The young flowering shoots boiled, have the flavour of asparagus. _Lin. Flor. Succ._

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**ANTHEMIS NOBILIS.**
ANTHEMIS NOBILIS. COMMON CAMOMILE.

SYNONYMA. Chamæmelum. Pharm. Lond. & Edinb. Gerard
auro duro, pinnis pinnatis, pinnulis lanceolatis incisis. Hal. Stirp.


subequalis. Flotcula radii plurès quam 5.


The roots are perennial, fibrous, spreading: the stems are slender,
round, trailing, hairy, branched, of a pale green colour, and about a
foot in length: the leaves are doubly pinnated; the pinnae are linear,
pointed, a little hairy, and divided into three terminal segments: the
flowers are compound, radiated, white, at the centre yellow, and stand
fingly: the calyx is common to all the florets, of an hemispherial
form, and composed of several small imbricated scales: the flowers
of the radius are female, and usually about eighteen, narrow, white,
and terminated with three small teeth: the tubular part of the floret
enclous the whole of the style, but does not conceal the bifid reflexed
ligula: the flowers of the disc are numerous, hermaphrodite, tubular,
and cut at the brim into five segments: the filaments are five,
very short, and have their anthera united, forming a hollow cylinder:
the germen is oblong; the style is short, slender, and furnished with
a bifid reflexed ligula: the seeds are small, and of an irregular shape:
the receptacle is supplied with rigid bristle-like pales. It grows in
most pastures, and flowers in July and August.
The name Camomile is supposed to be expressive of the smell of the plant ἀναξρός, quoniam odorem mali habeat. It is referred to the ἀναξρός of Dioscorides, and to the ἀναξρός of Theophrastus. Matricaria Chamomilla, or Corn Feverfew, is similar in its general appearance to the Anthemis nobilis, and is directed for official use by most of the foreign pharmacopoeias; but the plant which we have here figured has a more fragrant and a more powerful odour, yields more essential oil, and of course is the more efficacious.

A double-flower'd variety of Camomile is very common, and usually kept in the shops, but as the odorous and rapid matter chiefly resides in the disc, or tubular part of the florets, the London College therefore judiciously prefer the simple flowers, in which this matter is most abundant.

Both the leaves and flowers of this plant have a strong though not ungrateful smell, and a very bitter nauseous taste, but the latter are the bitterer, and considerably more aromatic. Camomile flowers give out their virtues both to water and rectified spirit: when the flowers have been dried so as to be pulverable, the infusions prove more grateful than when they are fresh or but moderately dried. Distilled with water, they impregnate the aqueous fluid pretty strongly with their flavour: if the quantity of camomile, submitted to the operation, is large, a little essential oil separates and rises to the surface of the water, in colour yellow, with a cast of greenish or brown, of a pungent taste, and a strong smell, exactly resembling that of the camomile. Rectified spirit, drawn off from the spirituous tincture, brings over likewise a part of the flavour of the chamomile, but leaves a considerable part behind in the extract. The smell is in great measure covered or suppressed by the spirit, in all the spirituous preparations; but the taste both in the spirituous tincture and extract, is considerably stronger than in the watery.

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a Plin. L. 22, c. 21.
b The tubes of the florets appear beset with minute glands, which probably secrete the essential oil.
c Baumé obtained from 82 1/2 of the flowers 13 drams, and once 18 drams of essential oil. But from a like quantity of the herb, without the flowers, only half a dram of this oil was procured. See Berg. M. M. p. 695.
d Lewis, M. M. p. 221.
These flowers possess the tonic and stomachic qualities usually ascribed to simple bitters, having very little astringency, but a strong odour of the aromatic and penetrating kind, from which they are also judged to be carminative, emmenagogue, and in some measure antispasmodic and anodyne. They have been long successfully employed for the cure of intermittents; as well as of fevers of the irregular nervous kind, accompanied with vesical obstructions, for which we have the authority of Sir John Pringle.

That camomile flowers may be Effectually substituted for Peruvian bark in the cure of intermittent fevers, appears from the testimony of several respectable physicians, to which we have referred; and to which we may add that of Dr. Cullen, who says, "I have employed these flowers, and agreeable to the method of Hoffman, by giving several times during the intermission, from half a dram to a dram of the flowers in powder, have cured intermittent fevers. I have found however that the flowers were attended with this inconvenience, that, given in a large quantity, they readily run off by stool, defeating thereby the purpose of preventing the return of paroxysms; and I have found, indeed, that without joining with them an oprime, or an astringent, I could not commonly employ them."

These flowers have been found useful in hysterical affections, flatulent or spasmotic colics, and dysentery, but from their laxative quality, Dr. Cullen tells us, they proved hurtful in diarrhoeas. A simple watery infusion of them is frequently taken, in a tepid state, for the purpose of exciting vomiting or for promoting the operation of emetics. Externally the flowers are used in the decoction pro fomento, and they are an ingredient in the decoction pro enemate.

ANTHEMIS PYRETHRUM.
ANTHEMIS PYRETHRUM. SPANISII CAMOMILE, Or, PELLITORY of SPAIN.


Sp. Ch. A. caulisbus simplicibus unifloris decumbentibus, foliis pinnato-multidis.

THE root is perennial, tapering, long, externally whitish, and sends off several small fibres: the stems are usually simple, round, trailing, bearing one flower, and scarcely a foot in height; but the specimen here figured was extremely luxuriant, and has in some degree departed from its more common and simple appearance: the leaves are doubly pinnated, segments narrow, nearly linear, and of a pale green colour: the flowers are large, at the disc of a yellow colour, at the radius white on the upper side, on the under side of a purple colour: the different florets answer to the description given of the Anthemis nobilis. It flowers in June and July.

This plant is a native of the Levant and the southern parts of Europe; it was cultivated in England by Lobel in 1570,* but it does

* Ab igne nomen habet, ob radicis ejservorem igneum. V. Bauh. l. c.

not ripen its seeds here unless the season proves very warm and dry. The root of Pyrethrum has a very hot pungent taste, without any sensible smell. Its pungency resides in a resinous matter, of the more fixed kind; being extracted completely by rectified spirit, and only in small part by water; and not being carried off, in evaporation or dilillation by either menstruums.

The ancient Romans, we are told, employed this root as a pickle, and indeed it seems less acid than many other substances now used for this purpose. In its recent state this root is not so pungent as when dried, yet if applied to the skin it is said to act like the bark of mezerion, and in four days produces inflammation of the part.

From the aromatic and stimulating qualities of Pyrethrum there can be no doubt but that it might be found an efficacious remedy, and equally suited for an internal medicine, as many others of this class now constantly prescribed. Its use however has been long confined to that of a malleatory, for on being chewed, or long retained in the mouth, it excites a glowing heat, stimulates the excretories of saliva, and thereby produces a discharge, which has been found to relieve toothach, and rheumatic affections of the face; in this way too, it is recommended in lachrymose complaints, and paralytic of the tongue.

* Miller Diet.
* * Lawi. M. M. p. 527.
* * Bergius, M. M. p. 698.
* * Bergius, V. I. c.
* * Its use in this way is mentioned by Serenus Samonicus.

"Pungitur cerebrum maiali radice pyrethrui."
SPIGELIA MARILANDICA. PERENNIAL WORM-GRASS, Or, INDIAN PINK.


THE root is perennial, unequal, simple, sends off many slender fibres, and grows in an horizontal direction: the stalk is simple, erect, smooth, obscurely quadrangular, of a purplish colour, and commonly rises above a foot in height: the leaves are ovate, ferral, somewhat undulated, entire, of a deep green colour, and stand in pairs upon the stem: the flowers are large, funnel-shaped, and terminate the stem in a spike: the calyx divides into five long narrow pointed smooth segments: the corolla is monopetalous, confling of a long tube, gradually swelling towards the middle, of a bright purplish red colour, and divided at the mouth into five pointed segments, which are yellow on the inside: the five filaments are about the length of the tube, and crowned with halberd-shaped antherae: the germen is small, ovate, placed above the insertion of the corolla, and supports a round style, which is longer than the corolla, furnished with a joint near its base, and bearded towards the extremity, which is supplied with an obtuse stigma: the capsule is double, two-celled, and contains many small angular plano-convex seeds. It is a native of America, and flowers in July and August.
Linnaeus first supposed this plant to be a Lonicera, or Honey-suckle, but afterwards he ascertained its characters, and called it Spigelia, in honour of the botanist Spigelius, whose first work was published in 1606.*

Two species of Spigelia are now known to botanists, viz. S. Anthelmia and marilandica; they have both been used as anthelmintics; the effects of the former are noticed by Dr. Browne in the Gentleman's Magazine for the year 1751, and in his History of Jamaica; also by Dr. Buckleby,* and several foreign writers. But the accounts of the vermifuge virtues of Spigelia, given by Drs. Linning and Garden,* from Charleston, South Carolina, evidently refer to the latter species, which is here figured; and as the anthelmintic efficacy resides chiefly in the root of the plant, that of the Anthelmia, or Annual Spigelia, which is very small, must be incomparably less powerful than the root of the marilandica, which is perennial. Dr. Garden, in his first letter to Dr. Hope, which was written about the year 1763, says, "About forty years ago, the anthelmintic virtues of the root of this plant were discovered by the Indians; since which time it has been much used here by physicians, practitioners, and planters; yet its true dose is not generally ascertained. I have given it in hundreds of cases, and have been very attentive to its effects. I never found it do much service, except when it proved gently purgative. Its purgative quality naturally led me to give it in febrile diseases, which seemed to arise from viscidity in the prime vice; and, in these cases, it succeeded to admiration, even when the sick did not vomit worms."

I have of late, previous to the use of the Indian Pink, given a vomit, when the circumstances of the case permitted it; and I have found this method answer so well, that I think a vomit should never be omitted. I have known half a dram of this root purge as briskly as the same quantity of rhubarb; at other times I have known it, though given in large quantities, produce no effect upon the belly; in such cases, it becomes necessary to add a grain or two

* Adrain Spigeli in ram herbarium Juss.ii, Patavii.
* P. 156.
* L. v.  no.

"of
of sweet mercury, or some grains of rhubarb; but it is to be ob-
erved, that the same happy effects did not follow its use in this
way, as when it was purgative without addition. The addition
however of the purgative renders its use safe, and removes all
danger of convulsions of the eyes, although neither *O. rutae, J. jubinae,*
or any other nervous substance, is given along with it. It is, in
general, safer to give it in large doses than in small; for, from the
latter more frequently the giddines, dimness of the sight, and
convulsions, &c. follow; whereas, from large doses, I have not
known any other effect than its proving emetic or violently cathar-
tic. To a child of two years of age, who had been taking ten
grains of the root twice a day, without having any other effect
than making her dull and giddy, I prescribed twenty-two grains
morning and evening, which purged her briskly, and brought
away five large worms. After some months an increased dose had
the same good effects. I prefer the root to the other parts of the
plant, of which, when properly dried, I gave from twelve to sixty
or seventy grains in substance. In infusion it may be given to the
quantity of two, three, or four drams twice a day. I have found
that, by keeping, the plant loses its virtue in part; for forty grains
of the root which has not been gathered above two months, will
operate as strongly as sixty which has been kept for fifteen
months."

In Dr. Garden's subsequent letters, addressed to Dr. Hope in the
years 1764 and 1766, the efficacy of this root in worm cases is further
confirmed, and he observes, that the root keeps better than he at first
thought, having lately used it several years old with great success.
In what he calls continued or remitting low worm fevers, he found
its efficacy promoted by the addition of *Rad. Sepentaria.*

This root, when taken in large doses, and not readily passing off by stool or vomit-
ing, is observed not only to affect the head but in a peculiar way the muscles which move
the eyes; an effect which is noticed both by Linnæus and Garden, and is to be removed
by administering a cathartic.

According to Linnæus, "thirty large worms, the *teretes,* were at once voided" by
a Negro girl from the use of this root. *I. c.*

As this plant seems to be received into the *Materia Medica* principally on the autho-
ricity of Dr. Garden, we have judged it proper to give his account in his own words.

**ARISTOLOCHIA SERPENTARIA.**
ARISTOLOCHIA SERPENTARIA.  SNAKE-ROOT  
BIRTHWORT.

SYNONYMA. Serpentina virginiana. Pharm. Lond. & Edinb.
Arístolochia Pilòlochìa s. Serpentina virginiana, caule nodofo.
Pluck. Alm. 50. t. 148. Catesby Hist. of Carol. t. i. p. 29. tab. 29.
Raii Hist. vol. iii. p. 394. Arístolochìa polychrìzos virginiana, &c.


Caps. 6-locularis, infera.

Sp. Cb. A. fol. cordato-oblongis planis, caulibus infirmis flexuosis
teretibus, fior folitariis. Caulis geniculata valde nodofo. Flores
ad radicem.

The root is perennial, and composed of a number of small fibres,
proceeding from a common trunk; externally brown, and internally
whitish: the stems are slender, round, crooked, jointed, and rise about
eight or ten inches in height: the leaves are heart-shaped, entire,
pointed, veined, and stand upon strong footstalks, to which they are
attached by three prominent ribs: it has no calyx: the flowers are
monopetalous, solitary, of a purplish brown colour, and placed upon
long sheathed jointed peduncles, which rise from the lower articula-
tions of the stem: the corolla is tubular, irregular; at the base dif-
tended into a globular figure, at the middle contracted and twisted,
at the extremity spreading, and of a triangular form: it has no fila-
ments, but six antherae, which are attached to the under side of the
frigma: the germin is oblong, angular, and placed below the corolla:
the style is extremely short: the stigma is roundish, and divided into
six parts: the capsule is hexagonal, separated into six cells, which
contain several small flat seeds. It is a native of Virginia, and flowers
in August.

No. 22. 4 E The
The first account we have of Serpentaria is that given in Johnson's edition of Gerard, in which we are told that it was brought from Virginia, and grew in the garden of Mr. John Tradescant, of South Lambeth, in 1632. But Johnson evidently confounds the Serpentaria with the Pifolochia cretica of Cluflius. In 1635, Dr. J. Cornutus published at Paris, Canadensium plantarum, aliarumque nondum edita- rum, Historia, wherein the Serpentaria is noticed under the name of Radix Snagroel Nothae Angliae, and highly extolled as an effectual remedy for the bites of the most poisonous serpents.*

Plukenet, whose botanical knowledge of this plant will not be doubted, informed Dale, that the roots of three different species of Arifolochia were sent to Europe for the use of snake-root; but though this might have happened a century ago, at present the practice appears to be no longer continued, for we have carefully examined several parcels of snake-root, without discovering these roots intermixed with those of the others referred to by Dale. We may notice however, that among these roots, some specimens of the whole plant were found, which differed from the annexed figure, having lance-shaped leaves. And this variety of Serpentaria seems to accord with that noticed by Alston, who says, "the dried specimen I have of the whole plant, brought directly from America by Mr. Richard Lightbody, forges, agrees with none of them; (meaning the three mentioned by Dale) the leaves no way resembling a lichen at the footstalk, being there all roundish, or obtusely pointed." The plant, from which the present figure was designed, is now growing in the Royal Botanic

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* "Miff, quoque est ad me ex notha Anglia radix quam Serpentaria vocant, vermacule Snagroel cum hae inscriptione. Hec radix alexiterium praefentillimum est, contra morum venenum ingenios perniciosissimique in notha Anglia, cujus modus intra duodecim horas intensus, nisi hujus radicis sumatur potio, qua sumpta nullus unquam auditus est periculorum de vita." p. 214.


b M. M. vol. i. p. 521.
Garden at Kew, where it was introduced by Mr. William Young about the year 1770."

"Snake-root has an aromatic smell, approaching to that of valerian, but more agreeable, and a warm bitterish pungent taste, which is not easily concealed or overpowered by a large admixture of other materials. It gives out its active matter both to water and rectified spirit, and tinges the former of a deep brown, the latter of an orange colour. Greatest part of its juice and flavour is carried off in evaporation or distillation by both menstrua: along with water there arises, if the quantity of the root submitted to the operation be large, a small portion of pale-coloured essential oil, of a considerable smell, but no very strong taste, greatest part of the camphorated pungency, as well as bitternes of the root, remaining in the inspissated extract. The spirituous extract is stronger than the watery: not so much from its having lost lefs in the evaporation, as from its containing the active parts of the root concentrated into a smaller volume; its quantity amounting only to about one-half of that of the other."

The root, as we have already observed, was first recommended as a medicine of extraordinary power in counteracting the poisonous effects of the bites of serpents, and it has since been much employed in fevers, particularly those of the malignant kind: a practice which seems founded on a supposition that the morbid matter of these fevers is somewhat analogous to the poison of serpents, and that its influence upon the human system might be obviated by the same means: hence Serpentina has been considered the most powerful of those medicines termed alexipharmics. Modern physicians however have exploded this theory of antidotes, and the alexiterials and theriacas so industriously studied ever since the first ages of Greece, are now wholly disregarded.

Serpentina is thought to possess tonic and antifebriferal virtues, and is generally admitted to be a powerful stimulant and diaphoretic; and in some fevers where these effects are required, both this and contrayerva have been found very useful medicines, as abundantly

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* We had this information from Mr. Aiton, who desires us to say, that, by mistake, this plant was passed unnoticed in the "Flora, Kew."
appears from the experience of Huxham, Pringle, Hillary, Lyfons, and others: yet it may be remarked, that by some of these authors this root has been employed too indiscriminately, for there seems to us some inconsistency in the practice of bleeding and giving snake-root in the same fever.

It is thought by many, that Peruvian bark and wine may in every case supersede the use of Serpentina; but this opinion is also liable to exceptions, as a mixed fluid of fever has been frequently observed to prevail, in which the bark has proved hurtful, though this root has evidently had a good effect; and even in intermittent fevers the bark has been found more efficacious when joined with Serpentina than when given alone; and this has been also the case in continued fevers. The dose of snake-root is usually from ten to thirty grains in substance, and to a dram or two in infusion. A tinctura serpentina is directed both in the London and Edinburgh Pharmacopoeias.

* In cases marked with protracted sight of debility and putridity, there cannot be a doubt but that the bark, wine, and a suitable application of cold, are the remedies chiefly to be trusted; but by admitting this, we are not to reject Serpentina as utterly useless in all fevers.

† Vide Lyfons, Practical Essays upon intermittent fevers, p. 1; &c.

ARISTOLOCHIA LONGA. LONG-ROOTED BIRTHWORT.


Sp. Ch. A. fol. cordatis petiolatis integerrimis obtusiunculis, caule infirmo, flor. solitariis.
Lyfons, the authors seems to snake-

bark than tinued continuered penta-

not be a chiefly uleists

AKT.

longa.

Fig.

procura.

saule

THE
THE root is perennial, long, tapering, branched, externally wrinkled and brown, internally yellowish: the stems are slender, round, branched, trailing, and usually exceed a foot in length: the leaves are heart-shaped, obtuse, entire, veined, of a pale green colour, and placed alternately upon round footstalks, which are about the length of the leaves: the flowers are solitary, and stand upon peduncles, which arise close to the leaf-stalks: the corolla forms a more regular tube than that of the Serpentina, and is tongue-shaped at the extremity: the other parts of inflorescence are similar to those described of Serpentina. It is a native of the South of Europe, and flowers from June till October.

The medicinal character of Aristolochia was formerly in great repute, and physicians very generally employed various species of the plant. Those received into our pharmacopoeias, were 1. Aristolochia longa. 2. A. rotunda. 3. A. tenuis or Clematis of Linnaeus. But the roots of these plants have for a long time been gradually falling into disuse, and at present, we believe, are rarely if ever prescribed: they are all expunged from the Mat. Med. of the London Pharmacopoeia, but in that of the Edinburgh the last species is still retained, and therefore, according to our plan, it might have been figured here; but as these different species are generally allowed to be similar in their medicinal qualities, we trust that the first, which is the most rare and curious, will be found the most acceptable to our readers.

All the Birthwort roots have somewhat of an aromatic smell, and a warm bitterish taste. That of the long and round species, on first being chewed, scarcey discover any taste, but in a little time prove nauseously bitter, accompanied with a slight degree of pungency. "They give out their virtue, by infusion, both to spirituous and watery menstrua; to the first most perfectly. In distillation, pure spirit brings over little or nothing: with water there arises, at least, from the slender-rooted sort, a small portion of essential oil, possessing the smell and flavour of the roots."*

The virtues, which the ancients ascribed to Aristolochia were very considerable, and it was consequtently employed in various diseases,

* Lewis, M. M. p. 112.
particularly those thought to proceed from obstructions, more especially of the uterine system; hence the name Aristolochia is said to have arisen from its supposed emmenagogue powers. And as a warm stimulating medicine, Dr. Cullen tells us he found it useful in some cases of retention and chlorosis, but never in cases of suppuration. Aristolochia has also been long very generally recommended as a remedy for the gout, and it is the first ingredient in the Portland powder, which has been much celebrated for the cure of this disease. It appears however that the long continued use of this powder, which is necessary for preventing the return of arthritic paroxysms, seldom fails to superinduce a premature senile state of body, and to lay a foundation for more fatal diseases. It is probable that the medicinal qualities of this plant are somewhat allied to those of its congener, the Serpentaria; but the sensible properties of the latter demonstrate it to be a more active medicine.

Aristolochia is given in substance from a scruple to two drams for a dose.


Ab spures & confus. It has also been derived from Aristolochius, who is said to have first discovered its virtues.


The powder is thus prepared: — R. Aristol. rotund. gustian. sumitum. et al. chamaec. chamarit. centaur. min. f. p. w. f. pulvis. A dram of this powder is directed to be taken every morning (jejuno ventriculo) for the space of three months, when the dose is to be diminished to three quarters of a dram for the next three months, and afterwards continued for six months in doses of half a dram, which, during the second year is to be taken every other morning.

* Brunner, De paenr. p. 143. Weighs: Caut. Med. Tratt. i. p. 32. See also Cullen’s First Lin.

INULA HELLENIUM.
INULA HELENIUM. COMMON INULA, OR, ELY: CAMPANE.


Sp. Ch. T. folius amplexicaudibus ovatis rugosis subitus tomentosis, calycum squamis ovatis.

THE root is perennial, large, thick, branched, externally brown or grey, internally whitish; the stalk is upright, strong, round, filiated, branched, beset with soft hairs, and rises three or four feet in height; the leaves are large, ovate, filiated, crowded with reticular veins, supplied with a strong, fleshy midrib, on the upper pagina smooth, on the under downy; the leaves, which are placed on the upper part of the stem are triad, and surround the branches, but those towards the bottom stand upon footstalks; the flowers are large, yellow, of the compound kind, and terminate the stem and branches; the calyx is composed of several rows of strong imbricated ovate segments; the corolla consists of numerous florets, which are of two kinds; those occupying the centre are of a regular tubular form, divided at the blim into five small segments, and are hermaphrodite, each containing five short filaments, which have their anthers united so as to form a hollow cylinder and a long germen, which supports a
flender style, about the length of the tube, and furnished with a bifid Ligima: the florets at the circumference are female, and at the lower part tubular, but at the upper ligulated or strap-shaped, and cut at the extremity into three narrow pointed teeth; the female part is similar to that in the hermaphrodite florets: the seeds are solitary, striated, quadrangular, and furnished with a simple feather or pappus: the receptacle is naked and flat. It is a native of England, growing in moist meadows, and flowers in July and August.

It is probable, that Elecampane is the Helenium foliis verbaeci of Dioscorides, and the Inula of Pliny, who also mentions Helenium but as a very different plant. Elecampane is seldom to be met with in its wild state, but it is commonly cultivated in gardens, from whence the shops are supplied with the root, which is the part directed for medicinal use. This root, in its recent state, has a weaker and less grateful smell than when thoroughly dried and kept for a length of time, by which it is greatly improved, its odour then approaching to that of Florence orris. Its taste, on first being chewed, is glutinous and somewhat rancid, quickly succeeded by an aromatic bitterness and pungency. Spirituous liquors extract its virtues in greater perfection than water; the former scarce elevate any thing in distillation; with the latter an essential oil arises, which concretes into white flakes: this possesses at first the flavour of the Elecampane, but generally loses it on keeping. An extract, made with water, possesses the bitterness and pungency of the root, but in a less degree than that made with spirit.”

The high opinion entertained by the ancients of the virtues of Elecampane may be collected from the words of Schroder, who says, “Abstergit, diluit, aperit, pulmonica eft. Stomachica, alexipharmaca, sudorifera, &c. Ufis præcip. in tartaro pulmonum renunque attenu-
ando, ac educendo, & hinc in tufti, affinmte, in cruditatibus ventriculi emendandis, ureteribus referandis, in peste, contagiosique morbis arcendis, in scabie." Bergius also ascribes many virtues to this root, and from its sensible and chemical qualities it promises to be a medicine of some efficacy; but in the diseases in which it is principally recommended, as dyspepsia, pulmonary affections, and uterine obstructions, we have no satisfactory evidence of its medicinal powers. One dram of this root in infusion, and from two drams to half an ounce in decoction, is said to be the dose usually given.

* P. 602. See Alison's M. M. vol i. p. 454.
* See Cullen's M. M. vol ii. p. 459.

THYMUS VULGARIS. COMMON GARDEN THYME.


a Thymus vulgaris folio tenuiore. C. B.
Narrow-leav'd Garden Thyme.

b Thymus vulgaris folio latiore.* C. B.
Broad-leav'd Garden Thyme.


THE root is perennial, woody, and subdivided into small fibres: the stems are numerous, round, hard, branched, and usually rise about a foot.

* This is the variety to which the figure and description here given apply.

No. 22. 4 G
in height: the leaves are small, narrow, elliptical, often slightly indented at the edges, beset with small glands, and stand in pairs upon very short footstalks: the flowers terminate the branches in whorls or round clusters: the calyx is tubular, striated, closed at the mouth with small hairs, and divided into two lips; of these the uppermost is cut into three teeth, the lowermost into two: the corolla is monopetalous, consisting of a tube, which is about the length of the calyx, and divided at the brim into two lips, of a pale purple colour; the upper lip is erect, or turned back, and notched at the end; the under lip is longer, expanding, and divided into three segments; of these the middle segment is the broadest: the filaments are two long, and two short: the anthers small and round: the germen is divided into four parts, from the centre of which issues the style, which is thread-shaped, and furnished with a bifid stigma: the seeds are four, small, roundish, and lodged at the bottom of the calyx. It is a native of the South of Europe, and flowers from May till August.

According to C. Bauhin, this plant is the φυμας of Dioscorides and Theophrastus. It grows wild abundantly in the mountainous parts of Italy and Spain; we are therefore the more induced to suppose it to be the plant of this name so frequently mentioned by the Latin poet. It was cultivated by Gerard, and usually finds place in our gardens with the other pot-herbs.

This herb has an agreeable aromatic smell, and a warm pungent taste. "To water it imparts, by infusion, its aromatic odour, but only a weak taste: in distillation, it gives over an essential oil, in quantity about an ounce, from thirty pounds of the herb in flower; of a gold yellow colour if distilled by a gentle fire, of a deep brownish red if by a strong one, of a penetrating smell, resembling that of the Thyme itself, in taste excessively hot and fiery: the remaining decoction inipissated, leaves a bitterish, roughish, suffaline extract. The

"Dioscorid. L. 3. c. 44. Theophrast. 4. hist. 7. & 6. hist. 2. 1. caus. 5. οὖν τα τα 
φυμας, quod is qui animi deliquium patiuntur adhibentur: aliis τος τας δεδουλτ, quod hoc veteres in sacr., quae igne accenso fiebant, primum uli fluit, ut apud
Rhodiginum. L. 3. c. 23. legere est."

b 'Nerine Galatea, chymo mali dulcius Hyblea.' Both this species and the Serpyllum are probably alluded to; they are equally fragrant, and coveted by bees.
active matter, which by water is only partially dissolved, is by rectified spirit dissolved completely, though the tincture discovers less of the smell of the Thyme than the watery infusion: the spirit brings over, in distillation, a part of its flavour, leaving an extract of a weak smell, and of a penetrating camphorated* pungency."

By Bergius the virtues of Thyme are said to be resolvent, emmenagogue, diuretic, tonic, and stomachic; but we find no disease mentioned in which its use is particularly recommended either by him or other writers on the Materia Medica. As agreeing in common with the natural order of verticillata, its aromatic qualities may be found equally useful in some of those complaints for which lavender, sage, rosemary, &c. are usually employed.

Lewis, M. M. p. 650.

† This plant seems actually to contain a species of camphor, thus noticed by Murray:
Camphora speciem continent herba, que se deliaruit nox post deflationem ejus cum aqua, dum oleum ab ea separatur, tam in goffypio quam officio vitri, crystallis exiguus, dein post aliquot dieum moram in fondo vitri crystallis, avellane nucis ino magna dinis, cubici, saccharo candi similibus." App. Med. vol. u p. 125. This with the odour of Thyme, had in every other respect the qualities of camphor. See Phil. Trans. vol. xxviii. p. 321. lqq. & p. 361.

Lewis, M. M. p. 536.

THYMUS SERPYLLUM. WILD, or MOTHER of THYME.


Serpyllum vulgare minus. G. B.
Common smooth Mother of Thyme.

Serpyllum foliis citri odore. G. B.
Lemon Thyme.

Serpyllum
Serpyllum villosum fruticosum, floribus dilute rubentibus. *Ray Synop.*
Hoary Mother of Thyme.

Serpyllum angustifolium hirifutum. *C. B.*
Hairy Mother of Thyme.

Sec *Hort. Kew.*


Sp. Ch. T. floribus capitatis, calibus repentibus, foliis planis obtuis
basili ciliatis.

"THE root is perennial, woody, fibrous, and of a brown colour;
the stems are numerous, hard, square, branched, procumbent, and
rise from four inches to a foot in height: the flowers are of a
purple colour, and stand in whorls towards the top of the stem
and branches: the leaves are ovate, entire, smooth, beset with numerous
small glands, fringed with hairs towards the base, and stand in pairs
upon very short footstalks: the calyx, the corolla, and sexual parts,
correspond with those mentioned of the Thymus vulgaris. It
is a native of Britain, affecting heaths and mountainous situations,
flowering in July and August.

It is observed by Mr. Curtis, that "few plants are subject to so
many varieties as the Wild Thyme. In its most natural state, when
found on dry exposed downs, it is small and procumbent: when
growing among furze or other plants, which afford it shelter, it runs
up with a slender stalk to a foot or more in height, and assumes an
appearance which might puzzle the young botanist." The specimen,
from which the drawing for the annexed plate was taken, grew in a
situation which subjected it to neither of these extremities; but it has
been so far sheltered as to participate more of the character of the

It has been a received opinion, that this and other aromatic herbs give a flavour to
the flesh of sheep that feed where these plants abound; but it is well known that sheep
refuse these aromatics when they have a choice of other pasturage. *Curt.* See Account
latter than the former. This plant has the same sensible qualities as those of the garden thyme, but has a milder, and rather more grateful flavour. "Its essential oil is both in smaller quantity, and less acrid, and its spirituous extract comes greatly short of the penetrating warmth and pungency of that of the other." From this it appears, that the Serpyllum, though possessing similar qualities, is evidently less medicinal than the foregoing species."


If this is the same as the Serpyllum of Dioscorides, he is of a different opinion, as he says, "Sylvestre ad medendi usum aptius quam fit hortens." αὐτόν αὖν, according to Pliny, who commends its use in various diseases. L. xx. c. 22. See Diosc. L. iii. c. 46. Theop. 6. hift. 7. Serpyllum is thus mentioned by Virgil:

Thefylis et rapido feflis melioribus æflu
Allia serpyllumque herbas contundit olentes. Ec. ii. 10.

LINUM USITATISSIMUM. COMMON FLAX.


Sp. Ch. L. calycibus capsulifisque mucronatis, petalis crenatis, foliis lanceolatis alternis, caule subsolitario.

No. 23.
THE root is annual: the stalk is erect, round, smooth, branched towards the top, and rises about a foot and a half in height. The branches are simple, alternate, and terminated by the flowers, which are solitary, and of a sky-blue colour: the leaves are lance-shaped, acute, sessile, smooth, glaucous, vertical, and alternately scattered over the stalk and branches: the calyx is divided into five segments, which are semi-lance-shaped, pointed, and slightly fringed with small hairs: the corolla is funnell-shaped, consisting of five petals, which are large, obovate, fimbriated, and minutely scollop'd at their extremities: the filaments are five, tapering, upright, about the length of the calyx, united at the base, and crowned with simple anthers: the germen is oval: the five styles are filiform, erect, of the length of the filaments, and furnished with blunt stigmata: the capsule is globular, divided into five valves, and ten cells: the seeds are solitary, glossy, and of a flattish oval shape. It is a native of Britain, and grows in corn fields and sandy pastures: the flowers appear in July.

Flax is an article of such extensive utility for various economical purposes, that the plant which furnishes it has obtained the trivial name of usitatissimum; and when it is considered that its seeds afford an oil equally useful in arts and in medicine, it may well be deemed an object of national importance. Sensible of this, the Society for the Encouragement of Arts, Manufactures, and Commerce, has laudably endeavoured to promote and extend the cultivation of this plant in Britain, and not without success. But still the greatest part of Flax and Linseed used in this country is the growth of the northern parts of Europe, where it is cultivated most abundantly.

The seeds have an unctuous mucilaginous sweetish taste, but no remarkable smell; on expression, they yield a large quantity of oil, which, when carefully drawn without the application of heat, has no

a It is remarked by Hasselquist, that in Egypt this plant rises with a strong stem to the height of four feet. 'Refa til bel. Landet.' p. 462.

b The bark of the plant is composed of numerous small tough longitudinal fibres, connected together with a glutinous matter which is dissolved by maceration in water, leaving the naked fibres, which are then to be dried and beaten, by which means the inner membranous parts are easily separated; after this it is combed, and fit to be spun into thread. It has been observed that the water in which this bark has been macerated, becomes poisonous to cattle, and on this account the practice of steeping it in any running stream or common pond, was prohibited by Statute 33d Henry VIII. cap. 17.
particular taste or flavour: in some properties it differs consider-
ably from most of the other oils of this kind; not congealing in
winter; not forming a solid soap with fixed alkaline fats; acting
more powerfully as a menstruum on sulphureous bodies, than any
other expressed oil that has been tried. The seeds, boiled in water,
yield a large proportion of a strong flavourless mucilage: to rectified
spirit they give out little or nothing."

Linseed appears to afford but little nourishment, and when taken
as food has been found to impair the stomach, and produce great
flatulence: effects, which are noticed of these seeds by Galen,5 and
since amply confirmed by Tragus, who relates6 that, in confluence
of a scarcity of corn in Zealand, the inhabitants were urged to the
necessity of eating boiled Linseed, which occasioned a remarkable
dilatation of the hypochondria, swellings of the face and other parts,
which in several instances proved fatal.

Infusions and decoctions of these seeds, like other vegetable mucilages, are used as emollients or demulcents in hoarseness, coughs,
and pleuritic symptoms, which frequently prevail in catarrhal affec-
tions; they are also recommended in nephritic pains and stranguries;
for these purposes, a spoonful of the seeds unbruised is said to be
sufficient for a quart of water.7 The seeds are also much used externally
in emollient and maturating cataplasmas. The expressed oil is an
official preparation, and is supposed to be of a more healing and
balsamic nature than the other oils of this class;8 it has therefore been
very generally employed in pulmonary complaints, also in colics,9 and
conflations of the bowels.10

5 Lewis, M. AL. p. 397.
6 Supp. L. 7. de alim. fac. L. i. c. 32.
7 See Rall Hist. p. 1773.
8 Lewis, l. c.
9 This subject is examined on treating of Olea europaea. See Med. Bot. vol. iii.
P. ii. p. 104.) and others.
several cases of constipation and colic, proceeding from different causes, successfully
iii. p. 485. &c.—It is used in common with other oils as a vermituge.

GEOFFROYA
GEOFFROYA INERMIS. SMOOTH GEOFFROYA,
Or, BASTARD CABBAGE-TREE.


THIS tree rises to a considerable height, and towards the top sends off several branches; the wood is hard enough to admit of being polished; the external bark is smooth and grey, internally it is black and furrowed; the leaves are pinnated, consisting of several pairs of pinnae, which are lance-shaped, pointed, veined, smooth, standing in pairs upon short footstalks, but with an odd one at the end: the flowers appear in clusters upon large branched spikes; the calyx is bell-shaped, and divided into five short obtuse segments; the corolla is of the papilionaceous kind, of a pale rose colour, consisting of a vexillum, which is roundish, concave, and notched at the apex; two ale, which are oblong, obtuse, concave, and somewhat shorter than the vexillum, and an obtuse divided carina; the filaments are ten, nine of which are united at the base; the anthers are simple, and roundish; the germen is oval, and furnished with a tapering curved style, which is terminated by a hooked stigma; the fruit is pulpy, resembling a small plum, and containing a hard nut or seed, separated into two valves, and marked on each side with a longitudinal furrow.

This tree is a native of Jamaica, where it is distinguished by the name of Cabbage-bark tree, or Worm-bark tree: the bark, which has a mucilaginous and sweetish taste, and a disagreeable smell, was first
first noticed as a vermifuge by Mr. Peter Duguid. Since that time several accounts of its anthelmintic virtues have been given in the Medical Commentaries by different authors: but Dr. Wright, who resided a long time at Jamaica, has communicated the fullest information concerning this tree, both in respect to its medical and botanical characters. Linnaeus enumerates only one species of this genus, which is called after Geoffroy, viz. G. spinosa; and, in contradistinction to this, Dr. Wright, on discovering that the plant here figured belonged to the same family, and was destitute of spines, very properly gave it the trivial name of inermis, and it has since been recognized and confirmed in this name upon the authorities of Swartz and Aiton, though, it is not yet admitted into any of the editions of the Systema Vegetabilium of Linnaeus. This species was first introduced into this country by Messrs. Kennedy and Lee, who cultivated it at Hammermith about the year 1778. According to Dr. Wright, the bark of this tree is powerfully medicinal, and its anthelmintic effects have been established at Jamaica by long experience.

It may be given in different forms, as in decoction, syrup, powder, and extract; and the manner of preparing and exhibiting these are thus stated by Dr. Wright:

"The decoction. Take fresh-dried or well-preserved cabbage-bark, one ounce. Boil it in a quart of water, over a flow fire, till the water is of an amber colour, or rather of deep coloured Madeira wine; strain it off, sweeten it with sugar, and let it be used immediately, as it does not keep many days."

"Syrup of Cabbage-bark. To any quantity of the above decoction add a double portion of sugar, and make a syrup. This will retain its virtues for years."  

"The extract of cabbage-bark is made by evaporating the strong decoction in balneo mariae to the proper consistence; it must be continually stirred, as otherwise the resinous part rises to the top, and on this probably its efficacy depends.

* This author thinks that the inhabitants of Jamaica are more subject to worms, "on account of their sweetish bread-kind, io wts, plantains, yams, bananas, sweetish potatoes, &c.," and considers it particularly fortunate, that the island supplies them with this bark, which "appears to be the most powerful vermifuge yet known, for it frequently brings away as many worms by food as would fill a large hat." See Essays and Observations Physical and Literary, vol. ii. p. 264.
"The powder of well-dried bark is easily made, and looks like jallap, though not of equal specific gravity.

"This bark, like most other powerful anthelmintics, has a narcotic effect; and on this account it is always proper to begin with small doses, which may be gradually increased till a nausea is excited, when the dose for that patient is ascertained. But by frequent use we can in common determine the dose, though we chuse to err rather on the safe side.

"A strong healthy grown person may, at first, take four table spoonfuls of the decoction or syrup, three grains of the extract, or thirty grains of the powder for a dose.

"A youth, three table spoonfuls of the decoction or syrup, two grains of extract, or twenty grains of powder.

"A person of ten years of age, two table spoonfuls of the decoction or syrup, one grain and a half of extract, or fifteen grains of the powder.

"Children of two or three years old, a table spoonful of the decoction or syrup, one grain of extract, or ten grains of the powder. Children of a year old, half the quantity.

"These may be increased, as above observed, till a nausea is excited, which will depend on the strength, sex, and habit of body of the patient.

"Care must be taken that cold water be not drank during the operation of this medicine, as it is in this case apt to occasion sickness, vomiting, fever, and delirium. When this happens, or when an over large dose has been given, the stomach must be washed with warm water: the patient must speedily be purged with Castor-oil, and use plenty of lime-juice beverage for common drink; vegetable acid being a powerful antidote in this case, as well as in an over dose of opium.

"The decoction is what is mostly given here, and seldom fails to perform every thing that can be expected from an anthelmintic medicine, by destroying worms in the intestines, and bringing them away in great quantities. By frequent use, however, these animals become familiarized, and we find it necessary to intermit it, or have recourse to others of inferior merit.

"The
"The writers of the Edinburgh Medical Commentaries take notice, that the decoction of cabbage-bark always excites vomiting. We find no such effect from it here, and may account for it by their receiving it in a mouldy state. A syrup, therefore, is given there with better effect. They observe also that it has a diuretic virtue, which we have not taken notice of here.

"This bark purges pretty briskly, especially in powder, thirty or forty grains working as well as jalap by flood; but in this way it does not seem to kill worms so well as in decoction.

"Five grains of the extract made a strong man sick, and purged him several times; but, by frequent use, he took ten grains to produce at length the same effect.

"It must not be concealed that fatal accidents have happened from the imprudent administration of this bark, chiefly from over-doing the medicine. But this cannot detract from the merit of the cabbage-bark, since the best medicines, when abused, become deleterious; and even our best aliments, in too great quantity, prove destructive. Upon the whole, the cabbage-bark is a most valuable remedy, and I hope will become an addition to the materia medica."

PASTINACA OPOPANAX. OPOPANAX, OR, ROUGH PARSNEP.

Opopanax, gummi-resina. Pharm. Lond.


Class


The root is perennial, thick, fleshy, tapering like the garden parsnip: the stalk is strong, branched, rough towards the bottom, and rises seven or eight feet in height: the leaves are pinnate, consisting of several pairs of pinnae, which are oblong, serrated, veined, and towards the base appear uniformed on the upper side: the flowers are small, of a yellowish colour, and terminate the stem and branches in flat umbels: the general and partial umbels are composed of many radii: the general and partial involucra are commonly both wanting: all the florets are fertile, and have an uniform appearance: the petals are five, lance-shaped, and curled inwards: the five filaments are spreading, curved, longer than the petals, and furnished with roundish antherae: the germen is placed below the corolla, supporting two reflexed stigmas, which are supplied with blunt stigmae: the fruit is elliptical, compressed, divided into two parts, containing two flat seeds, encompassed with a narrow border. It is a native of the South of Europe, and flowers in June and July.

This species of Parshnep was cultivated in 1731 by Mr. P. Miller, who observes that its "roots are large, sweet, and accounted very nourishing," therefore recommended for cultivation in kitchen-gardens. It bears the cold of our climate very well, and commonly maturates its seeds, and its juice here manifests some of those qualities which are discovered in the official opopanax;* but it is only in the warm regions of the East, and where this plant is a native, that its juice concretes into this gummy resinous drug. Opopanax is obtained by

* See his Dict.

b Alston says, "with regard to these plants growing here, I venture to say, that, if their juice be not the opopanax, it is very like it." M. M. v. ii. p. 443.

c We find no account of the manner of obtaining this drug since that mentioned by Dodonaeus, Prep. (p. 309.) & Boccone, (l. c.)
means of incisions made at the bottom of the stalk of the plant, from whence the juice gradually exudes, and by undergoing spontaneous concretion, assumes the appearance under which we have it imported from Turkey and the East-Indies, viz. "sometimes in little round drops or tears, more commonly in irregular lumps, of a reddish yellow colour, on the outside with specks of white, internally of a paler colour, and frequently variegated with large white pieces."

"This gummy-resin has a strong disagreeable smell, and a bitter acrid somewhat nauseous taste. It readily mingles with water, by trituration, into a milky liquor, which on standing deposits a portion of resinous matter, and becomes yellowish: to rectified spirit it yields a gold-coloured tincture, which tastes and smells strongly of Opopanax. Water distilled from it is impregnated with its smell, but no essential oil is obtained on committing moderate quantities to the operation."

Opopanax has been long employed by physicians, and esteemed for its attenuating, deobstruent, and aperient virtues; but as it is commonly prescribed in combination with other medicines, these qualities are by no means ascertained, nor do its sensible qualities indicate it to be a medicine of much power. Dr. Cullen classes it with the anti-spasmodics; it is however less fetid than galbanum, though more so than ammoniacum, and therefore may be supposed to have some affinity to a union of these two. It has commonly been given in hypochondriacal affections, visceral obstructions, menstrual suppositions, and asthma, especially when connected with a phlegmatic habit of body. It has no place in the Mat. Med. of the Edinburgh Pharmacopoeia, but, by the London College it is directed in the pillulae gumnii.

\[\text{No. 23.} 4\text{ K.} \quad \text{RHAMNUS}\]
Rhamnus catharticus. Purging Buckthorn.


Sp. Ch. R. spinis terminalibus, floribus quadrifidis dioicis, foliis ovatis, caule erecto.

This shrub is covered with dark brownish bark, divided into many branches, beset with strong spines, and usually rises seven or eight feet in height: the leaves are nearly elliptical, serrated, veined, and stand on shortish footstalks; the flowers are commonly male and female upon different plants, small, greenish, and placed in clusters upon simple peduncles: the calyx supplies the place of a corolla, it is funnel-shaped, of a pale green colour, and divided at the extremity into four spreading pointed segments: the filaments are usually four, arising from the base of a small convex scale, very short, and furnished with round antheræ: the germen is round, and supports a slender style, terminated by a trident stigma: the fruit is a round black berry, containing four seeds, which are compressed on one side, and protuberant on the other. It is a native of Britain, usually growing in woods and hedges near brooks, flowering in May and June, and ripening its seeds about the end of September.

The fruit or berries of this Shrub, which have been long received into the Materia Medica, are about the size of a small pea, and when ripe
ripe of a shining black colour; they contain a pulpy deep green juice, which has a faint unpleasant smell, and a bitterish, acrid, nauseous taste; they operate briskly by stool, and hence the plant derives the trivial name catharticus: their purgative effects are constantly accompanied with considerable thirst, and dryness of the mouth and throat, and frequently with severe griping of the bowels, especially unless some diluting liquor be plentifully drunk immediately after taking them.

"The dose is said to be about twenty of the fresh berries in substance; twice or thrice that number in decoction: a dram or a dram and a half of the dried berries; an ounce of the expressed juice; or half an ounce of the rod or extract, obtained by infusing the juice." The juice made into a syrup is the official preparation, and in this state it has been generally preferred by physicians, who found that in doses of one ounce to two it proved a very powerful purgative, and was therefore much employed as a hydragogue. Few patients however are able to bear a frequent repetition of this medicine; and even Sydenham, who was partial to the purgative treatment of hydro-pical diseases, found that other cathartics more effectually answered this purpose: at present it is rarely prescribed except in conjunction with other medicines of this class.

The inner bark, like that of Elder, is said to be a strong cathartic, and to excite vomiting.

* This juice is called by the French Verdi de Vasse, or Sap Green, and is used for painting or staining paper: that of the unripe berries is yellow, and when the berries are gathered late in the autumn, the juice is purple. It is also used as a dye. See Lin. Flor. Succ. p. 72.

* It is reported that the flesh of those birds which feed upon these berries is purgative. Homberg, Mem. de l’ Acad. des Sc. de Paris, 1712. p. 9.


* Allioni, Fl. Pedament, t. ii. p. 130.

TANACETUM
TANACETUM VULGARE. COMMON TANSY.


Sp. Ch. T. foliis bipinnatis incisæ serratis.

THE root is perennial, long, creeping, and fibrous: the stem is strong, erect, often reddish, branched towards the top, smooth, beset with leaves, and rises two or three feet in height: the leaves are doubly pinnated; leafflet pinnæ, numerous, notched, or deeply serrated; principal ribs edged with leafy clefts: the flowers are yellow, compound, and produced in a corymbus: the calyx consists of numerous small imbricated squamae, forming a common perianthium of an hemispherical shape: the florets at the disc are hermaphrodite, tubular, divided at the mouth into five pointed segments: the florets at the border are female, and cut at the brim into three teeth: the filaments are five, very short, slender, and furnished with antheræ, which unite and form a hollow cylinder: the germen in both the hermaphrodite and female florets is oblong, small, and supports a filiform style, furnished with a cloven reflexed stigma: the seeds are naked, solitary, and of an oblong shape: the receptacle is convex and naked. It is a native of England, growing in moist pastures, borders of corn fields, roads, and rivers, and flowering in July and August.

This
This species, of which there is a variety, folius crissis, the curled Tanfyl, which is said to be more grateful to the stomach than the common Tanfyl, and has therefore been preferred by some for medical purposes; but as the sensible qualities of the latter seem most powerful, we judge it to be most efficacious.

"The leaves and flowers of Tanfyl have a strong, not very disagreeable smell, and a bitter somewhat aromatic taste: the flowers are stronger though rather less unpleasant than the leaves. They give out their virtue both to water and spirit, most perfectly to the latter: the tincture made from the leaves is of a fine green; from the flowers of a bright pale yellow colour. Distilled with water they yield a greenish-yellow essential oil, smelling strongly of the herb: the remaining decoction, impelled, affords a strong bitter sublimal extract. The spirituous tinctures give over also, in distillation, a considerable part of their flavour; a part of it remaining along with the bitter matter, in the extract."

According to Bergius, the virtues of Tanfyl are tonic, stomachic, anthelmintic, emmenagogue, and resolvent; qualities usually attributed to bitters of the warm or aromatic kind; many of which we shall have occasion to notice under the genus Artemisia, which is closely allied to that of Tanacetum in its botanical character. Tanfyl has been much used as a vermisugte, and testimonies of its efficacy are given by many respectable physicians: not only the leaves but the seeds have been employed with this intention, and substituted for those of Santonicum.

We are told by Dr. Clark, that in Scotland Tanfyl was found to be of great service in various cases of gout; and Dr. Cullen, who afterwards was informed of the effects it produced upon those who had used the herb for this purpose, says, "I have known several who have taken it without any advantage, and some others who reported that they had been relieved from the frequency of their gout."


Tansy is also recommended in the hysteria, especially when this disease is supposed to proceed from menstrual obstructions.

This plant may be given in powder to the quantity of a dram, or more, for a dose; but it has been more commonly taken in infusion, or drunk as tea.

**DICTAMNUS ALBUS.** **WHITE FRAXINELLA,**

**Or, BASTARD DITTANY.**


The root is perennial, and sends off many long spreading fibres: the leaves are pinnated and large; pinnæ elliptical, veined, pointed, slightly serrated, stand in pairs, and are terminated by an odd one, which is the largest: the stalk is round, smooth, erect, and rises about a foot and a half in height: the bractæ are stipular, and placed singly at the base of the peduncles: the flowers appear from May till July; they are numerous, large, white, terminate the stem, and stand alternately upon long peduncles, which towards the top are bent downwards, and beset with small glands: the corolla is composed of five white petals, of an obvolutely oval shape, and inserted into the calyx.
calyx by long claws: the calyx is rough, and divided into five short segments: the filaments are ten, about the length of the corolla, marked with minute glands, and furnished with large anthers: the gynoecium is pentangular: the style short, tapering, and supplied with a pointed stigma: the seed vellums are five united capsules, each of which contains two small oval seeds.

This plant, which is commonly called Prasinella,* is a native of France, Germany, and Italy. It was cultivated here by Gerard, and frequently adorns the borders of our flower gardens, especially the red variety, which is the handkerchief plant. It emits a fragrant bituminous odour, which seems to be the essential oil of the herb, secreted by numerous small glands, with which the peduncles and filaments are abundantly furnished. These odorous effluvia are so very inflammable, that on the application of flame, they take fire, especially on the evening of a hot dry day.†

The root, which is the part directed for medicinal use, "when fresh, has a moderately strong, not disagreeable smell, but as met with in the shops it has scarcely any. To the taste it discloses a pretty strong and very durable bitterness, which is taken up both by watery and spirituous menstrua, and on insipidizing the filtered tinctures, remains entire in the extracts: the aqueous extract is in much larger quantity than the spirituous, and proportionally weaker in taste."‡

Formerly this root was used as a hemachic, tonic, and aecipharmic, and was supposed to be a medicine of much efficacy in removing uterine obstructions, and destroying worms; but its medicinal powers became so little regarded by modern physicians, that it had fallen almost entirely into disuse, till Baron Stoeck brought it into notice by publishing several cases of its success,† viz. in tertian intermittents, worms, (Junibraci) and menstrual suppurations. In all these cases he employed the powdered root to the extent of a scruple twice a day.

* From the resemblance its leaves have to those of the as.


He
He also made use of a tincture, prepared of two ounces of the fresh root digested in fourteen ounces of spirit of wine; of this twenty to fifty drops, two or three times a day, were successfully prescribed in epilepsies, &c. and when joined with fleece, this root, we are told, was of great service to chlorotic patients.

The Di€amnus undoubtedly is a medicine of considerable power; but, notwithstanding the account of it given by Stoeck, who seems to have paid little attention to its modus operandi, we may still say with Haller, "Nondum autem vires pro dignitate exploratus est." I. c.

**CANELLA ALBA. I. AURIF. LEAVED CANELLA.**


**THE stem of this tree rises very straight, from ten to fifty feet in height, and branched only at the top; it is covered with a whitish bark, by which it is easily distinguished at a distance from other trees in the woods where it grows: the leaves are placed upon short footstalks, and stand alternately; they are oblong, obtuse, entire, of a dark shining**
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Shining green hue, and thick like those of the laurel: the flowers are small, seldom opening, of a violet colour, and grow in clusters at the tops of the branches upon divided footstalks: the calyx is monophyllus, divided nearly to its base into three lobes, which are roundish, concave, incumbent, green, smooth, membranous, and persistent: the corolla is composed of five petals, which are much longer than the calyx, filiform, oblong, concave, erect, and two of them are somewhat narrower than the other three: the nectary is pitcher-shaped, of the length of the petals, and supports the antheræ instead of filaments, which are wanting: the antheræ are twenty-one, linear, parallel, distinct, single valved, and fixed longitudinally to the nectary: the germin is ovate, placed above the insertion of the corolla, and supports a cylindrical style, furnished with two obtuse rough convex stigmata: the fruit is an oblong berry, containing four kidney-shaped seeds of unequal size.

It appears a little surprising, that the Canella, which is a native of the West Indies, and of which figures have been given by Plukenet, Sclauer, Gatesby, Browne, and others, should have been generally confounded with the tree which produces the cortex Winteranu: even the younger Linnaeus, who describes this tree under the genus Winterania, from a specimen in the herbarium of Montin, has acknowledged that he could not discover how far it differed from the Drimys, or Wintera of Murray. The present figure, which is given on the authority of Dr. Swartz, who presented it to the Linnean Society, accompanied with a botanical history of the tree, will, we hope, re-

* "The whole tree (according to Dr. Swartz) is very aromatic, and when in blossom perfumes the whole neighbourhood. The flowers dried, and softened again in warm water, have a fragrant odour, nearly approaching to that of musk. The leaves have a strong smell of laurel. The berries, after having been some time green, turn blue, and become at last of a black glossy colour, and have a faint aromatic taste and smell. They are, when ripe, as well as the fruit of several kinds of laurel, very agreeable to the taste. See joined and Beld-pate Pigeons, (Columba Jamaicensis & lunecophaga) which feeding greedily upon them acquire that peculiar flavour so much admired in the places where they are found." I. e.

* Swartz observes, that the only tolerable figure among these is that of Browne, I. e.


* Vide l. c.

† Read before the Linnean in December 1788.
move every doubt concerning the true characters of Canella alba; and
by comparing the annexed plate with that published of the Winterana
aromatica, in the fifth volume of Medical Observations and Inquiries
by Drs. Fothergill and Solander,|| it may be observed how far the tree,
which produces the cortex winteranus, differs from that of our plant,
the bark of which is the official Canella alba. The latter appears from
Clusius to have been first introduced into Britain about the year 1600;†
the former was known in England twenty years before, and took its
name from William Winter, captain of one of the ships which accom-
panied Sir Francis Drake to the Straits of Magellan, from whence he
brought this bark to Europe in 1579. John Bauhin appears to be the
first who confounded the names of these barks, by stylizing the cortex
winteranus Canella alba; and as Sir Hans Sloane, who has given a
separate description of both trees, and was sensible of a difference in the
taste of their barks, seems to insinuate that this might depend upon the
place of growth, his remarks did not wholly remove the error.*

Professor Murray, in his 14th edition of the Systema Vegetabilium,
was the first who made a distinct genus of Canella, and thus corrected
the mistake of Linnaeus,‡ who, disregarding the evidence of the old
botanists,* combined two genera under the name of Laurus Winterana,†
but he afterwards made it a separate genus, and called it Winterania,*
a name by which it has been long universally, though improperly
distinguished. Mr. Aiton, who has followed Murray in considering
the Canella, as differing generically from the tree named after Winter,
 informs us, that it was cultivated by Mr. Phillip Miller, at Chelsea,
in 1739.‡

|| "Some Account of the Cortex Winteranus, or Magellanicus, by Dr. John Fothergill,
with a Botanical Description by Dr. Solander, and Some Experiments by Dr. Morris." p. 41.
† He says, "Ante paucos annos (1605) censuit exoticus cortex ineriri, cui nomen
Canellae albo indiderunt." Exot. lib. iv. cap. 4.
* Hift. vol. i. p. 460.
‡ Phil. Trans. No. 102. p. 462.
† P. 443. Though Murray has here said, "Cortex hujus est Canella alba officinae-
rum," yet the London College has not availed itself of this authority, no botanical
reference being given to Canella alba in the new pharmacopoeia.
* Among these we may notice Plukenet, who, speaking of these two trees, says,
"Varie inter se pluresum diversa plante per illarum ignorationem plane confunduntur." 

The
The officinal Canella alba is the bark of the branches of this tree, freed from its outward covering, and dried in the shade. It is brought to Europe in long quills, which are about three quarters of an inch in diameter, somewhat thicker than cinnamon, and both externally and internally of a whitish or light brown colour, with a yellowish hue, and commonly intermixed with thicker pieces, which are probably obtained from the trunk of the tree. This bark in taste is moderately warm, aromatic, and bitterish; its smell is agreeable, and resembles that of cloves. Its virtues are extracted most perfectly by proof spirit. "In distillation with water it yields an essential oil of a dark yellowish colour, of a thick tenacious consistence, difficultly separable from the aqueous fluid, in smell sufficiently grateful, though rather less so than the bark itself: the remaining deception, insipidated, leaves an extract of great bitterness, in consistence not uniform, seemingly composed of a resinous and gummy matter, imperfectly mixed. On insipidating the spirituous tincture, the spirit which distils has no great smell or taste of the Canella, but is so far impregnated with its more volatile oil as to turn milky on the admixture of water: the remaining extract retains the bitterness of the bark, but has little more of its warmth or flavour than the extract made with water."  

The use of Canella alba now supercedes that of the old bark of Winter, on the authority of both the London and Edinburgh pharmacopoeias. It has been supposed to possess a considerable share of medicinal power, and is said to be an useful medicine in the febrifuge, and some other complaints; but it is now considered merely in the character of an aromatic, and like many of the spices is chiefly employed for the purpose of correcting and rendering less disagreeable the more powerful and nauseous drugs. It is therefore an ingredient in the pulv. aloc. Pharm. Lond. and in the tinctura amara, vinum amarum, vinum rhei, &c. of the Pharm. Edinb. Swartz tells us that "this bark, together with the fruit of Caplicum, was formerly a common ingredient in the food and drink of the Caribs, the ancient natives of the Antilles; and even at present it makes a necessary addition to the meagre pot of the negroes."  

1 Lewis, M. M. p. 186.

SCILLA MARITIMA.
SCILLA MARITIMA.  
OFFICINAL SQUILL.  
Or, SEA ONION.


Sp. Ch.  S. nudiflora, bracteis refractis.

THE root is large, perennial, bulbous, coated, of a reddish hue, abounding with a tenacious juice, and furnished with many white fibres, which issue from its base: the stem is round, smooth, succulent, and rises two or three feet in height: the leaves are sword-shaped, radical, smooth, pointed, long, and of a deep green colour: the flowers are white, produced in a long close spike upon purplish peduncles, and appear in April and May: the bracteae are linear, twisted, and deciduous: it has no calyx: the corolla is composed of six petals, which are ovate, patent, with a reddish mark in the middle: the filaments are fix, tapering, shorter than the corolla, and furnished with oblong anthera, placed transversely: the germen is roundish, supporting a simple style about the length of the filaments, and furnished with a simple stigma: the capsule is oblong, smooth, marked with three furrows, and divided into three cells, which contain many roundish seeds.

This plant is a native of Spain, Sicily, and Syria, growing in sandy situations on the sea coast, and hence the name maritima.  It was first cultivated in England at the botanic garden at Oxford about the year 1648.  The red rooted variety has been supposed to be more

Vide, Hor. Oxon. ed. 1. p. 48.  efficacious
Efficacious than the white, and is therefore still preferred for medicinal use: it is to the taffe very nauseous, intensely bitter, and acrimonious, but without any perceptible smell. "Water, wine, proof spirit and rectified spirit, extract the virtues both of the fresh and the dry root. Nothing rises in distillation with any of these menstruas, the entire bitterness and pungency of the Squill remaining concentrated in the impregnated extract: the spirituous extract is in smaller quantity than the watery, and of a proportionably stronger almost fiery taffe."

"Alkalines considerably abate both the bitterness and acrimony of the Squill: vegetable acids make little alteration in either, though the admixture of the acid taste renders that of the Squill more supportable. These acids extract its virtue equally with watery or spirituous menstrua."

The root of the Squill, which appears to have been known as a medicine in the early ages of Greece, and has so well maintained its character ever since, as to be deservedly in great estimation, and of very frequent use at this time, seems to manifest a poisonous quality to several animals. In proof of this, we have the testimonies of Hillefeld, Bergius, Vogel, and others. Its acrimony is so great that even if much handled it exacerbates the skin; and if given in large doses, and frequently repeated, it not only excites nausea, torment, and violent vomitings, but it has been known to produce strangury, bloody urine, hyperacidity, cardialgia, haemorrhoids, convulsions, with fatal inflammation and gangrene of the stomach and bowels. But as many of the more active articles of the materia medica, by injudicious administration, become equally deleterious, these effects of the Scilla do not derogate from its medicinal virtues; on the contrary, we feel ourselves fully warranted in representing this drug, under proper management, and in certain cases and constitutions, to be a medicine of great

* It may be observed, that this red colour is only confined to the outer coats of the root.
* Lewis, M. M.

* Some refer its introduction to medical use to Epimenides; others to Pythagoras. Vide Haller, Hist. Bot. p. 12. It was sometimes called θάλαλα, and sometimes θαλαλία, and is noticed by Dioscorides, Hippocrates, Galen, Aëlius, Celsus, Pliny, Celsus Aurelianus, and the Arabian physicians.


