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.

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AND

PHYSICIAN TO THE SMALL-POX AND INOCULATION HOSPITALS.

IN THREE VOLUMES.

VOL. II. + III

Vol III begins with plate 136 p. 369

——— *et herbarum subjecta potentia nobis.* OVID.

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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.

PENTONVILLE,
February 20th, 1793

Juniperus communis

Published by Dr Woodville July 1, 1791.

JUNIPERUS COMMUNIS. COMMON JUNIPER.

SYNONYMA. Juniperus. *Pharm. Lond. & Edinb.* Juniperus vulgaris fruticosa. *Bauh. Pin. p.* 488. Juniperus vulgaris. *Park. Theat. p.* 1028. *Gerard. Emac. p.* 1372. *Raii Hist. p.* 1411. *Synop. p.* 44. Juniperus foliis convexo-concavis, aristatis, baccis alaribus, sessilibus. *Hal. Stirp. Helv. n.* 1661. *Hudson. Flor. Ang. p.* 436. *Withering. Bot. Arrang. p.* 1129. *Mill. illust. ic.*

β Juniperus foliis ternis patentibus, acutioribus, ramis erectioribus, bacca longioribus. *Mill. Dict.* Swedish Juniper.

γ Juniperus minor montana, folio latiore, fructuque longiore. *Bauh. Pin.* 489. Procumbent Juniper.

Class Dioecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1134.

Ess. Gen. Ch. *Masc. Amenti* Calyx squamæ. *Cor.* o. *Stam.* 3.

Fem. Cal. 3-partitus. *Petala* 3. *Styli* 3. *Bacca* 3-sperma, tribus tuberculis calycis inæqualis.

Sp. Ch. J. foliis ternis patentibus mucronatis bacca longioribus.

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:[a] 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

[a] 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 feeds. It grows in several heathy parts of England, and flowers in May.

Juniper is supposed to be the ἄρκευθος of the ancients,‖ who distinguished it into two kinds.[b] Both the tops and berries of this plant are directed for use in our Pharmacopœias, 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 vesicles, 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 essential oil, very subtile and pungent, in smell greatly resembling the berries, in quantity (if they have been sufficiently bruised) about one ounce from forty: the decoction, inspissated to the consistence of a rob or extract, has a pleasant, balsamic, sweet taste, with a greater or less degree of bitterishness. A part of the flavour of the berries arises also in distillation with rectified spirit: the inspissated tincture consists of two distinct substances; one oily and sweet; the other tenacious, resinous, and aromatic."[c]

These berries are chiefly used for their diuretic effects; they are also considered to be stomachic, 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 umbræ.
>
> Ecl. x. v. 75.

[b] See *Pliny. Lib. xvi. cap.* 25. Gum Sandrach, known also by the name of pounce, is the product of this species of Juniper: it exudes through the crevices of the bark, or the perforations made by insects.

[c] *Lewis, Mat. Med. p.* 362.

Of

Of the efficacy of Juniper berries in many hydropical affections, we have various relations by physicians of great authority, as Du Verney, Hoffman, 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 inspissated 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. Hoffman, 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 such old people as are 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.[d] 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."[e] Medical writers have also spoken of the utility of Juniper in nephritic cases, uterine obstructions, scorbutic 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.[f]

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

* *M. M. vol. ii. p.* 187.

[d] Van Swieten prescribed the following formula: ℞. Rob. Bacc. Junip. ℥ii. dilue in aquæ Junip. ℔ii. add. spirit. bacc. Junip. ℥ii. Quandoque spiritus nitri dulcis ℥ss ad sitim sedandam additur. *Comment. in Boerh. aph. T.* 4. *p.* 258. Of this mixture one or two ounces were given every three hours. [e] Duncan *New Ed. Dispens. p.* 214.

[f] Bergius says, "Virtus: *ligni & summitat.* diuretica, sudorifera, mundificans. *Bacca* diuretica, nutriens, diaphoretica." *M. M. p.* 810.

[g] Flor. Lapp. p. 301. They are likewise known to afford a pleasant wine. See Du Hamel, *Arbres, T. i. p.* 325.

pare

pare a beer from them, in great eſtimation for its diuretic and anti-ſcorbutic qualities. Our Pharmacopœias 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 active 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 fumentacious ſpirit, imbued with turpentine, or other materials to give it a flavour.

VALERIANA OFFICINALIS. OFFICINAL VALERIAN.

SYNONYMA. Valeriana ſylveſtris. *Pharm. Lond. & Edinb.* Valeriana ſylveſtris major. *Bauh. Pin. p.* 164. *Gerard. Emac. p.* 1075. *Park. Theat. p.* 122. *Raii Hiſt. p.* 388. *Synop. p.* 200. Valeriana foliis pinnatis, pinnis dentatis. *Hal. Hiſt. Stirp. Helv. n.* 210. Valeriana officinalis. *Hudſon. Flor. Ang. p.* 12. *Withering. Bot. Arr. p.* 36. *Flor. Dan. p.* 570.

α Foliis anguſtioribus.

Claſs Triandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 44.

Eſſ. Gen. Ch. Cal. o. *Cor.* 1-petala, baſi hinc gibba, ſupera. *Sem.* 1.

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 dentated, veined, ſmooth pinnæ, with an odd one at the end, which is the

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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 obtuſe ſegments: the three filaments are tapering, longer than the corolla, and furniſhed with round antheræ: the germen 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 ſubacrid. "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 φυ of Dioſcorides and Galen,[a] by whom it is mentioned as an aromatic and diuretic: it was firſt brought into eſtimation in convulſive affections by Fabius Columna,[b] 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[c] fifty years afterwards,

† *Lewis, M. M.*

[a] Græcis φυ eſſe credo, a φυ abominantis: olet enim radix felinum quid, non tamen ſine grato odore nardi *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. l. c.* [b] *Phytobaſamos Neapol.* 1592. *p.* 97.

[c] *Iatrologiſm. s. medicin. hiſt. pentac. quinque Rom.* 1643. *Pentec. 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,[d] Schuchmann,[e] Riverius,[f] Sylvius,[g] Marchant,[h] Chomel,[i] Sauvages,[k] Tissot,[l] 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.[m] Bergius[n] states its *virtus* to be antispasmodic, diaphoretic, emmenagogue, diuretic, anthelminthic.* Under the head *usus* he enumerates Epilepsia, Convulsiones, Hysteria, Hemicrania,[o] Visus 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,[p] 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, hysteric, and other spasmodic affections."[q] It is said however, that in some cases of epilepsy at the Edinburgh Dispensary, it was given to the extent of two ounces a day without effect;[r] and our own experience warrants us in saying,

[d] *Eph. Nat. Cur. Dec.* 2. *A.* 7. *Obs.* 78.

[e] *Eph. Nat. Cur. Dec.* 2. *A.* 4. *Obs.* 44. *p.* 116. & *App. ad Dec.* 3. *A.* 3. *p.* 86.

[f] *Prax. Med. Lib. i. p.* 62. [g] *Opera, p.* 427.

[h] *Mem. de L'Acad. d. Sc. de Paris*, 1706. *p.* 333.

[i] *Pl. Usuelles. T. i. p.* 228. [k] *Nosol. Method. T. iii. P.* 2. *p.* 231. *Ed.* 8*vo.*

[l] *Traité de l'epilepsie, p.* 310.

[m] Haller says, " Ego certe ad hystericos morbos, nimiamque nervorum sensibilitatem, frequenter cum bono eventu hac radice usus sum; et in ipsa epilepsia, non malo successu. *Stirp. Helv. n.* 210. [n] *Mat. Med. p.* 30.

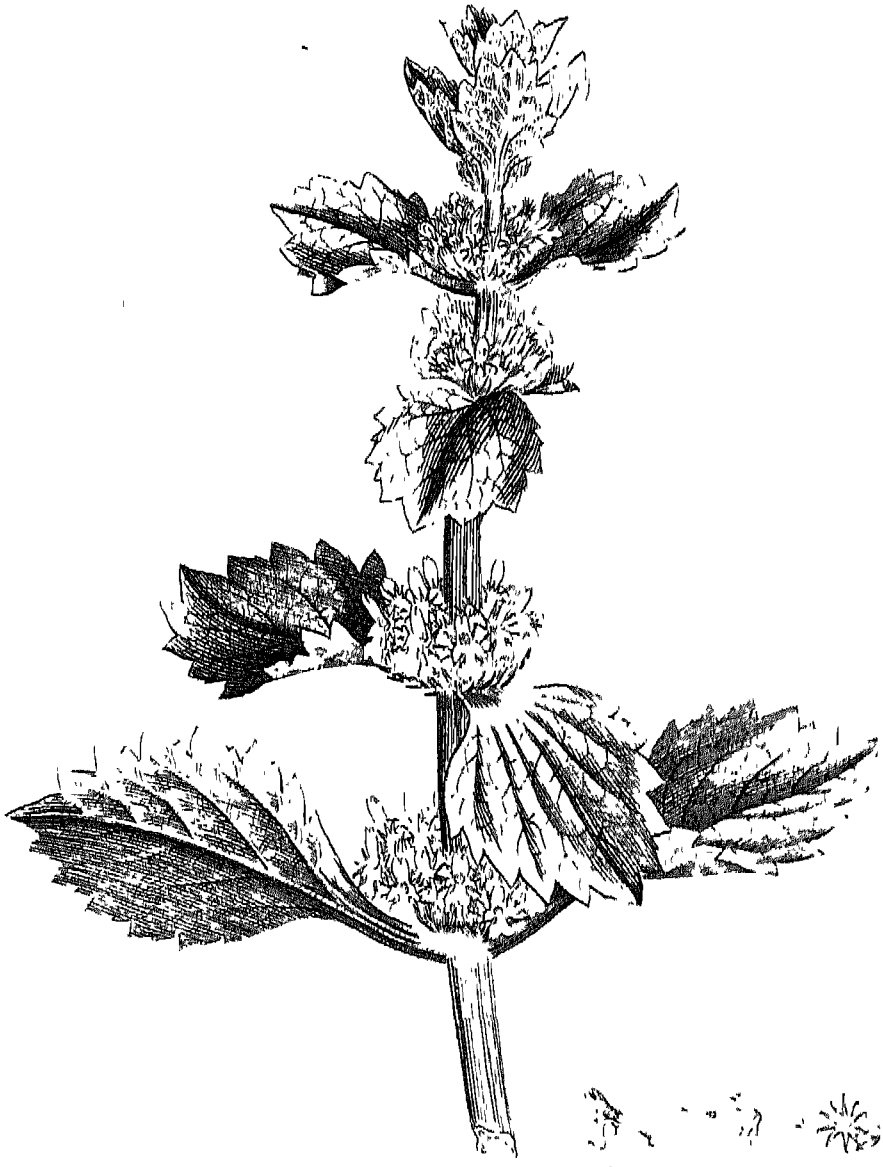
* He says, " Emeticam illam nunquam vidi, nec laxantem." The latter quality is however very generally ascribed to it by medical writers.

[o] Fordyce commends it highly in this disease, *De Hemicrania, p.* 91. Whytt, who joined it with manna, experienced its utility in epilepsy, *On Nerv. Dis. p.* 513. Joined with guaiacum, Morgan found it useful in resolving glandular or strumous humours. *Phil. princ. p.* 424.

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

[q] *Mat. Med. vol. ii. p.* 372. [r] *New Ed. Dispens. by Dr. Duncan, p.* 300.

that



Marrubium vulgare

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that it will be seldom found to answer the expectations of the prescriber. The root, in substance, is most effectual, and is usually given in powder from a scruple to a dram: its unpleasant flavour may be concealed by a small addition of mace. A tincture of Valerian in proof spirit, and in volatile spirit, are ordered in the London Pharmacopœia.

MARRUBRUM VULGARE. COMMON WHITE HOREHOUND.

SYNONYMA. Marrubium. *Pharm. Lond. & Edinb.* Marrubium album vulgare. *Bauh. Pin. p.* 230. *Park. Theat. p.* 44. Marrubium album. *Gerard Emac. p.* 693. *Raii Hist. p.* 556. *Synop. p.* 239. Marrubium dentibus calycinis denis, recurvis. *Hal. Stirp. Helv. n.* 258. *Hudson. Flor. Ang. p.* 260. *Withering. Bot. Arrang. p.* 617.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 721.

Ess. Gen. Ch. *Cal.* hypocateriformis, rigidus 10-striatus. *Corollæ* lab. sup. 2-fidum, lineare, rectum.

Sp. Ch. M. dentibus calycinis setaceis uncinatis.

THE root is perennial, and furnished with numerous fibres: the stalks are upright, strong, square, hairy, or downy, and rise about a foot and a half in height: the leaves are roundish or oblong, deeply serrated, 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 cylindrical tube, opening at the mouth into two lips: the upper lip is narrow, and cloven or notched; the under lip is broader, reflected, and

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 antheræ, 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 inſpiſſating 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 extract in leſs quantity than that obtained by water, and of more penetrating bitterneſs."[a]

This plant is the πρασιον of the ancients, by whom it is greatly extolled for its efficacy in removing obſtructions of the lungs and other viſcera.[b] It has chiefly been employed in humoural aſthmas,[c] obſtinate coughs, and pulmonary conſumptions;[d] inſtances are alſo mentioned of its ſucceſsful uſe in ſcirrhous affections of the liver,[e] jaundice,[f] cachexies, and menſtrual ſuppreſſions.[g]

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

[a] *Lewis, M. M. p.* 411. [b] *Dioſcorides, Lib. iii. c.* 119. See alſo *Pliny, Lib. xx. c.* 22.

[c] *Rhazes ad Manſor.* 3. *n.* 42. Particularly, infarctions of the lungs and difficulty of breathing from viſcid mucous.

Löſecke, Arzneym. p. 382. *Lange, Miſcell. verit. med. p.* 57.

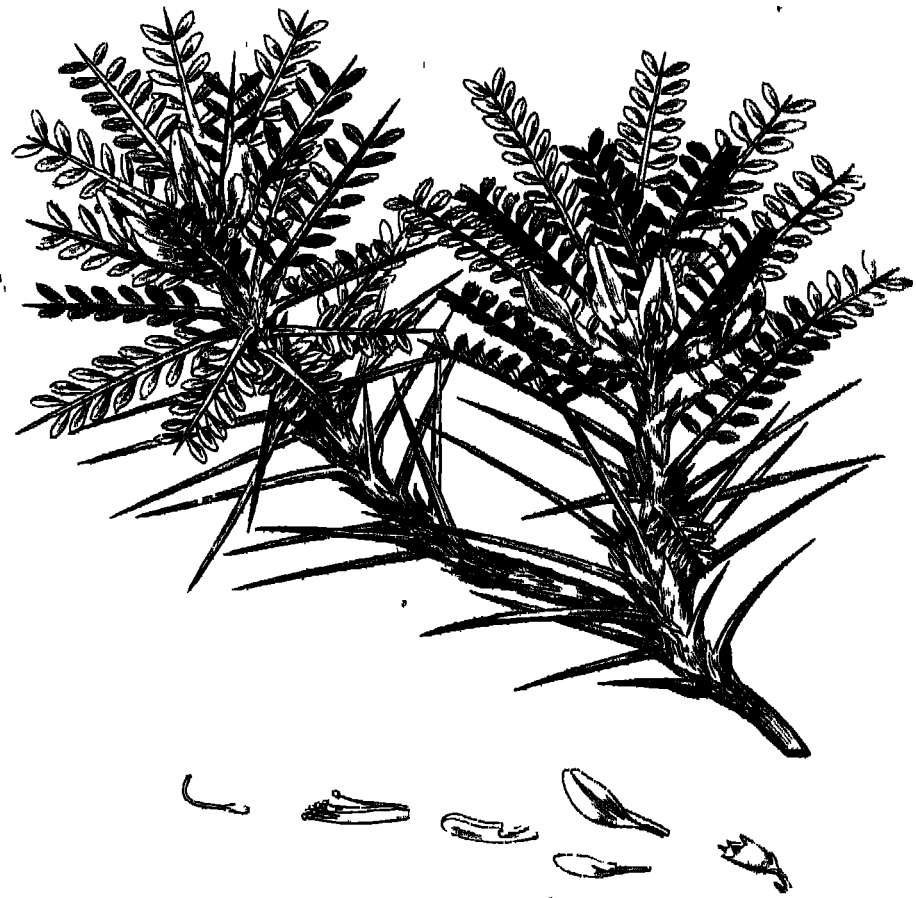
[d] *Alex. Trallian. Lib. v.* Vide *Celſus, Lib. iii. cap.* 22. *Caelius Aurelianus, Morb. chron. Lib. ii. p.* 423. *De Haen Rat. Medend. P. iv. p.* 252. But he and *Haller* often found it fail; the latter ſays, Ego quidem in morbis ſimilibus cum difficili ſputorum excreatione infuſum aquoſum utiliter dedi: & in phthiſi ſatis profecta ſemel vidi utile fuiſſe, non autem in aliis exemplis: potius vero mihi movere videtur, quam reprimere. l. c.

[e] *Zacutus Luſitanus, Prax. admir. Lib.* 2. *Obſ* 48. *Chomel, Uſuell. T. i. p.* 232.

[f] *Forreſt. Op. Lib.* 19. *Obſ.* 19. & 40. [g] *Borellus, Hiſt. et Obſerv. Cent. iv. p.* 14.

* Taken in conſiderable quantities it is ſaid to looſen the body.

be



Astragalus Tragacantha

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be clearly ascertained,[h] and the character it formerly obtained is so far depreciated, that it is now rarely prescribed by physicians. A dram 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 asthmas.[i]

[h] Bergius says, *Virtus:* tonica, emmenagoga, diuretica. *Usus:* Cachexia, ob. mensium, Hysteria, Asthma pituitosum.

[i] "It has had the reputation of a pectoral: but in many trials, its virtues in that way have not been observed; and in several cases it has been judged hurtful. For its use in Asthma and Phthisis, and for its power in resolving indurations of the liver, I consider the authorities of Forestus, Zacutus Lusitanus, and Chomel, to be very insufficient; and the events they have ascribed to it seem to be very improbable." *Cullen Mat. Med. vol. ii. p.* 155.

ASTRAGALUS TRAGACANTHA. GOAT's THORN MILK VETCH.

Ex hac planta exudat Gummi Tragacantha. *Pharm. Lond. & Edinb.*

SYNONYMA. Astragalus aculeatus fruticosus Massiliensis. *Pluk. Alm. p.* 60. Tragacantha. *Bauh. Pin. p.* 388. Tragacantha, sive spina hirci. *Gerard Emac. p.* 1328. Tragacantha vera. *Park. Theat. p.* 995. Tragacantha Massiliensis. *J. Bauh. Hist. i. p.* 407. *Raii Hist. p.* 933. *Du Hamel, Traité des Arbres, t. ii. p.* 343. *Tournefort, Voyage du Levant, t. i. p.* 21.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 892.

Ess. Gen. Ch. *Legumen* biloculare, gibbum.

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

THE root is perennial, long, tapering, and fibrous: the stems are shrubby, short, thick, branched, procumbent, clothed with brown rigid

rigid fibres, and beſet with long ſharp ſpines: the leaves are pinnated, conſiſting of about eight pairs of ſmall oblong pinnulæ, or leafits, 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 *alæ* 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 antheræ 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 two-celled 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,[a] 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 Billardière's late account [b] 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 Aſtragalus which afforded it, to be different from that figured and deſcribed by

[a] *Voyage, T. i. p.* 21.

[b] See Deſcription d'une nouvelle eſpece d'aſtragale, qui produit au Liban la gomme adragant, *Hiſt. de l'Acad. R. des Scien. du* 16 *Dec.* 1788. *et Rozier, Obſerv. ſur la phyſique, pour Janvier*, 1790.

Tournefort,

Tournefort, and consequently not the Tragacantha of Linnæus.[c] 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.[d] 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:[e] 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 cerus.

[c] He makes the following distinctions: The stem of the Cretan Astragalus 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 Astragalus which produce gum tragacanth.

* Multo fortius est hoc gummi, quam G. arabicum, sc. ut 1 ad 24. Etenim dum G. Tragac. scrup. 8 aquæ puræ libr. 2 in consistentiam Syrupi redigunt, requiruntur G. Arab. unc. 8 ad eundem effectum præstandum. *Berg. M. M. p.* 622.

[d] Rutty asserts, that in five or six hours it will dissolve in cold water. *Observ. on the Lond. & Edin. Dispen. p.* 179. † *Lewis's M. M.*

[e] See p. 189. Bergius says, *Virtus:* demulcens, obtundens, incrassans. *Usus:* Dysenteria, Diarrhœa, Stranguria. *l. c. p.* 621.

PANAX QUINQUEFOLIUM.

PANAX QUINQUEFOLIUM. GINSENG.

SYNONYMA. Ginseng. *Pharm. Lond. & Edinb.* *Raii Hist. p.* 1338. Aureliana canadensis. *Lafiteau* in *Memoires concernant la precieuse plante de Ginseng. Paris,* 1718. Et *Hist. de l'Acad.* 1718. *p.* 42. *Catesby's Car.* 3. *p.* 16. *t.* 16. *Breyn.* in *Prod. rar. pl.* 2. *p.* 35. *Fig. ad. p.* 52. Araliastrum foliis ternis quinquepartitis Gingseng s. Ninsin officinarum. *Ehret. tabul. a Trew, t.* 6. *fig.* 1. Gin-seng Chinensibus. *Jartoux Phil. Trans. vol. xxviii. p.* 237. *Conf. Des lettres edifiantes & curieuses, tom. x. p.* 172. Araliastrum, quinquefolii folio, majus Ninsin[a] vocatum. *Vall. Sex.* 43.

Class Polygamia. *Ord.* Dioecia. *Lin. Gen. Plant.* 1166.

Ess. Gen. Ch. *HERMAPHROD.* Umbella. *Cal.* 5-dentatus, superus. *Cor.* 5-petala. *Stam.* 5. *Styli* 2. *Bacca* disperma.

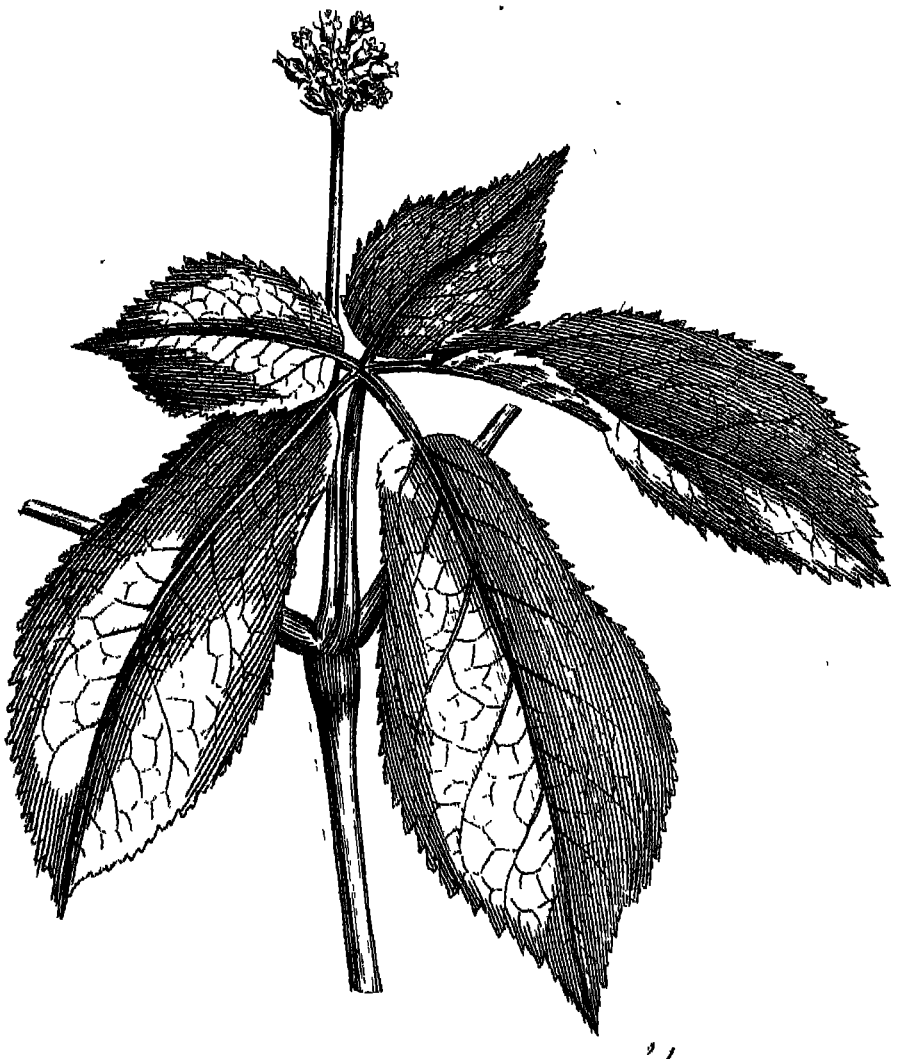
MASC. Umbella. *Cal.* integer. *Cor.* 5-petala. *Stam.* 5.

Sp. Ch. P. foliis ternis quinatis.

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 petiolus, which is long, round, and almost

[a] The plant formerly known by this name is now understood to be the Sion Ninsi, of Linnæus.

erect:



Panax quinquefolium.