No. 24. 4 N practical
practical utility, and real importance in the cure of many obstinate diseases. Its effects, as stated by Bergius, are incident diuretics, emetica, subpurges, hydragoga, expectorans, emmenagogia. In hydroptical cases it has long been esteemed the most certain and effectual diuretic with which we are acquainted; and in asthmatic affections, or dyspnea, occasioned by the lodgment of tenacious phlegm, it has been the expectorant usually employed. The Squill, especially in large doses, is apt to stimulate the stomach, and to prove emetic; and it sometimes acts upon the intestines, and becomes purgative; but when these operations take place, the medicine is prevented from reaching the blood vessels and kidneys, and the patient is deprived of its diuretic effects; which are to be obtained by giving the Squill in smaller doses, repeated at more distant intervals, or by the joining of an opiate to this medicine, which was found by Dr. Cullen to answer the same purpose. The Dr. further observes, that from a continued repetition of the Squill, the dose may be gradually increased, and the intervals of its exhibition shortened; and when in this way the doses come to be tolerably large, the opiate may be most conveniently employed to direct the operation of the Squill more certainly to the kidneys. In cases of dyspnea; that is, when there is an effusion of water into the cavities, and therefore that less water goes to the kidneys, we are of opinion, that neutral salt, accompanying the Squill, may be of use in determining this more certainly to the kidneys: and whenever it can be perceived that it takes this course, we are persuaded that it will also be always useful, and generally safe during the exhibition of the Squills to increase the usual quantity of drink.

The diuretic effects of Squills have been supposed to be promoted by the addition of some mercurial; and the less purgative preparations of mercury, in the opinion of Dr. Cullen, are best adapted to this purpose; he therefore recommends a solution of corrosive sublimate, as being more proper than any other, because most diuretic.

1 L. c. 2 All the authors who have written on these diseases, might here be cited.
1 We do not notice its use as an emetic, as we think it entirely superceded by the ipecacuanha.
2 This is mentioned on the authority of Dr. Cullen. M. M. v. ii. p. 558.
Cullen, i. c.

Where
Where the primæ vae abound with mucous matter, and the lungs are oppressed with viscid phlegm, this medicine is likewise in general estimation.

As an expectorant, the Squill may be supposed not only to attenuate the mucus, and thus facilitate its ejection, but by stimulating the secretory organs and mucous follicles, to excite a more copious excretion of it from the lungs, and thereby lessen the congestion, upon which the difficulty of respiration very generally depends. Therefore in all pulmonic affections, excepting only those of actual or violent inflammation, ulcer, and pain, the Squill has been experienced to be an useful medicine.

The official preparations of Squills are a conserve, dried Squills, a syrup, and vinegar, an oxymel, and pills. Practitioners have not however confined themselves to these; when this root was intended as a diuretic, it has most commonly been used in powder, as being in this state less disposed to nauseate the stomach; and to the powder it has been the practice to add neutral salts, as nitre, or crystals of tartar, especially if the patient complained of much thirst; others recommended calomel; and with a view to render the Squills less offensive to the stomach, it has been usual to conjoin an aromatic. The dose of dried Squill is from two to four or six grains, once a day, or half this quantity twice a day; afterwards to be regulated according to its effects. The dose of the other preparations of this drug, when fresh, should be four times this weight; for this root loses in the process of drying four-fifths of its original weight, and this loss is merely a watery exhalation.

"We must not, however, wish to observe here, that the drying of the Squill is a busines that requires much attention, as it may be readily over done, and thereby render the Squill entirely useless. This over drying in one way or other, happens more frequently than our apothecaries are aware of; and has led me to allow, that some operation on the stomach, some nausea excited by the Squill, is a necessary test of the activity of the portion of it employed." Cullen, l. c.


ARTEMISIA ABROTANUM.
ARTEMISIA ABROTANUM. COMMON SOUTHERNWOOD.


a A. caule erecto.


Cal. imbricatus, squamis rotundatis, conniventibus. Cor. radii nullae.

Sp. Ch. A. fruticosa, foliis setaceis ramosissimis.

THE root is perennial, woody, and fibrous: the stalk is shrubby, round, covered with smooth brown bark, ends off vertical branches, and rises two or three feet in height: the leaves are numerous, somewhat hoary, doubly and irregularly pinnate; pinnae, linear, long, narrow, entire, concave on the upper side, convex beneath, and stand upon long footstalks, which are also of this shape: the flowers are small, of a greenish yellow colour, and placed in close terminal spikes upon the branches: the calyx is imbricated, consisting of several membranous scales: the flowers are compound, composed of numerous florets; those in the centre, or disc, are hermaphroditic; but in the margin they are female: the corolla is tubular, and extremely minute; the filaments are five, short, and slender: the anthers are united, and form a hollow cylinder: the style is longer than the stamina, and furnished with a cleft reflexed stigma: the seeds are naked and solitary.

Southernwood
SHEEP WOOD.

Aegopodium

Tourn. Infl.

Plant. 945.

Abrotanum

Pulcherrimum

Cen.

Sheep wood is shrubby, with numerous branches, some slender, some short, long. The flowers are numerous, the margin minute: the style united, and antherina, and stamens naked and yellow.
Southernwood is a native of France, Spain, and Italy; it was cultivated here by Gerard, and its odour renders it so generally acceptable, that there are few gardens in which this plant is not to be found. Although it bears the cold of our winters very well, it so rarely flowers in Britain, that a specimen proper for delineation cannot without difficulty be obtained.

The leaves and tops of Southernwood, have a strong, and to most people an agreeable smell: its taste is pungent, bitter, and somewhat nauseous. These qualities are completely extricated by spirituous menstruum, the herb communicating to the spirit a beautiful green colour. Water extracts its virtues less perfectly, and the infusion is of a light brown colour. In distillation with water this plant affords but a small quantity of essiential oil; for from sixteen pounds of the fresh leaves scarcely three drams of this oil could be obtained.

The Annotanum mas &c femina were regarded by the ancients as medicines of considerable efficacy; the latter is referred to Santolina Chamæ-Cyparissus, Linn. (Common Lavender Cotton); the former is the species now under consideration, and has been esteemed to be stomachic, carminative, and deodorant: it is supposed to stimulate the whole system, more particularly that of the uterus. But though it still retains a place both in the London and Edinburgh pharmacopoeias, it is now rarely used, unless in the way of fomentation.

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* Lewis, M. M. p. 4.

ARTEMISIA ABSINTHIUM. COMMON WORMWOOD.


THE root is perennial, long, and fibrous: the stalks are round, channelled, somewhat downy, ligneous, rising two or three feet in height, and sending off several round branches: the leaves are compound, divided into many bluntish segments in a pinnated order, on the under side downy, of a whitish or pale green colour, and silky softness: the flowers are of a brownish yellow colour, pendent, and placed in numerous spikes, which stand alternately upon the branches: the calyx is composed of many oval scales: the florets are hermaphrodite and male, placed upon a villous receptacle, and in the structure of their different parts nearly resembling those described of the preceding species of Artemisia. This plant is a native of Britain, and grows about rubbish, rocks, and sides of roads.

The leaves of Wormwood have a strong disagreeable smell; their taste is nauseous, and so intensely bitter as to be proverbial.
The flowers are more aromatic and less bitter than the leaves, and
the roots discover an aromatic warmth without any bitterness.*

"The leaves give out nearly the whole of their finell and taste
both to aqueous and spirituous menstrua. Rectified spirit elevates
little from this plant in distillation: water brings over almost the whole
of its finell and flavour. Along with the aqueous fluid there arises
an essential oil, which finells strongly and tastes nauseous of the
Wormwood, though not bitter. The quantity of oil varies greatly,
according to the soil and secon in which the herb is produced."

"The watery extract loses the distinguishing finell and ill flavour
of the plant, but retains its bitterness almost entire. An extract,
made with rectified spirit, contains, along with the bitter, nearly the
whole of the nauseous part; water carrying off, in the evaporation,
al the oil in which the offensive flavour resides, while pure spirit
elevates very little of it."*

This species of Wormwood, which is thought by Professor Murray
to be the Absinthium ponticum of Dioscorides and Pliny,† may be
considered the principal of the herbaceous bitters. Its Virtus, in the
words of Bergius, is antiputredinosa, antacida, antihelmintica, re-
solvens, tonica, florachica.‡ And although it is now chiefly employed
with a view to the two last mentioned qualities, yet we are told of
its good effects in a great variety of diseases, as intermittent fevers,§
hypochondrias,|| obstruclions † of the liver and spleen, gout,‖ calculi,‖

* This plant communicates a bitter taste to the flesh and milk of cows and sheep
which feed on it. Lin. Flor. Suec. i. 325. The milk of a woman, who took the extract,

* Rammę from twenty-five pounds of the herb obtained six to ten drams of the oil.

† The extract, triturated with salt of tartar, emits a volatile odour; and hence
appears to contain sal ammoniacum. Sulzer. Diff. An in plantis fat essentiale ammoni-
cacum. Gott. 1769.

‡ Lewis, M. M. p. 6.

§ "Absinthium bathypicon herba sś vulgar cognita, Prestantisius in Ponto & Cappa-


|| Haller, l. c.

Lange, Dist. med. p. 111. † Haller, l. c. Bomare, Diet.


fever
fever, dropsy," worms, &c. Lindeolphe has ascertained, that by a continued use of this herb, great injury is done to the nervous system, from its narcotic and debilitating effects, which he experienced upon himself; observing also, that he could never take the extract or essence of Wormwood without being immediately affected with head-ach and inflammation of the eyes: and it is noticed both by him and his commentator, Stenzelius, that Absinthium produced similar effects upon many others. These narcotic effects of Wormwood have however been attributed to a peculiar idiocy, as numerous instances have occurred in which this plant produced a contrary effect, though taken daily for the space of six months. Dr. Cullen, speaking on this subject, says, "I have not had an opportunity of making proper experiments; but to me, with Bergius and Geditich, the odour of Wormwood seems temulentans, that is, giving some confusion of head: and formerly, when it was a fashion with some people in this country to drink Purl, that is, ale, in which Wormwood is infused, it was commonly alleged to be more intoxicating than other ales. This effect is improperly supposed to be owing to its volatile parts: but I am more ready to admit the general doctrine of a narcotic power; and I believe, from several considerations, particularly from the history of the Portland powder, that there is in every bitter, when largely employed, a power of destroying the sensibility and irritability of the nervous power."  

Externally Wormwood is used in diluent and antiseptic fomentations. This plant may be taken in powder, but it is more commonly preferred in infusion. The Edinburgh pharmacopeia directs a tincture of the flowers, which is, in the opinion of Dr. Cullen, a light and agreeable bitter, and at the same time a strong impregnation of the Wormwood.

2 Fehr, Hiera. pica, vol de Absinthe, analytica. p. 117. 
3 Heister in Hall. Dispr. anat. vol. 6. p. 713. 
5 De venenis. p. 547. 
6 Mat. Med. vol. 2. p. 81.
ARTEMISIA VULGARIS. MUG-WORT.


Sp. Ch. A. foliis pinnatifidis plantis incisis subitis tomentosis, racemis simplicibus recurvatis floribus radio quinquelloro.

The root is perennial, composed of numerous strong fibres: the stalk is erect, branched, angular, striated, reddish, and usually rises two or three feet in height: the leaves are irregularly and deeply divided into several laciniae or lobes, which are oval, pointed, on the upper side of a deep green colour, on the under downy, or covered with a cotton-like subulence: the flowers are small, purplish, and produced in spikes, which stand alternately, and rise from the bottom of the leaves: the calyx is composed of several narrow scales, which are purplish, woolly, and placed in an imbricated order: the florets are longer than the calyx, and upon a naked receptacle, and appear in August: the five florets of the circumference are female;

† Artemisia delia, ab Artemisia Malfoli Caria regis ura, quae haec fibri, ut loquitur Plinii l. 25. c. 7. p. 646, ad aptum, cum antea macta i.e. virginalis, quod viginti dea illi nomen delict, vos aurem. Sunt qui ab Artemide libitum cognominatum putent; quoniam privatum feminarum male, quibus actus i.e. Diana praebiit, medetur.

No. 25. 4 P those
those of the centre are hermaphrodite, and both agree in their structure with those of the other species already described.

Mugwort is a native of Britain, and is commonly found growing in waste grounds, and the borders of fields. It is divided into red and white varieties; the former is distinguished by a reddish tinge of the flake and flowers; in those of the latter they are of a pale green. "The leaves have a light agreeable smell, especially when rubbed a little; but scarcely any other than an herbaceous tinge. An extract made from them by water is likewise almost insipid; and an extract made by spirit has only a weak aromatic bitterness." Baierus informs us, in a dissertation on this plant, that by fermenting a large quantity of it, and afterwards distilling, and colothing the distilled water, a fragrant sapid liquor was obtained, with a thin fragrant oil on the surface. The flowery tops are considerably stronger than the leaves, and hence should seem to be preferable for medicinal use."

This plant, though rarely used at present, was by the ancients held in great estimation. Hippocrates very frequently mentions Artemisia; he thought it of great use in promoting uterine evacuations; with this intention it was also employed by Dioscorides; and Galen for this purpose used it in the way of fomentation; a practice which seems in some measure conformable to that of the Chinese women, who, as we are told, make a poultice of the leaves of this plant, mixed with rice and sugar, which in cases of amenorrhea, and hysteria, inferior bellarium ingerunt. If this herb however possesses any powers as an antisyphilitic or uterine, they are very weak; the London College has therefore properly expunged it from the materia medica.

Moxa is a subsance prepared in Japan from the dried tops and leaves of Mugwort, by heating and rubbing them betwixt the hands till only the fine internal lanuginous fibres remain, which are then combed and formed into little cones. These, used as cauteries, are

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* Lewis, M. M. p. 117.  
* De Morb. Mal. lib. 1.  
* Mat. Med. lib. 3. cap. 10.  
* Ten. Rhyno de Ather. p. 133.  
* This however is not the species of Artemisia from which the eastern Moxa is made, but that prepared from this plant in Germany was found to answer very well. See Eph. Nat. Cur. Dec. 3. A. 7. 8. App. 141.

It has also been made from the down of Verbacum.  

greatly
greatly celebrated in eastern countries for preventing and curing many disorders; but chronic rheumatisms, gouty, and some other painful affections of the joints, seem to be the chief complaints for which they can be rationally employed. The manner of applying the Moxa is very simple: the part affected being previously moistened, a cone of the Moxa is laid, which being set on fire at the apex, gradually burns down to the skin, where it produces a dark coloured spot: by repeating the process several times, an eschar is formed of any desired extent, and this on separation leaves an ulcer, which is kept open or healed up as circumstances may require.

It is said that the use of the Moxa was originally introduced by the Jesuits; but it is probably of greater antiquity. From remote times it has been the practice to cauterize the affected parts by various means. Hippocrates for this purpose not only used iron but flax, also a species of Fungus; and the Laplanders still prefer the Agaric, (Boletus ignarius) which they prepare and use in a similar way, as the Japanese do their Moxa. The Egyptians produced the same effects by means of cotton or linen cloth, and in Spain a Moxa is prepared from a species of the Echinops.

For a full account of these see Kämpfer’s *Amer. exot.*, *etc.*, &c. Abbé Grolée (Hist. of China) from whom it appears, that mirrors of ice or metal were used for the purpose of igniting the Moxa; and that the ancient Chinese made paper, and a kind of cloth, of the down of Artemisia.

See *Recueil d’observations curieuses*, tom. ii. p. 114.

*Lib. de offic. *§ 30.


**ARTEMISIA**
ARTEMISIA MARITIMA.   SEA WORMWOOD.


Sp. Ch.  A. folliis multipartitis tomentosis racemis cernenis floeculis feminis ternis.

THE root is perennial, spreading, and fibrous; the stems are procumbent, branched, about a foot in height, and covered with a white down or cotton: the leaves are numerous, irregularly divided into many segments, which are narrow, linear, and covered both above and below with a fine cotton-like substance, giving the whole plant a whitish appearance: the flowers are of a brownish yellow colour, and placed in pendent spikes: the calyx is composed of many roundish scales: three florets at the circumference are female, the others are hermaphrodite, and both in their structure resemble those of abisinthium.  It is a native of Britain, growing plentifully on the sea shore, and about salt marshes, and flowers in August and September.

This plant seems to have been formerly confounded with the A. pontica, or Roman Wormwood, as appears by Ray and Dale; their

"Abisinthium Londini & alibi in Anglia colitur nomen Ablintii Romani, non alter ab hoc differe putamus quam cultura & loco natali."  &c.  Illf.  p. 199.

Speaking of this plant, he says, "Muliercule Botanopole Londinenses Abisinthium romanum vocant."  Pharm.  p. 99.
specific differences however are very evident. Its taste and smell are considerably less unpleasant than those of the common Wormwood; and even the essential oil, which contains the whole of its flavour concentrated, is somewhat less ungrateful, and the watery extract somewhat less bitter, than those of the common wormwood. Hence it is preferred by the London College in those cases where the A. Absinthium is supposed to be too offensive to the stomach. But as the efficacy of these plants depends upon their sensible qualities, this species, though its virtues approach to those of common wormwood, yet from being less powerfully bitter, must be considered in a proportionate degree a less powerful medicine.

A conserve of the tops of this plant is directed by the London Pharmacopoeia.

"In its wild state it smell like Maum or Camphor, but in our gardens it is less grateful." 1

The smell of Wormwood, which is obtained from the ashes of the A. Absinthium, differs not from other vegetable fixed alkali, provided they be equally pure.

† It appears by Dioscorides, that the ancients believed it to disorder the stomach: — "Absinthium maium, quandam opus vocant, oft haeb pratenunbus senebas abrotoni pari sui dulcitudine, minus tellus festus hemunbus, subamars femacho inimica graveolens, & cum quandam calafclione astringens." 1. 3. c. 27.

ARTEMISIA SANTONICA. TARTARIAN SOUTHERN-WOOD.


No. 25. 4 Q


The root is perennial; the stem is round, smooth, branched, somewhat hoary, and rises about two feet in height; the lower leaves are divided into many narrow linear segments, standing in a pinnate order; those of the branches are fertile, narrow, and undivided; they are all of a pale green on the upper side, and whitish beneath; the flowers are roundish, brown, and placed in spikes upon short slender alternate peduncles; the calyx is composed of numerous narrow scales; the florets are male and female, placed upon a naked receptacle, and in their situation and structure agree with the other species of Artemisia already described. It is a native of Siberia, and flowers in September.

This species, which was first cultivated in England by Mr. P. Miller, A we obtained at the Royal Garden at Kew; but whether it is the official Santonicum, or not, seems very doubtful. *

It appears by the species plantarum, that though Linnaeus first considered this plant to be the Santonicum, afterwards however he changed his opinion, and referred it to another species, named Artemisia judaica; and in this he has been followed by Murray and Bergius; but as the evidence upon which this determination is founded, is admitted by Linnaeus himself to be still inconclusive, we have in conformity to the London College adopted the Artemisia as originally referred to.

* See Aiton's Hort. Kew.

* The following observation of Geoffroy on this subject is still, in some measure, applicable:—"Nulla quidem res in officinis magis usitata et cujus origo minus cognita fit;Nam in Gallia proveniunt, in Palatinis, in Aegypto, vel in Persia, aut in libero regno, Buitan, in India orientali remotissima." M. M. vol. ii. p. 406.


* He enumerates the seeds of this plant among those of the other plants hitherto not sufficiently ascertained. See his Preface to the Materia Medica.

The
The seed of Santonicum or Wormseed is small, light, oval, composed as it were of a number of thin membranous coats, of a yellowish green colour, with a call of brown; easily friable on being rubbed between the fingers, into a fine chaffy kind of substance.

These seeds are brought from the Levant; they have a moderately strong and not agreeable smell, somewhat of the wormwood kind; and a very bitter subacid taste. Their virtues are extracted both by watery and spirituous menstrua.

These seeds, in common with the other Artemisia, are esteemed to be stomatia, emmenagogue, and anthelmintic; but it is especially for the last mentioned powers that they have been generally administered; and from their efficacy in this way they obtained the name of Wormseed. Their quality of destroying worms has been ascribed solely to their bitterness; but it appears from Baglivi, that worms (lumbuci) immersed in a strong infusion of these seeds, were killed in five, and according to Redi, in seven or eight hours,\(^1\) while in the infusion of Wormwood, and in that of Aqaric the worms continued to live more than thirty hours; and hence it has been inferred that their vermifuge effects could not wholly depend upon the bitterness of this feed. To adults the dose in sub stance is from one to two drams twice a day. Lewis thinks that the spirituous extract is the most eligible preparation of the Santonicum for the purposes of an anthelmintic.


* Remarkable effect of the Santonicum in this way are related by Bentius:—"Puelleri cum decem, vermis venientis, sedmen Santonicum exhibu[I, fed per illud tempor quo suo uteratu, quae, fluximur, quae ev cognito, uti, cuendum diutius, unde etiam fluxus ipsete collavit." M. M. p. 668.

\(^1\) Baglivi, Op. p. 60. Recl de animal. viv, p. 159.

**DATURA STRAMONIUM.**
DATURA STRAMONIUM. COMMON THORN-APPLE.


The root is large, annual, white, divided, and fibrous: the stalk is thick, erect, round, smooth, shining, below simple, above dichotomous, and rises about two feet in height: the leaves are alternate, large, broad towards the base, pointed at the extremity, indented, and formed into several obtuse angles, smooth, of a dark green colour, and standing upon strong round short footstalks: the flowers are solitary, large, white, and placed on short erect peduncles at the junction of the branches: the calyx is composed of one leaf, tubular, pentangular, and divided at the brim into five teeth: the corolla is white, monopetalous, funnel-shaped, plicate, cut at the margin into five teeth, and furnished with a long cylindrical tube: the five filaments are tapering, about the length of the calyx, adhering to the tube, and supplied with oblong flat antherae: the germen is oblong, and placed above the insertion of the corolla: the style is filiform, equal in length to the filaments, and terminated by a thick blunt stigma: the capsule is large, oval, fleshy, beset with spines, divided into the cells, and four valves, which contain numerous kidney-shaped seeds. It grows wild in
...
in this country, about dunghills, rubbish, and in gardens, flowering in July.

This plant has been long known as a powerful narcotic poison; its congener, the D. Metel, is thought to be ξεπηγούμενος των Theophrastus and Dioecorides, and is therefore the species received by Linnaeus into the Medicinae. The Stramonium, in its recent state, has a bitterish taste, and a smell somewhat resembling that of poppies, or as called by Bergius, narcotic, especially if the leaves be rubbed between the fingers. By holding the plant to the nose for some time, or sleeping in a bed where the leaves are strewn, giddiness of the head and fluor are said to have been produced.

Instances of the deleterious effects of this plant are numerous, especially of the seeds, some of which we shall relate for the purpose of fataing them which they produce. A man, aged sixty-nine, labouring under a calculous complaint, by mistake boiled the capsules of the Stramonium in milk, and in consequence of drinking this decoction was afflicted with vertigo, dryness of the fauces, anxiety,

* Stecher, l. c. p. 5.


The circumstances recited in the following advertisement, published by my friend Dr. Haygarth, shew the necessity of adopting the precautions, which he judiciously recommends, and which ought to be made public.

"Gardeners are particularly desired to take care never to throw poisonous plants out of gardens into the streets, lane, or even the fields to which people can have access. Poor children, for diversion, curiosity, or hunger, are prompted to eat all kinds of vegetables which come in their way, especially seeds, fruits, or roots. This caution does not proceed from fanciful speculation, but from actual mischief, produced by the cause here specified. A physician has lately seen several children poisoned with the roots of the Aconite or Monkhood, thrown into an open field in the City of Chester, and with the seeds of the Stramonium or Thorn Apple, thrown into the street. The former were seized with very violent complaints of vomiting, an alarming pain of the head, stomach, and bowels; the latter with blindness, and a kind of madness, biting, scratching, shrieking, laughing, and crying, in a frightful manner. Many of them were very dangerously affected, and escaped very narrowly with life. Thele, and all other, poisonous plants, taken out of gardens, should be carefully buried or burned."

No. 25. 4 R followed
followed with loss of voice and senses; the pulse became small and quick, the extremities cold, the limbs paralytic, the features disforted, accompanied with violent delirium, continual watchfulness, and a total suppression of all the evacuations; but in a few hours he was restored to his former state of health.

Every part of the plant appears to possess a narcotic power, but the seeds are the only part, of whose fatal effects we find instances recorded. Their soporiferous and intoxicating qualities are well known in eastern countries, and if we can credit the accounts of some authors, have been converted to purposes the most licentious and dishonourable. The internal use of Stramonium, as well as that of several other deleterious plants which we have had occasion to notice, was first ventured upon and recommended by Baron Stoerck, who gave an extract prepared of the expressed juice of the plant, with advantage, in cases of mania, epilepsy, and some other convulsive affections. But as the success of this plant, even in the hands of the Baron, was not remarkable enough to claim very extraordinary praise, his account of the efficacy of the Stramonium probably would not have procured it a place in the Materia Medica of the Edinburgh Pharmacopoeia, had its character rested solely upon his representation. Odheus tells us, that of fourteen patients suffering under epileptic and convulsive affections, to whom he gave the Stra-


According to Haller, "Deliciae facit utique & fopores, inde amemiam, manum, convulsiones, paralysia attuum, sudores frigidas, fitim vehementem, tremores." l. c.

* For that of the root, see Rajh, l. c. For that of the leaves, Dechlini, Comm. Nov. l. c. p. 15.


It was a custom with the Chinese to infuse the seeds in beer. Spratt, Hist. of the Royal Society, p. 162.


* Lib. de Stram. St. published in 1762.
stramonium in an hospital at Stockholm, eight were completely cured, five were relieved, and only one received no benefit. Bergius relates three cases of its success, viz. one of mania, and two of convulsions. Reef, a Swedish physician, mentions its utility in two cases of mania. Wedenberg cured four girls, affected with convulsive complaints, by the use of this medicine. Other instances of the kind might be added. Greding, however, who made many experiments, with a view to ascertain the efficacy of this plant, was not so successful; for out of the great number of cases in which he employed the Stramonium, it was only in one instance that it effected a cure; and he objects to the cases related by Dr. Odhelius, on the ground that the patients were dismisssed before sufficient time was allowed to know whether the disease would return again or not. In this country we are unacquainted with any practitioners whose experience tends to throw any light on the medical character of this plant. It appears to us, that its effects as a medicine are to be referred to no other power than that of a narcotic; and Dr. Cullen, speaking on this subject, says, "I have no doubt that narcotics may be a remedy in certain cases of mania and epilepsy; but I have not, and I doubt if any other person has, learned to distinguish the cases to which such remedies are properly adapted. It is therefore that we find the other narcotics, as well as the Stramonium, to fail in the same hands in which they had in other cases seemed to succeed. It is this consideration that has occasioned my neglecting the use of Stramonium, and therefore prevented me from speaking more preciously from my own experience on this subject."  

The extract of this plant has been the preparation usually employed, and from one to ten grains and upwards, a day; but the powdered leaves, after the manner of those directed of hemlock, would seem for the reason there given, to be a preparation more cer-

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1 In his Mat. Med. he also says, "Deliium post pueroam sape curavi cum Datura, ubi alia faciuntur," adding, "Pariter illa profuit ad veras idem fixam ex maceore cum deliratione manifesta conjunctus," p. 122.


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tain and convenient. Greding found the strength of the extract to vary exceedingly; that which he obtained from Lu lwig, was a much more powerful medicine than that which he had of Stoeck.

Externally the leaves of Scabium have been used as an application to inflammatory tumours and burns; in the latter a remarkable influence is noticed by Gerard. i.e.

VERBASCUM THAPSUS. GREAT BROAD-LEAVED MULLEIN.


Sp. Ch. V. foliis decurrentibus utrinque tomentosis caule simplici.

THE root is biennial, long, divided, and descends deeply into the ground: the stalk is simple, erect, round, rigid, hairy, rises two or three feet in height, and is irregularly beset with leaves, which are large, without footstalks, at the base decurrent, or running along the stem, oblong or oval, somewhat pointed, indented at the margin, of a pale green colour, and covered on both sides with thick down, or white soft hairs; the bracteae are lance-shaped, with narrow points, hairy on the under side, on the upper smooth, and longer than the calyx: the flowers are yellow, and produced in long close terminal inclining spikes: the calyx is divided into five pointed segments, which
which are hairy on the outside: the corolla is monopetalous, yellow, divided at the limb into five unequal segments, which are blunt, oval, veined, and slightly indented at the edges: the five filaments are hairy, of unequal length, and furnished with double reddish anthers: the germen is roundish, downy, and supports a simple style, crowned with a compressed stigma: the capsule is oblong, separated into two cells and valves, and contains many small angular seeds. It is a native of England, and usually grows on the banks of ditches, and flowers in July.

The Verbascum, according to C. Baulin, is the plant of Dioscorides: it ranks with the natural order Solanaceae, but does not seem to possess those narcotic powers for which this order is distinguished.* The leaves have an herbaceous, bitterish, subacridine, tallow, but no peculiar smell: upon being chewed they discover a mucilaginous quality; and hence they are recommended as emollients both internally and externally. In the way of fomentation and cataplasm they are said to be an useful application to haemorrhoidal tumours; also for promoting the resolution or suppuration of glandular indurations.b

Catarrhal coups and diarrhoeas are the complaints for which the Verbascum has been internally prescribed. Dr. Home tried it in both, but it was only in the latter disease that this plant succeeded. He relates four cases in which a decoction of Verbascum was given; and from which he concludes, that it "is useful in diminishing or stopping diarrhoeas of an old standing, and often in easeing the pains of the intestines. These acquire a great degree of irritability; and the ordinary irritating caudes, aliment, bile, dilution from air, keep up a quicker peristaltic motion. This is obviated by the emolient and perhaps gentle astringent qualities of this plant."c

The decoction was prepared of two ounces of the leaves, with a quart of water, of which four ounces were given every three hours. The flowers of this plant have likewise been employed medicinally, having been supposed to possess anodyne and pectoral virtues: it is probable, however, that neither the leaves nor flowers deserve to be considered as medicines of much efficacy.

* A ἄνθος, i.e., quasi ἄνθος, flamma, quia hujus proelychiis fuit et C. Baulin, l.c.
* We are told, however, that by the seeds of this plant fillies become so softened as to dissolve themselves; to be taken out of the water by the hand. Naccius, Vide Bergius, Med. Med. p. 117. * See Ann. M. M. vol. i. p. 488. * Clinical Ex. & Hift. sec. 22.

In pulmonary complaints of cattle the Verbascum was found of great use, and hence is by Gerard called Cow's Lung-wort.

No. 26. 4 8

QUERCUS
QUERCUS ROBUR. COMMON OAK.


* Arborea, pedunculis elongatis (pedunculata) *Aiton, Hort. Kew.*

* Arborea, fructibus subtilissimis (familis) *Aiton, Hort. Kew.*

* Frutescens, ramis virgatis, fructibus specilibus (humilis) *Aiton, l.c.*

DWARF COMMON OAK TREE.


Fem. Cal. 1-phyllos, integerrimus, lebar. *Cor. o.*

*Styli 2-5.* *Sem. 1,* ovatum.

Sp. Ch. Q. foliis oblongis glabras sinnatias, lobis rotundatis, glan-

THIS tree frequently rises to a very considerable height, & sends off

* An Oak tree, in the parish of Little Shelley, Worcestershire, measured in cir-
cumference, at about two yards from the ground, 22 feet 4 inches, and close to the ground
nearly 48 feet. (Hollfear).—Of one growing in 1764, in Bromfield Wood, near

Ludlow, Shropshire, the trunk measured 68 feet in girth, and 43 in length: this tree,
allowing 90 square feet for the larger branches, contained 1455 feet of thick timber.
(Lightfoot).—The girth of the Green Dale Oak, near Welbeck, at eleven feet from
the ground, was 38 feet; and one growing at Cowthorpe, near Wetherby, Yorkshire,
measured 78 feet in circumference close to the ground. (Hunt. Evol.) See Withering, l.c.

* This reminds us of the Oak alluded to by Virgil:

* & quantum vertice ad auras


Ampl.
Quercus robur

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strong branches, and is covered with rough brown bark: the leaves are oblong, broader towards the end, deeply cut or finnate at the edges, forming obtuse lobes, and stand upon short footstalks: the flowers are very small, and are male and female upon the same tree: the calyx of the male flowers is divided into five, six, or seven segments, which are pointed, and often cloven: there is no corolla: the filaments are from one to two inch, and supplied with large double antherae: the calyx of the female flower is membranous, hemispherical, and composed of numerous imbricated pointed segments: there is no corolla: the stigmas are from two to five, and furnished with simple permanent stigmatata: its fruit is a nut, which is oblong, fixed to a short cup, and ripens in October, but the flowers appear in April.

This valuable tree is well known in to be a native of Britain, where it has in some instances acquired an extraordinary magnitude; its wood is of general use in carpentry, and by uniting hardness with such a degree of toughness as not easily to splinter, has been long justly preferred for the purpose of building ships. The astringent effects of the Oak were sufficiently known to the ancients, by whom different parts of the tree were used; but it is the bark which is now directed for medicinal use by our pharmacopoeias. To this tree we may also refer the Gally, or Galls, which are produced from its leaves by means of a certain insect.

Oak bark manifests to the taste a strong astringency, accompanied with a moderate bitterness, qualities which are extracted both by water and by rectified spirit. In universal use and preference in the tanning of leather is a proof of its great astringency, and like other astringents it has been recommended in agues, and for restraining haemorrhages, alvine fluxes, and other immoderate evacuations. A decoction of it has likewise been advantageously employed as a gargle, and as a fomentation or lotion in procidentia recti et uteri. Dr. Cullen tells us, that he has frequently employed the decoction with success in slight tunefactions of the mucous membrane of the fauces, and in

b Oak saw dust is the principal indigenous vegetable used in dyeing fustian. All the varieties of dyes, and different shades of brown, are made with oak saw-dust, variously managed and compounded. Oak ashes are likewise used in dying, as a substitute for galls. An infusion of the bark, with a small quantity of copperas, is used by the common people to dye woollen of a purplish blue, which is sufficiently durable. Withering, &c.
prolapfsus uvulae, and cynanche tonsillaris, to which some people are liable upon the least exposure to cold; and in many cases this decoction, when early applied, has appeared useful in preventing these disorders. It must be remarked however, that the Dr. almost constantly adds a portion of alum to these decoctions.†

Some have supposed that this bark is not less efficacious than that of the Cinchona, especially in the form of extract; but this opinion now obtains little credit, though there be no doubt that Oak bark may have the power of curing intermittents.‡

Galls, which in the warm climate of the East are found upon the leaves of this tree, are occasioned by a small insect, with four wings, called Cynips querci folii, which deposits an egg in the substance of the leaf, by making a small perforation through the under surface. The ball presently begins to grow, and the egg in the centre of it changes to a worm; this worm again changes to a nymph, and the nymph to the flying insect above mentioned,§ which by eating its passage out leaves a round hole: and those galls which have no holes, are found to have the dead insect remaining in them.

Two sorts of galls are distinguished in the shops, one said to be brought from Aleppo, the other from the southern parts of Europe. The former are generally of a bluish colour, or of a greyish, or black, verging to blueufes, unequal and warty on the surface, hard to break, and of a close compact texture: the others are of a light brownish or whitish colour, smooth, round, easily broken, less compact, and of a much larger size. The two sorts differ only in strength.

† Dr. Cullen tried also a solution of the alum alone, "but it did not prove so effectual." See Med. Med. vol. ii. p. 45.

‡ "I have employed the Oak bark in powder, giving it to the quantity of half a dram every two or three hours during the intermissions of a fever; and, both by itself, and joined with camomile flowers, have prevented the return of the paroxysms of intermittents." Cullen, i. e.

§ Many other excrescences are produced on this tree, and the insects which inhabit it are very numerous. For an enumeration of these, see Withering, i. e.

We have already noticed that the Oak in some parts of the East distills a species of manna, (p. 105) so that the words of Virgil seem literally verified: —

"Et dura quercus sudabunt roséida mella." — Bih. iv. 30.
two of the blue galls being supposed equivalent in this respect to three of the others.¹

Galls appear to be the most powerful of the vegetable astringents, striking a deep black when mixed with a solution of ferrum vitriolatum, and therefore preferred to every other sublimate for the purpose of making ink. As a medicine, they are to be considered as applicable to the same indications as the querci cortex, and by possessing a greater degree of astringent and styptic power, seem to have an advantage over Oak bark, and to be better suited for external use. Reduced to fine powder, and made into an ointment, they have been found of great service in haemorrhoidal affections.² Their efficacy in intermittent fevers was tried by Mr. Poupart, by order of the Academy of Sciences, and from his report it appears, that the Galls succeeded in many cases; and also that they failed in many other cases, which were afterwards cured by the Peruvian bark.³

¹ Lewis, M. M. ² See Galen, l. i. ³ See Mem. pour Pan. 1702.

JUGLANS REGIA. COMMON WALNUT-TREE.


Fram. Cal. 4-sidus, superus. Cor. 4-partita. Styli 2. Drupae, nucleo fulcato.

Sp. Ch. J. foliolis ovalibus glabris subferratis subaequalibus.

No. 26. ¹ T ¹ THIS
Thus is a large tree, and usually sends off many strong spreading branches, covered with a greyish bark: the leaves are large, pinnated, composed of several pairs of opposite pinnae, with an odd one at the end; they are oval, entire, nerved, veined, pointed, of a pale green colour, and stand upon short footstalks: the flowers are male and female upon the same tree, appearing in April and May, and the fruit ripens about the end of September: the male flowers are placed in a close cylindrical catkin: the calyx is monophyllous and squamous: the corolla is divided into five oval petals: the filaments are numerous, (about eighteen) short, and furnished with erect pointed anthères: the female flowers are generally three together: the calyx is divided into four segments, which are erect, short, evanescent, and stand upon the germin: the corolla is separated into four segments, which are pointed, erect, and longer than the calyx: the germin is oval, and placed below the corolla: the two styles are very short: the stigmata are large, expanding, reflexed, and indented: the fruit is of the drupaceous kind, large, unilocular, containing a large roundish nut, which is too well known to require a description here.

This tree, which is a native of Persia, has been long cultivated in this country, and bears our winters very well. Linnaeus describes its leaves as somewhat serrated; but this we have never observed, and therefore with Haller would rather substitute the word integerrimus for sub serratus. The wood is of a dark colour, and beautifully variegated, especially that of the root, and by being hard enough to admit of polishing, was much used by Cabinet-makers before the introduction of mahogany.

The unripe fruit, which has an astringent bitterish taste, and has been long used as a pickle, is the part directed for medicinal use by the London College, on account of its anthelmintic virtues. Its effects in destroying worms seem confirmed by the testimony of several authors: and in proof of its possilling this vermifuge power, we are told

* We may notice for curiosity a notion which formerly prevailed: Ut nuxes in primum annum copiosis proveniant, non est hodie apud rusticos quotannis, ut nuxes perticis decantantur. Hinc non inconcinni quidam alludendo vocabunt.

Nux, amina, mulier finili sunt legge ligata:
Hac tria nil sustinitur, it verbena velant.

Vide Ray, l.c.

* Plater, Fischer, Andry, and others.

that
that water, in which the green shells of Walnuts have been macerated, on being poured in a garden, was found to drive all the earth worms together as far as the water extended; and that the worms by being immersed in a strong infusion of these shells were immediately seized with spasms, and died in two minutes afterwards. An extract of the green fruit is the most convenient preparation, as it may be kept for a sufficient length of time, and made agreeable to the stomach of the patient by mixing it with cinnamon-water. This fruit, in its immature state, is also said to be laxative, and of use in aphthous affections and sore throats.

To answer these purposes, the Wittemberg Pharm. directs a rob to be prepared of its juice.

The kernel of the Walnut is similar in its qualities to that of the almond and hazel-nut, and affords an oil which amounts to half the weight of the kernel: according to De la Hire, this oil does not congeal by cold, and answers the medicinal purposes of the oil of almonds.

* Vinegar, in which Walnuts have been pickled, we have found to be a very useful gargle.
* Fitcher, l. c.
* According to the Salernitan maxim, 'max, eaten after fish, promote digestion.'
* 'Pot pikes not fit, potus caries calces elio.'

**ÆSCULUS HIPPOCASTANUM. COMMON HORSE CHESNUT.**


Sp. Ch. A. foliolis septenis.

**THIS**
'The tree frequently grows to a great height, and from the upper part of the trunk usually sends off numerous spreading branches, covered with rough brown bark: the leaves are digitated, composed commonly of seven large lobes, which are long, obversely ovate, serrated, ribbed, of a pale green colour, and proceed from a common centre attached to a long footstalk: the flowers terminate the branches in large conical spikes, and make a beautiful appearance: the calyx is tubular, and divided at the brim into five short blunt segments: the corolla consists of five petals, which are roundish, spreading, undulated at the edges, inflected in the calyx by narrow claws, and of a fine white colour, irregularly spotted with red and yellow: the filaments are seven, tapering, about the length of the corolla, bending at the top, and supplied with pointed anthers: the germen is round, supporting a short style, furnished with a pointed stigma: the capsule is round, tough, fleshy, beset with spines, divided into three valves, and containing two roundish compressed seeds. It is a native of the northern parts of Asia, and flowers in April and May.

Though the Caflamea was well known to the ancients, yet Matthiolius seems to be the first author who describes the Horse Chestnut, which was brought into Europe about the middle of the sixteenth century, and was so scarce in the time of Clusius, that there was then but one tree known at Vienna; which being too young to bear fruit, nuts were obtained from Constantinople in 1588; after which this tree was very generally propagated. It was cultivated in England by Mr. John Tradescant in 1633, and is now very common in this country. The wood is white, soft, soon decays, and is therefore of little value. The fruit in appearance resembles that of the Spanish Chestnut, and is eaten by sheep, goats, deer, oxen, and horeses.'

It


* The ripe capsule seldom contains more than one, but on being examined in its embryo state, two are constantly found. *Lin. Gen. Plant.

* See his Epist. medicinal. op. comm. p. 101. 115. Afterwards in Comm. in Dioscorid.


* Horses are said to eat this fruit greedily, and by it to have been cured of coughs and pulmonary disorders, and hence the name Horse Chestnut. For the purpose of fattening cattle, and particularly sheep, it has been thought necessary to macerate the nuts in caustic
It contains much farinaceous matter, which by undergoing a proper process, so as to divest it of its bitterness and acrimony, probably might afford a kind of bread: starch has been made of it, and found to be very good: it appears also to possess a sapaneous quality, as it is used, particularly in France and Switzerland, for the purpose of cleaning woollens, and in washing and bleaching linens.  

With a view to its errhine power the Edinburgh College has introduced it into the Materia Medica: as a small portion of the powder, snuffed up the nostrils, readily excites sneezing; even the infusion or decoction of this fruit produces this effect; it has therefore been recommended for the purpose of producing a discharge from the nose, which, in some complaints of the head and eyes, is found to be of considerble benefit.

On the Continent the bark of the Horse Chestnut-tree is held in great estimation as a febrifuge, and upon the credit of several respectable authors appears to be a medicine of great efficacy. Zannichelli at Venice was the first, who published its successful use in various cases of intermittents; since which its good effects have been confirmed by Leidenroft, Peipers, Junghans, Coste and Willemet, Sabarot De La Varniere, Turra, Buchholz, and others: from whom it appears, that this bark may be substituted for the Peruivan bark in every case in which the latter is indicated, and with equal, if not superior, advantage.

caucic alkali, in order to take off the bitterness, afterwards to wash them in water, and then boil them to a paste. (See Bon Mum. de l'Acad. 1720. p. 460.) Lime water was also found to answer. (See Hist. de la Société R. de Montpellier. tom. ii. p. 57.) But if the nuts are cut and mixed with oats or bran, this purpose may be effected with less trouble. Hennou Mag. 1779. p. 226.

Marcandier, Recherches sur les vegetaux nourrissants, p. 176. 218.


J. Jac Zannichelli Lettera intorno alle Facolta dell' Ippocoffana, &c.

No. 26.

The
The bark, intended for medicinal use, is to be taken from those branches, which are neither very old nor very young, and to be exhibited under similar forms and doses, as directed with respect to the cortex peruvianus. It rarely disagrees with the stomach; but its astringent effects generally require the occasional administration of a laxative.

MORUS NIGRA. COMMON MULBERRY TREE.


THIS tree never grows to a considerable height, but sends off several crooked branches, and is covered with rough brown bark: the leaves are numerous, heart-shaped, serrated, veined, rough, of a bright green colour, and stand upon short footstalks: the flowers are male and female upon the same tree: the male flowers are placed in close roundish catkins, each floret composed of a calyx, divided into four leaves, which are oval, concave, and erect: there is no corolla: the filaments are four, longer than the calyx, and furnished with simple anthers: the calyx of the female flower is divided into four

* This is not constantly the case, as it sometimes happens that all the flowers are male, or female, and consequently barren.

obtuse
obtuse persistent segments: there is no corolla: the germen is roundish, and supports two rough styles, supplied with simple stigmata: the fruit is a large succulent berry, composed of a number of smaller berries, each containing an oval seed, and affixed to a common receptacle. It flowers in June, and its fruit ripens in September.

The Mulberry-tree is a native of Italy, and is now cultivated in most parts of Europe, not only for the grateful fruit which it affords, but in many places for the more lucrative purpose of supplying Silk-worms with its leaves, upon which they feed.

The ripe fruit abounds with a deep violet-coloured juice, which in its general qualities agrees with that of the other acido-dulces, allaying thirst, partly by refrigerating, and partly by exciting an excretion of mucus from the mouth and fauces; a similar effect is also produced in the stomach, where, by correcting putrefecency, a powerful cause of thirst is removed. This is more especially the case with all those fruits in which the acid much prevails over the saccharine part, as the currant, which we have already noticed; and to which the medicinal qualities of this fruit may be referred; but both these, and most of the other summer fruits, are to be considered rather as articles of diet than of medicine. The London College directs a syrupus mori, which is an agreeable vehicle for various medicines.

The bark of the root of the Mulberry-tree has an acrid bitter taste, and potentiates a cathartic power. It has been successfully used as an anthelmintic, particularly in cases of Tænia. The dose is half a dram of the powder.

* G era had the first who is known to have cultivated it in England.
* The leaves of the white Mulberry are preferred for this purpose in Europe; but in China, where the silk silk is made, the silk worms are fed with those of the Morus tatarica. (Forster, in a letter to Professor Murray. See App. Med. vol. iv. p. 597. Dated 1787.) From the bark of another species of Mulberry, (M. papyrifera) the Japanese make paper, and the inhabitants of some of the islands of the South Sea make a kind of cloth.
* Page 207. See also Rubus and Citrus.
* Vide, Andry, de la generation des vers, &c. p. 172.

FICUS CARICA.
FICUS CARICA.  COMMON FIG-TREE.


Masc. Cal. 3-partitus. Cor. o. Stum. 3.

Fem. Cal. 5-partitus. Cor. o. Pist. i. Sem. 1.

Sp. Ch. F. foliis palmatis.

THE Fig-tree is covered with smooth brown bark, and sends off many spreading branches: the leaves are large, succulent, smooth, irregularly divided into five lobes, of a deep green colour, and stand upon strong footstalks. The fruit, in its early stage, serves as the common receptacle, and contains upon its inner surface all the florets, which are both male and female; the former has the calyx (proper) divided into three segments, which are lance-shaped, erect, and equal: there is no corolla: the filaments are three, brifly, of the length of the calyx, and furnished with double anthers. The calyx (proper) of the female flower is divided into five segments, which are pointed, and nearly equal: there is no corolla: the germin is oval: the style is tapering, in' flexed, and furnished with two pointed reflexed stigmata: the calyx is oblique, and contains in its bosom a roundish compressed seed. It is a native of the south of Europe, and commonly produces its flowers in June and July.

The
Ficus Carica
Published by D.M. Buchholz 1793
From history, both sacred and profane, the Fig-tree appears to have been known in the most early times. It has been long cultivated in England, and if screened from the north-east winds, commonly ripens its fruit here. The Fig, which has always been found a wholesome food, was by the ancients ripened or brought to perfection by Caprification; a practice which in some countries is still continued. It had been observed, that the fruit of this tree frequently withered and dropped off before it arrived at a state of maturity, and upon examination it was discovered that those figs succumbed best which had been perforated by certain winged insects, which therefore were supposed to be instrumental in ripening the fruit. This gave rise to caprification, which formerly consisted in tying near the young figs the fruit of the wild fig tree, in which the flies above mentioned breed in abundance, and these insects, upon acquiring sufficient strength, issue from the wild fruit, and by penetrating the young figs produce the effect intended. That this insect, which by the ancients was called Pienes, or Culex, and by Linnaeus, Cynips Pienes, produced this desirable effect, is generally admitted; but how it is to be explained has been the subject of some dispute.

To prevent ripe Figs from running into putrefaction, it is usual to dry them; which may be done either by the heat of the sun, or by means of an oven: the latter way is preferred, especially when the fruit has been caprified, as the larva of the cynips is destroyed by the heat. The best Figs are imported from the southern parts of Europe in small chests, and are compressed into a circular form, of a yellowish colour, and filled with a viscid sweet pulp, in which are lodged numerous small yellow lenticular seeds. The surface of the Figs is commonly covered with a saccharine matter, which exudes from the fruit, and hence they have been named Carica pingues, or fat Figs.

The recent fruit, completely ripe, is soft, succulent, and easily digested, unless eaten in immoderate quantities; when it is apt to occasion flatulence, pain of the bowels, and diarrhoea. The dried fruit is pleasant to the taste, and is more wholesome and nutritive.

* See Thesophrastus, Sidonia, Pliny, and others.


No. 27. 4 X  Figs
Figs are supposed to be more nutritious, by having their sugar united with a large portion of mucilaginous matter, which, from being thought to be of an oily nature, has been long esteemed an useful demulcent and pectoral; and it is chiefly with a view to these effects that they have been medicinally employed.

Figs are directed by the London Pharm. in the decoctum hordei compositum, and in the elecamnarium lenitivum. Externally applied they are supposed to promote the suppuration of tumours, and hence have a place in maturating cataplasmis; with this intention they are also sometimes used by themselves, as warm as they can easily be borne, to phlegmons of the gums, and other parts where a poultice cannot conveniently be applied.

**AMOMUM REPENS, OFFICINAL CARDAMOM.**

**SEU CARDAMOMUM.**


**Clas:** Monandria. **Ord.** Monogynia. **Lin. Gen. Plant. 2.**

**Eff. Gen. Ch.** Cor. 4-fida: lacinia prima patente.

**Sp. Ch.** A. scapis ramosis elongatis decumbentibus.

**Smith. Syf. Veg. ined.**

THE root is perennial: the stalks are simple, sheathy, erect, grow to a considerable height, and beset with leaves, which are lance-shaped, large, entire, acutely pointed, ribbed, and stand alternately upon the sheaths of the stalk: the flower stalk proceeds immediately from
from the root, and creeps along the ground; it is commonly about a foot and a half in length, articulated, in a zig-zag form,* and producing numerous flowers, which are placed upon divided filipulated peduncles, arising from the articulations: the calyx is small, and obscurely divided into three teeth at the margin: the corolla is monopetalous, composed of a narrow tube, divided at the mouth into four segments; of these the three outermost are long, narrow, uniform, and of a straw colour, but the central one, which has been considered as a nectary, is large, broad, concave, of an irregular oval shape, and marked with violet coloured stripes: the filament is membranous, strap-shaped, shorter than the segments of the corolla, to the top of which the anthera is joined: the germin is roundish, and placed below the infection of the tube of the corolla: the style is filiform, of the length of the filament, and supplied with an obtuse stigma: the capsule is triangular, divided into three cells and valves, containing several small dark coloured seeds.

This plant is a native of the East-Indies, and according to Sonnerat grows abundantly on the Malabar Coast; it differs considerably from the Amomum Cardamomum of Linæus, as appears by the specific character he has given it, and the figures to which it is referred to in his Species Plantarum.† Sonnerat, who first discovered the Amomum repens, and on whose authority it is considered to afford the seeds officially known by the name of Cardamomum minus, informs us, that this plant abounds so plentifully on a certain mountain on the Coast of Malabar, that it is called the Mountain of Cardamoms, from which all India is supplied with the seeds.

The Cardamoms imported into Europe have been distinguished by the names Cardamomum majus, medium, & minus; the distinction depending upon the respective sizes of their seeds; but the different species from which the two former are said to have been produced, are so imperfectly described, and their botanical histories so confused, that we are unable to give any satisfactory information concerning them;

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* In a specimen of this plant, which we have seen in the Herbarium of Sir Joseph Banks, this appearance was very remarkable.
and whether the Amomum verum of the ancient Greek writers is referable to our Cardamom, seems also equally uncertain.

The seeds of the Cardamomum minus, which are now generally preferred for medicinal purposes, are brought to us in their capsules, or husks, by which they are preserved; for they soon lose a part of their flavour when freed from this covering. "Their virtue is extracted not only by rectified spirit, but almost completely by water also; with this difference, that the watery infusion is cloudy or turbid, the spirituous clear and transparent. Scarcely any of the aromatic seeds give out so much of their warmth to watery menstrua, or abound so much with gummy matter, which appears to be the principle by which the aromatic part is made diffusible in water: the infusion is so mucilaginous, even in a dilute state, as hardly to pass through a filter."

"In distillation with water, a considerable quantity of essentiai oil separates from the watery fluid, of a pale yellowish colour, in smell exactly resembling the Cardamoms, and of a very pungent taste: the remaining decoction is disagreeably bitterish, and mucilaginous. On inosipating the tincture made of rectified spirit, a part of the flavour of the Cardamoms arises with the spirit; but the greatest part remains behind, concentrated in the extract, which smells moderately of the seeds, and has a pungent aromatic taste, very durable in the mouth, and rather more grateful than that of the seeds in substance."

Cardamom seeds, on being chewed, impart a glowing aromatic warmth, and grateful pungency: they are supposed gently to stimulate the stomach, and prove cordial, carminative, and antispasmodic, but without that irritation and heat which many of the other spicy aromatics are apt to produce. We are told by Sonnerat, that the Indians use it much, and believe it to strengthen the stomach, and assist digestion. Physicians however consider Cardamoms merely as an aromatic, and prescribe them in conjunction with other medicines, which they are intended to correct or assist.

Simple and compound spirituous tinctures of these seeds are directed by the Pharmacopoeias; they are also ordered as a spicy ingredient in many of the officinal compositions.

"Lewis, Mat. Med. p. 194."

CURCUMA
Amomum repens

Drawn by W. Woodward, March 4, 1792.
CURCUMA LONGA.  LONG-ROOTED TURMERIC.


The root is perennial, tuberous, and furnished with strong fibres, externally brownish, and internally of a deep yellow colour: the leaves arc radical, large, lance-shaped, obliquely nerved; at the bottom, vaginal, and closely embracing each other: the scapus, or flower stem, rises from the centre of the leaves; it is short, thick, smooth, and forms a spike of numerous bracteal imbricated scales, between which the flowers successively issue: the corolla is monopetalous, consisting of a narrow tube, divided at the mouth into three oval segments: the nectarium occupies the wide under-finus of the corolla, and is the most conspicuous part of the flower; it is of a flesh colour, petal-like, large, spreading, and cut into three divisions, of which the middlemost is the largest: the filaments are five, four of which are erect, slender, linear, contracted, sterile; the fifth is petal-formed, lodged within the nectarium, and cleft at the top, to which the anthera is adjoined: the germen is roundish, and placed below the corolla: the style is the length of the filament, and furnished with a simple hooked stigma: the capsule is roundish, three-celled, three-valved, and contains numerous small seeds.

No. 27.  
4 Y  
Turmeric
Turmeric is a native of the East Indies, and common in the gardens of the Chinese; it grows abundantly in Malacca, Java, and Bencoolen. It was first cultivated in England by Mr. P. Miller in 1759. The root of this plant has been long officially known, and passed under different names, as Crocus indicus, Terra merita, &c. In its dried state, as imported here, it is various in shape; externally of a pale yellow colour, wrinkled, solid, ponderous, and the inner substance of a deep saffron or gold colour; its odour is somewhat fragrant, and to the taste it is bitterish, slightly acrid, exciting a moderate degree of warmth in the mouth, and on being chewed it tingles the saliva yellow. It has been very generally employed for the purpose of dying, and in eastern countries it is much used for colouring and seafaring of food.

"This root gives out its active matter both to aqueous and spirituous menstrua. In distillation with water, it yields a small quantity of gold-coloured essential oil, of a moderately strong fixes, and a pungent taste: the remaining decoction, inipillated, leaves a bitterish considerably saline mass. Rectified spirit elevates little or nothing of its virtue; all the active parts being left behind in the infusillated extract."

This root has had the character of being a powerful aperient and resolvent: it has been commonly prescribed in obstructions of the liver, and other chronic visceral affections. The disease in which it has been thought most efficacious is the jaundice; but though the use of this root is highly recommended by several practical writers,

* Vide Konig, Rumphius, and Bontius.  
Hort. Kew.

* The Chinese use it as a menstruating.

* This substance is very rich in colour; and there is no other which gives a yellow colour of such brightness; but it poissées no durability, nor can mordants give it a sufficient degree: common salts, and ammoniacal muriate, are those which fix the colour best, but they render it deeper." Hamilton's translation of Berthollet's Elements of the Art of Dying, vol. ii. p. 280. See also on this subject, Heliot L'art de la Teint. p. 426, and Perner, Chem. Versuche zu. Nuuc. der Farbkunst, vol. i. 1. Abs. Scharff's Rept. ub. vennf. Gießungen. v. Farb. 1. 81.

* It enters the composition of the Curry powder which is now much used here.
Lewis, M. M.


KEMPFFERIA ROTUNDA

Stigma bipartita.  
Sp. Cb. K. fol. lanceolatus

The root is perennial, thick and brown, internally full of sheaths, and rises very large, radical, nearly elliptical in footstalks: the calyx is small, consisting of a long flender, bisected into five parts, three are inserted below the others, of which the remaining one is deep and round, revolutions, of a reddish colour; there is but one filament, with an end: the anther is linear, and rises above the tube of the cell.
it is now very rarely employed; and we are told by Dr. Cullen, that the decoctum ad Isericos of the Edinburgh Dispensatory, (Ed. 1756) "never had any other foundation than the doctrine of signatures in favour of the Curcula and Cheledonium majus."

*Mat. Med. vol. i. p. 25.*

**KÆMPFERIA ROTUNDUA. ZEDOARY.**


The root is perennial, tuberous, fleshy, compressed, externally of an auburn colour, internally of a bluish grey: the flower stem is covered with sheaths, and rives very little above the ground: the leaves are large, radical, nearly elliptical, pointed, veined, and stand upon broad footstalks: the calyx is small and obscure: the corolla is monopetalous, consisting of a long slender conical tube, divided at the upper extremity into five parts, three of which are long, narrow, spreading, inflected below the others, of which two are oval, pointed, and erect; the remaining one is deeply cut into two obvexly heart-shaped divisions, of a reddish colour, and beautifully suffused with purple: there is but one filament, which is membranous, and notched at the end: the anther is linear, doubled, entirely adherent, and scarcely rives above the tube of the corolla: the germen is roundish, and supports
ports a style, which is about the length of the tube, furnished with a folded roundish stigma: the capsule is triangular, divided into three cells, and as many valves, and contains numerous small seeds.

On the authority of Linnaeus, the Colleges of London and Edinburgh have referred the officinal Zedoary to this plant, which is a native of the East Indies. But Bergius informs us, that he received a specimen of the Zedoary plant from India, which, upon examination, was found to be a species of Amomum; and it is observed by Murray, that this opinion receives additional weight by the description of Zedoary, or the Indorum Tamognaei, given by Camellus.

It seems no easy task to discover with any tolerable probability, whether this drug was used by the ancients or not; some have supposed it to be the Caftus of Dioscorides, the Guider of Avicenna, the Zerumbet of Serpion. But this we leave to those who are ready to decide upon what is merely conjectural.

The roots of Zedoaria, longa and rotunda, are both produced by the same species of plant, and are indiscriminately used in the shops; the former are brought to us in oblong pieces, about the thickness of the little finger, two or three inches in length, bent, rough, and angular; the latter are roundish, about an inch in diameter, of an ash colour on the outside, and white within.

"This root has an agreeable camphoraceous smell, and a bitterish aromatic taste. It impregnates water with its smell, a slight bitterness, a considerable warmth and pungency, and a yellowish brown colour: the reddish yellow spirituous tincture is in taste stronger, and in smell weaker, than the watery. In distillation with water it yields a thick ponderous essential oil, smelling strongly of the Zedoary, in taste very hot and pungent."

Cartheuer, who ascribes the virtues of Zedoary to a camphoraceous volatile oil, considers it as a general remedy for most of the chronic

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* See on this subject, S. G. Manjius. De actibus Zedoariae relatios. Drjed. 1691.
with which humanity is afflicted, and little, and its effects are considerable, this root is now of great power, and might safely be used, though it still has a place in some pharmacopoeia.

Dr. Cullen says: "I am one of the Mat. Med." Mat.

MYRISTICA MOSCHATA.

SYNONYM. Nux Moschata.


Gen. Ch. Mas. Cal. 3-fidum precarnatum.

Fam. Cal. 3-fidue bifida. Cup.

Ch. M. foliis lanceolatis frut.

This tree attains the height of a few boughs which rise together in front of the trunk is a reddish brown, of a bright green colour: the leaves are undulate, obliquely nerved, obtuse at the under whith, and stand alternately small, and hang upon slender stalks of the leaves: they are both most

No. 27.
diseases with which humanity is afflicted; but as the camphor it contains can avail but little, and its effects as a bitter or aromatic are so very inconsiderable, this root is now deemed to possess very little medicinal power, and might safely be expunged from the materia medica; though it still has a place in the concoction aromatica of the London pharmacopoeia.

* See xiv. § 3. Dr. Cullen says, “I am clear that it might safely be omitted in our lists of the Mat. Med.” * Mat Med. vol. ii. p. 207.

MYRISTICA MOSCHATA. NUTMEG TREE.


THIS tree attains the height of thirty feet, producing numerous branches which rise together in stories, and covered with bark, which of the trunk is a reddish brown, but that of the young branches is of a bright green colour: the leaves are nearly elliptical, pointed, undulated, obliquely nerved, on the upper side of a bright green, on the under white, and stand alternately upon footstalks: the flowers are small, and hang upon slender peduncles, proceeding from the axillae of the leaves: they are both male and female upon separate trees.

No. 27.
Of the male flower the calyx consists of one bell-shaped leaf, divided at the brim into three small teeth: there is no corolla: the stamens, according to De La Marck, are from six to twelve, joined in a bundle, consisting of short filaments, inserted into the receptacle, and surrounded with antheræ, which are long, linear, and united.

Of the female flower the calyx is similar to that of the male flower; there is no corolla: the germen is above, oval, and supports a style, terminated by two stigmata: the fruit is round or oval, and of the drupous kind, of which the external covering is fleshy, tough, and by opening at the top separates into two valves, and discovers the Mace, which has a reticulated appearance, and divides into three portions, which closely invest a slender shell containing the seed or Nutmeg. This tree is a native of the East Indies, particularly the Molucca Islands.

The Nutmeg has been supposed to be the Comacuin of Theophrastus, but there seems little foundation for this opinion, nor can it with more probability be thought to be the Chryphalanos of Galen. Our first knowledge of it was evidently derived from the Arabians; by Avicenna it was called Jiausiban, or Jaußiband, which signifies Nut of Banda. Rumphius both figured and described this tree; but the figure given by him is so imperfect, and the description so confused, that Linnaeus, who gave it the generic name Myristica, was unable to assign its proper characters. Somerat's account of the Mucadier is still more erroneous; and the younger Linnaeus was unfortunately misled by this author, placing the Myristica in the class Polyanthria, and describing the corolla as consisting of five petals. Thunberg, who examined the flower of the Nutmeg, places it in the class monoecia, and according to his description, the male flower has but one filament, surrounded at the upper part by the antheræ; and as the filaments are short and slender, and the antheræ united, this mistake might easily arise.

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* Vide, &c.  
* Voyage à la Nouvelle Guinée, p. 194. t. 116.  
* Suppl. Plant. p. 265.  
* Ad, Stockholm. 1782. p. 46.

---

Since writing the above, Mr. Dylander informed me, that he had examined several specimens of these male flowers preserved in spirit, in each of which he found only one columnar filament, and concludes that De La Marck must have been deceived by dividing the fibres of this organ: consequently the Myristica should in strictness be placed in the order monadelphia.

Mr.

---

Mr. De La Marck informs us, that Nutmeg, both in flower and trunk of the tree, which was introduced into the large, and continually propagated there, were sent from the island, Mont. Jaußiband, and figure this and other species of the annexed plate will shew.

The seeds or kernels, after they have been long used both filled with water, they yield in flavour the spice itself; when is found swimming, gives an extract of an unctuous and astringency. Nutmegs by infusion, at hence the spirituous extract.

Nutmegs, when heated, or of impid yellow oil, will confine to. In the shop sign, called Oil of Māt. The root is brought from thick confine; of the smell, the second, is quality, comes from the.

The medicinal qualities of the ordinary, from, an agreeable; they, however, quantities, as it is apt.
Mr. De La Marck informs us, that he received several branches of the Myristica, both in flower and fruit, from the Isle of France, where a Nutmeg-tree, which was introduced by Monf. Poivre, in 1770, is now very large, and continually producing flowers and fruit. From these branches, which were sent from Monf. Céré, Director of the King’s garden in that island, Monf. De La Marck has been enabled to describe and figure this and other species of the Myristica with great accuracy; and the annexed plate will shew, that we have profited by his labours.

The seeds or kernels, called Nutmegs, are well known, as they have been long used both for culinary and medical purposes. Distilled with water, they yield a large quantity of essential oil, resembling in flavour the spice itself; after the distillation, an insipid fætidious matter is found swimming on the water; the decoction, infusiated, gives an extract of an unctuous, very lightly bitterish taste, and with little or no astringency. Rectified spirit extracts the whole virtue of Nutmegs by infusion, and elevates very little of it in distillation: hence the spirituous extract possiplies the flavour of the spice in an eminent degree.

Nutmegs, when heated, yield to the press a considerable quantity of limpid yellow oil, which on cooling concretes into a fætidious confluence. In the shops we meet with three sorts of unctuous substances, called Oil of Mace, though really expressed from the Nutmeg. The best is brought from the East Indies in stone jars; this is of a thick confluence, of the colour of mace, and has an agreeable fragrant smell: the second sort, which is paler coloured, and much inferior in quality, comes from Holland in solid masses, generally flat, and of a square figure: the third, which is the worst of all, and usually called Common Oil of Mace, is an artificial composition of fever, palm oil, and the like, flavoured with a little genuine oil of Nutmeg.

The medicinal qualities of Nutmeg are supposed to be aromatic, anodyne, stomachic, and restrigent, and with a view to the last mentioned effects, it has been much used in diarrhœas, and dysenteries. To many people the aromatic flavour of Nutmeg is very agreeable; they, however, should be cautioned not to use it in large quantities, as it is apt to affect the head, and even to manifest an

\[ \text{L. c.} \quad \text{\textquotedblleft Ed. New Dispens. by Dr. Duncan. p. 238. \textquotedblright} \quad \text{\textquotedblleft Bergius, M. M. p. 884. \textquotedblright} \]
hypnotic power in such a degree as to prove extremely dangerous. Bontius speaks of this as a frequent occurrence in India; and Dr. Cullen relates a remarkable instance of this soporific effect of the Nutmeg, which fell under his own observation, and hence concludes, that in apoplexy and paralytic cases this spicery may be very improper. The officinal preparations of Nutmeg are a spirit and essentia oil, and the Nutmeg in substance roasted, to render it more astringent. Both the spice itself and its essential oil, enter several compositions, as the confectio aromatica, spiritus amonis com. &c. Mace possesses qualities similar to those of the Nutmeg, but is less astringent, and its oil is supposed to be more volatile and acrid.

1 De Medicina Indorum, p. 20. See also Miscell. Nat. Cur. dec. III. ann. II. obs. 120.

2 "A person by mistake took two draughts of a little more of powdered Nutmeg: he felt it warm in his stomach, without any uneasiness; but in about an hour after he had taken it he was seized with a drowsiness, which gradually increased to a complete stupor and insensibility; and not long after he was found fallen from his chair, lying on the floor of his chamber in the state mentioned. Being laid a-bed he fell asleep; but waking a little from time to time, he was quite delirious: and he thus continued alternately sleeping and delirious for several hours. By degrees, however, both these symptoms diminished, so that in about six hours from the time of taking the Nutmeg he was pretty well recovered from both. Although he still complained of headache, and some drowsiness, he slept naturally and quietly the following night, and next day was quite in his ordinary health." Mat. Med. vol. ii. p. 204.

CARYOPHYLLUS AROMATICUS. CLOVE TREE.


Clase Polyandria.

**Eff. Gen. Cb. Cor. 4-petala. Cal. 4-phylus, duplicatus. Bacca 1-sperma, infera.**


THIS tree never rises to any considerable height, but divides into large branches, which are covered with smooth greyish bark: the leaves are large, entire, oblong, lance-shaped, of a bright green colour, and stand in pairs upon short footstalks: the flowers terminate the branches in bunches or panicles: the calyx of the fruit is divided at the brim into four permanent small pointed segments, and that of the flower is composed of four leaves, which are roundish, concave, deciduous, and placed above the germin: the corolla consists of four petals, which are roundish, notched, very small, and of a bluish colour:† the filaments are numerous, slender, inserted in the calyx, and furnished with simple anthers: the germin is oblong, large, terminated by the calyx of the fruit, and placed below the insertion of the corolla: the style is tapering, and the stigma simple: the pericarpium is one-celled, umbilicated, and terminated by the indurated converging calyx: the seed is a large oval berry.‡

It is a native of the East Indies, the Moluccas, &c. and was lately found by Sonnerat in New Guinea. It has been asserted that the Dutch, who have long been in possession of the principal spice islands, destroyed all the Clove trees growing in the other islands, in order to secure a lucrative branch of commerce to themselves, and confine the cultivation of this tree to the island of Ternate;* but it appears that in 1770 and 1772, both the Clove and Nutmeg trees were brought from one of the Moluccas, and transplanted in the Isle of France, Bourbon, and Seickelles,* where they have been found to thrive very well, (see Nutmeg) though the Clove tree has since succeded better in Cayenne.* To bring this tree to the highest perfection, a peculiar

* The Caryophyllus evidently belongs to the class Leofandria; and modern botanists refer it to the genus Eugenia. † We examined this plant preserved in spirit, in the possession of the President of the Royal Society, but without finding any corolla.

‡ The fruit, in its mature state, is known by the name *Anthophyllus.*

mode of cultivation seems necessary, and is practiced in Amboina by
the Dutch, by whom it is kept a profound secret." If the Clove was
known to the Greeks, it cannot be discovered by their writings, nor
is there any distinct account of it given by Pliny; but it seems in some
measure applicable to the description of the Carunfel of Serapion, and
the Charunfel Bellun of Avicenna, so that this spice, as well as the
Nutmeg, was probably known to the Arabsians.

The spice used here, and known by the name of Cloves, is the
unexpanded flowers or rather calyces, which are found to be more
aromatic than in their advanced state; they are of a dark brown colour,
which they acquire from the smoke to which they are exposed; for in
order to preserve the Cloves it is customary first to immerse them in
boiling water, and then subject them to fumigation, or merely to fumi-
gate them, and afterwards expose them to the sun for further exsiccation.

The Clove has a strong agreeable smell, and a bitterish hot not
very pungent taste: these qualities are completely extracted by rectified
spirit. After infusing the filtered tincture, the remaining extract
has little smell, but its taste is excessively hot and fiery. Cloves
impregnate water more strongly with their smell than they do spirit,
but not so much with their taste; and in distillation with water
they yield one-sixth of their weight of essential oil, smelling strongly
of the Cloves, but less pungent than the spirituous extract.

"The oil of Cloves commonly met with in the shops, and received
from the Dutch, is indeed highly acrimonious: but this oil is plainly
not the genuine distilled oil of Cloves, but considerably more pun-
gent, containing half its weight of an infipid expressed oil: it is
probably from the admixture of the refinable part of the Clove that
this sophificated oil receives both its acrimony and high colour."*

Clove is accounted the hottest and most acrid of the aromatics, and
by acting as a powerful stimulant to the muscular fibres, may in some
cases of atomic gout, paralysis, &c. supercede most others of the
aromatic class; and the foreign oil, by its great acrimony, is also
well adapted for several external purposes.

The essential oil is the preparation of this spice directed by the
pharmacopoeias, which, as well as the Clove itself, enters several
official compositions.

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SYNONYMA. Oliva
Pompl. p. 821. Olea
p. 1392. Park. The
Hamel, Traité des Arômes
Basel, Gracorum.
Varicata sunt, (a Com
b (Long-leav'd) foli
c (Broad-leav'd) foli
d (Iron-coloured) foli
e (Twisted-leav'd) foli
f (Box-leav'd) foli

Clusi Diandria. Or
Sp. Ch. O. folido
coarctatis.

THIS tree usually
off numerous long
the leaves are firm,
of a bright green,
short footstalks: the
ceed in clusters near
and divided at the base.
Corolla is a funnel-
length of the calyx
segments: the filaments
with erect anthers;
style, furnished with
No. 28.
OLEA EUROPEÀÆ. EUROPEAN OLIVE.


Varieties found, (a Common) foliis lanceolatis planis subtus incanis.
(b) (Long-leaf'd) foliis lineari-lanceolatis planis subtus argenteis.
(g) (Broad-leaf'd) foliis oblongis planis subtus incanis.
(e) (Iron coloured) foliis lanceolatis subtus ferrugineis.
(s) (Twisted-leaf'd) foliis oblongis oblique flexis subtus pallidos.
(g) (Box-leaf'd) foliis oblongo-ovalibus, ramis patentibus diversifolius.


Eff. Gen. Ch. Cor. 4-fida; laciniis subovatis. Drua monosperma.


THIS tree usually rises about twenty feet in height, and sends off numerous long branches, covered with bark of a greyish colour: the leaves are firm, narrow, lance-shaped, entire, on the upper side of a bright green, on the under whitish, and stand in pairs upon short footstalks: the flowers are small, white, numerous, and proceed in clusters near the footstalks of the leaves: the calyx is tubular, and divided at the brim into four small erect deciduous segments: the corolla is a funnel-shaped petal, consisting of a short tube, about the length of the calyx, and divided at the border into four stamine segments: the filaments are two, tapering, opposite, and crowned with erect anthers: the germin is round, and supports a simple short style, furnished with a stigma, which is cleft in two, and each division
The fruit is of the drupous kind, of an oblong or oval shape, containing a nut of the same form. It is native of the south of Europe, and flowers from June till August.

The Olive, in all ages, has been greatly celebrated and held in peculiar estimation, as the bounteous gift of Heaven; and in gratitude to the Deity, it was formerly exhibited in the religious ceremonies of the Jews. It is still considered as emblematic of peace and plenty; and the great quantity of oil which in some countries it produces, effectually realizes one of these blessings. The Olive has been long cultivated in Britain; it is mentioned in the Catalogus plantarum Horti Medici Oxoniensis, published in 1643; and when sufficiently sheltered, it bears the cold of our winters very well; though in this country it rarely produces flowers, and we believe never ripens its fruit.

The varieties of this tree are numerous, distinguished not only by the form of their leaves, as already noticed, but also by the shape, size, and colour of the fruit; as the large Spanish Olive, the small oblong Provence Olive, the small dark green Olive, the small roundish white Olive, (Aglandau) the large fleshy or Royal Olive, the large round Olive, (Ampoulan) the small round reddish black Olive, and the small fragrant or Lucca Olive. Of these, the two first sorts, when pickled, are well known to us by the names of Spanish and French Olives, which to many are extremely grateful, and have been supposed to excite appetite and promote digestion. Pickled Olives are prepared from the green unripe fruit, which is repeatedly steeped in water, to which some add alkaline salt or quicklime, in order to shorten the operation; for when macerated in water only, the Olives require a long time before their bitterness is sufficiently extracted; after this they are washed and preferred in a pickle of common salt and water, to which an aromatic is sometimes added.

Miller says, that "several Olive trees were planted against a warm wall at Cambdenhoue, near Kenfigton, which succeeded very well till their tops advanced above the wall; after which they were generally killed in winter, so far down as the top of the wall. These, in 1719, produced a good number of fruit, which grew so large as to be fit for pickling; but since that time their fruit has seldom grown to any size." "Dict"

For an account of the management and cultivation of Olives, see Bernard, De l'Olivier, 1788, couronné par l'Académie de Marissia. Couture, Traité de l'Olivier 1786. Du Hamel, l.c. Sieve, Observations, &c. 1769.

This variety affords the best oil.

The principal consumption of Olives is in killed oil, or oleum olivarum, gained by grinding and pressing the paste of the fruit, and after boiling the residuum, and pressing the oil off. The oil is of a bright pale amber without any smell; it becomes rancid in a warm situation; by cooking it congeals, and does not become equal to the freezing point of the oils of vegetables are nearly over, in the opinion of Dr. Culliford, and hence the oil of olives, nearly directed for internal use, is a valuable part of our food, both as nourishment with some, but on the condition that the contents of the form of a true fluid; this happens when heated with acid to an unctuous state, so that it is supposed to correct the fibres; and therefore has been used for various purposes and inflammation. On this occasion, cataractous affection has been successfully used in worm casts, cramps, colic, constipation of the bowels, uterine application to bites and bites. 

Meyenbroek, Phil. Nat. tom. ii. p. 69. See the experiments of William Oliver, n. 39, by which it appears that this mixture of most violent symptoms induced maladies of Olives to the affected part. Sci. med. l. c. p. 394. See l. c. p. 394, and with various success, and published it, and retracted that the particular species were not ascertain'd in any of the cafés alluded to of the oil, and says, that a woman, b

The
The principal consumption of Olives is in the preparation of the common fallad oil, or oleum olivarum of the pharmacopoeias, which is obtained by grinding and pressing them when thoroughly ripe: the finer and purer oil issues first by gentle pressure, and inferior sorts on heating the residuum, and pressing it more strongly. The best Olive oil is of a bright pale amber colour, bland to the taste, and without any smell: it becomes rancid by age, and the sooner, if kept in a warm situation: by cold, at the 38 degree of Fahr. therm. it congeals, and does not become rancid if kept in a degree of cold equal to the freezing point of water. All the mild expressed oils of vegetables are nearly of the same nature; a preference however, in the opinion of Dr. Cullen, should be given to the most fluid, and hence the oil of olives, and that of almonds, are most commonly directed for internal use. Oil, in some shape, forms a considerable part of our food, both animal and vegetable, and affords much nourishment: with some, however, oily substances do not unite with the contents of the stomach, and are frequently brought up by eructation; this happens more especially to those whose stomachs abound with acid to an uncommon degree. Oil considered as a medicine is supposed to correct acrimony, and to lubricate and relax the fibres; and therefore has been recommended internally to obviate the effects of various stimuli, which produce irritation, and consequent inflammation; on this ground it has generally been prescribed in coughs, catarrhal affections, and erinations. This oil has likewise been successfully used in worm cases, and in nephritic pains, spasms, colics, contusions of the bowels, &c. Externally it has been found an useful application to bites and raps of various poisonous animals.

*Muschenbrock, Phil. Nat. tom. ii. p. 616.*  
*Cullen, M. M. vol. i. p. 302.*

See the experiments of William Oliver, related in the Philosophical Transactions, vol. 39. p. 310. by which it appears that this man suffered his arm to be bitten by serpents, and waited till most violent symptoms ensued, when they were soon removed by applying warm oil of Olives to the affected part. Similar experiments were made upon pigeons, dogs, &c. with equal success. It failed however at Oxford, where these trials were made upon poultry, &c. See l. c. p. 394. Numerous experiments of this kind were repeated with various success, and published in the Mem. de L'Acad. de Sc. 1737. It is to be regretted, that the particular species of snake, by which the bites were given, was not ascertained in any of the cases alluded to. Linnæus was much disappointed in this use of the oil, and says, that a woman, bitten by the Coluber Chelata, died in great agony, though the oil was liberally administered both externally and internally. *Linnaen. Acad. vol. vi. p. 213. & vol. iv. p. 407.*
burns, tumours, and other affections, both by itself or as mixed in liniments or poultices. Oil rubbed over the body has been found by many of great service in dropfies, particularly in afeites, in which three instances of its success are related in the Philosophical Transactions by Dr. Oliver. Boenniken has mentioned the successful use of oil in rabies canina; and a farther account of its efficacy in that disease was lately read before the Medical Society of London; but though Boenniken attributes the cure of his patient to the oil, yet we find other means were employed, and the bitten part was scarified and blistered. Respecting the trial of this remedy here in hydrophobia, we can only observe, that it has since been used in a similar case without success, therefore at best little confidence is to be placed on a solitary instance. In regard to the general effects of oil, taken internally, we may remark, that though its effects as a medicine extend over the primae vis, yet it may be very rationally doubted if it produces any medicinal effect after passing into the sanguiferous system.

This oil enters several officinal compositions, and when united with water, by the intervention of alkali, is usually given in coughs and hoarseness, &c. The effects of soap will be noticed under the plant Salisola Kali.


**COPAIFERA OFFICINALIS.**
COPAIFERA OFFICINALIS. BALSAM of COPAIVA TREE.


THIS tree grows to a considerable height: it is covered with rough brown bark, and divides into numerous branches: the leaves are pinnated, large, consisting of four pairs of pinnas, which are alternate, except the undermost, which is nearly opposite; they are ovate, pointed, somewhat narrowed on one side, and placed upon short footstalks: the flowers are white, and produced in terminal branched spikes: there is no calyx: the petals are four, oblong, acute, concave, spreading: the filaments are ten, slender, incurved, somewhat longer than the corolla, and crowned with antherae, which are oblong, and incumbent: the germen is roundish, compressed, and stands upon a short pedicle: the style is filiform, incurved, about the length of the filaments, and furnished with an obtuse stigma: the fruit is an oval pod, of two valves, pointed with part of the remaining style: it contains one egg-shaped seed, involved in a berried arillus.

This tall and elegant tree is a native of South America, particularly Brazil, and some of the neighbouring islands; and it is said to have been discovered growing in Terra Firma in large woods with those trees which afford several of our officinal Balsams, especially that of Tolu and Peru. The resinous juice, called Balsam of Copaiba, is obtained
obtained from this tree by making incisions near the base of its trunk, extending not only through the bark but into the substance of the wood, when the balsam immediately issues, and at the proper season flows in such abundance, that sometimes in three hours twelve pounds have been procured. The older trees afford the best balsam, and yield it two or three times in the same year. The Balsam supplied by the young and vigorous trees, which abound with the most juice, is crude and watery, and is therefore accounted less valuable. While flowing from the tree this balsam is a colourless fluid; in time however it acquires a yellowish tinge, and the confluence of oil; but though by age it has been found thick like honey, yet it never became solid like other resinous fluids.

Genuine* Balsam of Copaiba has a moderately agreeable smell, and a bitterish biting taste, of considerable duration in the mouth; it dissolves entirely in rectified spirit, especially if the menstrum be previously alkaliized; when the solution has a very fragrant smell. Distilled with water it yields nearly half its weight of a limpid essential oil, and in a strong heat, without addition, a blue oil.

This, like most other balsams, is nearly allied to the turpentines. It was formerly thought to be an efficacious remedy in various disorders, as pulmonary consumptions, coughs, scrobutic diseases, dropsies, dysenteries, nephritic complaints, internal ulcers, flor albus, gleet, &c. but though some proofs of its good effects in certain states of these diseases may be adduced, yet as it irritates and heats the system to a considerable degree, few cases occur in which this medicine can safely be given, especially in large doses. It determines powerfully to the kidneys, and impregnates the urine

* Vide Simmons On the Treat Hidden says, "Whether a certain elixir or mixture is of the true quality, I cannot determine, but in its present condition, that it gives relief when employed it with success, viz. gr. iii. in wine."

* We sometimes find in shops, under the name of Copaiba, a thick, whitish, almost opaque Balsam, with a quantity of turbid watery liquor at the bottom. This sert, probably, is either adulterated by the mixture of other substances, or has been extracted by boiling in water, from the bark or branches of the tree." Lewis, M. D. p. 132.

* See Fuller, Phsem. extemp. p. 275. F. Hoffman, Obs. Phys. chem. p. 24. Lentiz, Buebtheil, einig. Krankh. 1774. p. 58. Mutis relates, that a woman in Santa Fé, who had been many years affected with a dropsy, in forty days was cured by taking balsam of copaiba, the dose of which she increased to a spoonful night and morning. Novelles de la Republique des lettres et des arts, 1786. n. 33. p. 374.

* Hoppe has fully set forth its dangerous effects. See D. Fred Wilh. Hoppe, apud Valentini Indian literatam. p. 624.
with its qualities, and has therefore been supposed peculiarly suited to diseases of the urinary passages, but by stimulating these organs it is apt to produce very mischievous consequences, its use is therefore now principally confined to gleet and flux album.

If this medicine can be advantageously administered in pulmonary affections, it must be in the absence of fever, and where the excretion from the lungs is unattended with inflammatory congestion. It may be most conveniently taken in the form of an emulsion, into which it may be brought by triturating it with almonds, or rather with a thick mucilage of gum-arabic, till they are well incorporated, and then gradually adding a proper quantity of water. The dose of the Balsam should rarely exceed twenty or thirty drops.

* Vide Simmons *On the Treatment of Consumptions*, p. 35. $^{	ext{9}}$.

Dr. Cullen says, "Whether a certain effect of balsam of copaiba is to be imputed to its laxative quality, I cannot determine, but must observe, that I have learned from an empirical practitioner, that it gives relief in hemorrhoidal affections; and I have frequently employed it with success, viz. given from twenty to thirty drops twice a day."


**RUBUS IDÆUS. RASPBERRY BUSH.**


*Sp. Ch.*

The stems of the Raspberry are biennial, rough, beset with spines, and rise two or three feet in height: the leaves are rough, veined, serrated, downy on the underside, and composed of five or three pair of oval pinnae, terminated by an odd one: the flowers terminate the branches in panicles, and appear in succession: the calyx is divided into five oblong expanding segments: the corolla consists of five petals, which are upright, blunt, narrow, white, and inserted into the calyx: the filaments are numerous, shorter than the petals, fixed to the calyx, and terminated with roundish compressed antheræ: the germens are numerous, and each supports a short capillary style, furnished with a simple permanent stigma: the fruit is a red berry, composed of several roundish granulations, collected into a knob, which is convex above, concave beneath, and placed upon a conical receptacle: each granulation has one cell, containing an oblong seed. It is a native of Britain, usually growing about woods, hedges, rocky mountains, and in moist situations, producing its flowers in May and June.

The Raspberry is very commonly cultivated in our gardens, where we frequently observe the varieties noticed above. The figure, which accompanies this description, is taken from a garden specimen, and consequently appears more luxuriant than when the Raspberry is found in its natural or uncultivated state. This fruit has a pleasant sweet taste, accompanied with a peculiarly grateful flavour, on account of which it is chiefly valued. Its virtues consist in allaying heat and thirst, and in promoting the natural excretions; but it seems less adapted to answer these purposes than many of the other summer fruits, some of which we have already noticed.

A grateful syrup, prepared from the juice, is directed for officinal use by the London Pharmacopoeia.

\textit{Rosa Canina.}
Rubus idaeus

Received in St. Paul's April 1 1791
Rosa Canina. Dog Rose

This small tree usually rises from the base into many branches, with alternate hooked prickles of two or three pair of pectinate leaflets; the leaves are all of an oblong pointed shape, growing close to the stem at its base furnished with white spines; the bracts are oval, fringed, and the pedicels, which are smooth; the calyx is long, three together, and of a reddish color, heart-shaped at the base; the sepals, sepals, and petals, are heart-shaped petals by divisions, subdividing into small, and are inversely heart-shaped petals.

No. 28.
ROSA CANINA.  

DOG ROSE, OR, HEP TREE.


Sp. Ch. R. germinibus ovatis pedunculisque glabris, caule petiolisque aculeatis.

THIS small tree usually rises ten or twelve feet in height, dividing towards the top into many branches, covered with smooth bark, and beset with alternate hooked prickles: the leaves are pinnated, consisting of two or three pair of pinnæ or leaflets, with an odd one at the end; they are all of an oblong or oval shape, ferrated, veined, pointed, growing close to the common footstalk, which is prickly, and at its base furnished with a sheathy expansion fringed at the edges: the bractæ are oval, fringed, and placed in pairs at the peduncles, which are smooth: the flowers are large, terminal, two or three together, and of a reddish or flesh-colour: the calyx is pitcher-shaped at its base, fleshy, separated above into five long expanding divisions, subdividing into smaller segments: the corolla consists of five inversely heart-shaped petals: the filaments are numerous, slender, No. 28. 5 D short,
short, inserted in the calyx, and furnished with triangular antheræ: the germens are numerous, in the bottom of the calyx, supplied with an equal number of styles, which are villous, short, compressed in the neck of the calyx, inserted in the side of the germen, and terminated with obtuse stigmata: the fruit is a fleshy smooth oval berry; of a deep fesh colour, formed of the tubular part of the calyx, and containing many long rough hairs. It is a native of Britain, commonly growing in woods and hedges, and flowering in June.

The flowers of this tree frequently make a conspicuous and beautiful appearance in the hedges, and though by some botanists they are said to be incoromous, yet their fragrance is often very perceptible. The fruit, called heps or hips, has a fourfth taste, and obtains a place in the London Pharmacopœia, in the form of a conserve; for this purpose the seeds and chaffy fibres are to be carefully removed; for if these prickly fibres are not entirely scraped off from the internal surface of the heps, the conserve is liable to produce considerable irritation on the primæ via. This officinal preparation of the fruit is not supposed to possess any medical virtue, but it is agreeable to the taste, and well suited to give form to the more active articles of the Materia Medica.

Formerly however it was esteemed useful in many disorders, as dropsies, calculous complaints, dysenteries, hemorhages, &c. See Harman, Diff. de Refa. §. 11.

Aモー-like prickly excrecence, called Bedeguor, Rafe sponges, and by the French Galè clothæus, is frequently found upon the branches of this tree, and is the habitation of the insect Cympa Refa. This excrecence was formerly in great repute as a remedy for various diseases. See Gendornius, Cympatologia, p. 136. 399.

ROSA CENTIFOLIA.
ROSA CENTIFOLIA.  HUNDRED-LEAVED ROSE.


The varieties of this species, according to Mr. Aiton, are

DUTCH HUNDRED LEAF'D ROSE.
BLUSH HUNDRED LEAF'D ROSE.
SINGLETON’S HUNDRED LEAF'D ROSE.
BURGUNDY ROSE.
SINGLE VELVET ROSE.
DOUBLE VELVET ROSE.
SULTAN ROSE.
STEPNEY ROSE.
GARNET ROSE.
BISHOP ROSE.
LISBON ROSE.


Sp. Ch. R. germinibus ovatis pedunculisque hispidis, caule hispido aculeato, petiolis inermibus.

THIS species of Rose-bush commonly rises about five or six feet in height, and is numerously beset with short spines: the leaves are pinnate, consisting of two or three pair of pinnas, with an odd one at the end; each pinna, or leaflet, is oval, or rather egg-shaped, broad, serrated, pointed, veined, hairy, and closely attached to the common...
common foottalk, which is rough, but without spines: the peduncles are covered with short bristly hairs; the flowers are large, commonly of a pale red colour, and the parts of inflorescence, which in their simple and natural state are similar to those described of R. canina, by the effects of cultivation, are forced into numerous petals, and are therefore to be considered as monstrities.

Most of the Roses, though much cultivated in our gardens, are far from being distinctly characterized. Those denominated varieties are extremely numerous, and often permanently uniform; and the specific differences, as hitherto pointed out, are in many respects so inadequate to the purpose of satisfactory discrimination, that it becomes a difficult matter to say, which are species, and which are varieties only. The London College, following Gerard and Parkinson, has still retained the name Rosa damascena; but the damask rose is another species, widely different from the centifolia, as appears from the descriptions given of it by Du Roy and Miller.

The petals are directed for medicinal use: they are of a pale red colour, and of a very fragrant odour; which to most people is extremely agreeable, and therefore this and most of the other roses are much used as nosegays: we may remark however, that in some instances they have, under certain circumstances, produced alarming symptoms. The petals impart their odorous matter to watery liquors, both by infusion and distillation: six pounds of fresh roses impregnate, by distillation, a gallon or more of water strongly with their fine flavour. On distilling large quantities, there separates from the watery fluid a small portion of a fragrant butyrous oil, which liquifies by heat and appears yellow, but concretes in the cold into a white mass: an hundred pounds of the flowers, according to the

* This species was cultivated by Gerard; but botanists have not been able to determine its native country.

* As freezing, inflammation of the eyes, faintings, hysterical affections, abortion, &c. (Echius, in Adami vit. med. p. 72.) Many other instances are related by Schenckius, 
Med. vol. iii. p. 160. Persons confined in a close room, with a large quantity of roses, have been in danger of immediate extinction of life. I. C. From the experiments of Priestley and Ingenhousz this effect seems owing to the mephitic air, which these and most other odorous flowers exhale. See Exper. on Vegetables by Dr. Ingenhousz.
experiments of Tachenius and Hoffman, afforded scarcely half an ounce of oil."†

The fustil of this oil exactly resembles that of the roses, and is therefore much used as a perfume. It possesseth very little pungency, and has been highly recommended for its cordial and analhetic qualities. These flowers also contain a bitterish substance, which is extracted by water along with the odorous principle, and remains entire in the decoction after the latter has been separated by distillation or evaporation. This fixed rapid matter of the petals manifests a purgative quality, and it is on this account that the flowers are received in the Materia Medica.

The pharmacopoeias direct a syrup to be prepared of this rose, which in doses of a spoonful is found to be pleasant and useful as a laxative for children, or to obviate costiveness in adults. The simple distilled rose-water seems to have nothing but its fragrance to recommend it.

† Lewis, M. M. p. 543.

The process for making Attar, or Essentia Oil of Roses, so much esteemed as a perfume, is related in the Attar Researches by Colonel Polier, and is as follows—Forty pounds of roses, with their calyces, are put into a still with 60 lbs of water. The mass being well mixed, a gentle fire is put under the still; and when fumes begin to rise, the cap and pipe are properly fixed and luted. When the impregnated water begins to come over, the fire is softened by gentle degrees, and the distillation continued until thirty pounds of water are come over, which is generally done in about four or five hours. This water is to be poured upon 40 lbs of fresh roses; and thence are to be drawn from 15 to 20 lbs of distilled water, by the same process as before. It is then poured into pots of earthen ware, or of tinned metal, and left exposed to the fresh air for the night. The attar or essence will be found in the morning, congealed and swimming on the top of the water.


* Lewis, I. c.

No. 29.

5. E

ROSA GALLICA.
ROSA GALLICA. RED OFFICINAL ROSE.


Æ Rosa Præneftina variegata plena. Mill. ic. 148. t. 221. f. 2.

MUNDI ROSE.

7 MARBLED ROSE.

3 VIRGIN ROSE.


Sp. Ch. R. germinibus ovatis pedunculifque hispidis, caule petiolifque hispido-aculeatis.

THIS species does not rise so high as the Centifolia, but much resembles it in its foliage. Linnaeus rests their specific difference on the greater roughness and prickliness of the leaf-stalks of the gallica, but from the observations we have made, this circumstance is not sufficiently remarkable to found the distinction. The petals of this species, though large and spreading, are never half so numerous as in the centifolia, and are of a deep crimson colour. It is a native of the south of Europe, and is now common in our gardens, flowering in June and July.

"The flowers give out their virtue both to watery and rectified spirit, and tinge the former of a fine red colour, but the latter of a very pale one: the extract obtained by infusing the watery infu-
Rosa gallica.
ion is moderately astringe, bitterish, and subaline; the spirituous extract is considerably stronger both in astringency and bitterness.*

The flowers of this species of rose possess neither the fragrance nor the laxative power of those of the centifolia, but are chiefly valued for their astringent qualities,* which are most considerable before the petals expand, and therefore in this stage they are chosen for medicinal use,* and ordered by the pharmacopoeias in different preparations, as those of a conserve, a honey, an infusion, and a syrup. These preparations, especially the first and second, have been highly esteemed in phthisical cases, particularly by the Arabian physicians. Avicenna* and Mellec* mention some remarkable instances of this kind which were cured by the roses. Rivenius also cites several others; and the case of Krüger, related in the German ephemerides, has been thought a still more evident proof of the efficacy of the conserve of roses in phthisis pulmonalis; but as the use of the conserve was constantly joined with that of milk and fat inæa, together with proper exercise in the open air, it has been doubted if their recoveries could be wholly imputed to the roses, though their mild astringent and corroborating virtues certainly contributed much.*

The infusion of roses is a grateful cooling subastringent, and useful in hæmoptysis, and some other hemorrhagic complaints as a gargle; its efficacy however depends chiefly on the acid. The syrup derives its use merely from its colour.

* Lewis, M. M. p. 543.
* Poterius, however, relates, that he found a dram of powdered red roses occasion three or four fluids, and this not in a few instances, but constantly in several. See Lewis, l.c.
* Both the astringency and the colour of the petals are best preferred by hasty excipitation.
* Lib. 3. Font. 10. Trad. 5. cap. 5. p. 275. * Cap. de phthifia.
* In some of the cases alluded to, twenty or thirty pounds of the conserve were taken in the space of a month.

PARIETARIA OFFICINALIS.
PARIETARIA OFFICINALIS.  WALL PELLITORY.


Sem. 1. superum, elongatum.

Sem. 1. superum, elongatum.


THE root is perennial, reddish, fibrous, creeping: the stem is erect, rough, viscous, reddish, and furnished with long spreading branches: the leaves are elliptical, pointed, veined, somewhat hairy, and placed on short footstalks: the flowers are small, of a greenish colour, tinged with red, placed at the base of the leaves in sessile-branched vetricillate clusters, and are both hermaphrodite and female; two of the former and one of the latter are placed within the same involucrum, which is permanent, and divided into seven irregular oval pointed leaflets, beset with glandular hairs: the calyx of the hermaphrodite flower separates into four flat blunt segments, about half the size of the involucrum, and supplies the place of a corolla: the filaments are four, transversely wrinkled, and manifest an elastic power: the antherae are double; and according to Mr. Lightfoot, have a great
a great degree of sensibility: the germen is egg-shaped, and supports a reddish style, terminated with a bristh-like stigma: the calyx becomes the seed vessel, and contains an egg-shaped seed. The female flower stands between the other two, from which it differs in not being furnished with Stamina.

It is reckoned among the most common of Britsh plants, growing on old walls, and flowering from May till September.

This plant promises little from its sensible qualities: it has no smell, and its taste is simply herbaceous. Formerly it was accounted emollient, and was one of the five herbs of this denomination; but as Parietaria has no mucilaginous quality, this effect ought to be ascribed to the warm water, for which the plant served merely the purpose of a vehicle. Its character, as a diuretic, is better known. Matthiolus tells us, that its expressed juice, sweetened with sugar, had a very powerful effect in this way: and Barbeirac informs us, that a decoction of this plant, and uva ursi, was found of great use in clearing the urinary passages of viscid mucus, and fabulous concretions: these testimonies however will have little weight with the medical practitioner, and it is now very seldom used, though sanctioned with a place in the Materia Medica of both the Pharmacopoeias.

a Matt. in Disfr. p. 782. b Medic. consent. 1751. p. 163.

"For if irritated with a point of a pin, they fly from the calyx with elastic force, and explode then powder." See, l. c.

The leaves, chewed in granaries, are said to destroy the corn weevil. Light.

Dr. Withering has been informed that this plant contains a considerable quantity of nitre, and that in making an extract from it, the mass has taken fire. Bot. Arr. p. 1142.

This quality of Parietaria is also noticed by Mr. Lightfoot. l. c.

No. 29. 5 f. SalSOLA KALL.


*Sp. Ch.* S. herbacea decumbens, folis subulatis spinosis scabris, calycibus marginatis axillaribus.

THE root is annual: the stem is angular, branched, smooth, decumbent, and rises about a foot in height: the leaves are long, narrow, awl-shaped, prickly, and in ternaries upon the branches, and like the stem are frequently of a reddish hue: the flowers are sepalie, axillar, white, yellowish, or of a rose colour: the calyx is membranous, and consists of five obtuse indented segments, each of which is furnished with a small tooth-like process at its base: it has no corolla, unless the calyx be considered as such: the five filaments are short, slender, inserted into the divisions of the calyx, and crowned with simple antherae: the germen is globular, and supports two stigmas with recurved stigmata: the capsule is oval, one-celled, involved in the calyx, and contains a large spiral seed formed like a snail-shell. It is a native of Britain, and common on the sea shore, flowering in July and August.

The annexed figure of the Kali is taken from a specimen which grew last year in the Royal Garden at Kew, and therefore has more luxuriance and beauty than it ever assumes in its wild state, where its humble
humble appearance might justify the epithet Seaweed, so contemptuously spoken of by the Latin Poet, "projecta vilior alga." Not only this, but various other plants, on being burned, are found to afford the fossil alkali, and some in a greater proportion than the Kali, consequently have an equal if not a superior claim to a place in this work.

These are Salsola sativa, Lin. Salsola Souda, Lofti.\(^b\) Kali hispanicum supinum annum Sedi folis brevibus, s. Kali d’Alicante, "puffin." It grows abundantly on that part of the Spanish coast which is washed by the Mediterranean Sea. This species is described first enumerated by Professor Murray, as it supplies all the best Soda consumed in Europe, which by us is called Spanish or Alicante Soda, and by the Spanish merchants Barrilla de Alicante.

Salsola Soda, Lin. Kali majus, rochleato femine. Banb. Pinn. Le Salicor, Marcurelle.\(^a\) Jacquin Hort. Vind. tab. 68. This species, which grows on the French Mediterranean coast, is much used in Languedoc for the preparation of this salt, which is usually exported to Sicily and Italy.

Salsola Tragus, Lin. affords an ordinary kind of Soda, with which the French frequently mix that made in Languedoc: this adulteration is also practised by the Sicilians, who distinguish the plant by the term felvaggia.\(^a\)

Salicornia herbae, Lin. Flor. Dan. tab. 303. Conf. Bastler, Opusc. subsec. tom. 2. p. 107. Pallas, Reise durch Ruff. Reich. tom. 1. p. 479. Is common in salt marshes, and on the sea shore, all over Europe. Linnaeus prefers the Soda obtained from this plant to that of all the others;\(^b\) but though the quantity of fossil alkali which it yields is very considerable, as a great portion of it is united with mutric acid, it is mixed with much common alkali.

Salicornia arabica, Lin. Mesembryanthemum nodiflorum, Lin. Plantago squarrota, Lin. All these, according to Alpinus, afford this alkali. It has also been procured from

\(^a\) Why the name Kali is adopted in the London Pharmacopoea for the fixed vegetable alkali, we are unable to devise.

\(^b\) Spanfis Reisa, p. 132. \(^c\) Mem. de l’Acad. de Sc. de Paris, 1717. p. 73. sqq. tab. 2.

\(^a\) Gronov. Fl. arzcat. Russoffii, p. 29. \(^d\) Nuortibus nulla aptior in hunc usum planta, quam dicta, Mut. Med. p. 36.
several of the Fuci, especially F. vesiculosus, and distinguished here by the name Kelp.† Various other marine plants might also be noticed as yielding Barilla or Soda by combustion; but the principal are confined to the genus Salifola and that of Salicornia. The Salifola Kali, on the authority of Rhauwolf, is the species from which the salt is usually obtained in eastern countries.‡

It is to be regretted, that the different kinds of Soda which are brought to European markets, have not been sufficiently analysed to enable us to ascertain with tolerable certainty the respective value of each; and indeed while the practice of adulterating this salt continues, any attempts of this kind are likely to prove fruitless: the best information on this subject is to be had from Jussieu,† Marcorelle, Cadet, Bolfrac, and Suflin. In those places where the preparation of Soda forms a considerable branch of commerce, as on the coast of the Mediterranean, the seeds of the Salifola are regularly sown in a proper situation near the sea, which usually shoot above ground in the course of a fortnight. About the time the seeds become ripe, the plants are pulled up by the roots, and exposed in a suitable place to dry, where their seeds are collected: this being done, the plants are tied up in bundles, and burned in an oven constructed for the purpose, where the ashes are then while hot continually stirred with long poles. The saline matter, on becoming cold, forms a hard solid mass, which is afterwards broken in pieces of a convenient size for exportation.

According to chemical analysis Soda generally contains a portion of vegetable alkali and neutral salts, as common salt, and sometimes vitriolated tartar, or Glauber salt, likewise liver of sulphur, and not

† The preparation of this is fully described by Bolfrac. See Observations on the State of the Islands of Scilly, p. 118.

‡ To these we may add Batis maritima, (Vide Jaccquin Hist. Stir. Amer. p. 172.) which on the coast of Carthage is found to have a very soft talc, where it is prepared into soda, which is used for the purpose of making glass. The Carthaginians call this plant Bailla.


According to the experiments of Du Hamel, the further from the sea the seeds are sown, the less solid alkali, and the more vegetable alkali the plants contain. Vide Mem. de l’Acad. 1767. p. 233.

unfrequently
unfrequently some portion of iron is contained in the mass; it is therefore to be considered as more or less a compound, and its goodness is to be estimated accordingly. The Spanish Soda, of the best sort, is in dark coloured masses, of a bluish tinge, very ponderous, sonorous, dry to the touch, and externally abounding with small cavities, without any offensive smell, and very flat to the taste; if long exposed to the air, it undergoes a degree of spontaneous calcination. The best French Soda is also dry, sonorous, brittle, and of a deep blue colour, approaching to black. The Soda, which is mixed with small stones, which gives out a fetid smell on solution, and is white, soft, and deliquescent, is of the worst kind.*

The method of purifying this salt is directed in the London Pharm. under the article of Natron preparatum, and in the Edinburgh Pharm. under that of Sal alkalineus fixus fossilis purificatus: the pure crystals, thus formed of Alicat barilla, are colourless, transparent, lamellated, of a rhomboidal figure, and one hundred parts are found to contain twenty of alkali, sixteen of acelial acid, and sixty-four of water; but upon keeping the crystals for a length of time, if the air be not excluded, the water evaporates, and they assume the form of a white powder. According to Imlin,† one ounce of water, at the temperature 62 of Fahr. dissolves five drams and fifteen grains of the crystals.‡ The same author also found that this salt preserved flesh from putridity longer than common salt, though not so long as the vegetable alkali.

Natron has been thought useful in febrifugal disorders, but it is seldom given in its simple state.

In combination with vitriolic acid this alkali forms Glauber salt, or Natron vitriolatum; with nitrous acid, cubic nitre; with marine acid, common salt; with the sedative salt of Homberg, borax; with cream of tartar, Rochelle salt, or sel faignette.

To enter fully on the peculiar properties, or chemical qualities, of this alkali, would lead us too far, and is properly the province of chemistry. It is in common use in the manufacture of glaze and soap.

* For this, and almost the whole on this subject, we are obliged to the late Professor Murray. See his App. Med. vol. 1.
† Bergman in Schoffert.
‡ Diff. de Sode. § 2.
1 Kirwan says, 2, 3 times its weight of water at this temperature are required.
No. 29. 5 G and
and as the latter is an article of the Materia Medica, we shall proceed to consider its medicinal effects.

All the soaps, of which there are several kinds, are composed of expressed vegetable oils, or animal fats, united with alkaline lixivia. The Sapo ex oleo olivae et natro confectus of the London Pharm. or the Sapo albus hispanicus of the Edinb. Pharm. (white Spanish soap) being made of the finer kinds of olive oil, is the best, and therefore preferred for internal use.

Soap was imperfectly known to the ancients. It is mentioned by Pliny as made of fat and ashes, and as an invention of the Gall. Areteus, and others, inform us, that the Greeks obtained their knowledge of its medical use from the Romans. Its virtues, according to Bergius, are detergent, resolvent, and aperient, and its use recommended in jaundice, gout, calculous complaints, and in obstructions of the visera. The efficacy of soap, in the first of these diseases, was experienced by Sylvius, and since recommended very generally by various authors who have written on this complaint; and it has also been thought of use in supplying the place of bile in the prima via. The utility of this medicine, in icterical cases, was inferred chiefly from its supposed power of dissolving biliary concretions, but this medicine has lost much of its reputation in jaundice, since it is now known that gall stones have been found in many, after death, who had been daily taking soap for several months and even years. Of its good effects in urinary calculous affections, we have the testimonies of several, especially when dissolved in lime water, by which its efficacy is considerably increased; for it thus becomes a powerful solvent of mucus, which an ingenious modern author supposes to be the chief agent in the formation of calculi; it is however only in the incipient state of the disease that these remedies promise effectual benefit, though they generally abate the more violent symptoms where they cannot remove the cause. With Boerhaave, soap was a general medicine; for as he attested most complaints to viscidity of the fluids, he, and most of the Boerhaavian school, prescribed it in conjunction with different

* The acid soap of Cornette. *Mem. de la Soc. de Med. de Paris, t. 3. p. 189.* is so little known as scarcely to be considered an exception.


resinous
resinous and other substances, in gout, rheumatism, and various visceral complaints. Soap is also externally employed as a resolvent, and gives name to several officinal preparations.

CAPSICUM ANNUUM. ANNUAL CAPSICUM, Or, GUINEA PEPPER.


- Capsicum filiquis longis propendentibus. Tourn. Infl. 152.

LONG-PODDED CAPSICUM.

- Capsicum caule herbaceo, fructu rotundo glabro. Mill. Dist.

CHERRY CAPSICUM.

- Capsicum caule herbaceo, fructu ovato. Mill. Dist.


Sp. Ch. C. caule herbaceo, pedunculis solitariis.

THE root is annual: the stem is thick, roundish, smooth, crooked, branched, and rises four or five feet in height; the leaves are elliptical or egg-shaped, pointed, veined, smooth, and placed in no regular order upon long footstalks: the flowers are solitary, white, and stand at the axillae of the leaves upon long peduncles: the calyx is persistent.
Tentent, angular, tubular, and cut at the extremity into five short segments: the corolla is monopetalous, wheel-shaped, consisting of a short tube, divided at the limb into five segments, which are spreading, pointed, and plaited: the five filaments are short, tapering, and furnished with oblong anthers: the germen is egg-shaped, and supports a slender style, which is longer than the filaments, and terminated by a blunt stigma: the capsule is a long conical pod, or berry, of a shining reddish colour, separated into two cells, which contain several flattish kidney-shaped seeds. It is a native of both Indies, and flowers in June and July.

This species, and all its varieties noticed above, were cultivated by Gerard, and are now commonly produced in the garden flowers of this country: the fruit varies both in shape and colour, but that which is of a conical form, and of a reddish or orange colour, is preferred. Its taste is extremely pungent and acrimonious, setting the mouth as it were on fire, and this sensation is of considerable duration. "It gives out its pungency to rectified spirit, together with a pale yellowish red tincture: the spirit, gently distilled off, has no considerable impregnation from the capsicum: the remaining extract is insupportably acry."*

The use of this and the other species of Capsicum, which have long been employed for culinary purposes, have but lately been adopted as a medicine. Cayenne pepper, which is now much used at our tables, is the fruit of Capsicum baccatum of Linnaeus, (Bird-pepper) and differs not materially in its effects from that of the species here figured, for which it is frequently substituted. In hot climates, particularly in the West Indies, and in some parts of Spanish America, the Capsicum is eaten both with animal and vegetable food in large quantities, and it enters so abundantly into their sauces, that to a person unaccustomed to eat them, their taste is intolerably hot.† But in the climates of which the Capsicum is a native, we are told that the free use of it is a salutary practice, being found to strengthen the stomach, assist digestion, and correct that putrid colliquation of the humours

† At Peru especially. Vide, Premier Voyage de la Mer du Sud. t. 1. p. 262.
so common in hot climates. As an aromatic of the most acrid and stimulant kind it certainly may be found efficacious in some paralytic and gouty cases, or to promote excitement, where the bodily organs are languid and torpid.

It has been successfully exhibited in cynanche maligna, and in what by Dr. Mackitrick calls cachexia africana, which he considers as the most frequent and fatal predisposition to disease among negroes. The dose he directs is from six to eight grains.

Bergius gave the seeds of Capsicum with great success in inveterate intermittents. *


He prescribes them as follows:

Re sem. pip nd g. vi. hacc. laus; scrup, ii. f. pulvis. divedendas in tres partes sequales, quarum prima potius sumendas incipiente primo rigore; secunda postridie cadem; tertia vero terto die. M. M. p. 444.

No. 29. 5 H CHENOPODIUM
CHENOPODIUM VULVARIA. STINKING GOOSE-FOOT, 
Or, ORACHE.


THE root is annual; the stems are procumbent, channelled, branched, and grow from six to twelve inches in length: the leaves are numerous, entire, of an irregular rhomboidal form, or often egg shaped, veined, of a mealy appearance, and flaccid alternately upon short footstalks: the flowers are very small, of a light green colour, and placed in clusters at the ax of the leaves: the calyx consists of one pentagonal leaf, cut into five pointed concave divisions: there is no corolla: the five filaments are small, tapering, about the length of the segments of the calyx, and furnished with double round anthers: the germin is orbicular, and supports two styles, terminated with obtuse stigmae: the seed is lenticular, and is inclosed by the calyx, which
which supplies the place of a capsule. It is usually found about old walls and rubbish, flowering in August.

This plant, in its recent state, has a nauseous taste, and a strong offensive smell, resembling that of putrid salt fish, and remaining long on the hands after touching the herb.* "It gives a strong impregnation to water both by infusion and distillation: the smell is extracted likewise by rectified spirit, and by this menstruum in some degree covered." This plant has been expunged from the Materia Medica of the London Pharmacopœia, but it is still retained in that of Edinburgh. Its virtues are ascribed to its remarkable fetor, from which it is inferred by Dr. Cullen to be a powerful antispasmodic, and especially recommended in hysterical affections.

Dr. Cullen says, "it has been frequently employed in this country with advantage; not however so frequently as might be expected, "as it is a plant, in its fresh state, not always ready at hand, and in "its dry state it loses all its sensible qualities. It can only be employed "therefore in its recent state, and the most convenient formula is that "of a confection; and as it is not always easy to reconcile our patients "to it even in that state, it is not employed so often as I could wish." Mat. Med. vol. ii. p. 365.

* Odoris virof intolerabilis, ut qui vel attacta levi manus inscit, ut longo tempore vix poscit clui. Rati Hist. p. 198.
URTICA DIOICA. COMMON NETTLE.


Fam. Cal. 2-valvis. Cor. o. Sem. unicum, nitidum.


THE root is perennial, creeping, yellowish, furrowed, tough, and supplied with joints, from which proceed many fibres: it sends up several stalks, which are erect, very little branched, obtusely quadrangular, furrowed, purplish, beset with rigid hairs, and usually rise from two to four feet in height: the leaves are heart-shaped, pointed, widely serrated, wrinkled, veined, covered with sharp stinging hairs, and stand oppositely upon slender footstalks: at the base of the leaf-stalks there are four stipules, which are narrow, spreading, and on the under side channelled: the flowers are dioecious, or male and female on different plants, growing in branched pendulous hairy racemi, or clusters of four together: the calyx of the male flower is cut into four small egg-shaped obtuse segments: there is no corolla: the nectarium is turbinated, almost transparent, blunt, perforated at the top, and placed in the centre of the flower: the filaments
ments are four, tapering, of the length of the calyx, and furnished with two-celled antheræ: the calyx of the female flower is composed of two valves, which are egg-shaped, concave, erect, and permanent: there is no corolla: the germen is oval, without a style, but supplied with a woolly stigma: the seed is single, compressed, blunt, shining. It is very common about old walls, sides of roads, and ditch banks, flowering in July.

The Urtica is well known; and though generally despised as a noxious weed, has been long used not only for medical but for culinary and economical purposes. As a diuretic it was formerly much used; and we are told of various haemorrhagic affections in which it was successfully employed. It is also said to manifest a diuretic character, and to be useful in calculous complaints, scurvy, gout, jaundice, &c. But these accounts have little credit, and the nettle is now considered as a simple oleaceous plant, and when young is found to be a good substitute for greens, or other pot-herbs.

The sharp hairs upon the fresh leaves of nettles readily enter the skin, and thereby produce considerable irritation and inflammation, and therefore have been employed in the way of a rubifacient, a practice which is termed urtication, and found of advantage in re-

* "Urtica, ab urendo dicit, quod puritum & pululas ignis similis excisit." Banck. Pin.

** "The young shoots, in the spring, are boiled and eaten by the common people instead of cabbage-greens. Lightf. l. c. The flaks may be dressed like flax or hemp for making ropes, nets, cloth, paper, &c. a practice not uncommon in some parts of Russia and Siberia. Vide Pirk, Beiträge zur botan. Kenntniss der Russ. Reich., vol. 2. p. 254. J. R. Acad. Handl. 1747. p. 59. J. R. Acad. Handl. 1778. p. 379. and others. The Nettle is said to be poisonous to frogs; for if the plant be thrown into a vessel where these animals are confined, they soon begin to swell, and in a few days perish. Vide Hayfriton, Sour am Riffelz., p. 150.

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 poked upon, it readily punctures the skin, and the same pressure forces up from the bag an acrimonious fluid, which instantly enters into the wound, and excites a burning inflammation. See Hooke, Discoveries by the microscope, p. 22. tab. 12. Guettard, Mém. de l'Acad. de St. de Paris, 1751. p. 350.
floring excitement in paralytic limbs, or in other cases of torpor or lethargy.


**MELISSA OFFICINALIS. COMMON BALM.**


*Melissa romana, floribus verticillatis sessilibus, foliis hirsutis.**

**ROMAN BALM.**

**Mill. Dist.**


**Ff. Gen. Ch. Cal. aridus, supra planiusculus: lab. superiore subfasciato. Corolla lab. super. subfornicatum, 2-lidum; lab. inf. lobo medio cordato.**

**Sp. Ch.** M. racemis axillaribus verticillatis: pedicellis simplicibus.

**THE** root is perennial, fibrous: the stems are erect, quadrangular, smooth, branched towards the bottom, and usually rise two or three feet in height: the leaves are heart or egg-shaped, spreading, rough, ribbed, veined, deeply serrated, of a bright green colour, and placed in pairs upon footstalks, which of the lower leaves are very long: the flowers are white or yellowish, placed in whorls or clusters at the
als of the leaves, and appear in June and July: the bractæ are oblong, notched, hairy, and placed at the peduncles: the calyx consists of one tubular pentangular leaf, divided at the brim into two lips, of these the upper is larger, and divided at the extremity into three segments; the under is shorter at the margin, and cut into two teeth: the corolla is monopetalous, bilabiated, tubular: the upper lip is the shorter, with a notch at the apex; the lower is cleft into three parts, of which the middle one is the largest: the stamens are four, two long and two short, and furnished with oblong anthers: the germen divides into four parts, from the centre of which issue a long slender stylo, crowned with a cleft stigma: the seeds are four, egg-shaped, and lodged at the bottom of the calyx.

Schulz, who has professedly written on this plant, was unable to say by what name it was known to the ancients. The *Melissi* of Dioscorides, which has been by some supposed to be our *Melissa*, is by Nicander referred to the *Marrubium*.

The Balm is a native of the southern parts of Europe, especially in mountainous situations, but it is very common in our gardens, and was cultivated in that of Gerhard previous to the year 1596. The herb, in its recent state, has a weak roughish aromatic taste, and a pleasant final, somewhat of the lemon kind, and hence this species has been named *Melissa* odor citri.

"On distilling the fresh herb with water, it impregnates the first runnings pretty strongly with its grateful flavour: when large quantities are subjected to the operation at once, there separates and rises to the surface of the aqueous fluid a small portion of essential oil, in colour yellowish, and of a very fragrant final."

Balm was formerly esteemed of great use in all complaints thought to proceed from a disordered state of the nervous system: thus it was very generally recommended in melancholic and hypochondriacal affections, and in the opinion of Paracelsus, the *Primum et Melissae* promised a complete renovation of man: even Hoffman and Boerhaave, who were probably baffled by the Arabian physicians, deemed


† *Theat. v. 554. 555.*

it an efficacious remedy. Simon Paulii and others speak of its effects as an emmenagogue; but neither this, nor indeed any other medicinal power, is now attributed to Balm. Prepared as tea, however, it makes a grateful diluent drink in fevers, and in this way it is commonly used either by itself or acidulated with the juice of lemons.

The essential oil, which Hoffman supposes to be a powerful corroborant of the nervous system, probably possesses no qualities peculiarly different from many other aromatics and cordials.

b Quod. lat. p. 436.

ANEMONE PRATENSIS. MEADOW ANEMONE; Or, PASQUE FLOWER.


Sp. Ch. A. pedunculo involucratu, petalis apice reflexis, foliis bipinnatis.

The root is perennial, thick, short, and sends off several strong fibres; the flower stem is smooth, beset with soft hairs, near the top furnished with a laciniated involucrum, and rises about six or eight inches
inches in height: the leaves are radical, bipinnated; segments narrow, short, linear, and of a glaucous green colour: it has no calyx: the petals are six, oblong, hairy, of a blackish purple colour, and their apices are turned backwards: the filaments are numerous, slender, about half the length of the petals, and furnished with yellow anthers; the germen are numerous, collected into a bundle, and supplied with long styles, terminated by tapering blunt filigrees: the seeds are placed on the common receptacle, and retain their styles, which, when the seeds go off, resemble long downy tails.

This Anemone is a native of Germany, where it grows in open fields, and flowers in May. It was first cultivated in England by Mr. Miller in 1731, and as we now find it in our gardens, it very much resembles the Anemone Pulsatilla, which grows wild in this country, and would doubtless prove a good substitute for the A. pratensis: the principal distinctions between these species, as they grow naturally, are taken from the flower, which in the A. pratensis is more pendulous, smaller, of a darker colour, and has the apices of the petals reflexed, the stem also is said to be less hairy, and shorter than that of the Pulsatilla.†

This plant, in its recent state, has scarcely any smell, but its taste is extremely acrid, and when chewed, corrodes the tongue and fauces; and the dried plant likewise still retains a considerable share of acrimony. It also appears from some experiments to contain a camphoraceous matter, which was obtained in the form of crystals, of an unctuous taste, and very inflammable.‡

This plant, like several others of great activity, has been received into the Materia Medica of the Edinburgh Pharmacopoeia, upon the authority of Baron Stoerck, who recommends it as an effectual remedy for most of the chronic diseases affecting the eye, particularly amaurosis, cataract, and opacity of the cornea, proceeding from

* An elegant specimen of this plant is correctly figured in English Botany, fig. 51. from which it may be seen how closely it resembles that here annexed, which we obtained through the favour of Mr. Curtis.

† We might also add, upon the authority of the Flor. Dan. that the leaves of the pratensis are somewhat conical, while those of the Pulsatilla are of a bright green. See plates 153. and 641.

‡ See Hann. Mag. 1779. n. 105.
various causes. He likewise found it of great use in venereal nodes, nocturnal pains, ulcers, caries, indurated glands, suppresseid menses, serpiginous eruptions, melancholy, and palsy. The Baron himself, who had for two years suffered much from a violent contusion of his eye, took this remedy, which he soon found occasioned a severe lancinating pain in the part affected; this he considered as a favourable omen of the specific action of the plant; an opinion which was afterwards confirmed in a great number of patients. Six cases of amaurosis, three of cataract, and seven of affections of the cornea, we are told were either entirely cured, or greatly benefited, by the exhibition of this remedy. Several cases proving its success in the other disorders which we have noticed above, especially those of syphilis, are also related by the Baron. Many German physicians have since tried the effects of this medicine in diseases of the eyes, and with success; of these we may mention Guldbrand, Hotz, Mohrenheim; several others however bear testimony of its inefficacy in these diseases, as Schmucker, Bergius, Richter, who increased the dose of this vegetable even beyond that directed by Stoecke. Notwithstanding this, Dr. Cullen says, "I would still recommend it to the attention of my countrymen, and particularly to a repetition of trials in that disease, so frequently otherwise incurable, the amaurosis. The negative experiments of Bergius, and others, are not sufficient to discourage all trials, considering that the disease may depend upon different causes; some of which may yield to remedies, though others do not."  

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4 Lib. de Pulsetilla nigris.

* Tode and Nieffen Diff. de praestantiss. ratione illustrandi Mat. Med. p. 11.


1 Mat. Med. p. 491.


Every
Every part of the plant, except its root, is ordered for medicinal use, and was by Baron Stoerck prepared for this purpose into an extract, a distilled water, and an infusion; but the first form seems to have been preferred, and was given from seven grains to three or four times that quantity, twice or thrice a day. In large doses it frequently excited nauseae and vomiting, or produced griping pains of the bowels, and looseness, and very generally proved diuretic. The fluid preparations of the plant are likewise recommended for external use in ulcers and complaints of the skin. The manner of preparing the extract is given in the Edinburgh Pharmacopoeia.

RHODODENDRON CHRYSAN- YELLOW FLOWERED
ANTIIUM. RHODODENDRON.


THIS
THIS beautiful shrub sends off spreading branches, which are covered with brown bark, and rise about a foot in height: the leaves are oblong, obtuse, thick, veined, reflexed at the margin, on the upper side of a deep green, beneath ferruginous, or glaucous, and surrounding the branches upon strong footstalks, which arise from between the imbricated stipular squamae: the flowers are large, yellow, and terminate the branches upon long peduncles, forming umbels: the calyx is persistent, divided into five teeth: the corolla is monopetalous, wheel-shaped, inclining, irregularly divided at the limb into five roundish spreading segments: the ten filaments are slender, spreading, nearly of the length of the corolla, and furnished with oval antherae: the germen is pentagonal, indented, and supports a style, which is longer than the filaments, and terminated by an obtuse stigma: the capsule is egg-shaped, somewhat angular, and divided into five cells, which contain numerous small seeds.

This species of Rhododendron has not yet been introduced into Britain: it is a native of Siberia, affecting mountainous situations, and flowering in June and July.

This plant, not being found in Murray’s App. Medicaminum, was by mistake omitted in our arrangement of the plants according to their natural orders, where it ought to stand in that of Bicornus, Order xvii.