Published by Dr. Woodville Augt. 1 1791

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 antheræ: the germen is roundish, placed below the corolla, and supports two short erect styles, crowned by simple stigmata: the fruit is an umbilicated 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. Sarrasin transmitted specimens of it to Paris in the year 1704;[b] and the Ginseng since discovered in Canada, Pensylvania, and Virginia by Lafiteau,[c] Kalm,[d] Bartram,[e] 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-seed, 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 industrious naturalist Peter Collinson,[f] 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

[b] Sarrasin was correspondent of the Royal Academy of Sciences, in the history of which his account was published in 1718. See p. 44.

[c] L. c. [d] *Rosa til N. America, t. iii. p.* 334. [e] *Comm. Nor.* 1741. *p.* 361.
[f] See *Hort. Kew.*

* 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.

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, accompanied with some degree of bitterishness, and a slight aromatic warmth, with little or no smell. It is far sweeter and of a more grateful smell than the roots of fennel, to which it has by some been supposed similar; and differs likewise remarkably from those roots, in the nature and pharmaceutic 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 destroyed or dissipated in the inspissiation of the watery tincture. The slight aromatic impregnation of the Ginseng is likewise in good measure retained in the watery extract, and perfectly in the spirituous."[g]

The Chinese ascribe extraordinary virtues to the root of Ginseng, and have long considered it as a sovereign remedy in almost all diseases 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 pituitous 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.[h] These, and many other effects of this root, equally improbable and extravagant, are related by various authors, and Jartoux was so much biassed 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.[i] But we know of no proofs of the

[g] *Lewis, M. M. p.* 325.

[h] L. c. See also Decker, (*Exercit. pract. p. m.* 670.)

[i] 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 rest we had that day: but four


Veratrum album
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the efficacy of Ginſeng in Europe, and from its ſenſible qualities we judge it to poſſeſs very little power as a medicine.[k] 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. xxviii. p.* 239.

[k] 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.

VERATRUM ALBUM. WHITE HELLEBORE, Or, VERATRUM.

SYNONYMA. Helleborus albus. *Pharm. Lond. & Edinb. Gerard Emac. p.* 440. *Raii Hiſt. p.* 168. Helleborus Albus, flore ſubviridi. *Bauh. Pin. p.* 186. Helleborus albus vulgaris. *Park. Theat. p.* 217. Veratrum flore ſubviridi. *Tournef. Inſt. p.* 272. Veratrum ſpica paniculata, floribus maribus & feminis. *Hall. Stirp. Helv. n.* 1204. Veratrum album. *Jacq. Flor. Auſt. v. iv. t.* 335. *Mill. Illuſtr. ic.*

Claſs Polygamia. *Ord.* Monoecia. *Lin. Gen. Plant.* 1144.

Eſſ. Gen. Ch. HERMAPHROD. *Cal.* o. *Cor.* 6-petala. *Stam.* 6. *Piſt.* 3. *Capſ.* 3, polyſpermæ.

MASC. *Cal.* o. *Cor.* 6-petala. *Stam.* 6. *Piſt.* rudimentum.

Sp. Ch. V. racemo ſupradecompoſito, corollis erectis.

THE

THE root is perennial, about an inch thick, externally brown, internally white, and beset 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 Ελλεβορος λευκος 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."[a]

* "Helleborus albus folia fert Plantaginis aut Betæ sylvestris similia, sed breviora, nigriora, & dorso rubescentia: caulem palmi altitudine, concavum; qui quidem tunicas quibus convolvitur abdicat cum arescere incipit. Radices subjacent numerosæ, tenues ac fibratæ, ab exiguo & oblongo capitulo, ceu cæpa, exeuntes, eidemque annexæ. Nascitur in montosis & asperis," *Dioscorid. M. M. L. iv c.* 150. This description of the plant, though imperfect, is the only one given by the ancients.

[a] *Mat. Med. vol. ii. p.* 68.

The

The Ελλεβορος μελας, or famous Anticyran Hellebore,[b] is likewise thought to be the Helleborus niger of Linnæus, 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;[c] 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.[d] The dried root has no peculiar smell, but a durable nauseous acrid bitterish taste, burning the mouth and fauces; when powdered and applied to issues or ulcers it produces griping and purging; if snuffed up the nose it proves a violent sternutatory. Gesner 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 scapulæ, and in the face and head, as well as the tongue

[b] "Naviget Anticyram."—

Danda est hellebori multo pars maxima avaris:
Necio, an Anticyram ratio illis destinet omnem.

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. *Pausanias, Lib. x. p.* 623.

[c] 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 veritable 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.

[d] See Pallas, *Russ. Reise, vol. i. p.* 49. Kalm's *N. Amer. tom. iii. p.* 48. Gunner, *Fl. Norveg. P. ii. p.* 2. For the poisonous effects of the roots, when applied to wounds of different animals, Vide *Phil. Trans. vol. xlvii. p.* 82.

and throat, followed with ſingultus, which continued till vomiting was excited.[e] Bergius alſo experienced very diſtreſſing ſymptoms merely by taſting this infuſion.[f] The root, taken in large doſes, diſcovers ſuch acrimony, and operates upwards and downwards with ſuch violence that blood is uſually diſcharged:[g] 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.[h] 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.[i]

The ancients, though ſufficiently acquainted with the virulency of their white Hellebore, were not deterred from employing it internally in ſeveral diſeaſes, eſpecially thoſe of a chronic and obſtinate kind, as mania, melancholia, hydrops, elephantiaſis, epilepſia, vitiligo, lepra, 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 primæ viæ, but when no ſenſible evacuations was promoted by its uſe.[k]

[e] *Epiſt. Med. p.* 69.

[f] *M. M. p.* 819. [g] Ettmuller. *Oper. tom. ii. P.* 2. *p.* 435. [h] Wepſer, *de Cicut. p.* 48. Lorry *de Melanch. ii. p.* 313. Borrich. *Act. Haf. vol. vi. p.* 145. Albert. Juriſprud. *Med. vol. vi. p.* 718. Breſl. Samml. 1724. *P.* 2. *p.* 269. *p.* 537. Act. Berol. *Dec.* 2. *vol.* 6. Miſc. Nat. Cur. *Dec.* 2. *Ann.* 2. *p.* 239. [i] *Act. Berol. cit. Miſc. Nat. Cur. cit.*

Bergius ſays, "Ego vix a memet impetrare potero, ut radicis, ita intenſe venenatæ, uſum internum cuiquam ſuaſurus ſim, niſi ſumma adhibita circumſpicientia; etenim conſtat, eam, in ſatis parca doſi propinatam, ſæpe horrenda ſymptomata excitaſſe, ut ſitim, cardialgiam, tormina, ſingultum, ſuffocationes, convulſiones, tremores, inflammationem primarum viarum, lipothymias, ſudorem frigidum, immo & mortem." *l. c.*

[k] Hippocr. περὶ Ἐλλεβορισμοῦ in Oper. ed. Lind. *tom. i. p.* 610. Et Aphoriſm. *Sect. iv. Aph.* 13—16.

Similar

Similar obſervations have been made of Veratrum by authors of later times: Mayerne[l] 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. Geſner,[m] who inveſtigated the qualities of Veratrum by repeated experiments, and whoſe 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. Geſner's account of Veratrum was followed by thoſe of ſeveral other authors,[n] 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,[o] 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:

[l] Prax. Med. *Lib. i. c. 7. p. 69. ſq.*

[m] He ſays, "non ad purgandum, ſed ad reſerandos meatus & craſſos humores attenuandum, eoſque a centro & interioribus corporis ad ſuperficiem & vias excretionum variarum educendum." Adding, "recreat & roborat, & hilariorem facit, & acuit ingenium: quod in me & aliis ſæpiſſime expertus ſcribo." Had Geſner lived long enough, he had ſtill more to ſay on this ſubject. "Ego, ſi vixero, in Ellebori hiſtoria multa proferam, quæ medici admirentur." *l. c.*

[n] *Hannemann, Quercetanus, Screta, Wepfer, Mundalto, Linder.*

[o] *Vermiſchte Med. u. chirurg. Schriften. Altenb.* 1781. to *p.* 30.

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 bleedings, with other means, were employed, the cure cannot wholly be aſcribed to the hellebore. See Agaſſiz. *Diſſ. de therapia maniæ. Erl.* 1785. *p.* 37.

vomiting

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 increaſed, 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,[p] but the diſeaſes in which its efficacy ſeems leaſt equivocal, are thoſe of the ſkin,[q] 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 reſorted 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.

p Greding, *l. c.* See alſo Smyth in *Medical Communications*, *vol. i. p.* 207.

q 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 Lorry, *de melanch. tom. ii. p.* 289. & Linnæus, *Amoen. Acad. vol. ix. p.* 261. Helleborus is ſuppoſed to be derived ἀπο τε ἑλειν βορα quod eſu perimat. Veratrum dicitur quod mentem vertat, or, à verare i. e. vera loqui. *V. C. Bauh. l. c.*

LILIUM CANDIDUM.

Lilium candidum.

Publiphed by Dr Woodville Sept 1 1791.

LILIUM CANDIDUM. COMMON WHITE LILY.

SYNONYMA. Lilium album. *Pharm. Edinb.* *Gerard Emac. p.* 190. *Raii Hist. p.* 1109. Lilium album vulgare. *Park. Parad.* 39. *J. Bauh. Hist. ii. p.* 685.

α Lilium album flore erecto et vulgare. *Bauh. Pin. p.* 76.

β Lilium album floribus dependentibus sive peregrinum. *Bauh. Pin. p.* 76. *Nodding-Flowered White Lily.*

Class Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 410.

Ess. Gen. Ch. *Cor.* 6-petala, campanulata: *linea* longitudinali nectarifera. *Caps.* valvulis pilo cancellato connexis.

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 transversely large orange-coloured antheræ: the style is longer than the filaments, and furnished with a fleshy triangular stigma: the germen becomes an oblong capsule, marked with six furrows, and divided into three cells, which contain many flattish 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 [a] 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;[b] 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 ſuppurating cataplaſms: it is probable however, that the poultices formed of bread or farina, poſſeſs every advantage of thoſe prepared of Lily root.

Lilium ἀπὸ λειριον vel λιριον. By the Greeks it is called κρινον.

[a] Alluding to this, Ovid, in the luxuriancy of his imagination, aſcribes its origin to the milk of Juno.

« Dum puer Alcides Divæ vagus ubera ſuxit
« Junonis, dulci preſſa ſapore fuit;
« Ambroſiumque alto lac diſtillavit Olympo.
« In terras fuſum Lilia pulchra dedit."

Pliny ſays, *Lilium Roſæ* nobilitate proximum eſt; and both theſe flowers have furniſhed their ſhare of metaphor to ancient and modern poets.

Either ſingly,

——— vel mixta rubent ubi lilia multâ
Alba rosâ: tales virgo dabat ore colores.

Æn. lib. xii. 68.

[b] Particularly as an antiepileptic and anodyne.

ERYNGIUM MARITIMUM.

Eryngium maritimum

Published by W. Woodville Sept. 1. 1791.

ERYNGIUM * MARITIMUM. SEA ERYNGO, or HOLLY.

SYNONYMA. Eryngium. *Pharm. Lond.* *Bauh. Pin. p.* 386. Eryngium marinum. *Gerard Emac. p.* 1162. *Park. Theat. p.* 986. *J. Bauh. Hist. vol. iii. p.* 86. *Raii Hist. p.* 384. *Synop. p.* 222. Eryngium maritimum. *Bauh. Pinax. p.* 386. *Hudson. Flor. Ang. Withering. Bot. Arrang. p.* 264. *Flor. Dan. tab.* 875.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 324.

Ess. Gen. Ch. *Flores* capitati. *Receptaculum* palcaceum.

Sp. Ch. E. foliis radicalibus subrotundis 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, striated, 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 *paleæ*, 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 antheræ: the two styles are filiform,

* Græci Philosophi Eryngium, quasi ἐρυγμὸς, id est ructum, dictum putant, quòd capræ quæ morsu surculum Eryngii præciderint, vel deglutiverint, cunctum gregem pone sequentem quasi stupore attonitum sistunt, donec Eryngium ructu rejecerint. *C. Bauh. l. 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 Linnæus, and in almost all the foreign pharmacopœias, the Eryngium campestre is considered to be the officinal plant: Geoffroy, however, has observed that the E. maritimum is by many thought to be a more powerful medicine, and Simon Paulli [a] gives it the preference; but Boerhaave [b] attributes the same virtues to both, and indeed it seems of little importance which is preferred. Eryngo is supposed to be the ηρυγγιον of Dioscorides,[c] 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 antiscorbutic:[d] it has likewise been celebrated for its aphrodisiac powers.[e] But this and the other effects ascribed to Eryngo seem now to obtain very little credit.

[a] *Quadrip. p.* 324. [b] *Hist. pl. T. i. p.* 194.

[c] *Lib.* 3. *c.* 24. He recommends it ad menses obstructos, tormina, inflationes hepaticos, venena, venenatos morsus, episthotonicos, & comitiales.

[d] Vide, *l. c.*

[e] " Non male tum Graiis florens Eryngus in hortis
" Quæritur: hunc gremio portet si 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. Suec.*

ANTHEMIS NOBILIS.

Anthemis nobilis

Published by Mr Wendelle Sept 1 1791

ANTHEMIS NOBILIS. COMMON CAMOMILE.

SYNONYMA. Chamæmelum. *Pharm. Lond. & Edinb. Gerard Emac. p.* 755. *Park. Parad. p.* 289. Chamæmelum nobile seu Leucanthemum odoratius. *Bauh. Pin. p.* 135. Chamæmelum odoratissimum repens, flore simplici. *J. Bauh. Hist. v. iii. p.* 118, *Raii Hist. p.* 353. *Synop. p.* 185. Chamæmelum foliis subhirsutis, nervo duro, pinnis pinnatis, pinnulis lanceolatis incisis. *Hal. Stirp. Helv. n.* 102. Anthemis nobilis. *Hudson, Flor. Ang. With. Bot. Arr.*

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 970.

Ess. Gen. Ch. Recept. paleaceum. *Pappus* nullus. *Cal.* hemisphæricus, subæqualis. *Flosculi* radii plures quam 5.

Sp. Ch. A. foliis pinnato-compositis linearibus acutis subvillosis.

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 pinnæ are linear, pointed, a little hairy, and divided into three terminal segments: the flowers are compound, radiated, white, at the centre yellow, and stand singly: the calyx is common to all the florets, of an hemispherical 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 encloses the whole of the style, but does not conceal the bifid reflexed stigma: 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 antheræ united, forming a hollow cylinder: the germen is oblong: the style is short, slender, and furnished with a bifid reflexed stigma: the seeds are small, and of an irregular shape: the receptacle is supplied with rigid bristle-like paleæ. It grows in most pastures, and flowers in July and August.

The

The name Camomile is ſuppoſed to be expreſſive of the ſmell of the plant χαμάμηλον, quoniam odorem mali habeat.[a] It is referred to the ανθεμις of Dioſcorides, and to the ανθεμον of Theophraſtus. Matricaria Chamomilla, or Corn Feverfew, is ſimilar in its general appearance to the Anthemis nobilis, and is directed for officinal uſe by moſt of the foreign pharmacopœias; 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 ſapid 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.[b]

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[c] 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 conſiderable ſtronger than in the watery."[d]

[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 ℔ 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

Thefe flowers poffefs the tonic and ftomachic qualities ufually afcribed to fimple bitters, having very little aftringency, but a ftrong odour of the aromatic and penetrating kind, from which they are alfo judged to be carminative, emmenagoge, and in fome meafure antifpafmodic and anodyne. They have been long fuccefsfully employed for the cure of intermittents;[e] as well as of fevers of the irregular nervous kind, accompanied with vifceral obftructions, for which we have the authority of Sir John Pringle.[f]

That camomile flowers may be effectually fubftituted for Peruvian bark in the cure of intermittent fevers, appears from the teftimony of feveral refpectable phyficians, to which we have referred; and to which we may add that of Dr. Cullen, who fays, " I have employed thefe flowers, and agreeable to the method of Hoffman, by giving feveral times during the intermiffion, 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 ftool, defeating thereby the purpofe of preventing the return of paroxyfms; and I have found, indeed, that without joining with them an opiate, or an aftringent, I could not commonly employ them."[g]

Thefe flowers have been found ufeful in hyfterical affections, flatulent or fpafmodic colics, and dyfentery, but from their laxative quality, Dr. Cullen tells us, they proved hurtful in diarrhœas. A fimple watery infufion of them is frequently taken, in a tepid ftate, for the purpofe of exciting vomiting or for promoting the operation of emetics. Externally the flowers are ufed in the decoctum pro fomento, and they are an ingredient in the decoctum pro enemate.

[e] Morton, *(Exercit. 1. de febr. interm. cap. 6.)* Hoffman, *(Diff. de præftan. rem. dom. p. 29.)* Heifter, *(Diff. de Medic. Germ. indig. p. 13.)* found thefe flowers more effectual in the cure of intermittents than the peruv. bark: and Dr. Cullen obferves, that his celebrated countryman, Dr. Pitcairn, was of opinion that the powers of Cam. flowers were in this refpect equal to the bark.

[f] *Dif. of the Army, p. 216.*

[g] *M. M. vol. ii. p. 79.*

ANTHEMIS PYRETHRUM.

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

SYNONYMA. Pyrethrum. *Pharm. Lond. & Edinb.* Pyrethrum flore bellidis. *Bauh. Pin. p.* 148. Pyrethrum officinarum. *Lob.* 447. *Gerard Emac. p.* 758. *Park. Theat. p.* 858. *Raii Hist. p.* 353. Chamæmelum speciofo flore, radice longa fervida. *Shaw, Afr. p.* 138. Anthemis caulibus fimplicibus unifloris decumbentibus. *Mill. Fig. t.* 38. πυρεθρον *Diofcorid. Lib.* 3. *c.* 85.*

Clafs Syngenefia. *Ord.* Polygamia Superflua, *Lin. Gen. Plant.* 970.

Eff. Gen. Ch. Recept. paleaceum. *Pappus* nullus. *Cal.* hemifphæricus, fubæqualis. *Flofculi* radii plures quam 5.

Sp. Ch. A. caulibus fimplicibus unifloris decumbentibus, foliis pinnato-multifidis.

THE root is perennial, tapering, long, externally whitifh, and fends off feveral fmall fibres: the ftems are ufually fimple, round, trailing, bearing one flower, and fcarcely a foot in height; but the fpecimen here figured was extremely luxuriant, and has in fome degree departed from its more common and fimple appearance: the leaves are doubly pinnated, fegments narrow, nearly linear, and of a pale green colour: the flowers are large, at the difc of a yellow colour, at the radius white on the upper fide; on the under fide of a purple colour: the different florets anfwer to the defcription given of the Anthemis nobilis. It flowers in June and July.

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

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

* *Adver. p.* 346. Vide *Hort. Kew.*

not

Anthemis Pyrethrum

Published by Dr Woodville Sept 1 1794

not ripen its ſeeds here unleſs the ſeaſon proves very warm and dry.[b] 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 diſtillation by either menſtruum."[c]

The ancient Romans, we are told, employed this root as a pickle,[d] and indeed it ſeems leſs acrid 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.[e]

From the aromatic and ſtimulating qualities of Pyrethrum there can be no doubt but that it might be found an efficacious remedy, and equally fitted for an internal medicine, as many others of this claſs now conſtantly preſcribed. Its uſe however has been long confined to that of a maſticatory,[f] 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 toothachs, and rheumatic affections of the face; in this way too, it is recommended in lethargic complaints, and paralyſes of the tongue.

[b] *Miller Dict.*

[c] *Lewis M. M. p.* 527. [d] See *Berg. M. M. p.* 698.

[e] *Bergius, V. l. c.*

[f] Its uſe in this way is mentioned by Serenus Samonicus.
" Purgatur cerebrum manſa radice pyrethri."

SPIGELIA MARILANDICA. PERENNIAL WORM-GRASS, Or, INDIAN PINK.

SYNONYMA. Spigelia. *Pharm. Lond. & Edinb.* Periclymeni virginiani flore coccineo planta marilandica, ſpica erecta, foliis conjugatis. *Cateſby Carol. vol. ii. p.* 78. Lonicera *marilandica* ſpicis terminalibus, foliis ovato-oblongis acuminatis diſtinctis ſeſſilibus. *Sp. Plant. p.* 249. Spigelia marilandica fol. ovatis oppoſitis ſpica ſecunda terminali. *Walter Flor. Carol. p.* 92. Vide *Mantiſſ. Lin. ii. p.* 338. *Eſſ. & Obſ. Phyſ. & Lit. vol. iii. p.* 151. *Curt. Bot. Mag.* 80.

Claſs Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 209.

Eſſ. Gen. Ch. Cor. infundibulif. *Caps.* didyma, 2-locularis, polyſperma.

Sp. Ch. S. caule tetragono, foliis omnibus oppoſitis.

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, ſeſſile, 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, conſiſting 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 antheræ: 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.

Linnæus

Spigelia marilandica

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Linnæus 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 Magazinine for the year 1751, and in his History of Jamaica;[a] also by Dr. Bocklesby,[b] and several foreign writers. But the accounts of the vermifuge virtues of Spigelia, given by Drs. Linning[c] and Garden,[d] from Charlestown, 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 "*primæ viæ*; and, in these cases, it succeeded to admiration, even "when the sick did not void 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

* Adriani Spigelii *in rem herbariam Isagoge*, Patavii.

[a] *P.* 156.

[b] *Oec. & Med. Observations*, *p.* 282.

[c] See *Ess. & Observ. Physical & Literary*, *vol. i. p.* 386. [d] *L. c.*

"of

" of ſweet mercury, or ſome grains of rhubarb; but it is to be ob-
" ſerved, 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,[e] although neither *ol. rutæ*, *ſabinæ*,
" 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 giddineſs, 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.[f] 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."[g]

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. ſepentar. virg.

[e] This root, when taken in large doſes, and not readily paſſing off by ſtool or vomiting, 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 Linning and Garden, and is to be removed by adminiſtering a cathartic.

[f] According to Linning, " thirty large worms, the *teretes*, were at once voided" by a Negro girl from the uſe of this root. *l. c.*

[g] As this plant ſeems to be received into the Materia Medica principally on the authority of Dr. Garden, we have judged it proper to give his account in his own words.


Aristolochia Serpentaria
Published by Dr Woodville Oct 1 1791

ARISTOLOCHIA SERPENTARIA. SNAKE-ROOT BIRTHWORT.

SYNONYMA. Serpentaria virginiana. *Pharm. Lond. & Edinb.* Ariſtolochia Piſtolochia ſ. Serpentaria virginiana, caule nodoſo. *Pluk. Alm.* 50. *t.* 148. *Cateſby Hiſt. of Carol. t. i. p.* 29. *tab.* 29. *Raii Hiſt. vol. iii. p.* 394. Ariſtolochia polyrrhizos virginiana, &c. *Morris. Hiſt. iii. p.* 310. *Park. Theat. p.* 420.

Claſs Gynandria. *Ord.* Hexandria. *Lin. Gen. Plant.* 1022.

Eſſ. Gen. Ch. Hexagyna. *Cal.* 0. *Cor.* 1-petala, lingulata, integra. *Caps.* 6-locularis, infera.

Sp. Ch. A. fol. cordato-oblongis planis, caulibus infirmis flexuoſis teretibus, flor ſolitariis. *Caulis geniculata valde nodoſa. 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 articulations of the ſtem: the corolla is tubular, irregular; at the baſe diſtended into a globular figure, at the middle contracted and twiſted, at the extremity ſpreading, and of a triangular form: it has no filaments, but ſix antheræ, which are attached to the under ſide of the ſtigma: the germen 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.

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 Pistolochia cretica of Clusius. In 1635, Dr. J. Cornutus published at Paris, Canadensium plantarum, aliarumque nondum editarum, Historia, wherein the Serpentaria is noticed under the name of Radix Snagroel Nothæ Angliæ, 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 Aristolochia were sent to Europe for those of snake-root;[a] 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, surgeon, agrees with none of them; (meaning the three mentioned by Dale) the leaves no way resembling a heart at the footstalk, being there all roundish, or obtusely pointed."[b] The plant, from which the present figure was designed, is now growing in the Royal Botanic

* "Missa quoque est ad me ex notha Anglia radix quam Serpentariæ vocant, vernacule Snagroel cum hac inscriptione. Hæc radix alexiterium præsentissimum est, contra morsum serpentis ingentis pernitiosissimique in notha Anglia, cujus morsus intra duodecim horas interficit, nisi hujus radicis sumatur portio, qua sumpta nullus unquam auditus est periclitari de vita." p. 214.

[a] "Tres radices sub hoc nomine in officinis nostris veniunt, ut nos monuit eruditissimus ille Botanicus *Leonard Plukenetius*, M. D. in literis ad me datis, viz. 1. Aristolochia polyrhizos, auriculatis foliis Virginiana. *Pluk. Phytog. Tab.* 78. *Almag.* 50. *Tourn. Inst.* 162. *&c.* 2 Aristolochia Violæ fruticosæ foliis Virginiana, cujus radix Serpentaria dicitur. *Pluk. Phytog. T.* 15. *Almag.* 50. *&c.* 3. Aristolochia Pistolochia, seu Serpentaria Virginiana, caule nodoso." This last is the plant we have figured. See Dale, *Pharmacol. p.* 194.

[b] *M. M. vol. i. p.* 521.