This plant, and its medicinal effects, were first described in the year 1747, by Ginelin and Steller; who mention it as frequently and successfully used in Siberia and other northern situations of which it is a native, for the cure of rheumatism, and other painful affections of the joints. Little attention however was paid to this remedy till the year 1779, when it was strongly recommended by Koelpin as an efficacious medicine not only in rheumatism, and gout but even in venereal cases; and it is now very generally employed in chronic

* It is said, “ Venatores et Glaciei maris solitores ad Leumum habitantes—dum primi Laborem suorum diebus facilis labantur et a perpetuo praeparaturum montium adfrenti genuum graves dolores patiuntur, castigatae et dolori, decerto hujus foliorum, bidum triduumve continuato efficaciter mederi, nullum inter dormire et quasi inebratia, brevi vero ad foliisures labores futuscentis inde appolliminos evadere.” See Ginelin. l. c.

rheumatisms in various parts of Europe. The leaves, which are the
part directed for medicinal use, have a bitterish subastringent taste,
and, as well as the bark and young branches, manifest a degree of
acrimony. Taken in large doses they prove a narcotic poison, pro-
ducing those symptoms which we have described as occasioned by
many of the order Solanaceae.

As a powerful and active medicine this shrub may probably be
found an important addition to the Materia Medica. Dr. Home, who
tried it unsuccessfully in some cases of acute rheumatism, says, "it
appears to be one of the most powerful sedatives which we have, as in
most of the trials it made the pulse remarkably slow, and in one patient
reduced it 38 beats." And in other cases in which the Rhododendron
has been used at Edinburgh, it has been productive of good effects,
and accordingly it is now introduced into the Edinburgh Pharmacopoeia.
The manner of using this plant by the Siberians, was by putting two
drams of the dried leaves in an earthen pot, with about
ten ounces of boiling water, keeping it near a boiling heat for a
night, and this they took in the morning, and by repeating it three
or four times generally effected a cure. It is said to occasion heat,
thirst, a degree of delirium, and a peculiar sensation of the parts
affected.

* Pracopius a Demidof of Moscow, employed a tincture of the leaves also in
hemorrhoidal complaints. *Neue nordische Beiträge, vol. 1, p. 399.* In Siberia it was
given in a case of cancer of the breast, by Butzer, with great success. *It is in common
Rhodod. Chrysanthe.* 1783.

* Those effects were produced on a goat, which, by eating ten leaves of the plant, was
fainted in a few minutes with trembling, fopoi, &c. See *Steller in Gmelin, l. c.*

It has also been remarked by Steller, that the effects of this plant have been found to
vary according to its form or nature; thus, that produced in a certain place, has been found
uniformly narcotic, that of another cathartic, and a sense of suffocation was the only
symptom occasioned by a third. *Vide Gmelin, l. c.*


No. 30. 5 L.

COCHLEARIA
COCHLEARIA ARMORACIA.  


Sp. Chb. C. foliis radicalibus lanceolatis crenatis; caulinis incisulis.

THE root is perennial, long, tapering, white: the stalk is round, erect, branched, smooth, and rises two or three feet in height: the radical leaves are very large, lance-shaped, scalloped at the edges, and stand on strong footstalls; those of the stalk are much smaller, narrow, and often divided at the edges: the flowers are white, numerous, and terminate the branches in thick clusters: the calyx is composed of four leaves, which are egg-shaped, concave, opening, and deciduous: the corolla consists of four inversely egg-shaped petals, which expand in opposite directions, and form a cross; they are twice the size of the calyx, and are inserted by narrow claws: the filaments are six, tapering, the two opposite ones shorter than the other four, and all furnished with blunt compressed anthers: the germen is heart-shaped, supporting a simple style, which is short, permanent, and furnished with an obtuse stigma: the capsule is heart-shaped, turgid, slightly notched at the end, and furnished with the style; it is divided into two cells, each containing about four seeds. It is found growing wild in many parts of England, particularly about
about rubbish and the sides of ditches; but it is commonly cultivated in gardens, and flowers in May.

The root of this plant, which has long been received into the Materia Medica, is also well known at our tables; "it affects the organs both of taste and smell with a quick penetrating pungency; nevertheles, it contains in certain vessels a sweet juice, which sometimes exudes in little drops upon the surface. Its pungent matter is of a very volatile kind, being totally dissipated in drying, and carried off in evaporation or distillation by water and rectified spirit: as the pungency exhalles, the sweet matter of the root becomes more sensible, though this also is in a great measure dissipated or destroyed. It impregnates both water and spirit, by infusion or by distillation, very richly with its active matter; in distillation with water it yields a small quantity of essential oil, exceedingly penetrating and pungent."

Dr. Cullen having, in our opinion, mentioned every thing necessary to be known respecting the medical virtues of Horse-radish, we shall here transcribe all that the ingenious Professor has written on this subject:

"The root of this only is employed, and it affords one of the most acrid substances of this order, (philippicus) and therefore proves a powerful stimulant, whether externally or internally employed. Externally it readily inflames the skin, and proves a rubifacient that may be employed with advantage in palsy and rhumatism; and if its application be long continued it produces blisters."—
"Taken internally, I have said in what manner its stimulant power in the fauces may be managed for the cure of hoarseness. Received into the stomach, it stimulates this, and promotes digestion, and

* Lewis, M. M. p. 534.

^ The Doctor here refers to the article Erysimum, the juice of which mixed with an equal part of honey or sugar, is strongly recommended for the cure of hoarseness which proceeds from an interrupted secretion of mucus, and which stimulants of the acrid kind are found most efficacious in relieving. When the Erysimum was not at hand, the Dr. substituted a syrup of Horse-radish. He says, "I have found that one dram of the root, finely scraped down, was enough for four ounces of water, to be infused in a close vessel for two hours, and made into a syrup, with double its weight of sugar. A teaspoonful or two of this syrup, swallowed leisurely, or at least repeated two or three times, we have found often very suddenly effectual in relieving hoarseness." Med. Med. v. i. p. 167.

"therefore
therefore is properly employed as a condiment with our animal food. If it be infused in water, and a portion of this infusion be taken with a large draught of warm water, it readily proves emetic, and may either be employed by itself to excite vomiting, or to afflit the operation of other emetics. Infused in water, and taken into the stomach, it proves stimulant to the nervous system, and is thereby useful in palsy; and if employed in large quantity it proves heating to the whole body: and hereby it proves often useful in chronic rheumatism, whether arising from scurvy, or other causes. Bergius has given us a particular method of exhibiting this root, which is by cutting it down, without bruising, into very small pieces; and these, if swallowed without chewing, may be taken down in large quantity, to that of a table spoonful: and the author alleges, that in this way, taken every morning for a month together, this root has been extremely useful in arthritic cafes; which however I suppose to have been of the rheumatic kind. It would seem that in this manner employed, analogous to the use of unbruised mustard-feed, it gives out in the stomach its subtle volatile parts, that stimulate considerably without inflaming. The matter of Horfe-radiish, like the same matter of the other fiquoque plants, carried into the blood vessels, passes readily into the kidneys, and proves a powerful diuretic, and is therefore useful in dropsy; and we need not say, that in this manner, by promoting both urine and perspiration, it has been long known as one of the moft powerful anticusbitics."

We are told by Dr. Withering, that an infusion of Horfe-radiish in milk makes one of the safest and best cosmatics. "I.e.

**SINAPIS NIGRA.**
SINAPIS NIGRA. COMMON BLACK MUSTARD.


Sp. Ch. S. siliquis glabris racemo appressis.

The root is annual; the stem erect, smooth towards the top, channelled at the bottom, about three feet in height, divided and subdivided in numerous distant spreading branches: the leaves are variously shaped; those near the root are large, irregularly heart-shaped, and pinnatifid or lobed at the base; those on the upper branches are narrow, and more entire: the flowers are yellow, and terminate the branches in close spikes: the calyx consists of four expanding strap-shaped deciduous leaves: the corolla is composed of four petals, which at their extremities are roundish, flat, spreading, and stand in opposite directions upon upright narrow claws: the filaments are six, four long and two short; they are all erect, tapering, and furnished with simple anthers: the germen is cylindrical, terminated by a style, which is crowned with a knobbed stigma: a small gland is placed between each of the short filaments and the germen, and between each pair of the long filaments and the calyx, the feel

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vessels
vessels or pods are nearly parallel with the branches, and are long, smooth, protuberant at the base, two-celled, two-valved, and contain many globular shining dark seeds. It is common in corn fields, and banks of ditches; but it is cultivated for use and flowers in June.

The seeds of this species of Mustard, which are directed by the London College, and that of the S. alba, which are preferred by that of Edinburgh, manifest no remarkable difference to the taste, nor in their general effects, and therefore answer equally well for the uses of the table, and for the purposes of medicine. They have an acrid pungent taste, and when bruised this pungency shows its volatility by powerfully affecting the organs of smell; they readily impart these qualities to aqueous liquors, and by distillation with water yield an essential oil of great acrimony. To rectified spirit these seeds give out very little either of their smell or taste. Subjected to the press, they yield a considerable quantity of mild insipid oil, which is as free from acrimony as that of almonds.

By writers on the Materia Medica, Mustard is considered to promote appetite, assist digestion, attenuate viscid juices, and by stimulating the fibres, to prove a general remedy in paralytic and rheumatic affections. Joined to its stimulant qualities, it frequently, if taken in considerable quantity, opens the body; and increases the urinary discharge, and hence has been found useful in droppical complaints.

It belongs to the same natural order as the last mentioned plant, to which it is nearly allied in its medicinal character, and, like all the other Siliquosae, has been recommended as an antiscorbutic; though we are told by Haller, that the use of Mustard disputes the humour.

**As much of the unbruised seeds as an ordinary table-spoon will contain does not prove heating to the stomach, but stimulates the intestinal canal, and commonly proves laxative. Cullen, M. M. vol. ii. p. 171.**

**See Meard and others.**

**"Semen Sinapis ia mortario tritum & cum vino albo mixtum, multas centurias scorbudicos & hagcreationem hominum in obidione Repellit..." Vide Ruff. Hist. p. 893.**
to putrefacency; an opinion which he was probably led to entertain from a supposition that it contained volatile alkali: for it is well known that some of these pungent plants, when in a state of putrefaction, give out this alkali by distillation, and hence have been termed alkali-plants; but the fermentation of these vegetable substances may be so directed as to be of the acceent kind, and the alkali obtained from them seems not to have existed in the vegetable in a separate state.† The great pungency of these plants is not therefore to be ascribed to the volatile alkali, but to the essential oil which they contain. Bergius informs us, that he found Mustard of great efficacy in curing vernal intermittents; for this purpose he directed a spoonful of the whole seeds to be taken three or four times a day, during the apyrexia, and when the disease was obliquely, he added flower of Mustard to the bark. Externally these seeds are frequently used as a stimulant or liniment.‡ Mustard-seed may be most conveniently given entire or unbruised, and to the quantity of a spoonful or half an ounce for a dose.


‡ The fresh powder of Mustard shows little pungency and much bitterness; but when it has been mildewed with vinegar, and kept for a day, the essential oil is evolved, and it becomes considerably more acid, as is well known to those who prepare Mustard for the table. A circumstance which should be attended to when designed for external use.” Cullen, l. c. .

‡ We have good reason to suppose, that Boerhaave was mistaken in ascertaining, as it has been denied by the most respectable authorities.

PISTACIA LENTISCUS.
PISTACIA LENTISCUS.

MASTICH TREE.

Ex qua fruit Mastic, Pharm. Lond. & Edinb.


Pistacia masticifolia, foliis abrupte pinnatis: foliis linear-lanceolatis.


THIS tree, which seldom exceeds a foot in diameter, rises ten or twelve feet in height; it is covered with a smooth brown bark, and towards the top sends off numerous branches: the leaves are regularly pinnated, and consist of several pairs of narrow ovate opposite pinnae, closely attached to the common fusticall, which is winged or supplied with a narrow foliaceous expansion: the male flowers are placed in an amenuin or open caskin: the calyx (proper) is divided into five minute ovate segments: the filaments are five, sometimes four, very short: the anthera are large, brown, erect, and of a quadrangular form: the female flowers, like those of the male, have no corolla, and are placed upon the common peduncle in alternate order: the calyx consists of three small squamous segments: the germen is egg-shaped, larger.
larger than the calyx, and supports two or three stigmas, terminated by reflexed clubbed stigma: the fruit is of the drupaceous kind, containing an egg-shaped smooth nut. The flowers appear in May, and the fruit ripens in August.

This tree, which is a native of the South of Europe and the Levant, appears by Evelyn's Kalendarium Hortense to have been cultivated in Britain in 1664; but in this country it is of slow vegetation, and seldom healthy enough to give us a competent idea of the plant in its natural situation, so that we have been enabled to publish a more correct figure of the Lentilocus, from a dried specimen of it in the Linnean Herbarium, than could have been done from the living plant as found in any of the gardens in the vicinity of London.

In the island of Chio, the officinal Mastic is obtained most abundantly, and, according to Tournefort, by making transverse incisions in the bark of the tree; from whence the Mastic exudes in drops, which are sufficed to run down to the ground, when, after sufficient time is allowed for their concretion, they are collected for use. The time chosen for making these incisions is the first of August, when the weather is very dry; on the following day the Mastic begins to appear in drops, which continue to exude till the latter end of September.

Mastic is a resinous substance, brought to us in small yellowish transparent brittle grains or tears: it has a light agreeable smell, especially when rubbed or heated: on being chewed, it first crumbles, soon after sticks together, and becomes soft and white, like wax, without impressing any considerable taste. It totally dissolves, except the earthy impurities, which are commonly in no great quantity, in rectified spirit of wine, and then discloses a degree of warmth and

* See Aiton's Hort. Kew.

The only tree of this species which we have observed to flower in England, is a male plant in the Apothecaries' garden at Chelsea, where many rare and valuable plants have been long successfully cultivated.


Vers la fin de Septembre les mêmes incisions fournissent encore du mastique, mais en nombre quantité. Town. l. c.

No. 31. 5 N bitterness,
bitterness, and a stronger smell than that of the resin in substance. Boiled in water, it impregnates the liquor with its smell, but gives out little or nothing of its substance; distilled with water, it yields a small proportion of a limpid essential oil, in smell very fragrant, and in taste moderately pungent. Rectified spirit brings over also in distillation, the more volatile odorous matter of the Mastich.\(^6\)

It is a common practice with the Turkish women to chew this resin, especially in the morning, not only to render their breath more agreeable, but to whiten the teeth, and strengthen the gums; they also mix it with their fragrant waters, and burn it with other odoriferous substances in the way of fumigation.

As a medicine, Mastich is considered to be a mild corroborant and astringent; and as possessing a balsamic power, it has been recommended in haemoptysis, proceeding from ulceration, fluor albus, debility of the stomach, and in diarrhoeas and internal ulcers.\(^7\) Chewing this drug has likewise been said to have been of use in pains of the teeth and gums, and in some catarrhal complaints; it is now however seldom used either externally or internally.

The \textit{Lentisci ligum}, or wood of this tree, is received into the Materia Medica of some of the foreign Pharmacopoeias, and is highly extolled in dyspeptic, gouty, haemorrhagic, and dysenteric affections.\(^8\)

\(^6\) Lewin, \textit{M. I}. p. 413. \(^7\) Lib. cit.

\(^8\) Degne (\textit{de dysenteria}. p. 201.) gave it successively in these complaints, in doses of ten grams to a scruple, both in substance and in the way of emulsion.


\textbf{Pistacia Terebinthius.}
Pistacia Terebinthus. Chian or Cytrus Turpentine Tree.

Ex qua fuit Terebinthina chia, Pharm. Lond.


Le. Du Hamel Arboris. t. 2. tab. 87.


T111S is a much larger tree than the preceding species: it sends off many long spreading branches; and is covered with smooth bark: the leaves are pinnate, confluent of ovate lance-shaped, veined, entire, opposite pinnate, with an odd one at the end: the flowers are male and female on different trees, and in their essential parts correspond with the description given of those of the P. Lentifus. It is a native of Barbary and the South of Europe, and has been cultivated.

* Le Brun tells us, that it was “le Terebinthe qui se comba pour donner plus d'ombre a la S. Vigne, huy qu'allant de Bethléem a Jerusalem pour porter son Fils au Temple, elle le voulut repousser sous cet arbre.” See Voyage au Levant. p. 284.
in Britain more than sixty years. It is more hardy than the P. Lentiscus, and if planted against a wall, it bears our winters very well.

Cyprus, or Chian Turpentine, which this tree furnishes, is procured by wounding the bark of the trunk of the tree, in several places, in the month of July, leaving a space of about three inches between each wound; from these the Turpentine issues, and is received upon flumes, which are placed at the bottom of the tree for this purpose, and upon which it becomes so much condensed by the coldness of the night, as to admit of being scraped off with a knife in the morning, which is always to be done before the sun rise; after this, in order to free it of all extraneous admixture, it is again liquified by the sun's heat, and passed through a strainer, when it is fit for use. The quantity of this Turpentine produced from each tree, is very inconsiderable, in so much that it has been observed that four large trees, sixty years old, whose trunks measured five feet in circumference, only yielded two pounds nine ounces and six drams; but in the easter parts of the islands, the names of which this Turpentine bears, the trees afford somewhat more, though still to little as to render it very costly, and on this account it is commonly adulterated, especially with other Turpentines. The best Chio Turpentine is generally about the consistence of thick honey, very tenacious, clear, and almost transparent, of a white color, inclining to yellow, and a fragrant smell, moderately warm to the taste, but free from acrimony and bitterness. The medicinal and other qualities of the Turpentines will be considered together under the species of Pinnus. See Index.


* See Du Hamel, l. c. p. 308. and Tournefort, Voyage du Levant. t. i. p. 145.

DELPHNIUM STAPHISAGRIA.
Dolpinum Staphisngria

Printed by W. Hurdell. July 1, 1792.
DELPHINIUM STAPHIL-  
SAGRIA.  
PALMATED LARKSPUR,  
OR, STAVESACRE.

p. 428. Aconitum auris Ricini hæc folis, flore caruleo magno, 

CLASSE Polyandria. ORD. Trigynia. GEN. PLANT. 681.

EFF. GEN. CH. CAL. 6. PETALS 5. NECTARIUM bilidum, pollice cornu-
atum. Silique 3. s. 1.

SP. CH. 15. nectariis tetraphyllis petalo brevioribus, foliis palmatis: 
lobis obtusis.

THE root is biennial: the stem is downy, smooth, erect, simple, 
purplish, and rises from one to two feet in height: the leaves are 
palmated, divided into five or seven lobes, which are ovate or lance-
shaped, veined, downy, and of a pale green colour: the leaf stalks 
are long, strong, downy, of the colour of the stem, from which they 
arise alternately, and are gradually shorter towards the top of the 
plant, so as to give the whole a regular conical shape: the flowers appear 
in June; they are large, bluish or purplish, stand upon long footstalks, 
and terminate the stalk in an open spike: there is no calyx: the 
corolla is composed of five egg-shaped spreading petals, of which the 
uppermost is extended backwards, so as to form a hollow spur or 
horn-like projection: the nectarium is commonly divided into four 
leaves, which are less than those of the corolla; the two superior are 
narrow, small, erect, and at the base drawn out into spurs like that of 
the petal, in which they are both inclosed; the other two are roundish,

* In some flowers we observed two spurs, in others but one, and the nectarium varied 
accordingly.

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5 O  
and
and plaits at the edges: the filaments are about twenty, short, tapering, and crowned with large yellow antheræ: the germens are three, closely compressing each other, tapering, very downy, and supplied with filiform short styles, terminated by simple stigmata: the three capsules are straight, oblong, tapering, and contain many rough, brown, triangular seeds.

Stavefarc, which is a native of the southern parts of Europe, was cultivated here in the time of Gerard: it is a handsome plant, though less beautiful than many of the other species of Larkspur.

The seeds, which are the only part of the plant directed for medicinal use, are usually imported here from Italy; they are large, rough, of an irregular triangular figure, and of a blackish colour on the outside, but yellowish within; their smell is disagreeable, and somewhat fetid; to the taste they are very bitter, acrid, and nauseous. Their virtues are extracted partially by water, and completely by rectified spirit.

These seeds seem to have been known to the ancients, by whom they were employed as a masticatory, for on being chewed they excite a copious flow of saliva, and on this account were recommended in tooth-aches, and other painful affections of the face and gums. The ancients also prescribed them with a view to their emetic and cathartic effects in doses of ten or fifteen grains: but the deleterious narcotic qualities of Stavefare were discovered to be so powerful as to forbid its internal use. Schultz, only by keeping it some time in his mouth, to relieve a tooth-ache, was for a time deprived of his senses; and Hillefeld has related, that a dog, by taking five scruples of these seeds, became convulsed, and soon died. Stavefare is now therefore confined to external use in some kinds of cutaneous eruption, but more especially for destroying lice and other insects; and by its efficacy in this way, this plant, in most of the European languages, is distinguished by the name Loufe-wort.


* See his Mat. Med. p. 435. 4 Diff. de Venen. p. 20.

LAURUS CAMPHORA.
LAURUS CAMPHORA. CAMPHOR-TREE.

Arbor ex qua obtinetur Camphora, Pharm. Lond. & Edinb.


Sp. Ch. L. foliis triplinervii lanceolato-ovatis.

THIS tree grows to a considerable height, dividing into many branches, covered with smooth greenish bark: the leaves are ovate, lance-shaped, entire, smooth, nervcd, on the upper side of a pale yellowish green colour, on the under glaucous, and stand upon long footstalks: the flowers are small, white, standing upon short pediciles, terminating the common peduncles, which are long, naked, erect, and proceed from the ax of the leaves: there is no calyx: the corolla is composed of six small ovate concave unequal petals: the nectarium
mucumum consists of three tubercles, terminating in briefly points, surrounding the germen: the filaments are nine, shorter than the corolla, and furnished with round anthers: the inner filaments are supplied at the base with two round glands: the germen is roundish, the style is simple, about the length of the filaments, and terminated by an obtuse stigma: the fruit resembles that of the Cinnamon.—

(See Plate 27.)

This tree is a native of Japan, growing abundantly in the woods of the western part of the island. It was first cultivated in Britain by Miller, and by being easily propagated it is now a common green-house plant in this country, where, though it often seems sufficiently luxuriant and healthy, it very rarely produces flowers: so that for the annexed figure we are obliged to Dr. Smith who supplied us with a specimen from his Herbarium.

Although this is the tree from which Camphor is chiefly obtained, and from which all Europe is supplied with this drug, many other vegetables however are well known to afford a similar substance; of these, that most worthy of notice is a large tree, indigenous to the islands of Borneo and Sumatra, which, though a different genus, somewhat resembles that of the Laurus, and is very fully described by Houttuyn; also by Grimm, Miller, Marsden, and others; by whom we are told it grows sometimes to the height of 100 feet, exceeds fifteen in circumference, and yields the Camphor in a native concrete state, in both these islands; but that of the former is accounted the best, and obtained more abundantly than in Sumatra.


We have seen the fruit of this tree, (in the possession of Dr. Smith) which has not the least affinity to that of any of the genus Laurus.

* See Verhandelingen der Maatschappy d. Westen. te Harlem, vol. xxi. p. 266. fig. tab. 8. He calls it, Laurus foliis ovalibus acuminatis lacinins, floribus magis tulipaces.


* See an account of Sumatra by Charles Miller in Phil. Trans. vol. 68. p. 169.

* Hift. of Sumatra. p. 121.

The
The Camphor is found to lodge everywhere in the interstices of the fibres of the wood, also in the pith, but most abundantly in the crevices and knots of this tree; which, in order to obtain the drug, must be cut down, its bark taken off, and the wood split. The larger pieces which in the Malay language are called Copallí (head), are first picked out from the upper part of the tree; afterwards the smaller, named Poernet (belly), and lastly that which adheres to the wood, and is procured by rasping, denominated Caki, or feet.

This native Camphor, when freed from woody fibres, is consumed in the East, and sold, even to the Japanese, at a very high price: it does not suffer so much loss or change, on exposure to the open air, as that imported from Japan, and appears in every respect to be a much purer and more valuable medicine. From this tree likewise exudes an oily or rather resinous fluid, named oil of Camphor; which is of great estimation for its external use in relieving pains, and resolving inflammatory tumours.

Of the other vegetables which yield Camphor, we have already noticed the Laurus Cinnamon, to which might be added several others which contain some proportion of this substance.  

The Camphor brought to Europe is to be considered as the essential oil of the tree here represented, obtained at Japan by a kind of distillation, or sublimation; and for this purpose the root is said by Ten Rhynæ to be the only part employed; but according to Cleyn "the Camphor is procured not only from the root, but also from the young branches; and by Kämpfer and Thunberg both the root and wood are mentioned as affording this valuable medicine.

Abbe Grosier, and the author of Flora Cochinchinensis, * informs us, that this tree, which is called Tébang, grows in China to an immense size; and the former states the process for obtaining the


* He says, "Habitat frequens, & inculta, non minus in China, quam in Japonia."

No. 32.  
* Camphor
Camphor by the Chinese to be as follows: "They take some branches, fresh from the Tébang, chop them very small, and lay them to steep in sulphur water for three days and three nights. After they have been soaked in this manner, they are put into a kettle, where they are boiled for a certain time, during which they keep continually stirring them with a stick made of willow. When they perceive that the sap of these small chips adheres sufficiently to the stick in the form of a white froth, they strain the whole, taking care to throw away the dregs and refuse. This juice is afterwards poured gently into a new earthen basin, well varnished, in which it is suffered to remain one night. Next morning it is found coagulated, and formed into a solid mass. To purify this first preparation, they procure some earth from an old earthen wall, which, when pounded and reduced to a very fine powder, they put into the bottom of a basin made of red copper; over this layer of earth they spread a layer of Camphor, and continue thus until they have laid four strata. The last, which is of very fine earth, they cover up with the leaves of pennyroyal; and over the whole they place another basin, joining it closely to the former by means of a kind of red earth, that cements their brains together. The basin thus prepared is put over a fire, which must be managed so as to keep up an equal heat: experience teaches them to observe the proper degree. But above all, they must be very attentive lest the plaster of fat earth, which keeps the basins together, should crack or fall off; otherwise the spirits would evaporate and ruin the whole process. When the basins have been exposed to the necessary heat, they are taken off and left to cool; after which they are separated, and the sublimated Camphor is found adhering to the cover. If this operation is repeated two or three times, the Camphor is found purer and in larger pieces. Whenever it is necessary to use any quantity of this substance, it is put between two earthen vessels, the edges of which are surrounded with several bands of wet paper. These vessels are kept for about an hour over an equal and moderate fire, and when they are cool the Camphor is found in its utmost perfection, and ready for use." 

The crude Camphor, exported from Japan, appears in small greyish pieces, and is intermixed with various extraneous matters; in

* See General Description of China, translated from the French, vol. i. p. 457.
this state it is received by the Dutch, and purified by a second sublimation; after which it is formed into loaves, the state in which it is brought to us. The peculiar method used by the Dutch in this process has long been kept a secret; but others have succeeded in refining this drug, and the manner of performing it is now detailed and found to answer the purpose very well.  

Pure Camphor is white, pellucid, somewhat translucent to the touch; of a bitterish aromatic acid taste, yet accompanied with a sense of coolness; of a smell fragrant, and approaching to that of rosemary, but much stronger. It is totally volatile and inflammable; soluble in vinous spirits, oils, and the mineral acids; not in water, fixed or volatile alkaline liquors, nor in the acids of the vegetable kingdom.  

Camphor does not seem to have been known to the Greeks; but by the Arabs it was called Caphur, or Canthur, and was supposed to possess a refrigerant power. To most small insects, and even to frogs and birds, the effluvia of Camphor prove very destructive, as appears from the experiments of Menghini and Carminiati. Taken inwardly by birds or quadrupeds, as rabbits, cats, dogs, sheep, &c. to the quantity of a dram, it has been found universally to produce deleterious effects; and in large doses it has occasioned symptoms equally dangerous on man, instances of which are related by Griffin, Alexander, Whytt, Collin, Hoffman, Callisen, Cullen, and others. Whether Camphor ought to be considered as a calificient and stimulant, or as a refrigerant and sedative, we are surprised should of late have become a subject of controversy; the experiments of Alexander, who found that his pulse was affected ten vibrations in a minute, sufficiently establish its sedative character; and though some instances might  

* The following method is directed in the *Pharm. Suecia*. p. 52.  
Rece Camphoro cruce libras das,  
Caules uile pulvuratæ ücriam unam.  
Simul titra immittantur cucurbitæ vitrea late et depressa, atque auxere calore littin,  
aucto liquefact Camphori. Reñoio potius calore sublimetur mafs pellucida, a scorpio,  
contrafo vitra, sparsula.  

* Duncan's Edinburgh New Dispensatory.  
* Allo Scapion.  
* Cam. de animal. ex mephitibus inter- 

* Experimental Essays, p. 227.  
* show
show a contrary effect, they are such as occasionally occur from the use of medicines universally admitted to be the most powerful of this class, and are to be explained as a secondary effect upon the principle of a reaction in the system; and our own experience, as well as that of several others noticed below, who have given it successfully in inflammatory complaints, leads us to conclude with Dr. Cullen, that inflammation is never the direct operation of this substance.

Respecting the use of this important medicine, in different diseases, we shall follow Dr. Cullen, whose words we shall transcribe, adding, however, proper notes and references, conformably to the plan hitherto pursued in this work.

"It has been much employed in fevers of all kinds, particularly in nervous fevers attended with delirium and much watchfulness; and in such I have frequently employed it with advantage. Some time ago, I have often seen it employed by my fellow-practitioners in such cases: and that the good effects of it did not always appear, I imputed it to its being used only in small quantities. Since we came into the free use of wine and opium, Camphire has been little employed in the practice of this country. The use of it, however, has been very fully established by some of the most- eminent physicians on the continent: among these I reckon the late learned and experienced Werlhoff, who often employed it in many inflammatory diseases with great benefit, and plainly gives us his opinion in favour of its refrigerant power.

"The use of this medicine has been especially remarkable in putrid fevers, of which indeed we have not many influences in this country: but from the very remarkable antiseptic powers which it discovers in experiments out of the body, it is very probable that when

x Quarin says, "Vidi enim in multis, quibus camphora majori dosi exibita fuit, pulsum celerimentum, faciem ruberrimum, oculos torves inflammatorios, convulsiones et phrenitidem lethalem fecutam fulsit." Method medic. febr., p. 57.

y Comm. Norimberg. 1734. & 1735. We may also notice Huxham and Hoffmann, l. i. c.


Mindereus,
when thrown into the body in large quantities, so that at least its more subtle parts may be diffused over the whole system, it may be expected to produce considerable antiseptic effects. Its power in checking and curing gangrene in the experiments of Collin, are very remarkable; but whether that power be owing to its antiseptic virtue alone, or to its operation at the same time on the nervous system, I would not rashly determine.

Both from its use in low, or what are called malignant fevers, and from its antiseptic powers, it is highly probable that it has been of great service in the confluent small-pox. It is also likely that it may be of service in favouring the eruption of exanthemata, and in bringing them back to the skin, when from any cause they had suddenly receded, though I have no particular experience of this.

These are the cases of acute diseases in which Camphire has been useful; and its use in many chronic cases is equally well authenticated. Whenever diseases depend upon a mobility of the nervous power, and an irregularity of its motions, it may be expected that such a powerful sedative should be of service. Accordingly, many practitioners have reported its virtues in hysterie and hypochondriac cases; and myself have had frequent experience of it.

In spasmotic and convulsive affections it has also been of service; and even in epilepsy it has been useful. I have not indeed known an epilepsy entirely cured by Camphire alone; but I have had


Haller, Opusc. path. p. 145. Tillot, Epist. Med. Prat. p. 237. C. L. Hoffmanns Nachricht von r. gut. Heilherr d. Kinderblattern. 1764. in Vogel Bib. vol. 5. p. 346. Collin, l. c. P. 3. nos. 23. 23. 24. In the Small-pox Hospital Camphor is in general use, and our own experience warrants us in saying that in the early stages of this disease, and after proper evacuations have been effected, it seldom fails, in doses of a scruple, to relieve the pains of the head and joints, and to procure sleep. But we have no reason to think, with Rotenhain and Boetius, that the activity of the variculous malformation is to be subdued by this medicine.


No. 32. 5 Q.
several instances of a paroxysm which was expected in the course
of a night, prevented by a dose of Camphire exhibited at bed-time;
and even this when the Camphire was given alone: but it has been
especially useful when given with a dose of cuprum ammoniacum,
of white vitriol, or of the flowers of zinc.
Since the report of Dr. Kinnier, in the Philosophical Transactions,
vol. XXXV. Camphire has been often employed in cases of mania;
and I have given above an account of a trial which I had made
of it. In that case, however, it was not successful; nor in several
other trials has it been more so with me, or other practitioners in
this country.
We have had here lately, in a patient under the care of Mr. Lata,
surgeon, a notable example of the use of Camphire in a maniacal
case, which I think it proper to take notice of here."
This shows clearly enough the power of Camphire in mania;
and I have only to add, that though in several other instances it
has not made a cure, it has not in any instance of a moderate
dose, that is, not exceeding half a dram, occasioned any disorder
in the system; and in several cases it has induced sleep, and ren-
dered the mind for some time more quiet.
I observe that De Berger has been more successful; and perhaps
the reason of our failure has been our not attending to his admo-
nition. In his letter to Werthoff on the subject of Camphire, he
has the following passage: Multoties hoc remediu in mea praxi utor,
practique in inflammationibus internis, magno cum successu, et deminor
tam multis medicos ab usu ejus interno aborrere. Non dein est, quod
præmissis premissitendi maniacum eo sanitati penitus resituit. In eo
vero momentum practicum situm est, ut sufficiens dosi et diu fatis
exhibeatur.
This is particularly confirmed by a case given by Joerdens in
the Commercium Norimbergense. In several other writers there are
accounts of maniacal and melancholic cases cured by the use of
Camphire; but many of the practitioners who report such cures
acknowledge, that in many cases it had disappointed their expec-

* In the case here alluded to, the dose of Camphor was gradually increased to above
sixty grains three times a day, by which a cure was effected.

"tations."
Whether these failures have been owing to the not employing at the same time niter, vinegar, and some other remedies which are supposed to contribute much to the virtues of Camphire, we would not determine; but we are clear that mania is a disease of considerable diversity with respect to its causes, and that there are certain cases of it only to which Camphire is properly adapted. In cases of an organic affection of the brain, it is hardly to be supposed that Camphire or any other remedy can be of use.

I have mentioned above, that several practitioners have employed Camphire in the most acute inflammatory diseases; and therefore we are not surprized to find that it has been given also internally in cases of acute rheumatism; and it is said to have been with advantage. We have no experience of it, because we have found another method of cure generally successful; but I take this occasion to mention its external use, as often of great service in removing the rheumatic pains of the joints or muscles. This we have often experienced, and have no doubt of Camphire having a peculiar power in taking off the inflammatory state in cases both of rheumatism and gout. In the case of rheumatism it is a matter of common experience: in the case of gout it is more rare; but I have had the following particular example of it. A gentleman had brought from the East Indies an oil of Camphire, a native substance, which seemed, by its smell and taste, to be no other than Camphire in that form, and which I perceive to be mentioned by naturalists as a native substance, produced by several trees in the East Indies. This the person prescribed of recommended to all his acquaintances as an infallible remedy for gout and rheumatism; and a gentleman who had often laboured under the gout, and then felt the pains of...
"it unusually severe, was persuaded to apply it. He had then the
gout exceedingly painful in the ball of the great toe and instep of
one foot. On this part he rubbed a quantity of the oil of Camphire;
and in about half an hour or a little more he was entirely freed
from the pain he had before. In less, however, than an hour
after, he had a pain and inflammation come upon the same part of
the other foot. As the pain here became pretty severe, he again
employed the oil of Camphire, and with the same effect of soon
relieving the pain very entirely. The consequence of this was
also the same; for in less than an hour the pain and inflammation
returned to the foot that had been first affected: and here again
our patient, obstinate in persevering in the trial of his remedy, again
applied the oil, and he had the same success as before in relieving
the part affected, and with the same effect also of occasioning a
translation. But here the translation being made to the knee, the
patient abstained from any farther application of the oil, and suf-
fered the pain of the knee to remain for a day or two, and till it went
off by some swelling and desquamation in the usual manner.

This history shows sufficiently the power of Camphire in relieving
the inflammatory pain and pain of the part chiefly affected; but
at the same time that it has no effect on the diathesis of the system,
and that, when that subsists, as Camphire is ready to occasion a
translation, it will always be employed in gouty cases with great
danger. In cases of acute rheumatism, we have had occasion to
remark, that a strongly solution of Camphire in oil would relieve the
pain of the joint for the time chiefly affected; but it was very often
with the translation of it to another joint soon after: and we have
therefore long ago ceased from employing such an application in
all cases when an acute rheumatism was very general and strong
in the system.

It may be supposed that it is analogous to this power of Cam-
phire in taking off an inflammatory state, that this medicine has
been often found so useful in relieving toothach; and I have no
doubt that Camphire operates by the power mentioned in relieving
toothach, but it is also by exciting a copious flow of saliva and
mucus from the internal surface of the mouth, that water somewhat
impregnated
impregnated with Camphire, employed to wash the mouth, has been frequently of service in relieving the disease.

However it may be with respect to tooth-ach, we have no doubt that the antiphlogisitic nature of Camphire may be of use in curing ophthalmia: and this gives a good ground for the many attempts that have been made to introduce Camphire into the medicines intended to be employed externally in the cure of ophthalmia.

We have now mentioned many of the virtues of Camphire as employed by itself, and must now mention some instances of its peculiar utility when combined with other medicines.

When combined with drastic purgatives, it is said to moderate their acrimony, and thereby their violent operation. We have not indeed perceived this, and perhaps never tried it in a proper manner; but in the mean time, the respectable authority of Mr. Luson,⁵ the father, satisfies me that it is well founded.

Another opinion that has been very general is, that Camphire has the power of correcting the acrimony of cantharides. In opposition to this, we would not quote the facts given by Dr. Héberden of two several instances in which Camphire seemed to occasion strangury; for I must conclude these facts to have been very accidental occurrences, as I have employed Camphire fifty times, even in large doses, without my ever observing its having any effect upon the urinary passages. Mr. Luson, the father, has observed, as I have done frequently, that Camphire, though given very largely, never discovers its smell in the urine, whilst it frequently does it in the perspiration and sweat.

It was formerly a frequent practice in this country to anoint a blistering plaster that was to be applied to the back, or other part, with camphorated oil, and this with a view of preventing strangury from the cantharides. The practice however has been long ago laid aside, because it was perceived that, in most persons, if the plaster was allowed to continue applied for above twelve hours, and while at the same time it was omitted to give the patient a large quantity of drink, a strangury would come on notwithstanding.


*Méd. Trans.,* vol. 1, p. 471.
"the unction of camphorated oil, and even the exhibition of a quantity of Camphire internally. The practitioners of this country have loft their power of Camphire in correcting the acrimony of cantharides; and for preventing the strangury that might otherwise arise, they trust entirely to a large exhibition of Arabic emulsion, and to the plaster's not being allowed to lie on too long.

Another virtue ascribed to Camphire in combination, is its moderating the action of mercury; and if the saline preparations of mercury are triturated with a portion of Camphire, this abstracts a part of the acid that had been united with the mercury, and therefore renders the preparation more mild than before, and at the same time does not deprive entirely the preparation of much of its deobstructive virtue. This we have had experience of in that very acrid preparation of mercury the turbeth mineral, and also in the mercurius dulcis or calomel, which, by being triturated with Camphire, become less purgative, and less ready to excite salivation. How far this mitigation of the preparations of mercury leaves them equally powerful as before in the cure of syphilis, I cannot certainly determine; but am of opinion that it does not, if they be employed in the same quantities as they would have been before.

This mitigation of the saline preparations of mercury, by a combination with Camphire, will be readily admitted; but many practitioners go farther, and alledge that mercury, in every condition, united with Camphire, becomes a more mild sublance, less irritating to the system, while it is equally powerful in curing the diseases to which it is otherwise adapted. * I must admit the experience of the practitioners of France in this matter, but those of this country know nothing of it; and I can assert, that in many trials, a quantity of Camphire added to our common mercurial ointment neither prevented the unction, in the usual quantity, from exciting salivation, nor rendered the symptoms of it more mild than usual.

* Raulin, Observ. de Medicine, p. 266.
"A peculiar combination of Camphire said to have considerable
effects, is that with opium. The employment of opium is in
many persons attended with some inconvenience and disorder, as
I have observed above; and every practitioner knows it to be
alleged by some respectable persons, that Camphire joined with it
prevents these disorders. It may be so, but I have not found it
in my experiments. I have found large doses of Camphire dispose
to sleep, but commonly with that same confusion of head and
turbulent dreams which sometimes arise from the use of opium;
and I have not found that a small quantity of Camphire has any
effects in increasing the power of opium, or of rendering the
operation of it different from what it would have been if employed
alone. But against the respectable authorities of Lafonnoe and
Halle, I must suspect that my experiments have not been made
properly or often enough.

'I here is still another instance of the improvement of a medicine
by a combination with Camphire. Mr. Lafonnoe assures us, that
Camphire, joined with the Peruvian bark, gives it more energy and
force, whether it be to be employed for the purpose of curing
fever or gangrene; and I believe this to be well founded.

"After thus treating of the virtues of Camphire, we must speak
of its dose and exhibition. It will appear clearly from what is
said above, that it may be given in doses of very different quan-
tities; and it appears to me from many trials, that doses of a few
grains, repeated only after long intervals, have hardly any effect at
all, and that, to obtain sensible effects from it, it must either be
given in large doses, not under that of twenty grains, or, if given
in smaller doses, these must be repeated frequently after short in-
tervals. The latter practice is preferred by some eminent practi-
tioners. To what length in either way we may proceed, I have
not experience enough to determine with any precision. From the
effects of two seruples given in one dose in the case narrated above,
and in another quoted from Dr. Hoffman, it would appear that
such doses are violent and dangerous; but from some other expe-

* Hallé, Mem. de la Société de Med. tom. cit. p. 73.
riments, it appears that larger doses have been sometimes given
with impunity: and when it is given in divided doses, it appears
from Collin's experiments, that it may be given to the quantity
of a dram, or two drams in the course of a day; and in one of
his experiments it was given to the quantity of half an ounce:
and the same will appear from the history which I have given
above. It is probable that from large doses only, considerable
effects are to be expected; and as, from many experiments, it
appears that the effects of Camphire are not very durable in the
body, it will be obvious that the repeated and long continued use
of it may be necessary to the cure of several diseases.

With respect to the exhibition of this medicine, it is, in the first
place, necessary that it should be always very minutely divided,
as we know it is not readily dissolved in the stomach; and
while it remains there, it will float on the surface of the other
contents, and in that way be applied to the upper orifice of the
stomach, and give occasion to some pain there. It ought therefore
to be minutely divided before it be given; and this may be done
by rubbing it first in a mortar with any dry powder, such as nitre
or hard sugar; but to make certain of a minute division, it is
proper at the same time to add a few drops of rectified spirit of
wine, or of other such spirituous menstruum as the spiritus vitrioli
dulcis, or liquor anomynus mineralis of Hoffman.

It may also be divided by rubbing it with the mucilage of gum
arabic; but this will also be more perfectly executed if the Cam-
phire is previously dissolved by a little spirit of wine or expressed
oil: By its being diffused in the mucilage of gum arabic, it may
be again diffused in any watery fluid for more convenient exhibi-
tion; but it is to be observed, that Camphire diffused in a watery
fluid is ready to exhale from it, or arise to its surface, and to
render the exhibition more disagreeable. When, therefore, any
large quantity of water in which Camphire is diffused is to be
prepared at once, it is proper to employ some means for entangling
the Camphire. Sugar alone does not seem to be sufficient for the

1 If this be not attended to, it commonly occasions heat and uneasiness at the stomach.
S. Fothergill, Med. Observ. &c. vol. i. p. 432.
"purpose; and it is more effectually done by triturating the Camphire with mucilage alone, or with a portion of sweet almonds, and diffusing it again by means of mucilage into an emulsion.

"It has been thought that the virtues may be increased by exhibiting along with it a portion of nitre; but in many trials I have not been sensible of the benefit derived from the nitre, which, in any quantity that can be conveniently employed, has little effect on the system. It is with more probability alleged, that vinegar exhibited with Camphire is of service. Vinegar certainly gives the best means of correcting the taste of Camphire, and seems even to render it less disagreeable to the stomach; and we may allow that both by its refrigerant and antiseptic powers, it may contribute somewhat to the virtues of the Camphire."*


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GENTIANA LUTEA. YELLOW GENTIAN.


Sp. Ch. G. corollis subquinquefidis rotatis verticillatis, calycibus spatiacsis.

No. 32. 5 S THE
THE root is perennial, long, cylindrical, externally brown, internally yellowish: the flower stem is strong, smooth, erect, tapering, and rises two or three feet in height: the leaves, which proceed from the lower part of the stem, are spear-shaped, large, entire, ribbed, sessile, and pointed; those on the upper part are concave, smooth, egg-shaped, and of a pale or yellowish green colour: the flowers are large, yellow, produced in whorls, and stand upon strong peduncles: the calyx is a membranous deciduous spatha: the corolla is divided into its base into five or more long narrow spreading elliptical segments: the filaments vary in number from five to eight; they are shorter than the corolla, and furnished with long erect anthers: the germen is long, conical, without a style, and supplied with two reflexed stigmata: the capsule is conical, of one cell, divided into two valves, and contains numerous small seeds. It flowers in June and July.

This plant is a native of the Alps, and according to the Hortus Kewensis was first cultivated in Britain in the time of Gerard. But the Gentian with which our shops are supplied, is imported from the mountainous parts of Switzerland, Germany, &c.||

The root, which is the only medicinal part of the plant, has little or no smell, but to the taste it manifests great bitterness, a quality which is extracted by aqueous, spirituous, and vinous menstrua, though not in so great a degree by water as by spirit; and the extract of this root, prepared from the watery infusion, is less bitter than that made from the spirituous tincture.∗

Gentiana † is the principal bitter now employed by physicians,* and as the intensive bitters are generally admitted to be not only tonic and stomachic, but also anthelmintic, antiseptic, emmenagogue, anti-arthritis, and sebiforme, this root has a better claim to the possession of these powers than most of this kind.

|| In pratis montanis & subalpinis, post hortus alpicemium ex planitie ubique, ut super Neussiari verus Nodos, sub Pannex, in pratis fovear. Latos tuncus occupat, quae a pecore non tangatur. Haller, i.e.

∗ Lewis, M. M. p. 320.

† The name Gentian is supposed to be taken from Gentius, King of Illyria, who first discovered its uses.

* The roots of other species of Gentian are reported to be equally bitter, and are preferred by some to that of the lacca visz. G. purpurea; solifluid, Pheumonanthic, campfera, Amaranta.
Many dyspeptic complaints, though arising from debility of the stomach, are more effectually relieved by bitters than by Peruvian bark; and hence may be inferred their superior tonic power on the organs of digestion. And the Gentian, joined with equal parts of tormentil or galls, we are told by Dr. Cullen* constantly succeeded in curing intermittent fevers, if given in sufficient quantity.

As a simple bitter the Gentian is rendered more grateful to the stomach by the addition of an aromatic, and for this purpose orange peel is commonly employed. The official preparations of this root are, the infusum gentianae compositum, & tinctura gentianae composita, ph. L., and the infusum amarum, vinum amarum, tinctura amara, five elixir floramicum,* ph. E. and by both pharmacopoeias the extract is directed.

* M. M. p. v. ii. p. 72.

Dr. Cullen observes, that this is the same as Stoughton’s elixir.

About forty-five years ago, a poisonous root was discovered in some of the parcels of Gentian brought to London, not however before its fatal effects had been experienced. (See Dr. Brodie’s account, Phil. Trans. vol. 45 p. 248.) This root was probably that of the Aconitum Thora, which is known to grow along with the Gentian. The former is to be distinguished from the latter by having a strong caudex, and being without bitterness, and of a whiter colour.

CHIRONIA CENTAURU M. CENTAURY.


Class Pentandria.


The root is annual, woody, fibrous, and of a yellowish colour: the stalk is erect, with few branches, smooth, angular, and usually rises from six to ten inches in height: the leaves are opposite, sessile, smooth, oblong, ribbed, obtusely pointed: the flowers are terminal, produced in a corymbus or bunch, and are of a pink or rose colour: the calyx is divided into five narrow erect permanent segments: the corolla is funnel-shaped, the tube of which is cylindrical, longer than the calyx, and divided at the limb into five egg-shaped segments: the filaments are five, white, slender, shorter than the corolla, and furnished with yellow oblong anthers, which finally become twisted: the germen is oblong, green, supplied with a simple style, which is crowned with a clubbed stigma. It grows in woods and pastures, and flowers in July.

As the botanical description of this plant corresponds exactly with that of the genus chironia,¹ we have followed several respectable botanists, and separated it from the gentians, with which it was originally clasped by Linnaeus.

"The active parts of this plant are dissolved readily both by water and rectified spirit: the herb, after infusion in sufficient quantities of either menstruum, remaining insipid. Water takes up along with the bitter a large quantity of an insipid mucilaginous substance, whereas rectified spirit seems to dissolve little more than the pure bitter part. Hence on insipiating the two solutions to the same consistencies, the watery extract proves much less bitter than the spirituous, and its quantity above four times greater."**

¹ It is aptly observed by Mr. Curtis, that Centaurn thus assumes its proper name *aurantiaca*, from Chiron the Centaur. See Plin. L. 25. c. 6. p. 635.

** Lewis, M. M.

Centaury
Centaury is justly esteemed to be the most efficacious bitter of all the medicinal plants indigenous to this country. It has been recommended as a substitute for gentian, and, by several, thought to be a more useful medicine: experiments out of the body also shew it to possess an equal degree of antiseptic power. To it therefore are to be ascribed all those medical effects noticed of the preceding article. Many authors have observed, that along with the tonic and stomachic qualities of a bitter, Centaury frequently proves cathartic; but it is probable, that this seldom happens, unless it be taken in very large doses. The use of this, as well as of the other bitters, was formerly common in febrile disorders, previous to the knowledge of Peruvian bark, which now supersedes them perhaps too generally; for many cases of fever occur, which are found to be aggravated by the Cinchona, yet afterwards readily yield to simple bitters.

The tops of Centaury plant are directed for use by the Colleges, and are most commonly given in infusion, but they may also be taken in powder, or prepared into an extract.

b "It is said that the extract of this plant is less agreeable than that of gentian; but I find no difference between them, and think it should be constantly substituted for that of gentian, as it may be more cheaply prepared." Cullen, M. M. vol. ii. p. 74.

c See Pringle, Dis. of the Army, App. p. 66.

d Lewis asserts, that no bitterness resides in the petals, but from tasting the recent flowers we discover this quality in a very considerable degree.

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TRIGONELLA FÆNUM GRÆCUM. FENUGREEK.

SY'NÔNYMA. Fænum graecum. Pharm. Lond. & Edinb.


Sp. Ch. T. leguminibus falcilibus siciitis crestitus subfalcatis acuminatis, caule erecto.

The root is annual, long, tapering, whitish, and fibrous: the flalk is erect, round, smooth, belet with soft hairs, often branched, and rises about two feet in height: the leaves are oblong, obtuse, slightly serrated, of a disagreeable smell, and stand in ternaries upon the common footstalks, which are placed alternately: the flowers are white, and appear in pairs at the axil of the leaves: the calyx is funnel-shaped, striated, covered with white hairs, and divided at the brim into five narrow pointed segments: the corolla is of the papillose kind, consisting of a vexillum or upper petal, which is oblong, erect, concave at the base, and indented at the apex: two alte or lateral petals, which are entire, oval, reflexed, and elongated at the base; a carina or under petal, which is small, and of an orbicular form: the filaments are ten, nine of which are united, and all furnished with simple anthers: the germen is sword-shaped, terminated by a short tapering style, which is furnished with a simple stigma: the pericarpium is a long compressed falcated pod, containing numerous rhomboidal seeds, of a brownish yellow colour. It flowers from June till August.

This plant is said to be a native of Montpelier, and to have been first cultivated in Britain by Gerard.* In dry seasons it maturates its seeds here very well, and, judging by our own experience, we think it might be cultivated to great advantage in this country.† The seeds of fenugreek are brought to us from the southern parts of France and Germany, where they are annually sown for the purpose of exportation to different places.

*Hort. Kew.
† Miller has given directions for cultivating this plant. See Dict.

These seeds are never given internally, their principal use being in cataplasms and fomentations, for softening, maturating, and discharging tumours; and in emollient glyters. They were also an ingredient in the oleum e mucilaginisbus of the shops: but this has no longer a place in the pharmacopoeia.

ANETHUM GRAVEOLENS. COMMON DILL.


Sp. Ch. A. fructibus compressis.

The root is annual or biennial, long, tapering, white, sending off strong libres, and striking deeply in the ground: several stems usually proceed from the same root, and are erect, smooth, channelled jointed, branched, covered with a glaucous exudation, and rise about two feet in height: the leaves stand upon sheathy footstalks, placed at the joints of the stalk, and are alternate, smooth, doubly pinnated; pinnæ linear, pointed: the flowers are produced in terminal umbels, which are large, flat, and like the partial umbels, composed of several radii: it has no involucrum: the corolla consists of five petals, which are yellow, egg-shaped, obtuse, concave, and have their points turned inwards: the five filaments are yellow, longer than the corolla, and furnished with roundish antheræ: the germen is placed below the insertion of the petals, and is covered by the nectarium: the two styles are very short, and terminated by obtuse stigmata: the seeds are two, oval,

(439)
oval, flat, striated, and surrounded with a membranous margin. The flowers appear in June and July.

This plant, which is a native of Spain and Portugal, appears by the Hortus Kewensis, to have been first cultivated in Britain by Mr. Gerard in 1597. The seeds of Dill are directed for use by the London and Edinburgh Pharmacopoeias; they have a moderately warm pungent taste, and an aromatic smell, but like that of the plant, not of the most agreeable kind. Water extracts very little of their virtues either by infusion or digestion for many hours. In boiling, their whole flavour exalts along with the watery vapour, and may be collected by distillation. Along with the water arises a considerable portion of pungent effluent oil, smelling strongly of the Dill. These seeds impart their flavour to rectified spirit by digestion, but not by distillation, the active part of the seeds remaining in the extract. The seeds and the plant itself were formerly much used in medicine, and from the time of Dioscorides have been esteemed for their carminative and hypnotic powers, and therefore have been recommended in flatulent colics, and certain dyspeptic symptoms proceeding from a laxity of the stomach. They are also said to be more effectual than the other seeds of this class in promoting the secretion of milk. At this time however the seeds of Dill are seldom employed, though a simple distilled water prepared from them is directed both by the London and Edinburgh Pharmacopoeias.

* Hort. Kew.

b Virgil does not seem to have been of this opinion: Narcissum & florem jungit bene olientis anethi. *Ec. l. 2.* *v. 45.*

c Lewis, *M. M.* *p. 58.*

d Forsyth speaks highly of their use in allaying vomiting and hiccup. *Oper. Lib. 6.* *Ohf. 29.* & *Lib. 18.* *Ohf. 12.*


ANETHUM Foeniculum.
ANETHUM FœNICULUM. COMMON FENNEL.


The root is perennial, white, tapering, and fibrous; three or four stems usually rise from the same root, and are erect, round, fliated, of a glaucous tinge, jointed, branched, and three or four feet in height: the leaves stand alternately at the joints of the stem upon long fliated sheaths, and are bipinnated, divided into long linear pointed pinnae, of a deep green colour: the flowers are produced in terminal umbels, which resemble those of Dill: there are no involucra: the corolla consists of five petals, which are yellow, ovate, emarginated, and have their points turned inwards: the five filaments are yellow, spreading, shorter than the petals, and supplied with double antherae: the germen is smooth, cylindrical, truncated, fliated, and covered with the nectarium, which is a large roundish fleshy yellow substance, divided into two parts, from each of which rises a short thick styyle, terminated by a blunt stigma: the seeds are two, oval, and deeply furrowed. The flowers appear in June.
The seeds of Foeniculum dulce are admitted of the Materia Medica in both Pharmacopoeias, and the root of Foeniculum vulgare also in that of the Edinburgh College;* but both these plants being considered as varieties of the Anethum Foeniculum, they are comprised in the figure here prefixed.

Fennel is found to grow wild in many parts of England, affecting dry chalky soils; but that which is cultivated in our gardens is more fragrant, of a sweeter flavour, and, excepting the seeds, which are brought from the south of Europe, commonly used both for medicinal and culinary purposes.

The seeds have an aromatic smell, and a warm sweetish taste.—"Water extracts the virtue of these seeds very imperfectly by infusion, but carries it off totally in evaporation: after repeated infusion, they retain part of their aromatic warmth, and the liquors are much less agreeable than the seeds in substance; after boiling for some time, the seeds prove entirely insipid, and the decoction, insipissated to the confidence of an extract, is very nearly so. By distillation they impregnate water with their flavour: a gallon receives a strong impregnation from a pound of the seeds. A large portion of essentiel oil separates in the distillation;—in smell resembling the fennel, in taste mild and sweetish like the oil of aniseeds, and like it also congealing, by a slight cold, into a white butyraseous mass. These seeds contain likewise a considerable quantity of a gross oil of the expressed kind, which, when freed from the essentiel oil, discovers no particular smell or taste. This oil is extracted, along with the aromatic matter of the fennel, by digestion in rectified spirit, but separates and rises to the surface upon insipissating the filtrated tincture. The spirit, gently distilled off, has very little of the flavour of the seeds; the oily matter retains a part both of their taste and smell; but much the greatest part remains concentrated in the extract."*  

* * *

"By Foeniculum dulce, (Dr. Cullen says) we mean seeds imported from a southern climate; we allow however the roots to be taken, as they most conveniently may, from the plants growing in our gardens." M. M. vol. ii. p. 158.

* * *


* Lewis, M. M. p. 303.
The Puniculum of the Latins is supposed to be the πολώνα of the Greeks, by whom it was highly esteemed for promoting the secretion of milk, an opinion which the experience of some modern authors has tended to confirm. The seeds are also supposed to be stomachic and carminative, but these, and indeed all the other effects ascribed to Fennel, as depending upon their stimulant and aromatic qualities, must be less considerable than those of dill, anise, and caraway, though named one of the four greater hot seeds.

The root, which Alston says may be called alimentum medicamentosum, was by Boerhaave thought to possess all the virtue of Ginseng, and which ranks as one of the five aperient roots, is now wholly disregarded. To the taste it is sweet, with very little aromatic warmth, and said to be pectoral and diuretic.

By the London Pharmacopoeia a simple distilled water is directed to be prepared from the seeds of Fennel, which also enter some other officinal compositions.


**DAUCUS CAROTA. WILD CARROT, or BIRD’s NEST.**


* Pallinaca
Paucinaca tenuifolia sativa radice lutea. C. Bartr.  
YELLOW GARDEN CARROT.

Paucinaca tenuifolia sativa radice atrorubente. C. Bartr.  
RED GARDEN CARROT.  


Fructus pilis hirsutus.


The root is biennial, large, spindle-shaped, fleshy, and yellowish; the stalk is round, erect, branched, furrowed, hairy, and rises about two feet in height: the leaves are large, and at the root many times pinnated; those on the stalk are gradually smaller towards the top, and cut into irregular pinnules, which on the upper side are of a deep green colour: the leaves are all somewhat hairy, and stand upon footstalks, which are nerved on the under side: the umbels are composed of several radii, and form a flat surface at the top while in flower, but when the seeds ripen, become concave, and drawn together; the partial umbels are similar to those of the general: the general involucrum consists of several leaves, which are cut into long narrow segments: the partial involucrum is more simple, consisting of flat-shaped leaflets: the corolla is composed of five petals, of which the outermost is the largest; they are all white, heart-shaped, and bent inwards: the five filaments are capillary, and furnished with simple antherae: the germen is small, and supports two reflexed stigmas, terminated by blunt stigmata: the seeds are two, egg-shaped, convex, rough on one side, covered with strong hairs, and flat on the other. It grows wild in meadows and pastures, and flowers from June till August.

This plant, in its cultivated state, is the well known garden Carrot, the roots of which are commonly served up at our tables. They appear by experiments to contain a large proportion of saccharine matter,* and consequently afford much nourishment: however they

* V. Marcgr. Mem. de l'Acad. des Sc. de Berlin. 1747. p. 89. See also Linn. Magaz. 1773. p. 75.
are found to be very difficult of digestion in the stomach, for if eaten raw, or imperfectly boiled, they usually pass through the body without suffering any material change. It is on this account, probably, that raw carrots have been given to children as a vermiluge. The expressed juice, or a decoction of these roots, has been recommended in calculous complaints, and as a gargle for infants in aphthous affections, or excoriations of the mouth; and a poultice of scraped carrot has been found an useful application to phagedenic ulcers, and to cancerous and putrid sores.

The seeds of wild Carrot, which obtain a place in the Materia Medica, have a light aromatic smell, and a warm acid taste. "Water, digested on the seeds, becomes impregnated with their smell, but takes up very little of their taste: in distillation or evaporation, it elevates the whole of their smell and aromatic warmth: on distilling large quantities, a small portion of yellowish essential oil is obtained, of a moderately pungent taste, and smelling strongly of the daucus. Rectified spirit takes up the whole of their virtue by digestion, and elevates little in distillation: the remaining extract smells weakly, and tastes strongly of the seeds." The seeds possess, though not in a very considerable degree, the aromatic qualities common to those of most of the umbelliferous plants, and hence have long been deemed carminative and emmenagogue; but they are chiefly esteemed for their diuretic powers, and for their utility in calculous and nephritic complaints, in which an infusion of three spoonfuls of the seeds in a pint of boiling water has been recommended; or the seeds may be fermented in malt liquor, which receives from them an agreeable flavour, resembling that of lemon peel.

On which account I have employed them as a means of ascertaining the time which food takes to pass through the tract of the alimentary canal." Withering, l.c.

"This use of the Carrot poultice was first discovered by Sulzer, (see Journal de Medicine, t. 24. p. 68.) since which its good effects are related by Gibbon (in Med. Off. & Inquir. vol. 4.) and others who have very generally found it to mitigate the pain and abate the stench of foul cancerous ulcers.

Lewis, M. M. p. 271.

"In opposition to this opinion, Dr. Cullen says, "We have seen the semen dauci fylvecriis employed in calculous cases in considerable quantities, and for a length of time, but never found its diuretic power anywise remarkable." M. M. vol. ii. p. 553.

Lewis, l. c.

No. 33.

5 X  CASSIA SENNA.
CASSIA SENNA.  SENNA, OR, EGYPTIAN CASSIA.


3 fleriles; insima. 3 rostrata. Legumen.

Sp. Ch. C. foliis fojugis subovatis, petiolis eglandulatis.