Garden

Garden at Kew, where it was introduced by Mr. William Young about the year 1770.[c]

"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 ſmell 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 bitterneſs of the root, remaining in the inſpiſſated extract. The ſpirituous extract is ſtronger than the watery: not ſo much from its having loſt leſs 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."[d]

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 morbific 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 Serpentaria 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.

Serpentaria is thought to poſſeſs tonic and antiſeptic 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

[c] We had this information from Mr. Aiton, who deſires us to ſay, that, by miſtake, this plant was paſſed unnoticed in the *Hort. Kew.*

[d] *Lewis, M. M. p.* 602.

appears

appears from the experience of Huxham, Pringle, Hillary, Lysons, 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 Serpentaria;[e] but this opinion is also liable to exceptions, as a mixed state 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 Serpentaria than when given alone;[f] 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 serpentariæ is directed both in the London and Edinburgh Pharmacopœias.

[e] In cases marked with progressive signs 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 Serpentaria as utterly useless in all fevers.

[f] Vide Lysons, *Practical Essays upon intermitting fevers*, p. 13, *seq.*

ARISTOLOCHIA LONGA. LONG-ROOTED BIRTHWORT.

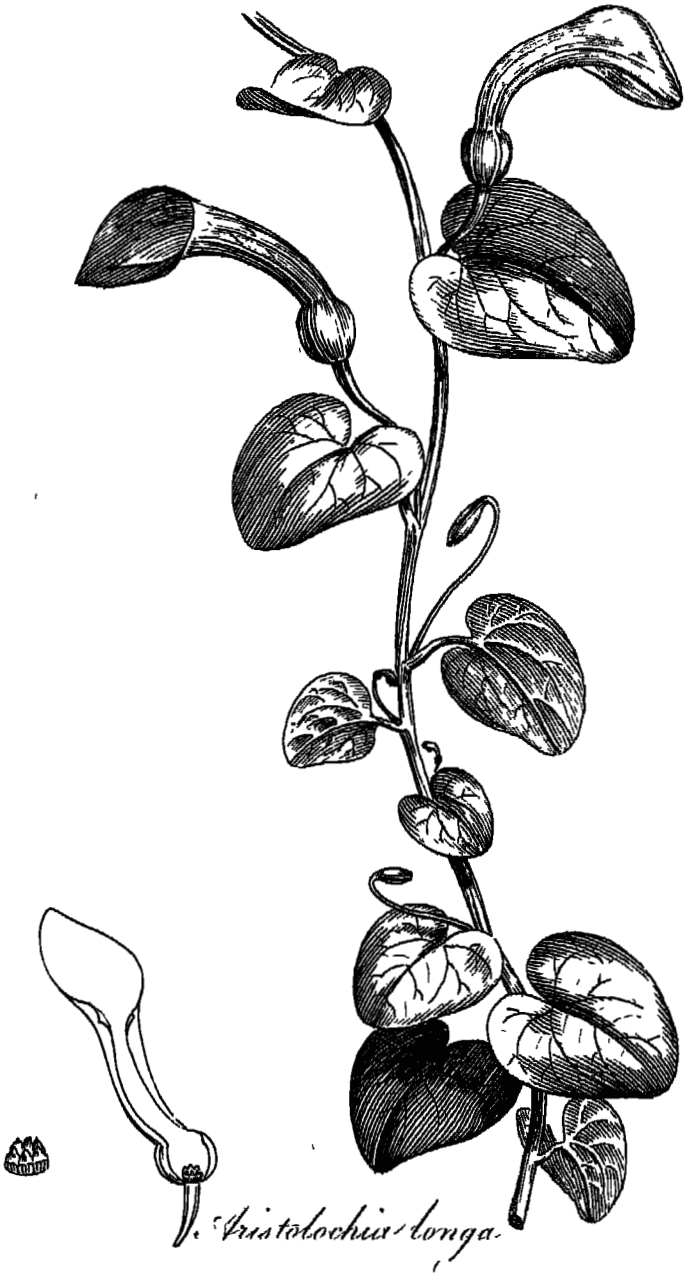
SYNONYMA. Aristolochia. *Pharm. Edinb.* Aristolochia longa. *Clus. Hist. ii. p.* 70. *J. Bauh. Hist. iii. p.* 560. *Gerard Pomac. p.* 846. *Raii Hist. p.* 762. Aristolochia longa vera. *Bauh. Pin. p.* 307. *Park. Theat. p.* 291. *Tourn. Inst. p.* 162. *Miller's Fig. tab.* 61.

Class Gynandria. *Ord.* Hexandria. *Lin. Gen. Plant.* 1022.

Ess. Gen. Ch. Hexandria. *Cal.* 0. *Cor.* 1-petala, lingulata, integra. *Caps.* 6-locularis, infera.

Sp. Ch. A. fol. cordatis petiolatis integerrimis obtusiusculis, caule infirmo, flor. solitariis.

THE



Aristolochia longa.

Publish'd by Dr Woodville Oct.r 1 1791

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 Serpentaria, and is tongue-ſhaped at the extremity: the other parts of fructification are ſimilar to thoſe deſcribed of Serpentaria. 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 pharmacopœias, were 1. Ariſtolochia longa. 2. A. rotunda. 3. A. tenuis or clematitis of Linnæus. 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 Pharmacopœia, 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, ſcarcely diſcover any taſte, but in a little time prove nauſeoully 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." [a]

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

[a] Lewis, *M. M.* p. 112.

 particularly

particularly those thought to proceed from obstructions,[b] more especially of the uterine system:[c] hence the name Aristolochia is said to have arisen from its supposed emmenagogue powers.[d] And as a warm stimulating medicine, Dr. Cullen tells us[e] he found it useful in some cases of retention and chlorosis, but never in cases of suppression. Aristolochia has also been long very generally commended as a remedy for the gout, and it is the first ingredient in the Portland powder,[f] 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.[g] 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.

[b] Fernelius *Method. Med. Lib.* 6. *cap.* 12. *p.* 163.

[c] Hippocr. *De nat. muliebri. p.* 572. *Oper. Foesii.*

[d] Ab ἄριστος & λοχεια. It has also been derived from Aristolochius, who is said to have first discovered its virtues.

[e] See *Mat. Med. vol. ii. p.* 83.

[f] The powder is thus prepared: —— ℞. Aristol. rotund. gentian. summit. et fol. chamædr. chamæpit. centaur. min. ℥ p. æ. 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.

[g] Brunner, *De pancr. p.* 143. *Werlhoff. Caut. Med. Tract. i. p.* 32. See also Cullen's *First Lin.*

INULA HELENIUM.

Inula Helenium

Published by Dr Woodville Oct 1 1791.

INULA HELENIUM. COMMON INULA, Or, ELECAMPANE.

SYNONYMA. Enula Campana. *Pharm. Lond.* Helenium. *Gerard Emac. p.* 793. *Raii Hist. p.* 273. *Synop. p.* 176. Helenium vulgare. *Bauh. Pin. p.* 276. Helenium sive Enula campana. *J. Bauh. Hist. iii. p.* 108. *Park. Theat. p.* 654. After foliis ovato-lanceolatis, serratis, subtus tomentosis, calycinis ovato-lanceolatis, maximis. *Hal. Stirp. Helv. n.* 72. Inula Helenium. *Hudson Flor. Ang. p.* 368. *With. Bot. Arr. p.* 922. *Flor. Dan.* 728.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 956.

Ess. Gen. Ch. *Recept.* nudum. *Pappus* simplex. *Antheræ* basi in setas duas desinentes.

Sp. Ch. T. foliis amplexicaulibus ovatis rugosis subtus tomentosis, calycum squamis ovatis.

THE root is perennial, large, thick, branched, externally brown or grey, internally whitish: the stalk is upright, strong, round, striated, branched, beset with soft hairs, and rises three or four feet in height: the leaves are large, ovate, serrated, crouded 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 sessile, 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 brim into five small segments, and are *hermaphrodite*, each containing five short filaments, which have their antheræ united so as to form a hollow cylinder and a long germen, which supports a slender

ſlender ſtyle, about the length of the tube, and furniſhed with a biſid ſtigma: 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 verbaſci of Dioſcorides,[a] and the Inula of Pliny,[b] who alſo mentions Helenium but as a very different plant.[c] 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 watery; 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, diſcutit, aperit, pulmonica eſt. Stomacha, alexipharmaca, ſudoriſera, &c. *Uſus præcip.* in tartaro pulmonum renumque attenuando,

[a] *Lib. i. cap.* 27. [b] *Lib. xix. cap.* 5.

[c] "Helenium e lacrymis Helenæ natum, & ideo in Helena inſula laudatiſſimum. Eſt autem frutex humi ſe ſpargens dodorantibus ramulis, folio ſimili ſerpyllo." *Lib. xxi. c.* 9.

The Innula is noticed by Horace:

"Erucas virides, inulas ego primus amaras
Monſtravi incoquere." SAT. 8. v. 51.

——— quum rapula plenus
Atque acidas mavult inulas. SAT. 2. v. 44.

Thymus vulgaris.

Published by W. Wandsworth [illegible] 1791

ando, ac educendo, & hinc in tussi, asthmate, in cruditatibus ventriculi emendandis, ureteribus reserandis, in peste, contagiosisque morbis arcendis, in scabie."[d] 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.[e] 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.

[d] P. 602. See *Alston's M. M. vol. i. p.* 454.
[e] See Cullen's *M. M. vol. ii. p.* 459.

THYMUS VULGARIS. COMMON GARDEN THYME.

SYNONYMA. Thymus. *Pharm. Edinb.* Thymus vulgaris folio tenuiore. *Bauh. Pin. p.* 219. *Tourn. Inst. p.* 196. Thymum durius. *Dod. Pempt. p.* 275. *Gerard Emac. p.* 573. *Raii Hist. p.* 521. *Park. Theat. p.* 7.

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

β Thymus vulgaris folio latiore.* *C. B.*
Broad-leav'd Garden Thyme. *Hort. Kew.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 727.

Ess. Gen. Ch. *Calycis* bilabiati faux villis clausa.

Sp. Ch. T. erectus, foliis revolutis ovatis, floribus verticillato-spicatis.

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.

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 antheræ 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 Θυμος of Dioſcorides and Theophraſtus.[a] 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.[b] 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 inſpiſſated, leaves a bitteriſh, roughiſh, ſubſaline extract. The

[a] "Dioſcorid. L. 3. c. 44. Theophraſt. 4. hiſt. 7. & 6. hiſt. 2. 1. caus. 5. απο τυ θυμυ, quod iis qui animi deliquium patiuntur adhibeatur: alii απο τνς θυμιασεως και τνς θυνς deducunt, quod hoc veteres in ſacris, quæ igne accenſo fiebant, primum uſi ſint, ut apud Rhodiginum, L 3. c. 23. legere eſt."

[b] 'Nerine Galatea, thymo mihi dulcior Hyblæ.' Both this ſpecies and the Serpyllum are probably alluded to; they are equally fragrant, and coveted by bees.

active

Thymus Serpyllum.

Delineated by Mrs Wakefield Oct 1 1791

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."[e]

By Bergius the virtues of Thyme are ſaid to be reſolvent, emmenagogue, diuretic, tonic, and ſtomachic;[e] 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 verticillatæ, its aromatic qualities may be found equally uſeful in ſome of thoſe complaints for which lavender, ſage, roſemary, &c. are uſually employed.

[e] Lewis, *M. M.* *p.* 650.

† This plant ſeems actually to contain a ſpecies of camphor, thus noticed by Murray: Camphoræ ſpeciem continet herba, quæ ſeſe declaruit mox poſt deſtillationem ejus cum aqua, dum oleum ab ea ſepararetur, tam in goſſypio quam orificio vitri, cryſtallis exiguis, dein poſt aliquot dierum moram in fundo vitri cryſtallis, avellanæ nucis adeo magnitudinis, cubicis, ſaccharo candi ſimilibus." *App. Med. vol. ii p.* 125. Theſe with the odour of Thyme, had in every other reſpect the qualities of camphor. See *Phil. Tranſ. vol. xxxiii. p.* 321. *ſqq.* & *p.* 361.

[e] *M. M. p.* 536.

THYMUS SERPYLLUM. WILD, or MOTHER of THYME.

SYNONYMA. Serpyllum. *Pharm. Edinb.* Serpyllum vulgare minus. *Bauh. Pin. p.* 220. *Park. Theat. p.* 8. Serpyllum vulgare. *Gerard Emac. p.* 570. *Raii Hiſt. p.* 521. *Synop. p.* 230. Thymus foliis ovatis ad baſin ciliatis. *Hal. Stirp. Helv. n.* 235. Thymus Serpyllum. *Hudſon. Flor. Ang. p.* 229. *Withering. Bot. Arrang. p.* 623. *Curt. Flor. Lond.*

α Serpyllum vulgare minus. *C. B.*
Common ſmooth Mother of Thyme.

β Serpyllum foliis citri odore. *C. B.*
Lemon Thyme.

γ Serpyllum

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

δ Serpyllum angustifolium hirsutum. *C. B.*
Hairy Mother of Thyme. See *Hort. Kew.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 727.

Ess. Gen. Ch. *Calycis* bilabiati faux villis clausa.

Sp. Ch. T. floribus capitatis, caulibus repentibus, foliis planis obtusis basi 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 purplish 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,[a] 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 extremes; but it has been so far sheltered as to participate more of the character of the

[a] 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 of Sheep Walks in Spain. *Gent. Mag.* 1764.

latter

Lineum usitatissimum.

Published by Dr Woodville. Mat. Med. 1791

ſatter 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."[b] From this it appears, that the Serpyllum, though poſſeſſing ſimilar qualities, is evidently leſs medicinal than the foregoing ſpecies.[c]

[b] Lewis, *M. M. p.* 651.

[c] 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 ſit hortenſe." Ερπυλλον, ab ερπω, according to Pliny, who commends its uſe in various diſeaſes. L. xx. c. 22. See *Dioſc. L. iii. c.* 46. *Theoph.* 6. *hiſt.* 7. Serpyllum is thus mentioned by Virgil:

> Theſtylis et rapido feſſis meſſoribus æſtu
> Allia ſerpyllumque herbas contundit olentes. Ec. ii. 10.

LINUM USITATISSIMUM. COMMON FLAX.

SYNONYMA. Linum. *Pharm. Lond. & Edinb.* Linum arvenſe. *Bauh. Pin. p.* 214. Linum ſativum. *Gerard, Emac. p.* 556. *Park. Theat. p.* 1335. *Raii Hiſt. p.* 1072. *Synop. p.* 362. Linum. *J. Bauh. Hiſt. iii. p.* 451. *Hall. Stirp. Helv. n.* 836. L. uſitatiſſimum. *Hudſ. Flor. Ang. p.* 133. *Withering. Bot. Arrang. p.* 328. *Curt. Flor. Lond.* Λινον *Dioſcor. L.* 2. *c.* 125. *Theoph.* 8. *Hiſt.* 7.

Claſs Pentandria. *Ord.* Pentagynia. *Lin. Gen. Plant.* 389.

Eſſ. Gen. Ch. Cal. 5-phyllus. *Petala* 5. *Caps.* 5-valvis, 10-locularis. *Sem.* ſolitaria.

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

THE root is annual: the ſtalk is erect, round, ſmooth, branched towards the top, and riſes about a foot and a half in height:[a] 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 funnel-ſhaped, conſiſting of five petals, which are large, obovate, ſtriated, and minutely ſcolloped at their extremities: the filaments are five, tapering, upright, about the length of the calyx, united at the baſe, and crowned with ſimple antheræ: the germen is oval: the five ſtyles are ſiliform, 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[b] is an article of ſuch extenſive utility for various œconomical 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 Haſelquiſt, that in Egypt this plant riſes with a ſtrong ſtem to the height of four feet. *Reſa til hel. 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

particular taste or flavour: in some properties it differs considerably from most of the other oils of this kind; not congealing in winter; not forming a solid soap with fixed alkaline salts;* 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."[c]

Linseed appears to afford but little nourishment, and when taken as food has been found to impair the stomach, and produce great flatulency: effects, which are noticed of these seeds by Galen,[d] and since amply confirmed by Tragus, who relates[e] that, in consequence of a scarcity of corn in Zealand, the inhabitants were urged to the necessity of eating boiled Linseed, which occasioned a remarkable distention 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 hoarsenesses, coughs, and pleuretic symptoms, which frequently prevail in catarrhal affections; 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.[f] The seeds are also much used externally in emollient and maturating cataplasms. The expressed oil is an officinal preparation, and is supposed to be of a more healing and balsamic nature than the other oils of this class;[g] it has therefore been very generally employed in pulmonary complaints, also in colics,[h] and constipations of the bowels.[i]

* Geoffroy, *Mem. de l'acad. des scien. de Paris l'ann.* 1741.

[c] Lewis, *M. M. p.* 397.

[d] Simp. L. 7. de alim. fac. l. 1. c. 32.

[e] See Rai *Hist. p.* 1073. [f] *Lewis, l. c.*

[g] This subject is examined on treating of Olea europæa. See *Med. Bot. vol. iii.*

[h] See Sydenham, *(Opp. cap. de pleur. p.* 265.*)* Haen, *(Rat. Med. P. i. p.* 24. *P. ii. p.* 103 *)* and others.

[i] Haen, *l. c. P. ii. p.* 204. V. Swieten, *Com. vol. ii. p.* 143. Gallesky mentions several cases of constipation and colic, proceeding from different causes, successfully treated by this oil, See Abhandl. v. Miserere u. d. Kräften d. Leinöls in dies. Krankh. p. 75 seq. Also Lentin, Beob. einig Krankh. p. 149. Vide Murray, App. Med. vol. iii. p. 485. seq.—It is used in common with other oils as a vermifuge.

GEOFFROYA

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

SYNONYMA. Geoffræa. *Pharm. Edinb.* Geoffræa jamaicencis inermis. *Wright's Description and Use of the Cabbage-bark Tree of Jamaica. Phil. Transf. vol.* 67. *p.* 507. Geoffroya inermis, foliolis lanceolatis. *Swartz. Prodr.* 100.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 876.

Ess. Gen. Ch. *Cal.* 5-fidus. *Drupa* ovata. *Nucleus* compressus.

Sp. Ch. G. inermis, foliolis lanceolatis. *Swartz. l. c.*

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 pinnæ, 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 *alæ*, 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 antheræ 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

Published by Dr Woodville. Nov.r 1 1791

firſt noticed as a vermifuge by Mr. Peter Duguid.[a] 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. Linnæus 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 Linnæus. This ſpecies was firſt introduced into this country by Meſſrs. Kennedy and Lee, who cultivated it at Hammerſmith 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 ſlow 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 mariæ* 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.

[a] This author thinks that the inhabitants of Jamaica are more ſubject to worms, " on account of their *ſweet viſcid bread-kind*, to wit, plaintains, yams, bananos, 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 ſtool 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

Pastinaca Opopanax

Published by D. Wendelle, Jan. 1 1791

"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 jallap by stool; 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-dosing 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.*

SYNONYMA. Panax costinum. *Bauh. Pin. p.* 156. Panax Heracleum. *Morris Hist. t. iii. p.* 315. *Boccone, Journ. des Sçav.* 1676. *p.* 28. *Gerard Emac. p.* 1003. *Raii Hist. p.* 410. Heracleum alterum, sive peregrinum Dodonæi. *Park. Theat. p.* 948. Pastinaca sylvestris altissima. *Tourn. Inst. p.* 319. P. Opopanax. *Gouan, Illustr.* 19. *t.* 13, 14.

Class

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 362.

Ess. Gen. Ch. *Fructus* ellipticus, compresso-planus. *Petala* involuta, integra.

Sp. Ch. P. foliis pinnatis: foliolis basi antica excisis. *Syst. Veg.*

THE root is perennial, thick, fleshy, tapering like the garden parsnep: the stalk is strong, branched, rough towards the bottom, and rises seven or eight feet in height: the leaves are pinnated, consisting of several pairs of pinnæ, which are oblong, serrated, veined, and towards the base appear unformed 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 antheræ: the germen is placed below the corolla, supporting two reflexed styles, which are supplied with blunt stigmata: 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 Parsnep 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.[a] 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 officinal opopanax;[b] 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

[a] 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, *Pempt.* (p. 309.) & Boccone, (l. c.)

means

means of incifions made at the bottom of the ftalk of the plant, from whence the juice gradually exudes,[c] and by undergoing fpontaneous concretion, affumes the appearance under which we have it imported from Turkey and the Eaft-Indies, viz. " fometimes in little round drops or tears, more commonly in irregular lumps, of a reddifh yellow colour, on the outfide with fpecks of white, internally of a paler colour, and frequently variegated with large white pieces."

" This gummy-refin has a ftrong difagreeable fmell, and a bitter acrid fomewhat naufeous tafte. It readily mingles with water, by triture, into a milky liquor, which on ftanding depofits a portion of refinous matter, and becomes yellowifh: to rectified fpirit it yields a gold-coloured tincture, which taftes and fmells ftrongly of Opopanax. Water diftilled from it is impregnated with its fmell, but no effential oil is obtained on committing moderate quantities to the operation."[d]

Opopanax has been long employed by phyficians, and efteemed for its attenuating, deobftruent, and aperient virtues; but as it is commonly prefcribed in combination with other medicines, thefe qualities are by no means afcertained, nor do its fenfible qualities indicate it to be a medicine of much power. Dr. Cullen claffes it with the antifpafmodics; it is however lefs fetid than galbanum, though more fo than ammoniacum, and therefore may be fuppofed to have fome affinity to a union of thefe two. It has commonly been given in hypochondriacal affections, vifceral obftructions, menftrual fuppreffions, and afthmas, efpecially when connected with a phlegmatic habit of body. It has no place in the Mat. Med. of the Edinburgh Pharmacopœia, but, by the London College it is directed in the pillulæ e gummi.

[d] *Lewis, M. M. p.* 468.

RHAMNUS CATHARTICUS. PURGING BUCKTHORN.

SYNONYMA. Spina cervina. *Pharm. Lond. & Edinb.* Rhamnus catharticus. *Bauh. Pin. p.* 478. *Raii Hist. p.* 1625. *Synop. p.* 466. *Hudson. Flor. Ang. p.* 98. *Withering. Bot. Arrang. p.* 239. *Flor. Dan.* 850. Rhamnus solutivus. *Gerard Emac. p.* 1337. Rhamnus solutivus sive Spina infectoria vulgaris. *Park. Theat. p.* 243. Rhamnus foliis spinosis, ovato-lanceolatis, ferratis. *Hal. Stirp. Helv. n.* 824.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 265.

Ess. Gen. Ch. *Cal.* tubulosus: squamis stamina munientibus. *Cor.* nulla. *Bacca.*

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 trifid 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

Rhamnus catharticus.

Published by Dr Wm. Aiton 1791

ripe of a ſhining black colour: they contain a pulpy deep green juice,[a] which has a ſaint unpleaſant ſmell, and a bitteriſh, acrid, nauſeous taſte: they operate briſkly by ſtool, and hence the plant derives the trivial name *catharticus*:[b] 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 rob or extract, obtained by inſpiſſating the juice."[c] The juice made into a ſyrup is the officinal 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.[d] Few patients however are able to bear a frequent repetition of this medicine; and even Sydenham, who was partial to the purgative treatment of hydropical 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.[e]

[a] This juice is called by the French Verd de Veſſie, 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. Suec. p.* 72.

[b] 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.

[c] Lewis, *M. M. p.* 612.

[d] Riverius, *Prax. lib. ii. cap.* 6. *p.* 44.—Boerhaave, *De virib. med. p.* 308.—Chomel, *Uſuell. tom. i. p.* 19.—Sydenham, *Opera*, *p.* 488.

[e] Allioni, *Fl. Pedemont*, *t. ii. p.* 130.

TANACETUM

TANACETUM VULGARE. COMMON TANSY.

SYNONYMA. Tanacetum. *Pharm. Lond. & Edinb. Raii Hist. p.* 365. *Synop. p.* 188. *Gerard Emac. p.* 650. Tanacetum vulgare luteum. *Bauh. Pin. p.* 132. Tanacetum vulgare. *Park. Theat. p.* 80. *Hudson Flor. Ang. p.* 357. *Withering. Bot. Arrang. p.* 887. *Flor. Dan. p.* 871. Tanacetum foliis pinnatis, pinnis semipinnatis, acute dentatis. *Hal. Stirp. Helv. n.* 132.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 944.

Ess. Gen. Ch. Recept. nudum. *Pappus* submarginatus. *Cal.* imbricatus, hemisphæricus. *Cor.* radii obsoletæ, 3-fidæ.

Sp. Ch. T. foliis bipinnatis incisis 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; lesser 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 squamæ, forming a common perianthum 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

Tanacetum vulgare

Published by H. Wichelle, Nov. 1 1/01

This ſpecies, of which there is a variety, *foliis criſpis*, the curled Tanſy, which is ſaid to be more grateful to the ſtomach than the common Tanſy, 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 Tanſy 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, inſpiſſated, affords a ſtrong bitter ſubſaline 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."[b]

According to Bergius, the virtues of Tanſy are tonic, ſtomachic, anthelmintic, emmenagogue, and reſolvent;[c] qualities uſually attributed to bitters of the warm or aromatic kind; many of which we ſhall ſoon have occaſion to notice under the genus Artemeſia, which is cloſely allied to that of Tanacetum in its botanical character. Tanſy has been much uſed as a vermifuge, 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 Tanſy was found to be of great ſervice in various caſes of gout;[f] 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."[g]

[a] See C. *Bauh. l. c.* [b] Lewis, *M. M. p.* 633. [c] *Mat. Med. p.* 664.

[d] Hoffman ſpeaks highly of its efficacy. See *Med. Syſt. T.* 4. *P.* 2. *p.* 333. See alſo *Supp. p.* 87. Roſenſtein, *Biſkd.* cap. de vermibus. [e] The latter however are much more bitter and aromatic. See *Lewis, l. c.* [f] Vide, *Eſſays and Obſ. phyſical and lit. vol. iii. p.* 438. [g] *Mat. Med. vol. ii. p.* 80.

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.

SYNONYMA. Dictamnus albus. *Pharm. Edinb.* Dictamnus albus sive Fraxinella. *Bauh. Pin. p.* 222. Fraxinella. *Gerard Emac. p.* 1245. *Morris, Hist. iii. p.* 456. *Tourn. Inst. p.* 430. Fraxinella flore purpureo & albo. *Park. Parad. p.* 333. Fraxinella, &c. *Raii Hist. p.* 698. *J. Bauh. iii. p.* 494. *Hal. Stirp. Helv. n.* 1029. *Miller's Figures, tab.* 123. *Jacquin, Flor. Aust. tab.* 428. [a] Flore niveo. [b] Flore rubro.

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 522.

Ess. Gen. Ch. *Cal.* 5-phyllus. *Petala* 5, patula. *Filamenta* punctis glandulosis adspersa. *Caps.* 5, coalitæ.

Sp. Ch. D. foliis pinnatis caule simplici. *Supp. p.* 232.

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 bracteæ 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 obversely oval shape, and inserted into the calyx

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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 antheræ: the germen is pentangular: the ſtyle ſhort, tapering, and ſupplied with a pointed ſtigma: the ſeed veſſels are five united capſules, each of which contains two ſmall oval ſeeds.

This plant, which is commonly called Fraxinella,* 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 handſomer 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.[a]

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 diſcovers a pretty ſtrong and very durable bitterneſs, which is taken up both by watery and ſpirituous menſtrua, and on inſpiſſating the filtered tinctures, remains entire in the extracts: the aqueous extract is in much larger quantity than the ſpirituous, and proportionably weaker in taſte."[b]

Formerly this root was uſed as a ſtomachic, tonic, and alexipharmic, and was ſuppoſed to be a medicine of much efficacy in removing uterine obſtructions, and deſtroying worms;[c] but its medicinal powers became ſo little regarded by modern phyſicians, that it had fallen almoſt entirely into diſuſe, till Baron Stoerck brought it into notice by publiſhing ſeveral caſes of its ſucceſs,[d] viz. in tertian intermittents, worms, (lumbrici) and menſtrual ſuppreſſions. 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 aſh.

[a] Vide Du Hamel, *Phyſ. des arbres, tom. i. p.* 150. Nollet, *Cours. de Phyſ. vol. i. p.* 300. [b] *Lewis, Mat. Med. p.* 274. [c] See Geier, *Dictamnographia. Buchner Diſſ. de Fraxinella.* Matthiolus ſays, "ad multa utilis eſt." *p.* 523. [d] Vide *libell. de Flammula Jovis, Dictamno albo, &c.*

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 ſteel, this root, we are told, was of great ſervice to chlorotic patients.

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

CANELLA ALBA. LAUREL-LEAVED CANELLA.

SYNONYMA. Canella alba. *Pharm. Lond. & Edinb.* Winterania Canella. *Lin. Supp. p.* 247. Arbor bacciſera laurifolia aromatica, fructu viridi calyculato racemoſo. *Sloane's Jamaica, vol. ii. p.* 87. *t.* 191. *f.* 2. *Cateſby's Carolina, vol. ii. p.* 50. *t.* 50. Canella foliis oblongis obtuſis nitidis, racemis terminalibus. *Browne's Jamaica, p.* 275. *t.* 27. *f.* 3. Caſſia lignea Jamaicenſis Laureolæ foliis ſubcinereis cortice piperis modo acri. *Pluckenet Almag. p.* 89. *t.* 81. *f.* 1. *Lin. Spec. Plant. p.* 636. *Conf. Swartz. Botanical Hiſtory of the Canella Alba. Linnean Tranſactions. p.* 96.

Claſs Dodecandria. *Ord.* Monogynia. *Lin. Gen. Winterania. p.* 598.

Eſſ. Gen. Ch. Cal. 3-lobus. *Pet.* 5. *Antheræ* 16, adnatæ nectario urceolato. *Bacca* 3-locularis. *Sem.* 2.

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

Canella alba.

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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, ſeſſile, 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 germen 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, Sloane, Cateſby, Browne,[a] and others, ſhould have been generally confounded with the tree which produces the cortex winteranus: even the younger Linnæus, 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.[b] 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 *White-headed and Bald-pate Pigeons, (Columba Jamaicenſis & leucocephala)* which feeding greedily upon them acquire that peculiar flavour ſo much admired in the places where they are found." l. c.

[a] Swartz obſerves, that the only tolerable figure among theſe is that of Browne, l. c.

[b] "Quantum differat a genere Drimys nondum bene ſcio." *Supp. p.* 247.

[c] *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 officinal 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 accompanied 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 [a] who confounded the names of theſe barks, by ſtyling 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 Linnæus,‡ who, diſregarding the evidence of the old botaniſts,* combined two genera under the name of Laurus Winterana;[f] but he afterwards made it a ſeparate genus, and called it Winterania,[g] 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.[h]

‖ "*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) cœpit exoticus cortex inferri, cui nomen Canellæ albæ indiderunt." *Exot. lib. iv. cap.* 4.

[a] *Hiſt. vol. i. p.* 460. [b] *Phil. Tranſ. No.* 192. *p.* 462.

‡ *P.* 443. Though Murray has here ſaid, "Cortex hujus eſt Canella alba officinarum," yet the London College has not availed itſelf of this authority, no botanical reference being given to Canella alba in the new pharmacopœia.

* Among theſe we may notice Plukenet, who, ſpeaking of theſe two trees, ſays, "Varie inter ſe plurimum diverſæ plantæ per illarum ignorationem plane confunduntur." *Almag. Mant. p.* 40.

[f] *Sp. Plant. ed.* 1. *p.* 371. [g] See his *Hort. Cliff.* 448. and *Mat. Med.*

[h] *Hort. Kew. vol. ii. p.* 125.

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 decoction, inspissated, leaves an extract of great bitterness, in consistence not uniform, seemingly composed of a resinous and gummy matter, imperfectly mixed. On inspissating 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."[1]

The use of Canella alba now supersedes that of the old bark of Winter, on the authority of both the London and Edinburgh pharmacopœias. It has been supposed to possess a considerable share of medicinal power, and is said to be an useful medicine in the scurvy, 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. aloet. 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 Capsicum, 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." l. c.

[1] Lewis, *M. M.* p. 186.

SCILLA MARITIMA.

SCILLA MARITIMA. OFFICINAL SQUILL, Or, SEA ONION.

SYNONYMA. Scilla. *Pharm. Lond. & Edinb.* Scilla vulgaris radice rubra. *Bauh. Pin. p.* 73. *Raii Hist. p.* 1164. Scilla rubra, sive Pancratium verum. *Park. Parad. p.* 133. Scilla rubra magna vulgaris. *J. Bauh. Hist. ii. p.* 615. Pancratium Clusii. *Gerard Emac. p.* 172. Ornithogalon maritimum, seu scilla radice rubra. *Tourn. Inst. p.* 381. β Scilla radice alba. *Bauh. l. c.*

Class Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 419.

Ess. Gen. Ch. Cor. 6-petala, patens, decidua. *Filamenta* filiformia.

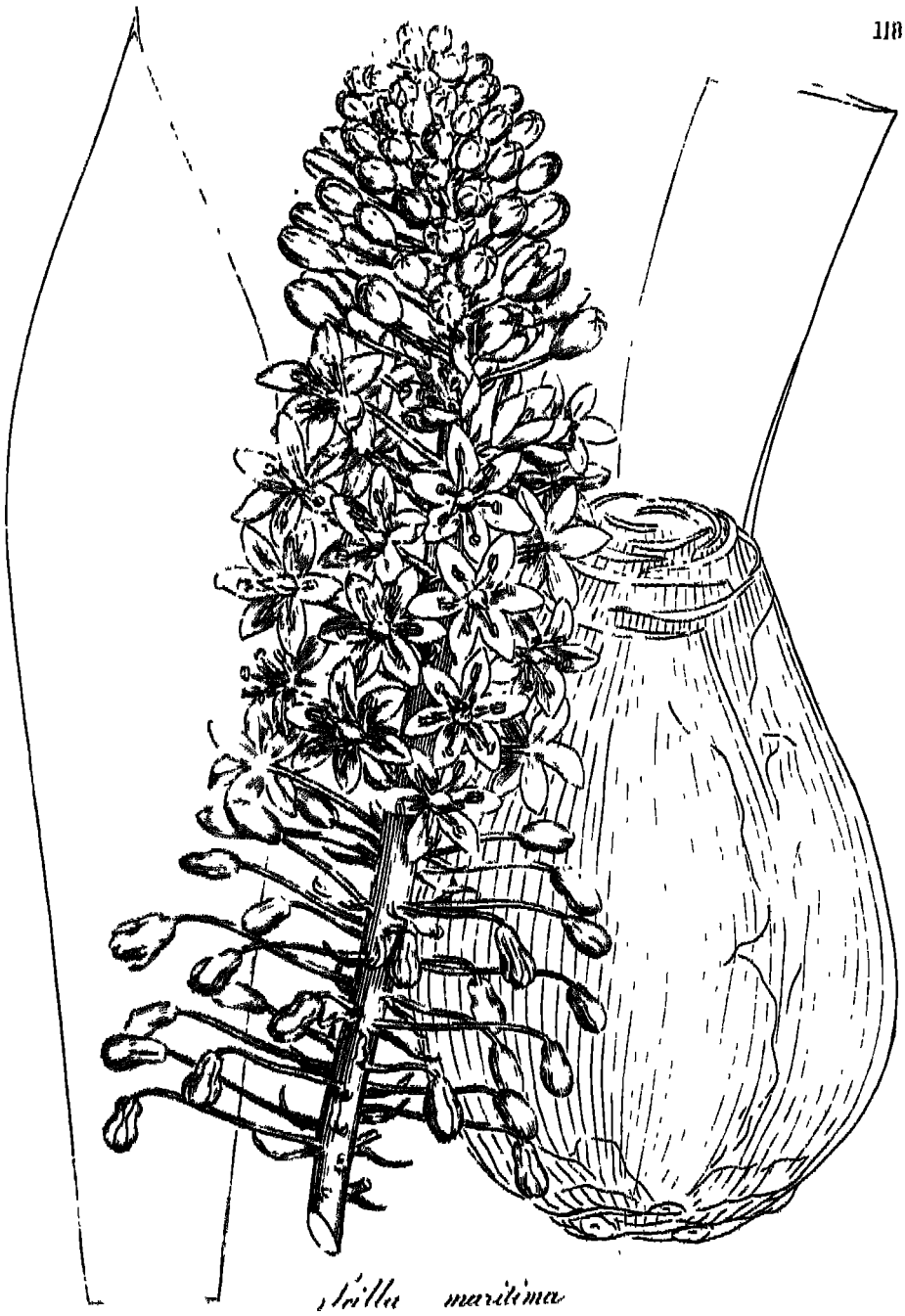
Sp. Ch. S. nudiflora, bracteis refractis.

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 whitish, produced in a long close spike upon purplish pedunicles, and appear in April and May: the bracteæ 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 six, tapering, shorter than the corolla, and furnished with oblong antheræ, 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, *Hort. Oxon. ed.* 1. *p.* 48.

efficacious



Scilla maritima

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efficacious than the white, and is therefore still preferred for medicinal use:[b] it is to the taste 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 menstrua, the entire bitterness and pungency of the Squill remaining concentrated in the inspissated extracts: the spirituous extract is in smaller quantity than the watery, and of a proportionably stronger almost fiery taste."

"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."[c]

The root of the Squill, which appears to have been known as a medicine in the early ages of Greece,[d] 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 Hillefeild,[e] Bergius,[f] Vogel,[g] and others. Its acrimony is so great that even if much handled it exulcerates the skin; and if given in large doses, and frequently repeated, it not only excites nausea, tormina, and violent vomitings, but it has been known to produce strangury, bloody urine, hypercatharsis, cardialgia, hæmorrhoids, convulsions, with fatal inflammation and gangrene of the stomach and bowels.[h] 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

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

[d] Some refer its introduction to medical use to Epimenides; others to Pythagoras. Vide Haller, *Bib. Bot. p.* 12. It was sometimes called Σκιλλα, and sometimes Πωγωνιον and is noticed by Dioscorides, Hippocrates, Galen, Aëtius, Celsus, Pliny, Cælius Aurelianus, and the Arabian physicians.

[e] *Diss. experim. circa venena, p.* 12. [f] *Mat. Med. p.* 265. [g] *V. in* Hillef. *p.* 18.

[h] See Lange, *de remed. Brunf. domest. p.* 176. Also Quarin, *Animadv. pract. p.* 166.

practical utility, and real importance in the cure of many obſtinate diſeaſes. Its effects, as ſtated by Bergius, are incidens diuretica, emetica, ſubpurgans, hydragoga, expectorans, emmenagoga.[l] In hydropical caſes it has long been eſteemed the moſt certain and effectual diuretic with which we are acquainted; and in aſthmatic affections,[k] or dyſpnœa, occaſioned by the lodgment of tenacious phlegm, it has been the expectorant uſually employed.[l] 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,[m] 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 dropſy; 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."[n]

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.

[l] *L. c.* [k] All the authors who have written on theſe diſeaſes, might here be cited.

[l] We do not notice its uſe as an emetic, as we think it entirely ſuperſeded by the ipecacuanha.

[m] This is mentioned on the authority of Dr. Cullen. *M. M. v. ii. p.* 558.

[n] Cullen, *l. c.*

Where

Where the primæ viæ 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 ſpaſm, the Squill has been experienced to be an uſeful medicine.

The officinal preparations of Squills are a conſerve, dried Squills,* a ſyrup, and vinegar, an oxymel, and pills. Practitioners have not however confined themſelves to theſe:[o] 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 recommend 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.[p]

* "We muſt not, however, miſs to obſerve here, that the drying of the Squill is a buſineſs 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.*

[o] See on this ſubject Wagner, *obſ. clin. ſect.* 2. in Hall. *collect. diſſ.* Ludwig, *Advers Medio-pract. vol. ii. p.* 695. Quarin, *l. c.* Werlhof, *Oper.* Stoll, *Prælect. in morb. chron.* Home, *Clin. Exper. & Hiſt. p.* 357. *&c.*

[p] Duncan, *New Edinb. Diſpenſ. p.* 322.

ARTEMISIA ABROTANUM.

ARTEMISIA ABROTANUM. COMMON SOUTHERNWOOD.

SYNONYMA. Abrotanum. *Pharm. Lond. & Edinb.* Abrotanum mas anguſtifolium majus. *Bauh. Pin. p.* 136. *Tourn. Inſt. p.* 459. *Duhamel, Arb. i. p.* 20. *t.* 4. Abrotanum mas vulgare. *Park. Theat. p.* 92. Abrotanum mas. *Gerard. Emac. p.* 1105. *Raii Hiſt. p.* 371. *Dodon. Pempt. p.* 21.

α A. caule *erecto.*

β A. *humilis* foliis ſetaceis pinnatifidis, caule decumbente ſuffruticoſo. *Mill. Dict.*

Claſs Syngeneſia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Eſſ. Gen. Ch. Recept. ſubvilloſum vel nudiuſculum. *Pappus* nullus. *Cal.* imbricatus, ſquamis rotundatis, conniventibus. *Cor.* radii nullæ.

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

THE root is perennial, woody, and fibrous: the ſtalk is ſhrubby, round, covered with ſmooth brown bark, ſends off vertical branches, and riſes two or three feet in height: the leaves are numerous, ſomewhat hoary, doubly and irregularly pinnated; pinnæ, 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 *hermaphrodite*; but in the *margin* they are *female*: the corolla is tubular, and extremely minute: the filaments are five, ſhort, and ſlender: the antheræ are united, and form a hollow cylinder: the ſtyle is longer than the ſtamina, and furniſhed with a cleft reflected ſtigma: the ſeeds are naked and ſolitary.

Southernwood

. Artemisia . Abrotanum

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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 extracted by spirituous menstrua, 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 essential oil; for from sixteen pounds of the fresh leaves scarcely three drams of this oil could be obtained.[a]

The Abrotanum mas & femina were regarded by the ancients [b] as medicines of considerable efficacy; the latter is referred to Santolina Chamæ-Cyparissus, *Lin.* (Common Lavender Cotton); the former is the species now under consideration, and has been esteemed to be stomachic, carminative, and deobstruent: 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 pharmacopœias, it is now rarely used, unless in the way of fomentation.

[a] Lewis, *M. M.* *p.* 4.

[b] See Theophrast. *Hist.* *L.* 1. *c.* 15. *p.* 44. Dioscor. *L.* 3. *c.* 29. *p.* 184. Galen, *Simpl.* *L.* 6. *p.* 40. Pliny, *L.* 21. *c.* 21.

ARTEMISIA ABSINTHIUM. COMMON WORMWOOD.

SYNONYMA. Abſinthium vulgare. *Pharm. Lond. & Edinb.* Abſinthium ponticum ſeu Romanum officinarum, ſeu Dioſcoridis. *Bauh. Pin. p.* 138. Abſinthium latifolium ſive Ponticum. *Gerard. Emac. p.* 1096. Abſinthium vulgare majus. *J. Bauh. Hiſt. iii. p.* 168. Abſinthium vulgare. *Park. Theat. p.* 98. *Raii Hiſt. p.* 366. *Synop. p.* 188. *Hal. Stirp. Helv. n.* 124. Artemiſia Abſinthium. *Hudſ. Ang. p.* 358. *Withering. Bot. Arrang. p.* 891.

Claſs Syngeneſia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Eſſ. Gen. Ch. Recept. ſubvilloſum vel nudiuſculum. *Pappus* nullus. *Cal.* imbricatus ſquamis rotundatis conniventibus. *Cor.* radii nullæ.

Sp. Ch. A. foliis compoſitis multifidis, floribus ſubgloboſis pendulis: receptaculo villoſo.

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

Artemisia . Abrotanum

Published by J. Wendell, Dec. 1 1741

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 smell 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 smell and flavour. Along with the aqueous fluid there arises an essential oil, which smells strongly and tastes nauseously of the Wormwood, though not bitter. The quantity of oil varies greatly, according to the soil and season in which the herb is produced.[a]

"The watery extract loses the distinguishing smell 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;[b] water carrying off, in the evaporation, all the oil in which the offensive flavour resides, while pure spirit elevates very little of it."[c]

This species of Wormwood, which is thought by Professor Murray to be the Absinthium ponticum of Dioscorides and Pliny,[d] may be considered the principal of the herbaceous bitters. Its *Virtus*, in the words of Bergius, is antiputredinosa, antacida, anthelminthica, resolvens, tonica, stomachica.[e] 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,[f] hypochondriasis,[g] obstructions[h] of the liver and spleen, gout,[i] calculi,[k]

* This plant communicates a bitter taste to the flesh and milk of cows and sheep which feed on it. *Lin. Flor. Suec. n.* 735. The milk of a woman, who took the extract, became extremely bitter. *Act. Hafn. vol.* 2. *p.* 165.

[a] *Baumé* from twenty-five pounds of the herb obtained six to ten drams of the oil.

[b] The extract, triturated with salt of tartar, emits a volatile odour; and hence appears to contain sal ammoniacum. Sulzer. *Diss. An in plantis sal essentiale ammoniacum?* *Gott.* 1769.

[c] Lewis, *M. M. p.* 6.

[d] "Absinthium bathypicron herba est vulgo cognita. Præstantius in Ponto & Cappadocia in monte Tauro appellato nascitur." *Dioscor. L.* 3. *c.* 26. *p.* 183.

[e] *Mat. Med. p.* 670. [f] Boerhaave, *Elem. Chem. Processus.* 39. *Comm. Nor.* 1734. *p.* 225. [g] Haller, *l. c.*

[h] Lange, *Brunov. p.* 111. [i] Haller, *l. c.* Bomare, *Dict.*

[k] Linnæus, *Am. Acad. T.* 3. *p.* 160.

scurvy,

ſcurvy,[l] dropſy,[m] worms, &c. Lindeſtolphe[n] has aſſerted, 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 taſte 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 idioſyncraſy, 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 Gleditſch, 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."[o]

Externally Wormwood is uſed in diſcutient and antiſeptic fomentations. This plant may be taken in powder, but it is more commonly preferred in infuſion. The Edinburgh pharmacopœia 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.

[l] Eugal. *De Scorb. p.* 83. [m] Fehr, *Hiera. picra, vel de Abſinth. analecta. p.* 117. Heiſter *in* Hall. *Diſput. anat. vol.* 6. *p.* 713. *Miſc. Nat. Cur. Dec.* 1. *Ann.* 3. *Obſ.* 322. [n] *De venenis. p.* 547. [o] *Mat. Med. vol.* 2. *p.* 81.

ARTEMISIA

Artemisia vulgaris

Publiphed by W. Richelle Jan.y 1792.

ARTEMISIA VULGARIS. MUG-WORT.

SYNONYMA. Artemisia.† *Pharm. Edinb.* Artemisia vulgaris major. *Bauh. Pin. p.* 137. Artemisia mater herbarum. *Gerard. Emac. p.* 1103. Artemisia foliis pinnatis inferne tomentosis, pinnis acute dentatis, spica paniculata erecta. *Hal. Stirp. Helv. n.* 130. Artemisia vulgaris. *J. Bauh. Hist. iii. p.* 184. *Park. Theat. p.* 90. *Raii Hist. p.* 372. *Synop. p.* 190. *Hudf. Flor. Ang. p.* 359. *Withering. Bot. Arrang. p.* 891.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Ess. Gen. Ch. *Recept.* subvillosum vel nudiusculum. *Pappus* nullus. *Cal.* imbricatus, squamis rotundatis conniventibus. *Cor.* radii nullæ.

Sp. Ch. A. foliis pinnatifidis planis incisis subtus tomentosis, racemis simplicibus recurvatis floribus radio quinquefloro.

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 laciniæ 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 substance: 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, stand upon a naked receptacle, and appear in August: the five florets of the circumference are female;

† "Artemisia dicta, ab *Artemisia Mausoli Cariæ regis uxore*, quæ hanc sibi, ut loquitur *Plinius l.* 25. *c.* 7. *p.* 646. adoptavit, cum antea παρθένος i. e. virginalis, quod virgo dea illi nomen dederit, vocaretur. Sunt qui ab *Artemide Ilithia* cognominatam putent; quoniam privatim fœminarum malis, quibus Αρτεμις i. e. *Diana* præest, medeatur." *C. Bauh. l. c.*

 those

thofe of the centre are hermaphrodite, and both agree in their ftructure with thofe of the other fpecies already defcribed.

Mugwort is a native of Britain, and is commonly found growing in wafte grounds, and the borders of fields. It is divided into red and white varieties; the former is diftinguifhed by a reddifh tinge of the ftalk and flowers; in thofe of the latter they are of a pale green. "The leaves have a light agreeable fmell, efpecially when rubbed a little; but fcarcely any other than an herbaceous tafte. An extract made from them by water is likewife almoft infipid; and an extract made by fpirit has only a weak aromatic bitternefs. Baierus informs us, in a differtation on this plant, that by fermenting a large quantity of it, and afterwards diftilling, and cohobating the diftilled water, a fragrant fapid liquor was obtained, with a thin fragrant oil on the furface. The flowery tops are confiderably ftronger than the leaves, and hence fhould feem to be preferable for medicinal ufe."[a]

This plant, though rarely ufed at prefent, was by the ancients held in great eftimation. Hippocrates[b] very frequently mentions Artemifia: he thought it of great ufe in promoting uterine evacuations: with this intention it was alfo employed by Diofcorides;[c] and Galen for this purpofe ufed it in the way of fomentation; a practice which feems in fome meafure conformable to that of the Chinefe women, who, as we are told,[d] make a poultice of the leaves of this plant, mixed with rice and fugar, which in cafes of amenorrhœa, and hyfteria, inftar bellarii ingerunt. If this herb however poffeffes any powers as an antihyfteric or uterine, they are very weak; the London College has therefore properly expunged it from the materia medica.

Moxa is a fubftance prepared in Japan from the dryed tops and leaves of Mugwort,[e] by beating and rubbing them betwixt the hands till only the fine internal lanuginous fibres remain, which are then combed and formed into little cones. Thefe, ufed as cauteries, are

[a] *Lewis, M. M. p.* 117. [b] *De Morb. Mul. lib.* 1.
[c] *Mat. Med. lib.* 3. *cap.* 10. [d] *Ten. Rhyne de Arthr. p.* 133.

[e] This however is not the fpecies of Artemifia from which the eaftern Moxa is made, but that prepared from this plant in Germany was found to anfwer very well. See *Eph. Nat. Cur. Dec.* 3. *A.* 7. 8. *App.* 141.

It has alfo been made from the down of Verbafcum.

greatly

greatly celebrated in eaſtern countries for preventing and curing many diſorders;[f] 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;[g] 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;[h] and the Laplanders ſtill prefer the Agaric, (Boletus igniarius) which they prepare and uſe in a ſimilar way, as the Japaneſe do their Moxa[i]. The Ægyptians produced the ſame effects by means of cotton or linen cloth;[k] and in Spain a Moxa is prepared from a ſpecies of the Echinops.