THE root is annual: the stalk is strong, smooth, branched, erect, and rises about two feet in height: the leaves stand in alternate order, and at their base are placed narrow pointed stipules: each leaf is composed of several pairs of oval or elliptical pointed nerved fiddle pinnae, of a yellowish green colour: the flowers are yellow, and produced successively in long axillary spikes: the calyx consists of five leaflets, which are narrow, obtuse, concave, unequal, and deciduous: the corolla is composed of five petals, which are roundish, concave, entire, and of unequal size: the filaments are ten, of which the three undermost are longer than the others, and furnished with large beaked curved anthers: the germen stands upon a short pedicle, and is long, compressed, and supplied with a short style, which is turned inwards, and terminated by an obtuse stigma: the seeds are brown, roundish, flat, and produced in a short compressed curved pod, divided by transverse partitions. The flowers appear in July and August.

Senna is a native of Egypt: it also grows in some parts of Arabia, especially about Mocha; but as Alexandria has ever been the great mart from which it has been exported into Europe, it has long been
been distinguished by the name of Alexandrian Senna, or Senna. Mons. Blondel, who was French Consul at several sea ports of the Levant, informs us, that the true Senna grows only in the woods of Ethiopia and in Arabia; for that the Senna, which was brought from Saide and Tripoli was carried there by the Caravans, and the negative testimony of Alpinus, who in his Lib. de plantis Egypti does not notice Senna, may seem to strengthen this opinion. But as Haselquiis found this plant growing spontaneously in upper Egypt, the allusion of Mr. Blondel is not to be implicitly received.

The Senna italica, or blunt-leaved Senna, is a variety of the Alexandrian species, which by its cultivation in the south of France, (Provenç) has been found to assume this change; it is less purgative than the pointed-leaved Senna, and is therefore to be given in larger doses; it was employed as a cathartic by Dr. Wight at Jamaica, where it grows on the sand banks near the sea.

Senna appears to have been cultivated in England in the time of Parkinson (1640); and Miller tells us, that by keeping these plants in a hot bed all the summer, he frequently had them in flower, but adds, it is very rarely that they perfect their seeds in England. There can be little doubt however but that some of the British possessious may be found well enough adapted to the growth of this vegetable, and that the patriotic views of the Society for encouraging Arts, &c which has offered a reward to those who succeed in the attempt, will be ultimately accomplished.

The leaves of Senna, which are imported here for medicinal use, have a rather disagreeable smell, and a subacid bitterish nauseous taste: they give out their virtue both to watery and spiritsuous menstrua.

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1 Seney, Diff. ii. 1537.
4 Cotte and Willemet Effusis sur quelques plantes indigènes Médic. a Nancy. p. 25.
7 See Diff.
communicating to water and proof spirit a brownish colour, more or
less deep according to the proportions; to rectified spirit a fine green.¹

Senna, which is in common use as a purgative, was first known
to the Arabian physicians, Serapion and Mechu; and the first of the
Greeks by whom it is noticed is Aeluarius, who does not mention
the leaves, but speaks of the fruit. Mechu likewise seems to prefer the
pod to the leaves, as being a more efficacious cathartic; but this fact is
contrary, for it purges less powerfully than the leaf, though it has the
advantage of seldom gripping the bowels, and of being without
that nauseous bitterness which the leaves are known to possess.² How
bitternests aids the operation of Senna is not easily to be understood;
but it is observed by Dr. Cullen, that "when Senna was infused in the
infusum amarum, a less quantity of the Senna was necessary for
a dose than the simple infusions of it."³ The same author has re-
marked, "that as Senna seldom operates without much gripping, its
frequent use is a proof how much most part of practitioners are
guided by imitation and habit."⁴ Senna however, when infused in a
large proportion of water, as a dram of the leaves to four ounces of
water, rarely occasions much pain of the bowels, and to those who
do not object to the bulkiness of the dose, may be found to answer all
the purposes of a common cathartic. For covering the taste of
Senna, Dr. Cullen recommends coriander seeds; but for preventing
its gripping, he thinks the warmer aromatics, as cardamom or ginger,
would be more effective. The formula given of the Senna by the
Colleges, are those of an infusion, a powder, a tincture, and an
eleuthery. Its dose in substance is from a scruple to a dram.

⁵ Lvvi, M. M.

¹ Folliculo quam folis est efficacior, presertim si est viridi nigricat, modice amarus,
subalitrinitit absolutus, recens, in quo semen amplum, comprehensus, vetustaque enim
examinitatur. Mefue D. Simp. l. 2. c. 15. p. 65.

² It has been an opinion generally received, that the stout stalks of the leaves and
twigs occasioned severe gripping; but this Bergius denies, as in a number of instances
he found their effects uniformly similar to those of the leaves. L. c.


The leaves of Colutea arborescens, (Common Bladder Senna) are purgative, and
may be substituted for those of Senna, according to Bartholin. Med. Dan. Danest. p.
126. Ed. 4. This is the more worthy of notice, as it is usually cultivated for ornament
in this country.

CASSIA FISTULA.
CASSIA FISTULA.  PURGING CASSIA.


Sp. Ch. C. folis quinquejugis ovatis acuminatis glabris, petiolis eglandulatis.

THIS tree frequently rises forty feet in height, producing many spreading branches towards the top, and covered with brownish bark, intersected with many cracks and furrows: the leaves are pinnate, composed of four to six pairs of pinnae, which are ovate, pointed, undulated, nerved, of a pale green colour, and stand upon shortish footstalks: the flowers are large, yellow, and placed in spikes upon long peduncles: the calyx consists of five oblong blunt greenish crenulated leaves: the corolla is divided into five petals, which are unequal, spreading, and undulated: the filaments are ten; of these the three undermost are very long and curled inwards; the remaining seven exhibit only the large antheræ, which are all rostrated, or open at the end like a bird’s beak: the germen is round, curved inwardly, without any apparent style, and terminated by a simple stigma: the fruit is a cylindrical pendulous pod, from one to two feet in length; at first soft and green, afterwards it becomes brown, and lastly black and shining, divided transversely into numerous cells, in each of which is contained a hard round compressed seed, surrounded with a black pulpy matter. The flowers appear in June and July.

No. 33.
This tree, which is a native of both the Indies, and of Egypt, was first cultivated in England by Mr. Philip Miller in 1731. The pods of the East India Caffia are of less diameter, smoother, and afford a blacker, sweeter, and more grateful pulp than those which are brought from the West Indies, South America, or Egypt, and are universally preferred. In Egypt it is the practice to pluck the Caffia pods before they arrive at a state of maturity, and to place them in a house, from which the external air is excluded as much as possible; the pods are then laid in strata of half a foot in depth, between which palm leaves are interposed: the two following days the whole is sprinkled with water, in order to promote its fermentation; and the fruit is suffered to remain in this situation forty days, when it is sufficiently prepared for keeping.

Those pods, or canes, which are the heaviest, and in which the seeds do not rattle on being shaken, are commonly the best, and contain the most pulp, which is the part medicinally employed, and to be obtained in the manner described in the pharmacopœias. The best pulp is of a bright shining black colour, and of a sweet taste, with a slight degree of acidity. "It dissolves both in water and in rectified spirit; readily in the former, slowly and difficultly in the latter, and not totally in either: the part which remains undissolved appears to be of little or no activity." We are told by C. Bauhin, that some have supposed the Siliqua Aegyptiacam of Theophrastus to be our Caffia Fistula; but there seems no evidence of its being known to the ancient Greeks; so that it is with more probability thought that the use of this, as well as of Senna, was first discovered by the Arabian physicians.

The pulp of Caffia has been long used as a laxative medicine, and being gentle in its operation, and seldom occasioning griping or uneasiness of the bowels, has been thought well adapted to children, and to delicate or pregnant women. Adults, however, find it of little effect, unless taken in a very large dose, as an ounce or more, and

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2. Vide Hasselquist and Alpinus.
3. See Pulparum extracto.
4. Lewis, M. M. p 207.
5. Siliquam Aegyptiacam Theophrasti (1 hist. 18.) nonnulla content. Pinax, p. 403.
6. Therefore to be considered the Einruxamber of Serapion, and the Chiarlander of Avicenna, from whom Actuurus seems to have his Kacara yulana. therefore
therefore to them this pulp is rarely given alone, but usually conjoined with some of the brisker purgatives. It has been observed by Vallisneri, that its purgative quality is remarkably promoted by manna; but this effect was never discovered in the trials made by Dr. Cullen, in whose opinion the Caffia pulp is much of the same nature as the fructus acido dulces; and he says, “it would certainly be proper for our country apothecaries to know that the pulp of prunes might be employed in the place of the more expensive and precarious Caffia.”

By the use of Caffia, it has been remarked, that the urine becomes of a green or blackish colour; but Bergius relates, that a young man took an ounce three successive mornings without producing the least change in the colour of his urine.

The official preparation of this drug is the elecuarium e caffia: it is also an ingredient in the elecuarium e fenna, or e. lenitivum.


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ORIGANUM VULGARE. WILD MARJORAM.


Sp. Ch. O. spicis subtundis paniculatis conglomeratis, bracteis calyce longioribus ovatis.

THE
THE root is perennial, creeping, and beset with numerous slender fibres: the stem is erect, square, purplish, downy, producing opposite branches, and rises about a foot and a half in height: the leaves stand upon footstalks in pairs at the joints; and are ovate, pointed, somewhat indented at the edges, above smooth, beneath downy, and of a deep yellowish green colour: the flowers are numerous, terminal, of a pale purplish colour, and stand in panicles or clusters: the bractæ, or floral leaves, are ovalish, sessile, and of a brownish red colour: the calyx is tubular, and divided at the brim into five segments, which are fiingled at the edges: the corolla consists of a funnel-shaped tube, longer than the calyx, divided at the limb into two lips, of which the upper is cleft, bilabiate, obtuse; the lower trifid, blunt, and spreading: the filaments are four, two long and two short, of a purple colour, and furnished with double antheræ: the germen is divided into four parts, from the centre of which rises a filiform style, crowned with a stigma, which is bilabiate, and reflexed: the seeds are four, egg-shaped, and lodged in the bottom of the calyx.

This plant grows wild in many parts of Britain, especially on dry chalky hills; or gravelly soils, and produces its flowers in July and August. It has an agreeable aromatic smell, approaching to that of marjoram, and a pungent taste, much resembling thyme, to which it is like-wise thought to be more nearly allied in its medicinal qualities than to any of the other verticillate, and therefore deemed to be emmenagogue, tonic, stomachic, &c. These effects, however, can only be ascribed to the aromatic and stimulant powers which all the herbs of this natural order seem to possess in common. Distilled with water it yields a moderate quantity of very acrid penetrating essental oil, which has been much used for ealing the pain of carious teeth, by dropping it on cotton, and inserting it in the cavity of the aching tooth. The dried leaves used instead of tea, are said to be exceedingly grateful. They are also employed in medicated baths and fomentations.

* Hence the derivation Origánum, ορυγύμας montis gaudium, quod locis montanis seleciturus. Vide Bed. in Theop. p. 562.

The country people use the tops of the plant to dye purple. Withering, l. c.

ORIGANUM MAJORANA.
(453)

**ORIGANUM MAJORANA.  SWEET MARJORAM.**


**Sp. Chb.** O. foliis ovatis obtusis, spicis subrotundis compactis pubescentibus.

The root is perennial, brown, and furnished with many long tough fibres: the flanks are numerous, woody, branched, square, and riíc a foot and an half in height: the leaves are egg-shaped, obtuse, downy, entire, of a pale green colour, and stand in pairs upon foott-flanks: the flowers are small, white, and appear successively between the bracteal leaves, which are numerous, and form round compact terminal spikes: the calyx is tubular, and divided at the brim into five pointed segments: the corolla consists of a funnel-shaped tube, divided at the limb into two lips, of which the uppermost is erect and roundish: the undermost is cut into three pointed segments: the other parts of fructification resemble those of *O. vulgare.* The flowers appear in August.

This plant is thought to be the *Σωκάρον* or *Amaracus* of the ancients: it has been long cultivated in our gardens, and in frequent use for culinary purposes; but the place of which it is a native has not yet been made known.

The leaves and tops of Marjoram have a pleasant smell, and a moderately warm aromatic bitterish taste. They yield their virtues

- *Τας Αμαράκας is noticed both by Virgil and Catullus:

  *ubi mollis amarus illum*

  *Floribus et dulci spirans complèctitur umbra.*

  *Æn. lib. i. v. 693.*

  *Cinge tempora floribus*

  *Suave olentis amaraci.*

  *Juliet et Malii Epithal.*

  *both*
both to aqueous and spirituous liquors by infusion, and to water in
distillation, affording also a considerable quantity of essentia oil,
amounting, according to Beaumé, to fifteen ounces from one hundred
and fifty pounds of the recent plant. This oil, on being long kept,
assumes a solid form.

The medicinal qualities of this plant agree with those of its con-
gener, Wild Marjoram; but being much more fragrant it is deemed
to be more cephalic, and better adapted to those complaints known
by the name of nervous; and may be therefore employed with the
same intentions as lavender. It is directed in the composition of the
pulvis frictionarius by both Pharmacopoeias, with a view to the
agreeable odour which it diffuses to the asphaltacea rather than to its
errhine power, which is very inconsiderable.

In its recent state, we are told, that it has been successfully applied
to serous tumours of the breasts.\n
\n\n\n\n\n\n\n1 Cohnalen in Comm. Nor. a. 1742. p. 151.

TAMARINDUS INDICA. Tamarind Tree.

SYNONYMA. Tamarindus. Pharm. Lond. & Edinb. Gerard
Rumph. Herb. Amb. p. 90. tab. 23. Silikwa arabica, que Tamara-


sub filamentis. Lagunum pulposum.
water in it, the essential oil, and a hundred other things kept for its water in the same way. One of its contents is deemed the most known with the composition of the plant to the plant to its

Tamarindus indica

Gerard

fig. 4.

Tama-

vol. i.

p. 10.

vol. ii.

189.

p. 25.

450.

exvibus

THIS
THIS tree rises to a great height, sending off numerous large
branches, which spread to a considerable extent, and have a beautiful
appearance: the trunk is erect, thick, and covered with rough bark
of a greyish or ash-colour: the leaves are pinnated, alternate, consist-
ing of several pairs (about 14) of small pinnae, which are opposite,
oblance, obtuse, entire, smooth, of a yellowish-green colour, and stand
upon very short footstalks: the flowers approach to the papilionaceous
kind, and are produced in racemes or lateral clusters: the calyx consists
of four deciduous leaves, which are patent or reflexed, oblong, or
rather ovate, entire, smooth, nearly equal in size, and straw-coloured
or yellowish: the petals are three, ovate, concave, acute, indented,
and pilate at the edges, about the length of the calyx, and of a
yellowish colour, beautifully variegated with red veins: the peduncles
are about half an inch long, and each furnished with a joint, at
which the flower turns inwards: the filaments are commonly three,
but in some flowers we have found four, in others only two; they
are purple, united at the base, and furnished with incumbent brownish
anthera: the germen is oblong, compressed, incurved, standing upon
a short pedicle: the style is tapering, somewhat longer than the fila-
ments, and terminated by an obtuse stigma: the fruit is a pod of a
roundish compressed form, from three to five inches long, containing
two, three, or four flatish angular shining seeds, lodged in a dark
pulpy matter, and covered by several rough longitudinal fibres. The
flowers, according to Jacquin, appear in October and November.

The generic character of Tamarindus is wholly founded upon this
species, as no other of the same family has hitherto been discovered.*
Though Linnaeus in his last edition of the Genera plantarum has
followed Jacquin's description of the Tamarindus, in observing that
the filaments are united at the base, a circumstance which ought to
have placed it in the class monadelphia, yet notwithstanding this,
they neither thought proper to remove it from the class Triandria,
where it also has been since retained in Murray's edition of the Systema
Vegetabilium; and is consequently thus classed by us in the systematic
arrangement prefixed to the first volume of this work. Since that
time however, we have had an opportunity of examining the recent

* Considerable difference in the shape of the pod and sweetness of the pulp has been
observed; but this variety depends upon the locality of the tree.

flower
flower of the Tamarind, from which we have no doubt of its having
the true character of the monodelphia clas, in which we have now
placed it, and for which we have lately had the authority of Schreber,
and that of De Louriero.†

This tree, which appears upon various authorities, to be a native
of both Indies, America, Egypt, and Arabia, was cultivated in Britain
previous to the year 1633; for in Johnson's edition of Gerard we
are told, that the figure of the Tamarind " is of a plant some six
months old, arisen of a seed : and such by sowing of seeds I have seen
growing in the garden of my deceased friend Mr. Fuggy." Miller
informs us, that Tamarind plants, " if rightly managed, will grow
very fast," adding, " for I have had them upwards of three feet
high in one summer, from seed, and have had two plants, which
produced flowers the same season they were sown; but this was
accidental, for none of the older plants have produced any flowers,
although I have several plants of different ages, some of which are
sixteen or eighteen years old, and about twelve feet high, with large
spreading tops." To this it may be added, that a healthy tree of
this species, now in the Royal Botanic Garden at Kew, much larger
and older than those mentioned by Miller, has not been known to
flower for several years before the present summer; this fortunately
enables us to publish a perfect specimen of it represented by the
annexed plate, which will be found to correct the figure of the Tamarind,
given by the justly celebrated botanist Jacquin.

The pulp of the Tamarind, with the seeds, connected together by
numerous tough fibres or fibres, are brought to us freed from the
outer shell, and commonly preserved in syrup. According to Long,
Tamarinds are prepared for exportation at Jamaica, in the following
manner. "The fruit or pods are gathered (in June, July, and August)
when full ripe, which is known by their fragility or easily breaking on

† He says, A Clasf. Trinidad ad Monadelpham transfundit hoc genus non solam pro-
pria observatione frutes, sed etiam ab ipso Linnæo monius filamenta habere internù con-

In order to make this more evident, we have displayed the filaments as they appeared
in our specimen. The rudiments of other filaments probably constitute that part of
the generic character which has not been noticed in our description.

b Sir Hans Sloane however says, "these trees were strangures in the West Indies, and
small pressure between the finger and thumb. The fruit, taken out of the pod, and cleared from the bony fragments, is placed in layers in a cauldron, and boiling syrup, just before it begins to granulate, is poured in, till the cauldron is filled: the syrup pervades every part quite down to the bottom, and when cool the cauldron is headed for sale."

He observes, that the better mode of preserving this fruit is with sugar, well clarified with eggs, till a transparent syrup is formed, which gives the fruit a more pleasant smell; but as a principal medicinal purpose of the pulp depends upon its acidity, which is thus counteracted by the admixture of sugar, it would therefore be of more utility if always imported here in the pods. The fruit produced in the East Indies is more esteemed than that of the West, and easily be distinguished by the greater length of the pods, and the pulp being dryer and of a more desirable colour.

This fruit, the use of which was first learned of the Arabicans, contains a larger proportion of acid, with the saccharine matter, than is usually found in the fructus acido-dulces, and is therefore not only employed as a laxative, but also for abating thirst and heat in various inflammatory complaints, and for correcting putrid disorders, especially those of a bilious kind; in which the cathartic, antiseptic, and refrigerant qualities of the fruit have been found equally useful. When intended merely as a laxative it may be of advantage to join it with manna, or purgatives of a sweeter kind, by which its use is rendered safer and more effectual. Three drams of the pulp are usually sufficient to open the body; but to prove moderately cathartic, one or two ounces are required. It is an ingredient in electuarium e caffla, and c. e senna, or lenitive electuary.

* L. c.*

"Turresfort relates, that an essential falt may be obtained from Tamarindus, by dissolving the pulp in water, and setting the filtered solution, with some oil upon the surface, in a cellar for several months; that the falt is of a fourth taste, and difficultly dissoluble in water; and that a like falt is sometimes found also naturally concreted on the branches of the tree. The falt, as Beauné observes, may be obtained more expeditiously, by clarifying the decoction of the Tamarinds with whites of eggs, then filtering it, and evaporating it to a proper consistence, and setting it to cool: the salt forms into crystals of a brown colour, and very acid taste; but in dissolving and crystallizing them again, or barely washing them with water, they lose almost all their acidify, the acid principle of the Tamarinds seeming not to be truly crystallizable." Vide Lethin, M. M. p. 633.

No. 34. 6 A GLYCIRRHIZA
GLYCYRRHIZA GLABRA. COMMON LIQUORICE.


Sp. Ch. G. leguminibus glabris, stipulis nullis, foliolo impari petiolato.

The root is perennial, long, round, succulent, tough, running to a considerable extent, externally brown, internally yellow, and of a sweet taste: the stalks are erect, strong, herbaceous, striated, garnished with few branches, and usually rise four or five feet in height: the leaves are pinnated, alternate, composed of several pairs of pinnae, with an odd one at the end: the leaflets are ovate, blunt, veined, of a pale green colour, and stand upon short footstalks: the flowers are of the papilionaceous kind, of a purplish colour, and appear in long spikes arising from the axils of the leaves: the calyx is persistent, tubular, cut obliquely into two lips, and divided into narrow pointed segments: the corolla consists of a vexillum, which is erect, lance-shaped, concave, obtuse; two alae, which are oblong, obtuse, and larger than the carina, which is about the length of the calyx: the filaments are ten, nine of which are joined at the base, and all furnished with simple roundish antherae: the germen is shorter than the calyx, and is supplied with a tapering style, terminated by a blunt stigma: the seeds are small, kidney-shaped, and produced in a pod, which is oblong, compressed, pointed, one-celled. The flowers appear in August.

Liquorice is a native of the South of Europe: it appears to have been cultivated in Britain in the time of Turner. The chief places

at which it has long been propagated for sale, are Pontefract in Yorkshire, Worktop in Nottinghamshire, and Godalming in Surrey; but it is now planted by many gardeners in the vicinity of London, by whom the metropolis is supplied with the roots, which, after three years growth, are dug up for use, and are found to be in no respects inferior for medical purposes to those produced in their native climate.

Liquorice root, lightly boiled in a little water, gives out nearly all its sweetness: the decoction, pressed through a strainer, and infused with a gentle heat till it will no longer stick to the fingers, affords a better extract than that brought from abroad, and its quantity amounts to near half the weight of the root. Rectified spirit takes up the sweet matter of the Liquorice equally with water; and as it dissolves much less of the insipid mucilaginous substance of the root, the spirituous tinctures and extracts are proportionably sweeter than the watery.

This root contains a great quantity of saccharine matter, joined with some proportion of mucilage; and hence has a viscid sweet taste. From the time of Theophrastus it has been a received opinion that it very powerfully extinguishes thirst: this, if true, is the more remarkable, as sweet substances in general have a contrary effect. It is in common use as a pectoral or emollient in catarrhal deflections on the breast, coughs, hoarseness, &c. "Infusions or extracts made from it afford likewise very commodious vehicles or intermedia for the exhibition of other medicines: the Liquorice taste concealing that of unpalatable druggs more effectually than syrups or any of the sweats of the saccharine kind."

* If the Liquorice be long boiled, its sweetness is greatly impaired, and the preparation contracteth an ungrateful bitterness and black colour.

* This matter, according to Lewis, differs from that of other vegetables, "in being far less disposed to run into inflammation." L. c.

* Hence it was named μύλο, and the root directed to be chewed in dropsies and other disorders where great thirst prevailed. Vide Theop. L. 9. cap. 13. Also noticed by Pliny, Lib. 22. c. 9.

* Dr. Cullen says, "to explain this, I observe that in the sweet of Liquorice, separated from the root, I do not find that it quenches thirst more than other sweets; and I take the mistaken notion to have arisen from this, that if a piece of the root is chewed till the whole of the sweetness is extracted, that further chewing brings out the acid and bitterish matter, which stimulates the mouth and fauces, so as to produce an excretion of fluid, and thereby takes off the thirst which the sweetness had produced." M. M. vol. ii. p. 407.

Leavis, l. c.

ALLIUM
ALLIUM SATIVUM. COMMON CULTIVATED GARLICK.


Sp. Ch. A. caule planifolio bulbifere, bulbo composito, flaminibus tricuspiddatis.

THE root is perennial, composed of several bulbs, enveloped in a common membrane, and from its base sends off many long white fibres: the stem is simple, and rises about a foot and a half in height: the leaves at the root are numerous, on the stem few; they are all long, flat, grass-like: the flowers of all the plants of this species which we have seen, arise between the small bulbs or rocamboles, which terminate the stem in a cluster: each flower is very small, whitish, and commonly abortive: the calyx is a spathe common to all the florets and bulbs; it is withered, and of a roundish shape: the corolla consists of six oblong petals: the filaments are six, tapering, alternately trifid, shorter than the corolla, and furnished with oblong erect antherae: the germen is placed above the insertion of the corolla, short, angular, and supports a simple style, terminated by an acute stigma: the capsule is short, broad, trilobed, three-celled, three-valved, and contains roundish seeds. It flowers in July.

This species of Garlick, according to Linnaeus, grows spontaneously in Sicily; but as it is much used both for culinary and medicinal purposes, Vide Spec. Plant.
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**Allium sativum**
Drawn by J. C. W. Oct. 1 1763
purposes, it has been long very generally cultivated in gardens: it shews the same propensity to forming bulbs instead of flowers as the A. Scorodophalum or Rocambole Garlick, which it also resembles in other respects.

Every part of the plant, but more especially the root, has a pungent acrimonious taste, and a peculiarly offensive strong smell. This odour is extremely penetrating and diffusive, for on the root being taken into the stomach, the alliaceous scent impregnates the whole system, and is discoverable in the various excretions. This volatile matter is, in part at least, an essential oil, which may be obtained in distillation in the ordinary manner, and like the oils of many of the flagellate plants, links in water. Applied to the skin, Garlick produces inflammation, and frequently vesiculates the part. "On drying, this root loses almost nine parts in fifteen, without suffering any considerable loss of its taste or smell; hence six grains dried are supposed to be equivalent to fifteen grains of the fresh root."

Garlick is generically allied to the onion, from which it seems only to differ in being more powerful in its effects, and in its active matter, being in a more fixed state; by stimulating the stomach they both favour digestion, and as the stimulus is readily diffused over the system, they may therefore be considered as useful condiments with the food of phlegmatic people, or those whose circulation is languid, and secretions interrupted; but with those subject to inflammatory complaints, or where great irritability prevails, these roots, in their acrid state, may prove very hurtful.

The medicinal uses of Garlick are various: it has been long in estimation as an expellorant in pituitous asthmas, and other pulmonary affections, unattended with inflammation. Its utility as a diuretic in dropsies, is also attested by unquestionable authorities;''

As in the urine, perforation, milk; and according to Bennet, the discharge of ulcers becomes imbued with this odour very soon after the Garlick has been taken into the stomach. Vide Tabiderum theat. exer. 29. p. 81. On being applied to the feet, the alliaceous taste has been produced in the mouth. Vide Hall. spufc. bat. p. 332.

Lewis, M. M. p. 33.


No. 34. 6 B and
and its febrifuge power has not only been experienced in preventing the paroxysms of intermittent, but even in fubduing the plague.

Another virtue ascribed to Garlick is that of an auralm-----------------------------------

"Vide Celsius i. e. p. 142. De Urin Rat. Med. P. ii. p. 57. ft. Rosenkranz Barns

studi. p. 317. Bergius. Vide M.M. p. 255. where he says, a In icubibus quoque autumn-

alibus repulsuntibus pueris, idem idem etiam quern venenatum. Indiciendum a bulbulo unico mance & vesperi, sed quotidie

urna bulbulo superaddendus, si quidem 4 vel 5 bulbulos similem agere qualibet vice.

etiam tunc evasit, diminuenda aut doxis, & sufficient pollicis tumere unicum, vel etiam

binos bulbulos, manue & vesperi, per plures fepinum.

b vide Hoffmann, Rosenkranz, Taube, and others.

"See Lassenberg App. plant. i. p. 221. Lindon febrity, p. 182. 188. 224.


Mohring Curiens. No. 1735. 230.

De Diffol. ed. cap. 10.

a A boy, six or seven years old, had for a considerable time suffered by a calculus in

the urinary bladder, which had been discovered on sounding; he had recourse to this
decotion, which very soon relieved the pain; after which his urine became extremely

turbid, and constantly deposited a copious clay-like sediment for several weeks, when it

returned its natural appearance, and the boy has ever since been free from complaint.

Another case similar to this has also been reported to us, of the truth of which we have

not a doubt.

a Especially in the confluent small-pox, about the eighth day. Epist. de variolis conf.
produced into the meatus auditorius, has been found an efficacious remedy."

Garlick may be administered in different forms; swallowing the clove entire, after being dipped in oil, is recommended as the most efficacious, or where this cannot be done, by cutting it into pieces without bruising it, may be found to answer equally well, producing thereby no uneasiness in the fauces. On being beaten up, and formed into pills, the active parts of this medicine soon evaporate; this we notice on the authority of Dr. Cullen, who thinks that Lewis has fallen into a gross error, in supposing dried Garlic more active than fresh.

The syrup and oxymel of Garlick, which formerly had a place in the British Pharmacopoeias, are now expunged.

Bergius for this purpose recommends the juice of Garlick dropped on cotton. i.e.

MENTHA PIPERITA. PEPPER-MINT.


THE root is perennial, creeping, and furnished with many small fibres; the stems are cren, square, jointed, striated, somewhat branched towards the top, and rise about two feet in height: the leaves are egg-shaped, serrated, pointed, nerv'd, of a dark green colour, and stand in pairs upon footstalks: the flowers are small, purple, and produc-
duced in terminal spikes, separated into clusters: the calyx is tubular, permanent, reddish, filiatered, hairy, and divided at the brim into five small pointed segments: the corolla is tubular, divided at the limb into four segments, of which the uppermost is the broadest, and notched at the apex: the filaments are two long and two short, tapering, and furnished with roundish antheræ: the germén is divided into four parts, supporting a slender erect style, which is longer than the corolla, and terminated by a cloven expanding stigma: the seeds are four, small, and lodged in the calyx. It is a native of England, affecting watery situations and banks of rivers, and flowers in August.

The spontaneous growth of this plant is said to be peculiar to Britain; but as it is generally preferred to the other species of Mint, its cultivation has long been extended over Europe, and that employed here is commonly raised in gardens. This species has a more penetrating smell than any of the other mints, and a much stronger and warmer taste, pungent and glowing like pepper, sinking as it were into the tongue, and followed by a sensation of coldness.

"By maceration, or infusion, it readily and strongly impregnates both water and spirit with its virtue.—In distillation with water it yields a considerable quantity of essentia oil of a pale greenish yellow colour, growing darker coloured by age, very light, subtile, perfuming in a high degree the specific smell and penetrating pungency of pepper-mint." — Rectified spirit, drawn off with a gentle heat from the tincture made in that menstruum, brings over little of the virtue of the herb, nearly all its pungency and warmth remaining concentrated in the extract." —

Its stomachic, anispeptic, and caraminative qualities renders it useful in flatulent colics, hysteric affections, retchings, and other dyspeptic symptoms, acting as a cordial, and often producing immediate relief. Its officinal preparations are an essentia oil, a simple water, and a spirit.

* Dr. Cullen observes, that "rectification is particularly necessary and proper for this essentia oil. What has been called essence of pepper-mint, seems to me to be no other than the rectified oil dissolved in spirit of wine." Vide *M. M. vol. ii. p. 150.*

* Lewis, M. M. p. 422.

We have already noticed that this plant yields camphor. *See Gaub. Adv. f. p. 99.*
Mentha viridis

Published by Dr. Woodville, May 2, 1792.
MENTHA VIRIDIS, SPEAR-MINT.


Sp. Ch. M. spicis oblongis, foliis lanceolatis nudis serratis flexilibus, flaminibus corolla longioribus.

The root is perennial, creeping, and beset with numerous small fibres: the stems are square, hollow, crecal, branched, and rise above two feet in height: the leaves are large, elliptical, serrated, pointed, of a bright green colour, and placed in pairs close to the stem, or upon very short footstalks: the flowers are small, purplish, and produced in terminal spikes: the filaments are longer than the corolla. In other respects the different parts of the flower correspond with the description given of the pepper-mint. It flowers in August.

This plant grows wild in many parts of England, and was found on the banks of the Thames by Mr. Hudson*; but it is more rarely met with in this state than the preceding species. It is not so warm to the taste as pepper-mint, but has a more agreeable flavour, and is therefore preferred for culinary uses, and more generally cultivated in our gardens. Many virtues are ascribed to mint by the ancients.

*See Withering, l. c.

No. 35. 6 C
but to what species the ðidymo[s & Māth] of the Greeks is to be referred, must ever remain uncertain: even at this time the different species of this extensive family are not satisfactorily ascertained; but, in a medical sense, this is of little importance, as the virtues of all reside in the aromatic flavour, which is common to the whole genus.

"On drying, the leaves lose about three-fourths of their weight without suffering much loss of their smell or taste; nor is the smell soon dissipated by moderate warmth, or impaired on keeping. Cold water, by maceration for six or eight hours on the dry herb, and warm water in a shorter time, become richly impregnated with its flavour.—By distillation, a pound and a half of the dry leaves communicate a strong impregnation to a gallon of water: the distilled water proves rather more elegant if drawn from the fresh plant in the proportion of ten pints from three pounds. Along with the aqueous fluid an essential oil distils, of a pale yellowish colour, changing to a red, in quantity near one ounce from ten pounds of the fresh herb in flower, finelling and tainting strongly of the mint, but somewhat less agreeable than the herb itself. Dry mint, digested in rectified spirit, either in the cold or with a gentle warmth, gives out readily its peculiar taste and smell, without imparting the grosser and more ungrateful matter, though the digestion be long continued. The tincture appears by day-light of a fine dark green, by candle-light of a dark red colour: a tincture extracted from the remaining mint by fresh spirit, appears in both lights green: the colour of both tinctures changes in keeping to a brown. On gentle distillation, with proof spirit, the spirituous portion which rises at first, discovers little flavour of the mint; but as soon as the watery part begins to distil, the virtues of the mint come over plentifully with it. Hence the spiritus

* Mint has not escaped the notice of the Latin poets:

An tibi quondam
Feburnos artus in dolentes vertere menthus
Persephone, licuit?
OVIN. MVT. L. x. v. 728.

By Martial it is called "indemix Mentha." EPIGR. L. 10. 48.

* Dr. Withering says, "the fact is, that a small quantity of this tincture is green either by day-light or by candle-light, but a large quantity of it seems impervious to common day-light: however, when held between the eye and a candle, or between the eye and the sun, it appears red; so that if put into a flat bottle it appears green, but when viewed edgewise, red." L. c.
menthae sativa. P. L. which is prepared by drawing off a gallon of proof spirit from a pound and a half of the dried plant, proves strongly impregnated with the mint."

To Spear-mint are to be ascribed the same medicinal qualities which we have noticed of Pepper-mint; but the different preparations of the former, though more pleasant, are perhaps less efficacious. "It contains much essentinal oil, but of an odour somewhat less agreeable than that of lavender or marjoram. It is therefore less employed as a cephalic; but it acts very powerfully on the parts to which it is immediately applied, and therefore considerably on the stomach, invigorating all its functions. It acts especially as an antispasmodic, and therefore relieves pains and cholie depending upon spasm. It will also stop vomiting, depending upon such a cause; but there are many cases of vomiting in which it is of no service: and in these cases, anywise depending upon inflammatory irritation in the stomach itself, or in other parts of the body, it aggravates the disease, and increases the vomiting. Practitioners have thought, and I think justly, that the infusion of mint in warm water, agrees better with the stomach than the distilled water, which is often somewhat empyreumatic."

Lewis observes, "that it is said by some to prevent the coagulation of milk; and hence it has been recommended to be used along with milk diets, and even in cataplasmis and fomentations for resolving coagulated milk in the breasts: upon experiment, the curd of milk, digested in a strong infusion of mint, could not be perceived to be any otherwise affected than by common water; but milk, in which mint leaves were let to macerate, did not coagulate near so soon as an equal quantity of the same milk kept by itself."

The officinal preparations of Spear-mint are an essentinal oil, a conserve, a simple water, and a spirit.

"In proof of the emmenagogue power of mint, Linnaeus informs us, that a woman, by the frequent use of it, became subject to menorrhagia. Vide Diff. de Menthe sativa p. 9."


"We are told, that "when cows have eaten the mentha aquatica, as they will do largely at the end of summer, when the pastures are bare, and hunger distresses them, then milk can hardly be made to yield cheese: a circumstance which sometimes puzzles the dairy-man." With. l. c."
MENTHIA PULEGIUM. PENNYROYAL MINT.


Sp. Ch. M. floribus verticillatis, foliis ovatis obtusis suberectis, caulibus suberectibus repentibus.

The root is perennial, creeping, fibrous: the stems are slender, procumbent, obtusely quadrangular, branched, and about a foot in length: the leaves are ovate, obtuse, somewhat indented, smooth, of a bright green colour, and stand upon short footstalks at the joints of the stem: the flowers are small, of a pale purple colour, and surround the stem at the joints in whorls: the calyx is tubular, striated, ventricose, and divided into five bearded segments: of these the two uppermost are the largest; the undermost one the leaf. The other parts of inflorescence agree with the preceding species of Mentha already described. It flowers in August and September.

Pennyroyal, like the other mints, is a native of Britain, affecting heaths and moor situations; but that used for medicinal purposes is commonly the produce of cultivation. It has a warm pungent flavour, somewhat similar to mint, but more acrid, and less agreeable both in smell
Its "active principle is an essential oil, of a more volatile nature than that of mint, coming over hastily with water at the beginning of the distillation, and rising also in great part with highly-rectified spirit; in taste very pungent, and of a strong smell; when newly drawn, of a yellowish colour, with a cast of green; by age turning brownish."

The Pulverium certainly possesses the general properties of the other mints: it is supposed, however, to be of less efficacy as a stomachic, but more useful as a carminative, and emmenagogue, and is more commonly employed in hysterical affections. We are told by Boyle, and others, that it has been successfully used in the hooping-cough; but the chief purpose to which it has long been administered is promoting the uterine evacuation. With this intention, Haller recommends an infusion of the herb with steep, in white wine, which he never knew to fail of success. However, in the opinion of Dr. Cullen, mint is in every respect a more effectual remedy than Pennyroyal; and "nothing but the neglect of all attempts to establish principles could have made physicians think of this as a peculiar medicine different from the other species:" and conformably to this remark, it may be observed, that this plant is less frequently used now than formerly.

Its officinal preparations are a simple water, a spirit, and an essential oil.

Lewis, M. M. p. 524.


Mat. Med. vol. ii. p. 150.
DOLICHOS PRURIENS. COWHAGE DOLICHOS.


Sp. Ch. D. volubilis, legum, racemosis; valvulis subcarinatis hirtis, pedunculis ternis.

THE root is perennial, fibrous: the stem is herbageous, climbing, cylindrical, hairy, divided into many branches, which twit round the neighbouring trees, and rise to a considerable height: the leaves are ternate, and stand upon long footstalks, placed alternately at the distance of a foot from each other: each pinna, or lobe, is entire, ovate, pointed, smooth on the upper side, on the under hirtute; the lateral lobes are oblique, and somewhat larger than that in the middle, which is of a rhomboidal shape: the proper footstalks are short, and furnished with small stipule: the flowers are large, of a purplish or violet colour, and placed mostly in ternaries upon short peduncles, and form pendant spikes, which arise from the axillae of the leaves, and
and are about a foot in length: the calyx is bell-shaped, gibbous at the base, lax, downy, divided into two lips, of which the upper is semi-ovate; the under separates into three lance-shaped segments: the corolla is of the papilionaceous order, consisting of a vexillum (stand) which is roundish, entire, concave, obtuse, and double the length of the calyx; two ala (wings) which are oblong, obtuse, concave, and twice the length of the vexillum; a carina (keel) which is scythe-shaped, of the length of the ala, compressed, and at the apex furnished on each side with a short concave spur: the filaments are ten, nine of which are united at the base; they are alternately longer and shorter; the former are four times the breadth of the others, and supplied with incumbent antheræ; but the antheræ of the latter are placed vertically: the germen is oblong, villous, and supports a slender style about the length of the filaments, terminated by a small orbicular stigma: the fruit is an oblong pod, in the form of the letter J, four or five inches in length, covered with brown bristly hairs, and containing four, five, or six seeds, of a brownish colour. The flowers appear in September and October.

The plant, known by the name of Cow-itch, Couhage, and Cowhage, is referred by Bergius and Miller to the Dolichos urens of Linnaeus; and this error is also to be found in Aiton's Hortus Kewensis.

Though the pods of both D. urens and D. pruriens are becket with fleshy eaves, but of the former there are shorter, and very thinly scattered over the pod, which is keel-shaped, much longer, and more than twice the breadth of that of the latter, and marked transversely with deep furrows. These circumstances show, that the D. urens is widely different from the officinal Cowhage here figured, which is a native of both Indies, and appears to have been cultivated in England in the time of Ray by Mr. Charles Hatton; and the plant is now growing in the apothecaries garden at Chelsea: but we cannot learn that it has ever been known to produce perfect flowers in our garden flowers: so that for the very correct figure subjoined to this sheet we

a Termæ commissiæ in horto D. Caroli Hatton plantæ producere. Vide Rall Hift. p. 887. In the Hort. Ken. D. pruriens is said to have been first introduced here by Mr. Gilbert Alexander: this mistake was probably caused by confounding the D. pruriens with the D. urens.
are indebted to the liberality of Sir Joseph Banks, in whose herbarium we found an excellent specimen of the plant.

The sharp hairs of the pod readily penetrate the skin, and cause a very troublesome itching, a mischievous purpose to which in this country they have been long chiefly converted. But the violent irritation which these hairs produce upon the external skin has not deterred practitioners from administering them internally, especially in the West Indies, where they have been generally employed for many years as a safe and efficacious anthelmintic; and with a view to this effect they are now admitted into the Materia Medica of the Edinburgh Pharmacopoeia.

Sir Hans Sloane, who has noticed the diuretic qualities of the roots and pods of this plant, observes, that an infusion of the latter "is a certain remedy for the dropsy;" but he takes no notice of the vermifuge effects of Cowhage: Browne however has informed us, that "in the Windward Islands some of the inhabitants make a syrup of the pods, which is said to be very effectual against worms." But as little attention would be paid to an observation so vague and unsatisfactory as this, we are to consider Mr. Bancroft as the first person whose writings tended to establish the anthelmintic character of Cowhage in Europe. He tells us, "the part used is the fetidous hairy substance growing on the outside of the pod, which is scraped off, and mixed with common syrup or molasses, to the consistency of a thin elec-
tuary, of which a tea-spoonful to a child of two or three years old, and double the quantity to an adult, is given in the morning fasting, and repeated the two succeeding mornings; after which a dose of rhubarb is usually subjoined. This is the empirical practice of the planters, who usually once in three or four months exhibit the Cow-itch in this manner to their slaves in general, but especially to all their children without distinction; and in this manner I have seen it given to hundreds from one year old and upwards with the most happy success. The patients, after the second dose, usually discharged an incredible number of worms, even to the amount of more than twenty at a time, so that the

He also informs, that this remedy was successfully used in the East Indies by Mr. Buckley. L. c.
"Fools consist of little else than these animals." He concludes by saying, "It is to be observed, that this remedy is particularly designed against the long round worm; whether it is equally deleterious to the afeurides, or whether it has ever been used against them, I am uncertain." Further accounts, shewing the efficacy of this medicine, have since appeared in the Medical Commentaries, and in a treatise, professedly written on the subject by Mr. Chamberlaine, to which a number of cases is subjoined, and to which great additions lately have been made on various and indubitable authorities, proving the Cowhafe to be not less successful here than in the warmer climates of which it is a native; and that all the different kinds of worms, known to infest the prime vir, have been expelled by this anthelmintic.

The manner, in which these hairy spicula act as a vermisuffage, seems to be purely mechanical; for neither the tincture, nor the decoction, possesses the least anthelmintic power.

- Vide his Essay on the natural history of Guiana in South America.
- See Vol. ii.
- Practical treatise on the efficacy of Stizolobium or Cowhafe, published in 1785. As the Cowhafe is seldom to be met with at the druggists, Mr. C. informs those who wish to give it a trial, that it is to be had at his house in Aylesbury street, Clerkenwell.
- The following experiment, made by Mr. Chamberlaine, illustrates this opinion: - "A calabash, full of very large worms of the teres kind, in full vigour, voided by a poor emaciated patient, was brought to me. Among these, I sprinkled some of the feta. For a minute or two no visible effect was produced; but in a little time they began to writh and twist themselves in an unusual manner, and exhibited evident signs of extreme torture. I took one of the worms, and viewing it through a magnifying glass, perceived that several of the feta had pierced very deep, and others were flicking loosely in various parts of its body, but that none of the spicula, which had once entered into the skin, dropped off." L.c.

ACORUS

No. 35.  6 E
ACORUS CALAMUS. SWEET FLAG, OR ACORUS.


THE root is perennial, horizontal, crooked, pointed, fibrous, somewhat compressed, about an inch thick, externally yellowish, with a greenish tinge, rugose, internally whitish, and of a spongy texture: the leaves are long, sword-shaped, sheathing one another, and commonly undulated on one side: the flowers are small, numerous, and produced on a spadix or conical spike at the edge of the leaf; there is no calyx: the corolla is composed of six petals, which are small, membranous, concave, and appear truncated: the six filaments are thick, somewhat longer than the petals, and furnished with double antheræ: the germin is gibbous, oblong, without a style, and terminated by a pointed stigma: the capsule is oblong, triangular, and divided into three cells, containing numerous oval seeds.

According to Linnaeus, this is the only true aromatic plant indigenous to northern climates. It is common in many parts of England, and usually grows in stagnant waters, and the sides of rivers, producing its flowers in May and June.

The roots of Calamus aromaticus have been long medicinally employed, and were formerly imported here from Asia and the Levant;

The virtues of Calamus aromaticus are noticed both by the Greeks and Arabs. See Dios L. 1. c. 2. Alpin. p. 141.
Dr ACORUS.

Synop. p. 437.

Cor. 6-petalae,
Cor. 6-petalae,

175

Ort. Kew.

Lancet-like, fibrous, somewhat yellowish, with a
fibrous texture; the
and commonly
and produced
there is no calyx;
membranous,
and thick, somewhat
the
the
by a pointed
into three cells,
indigenous
of England, and
owers, producing
medicinally em-
and the Levant;
ents and Arabian.
But those of English growth are now very generally substituted, and found to be little or nothing inferior to the exotic sorts, which is merely a variety of the same species.  

The root, in its dried state, has a moderately strong aromatic smell, and a warm pungent bitterish taste. Water is found to extract the bitter matter of the root most completely, and rectified spirit that of the aromatic. It imparts its virtues to water in distillation along with a small quantity of essential oil, amounting only to two ounces from fifty pounds of the root, according to Hoffmann; but Neuman and Cartheuser obtained the oil in a much larger proportion.  

The root of Calamus, though not heating like the spices, manifests to the taste considerable pungency, and a moderate share of bitterness, and has therefore been deemed useful as a warm stomachic, and was formerly much used here in combination with the more simple bitters, which, by this addition, were rendered more grateful and carminative. It has been recommended in vertigo, proceeding from a vitiated stomach, and in intermittent fevers, which we are told were cured by this root, after the bark had failed. We are also informed of its efficacy in scorbutic and haemorrhagic complaints; but to this, little credit will be given, and much less to the supposed elexipharmaic power of Calamus, though it is an ingredient in the theriac and mithridate of dignified memory, and still is much used in eastern countries as a preservative against contagions.

* See Murray, App. Med. v. 5. p. 42.

CALAMUS
CALAMUS ROTANG.  ROTANG CANE.

'Sanguis draconis, Pharm. Lond, & Edinb. e fructibus hujus arboris maxime defumitur.


THIS tree may be considered as a scandent kind of palm: the lower part of the stem, to the extent of two or three fathoms, is strong, erect, hollow, jointed, and beset with numerous spines; afterwards it takes a horizontal direction, and overruns the neighbouring trees to the distance of fifty or even one hundred feet: the leaves are several feet long, and composed of numerous pinææ, which are nearly a foot long, narrow, sword-shaped, and at the edges serrated with spinous teeth: the flowers are produced in spikes, which separate into long spreading branches: the calyx is divided into six perisétent leaflets, three exterior and three interior; the former are very short and pointed, the latter are oblong, concave, rigid, and unite closely, so as commonly to conceal the inner parts of the flower: it has no corolla: the filaments are fix, capillary, and furnished with round antheræ: the germs are roundish, placed above the inflorescence of the calyx, and the style is trifid, filiform, twisted in a spiral manner, and terminated by simple stigmata: the fruit is somewhat larger than that of a lillet, membranous, round, one-celled, covered with regular inverted obtuse scales, and contains a red rufinous pulp, which soon becomes dry: the seed is round and fleshy.  It is a native of the East Indies, where it commonly grows in woods near rivers, and has long supplied Europe with walking-canæs, which have usually been imported by the Dutch.

According
Calamus Rotang

Published by R.C. Treub in 1882
According to Linnaeus there are several varieties of the Calamus Rotang, which he has founded upon the different figures of this tree given by Rumphius; but whether these are varieties only, or different species, it is not for us to determine. The specimens of the Calamus in the herbariums of Sir Joseph Banks and Dr. Smith, differ considerably in their foliage; so that different species of this obscure genus will probably in future be systematically defined; our business however has only been to select for delineation that which accorded best with the descriptions of it given by Rumphius and Kämpfer, conformably to the synonymy to which we have referred.

Several trees are known to abound with a red resinous juice, which is obtained by wounding the bark, and called dragon’s blood, as the Pterocarpus Draco or Pterocarpus officinalis of Jacquin, the Dracaena Draco, the Dalbergia monandra, and the Pterocarpus fontinum. — Besides these, many of the Indian red woods, while growing, pour forth through the fissures of the bark a blood-coloured juice, forming a resinous concretion, to which the name dragon’s blood has been affixed. This drug however is chiefly obtained from the fruit of the Calamus Rotang, and is procured at the Molucca Islands, Java, and other parts of the East Indies, according to Kämpfer, by expelling this fruit to the steam of boiling water, which softens the external shell, and forces out the resinous fluid, which is then inclosed in certain leaves, of the reed kind, and hung in the air to dry. Another way of obtaining the Sanguis Draconis is by simply boiling the fruit in water, infusing the strained decoction, and drying it in the same manner as the former. In Polimania the external surface of the ripe fruit is often observed covered with the resin, which is rubbed off by shaking the fruit together in a bag; when this is done, the drug is melted by the sun’s heat, and formed into globules, which are folded in leaves: this is deemed the purest kind of dragon’s blood; and that which is next in goodness is procured by taking the fruit, which is found to

* As some of the Crotons (vide Linn. Supp. p. 319) and other trees noticed by Cramer, de duabus draconis arboribus, ad. p. 13. An exudation similar to the fanguis draconis produced from a tree at Botany Bay, was discovered by Sir Joseph Banks and Dr. Solander. Vide Hawkinsworth’s Collection of Voyages, vol. 3. p. 498. & 505. But the substance now known at New South Wales by the name of red gum, is perfectly soluble in water; the yellow gum of this place is however in its chemical and medicinal qualities not very different from fanguis draconis, and has been successfully employed as an astringent by Dr. Blane. See Phillip’s Voyage to New South Wales. p. 39.
be still distended with resin, out of the bag, and, after bruising it, exposing it to the sun, or boiling it gently in water; the drug then appears floating upon the surface, and is skimmed off and shaped into small cakes. The inferior sort of dragon's blood is that which rises from the crude fruit after being long boiled, and is usually formed into very large cakes, or mallei, in which the membranous parts of the fruit, and other impurities, are intermixed. It is also brought to us adulterated, or artificially composed, in various ways. Both the small globules, and the large mallei, which we have noticed, are imported here, and found to vary widely in goodness and purity. The best kind of this gummy resinous substance breaks smooth, is of a dark red colour, and when powdered changes to crimson; it readily melts, and catches flame. It is not acted upon by watery liquors, but it totally dissolves in pure spirit, and soluble likewise in expressed oils. It has no smell, but to the taste discovers some degree of warmth and pungency.

The Cinnabris and Sanguis Draconiis appear to have signified the same thing with the Ancient Greeks,* who were well acquainted with the astringent power of this medicine; and in this character it has since been much employed in haemorrhages and alvium fluxes. At present however it is rarely used internally, being superseded by more certain and effectual remedies of this numerous class; and it enters no official composition but that of emplastrum thuris of the London Pharmacopoeia.

* Kinnabris, aequa scorpius.

CUCUMIS COLOCYNTHIS. BITTER CUCUMBER; Or, COLOQUINTIDA.

SYNONYMA. Colocynthis. Pharm. Lond. & Edinb. Gerard

THE root is annual, white, divided into long branches, which strike deeply into the ground: the stems trail, like those of the garden cucumber, a considerable length, and are beset with rough hairs: the leaves are of a triangular shape, obtuse, variously finituate, hairy, on the upper surface of a fine green, beneath rough, and whitish: the flowers are yellow, solitary, and appear at the axils of the leaves: the calyx of the male flowers is bell-shaped, and divided at the brim into five tapering segments: the corolla is monopetalous, bell-shaped, and divided at the limb into five pointed segments: the filaments are three, two of which are bifid at the apex; they are all very short, and inserted into the calyx: the anthers are linear, long, erect, and adhere together on the outer side: the calyx and corolla of the female flower are similar to those of the male: the three filaments are without anthers: the germen is large: the style cylindrical, very short, furnished with three stigmata, which are thick, gibbous, bifid, and bent outwardly: the fruit is a round apple, of the size of an orange, divided into three cells, abounding with a pulpy matter, separated every where by cellular membranec, and including many ovate compressed seeds. The flowers appear from May till August.

Colocynth is imported for use to this part of Europe from Turkey, but it is yet unknown here of what place this plant is a native. It seems to have been cultivated in Britain in the time of Turner, and the figure we have given was drawn from a specimen of the plant produced by fowling the seed in a hot bed. Though the plants thus raised put forth flowers readily, they are very rarely known to bear fruit. The spongy membraneous medullary part of the fruit is directed for medicinal use: this, "which to the taste is nauseous, acrid, and intensely bitter, on being boiled in water, renders a large quantity of the liquor very and fliny: even a tincture of it made in proof spirit is so glutinous as not to pass through a filter, and not easily
through a common strainer. The watery decoctions inspissated, yield a large proportion, half of the weight of the colocynthus, or more, of a mucilaginous extract; which purges strongly, but with much less irritation, and greater safety, than the colocynthus itself, and appears to be the best preparation obtainable from this drastic drug."

This very powerful and irritating cathartic is the Ἄκαπερος of the Ancient Greeks, and the Alhandal of the Arabians. It was frequently employed by both in different diseases, though not without an apprehension of danger, from the violence of its effects, from which various infinences are related. In doses of ten or twelve grains this substance purges with great vehemence, frequently producing violent gripes, bloody discharges, and even disordering the whole system. Many attempts therefore have been made to correct its virulence, by the addition of acids, astringents, and the like; but these seem to answer no other purpose than what might be equally effected by a reduction of the dose. "The best method of abating its virulence, without diminishing its purgative virtue, seems to be by triturating it with gumy farinaceous substances, or the oily seeds, which, without making any alteration in the colocynthus itself, prevents its resinous particles from cohering, and flicking upon the membranes of the intestines, so as to irritate, inflame, or corrode them."

This drastic purgative has been recommended in various chronic complaints, but as several other cathartics have all the advantages of colocynthida, and may be used with more safety, its use is now seldom resorted to, especially alone. Extractum colocynthidis compostum & pipus ex colocynthide cum aloe, are directed by the Pharmacopoeias.

* Lewis, M. M. p. 246.


* Edinburgh New Dispens. by Dr. Duncan. p. 175.

* As worms, lues venerea, cephalalgia, mania, dropply, Gonorrhæa, epilepsy, asthma, &c.

CROCUS SATIVUS.
CROCUS SATIVUS. SAFFRON-CROCUS.


Sp. Ch. C. spatha univalvi radicali, corollae tubo longissimo.


Curt. Mag. 45.

The root is bulbous, perennial: the flower appears after the leaves, rising very little above the ground upon a slender succulent tube: the leaves rise higher than the flower, are linear, simple, radical, of a rich green colour, with a white line running in the centre, and all at the base inclosed along with the tube of the flower in a membranous sheath: the flower is large, of a bluish purple, or lilac colour: the corolla consists of five petals, which are nearly elliptical, equal, and turned inwards at the edges: the filaments are three, short, tapering, and support long erect yellow anthers: the germen is roundish, from which issues a slender style, terminated by three long convoluted stigmas, of a deep yellow colour: the capsule is roundish, three-lobed, three-celled, three-valved, and contains several round seeds. It flowers in September and October.

No. 36. 6 G
It is now indubitably ascertained that this plant is a native of England, though unknown to Ray, Miller, and several other subsequent botanists. It has been long cultivated for use in this and in many other countries; but English Saffron is generally preferred here to that which is imported from abroad, and may be distinguished by its parts being larger and broader. All the different plants of this genus are by Linnaeus considered only as varieties of the C. tativus. Jacquin, however, makes a distinct species of the spring Crocus: in this he has been followed by Curtis, who has published a figure of the plant in his botanical magazine: and Miller, who describes four species of this family, thinks all of them “must be allowed to be specifically different, since they do not vary to each other.”

The stigmata of the Crocus here figured, which constitute the officinal Saffron, are easily to be distinguished from those of the other varieties, and in the neighbourhood of Saffron-Walden, and in some parts of Cambridgeshire, where the plant is chiefly cultivated, are prepared for use in the following manner. In autumn, when the flowers appear, they are gathered every morning, and are spread upon a table; the stigmata along with a portion of the style, are then picked from the other part of the flowers, which are thrown away as useless. The stigmata being thus collected in sufficient quantity are then dried, which is effected by means of portable kilns, of a peculiar construction, over which a hair cloth is stretched; and upon this are placed a few sheets of white paper, on which the stigmata are strewed, about two or three inches thick, and then covered with several sheets of paper, over which is laid a coarse blanket, five or six times folded, or a canvas bag filled with straw; and when the fire has heated the kiln, a board, on which a weight is put, is placed upon the blanket in order to press the Saffron into a cake. For the first hour a pretty strong fire is employed; the Saffron is then found to be formed into a cake, which, after being turned, is subjected for another hour to the same degree of heat: it is then turned a second time, and a more gentle heat is applied for about twenty-four hours, or till the cake becomes dry, during which time it is turned every half hour.

* Vide l. c. * See Dict. * For a full account of the cultivation and management of Saffron, see Douglas in Phil. Trans. vol. 35, p. 566. And Miller's Dict. Saffron,
Saffron, thus prepared, has a powerful penetrating diffusive smell, and a warm pungent bitterish taste. "It gives out the whole of its virtues and colour to rectified spirit, proof spirit, wine, vinegar, and water: about three parts in four of the Saffron are taken up by each of these menstrua; and the matter which remains undissolved is inodorous, insipid, and of a pale clay colour." The acetoce, and even vinous tinctures of Saffron, on long keeping, lose a little of their colour and strength, but those made with rectified spirit remain in perfection for years. "In distillation it impregnates water strongly with its flavour: if the quantity of Saffron is large, a small portion of a fragrant and very pungent essentia oil may be collected, amounting, as is said by Vogel, to about a dram and a half from sixteen ounces. Rectified spirit elevates also a considerable share of its flavour, but leaves much the greater part concentrated in the extract."

Saffron is evidently the ἐγκόσσω of the Greeks, Crocus of the Latins, and Zaffaran, or Zahafaran, of the Arabsians. It was held in much estimation by the Hebrews, who called it Carcom, and was greatly celebrated in ancient times both by physicians and poets. As a medicine, Saffron was considered to be very powerful. Schroder affirms, that if taken to the quantity of two or three drams, it proves fatal; and by several authors we are informed, that in large doses it produced cephalalgia, intoxication, and mania. We are also assured, that it penetrates every part of the body, tinging the solids and excretions with a yellow colour; and that even the odour or effluvia of this drug, have been known to produce deleterious effects. It appears, however, from the experiments of Dr. Alexander, that Saffron possesses but very little active power, and may be taken in considerable quantity, without producing any remarkable effect; and it was lately given in the Edinburgh Infirmary, by Dr. Henry Cullen, even to the extent of half an ounce a-day, in several hysterical cases, without any sensible effect whatever.

* See Duncan’s Edinburgh New Dispensatory, p. 178.

Writers
Writers on the Materia Medica have very generally considered Saffron as a most exhilarating cordial; and for this purpose Boerhaave preferred the extract, infusiated only to the consistence of oil; but the observations of modern physicians do not furnish us with one instance in which this drug had any remarkable effect in raising the spirits; on the contrary Bergius informs us, that a lady always experienced great defpondency by taking this medicine. It has been supposed of considerable efficacy as an emmenagogue; Riverius mentions a singular case of its powerful action in this way.\(^n\) Dr. Cullen also informs us, that he has found it to succeed in this character in one or two instances; but that in many others, though repeatedly employed in large doses, no good effect was produced.\(^a\) Another quality for which Saffron has been esteemed, is that of an antifeptic; yet though, (according to the experiments of Sir John Pringle,\(^b\)) it manifested the power of retarding the putrefactive process of animal matter, we have no proof of its efficacy in this way on the living body, infected by a putrid disease. Saffron has also been employed as a diaphoretic, and for the purpose of throwing out variolous pustules, and other exanthemata; but this practice seems to have originated from a mistaken notion of the action of Saffron, as well as from a fallacious pathology, which is now utterly exploded. In short, though the sensible qualities of this medicine are pretty considerable, it appears to us to possess no other power than simply that of an aromatic: and Dr. Cullen declares, that he "has not been more puzzled upon any occasion, than in ascertaining the medicinal qualities of this substance," so that the words of a very classical writer may still be applied to it, though with a contrary view: "Nec poteris croci dotes numerare, nec uisus."

At present very little confidence is placed in this medicine, though it enters several official compositions. The Edinburgh College directs a tinctura croci, but that of London only retains a syrup of this drug.

\(^{*}\) Opera ed. Harf. p. 136.  
\(^{*}\) Cullen, M. M. vol. ii. p. 313.  
\(^{*}\) Diseases of the Army, App. p. 20.  
\(^{*}\) L. c.
the root is covered with a purplish colour, a naked tube, liliaceous, and are narrower than the antherae: the slender styles, the stigmae: the carpus is numerous small flowers in spring, when the plant is a native of the southern parts of Europe.

Hence it has been given the name of 'Colchicum autumnale.'
COLCHICUM AUTUMNALE. \ COMMON MEADOW SAFFRON.


Sp. Ch. C. foliis planis lanceolatis erectis.

\ a Flore simplici. \ b Flore pleno.

THE root is perennial, consisting of a solid double succulent bulb, covered with a brown membranous coat: the flower is large, of a purplish colour, and rises immediately from the root upon a long naked tube, like that of the Saffron: the leaves appear in the spring, and are numerous, radical, spear-shaped, one or two much narrower than the others: there is no calyx: the corolla is monopetalous, and divided into six lance-shaped large erect segments, of a pale purple colour: the filaments are six, tapering, white, much shorter than the corolla, and furnished with erect pointed yellow anthers: the germen is lodged at the root, from which issue three slender styles, reflexed at the top, and terminated by simple pointed stigmata: the capsule is three-lobed, divided into three cells, containing numerous small globular seeds, which do not ripen till the succeeding spring, when the capsule rises above the ground upon a strong peduncle. It is a native of England, affecting meadow grounds of a rich soil, and flowers in September.

\ a Hence it has been called naked lady. \ b It is not so rare a plant as the Saffron.

No. 36. 6 H
The recent root of this plant has been received into the Materia Medica of both Pharmacopoeias, on the recommendation of Baron Stoerck, who first thought of converting this acrid poison to the purposes of medicine. Respecting its effects and sensible qualities, authors have given very different reports. Haller informs us, that he found this root perfectly void of taste and acrimony; Krapp likewise says, that he ate the whole bulbs without feeling any inconvenience, except that of an ungrateful bitterish taste; and Kratochvill gave this root with impunity to several in doses of two, three, and even four drams; while Stoerck tells us, that by gently rubbing the root against the tip of his tongue, it rendered the part rigid, and almost void of sensation, for several hours. Ehrmann, Marges, Murray, and several other writers, also bear testimony to the great acrimony of Colchicum; so that we can only reconcile these contradictory accounts by supposing these roots to vary much according to their age, the soil in which they grow, and probably still more according to the season of the year in which they are dug up. Baron Stoerck affirms, that on cutting the fresh root into slices, the acrid particles emitted from it irritated the nostrils, fauces, and breath; and that the ends of the fingers with which it had been held, became for a time benzumed; that even a single grain in a crumb of bread, taken internally, produced a burning heat and pain in the stomach and bowels, urgent strangury, teneimus, colic pains, cephalalgia, hiccups, &c. From this relation, it will not appear surprising that we find several instances recorded in which the Colchicum proved a fatal poison both to man and brute animals.

The external use of this root, and the wearing it inclosed in a bag, suspended about the neck, which was formerly practiced for the purpose of preventing and curing pestilential fevers, will hardly be thought an exception to this assertion. Vide L. c. u. 1256.


Two boys, after eating this plant, which they found growing in a meadow, died in great agony. Jo. Agricola Ammonius, Medic. herbar. lib. 1. p. 90. See also Ludovici Opera, p. 69. Violent symptoms have been produced by taking three of the flowers. Gaudin, Plantes d’Aix, p. 123. The seeds likewise have been known to produce similar effects. Brev. Succ. 1723. p. 679. Deer and oxen have fallen a sacrifice to this poison; and according to Stoerck two draughts of the root killed a dog in thirteen hours, and upon opening its abdomen, the stomach and bowels were found to be greatly inflamed, or in a gangrenous state. L. c. p. 17.
From various observations on the effects of Colchicum made by Baron Stoerck, and especially upon the infusion of three grains of the fresh root in four ounces of wine, he remarked that its diuretic power was very considerable, and therefore concluded that if its deleterious acrimony were destroyed, it might prove in this character an efficacious medicine; accordingly he digested an ounce of the recent root sliced in a pound of vinegar for forty-eight hours with a gentle heat; the vinegar being then strained, it proved acrid to the taste, constringed and irritated the fauces, and excited a slight cough; to obviate which, he mixed the vinegar with twice its weight of honey, and gently boiled it down to the consistence of honey, forming an oxymel sufficiently grateful, and which, taken in doses of a dram, promoted a copious discharge of urine, without producing any inconvenience from its acrimony, though it moderately stimulated the fauces, and ab sorbed the mucus. Thus, like the squill, it was found both expectorant and diuretic; and the successful use of this medicine in various hydropic disorders in the hospital at Vienna, equalled the Baron's utmost expectations. He recommends, at first, a dram of the oxymel to be given twice a day in any suitable vehicle, and gradually to increase the dose to an ounce or more in a day. Many other practitioners, who employed the oxymel colchici in these complaints, also experienced its good effects, especially in Germany and France, where it continues to be a favourite medicine: in England, however, the Colchicum has been less successful, and is very generally thought a less efficacious diuretic than the squill, which excels it still more as an expectorant. The London College, conformably to the practice of Stoerck, directs an oxymel colchici, and that of Edinburgh a syrup; the latter however differs from the former only in using sugar instead of honey.

As Zach, Kräf, Planck, Collin, Ehrmann, and others.

We may here mention Marges, Planchon, Du Monceau, &c. &c.

Vide Med. Obs. &c. vol. 3. pref. See also Mynen's Essay on Drosby, p. 108.


**RUMEX HYDROLAPATHUM. WATER DOCK.**


THE root is perennial, large, thick, externally black, internally whitish: the stem is erect, channelled, branched, green, and rises about five feet in height: the upper leaves are long, narrow, and on the flower-spikes linear and pointed; those at the bottom of the stem are near a foot and a half in length, of a narrow ovate form, somewhat indented at the edges, and stand upon long strong channelled footstalks: the flowers are numerous, and hang in whorled spikes upon slender peduncles: the calyx is divided into three narrow pointed permanent segments: the corolla consists of three petals, which are ovate, narrow, pointed: the stamens are six, short, slender, and furnished with erect double antherae: the germen is turban-shaped, triangular, and supports three reflexed styles, terminated by rough glandular stigmata: the capsule is formed of the three petals, which by approaching each other assume a triangular form, and in this state
are called valves; these are very large, ovate, pointed, slightly notched towards the base, and furnished with an oblong grain, extending down the middle of each valve: the seed is solitary, ovate, triangular. It is a native of England, growing in ditches, pools, and rivers, and flowers in July and August.

The Hydrolapathum of the Edinburgh Pharmacopoeia is referred to the R. aquaticus of Linnaeus, which is supposed to be a different species from the Hydrolapathum of Mr. Hudion, though the same synonyms are ascribed to both. The plant here represented, which was found in the river Rodon, near Woodford Bridge, by having toothed valves, does not agree with the specific characters given by either of these authors; but it seems to correspond exactly with the description of it subjoined by Dr. Withering.

The root, which is the part of this plant directed for medicinal use, has a strong astringent taste, and readily strikes a black colour to a solution of ferrum vitriolatum, and yields its active matter both to water and to rectified spirit.

Many of the Lapatha* were formerly official herbs, of which the Water Dock has been esteemed to be the most efficacious, and by the Edinburgh College is still retained in the Materia Medica: the leaves, which manifest considerable acidity, are said to possess a laxative quality, and have therefore been used to obviate colicines: the roots are strongly astringent, and have been much employed both externally and internally for the cure of scurvy; especially when the gums are spongy, and frequent hemorrhages supervene. It is also recommended in various other cutaneous defecations, and in visceral obstructions: and in order to give the Hydrolapathum additional importance, Muntingius has taken great pains to prove that it is the Herba Britannica

* L. c. b L. c.

* From λαπάθε, evacuo λαπάτα, idem. Allton:

Si duc morabitur alius,
Mitulus & viles pollent obsacula conchae
Et Lapathi brevis herba. Horat. Sat. 4. l. II. 2. v. 27.

of the ancients: but many physicians still think this root does not peculiarly differ from other astringents, and are sceptical enough to place no faith in the great virtues ascribed to it by Muntingius and Sir John Hill.


The powdered root is laid by Murray to be an excellent dentifrice. App. Med. vol. 3. p. 344.

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**PIMPINELLA SAXIFRAGA. SMALL BURNET-SAXIFRAGE.**


THE root is perennial, spindle-shaped, whitish: the stem is erect, round, scored, downy, jointed, towards the top a little branched, and rises above a foot in height: the leaves are variously shaped, pinnated, alternate; on the upper part of the stem they divide into simple linear
Pimpinella saxifraga

Published by J. W. Edwards Nov. 4 1793
linear laciniae; toward the bottom the pinnae are broader, and at the root roundish, and deeply indented at the edges: the flowers are white, and stand in umbels, which are terminal, flat, consisting of twelve radii or more, both in the general and partial umbels: there is no involucrum: the proper corolla consists of five petals, which are ovate, and bent inwards at their extremities: the filaments are white, tapering, spreading, and furnished with roundish antherae: the germen is egg-shaped, striated, and upon it is placed a white fleshy double nectarium: the two styles are short, white, and furnished with simple stigmata: the seeds are naked, furrowed, egg-shaped. It is a native of this country, and grows in dry meadows and pastures: the flowers appear in August and September.

Several species of Pimpinella were formerly officinally used, of which the P. magna, and the species represented in the annexed plate, were the principal; in their medicinal qualities however these are found to have no remarkable difference.* The roots, which obtain a place in the Materia Medica of the Edinburgh Pharmacopoeia, have an unpleasant smell, and a hot pungent bitterish taste:† on drying, or on being long kept, their pungency is considerably diminished. Their virtue is extracted partially by water, and completely by rectified spirit. When large quantities of the root are distilled with water, a small portion of essential oil, extremely acrid and fiery, may be obtained.*

Bergius states the virtues of this root to be resolvent, diaphoretic, stomachic, and diuretic.† It is recommended by several writers* as a stomachic, and in all cases where pituitous humours are thought to prevail, as asthma, dropsies, catarrhal coughs, hoarseness, and what has been called angina serosa; and by Hoffmann* it is said to be an excellent emmenagogue. In the way of gargle it has been employed for dissolving viscid mucous, and to stimulate the tongue, when that organ becomes paralytic.

† Hence chewing it is recommended to relieve the tooth-ach.
† M. M. p. 230.
* Especially German Physicians.

Pimpinella
Pimpinella formerly entered the official pulvis arie, and like the arum it appears to be an acrid stimulant; but how far this quality renders it fit for the cure of the above-mentioned disorders, we leave to the consideration of others. It may be given in doses of a scruple in substance, and in infusion to two drams.

**PIMPINELLA ANISUM.**

**ANISE.**


Sp. Ch. P. folis radicalibus tridentis incisis.

THE root is annual, tapering: the stem is upright, branched, striated, jointed, smooth, and rises about a foot in height; the leaves on the upper part of the stem are divided into narrow pinnate segments, but at the bottom they are roundish, separated in three or five indented lobes, and stand upon scored sheath-like footstalks; the flowers are small, white, and placed in umbels, which are terminal, flat, consisting of several general and partial radii, without involucra; the parts of inflorescence resemble those of the P. Saxifraga; therefore need not be repeated here. It is a native of Egypt, and flowers in July.

The Anise was cultivated here in the time of Turner, (1551) but our summers are seldom warm enough to bring the plant to perfection. The seeds, according to Miller, are annually imported here from Malta and Spain, where the Anise is chiefly cultivated. Savary also informs us,
ANISE.


us, that "the Maltese and Alicant Anifie is most esteemed, though
not so green as the French;" and the Spanish Anisfeeds are easily
distinguished from those of France and Germany, by being much
smaller.

Anisfeeds have an aromatic smell, and a pleasant warm taste, accom-
panied with a considerable degree of sweetness. "They totally give
out their virtue to rectified spirit.—The spirit, distilled off from the
filtered tincture, has a light taste of the seeds, but leaves far the
greatest part of their virtue behind in the extract.—Infused in water,
they impart a little of their finell, but scarcely any taste: in distillation
they give out the whole of their flavour."—"Along with the water
arises an essential oil, to the quantity of an ounce or more from
three pounds."

"This oil, in colour yellowish, congeals, even when the air is not
sensibly cold, into a butyraeous white concrete. Its smell, which
exactly resembles that of the Anisfeeds, is extremely durable and dif-
fusive; its taste is milder and less pungent than that of almost any
other distilled vegetable oils."

"These seeds yield an oil likewise upon expression, of a greenish
colour, in taste grateful, and strongly impregnated with the flavour
of the seeds: sixteen ounces, lightly moistened by exposure to the
steam of boiling water, are said to afford one ounce. This oil is
composed of a gross insipid, inodorous one, of the same nature with
the common expressed oils; and a part of the essential oil of the seed,
on which the flavour depends."

The seeds of Anisfe, which are ranked among the four greater
hot seeds, have been long medicinally employed by physicians as an
aromatic and carminative, in preference to those of most of the other
umbelliferous plants; they have also been esteemed useful in pul-
monary complaints, and to posses, like those of fennel, a power of
promoting the secretion of milk. Their chief use however is in flatu-
lencies, and in the gripes, to which children are more especially liable;
and they are usefully combined with such purgatives as are apt to
produce these effects. Weakness of the stomach, diarrhoeas, and loss
of tone in the prima vis, are likewise complaints in which Aniſfeeds

\* Lewis, M. M. p. 63.
are suppos'd to be peculiarly useful; and hence by V. Helmont they were called *Solamen intesinorum*.

The essentiai oil,* which is the only officinal preparation of Anifeeds now directed by the Pharmacopoeias, is usually grateful to the stomach, and may be taken in the dose of twenty drops. In distempers of the breast, the oil is preferred, but in flatulencies and colics the seeds in substance are said to be more effectual.  


* Lewis. 1. c.

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**CORIANDRUM SATIVUM.  COMMON CORIANDER.**


**Sp. Ch.** C. Fructibus globosis.

**THE root is annual:** the stalk is erect, branched, round, smooth, of a glaucescent tinge, and rises about two feet in height: the leaves are variously pinnate; those of the upper part of the stalk are divided into narrow linear alternate pointed segments; those at the bottom are cut into irregular ferrated lobes, resembling the leaves of com-
mon parsley: the flowers are white, or reddish, and placed in terminal umbels, appearing in June: the partial umbels are composed of more radii than the general, and each is furnished with an involucrum of three narrow leaves; but the general involucrum is commonly wanting, or composed of a simple leaf: the general corolla is irregular in its shape, and unequal: the petals are five, oblong, bent inwards, and at the circumference the outermost are the largest: the filaments are five, slender, and furnished with roundish yellow anthers: the germen is globular, placed below the insertion of the corolla, and supports two short styles, bent in opposite directions, and terminated by simple stigmata: the fruit is globular, and divisible into two hemispherical concave seeds.

This plant is a native of the South of Europe, where in some places it is said to grow in such abundance, as frequently to choke the growth of wheat and other grain. From being cultivated here as a medicinal plant, it has for some time become naturalized to this country, where it is usually found in corn fields, the sides of roads, and about dunghills.

Every part of the plant, when fresh, has a very offensive odour, but upon being dried the seeds have a tolerably grateful smell, and their taste is moderately warm, and slightly pungent. "They give out their virtue totally to rectified spirit, but only partially to water. In dilution with water, they yield a small quantity of a yellowish essential oil, which sexcils strongly and pretty agreeably of the Coriander." *

Dioclesides affirms, that these seeds, when taken in a considerable quantity, produce deleterious effects; and in some parts of Spain and Egypt, where the fresh herb is eaten as a cordial, instances of fatuity, lethargy, &c. are observed to occur very frequently; but these quali-

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* See Murray, App. Med. vol. i. p. 278.  
* See English Botany, p. 67.

* "Coriander was probably called from sera cimex, because the green herb, feed and all, flinks intolerably of bugs." Alston. Loc. on the M. M. vol. ii. p. 349.


* "Si laputum fumantur sanae, mentem, non sine periculo, e suo fodo & flato demoveretur." And again, "Coriandum proto odor am latere non potest: epotum vocis raeut et tali, etque infanum, quid ex virolentia proficetur, ut ut qui tumfere varia delin puenda blatta iant: tota vero coccio coriandi odor fe profite." E. 3. c. 71.

ties seem to have been unjustly ascribed to the Coriander; and Dr. Withering informs us, that he has "known six drams of the seeds taken at once without any remarkable effect." Thee seeds, like those last mentioned, and indeed those of most of the umbelliferous plants, possess a stomachic and carminative power. They are directed in the infusum amarum, the infusum fennae tartari-fatum, and some other compositions of the Pharmacopoeias; and according to Dr. Cullen, the principal use of these seeds is, "that, infused along with fenna, they more powerfully correct the odour and taste of this than any other aromatic that I have employed; and are, I believe, equally powerful in obviating the griping that fenna is very ready to produce."


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SIUM NODIFLORUM. CREEPING WATER PARSNIP.


Sp. Ch. S. foliis pinnatis, umbellis axillaribus sessilibus.

THE
THE root is perennial, long, creeping, and hung with numerous fibres: the stem is jointed, thick, succulent, scored, procumbent, branched, and seldom reaches a foot in length: the leaves are pinnate, consisting of three or four pairs of pinnae, terminated by an odd one; the pinnae or segments are ovate, pointed, serrate, sessile: the flowers are small, and stand in axillary umbels, which are composed of from six to nine general radii, and about an equal number of partial radii: there is no general involucre, but the partial one consists of five, six, or seven ovate pointed leaflets: the corolla is composed of five petals, which are entire, ovalish, white, largest at the circumference, and bent inwards at their apices: the five filaments are slender, spreading, rather longer than the corolla, and furnished with roundish anthers: the germ is small, placed beneath the corolla, and supports two slender reflexed styles, terminated by blunt stigma: the fruit is egg-shaped, small, scored, divisible into two seeds, which are flat on one side, on the other convex and scored. It is common in rivers and ditches, and flowers in July and August.

This plant is not admitted into the Materia Medica of any of the Pharmacopoeias which we have seen, except that of the London College, where it has lately been received in the character of an antiscorbutic, or rather as a corrector of acrid humours, especially when manifested by cutaneous eruptions and tumours in the lymphatic system, for which we have the testimony of Beirle and Ray. But the best proofs of its efficacy are the following given by Dr. Withering: "A young lady, six years old, was cured of an obstinate cutaneous discharge, by taking three large spoonfuls of the juice twice a day: and I have repeatedly given to adults three or four ounces every morning, in similar complaints, with the greatest advantage. It is not nauseous, and children take it readily if mixed with milk. In the dose I have given it, it neither affects the head, the stomach, nor the bowels."

a See l. c.
b Ditt. de la Mat. Med. c Synop. p. 213.

No. 37. 6 L CITRUS
CITRUS AURANTIUM.  ORANGE-TREE.


* Malus Arantia major.  Baub. l. c.  SEVILLE ORANGE-TREE.
& Malus Arantia, cortice dulci eduli.  Baub. l. c.  CHINA ORANGE-TREE.


Sp. Ch.  C. petiolis alatis, foliis acuminatis.

THIS handsome evergreen rises several feet in height, sending off many branches, and covered with a greyish bark: the leaves are nearly elliptical, pointed, smooth, entire, of a shining green colour, and stand upon strong winged footstalks: the flowers appear during the whole summer, and are large, white, and arise from the smaller branches upon simple and branched peduncles: the calyx is saucer-shaped, and cut at the brim into five small pointed teeth: the petals are five, oblong, white, concave, and beset with small glands: the filaments are about twenty, united at the base in three or more distinct portions, and furnished with yellow anthers, placed vertically: the germen is roundish, supporting a cylindrical style, terminated by a globular stigma: the fruit is so well known, as not to require our description of it here.

This tree, according to Mr. Aiton, * is a native of India; but it has been long cultivated in the warmer parts of Europe, and the fruit

* Aurantium has been supposed by some to be derived ab aurio colore cortice fructus; by others, Arantium, ab oppido Achaia.  See C. B. l. c.  Allo Ray l. c.

brought
ORANGE-TREE

Pharm. Lond. Ed.

Malus Auran. &c.

The tree is several feet in height, bearing a greyish bark; the leaves are entire, of a shining green color, and the flowers appear during the white, and arise from the smaller peduncles; the calyx is receptive, with small pointed teeth; the petals and bell with small glands: the fruit is in three or more distinct florets, placed vertically: the ovary is a cylindrical style, terminated by a well-known, as not to require our notice.

This is a native of India; but it has been introduced into parts of Europe, and the fruit derived from ambo coloris coriaceae, and the seeds. See C.R. &c. Also Royts. Phys. Ill. p. 120.
brought to us is chiefly the produce of Spain and Portugal. Since the time of Parkinson, Orange-trees have been propagated here as ornamental green-house shrubs; but in this country the fruit rarely arrives at the perfection of that which is imported from Spain.

The China Orange, and Seville Orange, are both varieties of the same species; but it is only the latter which has a place in the Materia Medica of our Pharmacopoeias, in which not only the juice and exterior yellow rind of this fruit are directed for medicinal use, but also the leaves and flowers.

The juice is a grateful acid liquor, which, by allaying heat, quenching thirst, promoting various excretions, and diminishing the action of the sanguiferous system, proves of considerable use in all febrile and inflammatory disorders. It is also a powerful antiseptic, and of great efficacy in preventing and curing the scorbuty. Though what is here observed relates to the juice of the Seville Orange, yet that of the China, by being united with a larger proportion of saccharine matter, is more agreeable to the taste, therefore mostly preferred, and may be taken more freely. These acids, by uniting with the bile, are said to take off its bitterness; hence Dr. Cullen, thinks it probable, that acid fruits taken in are often useful in obviating the disorders that might arise from the redundancy of bile, and perhaps from the acid quality of it. On the other hand, however, if the acids are in greater quantity than can be, or are, properly corrected


The practice of evaporating this juice, or making it into what has been called a rata, in order to preserve it a length of time on ship board, has been recommended; but Dr. Cullen says, "in many trials which I have made, I could not exhaust it to such a concentrates as would preserve it without addition, without my finding the acid a good deal changed. It requires an acerbity and sharpness that does not allow it to be readily diffused in water; and I suspect it is not so readily miscible with the animal fluids as in its entire state. From Faller's observations in the voyage round the world, it was not found useful either in preventing or curing the scorbuty; which perhaps may be accounted for partly by the concentration bringing it nearer to the state of the volatile acids, or possibly by the diffutation of some volatile parts, perhaps a portion of aerial acid; both of which circumstances may render it less fit for the cure of scorbuty. I have therefore a bad opinion of the acid evaunted to a thick consistence; and judge the best way of preserving its virtues to be by a diligent separation of it from its mucilaginous part, and putting it up in close vessels, without putting any oil on its surface, which is ready to be added upon by the acid, and gives a disagreeable taint to it." Med. Med. vol. i. p. 252.

by
by the bile present, they seem, by some union with that fluid to acquire a purgative quality, that gives a diarrhoea, and the colic pains that are ready to accompany the operation of every purgative."

The outer yellow rind of the fruit is a grateful aromatic bitter, and is commonly employed as a stomachic, a character in which it is deservedly much esteemed. By the union of its aromatic and bitter qualities it warms the stomach, promotes appetite, and gives tone and strength to the viscera. It contains a considerable portion of volatile aromatic oil, very different from that of any other bitter, except what is found in the lemon; and the combination of this oil with the bitter of the orange peel, according to Dr. Cullen, gives it peculiar virtues; but the Orange-peel being commonly employed in conjunction with other bitters, these virtues have not been ascertained. He adds, that he has made several observations, which justify the opinion that Orange peel may be particularly useful in re compelling the tone of the stomach when it has been much impaired; but this does not appear to happen so often as it should, because we employ it almost only in its dried state, and in too small a proportion, as we take it dried with a part of the white inert substance that is also in the rind of the Orange.

It has been justly remarked, that "Orange-peel appears to be very considerably warmer than that of lemons, and to abound more with essential oil: to this circumstance, therefore, due regard ought to be had in the use of these medicines. The flavour of the first is likewise supposed to be less perishable than that of the other: hence the London College employ Orange-peel in the spirituous bitter tincture, which is designed for keeping; whilst in the bitter watery infusion, lemon-peel is preferred. A syrup, and distilled water, are for the same reason prepared from the rind of Oranges in preference to that of lemons."

Besides the use of Orange-peel as a stomachic, it has been much celebrated for the cure of intermittent fevers; and in testimony of its efficacy in most obstinate agues, we find several authorities cited by Professor Murray. It has likewise been experienced to be a powerful remedy in menorrhagia, for its good effects in various diseases of foreign places. Hamilton.

The flowers, which are stamens, have a warm aromatic savor. "They yield, in distillation both to water, and on evaporation, an oil, under the name of Orange oil."

The leaves of the orange tree are imbued with the same principle; like the peel and fruit, they secrete an essential oil, which is in distillation, especially the former, an exciting, astringent, and variously powerful, and variously efficacious, especially when it seems to have first been distilled.

Their employment in medicine, with success; p. 139. Cullen. The dose is from one dram, two or three times. Murray.


See his Works, p. 69. See also Meno, see gudin, who gives evidently much relieved by Murray, p. 2.
remedy in menorrhagia, and in immoderate uterine evacuations; and for its goe effects in these complaints, we have not only the affirma-
tions of foreign physicians, but also those of Doctors Whytt, and
Hamilton."

The flowers, which are extremely fragrant, and much used in per-
Fumes, have a warm taste, accompanied with some degree of bitter-
ness. They yield their flavour by infusion to rectified spirit, and in
distillation both to spirit and water: the bitter matter is dissolved
by water, and on evaporating the decoction, remains entire in the
extract. An oil, distilled from these flowers, is brought from Italy,
under the name of oleum, or essential neroli."

The leaves of the Orange-tree have a bitterish taste, and, on being
rubbed between the fingers and thumb, manifest considerable fra-
grancy; like the petals they are also beset with minute glands, which
secrete an essential oil, and are easily discovered on holding the leaf
between the eye and the light. Both the leaves and the flowers, but
especially the former, have been in great estimation as a remedy for
epilepsy, and various other convulsive disorders. Westerhoef, who
seems to have first made publick this virtue of the leaves, about thirty
years ago, transmitted an account of their efficacy to De Haen, who
also experienced their good effects; after which they became a
favourite remedy at Vienna, and numerous instances of their success
in these complaints are published by several German physicians."

Their employment, however, in this country has been attended
with less success; proofs of which are given by Professors Home and
Cullen. The dose of the powdered leaves is from half a dram to a
dram, or three times a day, and proportionably in decoction.

The young unripe fruit formerly had a place in the Edinburgh
Pharmacopoeia, under the name of Aurantium curassavica, or Curasso
oranges. The Limon Bergamotta of the Italians, from whom we have
the essence so named, approaches more nearly to the Orange than to the
lemon, as its leaves have winged footstalks.

1 See his Works, p. 662. 2 De praeh. reg. p. 20. 3 Edinb. New Disp. p. 139. Also
called oleum distillatum florum napthe. 4 Bergus states the former to be tonic and the

6 Locher, who gave this medicine to fifteen epileptic patients, says, that nine were
evidently much relieved by it, though not cured. Obs. Prad. p. 47. — See the authorities
cited by Murray. l. c. 6 Clinical Experiments. p. 221.
CITRUS MEDICA. LEMON-TREE.


Sp. Ch. C. petiolis linearibus.

THIS tree is equally beautiful as that of the orange, which it much resembles, so that at a little distance they are not easily to be distinguished: the leaves however of the Lemon-tree are commonly larger, slightly indented at the edges, and are without those winged appendages at the footstalks, which constitute the specific character of the orange: the flowers, which appear most part of the summer, are large, and the outer side of the petals have usually a purplish tinge: the other parts of inflorescence resemble those of the orange: the fruit has a prominent apex, externally of a pale yellow or straw-colour, internally divided into nine cells, containing an extremely acid juice.

This tree is a native of the upper parts of Asia, from whence it was brought to Greece, and afterwards by Paladius to Italy. Although it has been doubted whether Paladius was really the first cultivator of this tree in Italy, yet it is evident it could not have been propagated there long before his time, as appears by the writings of Pliny; nor is its cultivation noticed by Varro, Cato, or Columella.


* See Hist. Nat. l. 12. c. 3.

After
LEMON-TREE.


Tartar is as that of the orange, which it the distance they are not easily to beur of the Lemon-tree are commonly edges, and are without those winged which constitute the specific character of appear most part of the summer, are petals have usually a purplish tinge: resemble those of the orange: the fruitaily of a pale yellow or straw-colour, containing an extremely acid juice.

Upper parts of Asia, from whence itwards by Paladius to Italy. Although Paladius was really the first cultivating of fruit it could not have been propagated appears by the writings of Pliny i nor marro, Cato, or Columella.

Caras imprimis frequent, dein Palauidi diligentia in manus in uum devent, ut nermen & campos occup.

See Hyl. Nat. i. 12. c. 3.

After
After its introduction into Europe, we find Spain, Portugal, and France, became successively possessed of this valuable plant, with its congener; and the Hesperian fruits are now produced in such abundance, that their exportation gives rise to a lucrative branch of commerce.

The Lemon-tree, like the orange, is common in our green-houses; and according to the Hortus Kewensis, was first cultivated in Britain in the Oxford garden, previous to the year 1648. *

The juice of the fruit, which is more acid than that of the orange, possesses similar medical virtues, and therefore what we have already said of the latter will equally apply to the former. However this juice is always preferred where a strong vegetable acid is required. Saturated with the fixed vegetable alkali, it is in frequent extemporaneous use in febrile diseases; and by promoting the secretions, especially that of the surface, proves of considerable service in abating the violence of pyrexia. This medicine is also often employed to restrain vomiting. As an antiflatus, Lemon juice is also very generally taken on board ships, defined for long voyages; but even when well depurated of its mucilaginous parts, it is found to spoil by long keeping; to prevent which various means have been devised. We are told that, by mixing it with a fifth or sixth part of brandy or rum, it underwent no change during thirty-two months; but by being mixed with the spirit, it must have lost a part of its sharpness. As to reducing it to the state of a rob, we have already noticed the objections of Dr. Cullen in treating of the orange juice.

To preserve Lemon juice in purity for a considerable length of time, it is necessary that it should be brought to a highly concentrated state, and for this purpose it has been recommended to expose the juice to a degree of cold sufficient to congeal the aqueous and mucilaginous parts. After a crust of ice is formed, the juice is poured into another vessel; and by repeating this process several times, the


* However, when purified as mentioned by Dr. Cullen, (which we have related of the orange juice) and kept in a proper cellar, it has been found to retain its qualities unimpaired for four years. Vide Georgii in Vet. Acad. Handl. 1774. p. 245. fig.

* Forster’s Voyage, p. 638.
remaining juice, we are informed, has been concentrated to eight times its original strength, and kept without suffering any material change for several years. The ice first formed is wholly void of acidity, but the subsequent congealions become more and more imbued with the acid.

Whytt found the juice of Lemons to allay hysterical palpitations of the heart, after various other medicines had been experienced ineffectual; and this juice, or that of oranges, taken to the quantity of four or six ounces a-day, has sometimes been found a remedy in the jaundice. The exterior rind of Lemons is a grateful aromatic bitter, but less hot than orange-peel, and yields in distillation a less quantity of oil: the oil is extremely light, almost colourless, in smell nearly as agreeable as the fresh peel, and frequently employed as a perfume; it is generally brought to us from the southern parts of Europe, under the name of Essence of Lemons. The Lemon peel, though less warm, is similar in its qualities to that of the orange, and is employed with the same intentions.

The Pharmacopoeias direct a syrup of the juice, and the peel enters into the vinous and aqueous bitter infusions: it is also ordered to be candied: the essential oil is an ingredient in the Spiritus amoniae compositus, and other formulæ.

See Georgii, l. c.

Lemon juice also may be evaporated by the heat of the sun, till it forms a solid fape, in which state it was brought from Jamaica, and found extremely grateful to the taste, and in such a concentrated state, that one scruple of it dissolved in a quantity of water equal to the juice contained in a lemon, was rendered of the same degree of acidity. See Percival. Phil. Med. & Experimental Essays, p. 219.

On Nervous Distresses. See his Works, p. 649.

Vide Saunders Elements of the Practice of Physic, p. 170.

PAPAVER SOMNIFERUM.
PAPAVER SOMNIFERUM

*Opiu* Pharmacopoeia

**NONYMA.** Papaver somniferum


*Gerard. Ema. 1633.*


*Pomniferum. Hudfon.*


*Polyandra. Ord. M.*

*Gen. Ch. Cor. 4-petal. sub stigmate perf.*

*Ch. P. calycibus capulis.*

**THE root is annual, tap,**

soth, erect, often branch-

a or three feet in height.

ed, smooth, deeply cut in

the flowers are

spath; the flowers are

the calyx con-

ane, bident, and fall off as

if of four petals, which

aments are numerous

furnished with oblong

as globular, and upon in-

lated, and forms a kind

oth, divided half way

tures beneath the crown.

It is a native of

This species is said to

No. 38.
PAPAVER SOMNIFERUM. WHITE POPPY.

Opium. Pharmacopoeiarum plantæ capsularum succus densatus.


Sp. Ch. P. calycibus capsulifisque glabris, foliis amplissicaulibus incisis.

THE root is annual, tapering, and branched: the stalk is round, smooth, erect, often branched, of a glaucous green colour, and rises two or three feet in height: the leaves are alternate, large, ovate, lobed, smooth, deeply cut into various segments, and closely embrace the stalk: the flowers are very large, terminal, and usually white or purplish: the calyx consists of two leaves, which are ovate, smooth, concave, bifid, and fall off on the opening of the flower: the corolla consists of four petals, which are large, roundish, entire, undulated: the filaments are numerous, slender, much shorter than the corolla, and furnished with oblong erect compressed anthers: the germen is large, globular, and upon it is placed the stigma, which is large, flat, radiated, and forms a kind of crown: the capsule is one-celled, smooth, divided half way into many cells, which open by several apertures beneath the crown, and contain very numerous small white seeds. It is a native of England, usually growing in neglected gardens, or uncultivated rich grounds, and flowers in July and August.

This species is said to have been named White Poppy from the whiteness of its seeds; a variety of it however is well known to

No. 38. 6 N produce
produce black seeds; the double-flowered white poppy is also another variety; but for medicinal purposes any of these may be employed indiscriminately, as we are not able to discover the least difference in their sensible qualities or effects.

The seeds, according to some authors, possess a narcotic power; but there is no foundation for this opinion: they consist of a simple farinaceous matter, united with a bland oil, and in many countries are eaten as food. As a medicine, they have been usually given in the form of a wine, in catarrhs, strangury, &c.

The heads or capsules of the Poppy, which are directed for use in the Pharmacopoeias, like the stalks and leaves, have an unpleasant smell, somewhat like that of opium, and an acrid bitterish taste. Both the smell and taste reeke in a milky juice, which more especially abounds in the cortical part of the capsules, and in its concrete state constitutes the officinal opium. These capsules are powerfully narcotic, or anodyne; boiled in water, they impart to the menstruum their narcotic juice, together with the other juices which they have in common with vegetable matters in general. The liquor, strongly pressed out, suffered to settle, clarified with whites of eggs, and evaporated to a due concentration, yields an extract which is about one-fifth or one-sixth of the weight of the heads. This possesses the virtues of opium, but requires to be given in double its dose to answer the same intention, which it is said to perform without occasioning a nausea and giddiness, the usual effects of opium. This extract was first recommended by Mr. Arnot; and a similar one is now received in the Edinburgh Pharmacopoeia. It is found very convenient to prepare the syrup from this extract, by dissolving one dram in two pounds and a half of simple syrup. The syrupus papaveris albi, as directed by both Colleges, is a useful anodyne, and often succeeds in procuring sleep, where opium fails; it is more especially adapted to children. White Poppy heads are also used externally in fomentations, either alone, or more frequently added to the decoctum pro fomento.

Opium, as we have already observed, is obtained from the heads or capsules of this species of Poppy, and is imported into Europe from Persia, Arabia, and other warm regions of Asia. The manner

* Medical Essays & Obj. by a Society at Edim, vol. 5. p. 108.
in which it is collected has been described long ago by Kämpfer and others; but the most circumstantial detail of the culture of the Poppy, and the method of procuring the opium from it, is that given by Mr. Kerr, as practised in the Province of Bahar: he says, "The field being well prepared by the plough and harrow, and reduced to an exact level superfi-
ciety, it is then divided into quadrangular areas of seven feet long, and five feet in breadth, leaving two feet of interval, which is raised five or six inches, and excavated into an aqueduct for conveying water to every area, for which purpose they have a well in every cultivated field. The seeds are sown in October or November. The plants are allowed to grow six or eight inches distant from each other, and are plentifully supplied with water. When the young plants are six or eight inches high, they are watered more sparingly. But the cultivator furnishs all over the areas a nutrient compost of ashes, human excrements, cow dung, and a large portion of nitrous earth, scraped from the highways and old mud walls. When the plants are nigh flowering, they are watered plentifully to increase the juice.

When the capsules are half grown, no more water is given, and they begin to collect the opium.

At sun-set they make two longitudinal double incisions upon each half-ripe capsule, passing from below upwards, and taking care not to penetrate the internal cavity of the capsule. The incisions are repeated every evening until each capsule has received six or eight wounds; they are then allowed to ripen their seeds. The ripe capsules afford little or no juice. If the wound was made in the heat of the day, a cicatrix would be too soon formed. The night-dews by their moisture favour the exstillation of the juice.

Early in the morning, old women, boys, and girls, collect the juice by scraping it off the wounds with a small iron scoop, and deposit the whole in an earthen pot, where it is worked by the hand in the open sunshine, until it becomes of a considerable quantity. It is then formed into cakes of a globular shape, and about four pounds in weight, and laid into little earthen basins to

|| Kämpfer says, that in Perfia, a five-pointed knife is used for making the incisions. Amam. Eot. Obj. 15.
be further exsiccated. These cakes are covered over with the
Poppy or tobacco leaves, and dried until they are fit for sale.
Opium is frequently adulterated with cow-dung, the exsiccation of
the Poppy plant procured by boiling, and various other substances,
which they keep in secrecy." — "Opium is here a considerable
branch of commerce. There are about 600,000 pounds of it
annually exported from the Ganges."

It appears to us highly probable, that the White Poppy might be
cultivated for the purpose of obtaining opium to great advantage in
Britain. Alston says, "the milky juice, drawn by incision from
Poppy-heads, and thickened either in the sun or shade, even in this
country, has all the characters of good opium; its colour, consistence,
taste, smell, faculties, phenomena, are all the same; only, if care-
fully collected, it is more pure and more free of cæculencies." 4

Similar remarks have also been made by others, to which we may add
those of our own; for during the last summer, we at different times
made incisions in the green capsules of the White Poppy, from which
we collected the juice, which soon acquired a due consistence, and was
found, both by its sensible qualities and effects, to be very pure opium.

Opium, called also Opium Thebaicum, from being anciently pre-
pared chiefly at Thebes, has been a celebrated medicine from the
remotest times. It differs from the Meconium, which by the ancients
was made of the expressed juice or decoction of the Poppies.5

Opium is imported into Europe in flat cakes, covered with leaves
to prevent their sticking together: it has a reddish brown colour, and
a strong peculiar smell: its taste, at first, is nauseous and bitter, but
soon becomes acrid, and produces a slight warmth in the mouth: a
watery tincture of it forms an ink, with a chalybeate solution.
According to the experiments of Alston, it appears to consist of about
five parts in twelve of gummy matter, four of resinous matter, and
three of earthy, or other indiffusible impurities.6

The use of this celebrated medicine, though not known to Hippo-
crates, can be clearly traced back to Diagoras, who was nearly his
cotemporary, and its importance has ever since been gradually advanced

4 See Medical Observations and Inquiries, vol. 5, p. 317.
5 Medical Essays & Obs., vol. 5, p. 116.
6 Hence the ancients justly deemed the "Meconium multum opio ignavus."
7 Vide 1. e.
by succeeding physicians of different nations. Its extensive practical utility however has not been long well understood; and in this country perhaps may be dated from the time of Sydenham. Opium is the chief narcotic now employed; it acts directly upon the nervous power, diminishing the sensibility, irritability, and mobility of the system; and, according to a late ingenious author, in a certain manner suspending the motion of the nervous fluid, to and from the brain, and thereby inducing sleep, one of its principal effects. From this sedative power of opium, by which it allays pain, inordinate action, and restlessness, it naturally follows, that it may be employed with advantage in a great variety of diseases. Indeed, there is scarcely any disorder in which, under some circumstances, its use is not found proper; and though in many cases it fails of producing sleep, yet if taken in a full dose, it occasions a pleasant tranquillity of mind, and a drowsiness, which approaches to sleep, and which always refreshes the patient. Besides the sedative power of opium, it is known to act more or less as a stimulant, exciting the motion of the blood; but this increased action has been ingeniously, and, as we think, rationally ascribed to that general law of the animal economy, by which any noxious influence is resisted by a consequent reaction of the system. By a certain conjoined effort of this sedative and stimulant effect, opium has been thought to produce intoxication, a quality for which it is much useful in eastern countries.

We shall now proceed to consider the use of opium in particular diseases, beginning with fevers.

In most continued fevers of this climate, though originating from contagion, or certain corruptions of human effluvia, &c. there is, at the beginning, more or less of inflammatory diathesis, and while this continues, opium would generally aggravate the symptoms, and prove dangerous. Its use is likewise forbidden in the more advanced stage of this fever, whenever topical inflammation of the brain is ascertained, which sometimes exists and produces delirium, though other symptoms of the nervous and putrid kind prevail. But when irritation upon the brain is not of the inflammatory kind, and debility has made much progress, or where delirium is accompanied with immodic affections, opium is a sovereign remedy, and may be employed

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1 See: Cullen's Med. Med. C. febantia. See also what is said of opium.

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in large doses every eight hours, unless a remission of the symptoms and sleep take place.¹

In intermittent fevers, opium, in combination with other medicines, was much used by the ancients; but since the introduction of the Peruvian bark, opium is seldom trusted to for the cure of these disorders. This medicine however has been strongly recommended as an effectual means of stopping the recurrence of the febrile paroxysms; and has been given before the fit, in the cold stage, in the hot stage, and during the interval, with the best effects;¹ producing immediate relief, and in a short time curing the patient, without leaving those abdominal obstructions which have been ascribed to the bark. But in these fevers perhaps the best practice is to unite opium with the bark, which enables the stomach to bear the latter in larger doses, and adds considerably to its efficacy.¹

In inflammatory diseases the use of opium has been much condemned; and Young has established a general rule, "that opium is improper in all those diseases in which bleeding is necessary:"¹ this however has been much disputed;¹ and there are certainly numerous exceptions to it, which we shall now recite in the words of Dr. Cullen. "Such are those cases in which the inflammatory state arises from irritation in a particular part, producing spasm, and supervening inflammation. Thus in cases of jaundice, I have found a biliary stone, in passing the biliary ducts, give such an irritation as to produce a considerable inflammatory state in the system; and though I have found it necessary, for moderating this, to employ blood-letting, yet, as I considered the passage of the stone to be chiefly interrupted by a spasmodic contraction of the ducts, I have employed opium for taking off this with great advantage. Similar

¹ Vide Cullen l. c.

¹ Berryat, who is a fierce advocate for the use of opium in intermitents, recommends it to be given along with an infusion of centuary an hour before the accession of the paroxysm. See Memores presens à L'Acad. Royal des Scienc. 1755. T. 2. p. 254.


¹ Cullen l. c. ¹ Treatise on Opium, fæl. 39.


¹ circumstances
circumstances have frequently occurred in the case of urinary calci and the ureters, in which I have found it necessary to employ opium and blood-letting at the same time.

In like manner as opium is useful in moderating excretions, so when the irritation occasions an increase of these excretions, which is attended with affections which irritate the whole system, opium becomes especially useful. Hence it becomes so generally useful in catarrhal affections, and the cough attending them; and probably it is this analogy that has brought the use of opium to be frequently employed in pneumonic inflammations. It is possible that there may be cases of such inflammations wherein the opium may be more useful in taking off the cough, than hurtful by aggravating the inflammatory state of the system; but I have hardly met with such cases; and even in the recent state of catarrhs from cold, I have found the early use of opium hurtful: and in cases of pneumonic inflammation, I have always found it to be very much so, if exhibited before the violence of the disease had been moderated by repeated blood-letting. When that indeed has been done, I have found the opium very useful in quieting the cough, and I have hardly ever found it hurtful by stopping the expectoration.

It may suspend this for some hours; but if the glands of the bronchia have been duly relaxed by bleeding and blistering, the expectoration after the use of opiates always returns with more advantage than before. The mucus which had issued before had been poured out from the follicles in an acrid state; but, by being made to stagnate, it becomes milder, and is discharged in what the ancients called a concocted state, with more relief to the lungs."

When opium is so managed as to procure sweat, it will tend to remove an inflammatory state of the system, and may prove generally useful; a notable instance of this we observe in the cure of acute rheumatism by means of Dover's powder.

In the small-pox opium, since the time of Sydenham, has been very generally and successfully prescribed, especially after the fifth day of the disease; but during the first stage of the eruptive fever, we are told that it always does harm; an opinion which our experience at the Small-pox Hospital warrants us to contradict: for even at that period...
period of the disorder we often find the pulse languid, and the countenance pale, though pains in the loins and head are at the same time very severe; these symptoms, with restlessness, and other signs of irritability, which appear for some days after the attack of the disease, are considerably relieved by opium; to which however we usually add camphor and vinum antimonii tartarifati, taking care always to keep the body sufficiently open by the frequent use of a proper cathartic.

In hemorrhagic disorders the use of opium is inferred from its known effects in restraining all the excrescences, except that of sweat; but unless the hemorrhages be of the passive kind, or excited by irritation, unattended with inflammation, opium may produce considerable mischief, and therefore its use in these complaints requires great circumspection.

In dysentery opium, though not to be considered as a remedy, may however be occasionally employed to moderate the violence of the symptoms.

In diarrhoea, especially when the acrimony has been carried off by a continuance of the disease, opium is a certain and efficacious remedy.

In cholera and pyrosis, opium is the remedy chiefly trusted to.

In cholic it is employed with laxatives; and no doubt often prevents ileus and inflammation, by relieving the spasm. Even in ileus and in incarcerated hernia, it is often found to allay the vomiting, the spasm, the pain, and sometimes to diminish the inflammation, and prevent the gangrene of the strangulated gut.

Opium has been lately recommended for the cure of the venereal disease; and instances are adduced in which this medicine succeeded, where mercury had failed; yet few practitioners, we apprehend, will trust to opium alone in these complaints: it is generally allowed, however, to be an useful auxiliary, and to greatly allay the action of mercury. Its use in preventing and stopping the progress of gangrene is well established.

Opium is successfully used in different species of tetanus, and affords relief to various spasmatic and convulsive symptoms occurring in several diseases, which it would exceed our limits to describe particularly; of these we may mention asthma, epilepsy, dyspepsia, hypochondriasis, rabies canina, chorea fanæci viti, mania, &c. &c.

- See Mead, Man. et praæcepts medica, p. 64.
- Pringle, Dis. of the Army, p. 152.

Respecting
Respecting the external application of opium authors seem not sufficiently agreed. Some allege that when applied to the skin it always pain and spasm, procures sleep, and produces all the salutary, or dangerous effects which result from its internal use; while others assert that, thus applied, it has little or no effect whatever. But there is no doubt that, when mixed with caustic, it diminishes the pain, which would otherwise ensue, probably by decreasing the sensibility of the part. Injected up the rectum, it has all the effect of opium taken into the stomach, but to answer this purpose double the quantity is to be employed. Applied to the naked nerves of animals, it produces immediate torpor, and loss of power in all the muscles with which the nerves communicate. Opium taken into the stomach, in an immoderate dose, proves a narcotic poison, producing vertigo, tremors, convulsions, delirium, stupor, stertor, and finally fatal apoplexy.

The official preparations of this drug are opium purificatum, pilulae ex opio, pulvis opiatum, tinctura opii, and tinctura opii camphorata; it also enters the pulvis sudoricus, balsamum anodynum, electuarium japonicum, pulvis creta composta, &c.

The requisite dose of opium varies in different persons, and in different states of the same person. A quarter of a grain will in one adult produce effects which ten times the quantity will not do in another, and a dose that might prove fatal in cholera or cholic, would not be perceptible in many cases of tetanus or mania. The lowest fatal dose, to those unaccustomed to take it, seems to be about four grains; but a dangerous dose is so apt to produce vomiting, that it has seldom time to occasion death. When given in too small a dose, it often produces disturbed sleep, and other disagreeable consequences; and in some cases it seems impossible to be made to agree in any dose or form. Often, on the other hand, from a small dose, found sleep and alleviation of pain will be produced, while a larger one occasions vertigo and delirium. Some prefer the repetition of small doses; others the giving a full dose at once: its operation is supposed to last about eight hours.

* It is well known, that by the continued use of opium the dose requires to be increased to produce the effect desired; and we are told of one instance in which it was increased to ten drams a day. See Garcia Ab Horto Arum. vari. Clus.

No. 38. 6 P PAPAVER.
PAPAVER RHŒAS. RED or CORN POPPY.


Sp. Ch. P. caps. glabris globosis, caule piloso multifloro, fol. pinnatifidis incisis.

THE root is annual, simple, fibrous: the stalk is upright, branched, having hairs standing at right angles with the stem, which rises from one to two feet in height: the leaves are pinnated, toothed, hairy on both sides, at the base sheath-like: the peduncles are slender, furnished with hairs like the stem, and each supports a single flower: the calyx consists of two leaves, which are ovate, rough, concave, and deciduous: the corolla is composed of four petals, which are large, spreading, roundish, unequal, of a bright scarlet colour, and marked at the base with a shining black spot: the filaments are numerous, slender, purplish, and furnished with roundish compressed anthers: the germen is egg-shaped, truncated at the top: there is no style: the stigma is convex, radiated: the radii of a purple colour, and permanent: the capsule answers the description given of the germen; it is smooth, marked with several longitudinal projecting lines, which are in number equal to the radii of the stigma; at the top it is scolloped: the radii are numerous, minute, and of a purple colour.

This
CORN POPPY.


The stalk is upright, branched, with the stem, which rises from a rootstock, and are pinnate, toothed, hairy or pubescent. The peduncles are slender, furnished with a single flower: the calyx is rough, concave, and deciduous; the petals, which are large, spreading; the style, of a purple colour, and marked at the base; the stamens are numerous, slender, and with compressed anthers: the ovary is nearly round, at the top: there is no style: the pericarp is sometimes covered with lines, which are longitudinal projecting lines, which are covered with a purple colour; at the top it is scolloped: the stamens are numerous, slender, and with compressed anthers: the ovary is nearly round, at the top: there is no style: the pericarp is sometimes covered with lines, which are longitudinal projecting lines, which are covered with a purple colour; at the top it is scolloped.
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PIPER NIGRUM

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E. Gen. Ch. Cal. c
Sp. Ch. P. foliis ov

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trailing, and from eigh

Piper nigrum
This plant is common in corn fields, and flowers in June and July. It may be distinguished from P. dubium, to which it bears a general resemblance, by its urn-shaped capsules, and by the hairs upon the pedicels standing in a horizontal direction.

The capsules of this species, like those of fumiferum, contain a milky juice, of a narcotic quality, but the quantity is very inconsiderable, and has not been applied to any medical purpose; but an extract prepared from them has been successfully employed as a sedative. *

The flowers have somewhat of the smell of opium, and a mucilaginous taste, accompanied with a slight degree of bitterness. A syrup of these flowers is directed in the London Pharmacopeia, which has been thought useful as an anodyne and pectoral, and is therefore prescribed in coughs and catarrhal affections; but it seems valued rather for the beauty of its colour, than for its virtues as a medicine.


PIPER NIGRUM. BLACK PEPPER.


Sp. Ch. P. foliis ovatis septemnerviis glabris, petiolis simplicissimis.

THE root is perennial: the stems are round, smooth, jointed, swelling towards each joint, woody, slender, branched, scendent, or trailing, and from eight to twelve feet in length: the leaves are ovate, entire,
entire, smooth, seven-nerved, of a dark green colour, and stand at the
joints of the branches upon strong sheath-like footstalks: the flowers
are small, white, and produced in terminal spikes: there is no regular
calyx nor corolla: the filaments also are wanting: the two anthers
are roundish, and placed oppositely at the base of the germen: the
germen is ovate, upon which stand three rough stigmata: there is no
style: the fruit is a single-valved berry, containing one round seed.

This species of Pepper grows spontaneously in the East Indies, but
does not arrive at perfection without the aid of culture. It is cultivated
with such success in Malacca, Java, and especially at Sumatra, that
from these islands Pepper is exported to every part of the world,
where a regular commerce has been eftablished.

According to Mr. Marfden,\(^1\) the ground chosen by the Sumatrans
for a Pepper garden, is marked out into regular squares of six feet,
the intended distance of the plants, of which there are usually a
thousand in each garden. The next business is to plant the chinkareen,
which serve as props to the Pepper vines, and are cuttings of
a tree of that name, which is of quick growth. When the chinkareen
has been some months planted, the most promising perpendicular
shoot is reserved for growth, and the others lopped off: this shoot,
after it has acquired two fathoms in height, is deemed sufficiently
high, and its top is cut off. Two Pepper vines are usually planted
to one chinkareen, round which the vines twist for support; and after
being suffered to grow three years (by which time they acquire eight
or twelve feet in height) they are cut off about three feet from the
ground, and being loosen'd from the prop are bent into the earth in
such a manner that the upper end is returned to the root. This
operation gives fresh vigour to the plants, and they bear fruit plen-
tifully the ensuing season. The fruit, which is produced in long
spikes, is four or five months in coming to maturity: the berries are
at first green, turn to a bright red when ripe and in perfection, and
soon fall off if not gathered in proper time. As the whole cluster
does not ripen at the same time, part of the berries would be lost in
waiting for the latter ones; the Sumatrans therefore pluck the bunches
as soon as any of the berries ripen, and spread them to dry upon
mats, or upon the ground. By drying they become black, and more

\(^1\) See l. c. p. 107.
or less shrivelled, according to their degree of maturity. These are imported here under the name of black pepper.

White pepper is the ripe and perfect berries stripped of their outer coats: for this purpose the berries are steeped for about a fortnight in water, till by swelling their outer coverings burst; after which they are easily separated, and the pepper is carefully dried by exposure to the sun. Pepper which has fallen to the ground over-ripe loses its outer coat, and is sold as an inferior kind of white pepper.

Of these pungent hot spces the black fort is the hottest and strongest, and most commonly made use of for medicinal as well as culinary purposes. They differ from most of the other spices in this, that their pungency resides not in the volatile parts, or essential oil, but in a substance of a more fixed kind, which does not rise in the heat of boiling water. This fixed substance is probably the resinous part: the aromatic odorous matter seems to depend upon the essential oil. The distilled oil smells strongly of the pepper, but has very little acrimony; the remaining decoction, insipidized, yields an extract of considerable pungency. A tincture made in rectified spirit is extremely hot and fiery; a few drops of it set the mouth as it were in a flame.

Some have supposed Pepper to be less heating to the system than other aromatics; and the learned Gaubius affirms, that on taking it in large quantities he never found it to warm his stomach, nor to increase the frequency of his pulse. But Dr. Cullen affirms, that when he took this spice, even in a small quantity, it always felt warm on his stomach, and heated his whole body; and he thinks it was owing to the frequent use of Pepper that Gaubius did not experience the same effects.

Black Pepper is generally used as an aromatic and stimulant. It has been successfully employed in some cases of vertigo, and in paralytic and arthritic disorders. Given in large doses it has been found a remedy for intermittents; but its use in these has, in some instances, produced fatal consequences.

a White Pepper was formerly thought to be a different species from the black, and was sold at the fides of the East India Company (who have the monopoly of the Sumatran pepper trade) for treble the price of the black. Cramer, l.c.

b Gaubius found that the Pepper required to be boiled forty-three times in fresh quantities of water before its whole pungency was extracted. Méntr. p. 52.


No. 38. 6 Q. PIPER
Piper longum. 


Sp. Ch. P. foliis cordatis petiolaris seffilisibusque.

*THE root is perennial; the stems are shrubby, round, smooth, branched, slender, and climbing; but do not rise to any considerable height: the leaves differ much in size and form; they are commonly heart-shaped, pointed, entire, smooth, nervéd, of a deep green colour, and stand alternately upon footstalks: the flowers are small, and produced in short dense terminal spikes, which are nearly cylindrical: the parts of inflorescence, though less distinct, correspond with the description given of the former species. It is a native of the East Indies, especially Java, Malabar, and Bengal.

The berries, or grains, are very small, and lodged in a pulpy matter; like those of the black pepper they are first green, and become red when ripe. This fruit is hottest in its immature state, and is therefore gathered while green, and dried by the heat of the sun, when it changes to a blackish or dark grey colour.*

It is observed by Dr. Cullen, that Long pepper has precisely the same qualities with those of black, only in a weaker degree: * Bürkga also judges black pepper to be hotter than this species; an opinion which appears to us unfounded, and the contrary is asserted by Lewis and Murray: the latter says, "Ad meum alliorumque quorundam sensum, in lingua acris et calidius adhuc est Piper longum: pelquis dictis speciebus.


BRYONIA
THE root is perennial, branching several yards in length. The bushes are unbranched, lobed at the base. The flowers are white, deeply divided into five petals. The roots are three, of which two are in the third: the male flowers have the flower peduncle, and divided petals, and each flower has smooth red berries, which are found in woods and hedges.
BRYONIA ALBA.  WHITE BRYONY.


Fem. Cal. 5-dentatus. Cor. 5-partita. Stylus 3-fidus.

Baccæ subglobosa, polyperma.


THE root is perennial, large, often a foot in circumference, tapering, branched, and of a whitish yellow colour: the stems are several yards in length, angular, slender, scandent, twisting themselves about the bushes for support: the leaves are large, hairy, lobed, or palmated, lobes pointed; they stand alternately upon strong hairy footstalks: the flowers are of a yellowish green colour, produced in clusters at the footstalks of the leaves, and are male and female on different plants: the calyx of the male flower is bell-shaped, and deeply divided into five narrow pointed segments: the corolla is also divided into five segments, which are ovate, and spreading: the filaments are three, short, thick, and furnished with irregular antheræ, of which two are said to be on each two of the filaments, and one on the third: the calyx and corolla of the female flower resemble those of the male, but are smaller: the germen is round, and placed below the flower: the style is strong, erect, of the length of the corolla, and divided at the top into three parts, which are bent downwards, and each furnished with a large triangular stigma: the fruit is a smooth red berry containing five or six seeds. It is common in woods and hedges, and flowers in May and June.

Linnaeus
Linnaeus places this plant in the class Monocot, though he tells us that Jacquin describes it as dioecious, and we have always seen it so in this country; nor have we ever found it to bear black berries. Some doubt may also arise whether it be properly referred to the order Syngenesia, as the anthers upon the different filaments do not unite; a circumstance which we have endeavoured to represent in a separate display of the flower.

"Fresh Bryony root, taken up in the beginning of spring, abounds with a thin milky juice: if the upper part of the root be bared of earth, and the top cut over transversely, the juice continues to rise gradually to the surface, in notable quantity, for two or three days successively, and may be collected by forming a cavity in the middle to receive it. Both the root in substance, and the juice, have a disagreeable smell, and a nauseous bitter biling taste: applied for some time to the skin, they inflame or even vesiculate the part. On drying the one, or insinuating the other, they lose most of their acrimony, and nearly the whole of their ill scent. In sumner, the root proves much less juicy and weaker both in smell and taste."

Bergius states the virtues of this root to be purgans, hydragoga, emmenagoga, diuretica; recent. rad. subcutetica; and recommends it in dropsy and asthma.

This powerful and irritating cathartic, though now seldom prescribed by physicians, is said to be of great efficacy in evacuating ferous humour, and has been chiefly employed in hydroptical disorders. Instances of its good effects in other chronic diseases are also mentioned, as asthma, mania, and epilepsy. In small doses it is reported to operate as a diuretic, and to be resolvent and deobstruent; given in powder, from a scruple to a dram, it proves strongly purgative; and the juice, which issues spontaneously in doses of a spoonful or more, has similar effects, but is more gentle in its operation. An extract, prepared by water, acts more mildly, and with greater safety, than the root in substance, and may be given from half a dram to a dram. Externally the fresh root has been employed in cataplasms, as a resolvent and diuretic; also in ichthyic and other rheumatic affections.

* Lewis, M. M. p. 165.  
* See Burgefes, Lexicon Med. p. 1716, where he gives a particular account of a successful method of employing this root.  
* Sydenham, Prosefs. Illini., in op. p. 610.  

LIGUSTICUM LIVISTICUM.


**LIGUSTICUM**

**SYN.**

*Galium virescens* Lindl.

*Galium trifolium* L.

**T.**

*Escallonia*

**P.**

*Clafius*

**E.**

*Stevia*

**Sp.**

The plant is described as having intermediate characteristics between *Galium* and *Veronica*. It is a hardy species, particularly suited for coastal gardens. The flowers are yellow and the leaves are ovate-lanceolate, umbellate. The plant is often used in aromatic and medicinal properties. The fruit is a capsule, and the leaves are divided into five segments. The flowers are fragrant, which attracts pollinators such as bees and butterflies. The plant is noted for its ability to attract beneficial insects. It is ideal for areas with moderate temperatures and well-drained soil. The flowers are followed by seed pods.
LIGUSTICUM LEVISTICUM. COMMON LOVAGE.


The root is perennial, long, tapering, branched, externally brown, internally whitish: the stalk is erect, branched, smooth, striated, and rises five or six feet in height: the upper leaves are small, and irregularly cut into narrow elliptical segments; the lower leaves are large, doubly pinnated; pinnae indented, pointed, often lobed, and placed in pairs with an odd one at the top: the flowers are small, of a whitish yellow colour, and produced in umbels: the general and partial umbels are composed of nearly an equal number of radii, and each furnished with involucres, consisting of about seven simple ovate segments: all the flowers are fertile: the corolla consists of five petals, which are egg-shaped, and turned inwards: the five filaments are capillary, shorter than the corolla, and furnished with simple anthers: the germen is truncated at the top, upon which are placed two nectarious corpuscles, supporting two short styles, crowned with simple stigmae: the fruit is oblong, angular, furrowed, divisible into two seeds, which are oblong, on one side striated and convex, on the other flat and smooth: the flowers appear in June and July. It is a native of the Alps, and according to Mr. Aiton was first cultivated in England by Mr. Gerard.

No. 39. 6 R  

The
The odour of this plant is very strong, and peculiarly ungrateful; its taste is warm and aromatic. It abounds with a yellowish gummy resinous juice, very much resembling opoponax. Its virtues are supposed to be similar to those of angelica and masterwort in expelling flatulencies, exciting sweat, and opening obstructions; therefore chiefly used in hysterical disorders, and in uterine obstructions. A teacupful of the juice with rhenish wine, or a decoction of the seeds with wine or mugwort water, was, by Forrest, said to be a secret remedy of extraordinary efficacy in slow or laborious parturition. The leaves, eaten as salad, are accounted emmenagogue. The root, which is less ungrateful than the leaves, is said to possess similar virtues, and may be employed in powder.

* See Forre. lib. 28. ch. 32. in Schol. * Chomel. Usitelles, t. 2. p. 216.

CUMINUM CYMINUM. CUMMIN.


THE root is annual, simple, fibrous: the stalk is round, slender, often procumbent, branched, and rises about six or eight inches in height: the leaves are numerous, narrow, linear, pointed, grafs-like: the flowers are purple, and produced in numerous small umbels, which are usually composed of four radii, each supporting a partial umbel of a like number: the general and partial involucra consisted of four narrow pointed segments: all the florets are fertile: the corolla is
CUMIN

Cuminum. Cuminum

The root is a powerful stimulant and is used in medicine to treat digestive problems and as a flavoring agent in cooking. It is believed to have multiple health benefits, including reducing inflammation and improving digestion.

Published by [Author's Name] on [Publication Date] 1793
is composed of five petals, which are unequal, bent inwards, and notched at the apex: the filaments are five, and furnished with simple antherae: the germen is large, ovate, and placed below the corolla: the two styles are minute, and terminated by simple stigmae: the fruit is egg-shaped, or oblong, striated: the seeds are two, oblong, flat on one side, convex and striated on the other.