[f] For a full account of theſe ſee Kæmpfer *Amœn. exot. p.* 502, *&c.* Alſo Abbé Groſier *(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.

[g] See *Recueil d'obſervations curieuſes, tom. ii. p.* 114.

[h] *Lib. de affect.* §. 30.

[i] Harmens and Fielſtrom *Diſſ. Med. Lapp. in Hall. Collect. diſſ. pract. tom. vi. p.* 728.

[k] Proſper Alpinus, *Lib. iii. c.* 12. *p.* 209.

ARTEMISIA

ARTEMISIA MARITIMA. SEA WORMWOOD.

SYNONYMA. Abſinthium maritimum. *Pharm. Lond.* Abſinthium ſeriphium Belgicum. *Bauh. Pin. p.* 139. *J. Bauh. Hiſt. iii. p.* 188. Abſinthium ſeriphium ſive marinum Anglicum. *Park. Theat. p.* 102. Abſinthium marinum album. *Gerard. Emac. p.* 1099. *Raii Hiſt. p.* 370. *Synop. p.* 189. *Hudſ. Flor. Ang. p.* 359. *Withering. Bot. Arrang. p.* 890.

Claſs Syngeneſia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Eſſ. Gen. Ch. *Recept.* ſubvilloſum vel nudiuſculum. *Pappus* nullus. *Cal.* imbricatus, ſquamis rotundatis, conniventibus. *Cor.* radii nullæ.

Sp. Ch. A. foliis multipartitis tomentoſis racemis cernuis floſculis feminei 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 abſinthium. 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[a] and Dale;[b] their

[a] Abſinthii ſpeciem Londini & alibi in Anglia coli ſolitam nomine Abſinthii Romani, non aliter ab hoc differre putamus quam cultura & loco natali." &c. *Hiſt. p.* 370.

[b] Speaking of this plant, he ſays, "Mulierculæ Botanopolæ Londinenſes Abſinthium romanum vocant." *Pharm. p.* 99.

ſpecific

Artemisia, maritima

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Artemisia Santonica

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ſpecific differences however are very evident. Its taſte and ſmell are conſiderably leſs unpleaſant [e] 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 Pharmacopœia.

e "In its wild ſtate it ſmells like Marum or Camphor, but in our gardens it is leſs grateful." *Withering, l. c.*

The ſalt 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 marinum, quidam σεριφιον vocant, eſt herba prætenuibus ſurculis abrotoni parvi ſimilitudine, minutulis referta ſeminibus, ſubamara *ſtomacho inimica* graveolens, & cum quadam calfactione adſtringens." *l.* 3. *c.* 27.

ARTEMISIA SANTONICA. TARTARIAN SOUTHERNWOOD.

SYNONYMA. Santonicum. *Pharm. Lond. & Edinb.* Abſinthium Santonicum Alexandrinum. *Bauh. Pin. p.* 139. *Raii Hiſt. p.* 368. Sementina. *Gerard Emac. p.* 1100. Semen ſanctum. *Lob. ic.* 758. Abſinthium Seriphium Ægyptium & ſemen ſanctum, Scheba Arabum. *Camer. Epit. p.* 457. Abſinthium Santonicum alexandrinum, ſive ſementina & ſemen ſanctum. *Park. Theat. p.* 102. Artemiſia fruticoſa incana ramoſiſſima, corymbis ſeſſilibus ſpicatis ſubrotundis, foliis ſuperioribus linearibus breviſſimis obtuſiuſculis. *Gmel. Lib.* 11. *p.* 115. *t.* 51.

Class Syngenesia. *Ord.* Polygamia Superflua. *Lin. Gen. Plant.* 945.

Ess. Gen. Ch. *Recept.* subvillosum vel nudiusculum. *Pappus* nullus. *Cal.* imbricatus squamis rotundatis conniventibus. *Cor.* radii nullæ.

Sp. Ch. A. foliis caulinis linearibus pinnato-multifidis, ramis indivisis, spicis secundis reflexis, floribus quinquefloris.

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 pinnated order; those of the branches are sessile, 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 officinal Santonicum, or not, seems very doubtful.*

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

[a] 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 & cujus origo minus cognita sit. Num in Galliâ proveniat, in Palæstina, in Ægypto, vel in Persia, aut in solo regno, *Boutan*, in India orientali remotissima." *M. M. vol. ii. p.* 406.

[b] *Mantissa*, *p.* 111. & *p.* 281. And *Mat. Med.* second Edition.

[c] 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 feed of Santonicum or Wormfeed is fmall, light, oval, compofed as it were of a number of thin membranous coats, of a yellowifh green colour, with a caft of brown; eafily friable on being rubbed between the fingers, into a fine chaffy kind of fubftance.

Thefe feeds are brought from the Levant;[d] they have a moderately ftrong and not agreeable fmell, fomewhat of the wormwood kind; and a very bitter fubacrid tafte. Their virtues are extracted both by watery and fpirituous menftrua.

Thefe feeds, in common with the other Artemifias, are efteemed to be ftomachic, emmenagogue,[e] and anthelmintic; but it is efpecially for the laft mentioned powers that they have been generally adminiftered; and from their efficacy in this way they obtained the name of Wormfeed. Their quality of deftroying worms has been afcribed folely to their bitternefs; but it appears from Baglivi, that worms (lumbrici) immerfed in a ftrong infufion of thefe feeds, were killed in five, and according to Redi, in feven or eight hours,[f] while in the infufion of Wormwood, and in that of Agaric 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 bitternefs of this feed. To adults the dofe in fubftance is from one to two drams twice a day. Lewis thinks that the fpirituous extract is the moft eligible preparation of the Santonicum for the purpofes of an anthelmintic.

[d] *Lewis, M. M. p.* 580.

[e] Remarkable effects of the Santonicum in this way are related by Bergius:—"Puellæ eudem decenni, vermibus conflictanti, femina Santonici exhibui, fed per illud tempus quo iis utebatur, menfes fluxerunt, qua re cognita, ufum eorundem diffuafi, unde etiam fluxus fponte ceffavit." *M. M. p.* 668.

[f] *Baglic. Oper. p.* 60. *Redi de animal. viv. p.* 159.

DATURA STRAMONIUM.

DATURA STRAMONIUM. COMMON THORN-APPLE.

SYNONYMA. Stramonium. *Pharm. Edinb.* Solanum fœtidum, pomo ſpinoſo oblongo. *Bauh. Pin. p.* 168. Stramonium majus album. *Park. Parad. p.* 360. Stramonium ſpinoſum. *Gerard. Emac. p.* 348. *Raii Hiſt. p.* 748. Stramonium foliis anguloſis, fructu erecto, muricato calyce pentagonia. *Hall. Stirp. Helv. n.* 586. D. ſtramonium. *Withering. Bot. Arrang. p.* 230. *Flor. Danic. p.* 436. *Stoerck. Libell. de Stram. &c. Curt. Flor. Lond.*

Claſs Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant. p.* 246.

Eſſ. Gen. Ch. Cor. infundib. plicata. *Cal.* tubuloſus, angulatus, deciduus. *Caps.* 4-valvis.

Sp. Ch. D. pericarp. ſpinoſis erectis ovatis, foliis ovatis glabris.

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, plicated, 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 antheræ: the germen is oblong, and placed above the inſertion of the corolla: the ſtyle is ſiliform, 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

Datura Stramonium

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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 Στρυχνος μανικος of Theophraſtus and Dioſcorides, and is therefore the ſpecies received by Linnæus into the Materia Medica. 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 betwixt the fingers. By holding the plant to the noſe for ſome time, or ſleeping in a bed where the leaves are ſtrewed, giddineſs of the head and ſtupor are ſaid to have been produced.[a]

Inſtances of the deleterious effects of this plant are numerous, eſpecially of the ſeeds,[b] ſome of which we ſhall relate for the purpoſe of ſtating the ſymptoms 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 affected with vertigo, dryneſs of the fauces, anxiety,

[a] *Stoerck, l. c. p.* 5.

[b] Kramer, in *Comm. Nor. A.* 1733. *p.* 251. Kaauw *impet. n.* 349. Lobſten *epiſt. ad* Gurrin. *plant. venen. Alſat.* Claudet. *prax. med. leg. Cas.* 1. *Eph. Nat. Cur. Cent. ix. obſ.* 94. Huckel, in *Comm. Lit. Nor.* 1744. *p.* 14. Kaauw. *Act. Franc. i. p.* 200. Buchner, *Miſcell.* 1725. *p.* 611. *Eph. Nat. cur. Dec. iii. a.* 3. *obſ.* 170. Barrere, *Eſſai ſur l'hiſt. nat. de la France* (ed. nov.) *p.* 48. Deering. *Catal. of Plants, &c. p.* 209. Buchner, *Miſc. Phyſ. Math Med.* 1727. *p.* 122. Sauvages, *Noſol. T.* 2. *P.* 2. *p.* 430. Fowler, *Med. Comm. vol. v. p.* 164.

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, lanes, 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 Monkſhood, 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. Theſe, and all " other, poiſonous plants, taken out of gardens, ſhould be carefully buried or burned."

followed with loſs of voice and ſenſe; the pulſe became ſmall and quick, the extremities cold, the limbs paralytic, the features diſtorted, 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.[c]

Every part of the plant appears to poſſeſs a narcotic power,[d] 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,[e] and if we can credit the accounts of ſome authors, have been converted to purpoſes the moſt licentious and diſhonourable.[f] 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.[g] 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 Pharmacopœia, had its character reſted ſolely upon his repreſentation. Odhelius tells us, that of fourteen patients ſuffering under epileptic and convulſive affections, to whom he gave the Stra-

[c] *Eſſ. & Obſ. Phyſ. & Lit. v. ii. p.* 247.

According to Haller, "Delira facit utique & ſopores, inde amentiam, maniam, convulſiones, paralyſes artuum, ſudores frigidas, ſitim vehementem, tremores." *l. c.*

[d] For that of the root, ſee *Ray, l. c.* For that of the leaves, *Doderlin, Comm. Nor. l. c. p.* 15.

[e] "Ab Indis inter alia inebriantia et aromatica in electuarium recipitur ſemen, ad grata phantaſmata cienda, et, ut quidam volunt, quo ad celera patranda tanto audaciores evadant." *Kæmpher, Exot. p.* 650. Cited by *Murray, App. Med. vol. i. p.* 458.

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

[f] "Somnum facit adeo profundum, ut impune pudicitia puellæ violari poſſit, quæ hoc toxicum ſumſerit." See *Haller, l. c.* A mulierculis infidis Turcis, gynecæis incluſis, ad conſopiendos & dementandos maritos, quo aliorum magis deſideratorum amplexibus fatientur, uſurpari, et Hamburgi a vetula ſic honeſtam feminam, quo ſe infera moechum admitteret, intoxicatam narratur. *Lindenſtolpe de ven. Ed. Stenzel. p.* 531. Cited by *Murray, l. c.*

[g] *Lib. de Stram. &c.* publiſhed in 1762.

monium

monium in an hospital at Stockholm, eight were completely cured, five were relieved, and only one received no benefit.[h] Bergius relates three cases of its success, viz. one of mania, and two of convulsions.[i] Reef, a Swedish physician, mentions its utility in two cases of mania.[k] Wedenberg cured four girls, affected with convulsive complaints, by the use of this medicine.[l] 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 stated by Dr. Odhelius, on the ground that the patients were dismissed before sufficient time was allowed to know whether the disease would return again or not.[m] 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 precisely from my own experience on this subject."[n]

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-

[h] See *Vetensk. Acad. Handl.* 1766. *p.* 277. *sq.*

[i] In his Mat. Med. he also says, "Delirium post puerperium sæpe curavi cum Datura, ubi alia fefellerunt;" adding, "Pariter illa prosunt adversus ideam fixam ex mœrore cum deliratione manifesta conjuncta," *p.* 122.

[k] Strandberg, *om. chron. spikd. p.* 16.

[l] *Diss. de Stammonii usu, &c.*

[m] *Ludwig. Adverf. vol. i. p.* 354.

[n] *Mat. Med. vol. ii. p.* 282.

tain

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

Externally the leaves of Stramonium have been uſed as an application to inflammatory tumours and burns; in the latter a remarkable inſtance is noticed by Gerard. l. c.

VERBASCUM THAPSUS. GREAT BROAD-LEAVED MULLEIN.

SYNONYMA. Verbaſcum. *Pharm. Edinb.* Verbaſcum mas latifolium luteum. *Bauh. Pin. p.* 239. *Raii Hiſt. p.* 1094. *Synop. p.* 287. Verbaſcum album vulgare, ſive Tapſus barbatus communis. *Park. Theat. p.* 60. Tapſus barbatus. *Gerard Emac. p.* 773. Verbaſcum foliis decurrentibus utrinque tomentoſis *(lanatis) Hal. Stirp. Helv. n.* 581. V. Thapſus. *Flor. Dan. p.* 631. *Hudſon. Ang. p.* 89. *Withering. Bot. Arr. p.* 223.

Claſs Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 213.

Eſſ. Gen. Ch. Cor. rotata ſubinæqualis. *Caps.* 3-locularis, 2-valvis.

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 bracteæ 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


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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 antheræ: 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. Bauhin, is the φλομος [a] of Dioscorides: it ranks with the natural order Solanaceæ, but does not seem to possess those narcotic powers for which this order is distinguished.* The leaves have an herbaceous, bitterish, subastringent taste, 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 coughs and diarrhœas 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 diarrhœas of an old standing, and often in easing the pains of the intestines. These acquire a great degree of irritability; and the ordinary irritating causes, aliment, bile, distention from air, keep up a quicker peristaltic motion. This is obviated by the emollient 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] A φλεγω, uro, quasi φλογος, flamma, quia hujus pro elychniis usus est. *C. Bauh, l. c.*

* We are told, however, that by the seeds of this plant fishes become so stupified as to suffer themselves to be taken out of the water by the hand. *Boccone*, Vide *Bergius, Mat. Med. p.* 117. [b] See *Mur. M. M. vol. i. p.* 488. [c] *Clinical Ex. & Hist. sect.* 22.

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

QUERCUS ROBUR. COMMON OAK.

SYNONYMA. Quercus. *Pharm. Lond. & Edinb.* Quercus cum longo pediculo. *Bauh. Pin. p.* 420. Quercus vulgaris. *Gerard Emac. p.* 1340. Quercus latifolia. *Park. Theat. p.* 1386. Quercus vulgaris longis pediculis. *J. Bauh. Hist. vol. i. p.* 70. *Raii Hist. p.* 1385. *Synop. p.* 440. Quercus Robur. *Evel. Sylv.* by *Hunter, ed.* 2. *p.* 67. *Du Roy, Baumz. t. ii. p.* 236. *Hudf. Ang. p.* 421. *Withering, Bot. Arr. p.* 1083. *Hall. Stirp. Helv. n.* 1626.

α Arborea, pedunculis elongatis (pedunculata) *Aiton, Hort. Kew.* FEMALE OAK TREE.

β Arborea, fructibus subsessilibus (sessilis) *Aiton, Hort. Kew.* COMMON OAK TREE.

γ Frutescens, ramis virgatis, fructibus sessilibus (humilis) *Aiton. l. c.* DWARF COMMON OAK TREE.

Class Monoecia. *Ord.* Polyandria. *Lin. Gen. Plant.* 1070.

Ess. Gen. Ch. *MASC. Cal.* 5-fidus fere. *Cor.* 0. *Stam.* 5-10.
FEM. Cal. 1-phyllus, integerrimus, scaber. *Cor.* 0. *Styli* 2-5. *Sem.* 1, ovatum.

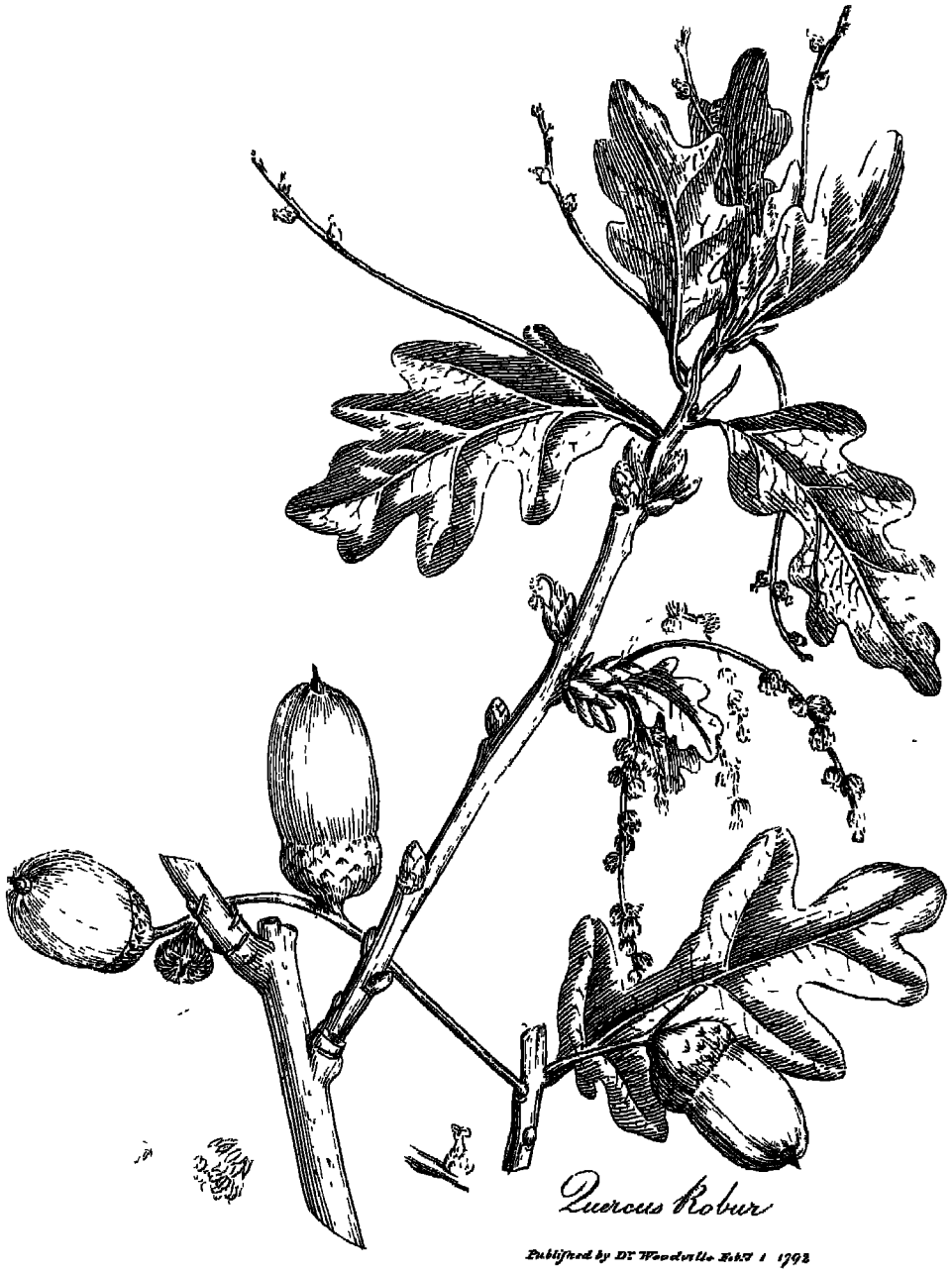
Sp. Ch. Q. foliis oblongis glabris sinuatis: lobis rotundatis, glandibus oblongis. *Aiton. Hort. Kew.*

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

[a] An Oak tree, in the parish of Little Shelsley, Worcestershire, measured in circumference, at about two yards from the ground, 22 feet 4 inches, and close to the ground nearly 48 feet, (Hollesear).—Of one growing in 1764, in Broomfield Wood, near Ludlow, Shropshire, the trunk measured 68 feet in girth, and 23 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. Evel.) See *Withering, l. c.*
This reminds us of the Oak alluded to by Virgil:

——— & quantùm vertice ad auras
Ætherias, tantùm radice in Tartara tendit. *Æn. l. iv.* 445.

strong



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 ſinuated 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 ſix to ten, and ſupplied with large double antheræ: the calyx of the *female flowers* is membranous, hemiſpherical, and compoſed of numerous imbricated pointed ſegments: there is no corolla: the germen is oval: the ſtyles from two to five, and furniſhed with ſimple permanent ſtigmata: 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 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.[b]

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 pharmacopœias. To this tree we may alſo refer the Gallæ, 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. Its 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 hæmorrhagies, 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 tumefactions of the mucous membrane of the fauces, and in

[b] Oak ſaw duſt is the principal indigenous vegetable uſed in dying fuſtian. All the varieties of drabs, and different ſhades of brown, are made with oak ſaw-duſt, variouſly managed and compounded. Oak apples 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*, *l. c.*

many

prolapsus uvulæ, and cynanche tonsillaris, to which some peop[illegible] liable upon the least exposure to cold: and in many cases this deco[illegible] early applied, has appeared useful in preventing these disorder[illegible] must be remarked however, that the Dr. almost constantly add[illegible] portion of alum to these decoctions.[c]

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

Galls, which in the warm climate of the East are found upon [illegible] leaves of this tree, are occasioned by a small insect, with four wi[illegible] called *Cynips quercifolii*, which deposits an egg in the substance [illegible] 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 chang[illegible] to a worm; this worm again changes to a nymph, and the nymph t[illegible] 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 blueness, 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,

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

[d] "I have employed the Oak bark in powder, giving it to the quantity o fhalf 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, l. c.*

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

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 duræ quercus sudabunt roscida mella." *Ecl. iv.* 30.

two


Juglans regia
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two of the blue galls being supposed equivalent in this respect to three of the others.[e]

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 substance 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 hæmorrhoidal affections.[f] 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.[g]

[e] *Lewis, M. M.* [f] See *Cullen, l. c.* [g] See *Mem. pour l'an.* 1702.

JUGLANS REGIA. COMMON WALNUT-TREE.

SYNONYMA. Juglans. *Pharm. Lond.* Nux Juglans sive regia vulgaris. *Bauh. Pin. p.* 417. *Tourn. Inst. p.* 501. Nux Juglans. *Gerard. Emac. p.* 1440. *Raii Hist. p.* 1376. *J. Bauh. Hist. vol. i. p.* 241. Nux Juglans vulgaris. *Park. Theat. p.* 1413. Juglans foliis septenis, ovato-lanceolatis, integerrimis. *Hal. Stirp. Helv. n.* 1624. Juglans regia. *Ic. Mill. Illust. Cramer Forstwesen. tab.* 22. *Du Ham. Arb.* 2. *p.* 50. *t.* 13. *Hunt. Evel.*

Class Monoecia. *Ord.* Polyandria. *Lin. Gen. Plant. p.* 1071.

Ess. Gen. Ch. *Mas.* *Cal.* 1-phyllus, squamiformis. *Cor.* 6-partita. *Filamenta*, 18.

Fem. *Cal.* 4-fidus, superus. *Cor.* 4-partita. *Styli* 2. *Drupa*, nucleo sulcato.

Sp. Ch. J. foliolis ovalibus glabris subserratis subæqualibus.

THIS 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 pinnæ, 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 six oval petals: the filaments are numerous, (about eighteen) short, and furnished with erect pointed anthèræ: the *female flowers* are generally three together; the calyx is divided into four segments, which are erect, short, evanescent, and stand upon the germen: the corolla is separated into four segments, which are pointed, erect, and longer than the calyx: the germen 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 drupous 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. Linnæus describes its leaves as somewhat serrated; but this we have never observed, and therefore with Haller would rather substitute the word integerrimis for subserratis. 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,[a] 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:[b] and in proof of its possessing this vermifuge power, we are told

[a] We may notice for curiosity a notion which formerly prevailed: Ut nuces in proximum annum copiosiùs proveniant, mos est hodie apud rusticos quosdam, ut nuces pertices decutiantur. Hinc non inconcinnè quidam alludendo cecinit,

Nux, asinus, mulier simili sunt lege ligata;
Hæc tria nil fructûs faciunt, si verbera cessant. Vide *Ray, l. c.*

[b] Plater, Fischer, Andry, and others.

that

Æsculus Hippocastanum.

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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,[c] 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.[d] 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,[e] and of use in aphthous affections and sore throats.[f] To answer these purposes, the Wittemberg Pharm. directs a rob to be prepared of its juice.

The kernel of the Walnut[g] 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,[h] this oil does not congeal by cold, and answers the medicinal purposes of the oil of almonds.

[c] Car. Stephan. *Prædial. lib.* 3. c. 13. Andry, *Generation des vers. p.* 142. J. G. Fischer, *Comm. de vermibus in C. H. et anthelmintic. Stade.* 1751. *p.* 14.

[*] Vinegar, in which Walnuts have been pickled, we have found to be a very useful gargle.

[d] Fischer, *l. c.* [e] Bergius, *M. M. p.* 744. [f] *De la Glace. p.* 499.

[g] According to the Salernitan maxim, nuts, eaten after fish, promote digestion.
"Post pisces nux fit, post carnes caseus esto."

ÆSCULUS HIPPOCASTANUM. COMMON HORSE CHESNUT.

SYNONYMA. Hippocastanum. *Pharm. Edinb.* Castanea folio multifido. *Bauh. Pin. p.* 419. Castanea equina. *Gerard. Emac. p.* 1442. *Park. Theat. p.* 1401. *Raii Hist. p.* 1683. Hippocastanum. *Hal. Stirp. Helv. n.* 1029. *Æ.* Hip. *Miller Illust. Hunt. Ewel. vol. i. p.* 359.