This plant, which is the only species of Cuminum yet discovered, is a native of Egypt and Ethiopia, and is cultivated in the islands of Sicily and Malta, from whence we are supplied with the seeds.

"Cumin seeds have a bitterish warm taste, accompanied with an aromatic flavour, but not agreeable. They give out great part of their finell by infusion in water, but very little of their taste: in distillation with water, a pungent oil arises, of a strong ungrateful flavour like that of the seeds: the decoction, inspissated, leaves a weakly roughish bitterish extract. Rectified spirit takes up the whole virtues of the cuminin by infusion, and leaves them nearly uninjured in evaporation."

Cuminin has been thought to be the Κομίνιον of Dioscorides. The seeds, which rank as one of the four greater hot seeds, contain a large proportion of essential oil, and are therefore supposed to possess a carminative and stomachic power, equal, if not superior to most of those of the umbelliferous class." They are generally preferred to the other seeds for external use in diluting indolent tumours, and give name both to a plaster and cataplasm in the Pharmacopoeias.

* It was cultivated in England in 1594 by Sir Hugh Plat. See Plat's Garden of Eden, part ii. p. 134. 110th. 1st. 162. 162.

b Lewis, Mat. Med. p. 268.

c Bucner, M. M. vol. ii. p. 159.

AMYRIS GILEADENSIS.
AMYRIS GILEADENSIS. BALSAM OF GILEAD AMYRIS.


ACCORDING to Mr. Bruce the Balsam or Balm-tree grows to the height of fourteen feet: its branches are numerous, spreading, crooked: the wood is white, soft, and covered with a smooth ash-coloured bark: the leaves are small, few, commonly conflingting of one pair of pinnae, with an odd one at the top: the pinnae are subnervate, inversely ovate, entire, veined, and of a bright green colour: the flowers are scattered upon the branches, and are of a white colour: the calyx is permanent, and divided at the brim into four small pointed teeth: the petals are four, oblong, concave, patent, white: the filaments are eight, tapering, erect, and terminated by oblong antherae: the germen is egg-shaped, and placed above the insertion of the corolla: the style is thick, of the length of the filaments, and terminated by a quadrangular stigma: the fruit is of the drupaceous kind, roundish, opening by four valves, and containing a smooth nut.

Mr. Bruce informs us, that Balm-tree is a native of Abyssinia, growing among the myrrh-trees behind Azab, all along the coast, to the Straits of Babylomandeb; and that it was early transplanted into the South of Arabia, and into Judea 1000 years before the Queen of Saba, who, according to Josephus, gave this tree, among other presents, to King Solomon.

Thouophrafas,
AM of GILEAD AMYRIS.

\textit{Lin. Gen. Plant. 473.}

4. oblonga. \textit{Stigma tetragontes.}

pedunculis unifloris lateralis.

Balsam or Balm-tree grows in bushes are numerous, spreading and covered with a smooth suber, commonly consisting of one. The top; the pinnas are esteemed of a bright green colour: the flowers, and are of a white colour. LED at the brim into four small, long, concave, patent, white: the filaments, and terminated by the drooping kind, round, forming a smooth nut.

The tree is a native of Arabia, growing in all along the coast, to the Straits. Early transplanted into the Solomons, before the Queen of Sheba, who, tree, among other precious, as Kay

Theophila,
Theophrastus, Dioscorides, Pliny, and even the Arabian physicians, supposed this Balsam to be the produce of Judea only; and hence it seems to have received the name of Balánum Judaicum, or Balm of Gilead. Forkal, who first discovered this tree to belong to the genus Amyris, transmitted a branch of it to Linnaeus, which on being broken smelled strongly of the Balsam; the leaves were all ternate, like those of the annexed figure, which corresponds exactly with the specimen in the possession of Sir Joseph Banks.

Besides this tree, which was found at Gidda, another was observed at Yemen, differing only from that found at Gidda, in having pinnated leaves. The former was first described by Linnaeus in his Mantissa, under the name A. Gileadensis, the latter under that of A. Opobalsamum; the name which he has adopted in his Materia Medica.

Whether these two species, the difference of which is supposed to consist merely in the number of their foliolas, are really the same or not, we cannot undertake to determine; but judging from analogy we should decide in the affirmative; for even in the figure of this tree, given by Alpinus, to which Linnaeus refers the A. Opobalsamum, the number of the leaflets varies much, being five, seven, and sometimes three; and in that published by Mr. Bruce, the larger leaves consist of five leaflets, but the smaller only of three.

The description of the Balsam of Mecca-tree, lately given by Gleditsch, differs from that of all other writers: he removes it from the genus Amyris, as not having the characters of that family; we shall therefore leave this author without making any further remark.

This Balsam, which has been received in the different Pharmacopoeias under the names of Balsamum de Mecca, Opobalsamum, Balsamum verum, and Balsamum Gileadense, issueth spontaneously from the bark of the tree; but is more commonly obtained by incisions: the Xylobalsamum, as the name imports, is prepared from the wood, and the Carpo-balsamum from the fruit. The Balsam now imported into Europe is reported to be principally collected between Mecca and Medina. The Bark, Mr. Bruce says, "is cut by an axe," when the juice is in its strongest.

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2. Tacitus says this tree was so averse to iron, that it trembled upon a knife being laid near it: and some pretend that the incisions should be made with ivory, shells, glass, or stone.

No. 39. 6 S "circulation
circulation in July, August, and the beginning of September. It is then received into a small earthen bottle, and every day’s produce gathered and poured into a larger, which is kept closely corked. The Opoponacum, or juice flowing from the Balsam-tree, at first when it is received into the bottle or vase from the wound from whence it issues, is of a light yellow colour, apparently turbid, in which there is a whitish caf, which I apprehend are the globules of air that pervade the whole of it in its first state of fermentation; it then appears very light upon shaking. As it settles and cools, it turns clear, and loses that milkiness which it first had when flowing from the tree into the bottle. It then has the colour of honey, and appears more fixed and heavy than at first. After being kept for years, it grows of a much deeper yellow, and of the colour of gold. I have some of it which I got from the Cadi of Medina in 1768; it is now still deeper in colour, full as much so as the yellowest honey. It is perfectly fluid, and has lost very little either of its taste, smell, or weight. The smell at first is violent, and strongly pungent, giving a sensation to the brain like that of volatile spirits when hastily drawn up by an incautious person. This lasts in proportion to its freshness, for, being neglected and the bottle uncorked, it quickly loses this quality, as it probably will at last by age, whatever care is taken of it."

The Balsam which one tree yields is very small, and the collecting of it is tedious and troublesome; hence it is so very scarce that the genuine Balsam is rarely if ever exported in a commercial way. The best Balsam, according to Alpinus, is at first turbid and white, of a very strong pungent smell, like that of turpentine, but much sweeter and more fragrant, and of a bitter, acrid, astringent taste; on being kept for some time, it becomes thin, limpid, light, of a greenish hue, and then of a gold yellow, after which it grows thick like turpentine, and loses much of its fragrance. Some compare the smell of this

*L.*

1 Lady Mary Wortley Montague says, that even at Constantinople it was not without difficulty procured. See *Letters*, vol. ii. p. 115.

2 Three or four drops a day are said to be the usual quantity obtained from one branch; nor does the most fertile tree ever yield more than sixty in that time. See Gerleobr *Tageluch*: Klop nach Constantinopel. p. 327.
Ballam to that of citrons; others to that of a mixture of rosemary and sage flowers. The chief mark of its goodness is said to be founded on this, that when dropped on water it spreads itself all over the surface, forming a thin pellicle, tough enough to be taken up upon the point of a pin, and at the same time impregnating the water with its smell and flavour. 

It appears on scripture authority, that the great value and use of this drug remounts to very early ages, as it seems coeval with the India trade for pepper. To enumerate all the virtues and medicinal uses still attributed to it by eastern nations, would be outraging the bounds of all rational credibility; but they who are desirous of this information may be gratified by consulting Alpinus. European physicians consider it to be not essentially different from other resinous fluids, or turpentines, especially as we find it imported here: it is therefore generally believed, that the Canada and Copaiva balams will answer every purpose for which it can be employed. In Turkey it is not only in high esteem as a medicine, but also as an odoriferous unguent and cosmetic: its effects with respect to its last-mentioned use seem to depend merely on its stimulating the skin; for it is observed by Lady Mary Wortley Montague, that the day after she had used the Balsam, her face became red and swollen; an inconvenience which she suffered for three days. 

* This use of the goodness of the Balsam, which is mentioned by Alston, is not to be condemned upon, as several resinous fluids, and even oil of juniper, produce the same phenomenon. 

† Balm and Myrrh were carried by the Ishmaelites to Egypt. See Gen. c. xxxvii. v. 25. 

‡ See l. c.

The high opinion entertained of its virtues we learn from the following verse in Jeremiah: “Is there no balm in Gilead? is there no physician there? why then is not the health of the daughter of my people recovered?” ch. viii. ver. 22.

TOULIFERA BALSAMUM.
TOLUIFERA BALSAMUM. BALSAM OF TOLU TREE.

_Balsamum toluanum._ Pharm. Lond. & Edinb.

SYNONYMA. _Balsamum Tolutanum, foliis ceratæ similibus._


THIS tree grows to a considerable height; it sends off numerous large branches, and is covered with rough thick greyish bark: the leaves are elliptical or ovate, entire, pointed, alternate, of a light green colour, and stand upon short strong footstalks: the flowers are numerous, and produced in lateral racemis: the calyx is bell-shaped, divided at the brim into five teeth, which are nearly equal, but one is projected to a greater distance than the others: the petals are inserted into the receptacle, and are five in number, of which four are equal, linear, and a little longer than the calyx; the fifth is much the largest, inversely heart-shaped, and its _nugnis_ is of the length of the calyx: the ten filaments are very short, and furnished with long antheræ: the germen is oblong: there is no style: the stigma is pointed: the fruit is a round berry.

Through the favour of Sir Joseph Banks, we have been enabled to present our readers with the annexed figure of this tree, which has hitherto been little known, and but imperfectly described.* It grows in Spanish America, in the Province of Tolu, behind Cartha-

* We regret that the flowers were not sufficiently advanced for us to represent the interior parts of inflorescence. A piece of the bark, which tasted strongly of the Balsam, accompanies the specimen in Sir Joseph’s Herbarium.
Alsam of Tolu Tree

The following is a description of the Tolu Tree:

- **Height**: It reaches a height of 20 feet, with a thick grayish bark.
- **Bark**: The trunk is rough and covered with large, gray scales.
- **Leaves**: The leaves are simple, oval, and slightly toothed.
- **Flowers**: The flowers are small, white, and fragrant.
- **Fruit**: The fruit is a small drupe, with a thin, brown outer skin.

This tree is native to Mexico and Central America and is known for its valuable resin, which is used in various industries.
genus, whence we are supplied with the Balsam, which is brought to us in little gourd-shells. This Balsam is obtained by making incisions in the bark of the tree, and is collected into spoons, which are made of black wax, from which it is poured into proper vessels.*

This Balsam is of a reddish yellow colour, transparent, in consistence thick and tenacious: by age it grows so hard and brittle, that it may be rubbed into a powder between the finger and thumb. Its smell is extremely fragrant, somewhat resembling that of lemons; its taste is warm and sweetish, and on being chewed it adheres to the teeth. Thrown into the fire it immediately liquifies, takes flame, and disperses its agreeable odour. Though it does not dissolve in water, yet if boiled in it for two or three hours, in a covered vessel, the water receives its odoriferous smell: water also suffers a similar impregnation from the Balsam by distillation. With the assistance of mucilage it unites with water, so as to form a milky solution. It dissolves entirely in spirit of wine, and easily mixes with distilled oils, but lets easily with those of the expressed kind. Distilled without addition, it produces not only an empyreumatic oil, of a pale dark colour, but sometimes a small portion of a saline matter, similar to that of the flowers of benzoin.

This Balsam possesses the same general virtues with the former, and that of Peru; it is however less heating and stimulating, and may therefore be employed with more safety. It has been chiefly used as a pectoral, and is laid to be an efficacious corroborant in gleet and seminal weakness. It is directed by the Pharmacopoeias in the Syrupus tolatanus, tinctura tolatana, & Syrupus balsamicus.

* Monard. i. c.

No. 39. 6 T

SMILAX.
THE root is perennial, divided into several branches, which are somewhat thicker than a goose quill, straight, externally brown, internally white, and three or four feet in length: the stalks are shrubby, long, slender, scandent, or trailing, angular, and beset with spines: the leaves are ovate, without spines, pointed, three-nerved, and Rand alternately upon footstalks, at the base of which proceed long tendrils: the flowers are male and female on different plants, lateral, and usually stand three or four together upon a common peduncle: the calyx of the male flower is bell-shaped, divided into six segments, which are oblong, spreading, and reflexed at their points: the filaments are six, simple, and furnished with oblong anthers: the calyx of the female flower is similar to that of the male: there is no corolla, unless the calyx be considered as such: the germen is ovate, and supports three minute styles, furnished with oblong reflexed hairy stigmata: the fruit is a round three-celled berry, containing two globular seeds.
A SMILAX.


hederaceo leni

Styli 3. Bacca

ovatis retulotis.

The stalks, which are usually brown, indented, and smooth with spines: the leaves are ovate, and have a peduncle; the flower has five segments, with five points; the filaments are the calyx small: there is no germinis ovatus, being reflexed hairy containing two
This plant is a native of America, and flowers in July and August. According to Mr. Aiton it was first cultivated in this country by Mr. Forster in 1691.

Though this is the plant which is considered by Linnaeus as furnishing the officinal Saracparilla, yet there are other writers who contend that this medicine is the root of the Smilax aspera L. which is said to correspond with the Saracparilla in every respect. Sir Wm. Fordeyce, who has investigated the subject, says, "Prosper Alpinus has put it beyond all doubt, by the appearance of the smilax aspera, which he found in soft grounds in the island of Zant, (Zacynthus) that Europe, and the Grecian islands in particular, furnish the true Saracparilla, or Smilax aspera peruviana dicta of C. Bauhine." But this synonym is referred to the Smilax Saracparilla by Linnaeus, whose authority we have followed, along with Murray and Bergius, in preference to that of Alpinus. Besides it may be remarked, that in Spain, Italy, and other parts of Europe, where the Smilax aspera grows in abundance, the American Saracparilla is still employed, and imported at a great expense. It is probable however that these two species of the same genus, and of the same subdivision of caule auleato, angulato, may have roots of similar appearance and properties: we have already noticed that not only different species, but even different genera in some inflections, produce the same drug.

"This root has a farinaceous somewhat bitterish taste, and no smell. To water it communicates a reddish brown, to rectified spirit a yellowish red tincture, but gives no considerable taste to either menstruum. An extract, obtained by infusing the spirituous tincture, has a weak somewhat nauseous balsamic bitterness, which is followed by a slight but durable pungency. The watery extract is much weaker, and in larger quantity."

Saracparilla was more than two centuries ago introduced into Spain.

* Vide Hort. Kew.

* See P. Alpinus Plant. Ägypt. p. 136. Albo Fallopium, Amatus Luzitanus, Guilielmii, Tobias Aldinus, Monardes, &c. who all either think it the same, or of equal efficacy.


* C. Bauhine states its first introduction into Spain to be about the year 1573. But Monardes informs us, that it was brought from New Spain to Madrid twenty or thirty years before this time. The word Saracparilla is of Spanish origin. "Zarda quidem Hispam rubrum; parra autem vetem, & parilla videlicet significat." C. Bauh. l. c.
as an undoubted specific in syphilitic disorders, and was also celebrated as a medicine in some other diseases of the chronic kind. But whether it was owing to a difference of climate, or other causes, European practitioners soon found that it by no means answered the character which it had acquired in the Spanish West Indies, and therefore it became very much neglected. Many physicians however still consider the Saraparilla to be a medicine of much efficacy; and though they admit that by the use of this root alone we are not to expect a cure of the lues venerea, yet they assert that when it is given along with mercury, the disease is much sooner subdued; and that ulcers, nodes, and other symptoms of this disorder, which refuted the effects of repeated salinations, have afterwards disappeared by the continued use of Saraparilla. In proof of this, we find several cases related by the late Sir William Fordyce: but it may be remarked, that ulcers, and other complaints, which continue after a properly conducted course of mercury, are often rather to be considered as the vestiges of the lues than the actual disease, and consequently any other medicine possessing no antivenereal power, but improving the general habit of body, might be employed with equal success. Admitting this, however, is not denying the utility of Saraparilla, which has been decidedly done by a late ingenious professor. It is in frequent use at most of the London hospitals, and we have known patients, after the use of mercury, much sooner restored to health by this root than in our opinion could have been accomplished by any other medicine with which we are acquainted, especially when employed in powder.

This root is also recommended in rheumatic affections, scrofula, and cutaneous complaints, or where an acrimony of the fluids prevail. It may be given in decoction or powder, and should be continued in large doses for a considerable time.

* L. c.  

Dr. Cullen.

VITIS VINIFERA.
VITIS VINO

SYNONYMA.
Pin. p. 299. J.
Park. Theat. p. 1
Duhameu. Arb. ii.
Vitis corinthia

Claf. Pentandria.

supera.

Sp. Ch. V. folis 1

THE Vine fern
and is covered with
deeply serrated, co-
nately upon long 5
spikes: the calyx
petals are five, 5m
apices, and soon 1
nished with simple
style, but supplied
berry, of one cell,
The flowers appea

The Vine is a r
quarters of the wo:
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varieties of grape
and taste, and aff
various. Vine le
have an altringei
hemorrhages, and
medicines. The
No. 40.
THE Vine sends off numerous long slender climbing branches, and is covered with rough dark brown bark: the leaves are roundish, deeply serrated, commonly divided into three lobes, and stand alternately upon long footstalks: the flowers are small, and produced in spikes: the calyx is divided into five small narrow segments: the petals are five, small, oblong, whitish, withered, adherent at their apices, and soon fall off: the five filaments are tapering, and furnished with simple anthers: the germen is egg-shaped, without any style, but supplied with a cylindrical stigma: the fruit is a large round berry, of one cell, and contains five hard seeds, of an irregular form. The flowers appear in June and July.

The Vine is a native of most of the temperate parts of the four quarters of the world, and is successfully cultivated in our hemisphere between the thirtieth and fifty-first degree of latitude. Through the effects of culture, and a difference of soil and climate, numerous varieties of grapes are produced, differing widely in shape, colour, and taste, and affording wines, which are known to be extremely various. Vine leaves, called pampini, and the tendrils or capreoli, have an astringent taste, and were formerly used in diarrheas, hemorrhages, and other disorders, requiring refrigerant and styptic medicines. The juice, or sap, of the Vine, named lacryma, has been
been recommended in calculous disorders, and is said to be an excellent application to weak eyes, and specks of the cornea. The unripe fruit has a harsh rough four taste; its expressed juice, called verjuice, was much esteemed by the ancients, but is now superseded by the juice of lemons; for external use however, particularly in bruises and sprains, verjuice is still employed, and considered to be a very useful application.

The dried fruit constitutes an article of the Materia Medica, under the name of uva pasia, of which two kinds were formerly mentioned in our Pharmacopoeias, viz. Uvæ pasia majores & minores, or raisins and currents; the latter is a variety of the former, or the fruit of the Vitis corinthiaca seu aepyrena, of C. B. The manner of preparing them is by immersing them in a solution of alkaline salt, and soap lye made boiling hot, to which is added some olive oil and a small quantity of common salt, and afterwards drying them in the shade. These fruits are used as agreeable lubricating aesculent sweets, in pectoral decoctions, and for obtunding the acrimony of other medicines, and rendering them grateful to the palate and stomach. They are directed in the Decoction hordei compositum, Tinctura fennæ, and Tinctura cardamomi composita.

Wine, or the fermented juice of the grape, of which there is a great variety; has by medical writers been principally confined to four sorts, as sufficient for official use. These are the vinum album hispanicum, mountain; vinum canarium, canary or sack; vinum rheзамum, french; and vinum rubrum, red port.

On a chemical investigation, all wines consist chiefly of water alcohol, a peculiar acid, the aerial acid, tartar, and an astrigent gummy resinous matter, in which the colour of red wines retides, and which is expressed from the husks of the grapes. They differ from each other in the proportion of these ingredients, and particularly in that of the alcohol, which they contain.

The qualities of wines depend not only upon the difference of the grapes, as containing more or less saccharine juice, and of the acid matter which accompanies it, but also upon circumstances attending the process of the fermentation. Thus, if the fermentation be incomplete, the wine may contain a portion of must, or unfermented

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* See Antill in American Philosophical Transactions, vol. i. p. 194.
juice; or if it be too active, or too long protracted, it may be converted into vinegar."

New wines are liable to a strong degree of acetescency when taken into the stomach, and thereby occasion much flatulency, and eructations of acid matter; heart-burn, and violent pains of the stomach from spasms are also often produced; and the acid matter, by passing into the intestines, and mixing with the bile, is apt to occasion colics, or excite diarrhoeas. Sweet wines are likewise more disposed to become accecent in the stomach than others; but as the quantity of alcohol which they contain is more considerable than appears sensibly to the taste, their acetescency is thereby in a great measure counteracted. Red port, and most of the red wines, have an astrigent quality, by which they strengthen the stomach, and prove useful in restraining immoderate evacuations; on the contrary, those which are of an acid nature, as rhine, pass freely by the kidneys, and gently loosen the belly. But this, and perhaps all the thin or weak wines, though of an agreeable flavour, yet, as containing little alcohol, are readily disposed to become accecent in the stomach, and thereby to aggravate all arthritic and calculous complaints, as well as to produce the effects of new wine.

The general effects of wine are, to stimulate the stomach, exhilarate the spirits, warm the habit, quicken the circulation, promote perspiration, and in large quantities to prove intoxicating, and powerfully sedative.

In many disorders wine is universally admitted to be of important service, and especially in fevers of the typhous kind, or of a putrid tendency; in which it is found to raise the pulse, support the strength, promote a diaphoresis, and to resist putresfaction; and in many cases it proves of more immediate advantage than the Peruvian bark. Delirium, which is the consequence of excessive irritability, and a defective state of nervous energy, is often entirely removed by the free use of wine. It is also a well-founded observation, that thòse who indulge in the use of wine, are less subject to fevers, both of the malignant and intermittent kind. In the putrid fore throat, in the small-pox, when attended with great debility and symptoms of putrefaction, in gan-

See Cullen M. M. vol. 1. p. 413.

genes,
genes, and in the plague, wine is to be considered a principal remedy. And in almost all cases of languors, and of great prostration of strength, wine is experienced to be a more grateful and efficacious cordial than can be furnished from the whole class of aromatics.

The Tartar, which is thrown off from wines to the sides and bottom of the cask, is also an official article, and consists of the vegetable alkali superfatted with acid. When taken from the cask, it is found mixed with an earthy, oily, and colouring matter; that obtained from red wine is of deep brown colour, and commonly called red, and when it is of a paler colour, white tartar. It is purified by dissolving it in boiling water, and separating the earthy part by filtering the boiling solution. On cooling the solution, it deposits irregular crystals, containing the colouring matter, which is separated by boiling the mass with white clay. The tartar, thus purified, is called cream of tartar. If this be exposed to a red heat, its acid flies off, and what remains is the vegetable alkali, or salt of tartar.

Crystals of tartar are in common use as a laxative and mild cathartic; they are also esteemed for their cooling and diuretic qualities, and therefore have been much employed in droptries, and other cases requiring an antiphlogistic treatment. Dr. Cullen says, "that in large doses they act like a purgative in exciting the action of the absorbents in every part of the system, and that more powerfully than happens from the operation of any entirely neutral salt;" and hence is founded their utility in the cure of droptries. It must be remarked, however, that they do not readily pass off by the kidneys, unless taken with a large quantity of water; and therefore when intended as a diuretic they ought to be given in a liquid form, as Dr. Home has directed. The dose is to be regulated according to the circumstances, from a dram to two ounces. These salts enter several official compositions.

Another article to be noticed here is Vinegar, which has been esteemed of great use in almost all inflammatory and putrid disorders, whether internal or external. Bergius says, it is refrigerans, refolvens, antiputridenofs, alexiteria, antiphlogistica, digestiva, antifacutica, diaphoretica. It is very efficacious in counteracting the effects of vegetable poisons, especially those of the narcotic kind. Inhaled in the form of a vapour, it is found useful in the putrid sore throat; and
and it has been given to dilute and neutralize
the acetate, or spirit of
ferns. By distillation
empyreumatic taste, a
base; when required
by fr.,...ing it, after the
juice of lemons.
Vinegar is also much
the virtues of other m

SACCHARUM OFF.
Saccharum non pro

SYNONYMA. A
Theat. p. 1210.
Hist. p. 1278.
Rumph. Herb. Amb.
p. 244. t. 23. f. 1.
Trans. vol. 69. P.

Class Triandria. Or

Eff. Gen. Ch. Cal. 2
Hort. Kew.
sp. Ch. S. floribus f

THE root is perennial,
undivided, jointed, from
eight to eighteen feet
shaped, and embraces
terminal loose panicel
long, or lance-shaped
No. 40.
and it has been given successfully in mania, and in rabies canina. Distilled and neutralized with volatile alkali, it forms the aqua ammoniæ acetata, or spiritus Mindereri, a medicine of common use in fevers. By distillation, however, the vinegar generally contracts an empyreumatic taste, and is seldom found in a rightly concentrated state; when required to be of great strength, it may be rendered so by flavouring it, after the manner we have directed for concentrating the juice of lemons.

Vinegar is also much employed as a menstruum, or for extracting the virtues of other medicines.

SACCHARUM OFFICINARUM. COMMON SUGAR CANE.

Pharm. Lond.


Sp. Ch. S. floribus paniculatis, foliis planis.

THE root is perennial, knotted, and fibrous: the stem is simple, or undivided, jointed, smooth, about two inches in diameter, and rises from eight to eighteen feet in height: the leaves are long, simple, sword-shaped, and embrace the stem: the flowers are small, and produced in a terminal loose panicle: the calyx is a gluma of two valves, which are oblong, or lance-shaped, pointed, erect, concave, equal, and the base surrounded

No. 40. 6 X
surrounded with long woolly hairs: the corolla is composed of two valves, shorter than those of the calyx, and of a fine delicate texture: the nectarium is divided into two leaflets: the filaments are three, capillary, of the length of the corolla, and furnished with oblong antheræ: the germen is oblong, and supports two feathered styles, terminated by a plumose stigma: the seed is oblong, and is invested by the corolla.

The Sugar Cane is a native of Africa, and Lower Asia, as the East Indies and Arabia felix; it is also said to grow spontaneously in America; but others assert that it was unknown in these regions till Europeans possessed it. For a considerable time however it has been industriously cultivated in the American Islands situated within the tropics, and was two centuries ago introduced into the garden of that assiduous botanist Mr. Gerard.

We have before remarked on the subject of manna, that several vegetables secrete a sweet or saccharine juice, easily converted into sugar. The Arundo Bambo L. distils from its joints a fluid, which, by the heat of the sun, concretes into sugar, and is collected for use. A considerable quantity of sugar is annually obtained in America from the Acer saccharina, a species of Maple. The inhabitants of New Spain procure sugar from the Agave americana: it is likewise obtained from the Asclepias syriaca, and Zea Mays. Nor are the inhabitants of the northern regions wholly destitute of vegetables which furnish this useful article; for at Kamchatska it is produced from the Heracleum Syphondylum and fucus saccharinus.²

The plant here figured affords the sugar in common use, which is prepared from its expressed juice, boiled with the addition of quick lime, or the common vegetable alkali. The boiling is repeated in smaller and smaller vessels, during which it is often necessary to scum the impurities, and employ additional alkali; when the juice acquires a due confluence, it is suffered to cool in a proper vessel, and the saccharine matter concretes into a crystallized mass. This, after being separated from the melasses, is sold under the name of brown sugar.

This sugar is the upper part of the watery moisť, considerable part of which is added monly both; the oil with its oily and carefully taken off: the woolen cloth, fibre; it is the into conical mou placed down, is flopped up, but the syrup or meli part, the cone o mould, which, the clay closely applied, placed upon its base or baked in Solutions of sugar, as an are described of it is a acid of which Be nitrous acid; and vegetable and all other constituent matter; and thou bination of these

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² See Pijes. Mont. Aromat. p. 186. It is also procured from the Borassus flabelliformis & Cocos nucifera.
³ Several roots and fruits likewise afford sugar. The use of this is to imbibe the superfluous acid.
or moist Sugar; the faccharum non purificatum, of the London Pharmacopoeia.

This Sugar may be purified in conical moulds, by spreading on the upper broad surface some moist clay, which gradually transfixes its watery moisture through the mass of Sugar, and carries with it a considerable part of the remains of the treacle matter; it is then called clayed Sugar. The faccharum purificatum, or loaf Sugar, is prepared in this country from the other Sugar boiled in water, to which is added lime water, also bullocks blood, or eggs, or commonly both; these are found to clarify the Sugar, by incorporating with its oily and mucilaginous parts, and forming a scum, which is carefully taken off. After sufficient clarification it is drained through a woollen cloth, and boiled again until it becomes of a proper consistence; it is then poured into a refrigernatory, and when duly cooled, into conical moulds made of clay, and perforated at the apex, which is placed downwards: at first the aperture at the apex of the mould is stopped up, but as the Sugar concretes it is opened, in order that the syrup or melasses may drain off. By this draining of the fluid part, the cone of Sugar shrinks at the base below the edges of the mould, which, to render the loaf still whiter, is filled up with moist clay closely applied to the base of the Sugar cone: lastly, the cone is placed upon its base, taken out of the mould, wrapped in paper, and dried or baked in a close oven.

Solutions of brown or white Sugars, boiled down until they begin to grow thick, and then removed into a very hot room, shoot upon sticks placed across the vessels for that purpose into brown or white crys-}tals of candy, (faccharum cristalinum).

Sugar, as an article of diet, is so well known as not to require any description of it here: it is manifestly a neutral saline substance, the acid of which Bergman first taught us to separate by means of the nitrous acid; and it since appears that several other substances, both vegetable and animal, contain an acid similar to that of Sugar. The other constituent parts of Sugar seem to be an oily and mucilaginous matter; and though it is not yet satisfactorily explained how a combination of these substances should produce on the organs of taste a...
Sensation of sweetness, yet as it is known that the strong vitriolic acid becomes sweet by uniting it to spirit of wine, we may easily conceive that the sweetness of Sugar may be effected in a somewhat similar way.

From the known properties of Sugar, it has been supposed to unite the uchtuous part of the food with the animal juices, and hence it has been thought to increase corpulence or fatness; others however have thought that a contrary effect would be produced by this quality of sugar, viz. by preventing the separation of the oily matter from the blood, which forms fat. Professor Murray, who has treated this subject very elaborately, thinks that by the fermentation which Sugar undergoes in the stomach, and by its dissolving resolvent saponaceous qualities, as well as by the acid which it contains, it rather tends to emaciate than to fatten the body; and in this opinion he observes that he has the authority of Boerhaave, who says if this sweet be taken in large quantities it produces emaciation by dissolving too much of the animal oil. He is therefore much surprized, that Mr. John Hunter should lately recommend Sugar and honey as the best restoratives to those suffering from great debility from a long course of mercury. What may be the effects of Sugar in this respect in its refined state may be difficult to determine; but in its crude state there can be no doubt of its affording a considerable share of nourishment, both as combined in various vegetable matters, and as separated by art. Those animals, which wholly feed upon it in the Sugar islands, become remarkably corpulent; and the negro children, whose diet sometimes for a season to be confined to molasses, are easily distinguished from others by their superior bulk;* they are however more disposed to suffer by worms, and are likewise less active and healthy.

Sugar however appears by the experiments of several writers to prove deleterious to various kinds of worms, either by immersing them in a solution of twenty grains of dregs immediate an hour; it also but not to sparrow than that of a cat.

Sugar may cease quantities without not wanting of it and dissolving the are said to have a four ounces of Sugar and water, with redness and and redness of the over the right flap who was much al greedily ate a large taken ill, and the examining his bow of the blood were given to these and met our read stomachs has great advantage, at least.

As a medicine, Dr. Cullen classes it saponacea, edulcorant, nutrients. In catarr employed: it has its plasters; and from

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* See App. Met. vol. 5.
* In Asia, Elephants and other animals are fed upon Sugar. See Abridgment of Evidence on Slave Trade.
them in a solution of Sugar, or sprinkling it upon their bodies; and twenty grains of lump Sugar forced into the stomach of a frog, produced immediate torpor and death, which followed in the course of an hour: it also proved fatal to pigeons, and to the gallinæ kind, but not to sparrows; and with sheep and dogs it had no other effect than that of a cathartic.

Sugar may certainly be taken into the stomach in pretty large quantities without producing any bad consequences, though proofs are not wanting of its mischievous effects, in which, by its attenuating and dissolving the fluids, and relaxing the solids, debility and distemper are said to have been produced. Stark for many days took from four ounces of Sugar to eight, ten, sixteen, and even twenty, with bread and water, by which nausea, flatûs, ulceration in the mouth, with redness and tumefaction of the gums, oppression, purging, pain, and redness of the right nostril, bleeding at the nose, and livid streaks over the right scapula, were produced. We are also told that a boy who was much affected by acidity of the stomach, in a short time greedily ate a large quantity of lump Sugar; soon afterwards he was taken ill, and the next morning found dead in his bed. Upon examining his body, red spots, and other marks of a dissolved state of the blood were discovered.

What degree of credit ought to be given to these and other cases of the like kind, we leave to the judgment of our readers: but that the liberal use of Sugar to many stomachs, has greatly impaired the digestive powers, and laid a foundation for various complaints, is highly probable. At the same time, we must admit, that several indulge largely in this article, if not with advantage, at least with impunity.

As a medicine, Sugar cannot be considered to possess much power. Dr. Cullen classifies it with the attenuantia; and Bergius states it to be fapolacea, edulcorans, relaxans, pectoralis, vulneraria, antifebric, nutritiva. In catarhal affections both sugar and honey are frequently employed: it has also been advantageously used in calculous complaints; and from its known power in preserving animal and vege-

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1 See Rudi obs. de animacul. vivis in corp. viv. p. 166. sq.
2 Carminati Opus. Therap. vol i. p. 113.
3 Vide Clinical & anatomical observations with experiments dietetical & statical.

No. 40.  6 Y  table
table substances from putrefaction, it has been given with a view to its antiseptic effects. The candy, by dissolving slowly in the mouth, is well suited to relieve tickling coughs and hoarseness. The use of Sugar in various medicinal compositions is too obvious to require being particularly pointed out.

**ULMUS CAMPESTRIS. COMMON ELM.**


**Sp. Chb.** U. foliis duplicato-ferratis; basi inaequalibus.

**THIS** is very common in the neighbourhood of London, where it grows to a considerable height, sends off strong branches, and is covered with rough cracked brown bark: the leaves are ovate, rough, doubly ferrated, and stand alternately upon strong footstalks: the flowers appear before the leaves, on short spikes at the bottom of the leaf-buds: the calyx is turban-shaped, wrinkled, permanent, and divided at the border into five segments: there is no corolla: the five filaments are tapering, twice as long as the calyx, and furnished with short upright antherae, marked with four furrows: the germen is round, compressed, upright, and supports two styles, which bend outwards, and are terminated by downy stigmata: the fruit is an oval large
large berry, which is without juice, and of a membranous texture: the seed is round, but somewhat compressed.

This tree, of which there is one variety with smaller leaves, and another with smooth leaves, grows plentifully in Worcestershire and Middlesex, but is said not to be found to the north of Stamford.

The inner tough bark, which is directed for use by the Pharmacopoeia, has no remarkable smell, but has a bitterish taste, and abounds with a slimy juice, which has been recommended in nephritic cases, and externally as a useful application to burns. The external bark is brittle, contains but little mucilage, and is wholly destitute of both smell and taste. The internal bark of the branches is more bitter than that of the trunk, and therefore probably more efficacious.

The complaints for which it is chiefly recommended, are those of the cutaneous kind allied to herpes and lepra. Dr. Lyfons mentions five cases of invertebrate eruptions, both dry and humid, or those forming incrustations, which were successfully treated by a decoction of this bark, prepared from four ounces of it taken fresh, and boiled in two quarts of water to one; of this the patients were usually directed to drink half a pint twice a day. But as he added nitre to the decoction, and also frequently had recours to purgatives, it may be doubted if these cures ought to be wholly ascribed to the Elm bark.

Dr. Lattison found this bark most effectual in what he supposes to be the lepra ichthyosis of Sauvages, in which it succeeded after all the medicines usually employed in such cases had failed. A remarkable instance of its efficacy also in lepra vulgaris, affecting the whole body, is related by Banaus, who proposes the use of Elm bark in various other diseases, as fluor albus, rheumatism, old ulcers, cancerous and sarcomatous affections, tinea capitis, febric, &c. In very obstinate cases it is necessary to persever in the use of the decoction for some months.

  b See Medical Memoirs, p. 152.
  c See Jour. de Paris, 1783. n. 255.

SALIX FRAGILIS.


THIS species grows to a considerable height, sending off large branches, and is covered with wrinkled bark of a grey colour: the leaves are long, narrow, ovate, or lance-shaped, ferrate, and placed upon footstalks, which are furnished with glandular teeth: the flowers are male and female upon different trees, and produced in catkins: the calyx, or common calkin of the male flower, is oblong, imbricated; inclosed by an involucrum formed of a bud, and consisting of scales, which are oblong, flat, expanding, and unifloral: there is no corolla: the nectarium is a small cylindrical truncated gland, containing honey, and placed in the centre of the flower: the filaments are two, straight, filiform, longer than the calyx, and furnished with double antherae of four cells: in the female flower the scaly calkin resembes that of the male: the germen is egg-shaped, tapering, so as to leave no distinct style, and is longer than the scales: the stigmata are two, bifid and erect: the capfule is ovate, one-celled, and fur-

ished
nished with two valves which roll back: the seeds are numerous, egg-shaped, very small, and crowned with a simple hairy pappus. The flowers appear in April and May.

This tree, which grows in hedges and about the banks of rivers in several parts of England, is easily to be distinguished from the other species of willow, by the readiness with which it breaks at the year’s shoot last made upon being slightly struck with the finger; and hence the name fragilis.

The bark of the branches of this tree manifests a considerable degree of bitterness to the taste, and is also astringent; hence it has been thought a good substitute for the Peruvian bark, and upon trial was found to stop the paroxysms of intermittent: it is likewise recommended in other cases requiring tonic or astringent remedies. Not only the bark of this species of Salix, but that of several others, possess similar qualities, particularly of the Salix alba & S. pentandra, both of which are recommended in the foreign pharmacopoeias. But in our opinion the bark of the S. triandra is more effectual than that of any other of this genus; at least its sensible qualities give it a decided preference.


With Herpinius however this bark did not succeed. He says, Ego hunc corticem in febris intermittentibus iterum iterumque exhibui, sed irrito constav.

a Cinara hortensis aculeata. C. B. French Artichoke.


Sp. Ch. C. foliis subspinosis pinnatis indivisifque, calycinis squamis ovatis.

THE root is perennial, large, and fibrous: the stem is thick, strong, branched, striated, and rises about three feet in height: the leaves are large, of an irregular shape, pinnatifid, obtuse, bent downwards, and stand upon strong scored footstalks; on the upper side they are smooth and veined, and on the under reticulated, hoary, and downy: the flowers terminate the stem and branches upon thick fleshy peduncles: the common calyx is globular, three or four inches in diameter, and composed of numerous ovate scales, which at the base are thick and fleshy, at the apex tough, membranous, shining, notched, but with a spinous point in the centre: the florets of the corolla are numerous, blue, and equal in size, each consisting of one leaf, which is funnel-shaped, and at the base forms a slender tube; at the limb it is erect, and divided into five segments; five filaments, which
which are capillary, very short, and furnished with antheræ, which
form a cylindrical tube of the length of the corolla, and five toothed:
a germin of an ovate form, which supports a slender style, longer
than the flamina, and terminated by a simple, oblong, notched stigma:
the seeds are oblong, obscurely quadrangular, and furnished with a
long sessile feathery pappus: the receptacle is bristly. It flowers in
August and September.

The Artichoke is a native of the southern parts of Europe. It was
cultivated here by Turner; and as a culinary article it is common in
most kitchen gardens.

The receptacles, or bottoms of the heads, and the fleshy part of
the scales are usually eaten, and though thought by Galen to generate
bile and melancholy, are wholesome and nutritious. The Arabs noticed
their diuretic qualities, and therefore deemed them useful to
carry off morbid matter by the kidneys.

The leaves are bitter, and afford by expression a considerable quan-
tity of juice, which when strained and mixed with an equal part of
white wine, has been given successfully in dropsies; for this purpose
two or three spoonfuls of the mixture are to be taken night and
morning. An infusion of the leaves are likewise diuretic, and may
be employed with the same intention.

a Antecedent to the year 1551.

b See Sebiscius de Aliment. facult. p. 346.


CINCHONA
CINCHONA OFFICINALIS.  OFFICINAL CINCHONA;  
Or PERUVIAN BARK TREE.  

Peruvianus cortex.  Pharm. Lond. & Edinb.

SYNONYMA.  Quinquina.  De La Condamine, in Mem. de  
et Pullney.  Diff. de Cinchona aff.


Eff. Gen. Ch.  Cor. infundibulif. apice lanata.  Caps. infra, 2-locur- 
laris, dissepimento parallelo.—Sem. imbricata.  fiscq.

Sp. Ch.  C. foliis ellipticis subbus pubescentibus corollæ, limbo lanato.

THIS tree is very lofty, sending off large branches, covered with  
rough brown bark: the leaves vary from an ovate to an elliptical  
shape, the larger approaching more to the former, and the smaller to  
the latter figure; they are all entire, nerved, smooth on the upper  
side, on the under tomentose, and stand in pairs upon footstalks: the  
flowers are produced in panicles, and stand upon slender pedicles: the  
calyx is small, bell-shaped, and cut at the margin into five minute  
segments: the corolla is funnel-shaped, consisting of a long cylindrical  
tube, divided at the limb into five segments, which are ovate, or ob- 
long, spreading, on the upper side red, on the under woolly, and  
fringed at the edges: the five filaments are brilly, placed in the middle  
of the tube, and furnished with oblong anthers, twisted in a spiral  
manner: the germen is ovate: the style is filiform, somewhat longer  
than the stamina, and furnished with a round stigma: the capsule  
divides into two parts, the cells of which are separated by a parallel  
partition: the seeds are small and numerous.

This
This figure we have not scrupled to copy from that given by
Monf. de la Condamine,\textsuperscript{a} whose description of this tree, though
published more than fifty years ago, being the result of a careful
examination of the living tree in its native soil, is still the only
one on which we can with confidence rely.

It is a native of Peru, growing most abundantly on a long chain
of mountains extending to the north and south of Loxa, where its
trunk frequently exceeds in bulk the body of a man. According to
Mr. Arrot, the soil in which these trees thrive best, is generally a
red clayey or rocky ground, and especially on the banks of small
rivers descending from the high mountains.\textsuperscript{b} This author also
informs us, that the propereft season for cutting off the bark is from
September to November, and the manner of conducting this we
have related in Mr. Arrot's own words.* On the trees being en-
tirely stripp'd of their bark they soon perish; and as the number of
these trees to which access could be had, was fain to be not very
considerable, it has been suppos'd that a sufficient quantity of bark

\textsuperscript{a} L. c. \textsuperscript{b} Phil. Trans. vol. 40, p. 83.

* "The propereft season for cutting the bark is from September to November.
the only time in the whole year of some intermission from the rain in the mountains.
Having discovered a spot where the trees most abound, they first build huts for the
workmen, and then a large hut wherein to put the bark in order to preserve it from
the wet; but they let it lie there as short a time as possible, having beforehand cut
a road from the place where the trees grow, though the woods, sometimes three
or four leagues, to the nearest plantation or farm-house in the low country, whither, if
the rain permits them, they carry the bark forthwith to dry. These preparations being
made, they provide each Indian (they being the cutters) with a large knife, and a
bag that will hold about fifty pounds of green bark: every two Indians take one tree,
whence they cut or fince down the bark, as far as they can reach from the ground;
they then take sticks about half a yard long each, which they tie to the tree with
a touch with at proper distances, like the steps of a ladder, always flicing off the bark
as far as they can reach before they fix a new step, and thus mount to the top, the
Indian below gathering what the other cuts: this they do by turns, and go from tree
to tree until the bag is full, which, when they have plenty of trees, is generally a day's
work for one Indian. As much care as possible must be taken that the bark is not cut
wet; should it so happen, it is to be carried directly down to the low country to dry,
for otherwise it loses its colour, turns black, and rots; and if it lie any time in the hut
without being spread, it runs the same risk: so that while the Indians are cutting, the
natives if the weather permits ought to be carrying it down to the place appointed for
drying it, which is done by spreading it in the open air, and frequently turning it." L. c.
to supply the demand, could not long be procured. Condamine, however, affirms that the young trees do not die by losing their bark, but send out fresh shoots from the base, and as those which are suffered to become old have time to disseminate and propagate, we trust the fear of exhausting this valuable medicine is wholly groundless.

We seem to have no satisfactory account at what time, or by what means, the medicinal efficacy of the Peruvian Bark which is now so well established, was first discovered. Some contend that its use in intermittent fevers was known to the Americans long before the Spaniards possessed Peru, but that they concealed this knowledge from the Europeans; and, on the contrary, it is asserted by others, that the Peruvians never supposed it to be fit for any medicinal use, but thought that the large quantities exported thence was for the purpose of dyeing, and they actually made some trials of its effects in this way. Condamine says, that according to an ancient tradition, the Americans owe the discovery of this remedy to the lions, which some naturalists pretend are subject to a kind of intermittent fever, of which they were observed to be cured by instinctively eating the bark of the Cinchona. But Geoffroy states, that the use of the bark was first learned from the following circumstance:—Some cinchona trees being thrown by the winds into a pool of water, lay there till the water became so bitter that every body refused to drink it. However, one of the neighbouring inhabitants being seized with a violent paroxysm of fever, and finding no other water to quench his thirst, was forced to drink of this, by which he was perfectly cured. He afterwards related the circumstance to others, and prevailed upon some of his friends who were ill of fevers to make use of the same remedy, with whom it proved equally successful. The use of this excellent medicine, however, was very little known till about the year 1638, when a signal cure having been performed by it on the Spanish viceroy's lady, the Countess del Cinchon, at Lima, it came into general use, and hence was distinguished by the appellation pulvis comitissae, or the Countess's powder; also called, cortex china, or chinchina; kina kina, or kinkina; and Countess the

in whose hand was first introduced Jesuiticus, public cause that causes expense for the

"This bark rolled up into brownish, and inside is of a breaks close an inferior kinds chewing fepan than the latter, hour, resembling flight smell, an aromatic kind bitter, astringent, some degree of being ungrateful.

Besides this it been recommend the cortex per caribica, or the at St. Lucie; a Santa Fé. Th than the common together like the bark, and appears thin, rugged, reddish brown of a darker color layer is more v

Kirkina; and quina quina, or quinquina. On the recovery of the Counts he distributed a large quantity of the bark to the Jesuits, in whose hands it acquired still greater reputation, and by them it was first introduced into Europe,* and thence called cortex, or pulvis jucuticus, pulvis patrum; and also Cardinal de Lugo’s powder, because that charitable prelate bought a large quantity of it at a great expense for the use of the religious poor of Rome.

This bark is brought to us in pieces of different sizes, some rolled up into short thick quills, and others flat: the outside is brownish, and generally covered in part with a whitish moss: the inside is of a yellowish reddish or rusty iron colour. The best sort breaks close and smooth, and proves friable between the teeth: the inferior kinds appear when broken of a woody texture, and in chewing separate into fibres. The former pulverizes more easily than the latter, and looks, when powdered, of a light brownish colour, resembling that of cinnamon, or somewhat paler. It has a slight smell, approaching as it were to muskiness, yet so much of the aromatic kind as not to be disagreeable. Its taste is considerably bitter, astringent, very durable in the mouth, and accompanied with some degree of aromatic warmth, but not sufficient to prevent its being ungrateful.”

Besides this bark, that of several other species of Cinchona have been recommended for medical use by different authors, especially the cortex peruvianus ruber, or red bark; also that of the cinchona caribæa, or the Jamaica bark; that of cinchona floribunda produced at St. Lucie; and that of two or three other species discovered at Santa Fé. The first of these is in much larger and thicker pieces than the common, most of the pieces are concave, though not rolled together like the quilled bark. They break short, like the best common bark, and appear evidently composed of three layers. The outer is thin, rugged, frequently covered with a mossy substance, and of a reddish brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and resinous. The innermost layer is more woody and fibrous, and of a brighter red. In pow-

* Louis the fourteenth, when Dauphin, was said to be one of the first in Europe who experienced its efficacy.  † Lewis, M. M. p. 485.
dering this bark, the middle layer which seems to contain the greatest proportion of resinous matter does not break so readily as the rest; a circumstance to be attended to, left the most active part should be left out of the fine powder. This red bark to the taste discovers all the peculiar flavour of the Peruvian Bark, but much stronger than the common officinal fort. An infusion in cold water is intensely bitter, more so than the strongest decoction of common bark. Its astringency is in an equal degree greater than that of the infusion of common bark, as is shown by the addition of martial vitriol. The spirituous tincture of the red bark is also proportionally stronger than that of the pale. The quantity of matter extracted by rectified spirit from the powder of the former, was to that from the latter as 3 to 2 in one experiment, and as 229 to 130 in another; and yet on infusing the two residuums of the first experiment in boiling water, that of the red bark gave a liquor considerably bitter, and which struck a black with martial vitriol; while that yielded by the other, was nearly tasteless and void of astringency."*

Respecting the medicinal properties we have several respectable authorities, shewing, that as the red bark possesses the same virtues with the common, in a much higher degree,† so it has been found of more efficacy in the cure of intermittent belonging to the quilled bark, and gave consent, which was a produced to the Sea Sick, and the deepness of its effect with its tone of the cafe.

Jacquin* and the Sea Sick is not left, it will prove Skeie et floribunda, Phil.Trans. which is withstanding character," of this genus dibiotic; proved so that the small one's recommendation at Santa Fè from their useful with.

At present the red kind; it is esteemed.

"The red bark in water; but

* Lewis, l. c.
† Irving's and Skeie's Experiments.
the quilled bark in common use, &c. It was extremely resinous, and gave evident proofs of its being the quill of the larger red bark which was in the same chest." If the pale and red bark were really the produce of the same species of Cinchona, the latter differing from the former only by acquiring greater maturity, we should find the deepness of the colour of the pale bark to correspond proportionably with its thickness or the size of the quill, which is certainly not the case. The Cinchona Caibazia is described and figured by Jacquin and Dr. Wright; it grows in Jamaica, where it is called the Sea Side Beech. According to Dr. Wright, the bark of this tree is not less efficacious than that of the Cinchona of Peru, for which it will prove an useful substitute; but by the experiments of Dr. Skeete it appears to have less astringent power." The Cinchona floribunda, or bark tree of St. Lucie, a figure of which we find in Phil. Trans. also in Rozier's Observations sur la Physique, affords a bark which is likewise said to have been used with advantage; but notwithstanding all that has been written to establish its medicinal character, it seems to us greatly inferior to that of the other species of this genus. In its recent state it is considerably emetic and cathartic; properties, which in some degree it retains on being dried; so that the stomach does not bear this bark in large doses, and in small ones its effects are not such as to give it any peculiar recommendation. Several species of Cinchona have lately been discovered at Santa Fé, yielding barks both of the pale and red kind; and which, from their sensible qualities, are likely upon trial to become equally useful with those produced in the kingdom of Peru.

At present, the use of the bark is chiefly confined to the pale and red kind; and the nearer the former resembles the latter, the more it is esteemed.

" The Peruvian Bark yields its virtues both to cold and boiling water; but the decoction is thicker, gives out its taste more readily,
and forms an ink with a chalybeate more suddenly than the fresh cold infusion. This infusion, however, contains at least as much extractive matter, but more in a state of solution; and its colour on standing with the chalybeate becomes darker, while that of the decoction becomes more faint. When they are of a certain age, the addition of a chalybeate renders them green; and when this is the case, they are found to be in a state of fermentation, and effete. Mild or caustic alkalies, or lime, precipitate the extractive matter, which in the case of the caustic alkali is re-dissolved by a further addition of the alkali. Lime-water precipitates less from a fresh infusion than from a fresh decoction; and in the precipitate of the latter, some mild earth is perceptible. The infusion is by age reduced to the same state with the fresh decoction, and then they deposit nearly an equal quantity of mild earth and extractive matter; so that lime-water as well as chalybeate, may be used as a test of the relative strength and perishable nature of the different preparations, and of different barks. Accordingly, cold infusions are found by experiments to be less perishable than decoctions; infusions and decoctions of the red bark, than those of the pale: those of the red bark, however, are found by length of time to separate more mild earth with the lime-water, and more extracted matter. Lime-water as precipitating the extractive matter appears an equally improper and disagreeable menstruum. Water has been found to suspend the resin by means of much less gum than has been supposed. Rectified spirit of wine extracts a bitterness, but no astringency, from a residuum of twenty aflusions of cold water; and water extracts astringency, but no bitterness, from the residuum of as many aflusions of rectified spirit. The residua of both are insipid."

From many ingenious experiments made on the Peruvian Bark by Dr. Irving, published in a Dissertation which gained the prize-medal given by the Harveian Society of Edinburgh in 1783, the power of different menstrua upon Peruvian Bark, is ascertained with greater accuracy than had before been done: and it appears, that with respect to comparative power, the following fluids act in the

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order in which they are placed: Dulcified spirit of vitriol: Caustic lye: French brandy: Rhenish wine: Soft water: Vinegar and water: Dulcified spirit of nitre: Mild volatile alkali: Rectified spirit of wine: Mild vegetable alkali: Lime-water. The antiseptic powers of vinegar and bark united are double their sum taken separately. The astringent power of the bark is increased by acid of vitriol; the bitter taste is destroyed by it.

Though the bark on its first introduction, and even some time afterwards, was reprobated by some eminent physicians as a dangerous remedy; yet these prejudices are entirely done away, and its character is now universally established: so that the disputes which at present subsist are confined to its mode of operation, or the manner in which it is most efficaciously administered. To detail these, however, or even to give a circumstantial relation of the various states of disease in which the bark might be advantageously employed, would far exceed our limits: we are therefore confined to state briefly those diseases to which this medicine is more especially adapted.

The bark first acquired its reputation for the cure of intermittent fevers, and in these, when properly exhibited, it rarely fails of success. For this purpose, some practitioners prefer giving it just before the fit, some during the fit, and others immediately after. Dr. Cullen, who is of the first opinion, says, "I am satisfied that giving a large dose of the bark immediately before the time of accession, is the most proper practice: but that dose must not be under two drams of pale bark, for there are some stomachs which will not bear even that quantity, or a larger that might be necessary. It is commonly, therefore, convenient to give small doses, but to give them every hour for some hours near to the times of accession." Some again order it in the quantity of an ounce between the fits; the dose being more frequent and larger, according to the frequency of the fits; and this mode of procedure, although it may perhaps lead to the employment of more bark than is necessary, is considered by Dr. Duncan as upon the whole preferable, from being best suited to most stomachs. When

the bark pukes, or purges, or oppresses the stomach, it is to be countered by remedies particularly appropriated to them. Thus, vomiting, is often restrained by exhibiting it in wine; looseness, by combining it with opium; and oppression at the stomach, by the addition of an aromatic. But unless for obviating particular occurrences, it is more successful when exhibited in its simple state than with any addition.

It may be given from the very commencement of the disease without any previous evacuations, though it commonly answers better after emptying the alimentary canal, particularly the stomach; and it is to be continued not only till the paroxysms cease, but till the natural appetite, strength, and complection return.

In remittent fevers, especially during the times of remission, the bark may also be employed with great success; for as both these and intermittents arise from the same cause, prevail at the same season, and assume mutually the form of each other, they show a strict affinity, and found a presumption which is confirmed by experience, that they may be cured by the same remedy. In continued fevers, or typhus of the nervous and putrid kind, the bark is very generally used, as well suited to counteract the debility or putrefaction which marks the progress of the disorder. There is, however, one state not unfrequently present in these epidemic fevers, in which the bark is found to be hurtful; i.e. symptoms of congestion; or topical inflammation of the head, manifested by headache, redness of the eyes, and phrenitic delirium. And whenever delirium is accompanied with much subfulthus tendinum, or frequent convulsive twitchings of the limbs, Dr. Cullen thinks opium in large doses is the only remedy to which we can trust.

Of late the bark has been much employed in acute rheumatism, particularly after the violence of the disease has been in some measure moderated by the antiphlogistic treatment, or when evident remissions take place. Many, however, have recourse to this medicine in the first stage of the disease, and we have witnessed its success in some of the London Hospitals, even while the inflammatory symptoms prevailed to a very considerable degree. This seems contrary to the experience of Dr. Cullen, who says, "As I consider this disease..."
disease as especial bark to be absolute especially in its be.

In the confluence promote the rising in ence teaches us that is completed, or w of the blood supo. The other disease, nos fore throats, dysentery, all hens agitated discharges; with any particular: rickets, scurvy, flu pulmonalis, &c.

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CINCHONA.—C PERUVIANUS


THOUGH the botanically determined Groshke a drawi was found in the whom we are obli drawing two speci and the other in its

No. 41.
disease as especially consisting in a phlogistic diathesis, I hold the bark to be absolutely improper, and have found it manifestly hurtful, especially in its beginning, and in its truly inflammatory state."

In the confluent small-pox the bark has been recommended to promote the rising of the pustules; this opinion our own experience teaches us to reject; but after the maturation of the pustules is completed, or where symptoms of putrescency, or a dissolved state of the blood supervenes, the bark cannot be too liberally employed. The other diseases in which the bark is recommended, are gangrenous sore throats, and indeed every species of gangrene; scarletina, dysentery, all hemorrhages of the passive kind; likewise other increased discharges; some cases of dropy, especially when unattended with any particular local affection, scrophula, ill conditioned ulcers, rickets, scurvy, states of convalescence, certain stages of phthisis pulmonalis, &c.

The official preparations of the bark are the powder, the extract, the tincture, and the decoction. This last, though frequently employed, is in many respects inferior even to a simple watery infusion; but the best form is that of powder, in which the constituent parts are in the most effectual proportion.

CINCHONA.—CORTEX RED PERUVIAN BARK. TREE. PERUVIANUS RUBER.

Cortex Peruvianus ruber officinarum.

THOUGH the specific character of this species has not yet been botanically determined, yet upon the testimony of Combe and Groschke, a drawing of it was sent to Linnaeus from Peru, which was found in the Linnean Herbarium purchased by Dr. Smith, to whom we are obliged for the annexed figure. In the original drawing two specimens of the branches are given, one in its floral and the other in its capsular state; to which is also added, a sketch of

the bark. On these authorities, and on that of Murray, who, in his sixth vol. of the *App. Medicam*⁴ refers to this figure, we consider ourselves sufficiently warranted to present it to the publick, not doubting of its being peculiarly acceptable to our medical readers.

It has evidently the essential characters of the Cinchona, while it differs specifically from all the others which we have seen of this genus. From that of the *C. officinalis*, the disparity is so obvious, that on comparing the two figures, it does not require to be pointed out.

The medicinal qualities of the bark have been considered already with that of the preceding.

⁴ See p. 45.

**ALOE PERFOLIATA SOCOTORINA. SOCOTORINE ALOE.**


_Sp. Ch._ A. foliis caulinis dentatis amplexicaulis vaginantibus, floribus corymbosis cernuis pedunculatis subcylindricis.¹

¹ _A. S._ folii longissimi et angustissimi, marginibus spinosis, floribus spicatis.

THE root is perennial, strong, fibrous: the flower-stems rise three or four feet in height, and are smooth, erect, of a glaucous green colour, and towards the top beset with ovate bracteal scales: the leaves are numerous, and proceed from the upper part of the root: they are narrow, tapering, thick, or fleshy, succulent, smooth, glaucous, and beset at the edges with spiny teeth: the flowers are produced
duced in terminal spikes, and of a purple or reddish colour: there is no calyx: the corolla is monopetalous, tubular, nectariferous, cut into six narrow leaves which separate at the mouth: the filaments are six, tapering, yellowish, inserted into the receptacle, and furnished with oblong orange-coloured antherae: the germen is oblong, supporting a simple slender style, of the length of the filaments, and terminated by an obtuse stigma: the capsule is oblong and divided into three cells, with as many valves, and contains many angular seeds.

It is a native of Africa, and flowers most part of the year.

Not only the succozone aloeis, which is the inspissated juice of the plant here represented, but also the hepatic or Barbados aloeis is directed for official use in our pharmacopoeias. This however being obtained from another variety of the same species, viz. the aloe (umenta) foliis spinosis confertis dentatis vaginantibus planis maculatis. It has not been thought necessary to give a separate figure of it here. Besides, it appears probable from the observations of Professor Murray, that different species as well as varieties of aloe would furnish the various kinds of this drug, and that Linnæus by referring these sorts to those plants, the recent juice of which seemed to respectively correspond the nearest to them in taste, might easily be milled; for Murray upon tasting the fresh juice of many different species of aloe, sometimes found it bitter, and at other times totally devoid of bitterness.

A tract of mountains about fifty miles from the Cape of Good Hope is wholly covered with the aloeis plants, which renders the

1. See Commentatio de fucsi albiis amari initis in Murr. Opus. tom. 2. p. 488. This author found the bitterest species to be the following: 1. Aloe elongata, floribus epicae tubulosa, triquetris subingentibus oblique dependibus, foliis aggregatis dentato-spinosis. It seems to be the variety spicae of the spec. plant. and is probably the aloe mentioned by Hughes and Browne. A figure of it is given in the Gottingen Trans. for the year 1768.

2. Aloe spicae. Thumb. (See Supp. plant.) This is said to afford the best hepatic aloe.

3. Aloe linguaformis (see Supp. reg. ed. 14.) This plant in the interior parts of the Cape, is cultivated by some as producing the best and purest aloe. Thumb. de Med. Afric. p. 7. But the greatest quantity of aloe exported from the Cape of Good Hope, is prepared from another species, not defined by Thunberg, though not uncommon in our botanic gardens V. Phystegi. Lifs. Handl. P. x. p. 112, and Sparman Reis til Gods Kloppen. p. 742, it is probably the A. spicae of Thumb.
planting of them there unnecessary; but in Jamaica and Barbadoes they are now carefully cultivated; to the former of these Islands, they were first brought from Bermuda, and gradually propagated themselves. They require two or three years standing before they yield their juice in perfection; to procure which, according to Dr. Browne, "The labourers go into the field with tubs and knives, and cut off the largest and most succulent leaves close to the stalk; these are immediately put into the tubs, and disposed one by the side of another in an upright position, that all the loose liquor may dribble out at the wound. When this is thought to be almost wholly discharged, the leaves are taken out one by one, passed through the hand to clear off any part of the juice that may yet adhere, or stick in the sides open veins; and the liquor put in shallow flat-bottomed vessels, and dried gradually in the sun, until it acquires a proper consistence. What is obtained in this manner is generally called socotrine aloes, and is the clearest and most transparent, as well as the highest in esteem and value." The method of procuring the common aloes he states to be nearly the same with that mentioned by Mr. Hughes, and lately by Mr. Millington: after a sufficient quantity of juice is drained from the leaves, to make it an object for the boiling house, the last-mentioned gentleman informs us, "three boilers, either of iron or copper, are placed to one fire, though some have but two, and the small planters only one. The boilers are filled with juice, and as it ripens or becomes more intensified, by a constant but regular fire, it is ladled forward from boiler to boiler, and fresh juice is added to that last sent from the fire, till the juice in that nearness to the fire (by much the smallest of the three, and commonly called by the name of tach, as in the manufactory of sugar) becomes of a proper consistence to be skipped, or ladled out into gourds, or other small vessels, used for its final reception. The proper time to skip or ladle it out of the tach, is when it is arrived at what is termed a refined height, or when it cuts freely, or in thin flakes from the edge of a small wooden slice, that is dipped from time to time into the tach for that purpose. A little lime-water is useful in this operation is too; it is most approved in Barbadoes. The following is taken at top, and tapers to pewter, or tin, if fluid parts are expected up for use. These accounts that given by Dr. Wright's following a carefully cleansed and cut in pieces. Baskets are put into minutes, when liquor is strong through a strainer, and the juice is sacrificed by a cock, and a is boiled briskly, requires constant observation of the consistence for sale. The

The aloe focons formerly brought the Red Sea: it contains a degree pellucund and purplish cast; wh hard and friable it softens between th

<sup>a</sup> See Browne's Jamaica, p. 198.<br><sup>b</sup> See his History of Barbadoes, p. 159.<br><sup>c</sup> See London Med. Journal, V. 8, p. 422.<br><sup>d</sup> It is now said to be No. 47.
lime-water is used by some aloe boilers during the process, when the
ebullition is too great." He adds, "as to the sun-dried aloe which
is most approved for medicinal purposes, very little is made in Bar-
badoes. The process is however very simple, though extremely
tedious. The raw juice is either put into bladders, left quite open
at top, and suspended in the sun, or in broad shallow trays of wood,
powder, or tin, exposed also to the sun every dry day, until all the
fluid parts are exhaled, and a perfect resin formed, which is then
packed up for use, or for exportation".

These accounts of procuring the aloe differ considerably from
that given by Dr. Wright, who says "Hepatic aloe is obtained in
the following manner. The plant is pulled up by the roots and
carefully cleansed from earth or other impurities. It is then sliced
and cut in pieces into small hand-baskets or nets. These nets or
baskets are put into large iron boilers with water, and boiled for ten
minutes, when they are taken out, and fresh parcels supplied till the
liquor is strong and black. At this period the liquor is thrown
through a strainer into a deep vat, narrow at bottom, to cool, and to
deposit its exultant parts. Next day the clear liquor is drawn off
by a cock, and again committed to the large iron vessel. At first it
is boiled briskly, but towards the end the evaporation is slow, and
requires constantly stirring to prevent burning. When it becomes
of the consistence of honey, it is poured into gourds or calabashes
for sale. The locutorine aloes may be prepared as above."

The aloe locutorina or locutorine aloe is so named, from being
formerly brought from the island Socotria or Zocotria at the mouth of
the Red sea: it comes wrapt in skins and is of a bright surface, and in
some degree pulchritudinous; in the lump a yellowish red colour with a
purplish cast; when reduced into powder of a golden colour. It is
hard and friable in the winter, somewhat pliable in the summer, and
softens between the fingers. Its bitter taste is accompanied with an
aromatic flavour, but not sufficient to prevent its being disagreeable:

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1. Millington, l. c.
2. V. Dr. Wright's account of the Medicinal plants growing in Jamaica, in Lond.
3. It is now said to be imported from the Cape by the Dutch East India Company.
4. No. 41. $7 0
5. the
the smell is not very unpleasant, and somewhat resembles that of myrrh. The aloe hepatica E. P. and barbadensis L. P. the Hepatic, Barbadoes, or common aloe, is chiefly brought from Barbadoes; the best sort in large gourd shells, an inferior kind in pots, and a still worse in cakes; is darker coloured than the foregoing, and not so clear or bright. It is generally drier and more compact, though sometimes, especially the cake sort, quite soft and clammy. Its smell is much stronger and more disagreeable: the taste intensely bitter and nauseous, with little or nothing of the aromatic flavour of the focotorine.

Another kind of aloe obtained from the aloe guineensis caballina vulgari similis sed tota maculata*, is also kept in the shops, and called aloe caballina, or horse aloe. This is easily distinguished from both the foregoing, by its strong rank smell: in other respects it agrees pretty much with the hepatic, and is now not unfrequently sold in its place. Sometimes it is prepared so pure and bright as scarcely to be distinguished by the eye, even from the focotorine, but its offensive smell readily betrays it; and if this also should be dissipated by art, its wanting the aromatic flavour of the finer aloe will be a sufficient criterion. This aloe is not admitted into the Materia Medica, and is employed chiefly by farriers.

All the kinds of aloe consist of a resin united to a gummy matter, and dissolve in pure spirit, proof spirit, and proof spirit diluted with half its weight of water; the impurities only being left. They dissolve also by the assistance of heat in water alone; but as the liquor grows cold, the resinous parts subside. The hepatic aloe is found to contain more resin and less gum than the focotorine, and this than the caballine. The resins of all the sorts, purified by spirit of wine, have little smell: that obtained from the focotorine has scarce any perceptible taste; that of the hepatic, a slight bitterish relish; and the resin of the caballine, a little more of the aloetic flavour. The gummy extracts of all the sorts are less disagreeable than the crude aloe: the extract of focotorine aloe has very little smell, and is in taste not unpleasant: that of the hepatic has somewhat stronger smell, but is rather more agreeable in taste than the extract of the focotorine: the gum of the caballine retains a considerable share of the peculiar rank smell of

* Cammel. Præc. Lat. p. 4.
this sort of aloe, but its taste is not much more unpleasant than that of the extracts made from the two other sorts.  

Aloes is neither noticed by Hippocrates nor Theophrastus, but Dioscorides mentions two kinds; and Avicenna tells us, that of the different kinds the succorine is the best. Celsus, however, who frequently employed aloe, does not mention any peculiar sort.

Aloes is a well known purgative; a property which it possesses not only when taken internally, but also by external application. This cathartic quality of aloe does not, like most of the others of this class, reside in the resinous part of the drug but in the gum, for the pure resin has little or no purgative power. Boerhaave declares aloe to be an effectual and safe cathartic, but though we may have little to fear from its hypertensive effects, yet in large doses it often produces much heat and irritation, particularly about the rectum, from which it sometimes occasions a bloody discharge: therefore, to those who are subject to piles, or of an hemorrhagic diathesis, or even in a state of pregnancy, its exhibition has been productive of considerable mischief; but on the contrary, by those of a phlegmatic constitution or suffering by uterine obstructions, and in some cases of dyspepsy, palsy, gout, and worms, aloe may be employed as a laxative with peculiar advantage. Its purgative effects are not always in proportion to the quantity taken, and as its principal use is rather to obviate constipations than to operate strongly, this ought to be no objection to its use. Respecting the choice of the different kinds of aloe, it may be observed that the succorine, as already mentioned, contains more gummy matter than the hepatic, and hence is found to purge with more certainty and greater irritation; therefore is most proper where a stimulus is required, or for promoting the uterine discharge: while the hepatic is better calculated for the purpose of a common purgative; and also by containing more resin answers better for external application considered as a vulnerary.

The dose of aloe is from half a scruple to half a dram, but it is seldom given alone. Several preparations of it are directed in the

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1 See Edinburgh new Dispensatory.

**IPECACUANHA.**


AFTER the great diligence of naturalists in exploring every quarter of the world, to extend the science of botany, it seems surprising that the plant Ipecacuanha, the roots of which have been in common use more than a century, should not have yet been botanically ascertained. It has been referred to several different genera, as that of paris, euphorbia, lonicera, viola, pfychotria, &c.; and though this last has lately been thought to be the genus to which it belongs, and consequently named *P.* emetica by the younger Linnaeus; yet the authority on which Mutis received the information, we cannot implicitly follow; and the figure before us, though evidently the true Ipecacuanha plant, not being advanced to a state of inflorescence, leaves this matter still undetermined. For the plant here represented, we are obliged to Sir Joseph Banks; to whom it was sent (preferred in spirits) from Brazil by Governor Phillips; and though it is not in a state of perfection, we trust it will, as a curiosity, be thought a valuable addition to our plates.

Fifo divides this root into two sorts, the white and the brown, or according to Geoffroy, the Peruvian and Brazilian Ipecacuanha; but three sorts are evidently distinguishable in our shops, viz. ashen-coloured

* *Pifon. Ind. res. Med. et Nat.* p. 231.
coloured or grey, brown, and white. The ash-coloured is brought from Peru, and "is a small wrinkled root, bent and contorted into a great variety of figures, brought over in short pieces full of wrinkles and deep circular fissures, down to a small white woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, looks smooth and resinous upon breaking; it has very little smell; the taste is bitterish and subacid, covering the tongue as it were with a kind of mucilage. The brown is small, somewhat more wrinkled than the foregoing; of a brown or blackish colour without, and white within; this is brought from Brazil (and corresponds with our specimen). The white root is woody, has no wrinkles, and no perceptible bitterness in taste. The first, the ash-coloured or grey Ipecacuan, is that usually preferred for medicinal use. The brown has been sometimes observed, even in a small dose, to produce violent effects. The white, though taken in a large one, has scarce any effect at all." b Dr. Irving has ascertained by experiments, c that this root contains a gummy and resinous matter, and that the gum is in much greater proportion, and is more powerfully emetic than the resin: that the cortical part is more active than the ligneous, and that the whole root manifests an antiseptic and astringent power. He also found its emetic quality to be most effectually counteracted by means of the acetic acid, infomuch that thirty grains of the powder taken in two ounces of vinegar, produced only some looser stools.

The first account we have of Ipecacuan is that published by Piso, in 1649; but it did not come into general use till thirty years afterwards, when Helvetius, d under the patronage of Louis XIV. employed it at the Hotel de Dieu, and introduced this root into common practice; and experience has proved it to be the mildest and safest emetic with which we are acquainted, having this peculiar advantage, that if it does not operate by vomit, it readily passes off by the other emunctories.

b Edin. New Dispens. p. 211.
c See the Dissertation which obtained the prize medal of the Harveian Society of Edinburgh, for 1784.
d See Recueil des Méthodes, p. 280.
It was first introduced to us with the character of an almost infallible remedy, in dysenteries and other inveterate fluxes, as diarrhœa, menorrhagia, and leucorrhœa, and also in disorders proceeding from obstructions of long standing: nor has it lost much of its reputation by time. The use of Ipecacuan in these fluxes, is thought to depend upon its restoring perspiration; for in these cases, especially in dysentery and diarrhœa, the skin is dry and tenæ; and while the common diaphoretics usually pass off by stool, small doses of this root have been administered with the best effects, proving both laxative and diaphoretic. * In the spasmodic asthma, Dr. Akenfide remarks, that where nothing contraindicates repeated vomiting, he knows no medicine so effectual as Ipecacuan. In violent paroxysms a scruple procures immediate relief. Where the complaint is habitual, from three to five grains every morning, or from five to ten every other morning, may be given for a month or six weeks.

This medicine has also been successfully used in hemorrhages. Several cases of menorrhagia are mentioned by Dahlberg, in which one third or half a grain was given every four hours till it effected a cure. These small doses are likewise found of great use in catarrhal and even consumptive cases, as well as in various states of fever. Dr. Cullen informs us, that he knew a practitioner who cured intermittents by giving five grains of Ipecacuanha, or enough to excite nausea, an hour before the accession of the fit was expected; and that “Dr. Thomp- son, formerly of Montrose, proposed to cure agues by the employment of emetics given at the time of accession, or at the end of the cold stage: and this practice has also been successful, and may indeed be executed by tartar emetic; but in trying such practices, I have found the Ipecacuanha more manageable than the other, and generally to be more easy to the patient.”

Ipecacuan, particularly in the state of powder, is now advantageously employed in almost every disease in which vomiting is

* Dr. Cullen attributes its good effects entirely to its purgative quality, M. M. Vol. 2. p. 477. 1 Med. Trans. vol. 3. p. 76.

indicated;
SYNONYMA.
p. 1051. Rall.
Helv. p. 1693.
manes five Pol.
Trichomanes. 1
Vol. 3. p. 52.
Bolton. Fil. Bri

Class Cryptogamia

Gen. Ch. Fr

Sp. Ch. A. frond

THE root is
of a dark brown or
six or eight inches
of a shining black if
indented at the ten
twenty pairs, of wh
others gradually
indicated; and when combined with opium, under the form of pulvis sudorificus, it furnishes us with the most useful and active sweating medicine which we possess. It is also given with advantage in very small doses even when it produces no sensible operation. The full dose of Ipecacuan in substance is a scruple, though less doses will frequently produce an equal effect. The officinal preparation is vinum ipecacuanæ.

ASPLENIUM TRICHOMANES. COMMON MAIDENHAIR, Or SPLEEN-WORT.


THE root is perennial, consisting of numerous slender fibres, of a dark brown colour: the general leaves are numerous, pinnated, fix or eight inches in length; the ribs of which are smooth, and of a flowering blackish colour; the pinnæ are sejunct, somewhat roundish, indented at the edges, placed oppositely, and consisting of about twenty pairs, of which the largest stands in the middle of the leaf; the others gradually decrease towards each extremity, especially the upper:
upper: the fructifications, or seed vesicles, are placed on the back of the pinnæ or lobes of the leaf, and form a row of three or four on each side of the midrib: at first they are yellowish, and are covered with a thin membrane, which when at maturity bursts, and discharges the contents over the other leaves.

It is common in this country, and is usually found on old walls and rocks in moist and shaded situations.

This plant we figure on the authority of the Edinburgh Pharmacopœia.

The leaves have a mucilaginous sweetish subastringent taste, without any particular flavour; they are esteemed useful in disorders of the breast, proceeding from a thickness and acrimony of the juices; and are likewise supposed to promote the expectoration of tough phlegm, and to open obstructions of the viscéra. They are usually directed in effusion or decoction, with the addition of a little liquorice. A syrup prepared from them, though it has now no place in our pharmacopœias, is frequently to be met with in our shops, both as prepared at home and imported from abroad. A little of these syrups mixed with water makes a very pleasant draught. The syrup brought from abroad has an admixture of orange flower-water.


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**LICHEN ISLANDICUS. ERYNGO-LEAVED LICHEN.**


Fam. Farina folii adaspera.

D. Foliacei.


THIS Lichen is foliaceous, erect, large: the leaves are crowded, connected together, tough, membranous, two or three inches long, variously finuated, or divided into irregular blunt lobes, turned in at the edges, and fringed with short strong bristles: the surface is smooth, shining, channelled, and of a pale green or brown colour: the fructifications or scutella are large, of a reddish brown colour, and placed on the lobes of the leaves. It is a native of Britain, particularly on the mountains of Wales and Scotland.

The medicinal qualities of the Lichen Islandicus have lately been so well established at Vienna, that this plant is now admitted into the Materia Medica of the Edinburgh Pharmacopoeia. It is extremely mucilaginous, and to the taste is bitter and somewhat astringent: its bitterness, as well as the purgative quality which it manifests in its recent state, are in a great measure dissipated on drying, or may be extracted by a slight infusion in water, so that the inhabitants of Iceland convert it into a tolerably grateful and nutritive food. An ounce of this Lichen, boiled a quarter of an hour in a pint of water, yielded seven ounces of a mucilage, as thick as that procured by the solution of one part of gum arabic in three of water.

The medical virtues of this Lichen were probably first learned from the Icelanders, who employ it in its fresh state as a laxative, but when deprived of this quality, and properly prepared, we are told that it is an efficacious remedy in consumptions, coughs, dysenteries, and diarrhœas. Scopoli seems to have been the first who of late years


No. 42. 7 F called
called the attention of physicians to this remedy in consumptive disorders; and further instances of its success are related by Herz, Cramer, Tromsdorff, Ebeling, Paulizky, Stoll, and others, who bear testimony of its efficacy in most of the other complaints above mentioned. Dr. Herz says, that since he first used the Lichen in dysentery, he found it so successful that he never had occasion to employ any other remedy; it must be observed, however, that cathartics and emetics were always repeatedly administered before he had recourse to the Lichen, to which he also occasionally added opium.

Dr. Crichton informs us, that during seven months' residence at Vienna he had frequent opportunities of seeing the Lichen Islandicus tried in phthisis pulmonalis at the General Hospital, and confesses, "that it by no means answered the expectation he had formed of it." He adds, however, "From what I have seen, I am fully convinced in my own mind, that there are only two species of this disease where this sort of Lichen promises a cure. The two species I hint at, are the phthisis hemoptica, and the phthisis pituita, or mucosa. In several cases of these I have seen the patients so far get the better of their complaints as to be dismissed the hospital cured; but whether they remained long so or not I cannot take upon me to say." That this Lichen strengthens the digestive powers, and proves extremely nutritious, there can be no doubt; but the great medicinal efficacy attributed to it at Vienna will not readily be credited at London. It is commonly given in the form of a decoction; an ounce and a half of the Lichen being boiled in a quart of milk. Of this a tea-cupful is directed to be drank frequently in the course of the day. If milk disagree with the stomach, a simple decoction of the Lichen in water is to be used. Care ought to be taken that it be boiled over a slow fire, and not longer than a quarter of an hour.

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* Briefs an Aerzte, vol. 2.
* Diff. de Lichene Islandico.
* Diff. de Lichene Islandico.

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JUNIPERUS LYCIA.
JUNIPERUS

SYNONYM


Lob. Icon. 22.

Cl. Dioecia.


Sp. Ch. J. foli.

THIS species is peculiar in its erect branches, round, blunt, with a cated with small, different plants, already given on when ripe of a

It is a native of country; for the the scaly appears drawn from a fp.

The officinal

Olibanum, is far appearing in dr.

reddish colour.*

* This drug has requ the single teas are cam.

nusculus; and wher ths cortices; the coarfa manna ths
JUNIPERUS LYCIA.  
LYCIAN JUNIPER, or CEDAR.
Olibanum.  Pharm. Lond. & Edinb.

SYNONYMA. Cedrus folio cupressi major, fructu flavecente. 


Sp. Ch.  J. foliis ternis undique imbricatis ovatis obtusis.

TIIIS species rises but to an inconsiderable height, sending off erect branches, covered with brown bark: the leaves are small, round, blunt, variously divided, and everywhere remarkably imbricated with small close scales: the flowers are male and female on different plants, and accord with the description which we have already given of the Juniperus Sabina: the berries are large, and when ripe of a dark brown colour.

It is a native of the South of Europe, and very scarce in this country; for that species called Lycia by the gardeners here, has not the feathery appearance represented in the plate before us, which was drawn from a specimen in the Herbarium of Sir Joseph Banks.

The officinal gummy resinous substance, known by the name of Olibanum, is laid to ounce spontaneously from the bark of this tree, appearing in drops or tears, of a pale yellowish, and sometimes of a reddish colour. *  " Olibanum has a moderately strong and not very

*This drug has received different appellations, according to its different appearances: the single tears are called simply olibanum, or thun: when two are joined together, thus masculum, and when two are very large, thus femininum: if several adhere to the bark thus torticeum: the fine powder, which rubs off from the tears, mica thun; and the coarser massa thun, agreeable
agreeable smell, and a bitterish somewhat pungent taste: in chewing it sticks to the teeth, becomes white, and renders the saliva milky. Laid on a red-hot iron, it readily catches flame, and burns with a strong diffusive and not unpleasant smell. On trituration with water, the greatest part of it dissolves into a milky liquor, which on standing deposits a portion of resinous matter."¹ The gummy and resinous parts are nearly in equal proportions; and though rectified spirit dissolves less of the Olibanum than water, it extracts nearly all its active matter. It is brought from Turkey, and from the East Indies; but that which comes from India is less esteemed.

In ancient times Olibanum seems to have been in great repute, and was chiefly used in affections of the head and breast, coughs, hæmoptysis, and in various fluxes both uterine and intestinal: it was also much employed externally. Riverius found it of great efficacy in pleurisies, which were said to be epidemic; and Geoffroy likewise experienced its success in these diseases, especially after venesection; at present, however, recourse is seldom had to this medicine, which is now superseded by myrrh, and other articles of the resinous kind.

¹ Lewis, M. M. p. 460.
² It is the "θάνατος of Theophrastus & Dioscorides, διαφέρων of Hippocrates.

PINUS SYLVESTRIS. SCOTCH FIR.
Pinus liquida. Pharm. Lond. & Edinb.

THIS tree grows so as to be made in diverging, and brown colour; they are concave on the outer of a deep green glaucous branches: the flowers former stand in but at the bottom united at the bottom erect antherae: the is small, composed oblong, imbricated germein is very few simple stigma: the before flood open a membranaceous

It is a native of In black, boggy and hence named thrive. The wood is, by the inhabitants bread.

Though most fea

**Eff. Gen. Ch.** **Mas. Cal.** 4-phyllus. **Cor. o. Stam.** plurima.  
**Antherae nuda.**  
**Fem. Cal.** floribill: squama 2-flora. **Cor. o. Pfl. 1.**  
**Nux** ala membranacea excepta.


**This** tree grows usually straight, tapering, and to a great height, so as to be made into good masts for ships: the branches are numerous, divaricating, and like the stem covered with rough bark of a reddish brown colour: the leaves stand in pairs, and are united at the base with the sheath; they are two or three inches long, convex on one side, concave on the other, very narrow, linear, striated, somewhat pointed, of a deep green glaucous colour, and surround the ends of the smaller branches: the flowers are male and female upon the same tree; the former stand in bunches without any calyx, unless the loose scales be considered as such: there is no corolla: the filaments are numerous, united at the bottom, forming an upright pillar, and furnished with erect antheræ: the latter consists of a calyx, or common cone, which is small, composed of scales, with two flowers in each; the cones are oblong, imbricated, permanent, inflexible: there is no corolla: the germs is very small, producing a tapering style, terminated by a simple stigma: there is no capsule, but the scales of the cone, which before flood open close upon the seed or nut, which is supplied with a membranaceous wing.

It is a native of Scotland, especially among the highland mountains, and hence named Scotch Fir. It flourishes best in a poor sandy soil. In black, boggy or chalky ground, or near stagnant waters, it does not thrive. The wood is used for various purposes, and the inner bark is, by the inhabitants of the north of Europe, made into a kind of bread.

Though most species of Fir possess in common the same medicinal properties, and all agree in affording the different products of the No. 42.  

7 G  

**turpentine**
turpentine kind; yet as it has been found that some species produce these different articles of the Materia Medica in greater purity, or in more abundance than others: we have accordingly assigned to each, the respective article which it best supplies. This tree not only furnishes most abundantly the Pia liquida, or Tar, but also from it may be obtained the common turpentine, and the white and yellow refins.

The manner in which the Tar is procured is by cutting the tree into pieces, which are inclosed in a large oven constructed for the purpose, with a channel at the bottom. A sufficient degree of heat is then applied, by which the tar is forced out of the wood, and runs off by the opening at the bottom: a process termed distillation per descensum.

Tar, which is well known from its economical uses, is properly an empyreumatic oil of turpentine, and has been much used as a medicine both internally and externally. Tar water,* or water impregnated with the more soluble parts of tar, was sometime ago a very popular remedy in various obstinate disorders, both acute and chronic; especially in small-pox, scurvy, ulcers, fistulas, rheumatism, asthma, coughs, cutaneous complaints, &c. and though its medicinal efficacy was greatly exaggerated by the publications of Bishop Berkeley, Prior, and others, yet Dr. Cullen acknowledges that he experienced this preparation in several cases to be a valuable medicine, and that it "appeared to strengthen the tone of the stomach, to excite appetite, promote digestion, and to cure all symptoms of dyspepsia. At the same time it manifestly promotes the excretions, particularly that of urine; and the same may be presumed to happen in that of others. From all these operations it will be obvious, that in many disorders of the system this medicine may be highly useful."

* The proportions that have been commonly employed, are two pounds of tar to a gallon of water, which are to be well stirred together, then suffered to settle for two days, and the clear liquor poured off for use. From a pint to a quart, according to circumstances, may be taken in the course of twenty-four hours. Dr. Cullen thinks with Mr. Reid, that the acid principle gives the virtue to tar water; and hence the Bishop of Clonfey properly preferred the Norway tar to that of New England, as the former contains more acid than the latter.

An ointment has been chiefly employed. A leg of mutton, to give the mixture of the body is to be preferred, whilst the alleged to be a benefit of its virtues, but for reasons of repetition.

**PINUS ABI**

**SYNONYM**

493. Picea
   Abies mas
   Abies. *Hi*
   fructu deo
   Fir Tree.

*Clas* Monoc,”

*Eff. Gen. Ch*
An ointment of tar is directed in both Pharmacopoeias, which has been chiefly employed in cutaneous disorders. Dr. Cullen says, "I have met with an empirical practice with respect to tar of a singular kind. A leg of mutton is laid to roast; and whilst it continues roasting, it is basted with tar instead of butter. Whilst the roasting goes on, a sharp skewer is frequently thrust into the substance of the mutton, to give occasion to the running out of the gravy; and with the mixture of the tar and gravy to be found in the dripping-pan, the body is to be anointed all over for three or four nights successively; whilst for the same time the same body-linen is to be worn. This is alleged to be a remedy in several cases of lepra; and I have had one instance of its being employed in a lepra ichthyosis with great success: but for reasons readily to be apprehended, I have not had opportunities of repeating the practice."

L. c.

PINUS ABIES. NORWAY SPRUCE FIR TREE.

Pix burgundica. Pharm. Lond. & Edinb.


Sp. Ch.

THIS tree somewhat resembles the former in its general appearance: the leaves are short, solitary, pointed, somewhat quadrangular, and upon the older branches incline in opposite directions: the cones are almost cylindrical, bent downwards, larger, and of a darker colour than the preceding species.

Ray and Hudson mention this tree as a native of Scotland; but we are told in the Flora Scotica that the P. sylvestris is the only species of pine that grows wild in that country.

Upon an incision being made into the bark of this tree, a clear tenacious fluid issues, which concretizes into a resinous substance, known by the name of resina abietis. This, after being boiled in water, and strained through a linen cloth, is called in the Pharmacopoeias Pix burgundica, or Burgundy pitch. But if the boiling of the native resin is continued till the water is wholly evaporated, and wine vinegar is at this time added, a substance named Colophonium is formed.

Burgundy pitch, which is chiefly imported from Saxony, is of a solid consistence, yet somewhat soft, of a reddish brown colour, and not disagreeable in smell. It is entirely confined to external use, and was formerly an ingredient in several ointments and plasters. In inveterate coughs, affections of the lungs, and other internal complaints, plasters of this resin, by acting as a topical stimulus, are frequently found of considerable service.

PINUS PICEA.
PINUS

SYNONYM

Pin. p. 595.
Abies Taxin.
foliis solitaria.
tundis planis.

n. 1657. Pin.
fructu furfur.


St. Ch. P. foliis
obtusilim.

THIS tree fol.
bark is closer, and
leaves are solitary.
two longitudinal
Alue pointed, at
the lower branche.
manner: the con
which, when your
upper margin, bu
and closely emba.
Germany; and anc.
No. 42.
PINUS PICEA.  
SILVER FIR TREE.
Terebinthina communis.  Pharm. Lond. & Edinb.

SYNONYMA.  Abies conis furfum spectantibus, feu mas.  Baub.  
folis foliariis emarginatis, conis oblongis erectis, squamis subro-  
fructu furfum spectante.  Du Hamel. Arb. 1.  p. 3. t. 1.  The Silver  


Ant. nuda.  
Nux ala membranacea excepta.

Sp. Ch.  P. foliis foliariis planis emarginatis pecitinatis, squamis coni  

THIS tree seldom grows to the height of the former species; its  
bark is closer, and that of the branches is of shining silvery hue: the  
leaves are solitary, short, rigid, and on the under side marked with  
two longitudinal whitish lines; on the upper branches they are ob-  
tusely pointed, and grow so close as almost to conceal the bark; on  
the lower branches they are emarginated, and stand in a pecinated  
manner: the cones are upright, large, and furnished with scales,  
which, when young, have a membranous appendage, rising from the  
upper margin, but when fully formed, the scales are very obtuse,  
and closely embrace each other.  It is a native of Switzerland and  
Germany; and according to the Hortus Kewensis was first cultivated  
No. 42.  7 H  in
in the Chelsea Garden, in 1739; but as thirty-six fine trees of this species are mentioned by Plot and Ray as growing near Newport, in Shropshire, it must have been cultivated in this country at a much earlier period.

Though Linnaeus, and several other writers on the Materia Medica, refer the common turpentine to the pinus sylvestris, and the terebinthina argenteoratenis, or Strasburg turpentine, to the Silver Fir Tree; yet, upon the authority of Murray, who follows Du Hamel and Haller, we have ascribed the terebinthina vulgaris to the pine here figured, which pours out the turpentine so freely, that it is seldom necessary to make incisions through the bark for the purpose.

The medicinal uses of the different turpentines will be considered under the Pinus Larix.

PINUS LARIX. COMMON WHITE LARCH TREE.
Terebinthina veneta. Pharm. Lond. & Edinb.


THE
THE long flender pendent branches and whitish bark readily distinguish the Larch from the preceding species of pine: the leaves are deciduous, flender, soft, of a bright green colour, and placed in bundles: the cones are small, egg-shaped, covered with obtuse scales, from beneath which, the bracteal leaves appear.

It is a native of Switzerland and Germany, flowering in March and April, and cultivated in England since the year 1629.

The terebinthina veneta, or more properly called larigna (as we are not wholly supplied with this article by the Venetians) issues spontaneously through the bark of this tree, but is more commonly obtained by wounding the bark at the distance of about two feet from the ground, and inserting in the wound a small canula, through which the turpentine flows into proper vessels, which are placed for its reception.

This turpentine is usually thinner than any of the other sorts, of a clear whitish or pale yellowish colour, a hot pungent bitterness disagreeable taste, and a strong smell, without any thing of the aromatic flavour of the Chian kind.—The different turpentines reserved for consideration here, are the Chian or Cyprus turpentine, obtained from Pinus terbinthi, (see page 415.) 2. the Common, from the Pinus Picca: to this tree is also referred the Terebinthina argentata, or Strasburg turpentine: 3. the Venice turpentine: and here we may include the balsamum canadense, or Canada balm, which may be considered as one of the purest of the turpentines, and is procured from the Pinus Balsamea, or Balm of Gilead-Fir.

All these turpentines dissolve totally in rectified spirit, but give out little to watery menstrua: they become miscible with water, into a milky liquor, by the mediation of the yolk or white of an egg, and more elegantly by mucilages. Distilled with water, they yield a notable quantity of a subtle penetrating essential oil, vulgarly called spirit; a yellow or blackish resin remaining in the still, which is the common resin of the shops. The essential oil, on being distilled in a retort, becomes more subtle, and in this state is called ethereal oil of turpentine.

All the turpentines have been considered as hot stimulating corrodants and detergents, qualities which they possess in common.
They stimulate the first passages, and prove laxative; and we are told by Dr. Cullen, that half an ounce or an ounce of Venice turpentine, triturated with the yolk of an egg, and diffused in water, may be employed in the form of an injection, as the most certain laxative in colics, and other cases of obstinate constiveness. When turpentine is carried into the blood-veins, it stimulates the whole system; hence its use in chronic rheumatism and paralysis. Turpentine readily passes off by urine, which it imbues with a peculiar odour; also by perspiration, and probably by exhalation from the lungs: and to these respective effects are to be ascribed the virtues it may possess in gravelly complaints, scurvy, and pulmonic disorders. In all these diseases, however, and especially the last, this medicine, as well as some of the gums and balsams of the terebinthinate kind, by acting as stimulants, are often productive of mischief, as was first observed by Boerhaave, and since by Fothergill.

Turpentine has been much used in gleets and fluor albus; its efficacy in the former of these disorders Dr. Cullen ascribes to its inducing some degree of inflammation of the urethra; in proof of which he says, "I have had some infinaces, both of turpentine and balsam of copaiva, producing a manifest inflammation in the urethra, to the degree of occasioning a suppression of urine; but when these effects went off, the gleet, which had subsisted for some time before, was entirely cured."

The essential oil, in which the virtues of turpentine reside, is not only preferred for external use, as a rubificient, &c. but also internally as a diuretic; and by Pitcairn and Cheyne as a remedy for the sciatica; but few stomachs are able to bear it in the doses they direct.

Turpentine, so much used formerly as a digestive application, is in modern surgery almost wholly exploded.

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The following ARRANGEMENT is extracted from the MATERIA MEDICA, published by Dr. CULLEN.

MATERIAE MEDICÆ TABULA GENERALIS.

In qua Medicamenta ad Capita quaedam secundum indicationes morborum curatorias quibus respondent, referuntur.

MATERIA MEDICA coactat ex

\{
  \begin{align*}
    \text{NUTRIMENTIS quæ sunt}, \\
    \text{Libri, Sect. I.} \\
    \text{Potius, S. II.} \\
    \text{et quæ cum his affinuntur Condimenta, S. III.} \\
  \end{align*}
\}

\[
\begin{align*}
  \text{Sobda.} & : \\
  \text{Simplicia.} & : \\
  \text{Astringentia, Cap. I.} \\
  \text{Tonica, C. II.} \\
  \text{Emollientia, C. III.} \\
  \text{Erodentia, C. IV.} \\
  \text{Viva.} & : \\
  \text{Stimulantia, C. V.} \\
  \text{Sedativa.} & : \\
  \text{Narcotica, C. VI.} \\
  \text{Refrigerantia, C. VII.} \\
  \text{Antisepsiæ medica, C. VIII.} \\
  \text{Fluida.} & : \\
  \text{Immutantia.} & : \\
  \text{Fluidatum.} & : \\
  \text{Astringentia, C. IX.} \\
  \text{Inflammatia, C. X.} \\
  \text{Mitutum.} & : \\
  \text{Acetenum corrigentia.} & : \\
  \text{In genere} & : \\
  \text{Demulcentia, C. XI.} & : \\
  \text{In specie} & : \\
  \text{Antitoxina, C. XII.} & : \\
  \text{Antalkaline, C. XIII.} & : \\
  \text{Antisepia, C. XIV.} \\
  \end{align*}
\]

\[
\begin{align*}
  \text{Evacuationia.} & : \\
  \text{Erupta, C. XV.} \\
  \text{Stagnativa, C. XVI.} \\
  \text{Despeltae mutue, C. XVII.} \\
  \text{Euncta, C. XVIII.} \\
  \text{Cathartica, C. XIX.} \\
  \text{Distrutta, C. XX.} \\
  \text{Diarheatica, C. XXI.} \\
  \text{Minagoga, C. XXII.} \\
  \end{align*}
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Vol. III.
CATALOGUE of the VEGETABLE MATERIA MEDICA,

According to the preceding Table.

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<td>Sinapi.</td>
<td>Sinaroubra.</td>
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<table>
<thead>
<tr>
<th>D. Alliææ.</th>
<th>Trifolium paluste</th>
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<tbody>
<tr>
<td>Allium.</td>
<td>Fumaria.</td>
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<th>E. Conifææ.</th>
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<tr>
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<tr>
<td>Pinus.</td>
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<tr>
<td>Juniperus.</td>
<td>Quaæta.</td>
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<table>
<thead>
<tr>
<th>F. Balzamica.</th>
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<tbody>
<tr>
<td>Terebinthæ.</td>
<td>Fumaria.</td>
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<tr>
<td>o. Balsamum car.</td>
<td>Quaæta.</td>
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<tr>
<td>Balzamum cum</td>
<td>Sinaroubra.</td>
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<tr>
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<tr>
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<table>
<thead>
<tr>
<th>G. Refugia.</th>
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<tr>
<td>Gentiana.</td>
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<td>Lílium album</td>
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<th>B. Umbellæ.</th>
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</tr>
<tr>
<td>Lílium album</td>
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CATALOGUE of the VEGETABLE MATERIA MEDICA.

II. Aromaticæ.
- Cinnamomum
- Nux Moschata
- Mace
- Caryophyllus arom.
- Pimento
- Canella alba
- Cascarilla
- Pipai nigrum
- longum
- indicum
- Zingiber
- Cardamomum minus
- Zedoaria
- Serpentina virginiana
- Ginfeng
- Salanus aromaticus

VI. Narcotica.
   a Rheasæ
   b. Umbellataræ
   c. Cicuta
   d. Solanacæa.

   Belladonna
   Hyoscyamus
   Nicotiana
   Solanum
   Stramonium
   d. Virosæ

   Lausus
   Camphora
   Crocus
   Vinum

VII. Refrigerantia.
- Plantarum Fruëtus
- Herbe et Radices acidi

VIII. Antispasmodica.
- Herba sativa
- Artemisia
- Atriplex sativa
- Cuminum
- Pulegium
- Ruta
- Sabina

- Gummi sativa
- Asafetida
- Galbanum
- Opoponax
- Valeriana sylvestris

IX. Diluentia.
X. Atenuantia.
- Alkaliæ
- Saccharum
- Glycyrrhiza
- Fruetus ficatae

XI. Inpissantia.
- Acida
- Demulcentia farinosa
- et mucilaginosa

XII. Demulcentia.
- Mucilago
- Gummi arboecum
- tagacantha
- Fannoso
- Oleora blanda

XIII. Antacidæa.
XIV. Antalkalina.

XV. Antiseptica.
- Plantarum partes acidiæ
- Olera acephentia
**CATALOGUE of the VEGETABLE MATERIA MEDICA.**

<table>
<thead>
<tr>
<th>System</th>
<th>Glycyrrhiza</th>
<th>Aconitum</th>
<th>Delphinium</th>
<th>Helleborus</th>
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<tr>
<td>XVI. ERHINA.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Helleborus albus</td>
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<tr>
<td>Iris palustris</td>
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</tr>
<tr>
<td>Pyrethrum</td>
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<tr>
<td>XVII. SYLLOGOGA.</td>
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<tr>
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<tr>
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<tr>
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<td>Piper</td>
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<tr>
<td>Pyrethrum</td>
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<tr>
<td>XVIII. EXPECTORANTIA.</td>
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<tr>
<td>Hedera terrefilis</td>
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<tr>
<td>Marrubium</td>
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<tr>
<td>Pulegium</td>
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<tr>
<td>Aluca campana</td>
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<tr>
<td>Iris florentina</td>
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<tr>
<td>Nicotiana</td>
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<td>Scilla</td>
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<td>Tussilago</td>
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<tr>
<td>Benzoe</td>
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<tr>
<td>Styrax</td>
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<tr>
<td>Balsamum canad.</td>
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<tr>
<td>Pyrethrum</td>
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<thead>
<tr>
<th>System</th>
<th>Aristolochia</th>
<th>Frangula</th>
<th>Sanguinaria</th>
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<tbody>
<tr>
<td>XVIII. EXPECTORANTIA.</td>
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[This Arrangement, though evidently defective, yet considering the authority on which it stands, we have thought proper to publish it without any material alteration.]
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<tr>
<th>Systematic Names</th>
<th>English</th>
<th>Official</th>
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<tbody>
<tr>
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<td>Glycyrrhiza</td>
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<td>Goats Thorn Milk Vetch</td>
<td>Tragacantha, gummi</td>
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<tr>
<td>Trigonella Fumum gracum</td>
<td>Common Fenugreek</td>
<td>Fumum gracum</td>
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**XXV. LOMENTACEÆ.**

<table>
<thead>
<tr>
<th>Caffia Senna</th>
<th>Senna Caffia</th>
<th>Senna</th>
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<td>Puging Caffia</td>
<td>Caffia fistularis</td>
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<td>Catechu Mimosa</td>
<td>Catechu, extrātum</td>
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<td>Egyptian Thom Mimosa</td>
<td>Arabecum, gummu</td>
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<td>Tamarindus</td>
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<tr>
<td>Hæmatoxylum campbrianum</td>
<td>Logwood Tree</td>
<td>Lignum Campechenæ</td>
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<td>Polygala Senega</td>
<td>Rattlesnake-Root Milk-Wort</td>
<td>Seneka</td>
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<td>Fumaria</td>
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**XXVI. MULTISILIQUÆ.**

<table>
<thead>
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<th>Aconitum Napellus</th>
<th>Common Wolf's-Bane</th>
<th>Napellus</th>
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<tbody>
<tr>
<td>Delphium Staphisagria</td>
<td>Staveacre</td>
<td>Staphisagria</td>
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<tr>
<td>Helleborus niger</td>
<td>Black Hellebore</td>
<td>Helleborus niger</td>
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<tr>
<td>---</td>
<td>Beas'-Foot</td>
<td>Helleborafter</td>
</tr>
<tr>
<td>Anemone pratensis</td>
<td>Meadow Anemone</td>
<td>Pulatilla nigicaus</td>
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<tr>
<td>Clematis refiflora</td>
<td>Upright Virgin's Bower</td>
<td>Flammula Jovis</td>
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<tr>
<td>Dictamnus albus</td>
<td>Baseard Dittany</td>
<td>Dictamnus albus</td>
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<td>Ruta graveolens</td>
<td>Common Rue</td>
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**XXVII. SENTICOSÆ.**

<table>
<thead>
<tr>
<th>Potentilla reptans</th>
<th>Cinquefoil</th>
<th>Pentaphyllum</th>
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<tbody>
<tr>
<td>Rubus idæus</td>
<td>Rasp-Berry</td>
<td>Rubus idæus</td>
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<tr>
<td>Rofa centfolia</td>
<td>Hundred-leaved Rose</td>
<td>Rofa damascena</td>
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<tr>
<td>---</td>
<td>Red Officinal Rose</td>
<td>Rofa rubra</td>
</tr>
<tr>
<td>canina</td>
<td>Hip, or Dog Rose</td>
<td>Cynobatus, frustis</td>
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**XXVIII. POMACEÆ.**

<table>
<thead>
<tr>
<th>Pyrus Cydonia</th>
<th>Quince Tree</th>
<th>Cydonium malum</th>
</tr>
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<tbody>
<tr>
<td>Prunus domestica</td>
<td>Prune, or Plum Tree</td>
<td>Prunum gallicum</td>
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<tr>
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<td>Sloe Tree</td>
<td>Prunum sylvestre</td>
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<tr>
<td>Amygdalus communis</td>
<td>Common Almond</td>
<td>Amygdala</td>
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<td>Punica Granatum</td>
<td>Pomegranate</td>
<td>Granatum</td>
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<td>Citrus Medica</td>
<td>Lemon Tree</td>
<td>Limon</td>
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<td>Orange Tree</td>
<td>Aurantium hispalenses</td>
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<tr>
<td>Ribes rubrum</td>
<td>Red Currant</td>
<td>Ribes rubrum</td>
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<tr>
<td>Ribes nigrum</td>
<td>Black Currant</td>
<td>Ribes nigrum</td>
</tr>
<tr>
<td>Myrtus Pimenta</td>
<td>All-Spice</td>
<td>Pimento</td>
</tr>
<tr>
<td>Caryophyllus aromaticus</td>
<td>Clove Tree</td>
<td>Caryophyllum aromaticum</td>
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<thead>
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<tr>
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<thead>
<tr>
<th>XXX. Succulentae</th>
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<tbody>
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<tr>
<td>Caryophyllus aromaticus</td>
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<table>
<thead>
<tr>
<th>XXXI. Columnifera, S. Malvaceae</th>
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<tbody>
<tr>
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<tr>
<td>Malva sylvestris</td>
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<thead>
<tr>
<th>XXXII. Grunales</th>
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<td>Guaiacum officinalis</td>
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<td>Quassia amara</td>
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<td>Linum usitatissimum</td>
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<td>Cistus creticus</td>
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<td>Hypericum perforatum</td>
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<td>Fraxinus Orus</td>
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<td>Rhamnus catharticus</td>
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<td>Sambucus nigra</td>
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<td>Amyris Elemifera</td>
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<td>Copaifera officinalis</td>
</tr>
<tr>
<td>Myroxylon peruvianum</td>
</tr>
<tr>
<td>Toluifera Balsamum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXXVI. Coadunatae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhamnus catharticus</td>
</tr>
<tr>
<td>Sambucus nigra</td>
</tr>
<tr>
<td>Amyris Elemifera</td>
</tr>
<tr>
<td>Copaifera officinalis</td>
</tr>
<tr>
<td>Myroxylon peruvianum</td>
</tr>
<tr>
<td>Toluifera Balsamum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXXVII. Dumose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcatus Hippo-cafum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXXVIII. Trihitate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcatus Hippo-cafum</td>
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</table>

<table>
<thead>
<tr>
<th>Systematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Croton ( \text{Ricinus communis} )</td>
</tr>
<tr>
<td>Stalagmitis ( \text{Sabal} )</td>
</tr>
<tr>
<td>Salvia ( \text{Salvia} )</td>
</tr>
<tr>
<td>Chenopod ( \text{Chenopodium} )</td>
</tr>
<tr>
<td>Rumex ( \text{Rumex} )</td>
</tr>
<tr>
<td>Laurus ( \text{Laurus} )</td>
</tr>
<tr>
<td>Safflower ( \text{Carthamus} )</td>
</tr>
<tr>
<td>Common Flax ( \text{Linum} )</td>
</tr>
<tr>
<td>Wood-Sorrel ( \text{Oxalis} )</td>
</tr>
<tr>
<td>Balsam of Gilead ( \text{Myrrhis} )</td>
</tr>
<tr>
<td>Sparrow-Flax ( \text{Lupinus} )</td>
</tr>
<tr>
<td>Balsam of Peru ( \text{Myroxylon} )</td>
</tr>
<tr>
<td>Balsam of Tolu ( \text{Cananga} )</td>
</tr>
<tr>
<td>Manna ( \text{Balanus} )</td>
</tr>
<tr>
<td>Daphne ( \text{Morus} )</td>
</tr>
<tr>
<td>Cocos ( \text{Cocos} )</td>
</tr>
<tr>
<td>Piper ( \text{Piper} )</td>
</tr>
<tr>
<td>Acorus ( \text{Acorus} )</td>
</tr>
<tr>
<td>Arum ( \text{Arum} )</td>
</tr>
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</table>
## CATALOGUE.


<table>
<thead>
<tr>
<th>XXXIX.</th>
<th>TRICOGENAE.</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Croton <em>Cofcarilla</em></td>
<td>Willow-leaved Croton</td>
<td><em>Cafcarilla</em></td>
<td></td>
</tr>
<tr>
<td>Ricinus <em>communis</em></td>
<td>Palma Chiriti</td>
<td>Ricinus</td>
<td></td>
</tr>
<tr>
<td>Stalsgmitis <em>Cambogioides</em></td>
<td>Gamboge Tree</td>
<td>Gambogia</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XL.</th>
<th>OLERACEAE.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salvia <em>Kali</em></td>
<td>Prickly Salt-Wort</td>
<td>Barilla; Natron</td>
<td></td>
</tr>
<tr>
<td>Chenopodium <em>Pulvaria</em></td>
<td>Stinking Goosefoot</td>
<td><em>Atriplex fetida</em></td>
<td></td>
</tr>
<tr>
<td>Rumex <em>aquaticus</em></td>
<td>Water Dock</td>
<td><em>Hydrolapathum</em></td>
<td></td>
</tr>
<tr>
<td>— Acesta</td>
<td>Common Sorrel</td>
<td>Acetosa</td>
<td></td>
</tr>
<tr>
<td>Rheum <em>palmatum</em></td>
<td>Officinal Rhubarb</td>
<td>Rhabarbarum.</td>
<td></td>
</tr>
<tr>
<td>Polygonum <em>Biforta</em></td>
<td>Briofft Snakeweed</td>
<td>Bifotta</td>
<td></td>
</tr>
</tbody>
</table>

| Laurus *Cinnamomum* | Cinnamon Tree | Cinnamomum | |
| — nobilis | Sweet Bay | Laurus | |
| — Saffafras | Saffafras Tree | Saffafras | |
| — Camphora | Camphor Tree | Camphora | |
| Canella *alba* | Laurel-leaved Canella | Canella *alba* | |
| Myristica *Moifibata* | Nutmeg Tree | *Nux moschata* | |

<table>
<thead>
<tr>
<th>XLI.</th>
<th>SABRIDÆ.</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Parietaria <em>officinalis</em></td>
<td>Wall Pellitory</td>
<td>Parietaria</td>
<td></td>
</tr>
<tr>
<td>Dorstenia <em>Contrayerva</em></td>
<td>Contrayerva</td>
<td>Contrayerva</td>
<td></td>
</tr>
<tr>
<td>Ficus <em>Carica</em></td>
<td>Fig Tree</td>
<td>Carica</td>
<td></td>
</tr>
<tr>
<td>Urtica <em>dioica</em></td>
<td>Common Nettle</td>
<td>Urtica</td>
<td></td>
</tr>
<tr>
<td>Morus <em>nigra</em></td>
<td>Mulberry Tree</td>
<td>Morum</td>
<td></td>
</tr>
<tr>
<td>Ulmus <em>campesritis</em></td>
<td>Common Elm</td>
<td>Ulmus</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XLII.</th>
<th>verzeculae.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Daphne <em>Mezereum</em></td>
<td>Mezereum</td>
<td>Mezereum</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XLIII.</th>
<th>PALMÆ.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocos <em>butyrasea</em></td>
<td>Oil Palm Tree</td>
<td>Palma, <em>oleum</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XLIV.</th>
<th>PIPERITÆ.</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Piper <em>nigrum</em></td>
<td>Black Pepper</td>
<td><em>Piper nigrum</em></td>
<td></td>
</tr>
<tr>
<td>— longum</td>
<td>Long Pepper</td>
<td>— longum</td>
<td></td>
</tr>
<tr>
<td>— Cubeba</td>
<td>Cubeb Pepper</td>
<td>Cubebæ</td>
<td></td>
</tr>
<tr>
<td>Acorus <em>Calamus</em></td>
<td>Sweet Flag</td>
<td>Calamus aromaticus</td>
<td></td>
</tr>
<tr>
<td>Arum <em>maculatum</em></td>
<td>Common Arum</td>
<td>Arum</td>
<td></td>
</tr>
</tbody>
</table>
CATALOGUE.

XLV. SCITAMINEÆ.

Amomum Zingiber Ginger Zingiber
—— Cardamomum Cardamom Cardamomum minus
Curcuma longa Turmeric Curcuma
Kampferia rotundata Zedoary Zedoaria

IL. LILIACEÆ.
Lilium candidum Common White Lily Lilium album
Scilla maritima Official Squill Scilla
Allium sativum Common Garlick Allium
Veratrum album White Hellebore Helleborus albus
Colchicum autumnale Common Meadow Saffron Colchicum
Crocus sativus Saffron Crocus
Aloe species varia Aloe Aloë
Convallaria Polygonatum Solomon’s Seal Convallaria

XLVI. ENSATE.
Iris florentina Florentine Orris Iris florentina
—— Pseudosculus Yellow Water Flag Iris palustris

XLVII. ORCHIDEÆ.
Orchis mascula Male Orchis Satyrium

XLIX. TRIPETALOIDÆ.
Calamus Rotang Dragon’s Blood Tree Sanguis dsacons

L. GRAMINEÆ.
Triticum hibernum Wheat Triticum
Hordeum distichon Barley Hordeum
Avena sativa Oat Avena
Saccharum officinarum Sugar Cane Saccharum

LII. FILICES.
Polypodium Filix mas Male Fern Filix
Asplenium Trubonanides Maidenhair Trichomanes

LIII. MSC Æ.

LIV. AALGÆ.
Lichen islandicus Eryngo-leaved Lichen Lichen islandicus

LV. FUNGI.
Boletus ignarius Agaric Agaricus chirurgorum

In which are related are a Order:

SYSTEMS.

Pinus flexu Pica
—— Abies Lar.
Juniperus
—— Salix frag.
Juglans reg. Plátia
—— L. Arčium
Centaurca Deontodon
Artumaria
—— Tanacetum
Tussilago Amethism
—— P. Inula Helen
Arnica monta
Achillea Mil
CATALOGUE II.

In which all the Plants composing the MATERIA MEDICA, as referred to by the COLLEGES of LONDON and EDINBURGH, are arranged according to their Botanical Affinities or Natural Orders, adopted by Professor Murray.

I. CONIFERÆ.

<table>
<thead>
<tr>
<th>Latin Name</th>
<th>English Name</th>
<th>Officinal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinus sylvestris</td>
<td>Scotch Fir</td>
<td>Pin liquida</td>
</tr>
<tr>
<td>Picea</td>
<td>Silver Fir Tree</td>
<td>Terebinthina vulgaris</td>
</tr>
<tr>
<td>Abies</td>
<td>Norway Spruce Fir Tree</td>
<td>Pix Burgundica</td>
</tr>
<tr>
<td>Larix</td>
<td>Common White Larch Tree</td>
<td>Terbinthina veneta</td>
</tr>
<tr>
<td>Juniperus communis</td>
<td>Common Juniper</td>
<td>Juniperus</td>
</tr>
<tr>
<td>Lycia</td>
<td>Olbanum Juniper</td>
<td>Olbanum, gummi resina</td>
</tr>
<tr>
<td>Sabina</td>
<td>Common Savin</td>
<td>Sabina</td>
</tr>
</tbody>
</table>

II. AMENTACEÆ.

<table>
<thead>
<tr>
<th>Latin Name</th>
<th>English Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salix fragilis</td>
<td>Crack Willow</td>
</tr>
<tr>
<td>Juglans regia</td>
<td>Common Wallnut Tree</td>
</tr>
<tr>
<td>Quercus Rebur</td>
<td>Common Oak Tree</td>
</tr>
<tr>
<td>Piptacia Terebinthuse</td>
<td>Common Turpentine Tree</td>
</tr>
<tr>
<td>Lenicifus</td>
<td>Common Mastich Tree</td>
</tr>
</tbody>
</table>

III. COMPOSITÆ.

<table>
<thead>
<tr>
<th>Latin Name</th>
<th>English Name</th>
<th>Officinal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctium Lappa</td>
<td>Common Burdock</td>
<td>Bardana</td>
</tr>
<tr>
<td>Centaurac benedicta</td>
<td>Holy Thistle</td>
<td>Carduus benedictus</td>
</tr>
<tr>
<td>Deontodon Taraxacum</td>
<td>Common Dandelion</td>
<td>Taraxacum</td>
</tr>
<tr>
<td>Artemisia Abrotanum</td>
<td>Common Southernwood</td>
<td>Abrotanum</td>
</tr>
<tr>
<td>Abflinthium</td>
<td>Common Wormwood</td>
<td>Abflinthium</td>
</tr>
<tr>
<td>vulgaris</td>
<td>Common Mugwort</td>
<td>Artemisia</td>
</tr>
<tr>
<td>maritima</td>
<td>Sea Wormwood</td>
<td>Abflinthium maritimum</td>
</tr>
<tr>
<td>Santonicia</td>
<td>Tartarian Wormwood</td>
<td>Santonicum</td>
</tr>
<tr>
<td>Tanacetum vulgaris</td>
<td>Common Tansy</td>
<td>Tanacetum</td>
</tr>
<tr>
<td>Tussilago Farfara</td>
<td>Colt’s Foot</td>
<td>Tussilago</td>
</tr>
<tr>
<td>Anthemis nobilis</td>
<td>Common Camomile</td>
<td>Chamemelum</td>
</tr>
<tr>
<td>Pyrethrum</td>
<td>Pellitory of Spain</td>
<td>Pyrethrum</td>
</tr>
<tr>
<td>Inula Helienium</td>
<td>Elecampane</td>
<td>Endula campana</td>
</tr>
<tr>
<td>Arnica montana</td>
<td>Mountain Arnica</td>
<td>Arnica</td>
</tr>
<tr>
<td>Achillea Millefolium</td>
<td>Common Yarrow</td>
<td>Millefolium</td>
</tr>
</tbody>
</table>
CATALOGUE.


SYSTEMATIC NAMES.        OFFICINAL.
Valeriana officinalis      Valeriana sylvetris
Plantago major             Plantago

V. C O N G L O M E R A T E .

Eryngium maritimum         Eryngium
Daucus Carota              Daucus sylvetris
Conium maculatum           Cicut
Ferula Assa foetida        Asfaetida, gummi resina
Angelica Archangelica      Angelica
Bubon Galbanum             Galbanum, gummi resina
Cuminum Cymum              Cuminum
Conandrum sativum          Coriandrum
Sium nodiforum             Sium
Imperatoria Ofruthium       Imperatoria
Pulinaea Opopanax           Opopanax, gummi resina
Anethum graveolens         Anethum
Pimpinella Saxifraga       Pimpinella
Anisum                     Anisum
Apium Petroselinum         Petroselinum

VI. U M B E L L A T E .

Eryngium maritimum         Sea Eryngo
Daucus Carota              Wild Carrot
Conium maculatum           Common Hemlock
Ferula Assa foetida        Asfetida, Gigantic Fennel
Angelica Archangelica      Garden Angelica
Bubon Galbanum             Lovage-leaved Bubon
Cuminum Cymum              Cuminum
Conandrum sativum          Creeping Water Parsley
Sium nodiforum             Common Water Parsley
Imperatoria Ofruthium       Common Water Parsley
Pulinaea Opopanax           Rough Parsley
Anethum graveolens         Common Dill
Pimpinella Saxifraga       Common Caraway
Anisum                     Anise
Apium Petroselinum         Common Parsley

VII. H E D E R A C E A E .

Vitis vinifera              Vitis
Panax quingfrelium         Ginseng

VIII. S A R M E N T A C E A E .

Smilax Smilax              Saraparilla Smilax
Cifampelos Pareira         Pareira brava Cifampelos
Ariftolochia Serpentina    Ariftolochia tenuis
Anisum uniquitatis         Anisum

IX. S T E L L A T E .

Rubia tinctorum             Dyer's Madder
Spigelia marilandica       Perennial Worm-grass

SYSTEMAT
Cucumis Cola
Memordica E
Bryonia alba
Solanum Duk
Atropa Bellad
Hyoscyamus
Datura Stre
Nicotiana T
Capsicum an
Verbaicum I
Digitalis pur
Convolvulus
Lobelia fphi
Viola edoras
Cinchoa g
Cinchoa g

Geniana lat
Chironia Cn
Menyanthes
Olea europae
Arbutus Uva
Styrax officina
Styrax Benzai
Santalum Alba
Anchusa tinch
<table>
<thead>
<tr>
<th>Systematic Names</th>
<th>English</th>
<th>Officinal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumis Colocynthis</td>
<td>Bitter Cucumber</td>
<td>Colocynthis</td>
</tr>
<tr>
<td>Momordica Elaterium</td>
<td>Wild Cucumber</td>
<td>Cucumis agrestis</td>
</tr>
<tr>
<td>Bryonia alba</td>
<td>White Brony</td>
<td>Bryonia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XII.</th>
<th>SALONACEÆ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solanum Dulcamara</td>
<td>Woody Nightshade</td>
</tr>
<tr>
<td>Atropa Belladonna</td>
<td>Deadly Nightshade</td>
</tr>
<tr>
<td>Hyoscyamus niger</td>
<td>Black Henbane</td>
</tr>
<tr>
<td>Datura Stramonium</td>
<td>Common Thorn Apple</td>
</tr>
<tr>
<td>Nicotiana Tabacum</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Capsicum annuum</td>
<td>Annual Capsicum</td>
</tr>
<tr>
<td>Verbascum Thapsus</td>
<td>Common Mullein</td>
</tr>
<tr>
<td>Digitalis purpurea</td>
<td>Common Foxglove</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XIII.</th>
<th>CAMPANACEÆ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convolvulus Scammonia</td>
<td>Scammony Bindweed</td>
</tr>
<tr>
<td>Lobelia siphilitica</td>
<td>Blue Lobelia</td>
</tr>
<tr>
<td>Viola odorata</td>
<td>Sweet Violet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XIV.</th>
<th>CONTORTEÆ.</th>
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</thead>
<tbody>
<tr>
<td>Cinchona officinalis</td>
<td>Peruvian Bark Tree</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>XV.</th>
<th>ROTACEÆ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gentiana lutea</td>
<td>Yellow Gentian</td>
</tr>
<tr>
<td>Chironia Centaurum</td>
<td>Leffir Centaury</td>
</tr>
<tr>
<td>Menyanthes trifoliata</td>
<td>Buck-Bean</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XVI.</th>
<th>SEPIARIAE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olea europaea</td>
<td>Common European Olive</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>XVII.</th>
<th>BICORNES.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arbutus Uva ursi</td>
<td>Bear-Berry</td>
</tr>
<tr>
<td>Styrax officinalis</td>
<td>Storax Tree</td>
</tr>
<tr>
<td>Styrax Benzoin</td>
<td>Gum Benjamin Tree</td>
</tr>
<tr>
<td>Santalum Album</td>
<td>Yellow Saunders Tree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XVIII.</th>
<th>ASPERIFOLIAE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchusa tinctoria</td>
<td>Dier's Buglos</td>
</tr>
</tbody>
</table>
CATALOGUE.

XIX. VERTICILLATÆ.

SYSTEMATIC NAMES.  ENGLISH.  OFFICINAL.

Teucrium *Marum* - Herb Maftich - Marum syriacum
--- *Scordium* - Water Germander - Scordium
Thymus *vulgaris* - Garden Thyme - Thymus
--- *Serpyllum* - Wild Thyme - Serpyllum
Melissa *officinalis* - Common Balm - Melissa
Hyssopus *officinalis* - Common Hyssop - Hyssopus
Lavandula *Spica* - Common Lavender - Lavandula
Origanum *vulgaris* - Common Majoram - Origanum
--- *Marjorana* - Sweet Marjoram - Majorana
Mentha *piperita* - Pepper-Mint - Mentha piperita
--- *viridis* - Spear-Mint - Peppermint
--- *Pulegium* - Pennyroyal-Mint - Pulegium
Marrubium *vulgare* - Common Horehound - Marrubium
Salvia *officinalis* - Garden Sage - Salvia
Rosmarinus *officinalis* - Rosemary - Rosmarinus
Glecoma *hederacea* - Ground Ivy - Hedera terrestris

XX. PERSONATE.

Gratiola *officinalis* - Hedge-Hyssop - Gratiola
Veronica *Beccabunga* - Brooklime - Beccabunga

XXI. RHOEADÆS.

Papaver *Rhoeas* - Red Poppy - Papaver erraticum
--- *fournierum* - Common White Poppy - Papaver album, Opium

XXII. PUTAMINEÆ.

Sisymbrium *Nafturtium* - Water-Cress - Nafturtium aquaticum
Cardamine *pratensis* - Ladies-Smock - Cardamine
Sinapis *nigra* - Common Mustard - Sinapi
Cochlearia *officinalis* - Scurvy-Grass - Cochlearia hortensis
--- *Armoracia* - Horseradish - Raphanus ruficanus

XXIV. PAPILIONACEÆ.

Dolichos *pruriens* - Cowhage - Dolichos
Geoffrœa *inauris* - Smooth Baffard Cabbage-tree - Geoffrœa
Spartium *fo Sharonium* - Common Broom - Genista