Class Heptandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 462.

Ess. Gen. Ch. *Cal.* 1-phyllus, 5-dentatus, ventricosus. *Cor.* 5-petala, inæqualiter colorata, calyci inserta. *Caps.* 3-locularis.

Sp. Ch. *Æ.* foliolis septenis.

THIS

THIS tree frequently grows to a great height,[a] 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 oval, 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, inserted 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 antheræ: 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[b] roundish compressed seeds. It is a native of the northern parts of Asia, and flowers in April and May.

Though the Castanea was well known to the ancients, yet Matthiolus seems to be the first author who describes the Horse Chesnut;[c] 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,[d] 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 Chesnut, and is eaten by sheep, goats, deer, oxen, and horses.[e] It

[a] A Horse Chesnut-tree, above 80 years old, and 50 feet high, still continued in a healthy and growing state. *Samml. d. Berner landwirthschaftl. Gesellsch. vol. ii. p.* 943.

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

[c] See his *Epist. medicinal. op. omn. p.* 101. 125. Afterwards in *Comm. in Dioscorid.*

[d] *Murray, App. Med. vol. iv. p.* 63.

[e] 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 Chesnut. 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:[f] it appears also to possess a saponaceous quality, as it is used, particularly in France and Switzerland, for the purpose of cleaning woollens, and in washing and bleaching linens.[g]

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 considerable benefit.

On the Continent the bark of the Horse Chesnut-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[h] at Venice was the first, who published its successful use in various cases of intermittents; since which its good effects have been confirmed by Leidenfrost, Peipers,[i] Junghans,[k] Coste and Willemet,[l] Sabarot De La Varniere,[m] Turra,[n] Buchholz,[o] and others: from whom it appears, that this bark may be substituted for the Peruvian bark in every case in which the latter is indicated, and with equal, if not superior, advantage.

caustic alkali, in order to take off the bitterness, afterwards to wash them in water, and then boil them to a paste. (See Bon *Mem. de l'Acad.* 1720. *p.* 460.) Lime water was also found to answer. (See *Hist. de la Société R. de Montpell. tom. ii. p.* 57.) But if the nuts are cut and mixed with oats or bran, this purpose may be effected with less trouble. *Hannov. Mag.* 1770. *p.* 226.

[f] Parmentier, *Recherches sur les vegetaux nourissans*, *p.* 176. 218.

[g] Marcandier, *Traité de Chanvre*, *Leipziger Intelligenzblatt.* 1764. *p.* 46. *De re rustica*, or the *Repository for papers in Agriculture*, *vol. ii. p.* 75. *sq.* &c.

[h] J. Jac Zannichelli *Lettera intorno alle Facolta dell' Ippocastano*, &c.

[i] Leidenfrost in Peipers *Diss. de cortice Hippoc. Duisburg.* 1763. [k] *Diss. de nucis vomicæ et corticis Hippocast. virtute med.* 1770. *p.* 25. *sq.* [l] *Essais sur les plantes indigenes. p.* 57. [m] *Journ. de Medec. tom.* 47. *p.* 324. [n] *Della febbrifuga Facolta dell' Ippocastano, in Vicenza.* 1780. [o] *Uber Antisept. Subst.* 1776. See *Murray, l. c.*

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.

SYNONYMA. Morum. *Pharm. Lond.* Morus fructu nigro. *Bauh. Pin. p.* 459. Morus. *Gerard. Emac. p.* 1507. Morus nigra. *J. Bauh. Hist. vol. i. p.* 118. *Raii Hist. p.* 1429. *Park. Parad. p.* 596. *Du Hamel Traité des arbres fruitiers, tom. i. p.* 335. *Hunt. Evel. vol. ii. p.* 39.

Class Monoecia. *Ord.* Tetrandria. *Lin. Gen. Plant.* 1055.

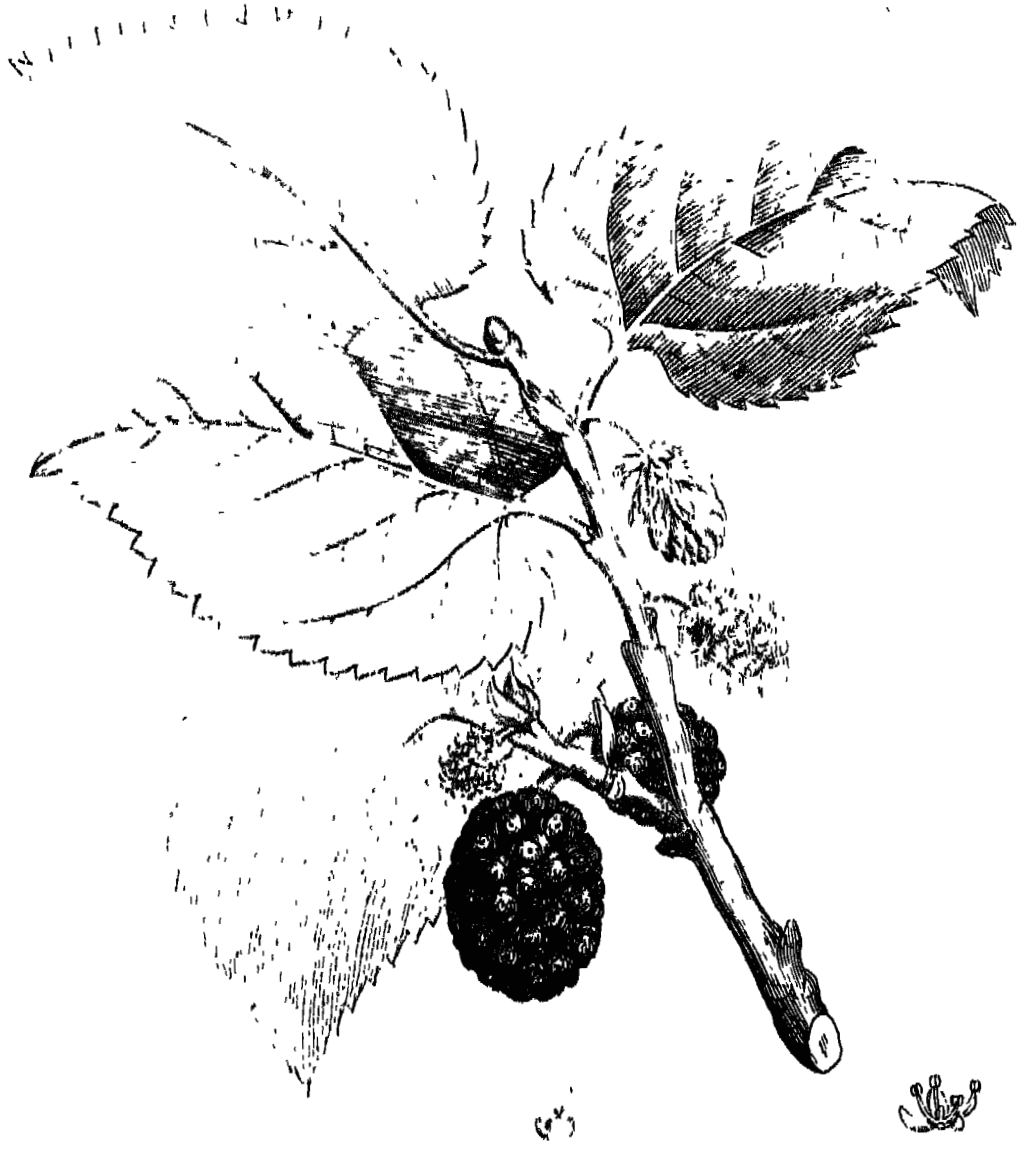
Ess. Gen. Ch. *Masc.* *Cal.* 4-partitus. *Cor.* 0.
Fem. *Cal.* 4-phyllus. *Cor.* 0. *Styli* 2. *Cal.* baccatus. *Sem.* 1.

Sp. Ch. M. foliis cordatis scabris.

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:[a] 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 antheræ: the calyx of the *female flower* is divided into four

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

obtuse



. Morus nigra

Delineat. by W. Hendrickson Feb.y 1 1792

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,[b] 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.[c]

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 putreſcency, a powerful cauſe of thirſt is removed.[d] 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;[e] 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 poſſeſſes a cathartic power. It has been ſucceſsfully uſed as an anthelmintic, particularly in caſes of Tænia.[f] The doſe is half a dram of the powder.

[b] Gerard is the firſt who is known to have cultivated it in England.

[c] The leaves of the white Mulberry are preferred for this purpoſe in Europe; but in China, where the beſt ſilk is made, the ſilk worms are fed with thoſe of the Morus tartarica. (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.

[d] See Cullen's account of the fructus acido-dulces. *Mat. Med. vol. i. p.* 242.

[e] Page 207. See alſo Rubus and Citrus.

[f] Vide, Andry, *de la generation des vers, &c. p.* 172.

FICUS CARICA.

FICUS CARICA. COMMON FIG-TREE.

SYNONYMA. Carica. *Pharm. Lond. & Edinb.* Ficus communis. *Bauh. Pin. p.* 457. Ficus vulgaris. *Park. Theat. p.* 1494. Ficus. *Gerard. Emac. p.* 1410. *Raii Hist. p.* 1531. Ficus Carica. *Miller Illust. Syst. sex. Du Hamel Traité des arbres Fruitiers. tom. i. p.* 207. *tab.* 1. 2. Bernard in *Obs. sur la physique, l'hist. nat. &c. tom.* 29. *tab.* 1. Συκη *Graec.*

Class Polygamia. *Ord.* Trioecia. *Lin. Gen. Plant.* 1168.

Ess. Gen. Ch. *Receptaculum* commune turbinatum, carnosum, connivens, occultans flosculos vel in eodem vel distincto.

Masc. Cal. 3-partitus. *Cor.* 0. *Stam.* 3.

Fem. Cal. 5-partitus. *Cor.* 0. *Pist.* 1. *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, bristly, of the length of the calyx, and furnished with double antherae. The calyx (proper) of the *female flower* is divided into five segments, which are pointed, and nearly equal: there is no corolla: the germen is oval: the style is tapering, inflexed, 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

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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 [a] ripened or brought to perfection by Caprification; a practice which in ſome countries is ſtill continued.[b] 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 ſucceeded 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 Pſenes, or Culex, and by Linnæus, Cynips Pſenes, 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 the fruit, and hence they have been named *Caricæ 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 flatulency, pain of the bowels, and diarrhœa.[c] The dried fruit is pleaſanter to the taſte, and is more wholeſome and nutritive.

[a] See *Theophraſtus*, *Suidas*, *Pliny*, and others.

[b] Caprification, as practiſed at ſome of the Archipelago Iſlands, when viſited by Tournefort, appears to be a very curious but troubleſome buſineſs. See *Tournefort*, *Voyage du Levant*, *vol. i. p.* 130.

[c] *Murray*, *App. Med. vol. iv. p.* 585.

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 electuarium lenitivum. Externally applied they are ſuppoſed to promote the ſuppuration of tumours, and hence have a place in maturating cataplaſms; 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, SEU CARDAMOMUM. — OFFICINAL CARDAMOM.

SYNONYMA. Cardamomum minus. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1547. *Park. Theat. p.* 1576. Cardamomum ſimpliciter in officinis dictum. *Bauh. Pin. p.* 414. Cardamomum cum ſiliquis ſeu theeis brevibus. *J. Bauh. Hiſt. vol. ii. p.* 205. Amomum repens, ſeu Le Cardamome de la Côte de Malabar. *Sonnerat Voyage aux Indes oriental. tom. ii. p.* 240. *tab.* 136. Alia ſpecies eſt Amomum Cardamomum L. ſcapo ſimpliciſſimo breviſſimo.

Claſs Monandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 2.

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

Sp. Ch. A. ſcapis ramoſis elongatis decumbentibus.

Smith, Syſt. 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 ſtipulated 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 germen is roundiſh, and placed below the inſertion 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:[a] it differs conſiderably from the Amomum Cardamomum of Linnæus, as appears by the ſpecific character he has given it, and the figures to which it is referred to in his Species Plantarum.[b] Sonnerat, who firſt diſcovered the Amomum repens, and on whoſe authority it is conſidered to afford the ſeeds officinally 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;

* In a ſpecimen of this plant, which we have ſeen in the Herbarium of Sir Joſeph Banks, this appearance was very remarkable.

[a] L. c.

[b] Elettari. *Hort. Malab. vol. ii. tab.* 5.
Rumph. *Amboin. vol. v. tab.* 65.

and

and whether the Amomum verum of the ancient Greek writers is referable to our Cardamom, feems alfo equally uncertain.

The feeds of the Cardamomum minus, which are now generally preferred for medicinal purpofes, are brought to us in their capfules, or hufks, by which they are preferved; for they foon lofe a part of their flavour when freed from this covering. "Their virtue is extracted not only by rectified fpirit, but almoft completely by water alfo; with this difference, that the watery infufion is cloudy or turbid, the fpirituous clear and tranfparent. Scarcely any of the aromatic feeds give out fo much of their warmth to watery menftrua, or abound fo much with gummy matter, which appears to be the principle by which the aromatic part is made diffoluble in water: the infufion is fo mucilaginous, even in a dilute ftate, as hardly to pafs through a filter."

"In diftillation with water, a confiderable quantity of effential oil feparates from the watery fluid, of a pale yellowifh colour, in fmell exactly refembling the Cardamoms, and of a very pungent tafte: the remaining decoction is difagreeably bitterifh, and mucilaginous. On infpiffating the tincture made of rectified fpirit, a part of the flavour of the Cardamoms arifes with the fpirit; but the greateft part remains behind, concentrated in the extract, which fmells moderately of the feeds, and has a pungent aromatic tafte, very durable in the mouth, and rather more grateful than that of the feeds in fubftance."[c]

Cardamom feeds, on being chewed, impart a glowing aromatic warmth, and grateful pungency: they are fuppofed gently to ftimulate the ftomach, and prove cordial, carminative, and antifpafmodic, but without that irritation and heat which many of the other fpicy aromatics are apt to produce. We are told by Sonnerat, that the Indians ufe it much, and believe it to ftrengthen the ftomach, and affift digeftion. Phyficians however confider Cardamoms merely as an aromatic, and prefcribe them in conjunction with other medicines, which they are intended to correct or affift.

Simple and compound fpirituous tinctures of thefe feeds are directed by the Pharmacopœias; they are alfo ordered as a fpicy ingredient in many of the officinal compofitions.

[c] Lewis, *Mat. Med. p.* 194.

CURCUMA

Amomum repens seu Cardamomum.

Published by Dr. Woodville March 1 1792


Curcuma longa.

CURCUMA LONGA. LONG-ROOTED TURMERIC.

SYNONYMA. Curcuma. *Pharm. Lond. & Edinb.* Cannacorus radice crocea, ſive Curcuma officinarum. *Tourn. Inſt. p.* 367. Curcuma longa. *König, in Rez. obſ. bot. faſc.* 3. *p.* 72. Curcuma radice longa. *Zanon. Hiſt. Pl. ed. Mont. p.* 86. *tab.* 59. Curcuma domeſtica major. *Rumph. Herb. Amboin. tom.* 5. *p.* 162. *tab.* 67. Manjella-Kura. *Hort. Malab. tom.* 11. *p.* 21. *tab.* 11. Amomum Curcuma. *Jacquin, Hort. Vindob. tom.* 3. *p.* 5. *tab.* 4.

Claſs Monandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 6.

Eſſ. Gen. Ch. *Stamina* 4-ſterilia, quinto fertili.

Sp. Ch. C. foliis lanceolatis: nervis lateralibus numeroſiſſimis.

THE root is perennial, tuberous, and furniſhed with ſtrong fibres, externally browniſh, and internally of a deep yellow colour: the leaves are 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-ſinus 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.

Turmeric is a native of the Eaſt Indies, and common in the gardens of the Chineſe; it grows abundantly in Malacca, Java, and Balega.[a] It was firſt cultivated in England by Mr. P. Miller in 1759.[b] The root of this plant has been long officinally 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,[c] exciting a moderate degree of warmth in the mouth, and on being chewed it tinges the ſaliva yellow. It has been very generally employed for the purpoſe of dying,[d] and in eaſtern countries it is much uſed for colouring and ſeaſoning of food.[e]

"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 ſmell, and a pungent taſte: the remaining decoction, inſpiſſated, leaves a bitteriſh conſiderably ſaline maſs. Rectified ſpirit elevates little or nothing of its virtue; all the active parts being left behind in the inſpiſſated extract."[f]

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,[g]

[a] Vide Konig, Rumphius, and Bontius. [b] *Hort. Kew.*

[c] The Chineſe uſe it as a ſternutatory.

[d] "This ſubſtance is very rich in colour, and there is no other which gives a yellow colour of ſuch brightneſs; but it poſſeſſes no durability, nor can mordants give it a ſufficient degree: common ſalt, and ammoniacal muriat, 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, Hellot *L'art de la Teint. p.* 406. and Porner, *Chym. Verſuche z. Nuz. der Farbekunſt, vol. i.* 1. *Abh.* Scharffs *Recepte üb. verſch. Gattungen. v. Farb.* 1. *St.*

[e] It enters the compoſition of the Curry powder which is now much uſed here.

[f] *Lewis, M. M.*

[g] Of theſe we may more particularly refer to Bontius, (*De Med. Indor. p.* 115.) F. Hoffman, (*Meth. Med.* in *Med. rat. tom. iii. p.* 542.) Coe, (*on Bileary Concret. p.* 285.)

it

it is now very rarely employed; and we are told by Dr. Cullen, that the decoctum ad Ictericos of the Edinburgh Dispensatory, (Ed. 1756) "never had any other foundation than the doctrine of signatures in favour of the Curcuma and Cheledonium majus."[h]

[h] *Mat. Med. vol. i. p.* 25.

KÆMPFERIA ROTUNDA. ZEDOARY.

SYNONYMA. Zedoaria. *Pharm. Lond. & Edinb.* I. Zedoaria longa. II. Zedoaria rotunda. *Bauh. Pin. p.* 31. *Park. Theat. p.* 1612. *Raii Hist. p.* 1340. *Gerard, Emac. p.* 1623. Malan-Kua. *Rheed. Hort. Malab. tom.* 11. *p.* 17. *tab.* 9.

Class Monandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 7.

Ess. Gen. Ch. *Cor.* 6-partita: laciniis 3 majoribus patulis, unica bipartita. *Stigma* bilamellatum.

Sp. Ch. K. fol. lanceolatis petiolatis.

THE root is perennial, tuberous, fleshy, compressed, externally of an ash colour, internally of a bluish grey: the flower stem is covered with sheaths, and rises 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 six parts, three of which are long, narrow, spreading, inserted below the others, of which two are oval, pointed, and erect; the remaining one is deeply cut into two obversely heart-shaped divisions, of a reddish colour, and beautifully striated with purple: there is but one filament, which is membranous, and notched at the end: the anthera is linear, doubled, entirely adherent, and scarcely rises 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 Linnæus, 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;[a] and it is obſerved by Murray, that this opinion receives additional weight by the deſcription of Zedoary, or the *Indorum Tamogcanſi*, given by Camellus.[b]

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 Coſtus of Dioſcorides, the Guiduar of Avicenna, the Zerumbet of Serapion.* 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."[c]

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

[a] " Plantam habui ex Cochinchina, figuræ Rheedeanæ convenientem, lectam a Cl. Joanne de Loureyro & comparatam ſub itinere Chinenſi, Cl. Car. G. Exeberg, Centurione & navis Gubernatore, de ſcientia botanices bene merito." *Mat. Med. p.* 5. He calls it, *A. ſcapo nudo, ſpica laxa truncata*; and makes its ſynonyma to be, Kua. *Rheed. Malab.* 11. *p.* 13. *t.* 7. Tommon itam. *Rumph Amb.* 5. *p.* 169. *Zedoaria Camell. Stirp. Luz. p.* 23. [b] See *Raii, Hiſt. plant. vol.* 3. *in App.* [c] *Lewis, M. M. p.* 684.

* See on this ſubject, S. G. Manitius. *De ætatibus Zedoariæ relatio. Dreſd.* 1691.

diſeaſes


Kæmpferia rotunda
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diſeaſes with which humanity is afflicted;[e] 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;[f] though it ſtill has a place in the confectio aromatica of the London pharmacopœia.

[e] Sect. xiv. §. 3. [f] 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.

SYNONYMA. Nux Moſchata. *Pharm. Lond. & Edinb. Park. Theat. p.* 1600. *Raii Hiſt. p.* 1522. Nux Moſchata, fructu rotundo. *Bauh. Pin. p.* 407. *Pluk. Almag. p.* 267. Nux Moſchata rotunda, ſive femina. *Gerard, Emac. p.* 1536. *Breyn. Prod. vol. ii. p.* 77. Nux Myriſtica. *Rumph. Amb. vol. ii. tab.* 4. Myriſtica Moſchata. *Thumb. Act. Stockholm. ann.* 1782. *p.* 46. *t.* 1. *Conf. Mémoire ſur le genre du Muſcadier Myriſtica, par Mr. De La Marck; Hiſt. de l'Acad. Royal des Scien. pour l'an.* 1788. *pub. en* 1790. *p.* 148.

Claſs Dioecia. *Ord.* Syngeneſia. *Shreb. Gen. Plant.* 1562.

Eſſ. Gen. Ch. *Masc. Cal.* 3-fidus. *Cor.* 0. *Antheræ* circum ſupremam partem filamenti adnatæ.

Fem. Cal. 3-fidus. *Cor.* 0. *Styl.* breviſs. *Stigma* biſida. *Caps.* drupacea. *Shreb.*

Sp. Ch. M. foliis lanceolatis fructu glabro. *Thunb.*

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 whitiſh, and ſtand alternately upon footſtalks: the flowers are ſmall, and hang upon ſlender peduncles, proceeding from the axillæ of the leaves: they are both male and female upon ſeparate trees.

 Of

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 stamina, 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 Comacum of Theophrastus, but there seems little foundation for this opinion, nor can it with more probability be thought to be the Chrysobalanos of Galen. Our first knowledge of it was evidently derived from the Arabians; by Avicenna it was called Jiausiban, or Jausiband,[a] which signifies Nut of Banda. Rumphius both figured and described this tree;[b] but the figure given by him is so imperfect, and the description so confused, that Linnæus, who gave it the generic name Myristica, was unable to assign its proper characters. Sonnerat's account of the Muscadier is still more erroneous;[c] and the younger Linnæus was unfortunately misled by this author, placing the Myristica in the class Polyandria, and describing the corolla as consisting of five petals.[d] 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;[e] and as the filaments are short and slender, and the antheræ united, this mistake might easily arise.*

[a] *Lib. ii. cap.* 503, and by Serapion it was named Jeuzbave.
[b] Vide, *l. c.* [c] *Voyage à la Nouvelle Guinée, p.* 194. *t.* 116. [d] *Suppl. Plant. p.* 265. [e] *Act. Stockholm.* 1782. *p.* 46.

* Since writing the above, Mr. Dryander 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 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 Monſ. Poivre, in 1770, is now very large, and continually producing flowers and fruit.[f] From theſe branches, which were ſent from Monſ. Céré, Director of the King's garden in that iſland, Monſ. 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 ſebacious matter is found ſwimming on the water; the decoction, inſpiſſated, gives an extract of an unctious, 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 poſſeſſes 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 ſebacious conſiſtence. In the ſhops we meet with three ſorts of unctious 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 conſiſtence, 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 ſevum, palm oil, and the like, flavoured with a little genuine oil of Nutmeg.[g]

The medicinal qualities of Nutmeg are ſuppoſed to be aromatic, anodyne, ſtomachic, and reſtringent,[h] 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

[f] *L. c.* [g] *Ed. New Diſpenſ.* by *Dr. Duncan. p.* 238. [h] *Bergius, M. M. p.* 884.

hypnotic

hypnotic power in ſuch a degree as to prove extremely dangerous. Bontius ſpeaks of this as a frequent occurrence in India;[i] and Dr. Cullen relates a remarkable inſtance of this ſoporific effect of the Nutmeg, which fell under his own obſervation,[k] and hence concludes, that in apoplectic and paralytic caſes this ſpice may be very improper. The officinal preparations of Nutmeg are a ſpirit and eſſential 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 amoniæ 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.

[i] *De Medicina Indorum, p.* 20. See alſo *Miſcell. Nat. Cur. dec.* III. *ann.* II. *obſ.* 120.

[k] "A perſon by miſtake took two drams or 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 head-ach, 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.

SYNONYMA. Caryophyllum aromaticum. *Pharm. Lond. & Edinb.* Caryophyllus aromaticus, fructu oblongo. *Bauh. Pin. p.* 410. *Raii Hiſt. p.* 1508. Caryophylli. *Park. Theat. p.* 1577. *Gerard, Emac. p.* 1535. Caryophyllus aromaticus, Indiæ orientalis, fructu clavato monopyreno. *Pluk. Alm.* 88. *t.* 155. *f.* 1. Caryophyllum. *Rumph. Herb. Amb. vol. ii. t.* 1. 2. *ſq.* Caryophyllus Kruidnagelboom. *Houttuyn natuurlyke hiſtorie, vol. ii. P.* 3. *p.* 44. *tab.* 12. *fig.* 1. Le Geroflier. *Sonnerat Voyage à la Nouvelle Guinée. p.* 196. *tab.* 119.

Claſs Polyandria.

Caryophyllus aromaticus

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Class Polyandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 669.*

Ess. Gen. Ch. *Cor.* 4-petala. *Cal.* 4-phyllus, duplicatus. *Bacca* 1-sperma, infera.

Sp. Ch. C. foliis ovato-lanceolatis oppositis, floribus terminalibus, &c. *Mill. Dict.*

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 pannicles: 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 leafits, which are roundish, concave, deciduous, and placed above the germen: 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 antheræ: the germen 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.[a]

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;[b] 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,[c] where they have been found to thrive very well, (see Nutmeg) though the Clove tree has since succeeded better in Cayenne.[d] To bring this tree to the highest perfection, a peculiar

* The Caryophyllus evidently belongs to the class Icosandria; 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.

[a] The fruit, in its mature state, is known by the name *Anthophyllus*.

[b] Savary, *Dict. vol. ii. p.* 653. [c] *Hist. de l'Acad. de Sc. de Paris*, 1772. [d] Tessier, *in Rozier Journ. de Phys.* 1779.

mode of cultivation ſeems neceſſary, and is practiſed in Amboina by the Dutch, by whom it is kept a profound ſecret.[e] 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 Charumfel Bellun of Avicenna,[f] ſo that this ſpice, as well as the Nutmeg, was probably known to the Arabians.

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 fumigate 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 inſpiſſating 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 near 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 pungent, containing half its weight of an inſipid expreſſed oil: it is probably from an admixture of the reſinous part of the Clove that this ſophiſticated oil receives both its acrimony and high colour."[g]

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 atonic gout, paralyſis, &c. ſuperſede 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 pharmacopœias, which, as well as the Clove itſelf, enters ſeveral officinal compoſitions.

[e] *Rumph. l. c.* [f] *Vide J. Bauh. Hiſt. vol. i. p.* 426. [g] *Lewis, M. M. p.* 203.

END OF THE SECOND VOLUME.

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I N D E X.

Olea europæa

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OLEA EUROPÆA. EUROPEAN OLIVE.

SYNONYMA. Oliva. *Pharm. Lond. & Edinb.* Olea. *Dod. Pempt. p.* 821. Olea ſativa. *Bauh. Pin. p.* 472. *Gerard. Emac. p.* 1392. *Park. Theat. p.* 1436. *Raii Hiſt. p.* 1541. *Conf. Du Hamel, Traité des Arbres, T.* 2. *p.* 54. *Tab.* 14. *Zait. Hebræorum,* Ελαια, *Græcorum.*

Varietates ſunt, *(α Common)* foliis lanceolatis planis ſubtus incanis.

β *(Long-leav'd)* foliis lineari-lanceolatis planis ſubtus argenteis.

γ *(Broad-leav'd)* foliis oblongis planis ſubtus incanis.

δ *(Iron coloured)* foliis lanceolatis ſubtus ferrugineis.

ε *(Twiſted-leav'd)* foliis oblongis oblique flexis ſubtus pallidis.

ζ *(Box-leav'd)* foliis oblongo-ovalibus, ramis patentibus divaricatis. *Aiton. Hort. Kew.*

Claſs Diandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 20.

Eſſ. Gen. Ch. *Cor.* 4-fida: laciniis ſubovatis. *Drupa* monoſperma.

Sp. Ch. O. foliis lanceolatis integerrimis, racemis axillaribus coarctatis. *Hort. Kew.*

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 ſemiovate ſegments: the filaments are two, tapering, oppoſite, and crowned with erect antheræ: the germen is round, and ſupports a ſimple ſhort ſtyle, furniſhed with a ſtigma, which is cleft in two, and each diviſion

ſion notched at the apex: the fruit is of the drupous kind, of an oblong or oval ſhape, containing a nut of the ſame form. It is a 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 1648; 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.[a]

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 oblong dark green Olive, the ſmall roundiſh white Olive,[b] (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 quick lime, 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 preſerved in a pickle of common ſalt and water, to which an aromatic is ſometimes added.

[a] Miller ſays, that "ſeveral Olive trees were planted againſt a warm wall at Cambden-houſe, near Kenſington, 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'Academie de Marſeille.* Couture, *Traité de l'Olivier* 1786. Du Hamel, *l. c.* Sieuve, *Obſervations, &c.* 1769.

[b] This variety affords the beſt oil.

The

The principal consumption of Olives is in the preparation of the common sallad oil, or oleum olivarum of the pharmacopœias, 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.[c] 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.[d] 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 erosions. This oil has likewise been successfully used in worm cases, and in nephritic pains, spasms, colics, constipations of the bowels, &c. Externally it has been found an useful application to bites and stings of various poisonous animals,[e]

[c] *Muschenbroeck, Phil. Nat. tom. ii. p.* 616. [d] *Cullen, M. M. vol. i. p.* 302.

[e] 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 serpent, 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 Chersea, died in great agony, though the oil was liberally administered both externally and internally. *Amœn. Acad. vol. vi. p.* 213. *& vol. ii. p.* 407.

burns,

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 dropsies, particularly in ascites, in which three instances of its success are related in the Philosophical Transactions by Dr. Oliver.[f] 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 been since 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 primæ viæ, 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 Salsola Kali.

[f] *Philosophical Transf. vol.* 49. *p.* 46. For other instances, see *Ann. Med.* 1. *p.* 90. *Beobacht. a. d. Arzneyw. p.* 569. *sqq.* And *Gardane, Gazette de Santé*, 1773 & 1774. *p.* 29, 254, 267, 279.

* Fränk. Samml. T. *B.* 590. sqq.

COPAIFERA OFFICINALIS.

Copaifera officinalis

Published by J. Wendelle April 1 1793

COPAIFERA OFFICINALIS. BALSAM of COPAIVA TREE.

Balſamum Copaiva. *Pharm. Lond.* Balſamum Copaibæ. *Pharm. Ed.*

SYNONYMA. Coapoïba. *Marcgr. bras.* 130. Copaiba. *Piſ. Hiſt. Nat. et Med. p.* 118. Arbre de Copau. *Labat, Nouv. voyage aux Iſles de L'Amerique, tom. ii. p.* 365. Le Copahu. *Barrere Hiſt. Nat. de la France equinoxiale. p.* 40. Arbor baccifera Braſilien. &c. *Raii Hiſt. p.* 1759. Copaifera officinalis. *Jacquin Select. Stirp. Americ. p.* 133. *tab.* 86. *ed. pict. p.* 67. *tab.* 128.

Claſs Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 542.

Eſſ. Gen. Ch. Cal. o. *Petala* 4. *Legum.* ovatum. *Sem.* 1, arillo baccato.

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 pair of pinnæ, 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 antheræ, 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 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 consistence 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 menstruum be previously alkalized; 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, scorbutic diseases, dropsies, dysenteries, nephritic complaints, internal ulcers, fluor albus, gleets, &c. but though some proofs of its good effects in certain states of many of these diseases may be adduced,[a] 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.[b] It determines powerfully to the kidneys, and impregnates the urine

* "We sometimes find in shops, under the name of Copaiba, a thick, whitish, almost opake Balsam, with a quantity of turbid watery liquor at the bottom. This sort, 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. M. p.* 132.

[a] See Fuller, *Pharm. extemp. p.* 275. F. Hoffman, *Obs. Phys. chym. p.* 24. Lentin, *Beobacht. 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. *Nouvelles de la Republique des lettres et des arts*, 1786. *n.* 33. *p.* 374.

[b] Hoppe has fully set forth its dangerous effects. See D. Fred Wilh. Hoppe, apud Valentini Indiam literatam. p. 624.

with

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 gleets and fluor albus.

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[c] 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.

[c] Vide Simmons *On the Treatment of Conſumptions*, *p.* 36. *ſq.*

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 hæmorrhoidal affections; and I have frequently employed it with ſucceſs, viz. given from twenty to thirty drops twice a day." *Mat. Med. vol. ii. p.* 199.

RUBUS IDÆUS. RASPBERRY BUSH.

SYNONYMA. Rubus idæus. *Pharm. Lond.* Rubus idæus ſpinoſus fructu rubro. *J. Bauh. Hiſt. vol. ii. p.* 59. *Raii Hiſt. p.* 1640. *Synop. p.* 467. Rubus caule ſpinoſo; ſubrecto, foliis quinatis et ternatis, ſubtus tomentoſis, fructibus hirſutis. *Hall. Stirp. Helv. no.* 1108. Rubus idæus. *Gerard, Emac. p.* 1272. *Park. Theat. p.* 557. *Hudſ. Ang. p.* 219. *Lightf. Scot. p.* 263. *Withering. Bot. Arrang. p.* 525. *Flor. Dan.* 788. α Red Raſpberry. β White Raſpberry. γ Smooth Raſpberry. *Aiton. Hort. Kew.*

Claſs Icoſandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 632.

Eſſ. Gen. Ch. *Cal.* 5-fidus. *Petala* 5. *Bacca* compoſita: acinis monoſpermia.

Sp. Ch.

Sp. Ch. R. foliis quinato-pinnatis ternatiſque, caule aculeato, petiolis canaliculatis.

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 pinnæ, terminated by an odd one: the flowers terminate the branches in pannicles, 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 Pharmacopœia.

ROSA CANINA.

Rubus idæus

Published by Dr Woodville April 1 1794

Published by D. Stoddart April 1 1793

ROSA CANINA. DOG ROSE, Or, HEP TREE.

SYNONYMA. Cynoſbatus. *Pharm. Lond.* Roſa ſylveſtris vulgaris, flore odorato incarnato. *Bauh. Pin. p.* 483. Roſa ſylveſtris inodorata, ſeu canina. *Park. Theat. p.* 1017. *Raii Hiſt. p.* 1470. *Synop. p.* 454. *Gerard. Emac. p.* 1270. Roſa ſpinis aduncis, foliis ſeptenis, calycibus tomentoſis, ſegmentis pinnatis & ſemipinnatis tubis breviſſimis. *Hal. Stirp. Helv.* 1101. Roſa canina. *Hudſ. Ang. p.* 219. *Lightf. Scot. p.* 262. *Ed.* 1789. *Withering. Bot. Arr. p.* 523. *Curt. Flor. Lond. Flor. Dan.* 555.

Claſs Icoſandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Eſſ. Gen. Ch. Petala 5. *Cal.* urceolatus, 5-fidus, carnoſus, collo coarctatus. *Sem.* plurima, hiſpida, calycis interiori affixa.

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 leafits, with an odd one at the end; they are all of an oblong or oval ſhape, ſerrated, 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 bracteæ 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, 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 fleſh colour, formed of the tubular part of the calyx, and containing many long rough ſeeds. 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 inodorous, yet their fragrance is often very perceptible. The fruit, called heps or hips, has a ſouriſh 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 viæ. This officinal preparation of the fruit is not ſuppoſed to poſſeſs any medical virtue,[a] but it is agreeable to the taſte, and well ſuited to give form to the more active articles of the Materia Medica.

[a] Formerly however it was eſteemed uſeful in many diſorders, as dropſies, calculous complaints, dyſenteries, hæmorrhages, &c. See Herman, *Diſſ. de Roſa*. §. 11.

A moſs-like prickly excreſcence, called *Bedeguar*, *Roſe ſponge*, and by the French *Galle chevelue*, is frequently found upon the branches of this tree, and is the habitation of the inſect *Cynips Roſæ*. This excreſcence was formerly in great repute as a remedy for various diſeaſes. See Gendornius, *Cynoſbatologia*, *p*. 136. *ſqq*.

ROSA CENTIFOLIA.

Rosa centifolia

Published by Dr Woodville May 1 1792

ROSA CENTIFOLIA. HUNDRED-LEAVED ROSE.

SYNONYMA. Rosa damascena. *Pharm. Lond.* Rosa pallida. *Pharm. Edinb.* Rosa multiplex media. *Bauh. Pin. p.* 482. Rosa Hollandica sive Batava. *Gerard, Emac. p.* 1262. Rosa centifolia batavica. 11 *Clus. Hist. i. p.* 114.

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

Dutch Hundred Leav'd Rose.
Blush Hundred Leav'd Rose.
Singleton's Hundred Leav'd Rose.
Burgundy Rose.
Single Velvet Rose.
Double Velvet Rose.
Sultan Rose.
Stepney Rose.
Garnet Rose.
Bishop Rose.
Lisbon Rose.

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Ess. Gen. Ch. Petala 5. *Cal.* urceolatus, 5-fidus, carnosus, collo coarctatus. *Sem.* plurima, hispida, calycis interiori affixa.

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 pinnated, consisting of two or three pair of pinnæ, 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 footſtalk, 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 monſtroſities.

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 Roi 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.[a] 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 butyraceous 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.

[a] As ſneezing, inflammation of the eyes, faintings, hyſterical affections, abortion, &c. (Echtius, in *Adami vit. med. p.* 72.) Many other inſtances are related by Schenckius, *Obſ. Med. rar. p.* 917. See alſo Nat. Curioſ. in various parts, cited by Murray, *App. 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. *l. c.* From the experiments of Prieſtley and Ingenhouſz this effect ſeems owing to the mephitic air, which theſe and moſt other odoriferous flowers exhale. See Exper. on Vegetables by Dr. Ingenhouſz.

experiments

experiments of Tachenius and Hoffman, afforded ſcarcely half an ounce of oil." †

The ſmell of this oil exactly reſembles that of the roſes, and is therefore much uſed as a perfume.[b] It poſſeſſes very little pungency, and has been highly recommended for its cordial and analeptic qualities.[c] 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.[d] This fixed ſapid matter of the petals manifeſts a purgative quality, and it is on this account that the flowers are received in the Materia Medica.

The pharmacopœias 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.* 541.

The proceſs for making Attar, or Eſſential Oil of Roſes, ſo much eſteemed as a perfume, is related in the *Aſiatic Reſearches* by Colonel Polier, and is as follows:—Forty pounds of roſes, with their calyces, are put into a ſtill with 60 ℔ 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 leſſened 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 ℔ of freſh roſes; and thence are to be drawn from 15 to 20 ℔ of diſtilled water, by the ſame proceſs as before. It is then poured into pans 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.

[c] *F. Hoffman, Obſ. phyſ. chem. p.* 21. [d] *Lewis, l. c.*

ROSA GALLICA. RED OFFICINAL ROSE.

SYNONYMA. Rosa rubra. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1261. *Raii Hist. p.* 1470. Rosa rubra multiplex. *Bauh. Pin. p.* 481. *Du Hamel Arbr.* 2. *p.* 222. *t.* 53. Rosa rubra anglica. *Park. Parad. p.* 413.

Rosa caule subinermi, foliis quinis subtus villosis, calycis foliolis indivisis. *Mill. Dict.*

β Rosa Præneſtina variegata plena. *Mill. ic.* 148. *t.* 221. *f.* 2.

Mundi Rose.

γ *Marbled Rose.*

δ *Virgin Rose.*

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Ess. Gen. Ch. Petala 5. *Cal.* urceolatus, 5-fidus, carnosus, collo coarctatus. *Sem.* plurima, hispida, calycis interiori lateri affixa.

Sp. Ch. R. germinibus ovatis pedunculisque hispidis, caule petiolisque hispido-aculeatis.

THIS species does not rise so high as the Centifolia, but much resembles it in its foliage. Linnæus rests their specific difference on the greater roughness and pricklines 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 inspissating the watery infusion

Rosa gallica

Published by Dr. Woodville May 1 1793

ſion is moderately auſtere, bitteriſh, and ſubſaline; the ſpirituous extract is conſiderably ſtronger both in aſtringency and bitterneſs."[a]

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 ſtate they are choſen for medicinal uſe,[b] and ordered by the pharmacopœias 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[c] and Meſué[d] mention ſome remarkable inſtances of this kind which were cured by the roſes. Riverius alſo cites ſeveral others;[e] and the caſe of Krüger, related in the German ephemerides,[f] 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 farinacea, together with proper exerciſe in the open air, it has been doubted if theſe recoveries could be wholly imputed to the roſes,[g] though their mild aſtringent and corroborant virtues certainly contributed much.[h]

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

[a] *Lewis, M. M. p.* 543.

* Poterius, however, relates, that he found a dram of powdered red roſes occaſion three or four ſtools, and this not in a few inſtances, but conſtantly in ſeveral. See *Lewis, l. c.*

[b] Both the aſtringency and the colour of the petals are beſt preſerved by haſty exſiccation.

[c] *Lib.* 3. *Fen.* 10. *Tract.* 5. *cap.* 5. *p.* 275.

[d] *Cap. de phthiſi.*

[e] *Prax. Med. Lib.* 7. *cap.* 7. *p.* 348.

[f] *Dec.* 2. *An.* 4. *obſ.* 9.

[g] See *Cullen, M. M. vol. ii. p.* 35.

[h] 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.

SYNONYMA. Parietaria. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 331. *Raii Hist. p.* 206. *Synop. p.* 158. Parietaria officinarum & Dioscoridis. *Bauh. Pin. p.* 121. Parietaria vulgaris. *Park. Theat. p.* 436. Parietaria foliis elliptico-lanceolatis hirsutis. *Hal. Stirp. Helv. n.* 1612. Parietaria officinalis. *Hudf. Ang. p.* 442. *Lightf. Scot. p.* 634. *Withering Bot. Arr. p.* 1141. *Curt. Flor. Lond. Flor. Dan.* 521.

Class Polygamia. *Ord.* Monoecia. *Lin. Gen. Plant.* 1152.

Ess. Gen. Ch. HERM. *Cal.* 4-fidus. *Cor.* o. *Stamina* 4. *Styl.* 1 *Sem.* 1. superum, elongatum.

FEM. *Cal.* 4-fidus. *Cor.* o. *Stam.* o. *Stylus* 1. *Sem.* 1. superum, elongatum.

Sp. Ch. P. fol. lanceolato-ovatis pedunculis dichotomis calycibus diphyllis.

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 alæ of the leaves in sessile-branched veticillate 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 leafits, 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 antheræ are double, and according to Mr. Lightfoot, have a great

Parietaria officinalis

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a great degree of ſenſibility: † the germen is egg-ſhaped, and ſupports a reddiſh ſtyle, terminated with a bruſh-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 amongſt the moſt common of Britiſh 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:[a] and Barbeirac[b] 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 Pharmacopœias.

[a] *Matt. in Dioſc. p.* 782. [b] *Medic. conſtit.* 1751. *p.* 163.

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

The leaves, ſtrewed 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.*

SALSOLA KALI. PRICKLY SALT-WORT.

SYNONYMA. Kali ſpinoſum cochleatum. *Bauh. Pin. p.* 289. Tragus ſive Tragum Matthioli. *Park. Theat. p.* 1034. *Gerard Emac. p.* 1117. *Ray Hiſt. p.* 212. *Synop. p.* 159. *Morr. Hiſt. 5. ſ.* 33. *t.* 11. Salſola Kali. *Hudſ. Arg. p.* 93. *Lightf. Scot. p.* 151. *Withering Bot. Arrang. p.* 257. *Flor. Dan. p.* 818.

Barilla, Natron, *Pharm. Lond.* Sal alkalinus fixus foſſilis, *Pharm. Ed.* vulgo ſal ſodæ ex herba kali uſta.

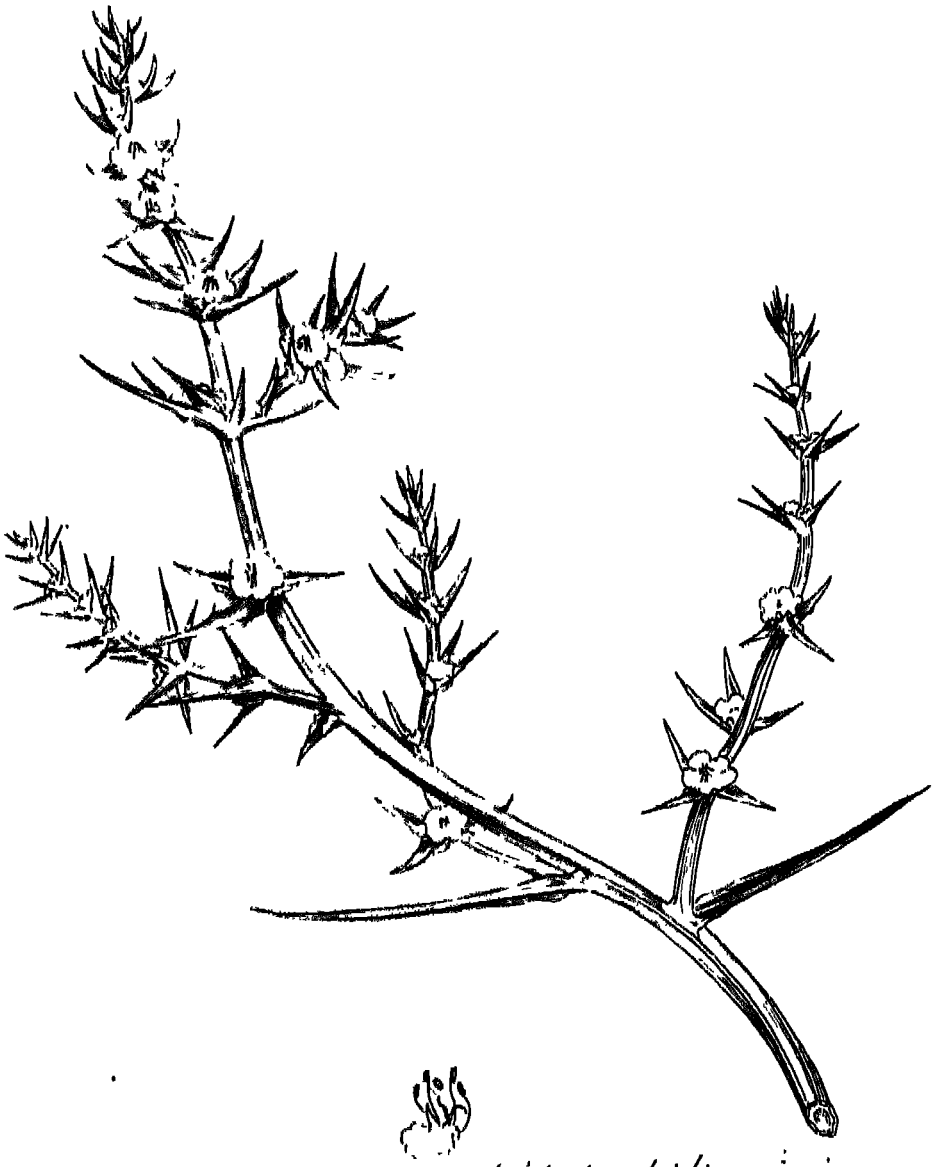
Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 311.

Eſſ. Gen. Ch. Cal. 5-phyllus. *Cor.* o. *Caps.* 1-ſperma. *Sem.* cochleatum.

Sp. Ch. S. herbacea decumbens, foliis 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, ſtand in ternaries upon the branches, and like the ſtem are frequently of a reddiſh hue: the flowers are ſeſſile, axillary, whitiſh, 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 antheræ: the germen is globular, and ſupports two ſtyles 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 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 luxuriancy and beauty than it ever aſſumes in its wild ſtate, where its humble



Salsola Kali

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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 fossile alkali, and some in a greater proportion than the Kali,[a] consequently have an equal if not a superior claim to a place in this work.

These are SALSOLA SATIVA, *Lin.* Salsola Souda, *Lofling*.[b] Kali hispanicum supinum annuum Sedi foliis brevibus, s. Kali d'Alicante, *Jussieu*.[c] It grows abundantly on that part of the Spanish coast which is washed by the Mediterranean Sea. This species is deservedly first enumerated by Professor Murray, as it supplies all the best Soda consumed in Europe, which by us is called Spanish or Alicant Soda, and by the Spanish merchants *Barrilla de Alicante*.

SALSOLA SODA, *Lin.* Kali majus, cochleato semine. *Bauh. Pin.* Le Salicor, *Marcorelle*.[d] *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 selvaggia.[e]

SALICORNIA HERBACEA, *Lin. Flor. Dan. tab.* 303. Conf. *Baster, Opusc. subsec. tom.* 2. *p.* 107. *Pallas, Reise durch Russ. Reich. tom. i. p.* 479. Is common in salt marshes, and on the sea shore, all over Europe. Linnæus prefers the Soda obtained from this plant to that of all the others;[f] but though the quantity of fossil alkali which it yields is very considerable, as a great portion of it is united with muriatic acid, it is mixed with much common salt.

SALICORNIA ARABICA, *Lin.* MESEMBRYANTHEMUM NODIFLORUM, *Lin.* PLANTAGO SQUARROSA, *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 Pharmacopœia for the fixed vegetable alkali, we are unable to devise.

[b] *Spanska Resa, p.* 132. [c] *Mem. de l'Acad. de Sc. de Paris*, 1717. *p.* 73. *sqq. tab.* 2.

[d] *Mem. pres. à l'Acad. &c. tom.* 5. *p.* 531.

[e] Gronov. *Fl. orient. Rauwolfii, p.* 29. [f] Nostratibus nulla aptior in hunc usum planta, quam dicta, *Mat. Med. p.* 36.

several

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 Salſola and that of Salicornia. The Salſola Kali, on the authority of Rauwolf, is the ſpecies from which the ſalt is uſually obtained in eaſtern countries.[g]

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,[h] Marcorelle,[i] Cadet,[k] Borlaſe,[l] and Seſtini.[m] In thoſe places where the preparation of Soda forms a conſiderable branch of commerce, as on the coaſt of the Mediterranean, ſeeds of the Salſola are regularly ſown in a proper ſituation near the ſea,[n] 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 Borlaſe. See *Obſervations on the State of the Iſlands of Scilly*, *p.* 118.

‖ To theſe we may add Batis maritima, (Vide *Jacquin Hiſt. Stirp. Amer.* *p.* 127.) which on the coaſt of Carthagena is found to have a very ſalt taſte, where it is prepared into ſoda, which is uſed for the purpoſe of making glaſs. The Carthaginians call this plant *barilla*.

[g] Alp. *Pl. Ægypt.* [h] *L. c.* [i] *L. c.* [k] Vide, *Mem. de l'Acad. &c.* 1767. *p.* 487. [l] *L. c.* [m] *Lettere della Sicilia*, *tom.* 3. *p.* 58. 76.

[n] According to the experiments of Du Hamel, the further from the ſea the ſeeds are ſown, the leſs foſſil alkali, and the more vegetable alkali the plants contain. Vide *Med. 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 ſalt 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 præparatum, and in the Edinburgh Pharm. under that of Sal alkalinus fixus foſſilis purificatus: the pure cryſtals, thus formed of Alicant barilla, are colourleſs, tranſparent, lamellated, of a rhomboidal figure, and one hundred parts are found to contain twenty of alkali, ſixteen of aerial acid, and ſixty-four of water;[o] 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,[p] 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 ſcrophulous 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 ſaignette.

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 glaſs and ſoap,

* For this, and almoſt the whole on this ſubject, we are obliged to the late Profeſſor Murray. See his *App. Med. vol.* 4.

[o] *Bergman in Scheffers.* [p] *Diſſ. de Soda.* §. 2.

‡ Kirwan ſays, 2, 5 times its weight of water at this temperature are required. *Min. p.* 176.

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.[a] The Sapo ex oleo olivæ et natro confectus of the London Pharm. or the Sapo albus hispanus 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 Galls.[b] Aretæus, 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 viscera. The efficacy of soap, in the first of these diseases, was experienced by Sylvius,[c] 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 primæ viæ.[d] 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.[e] 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 attributed most complaints to viscidity of the fluids, he, and most of the Boerhaavian school, prescribed it in conjunction with different

[a] 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.

[b] *Lib.* 28. *c.* 12. [c] *Oper. Med. lib.* 1. *cap.* 46. [d] Heberden, *Med. Transf. vol.* 2. *p.* 166. [e] Dr. Heberden, *l. c. Phil. Transf. vol.* 47. *p.* 472. *Whytt's Works, p.* 433. *sqq.* Bergius, *Vet. Acad. Handl.* 1777. *p.* 309.

resinous

Capsicum annuum.

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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.

SYNONYMA. Piper indicum. *Pharm. Lond. & Edinb.* Piper Indicum vulgatissimum. *Bauh. Pin. p.* 102. *Raii Hist. p.* 676. Piper Calecutium sive Capsicum oblongius. *J. Bauh. Hist. vol. ii. p.* 943. Capsicum longioribus siliquis. *Gerard Emac. p.* 364. Capsicum majus vulgatius, oblongis siliquis. *Park. Theat. p.* 355. Capsicum indicum. *Burm. Thes. Zeyl. p.* 53.

α Capsicum siliquis longis propendentibus. *Tourn. Inst.* 152.
LONG-PODDED CAPSICUM.

β Capsicum caule herbaceo, fructu rotundo glabro. *Mill. Dict.*
CHERRY CAPSICUM.

γ Capsicum caule herbaceo, fructu ovato. *Mill. Dict.*
OLIVE CAPSICUM. *Aiton. Hort. Kew. vol. i. p.* 253.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 252.

Ess. Gen. Ch. *Cor.* rotata. *Bacca* exsucca.

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 axillæ of the leaves upon long peduncles: the calyx is persistent,

ſiſtent, 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 antheræ: 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 ſtoves 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 fiery."[a]

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 Linnæus, (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,[b] 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.[c] 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 putreſcent colliquation of the humours

[a] *Lewis, M. M. p.* 508. [b] Vide *Browne's Jamaica, p.* 176.

[c] At Peru eſpecially. Vide, *Frezier Voyage de la Mer du Sud. t.* 1. *p.* 262.

ſo

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,[d] 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.[e]

[d] *Duncan's Ed. Diſpenſ, p.* 257.

[e] He preſcribes them as follows:

℞ ſem. pip ind gr vi. bacc. laur ſcrup. ii. f. pulvis, divedendus in tres partes æquales, quarum prima portio ſumenda incipiente primo rigore; ſecunda poſtridie eadem hora; tertia vero tertio die. *M. M. p.* 144.

CHENOPODIUM VULVARIA. STINKING GOOSE-FOOT, Or, ORACHE.

SYNONYMA. Atriplex fœtida. *Pharm. Edinb.* *Bauh. Pin. p.* 119. Atriplex olida. *Gerard Emac. p.* 327. *Raii Hist. p.* 198. Blitum fœtidum Vulvaria dictum. *Raii Synop. p.* 156. Atriplex olida sive sylvestris fœtida. *Park. Theat. p.* 749. Chenopodium caule diffuso, foliis obtuse lanceolatis. *Hal. Stirp. Helv. n.* 1577. Chenopodium olidum. *Curt. Flor. Lond.* Chenopodium Vulvaria. *Hudf. Ang. p.* 107. *Lightf. Scot. p.* 149. *Withering. Bot. Arr. p.* 255.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 309.

Ess. Gen. Ch. *Cal.* 5-phyllus, 5-gonus. *Cor.* 0. *Sem.* 1, lenticulare, superum.

Sp. Ch. C. foliis integerrimis rhomboideo-ovatis, floribus conglomeratis axillaribus.

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 stand alternately upon short footstalks: the flowers are very small, of a light green colour, and placed in clusters at the alæ 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 antheræ: the germen is orbicular, and supports two styles, terminated with obtuse stigmata: the seed is lenticular, and is inclosed by the calyx, which

Chenopodium Vulvaria

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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 conſerve; 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 viroſi intolerabilis, ut qui vel attactu levi manus ita inficit, ut longo tempore vix poſſit elui. *Raii Hiſt. p.* 198.

URTICA DIOICA.

URTICA DIOICA. COMMON NETTLE.

SYNONYMA. Urtica. *Pharm. Lond. & Edinb.* Urtica urens maxima. *Bauh. Pin. p.* 232. Urtica urens. *Gerard. Emac. p.* 706. Urtica major vulgaris & media ſylveſtris. *Park. Theat. p.* 440. Urtica racemifera major perennis. *Raii Synop. p.* 139. *Hiſt. p.* 160. Urtica ſtirpibus ſexu diſtinctis, foliis ſerratis ovato-lanceolatis productis. *Hal. Stirp. Helv. n.* 1614. Urtica dioica. *Hudſ. Ang. p.* 417. *Lightf. Scot. p.* 578. *Withering Bot. Arr. p.* 1071. *Con. Flor. Dan. p.* 746. *Curt. Flor. Lond.*

Claſs Monoecia. *Ord.* Tetrandria. *Lin. Gen. Plant.* 1054.

Eſſ. Gen. Ch. *Masc.* *Cal.* 4-phyllus. *Cor.* o. *Nectarium* centrale, cyathiforme.

Fem. *Cal.* 2-valvis. *Cor.* o. *Sem.* unicum, nitidum.

Sp. Ch. U. foliis oppoſitis cordatis, racemis geminis.

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 ſtipulæ, which are narrow, ſpreading, and on the underſide channelled: the flowers are dioicous, 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 fila-

ments

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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 [a] is well known; and though generally despised as a noxious weed, has been long used not only for medical but for culinary and œconomical purposes.[b] As a styptic it was formerly much used; and we are told of various hæmorrhagic 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 oleraceous plant, and when young is found to be a good substitute for greens, or other pot-herbs.

The sharp hairs [c] 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-

[a] "Urtica, ab urendo dicta, quod pruritum & pustulas igni similes excitet." *Bauh. Pin.*

[b] "The young shoots, in the spring, are boiled and eaten by the common people instead of cabbage-greens. *Lightf. l. c.* The stalks 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 Falk, *Beytrage zur topogr. Kenntniss des Russ. Reichs, vol.* 2. *p.* 254. *Vet. Acad. Handl.* 1747. *p.* 59. *Petersb. Journ.* 1778. *p.* 370. 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 *Hagstrom Svar om Biskotsel, p.* 150.

[c] The stings are very curious microscopic objects: they consist of an exceedingly fine pointed tapering hollow substance, with a perforation at the point, and a bag at the base. When the sting is pressed upon, it readily punctures the skin, and the same pressure forces up 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, *Mem. de L'Acad. de Sc. de Paris,* 1751. *p.* 350.

ſtoring excitement in paralytic limbs,[d] or in other caſes of torpor or lethargy.[e]

[d] *Celſus ed. Kraus. p.* 179. [e] Scopoli *Fl. Carn. ed.* 1. *p.* 428. Aretæus *curat. acut. lib. i. cap.* 2. *ed. Boerh. p.* 80. H. Piſo in *Spicileg. curat. p.* 6. 9. Languentis veneris incitamentum recentis Urticæ olim fuere, quorſum reſpicit Petronius, (*Satiricon ed. De Salas. p.* 84.) (alii que) Vid. *Murray App. Med. vol.* 4. *p.* 592.

MELISSA OFFICINALIS. COMMON BALM.

SYNONYMA. Meliſſa. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 689. *Raii Hiſt. p.* 570. Meliſſa hortenſis. *Bauh. Pin. p.* 229. *Tourn. Inſt.* 193. Meliſſa vulgaris. *Park. Theat. p.* 40. Meliſſa vulgaris odore Citri. *J. Bauh. Hiſt. iii. p.* 232. Meliſſa petiolis unifloris, folio brevioribus, foliis cordatis ſerratis. *Hal. Stirp. Helv. n.* 242.

ß Meliſſa *romana*, floribus verticillatis ſeſſilibus, foliis hirſutis. ROMAN BALM. *Mill. Dict.*

Claſs Didynamia. *Ord.* Gymnoſpermia. *Lin. Gen. Plant.* 728.

Eſſ. Gen. Ch. Cal. aridus, ſupra planiuſculus: lab. ſuperiore ſubfaſtigiato. *Corollæ* lab. ſuper. ſubfornicatum, 2-fidum; 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 alæ


Melissa officinalis
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alæ of the leaves, and appear in June and July: the bracteæ 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 middlemost is the largest: the filaments are four, two long and two short, and furnished with oblong antheræ: the germen divides into four parts, from the centre of which issues a long slender style, crowned with a cleft stigma: the seeds are four, egg-shaped, and lodged at the bottom of the calyx.

Schultz, who has professedly written on this plant,* was unable to say by what name it was known to the ancients. The Μελισσοφυλλον seu Μελιτταινα, 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 Gerard previous to the year 1596. The herb, in its recent state, has a weak roughish aromatic taste, and a pleasant smell, somewhat of the lemon kind, and hence this species has been named Melissa odore 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 smell." *

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 ens Melissæ* promised a complete renovation of man: even Hoffman and Boerhaave, who were probably biassed by the Arabian physicians, deemed

* J. Hen. Schultz, *De Melissa*, *anno* 1739.

‖ *Theriac. v.* 554. 555.

* *Lewis, M. M. p.* 417.

it

it an efficacious remedy.[b] Simon Paulli[c] 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 corroberant of the nervous ſyſtem, probably poſſeſſes no qualities peculiarly different from many other aromatics and cordials.

[b] *Quad. bot. p.* 436.

[c] Fr. Hoffman, *Diſſ. de remed. domeſt.* §. 20. Boerh. *Chem. T. ii. p.* 67.

ANEMONE PRATENSIS. MEADOW ANEMONE; Or, PASQUE FLOWER.

SYNONYMA. Pulſatilla nigricans. *Pharm. Edinb.* Pulſatilla flore minore nigricante. *Bauh. Pin. p.* 177. Pulſatilla flore minore. *Gerard. Emac. p.* 386. Pulſatilla vulgaris, ſaturatiore flore. *Cluſ. Hiſt. i. p.* 246. Pulſatilla flore clauſo obſoleto, petalis reflexis. *Helw. pulſ. p.* 65. *t.* 11. Pulſatilla foliis decompoſitis pinnatis, flore pendulo, limbo reflexo. *Hort. Cliff.* 223. A. pratenſis. *Flor. Dan.* 611.

Claſs Polyandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 694.

Eſſ. Gen. Ch. Cal. 0. *Petala* 6-9. *Sem.* plura.

Sp. Ch. A. pedunculo involucrato, 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

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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 antheræ: the germens are numerous, collected into a bundle, and ſupplied with long ſtyles, terminated by tapering blunt ſtigmata: 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,[a] which grows wild in this country, and would doubtleſsly 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.[b]

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.[c]

This plant, like ſeveral others of great activity, has been received into the Materia Medica of the Edinburgh Pharmacopœia, 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

[a] 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.

[b] We might alſo add, upon the authority of the *Flor. Dan.* that the leaves of the *pratenſis* are ſomewhat tomentoſe, while thoſe of the Pulſatilla are of a bright green. See plates 153. and 611.

[c] See *Hann. Mag.* 1779. *n.* 105.

various causes.[d] He likewise found it of great use in venereal nodes, nocturnal pains, ulcers, caries, indurated glands, suppressed menses, serpiginous eruptions, melancholly, 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,[e] Hotz,[f] Mohrenheim:[g] several others however bear testimony of its inefficacy in these diseases, as Schmucker,[h] Bergius,[i] Richter,[k] who increased the dose of this vegetable even beyond that directed by Stoerck. 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."[l]

[d] *Lib. de Pulsatilla nigric.*

[e] Tode and Nielsen *Diss. de præstantiss. ratione illustrandi Mat. Med. p.* 11.

[f] Jo. Iac. Zimmermann. *Diss. obs. circa Mercur. Ext. Cicut. et Pulsatill.* §. 14. Argent. 1779.

[g] *Chirurg. Beob. T.* 1. & 11.

[h] In *verm. chir. Schrift. t. ii. p.* 26. [i] *Mat. Med. p.* 491.

[k] Aug. Gottl. Richter *Chir. Bibl. vol.* 6. *p.* 584.

[l] *Mat. Med. vol. ii. p.* 216.

Every

Rhododendron Chrysanthum

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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 nausea 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 Pharmacopœia.

RHODODENDRON CHRYSANANTHUM. — YELLOW FLOWERED RHODODENDRON.

SYNONYMA. Rhododendron. *Pharm. Edinb.* Andromeda foliis ovatis, utrinque venosis corollis campanulatis obliquis. *Gmelin, Flor. Sib. iv. p.* 121. *tab.* 54. Rhod. Chrys. *Pallas, It. vol. iii. p.* 369. *App. p.* 792. *n.* 87. *tab. N. fig.* 1. 2. *Kolpin. monogr. cum figura Pallasii.* R. foliis ovatis scabris, margine reflexis, subtus glabris, umbellis terminalibus, corollis flavis irregularibus. *Flora Rossica, tom. i. p.* 44. *tab.* 30.

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 548.

Ess. Gen. Ch. *Cal.* 5-partitus. *Cor.* infundibulif. *Stam.* declinata. *Caps.* 5-locularis.

Sp. Ch. R. foliis oblongis impunctatis supra scabris venosissimis, corolla rotata irregulari, gemma florifera ferrugineo-tomentosa. *Supp. Plant.* 237.

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 ſquamæ: 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 antheræ: 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 Bicornes, Order xvii.

This plant, and its medicinal effects, were firſt deſcribed in the year 1747, by Gmelin and Steller,[a] 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;[b] and it is now very generally employed in chronic

[a] It is ſaid, "Venatores et Glacici mariæ foſſores ad Lenam habitantes—dum primis laborum ſuorum diebus facile laſſantur et a perpetuo præruptorum montium adſcenſu genuum graves dolores patiuntur, laſſitudini et dolori, decocto hujus foliorum, biduum triduumve continuato efficaciter mederi, nullum inter dormire et quaſi inebriari, brevi vero ad ſolidiores labores ſuſtinendos inde appiſſimos evadere." See *Gmelin. l. c.*

[b] *Praktiſche Bemerkungen über den Gebrauch der Sibiriſchen Schneerose in Gichtkrankheiten von D. A. B. Koeplin.* Berlin u. Stettin. 1779.

rheumatiſms

rheumatiſms in various parts of Europe.[c] 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, producing thoſe ſymptoms which we have deſcribed as occaſioned by many of the order Solanaceæ.[d]

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."[e] 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 Pharmacopœia.[f] 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.

[c] *Procopius a Demidof* of Moſcow, employed a tincture of the leaves alſo in hæmorrhoidal complaints. *Neue nordiſche Beyträge, vol.* 3. *p.* 399. In Siberia it was given in a caſe of cancer of the breaſt, by *Butzow*, with great ſucceſs. It is in common uſe in Germany. See Pallas Flor. Roſſica. c. and J. H. Zahn. *Diſſ. Med. inaug. de Rhodod. Chryſantho.* 1783.

[d] Theſe effects were produced on a goat, which, by eating ten leaves of the plant, was ſeized in a few minutes with tremblings, ſopor, &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 ſolum natale: 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.*

[e] *Clin. Exper. p.* 140. [f] See *Duncan's Edinb. Diſpenſ. p.* 264.

COCHLEARIA ARMORACIA. HORSE-RADISH.

SYNONYMA. Raphanus rusticanus. *Pharm. Lond. & Edinb. Bauh. Pin. p.* 96. *Gerard. Emac. p.* 241. *Park. Theat. p.* 860. *Raii Hist. p.* 818. *Synop. p.* 301. *Hist. Ox. iii. t.* 7. *f.* 2. Nasturtium foliis radicalibus lanceolatis crenatis, caulinis incisis. *Hal. Stirp. Helv. n.* 504. Cochlearia Armoracia. *Hudf. Ang. p.* 284. *Withering Bot. Arr. p.* 681. *Relhan Flor. Cant. p.* 249.

Class Tetradynamia. *Ord.* Siliculosa. *Lin. Gen. Plant.* 803.

Eff. Gen. Ch. *Silicula* emarginata, turgida, scabra: valvulis gibbis, obtusis.

Sp. Ch. C. foliis radicalibus lanceolatis crenatis; caulinis incisis.

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, scolloped at the edges, and stand on strong footstalks; 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 antherae: 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

Cochlearia Armoracia

Lithgh. & Ex. Dr. H. Wahlbe. Lund. 1742

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; nevertheleſs 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 exhales, 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."[a]

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, (ſiliquoſa) 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 rheumatiſm; " and if its application be long continued it produces bliſters."— " Taken internally, I have ſaid in what manner its ſtimulant power " in the ſauces may be managed for the cure of hoarſeneſs.[b] Received " into the ſtomach, it ſtimulates this, and promotes digeſtion, and

[a] *Lewis, M. M. p.* 534.

[b] 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 reſtoring. 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, freſh, 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." *Mat. Med. v. ii. p.* 167.

" therefore

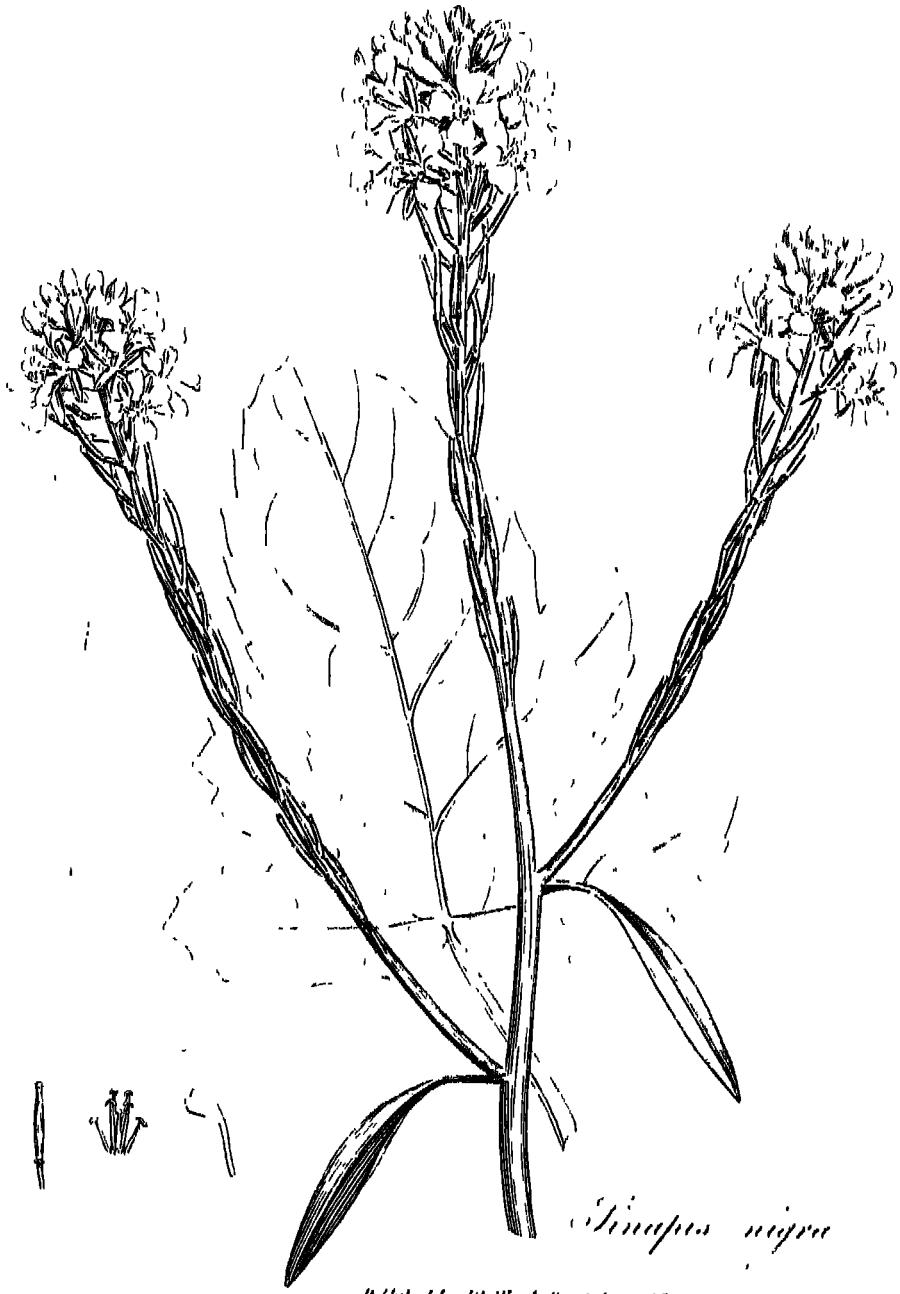
" therefore is properly employed as a condiment with our animal " food. If it be infused in water, and a portion of this infusion be " taken with a large draught of warm water, it readily proves " emetic, and may either be employed by itself to excite vomiting, " or to assist the operation of other emetics. 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 [c] 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 " cases; which however I suppose to have been of the rheumatic " kind. It would seem that in this manner employed, analagous to " the use of unbruised mustard-seed, it gives out in the stomach its " subtle volatile parts, that stimulate considerably without inflaming. " The matter of Horse-radish, like the same matter of the other " siliquose 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 " most powerful antiscorbutics." [d]

[c] See *Berg. Mat. Med. p.* 559. where he adds, " Agit secure, ventriculum vix calefacit, nisi sub fine curæ. Multos scorbuticos hoc etiam regimine perquam levatos vidi."

[d] *Mat. Med. vol. ii. p.* 169.

We are told by Dr. Withering, that an infusion of Horse-radish in milk makes one of the safest and best cosmetics. *l. c.*

SINAPIS NIGRA.



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SINAPIS NIGRA. COMMON BLACK MUSTARD.

SYNONYMA. Sinapi. *Pharm. Lond. & Edinb.* Sinapi rapi folio. *Bauh. Pin. p.* 99. Sinapi ſativum alterum. *Gerard Emac. p.* 244. Sinapi ſativum rapi folio. *Park. Theat. p.* 831. Sinapi ſativum ſecundum. *Ray Hiſt. p.* 803. *Synop. p.* 295. Sinapi ſiliquis tetragonis glabris. *Hall. Stirp. Helv. n.* 465. Sinapis nigra. *Hudſ. Flor. Ang. p.* 297. *Lightf. Flor. Scot. p.* 361. *Withering Bot. Arrang. p.* 713.

Claſs Tetradynamia. *Ord.* Siliquoſa. *Lin. Gen. Plant.* 821.

Eſſ. Gen. Ch. Cal. patens. *Cor.* ungues recti. *Glandula* inter ſtamina breviora et piſtillum, interque longiora et calycem.

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 antheræ: 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 ſeed

veſſels or pods ſtand 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 thoſe 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 ſhews 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,[a] and increaſes the urinary diſcharge, and hence has been found uſeful in dropſical complaints.[b] 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 Siliquoſæ, has been recommended as an antiſcorbutic;[c] though we are told by Haller, that the uſe of Muſtard diſpoſes the humours

[a] 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.

[b] See Mead and others.

[c] "Semen Sinapeos in mortario tritum & cum vino albo mixtum, multas centurias Scorbuticorum & languentium hominum in obſidione Rupellenſi ſanitati reſtituit. Plerique enim obſeſſorum & urbe incluſorum fame & inedia preſſi, multa ſordida & quæ natura abhorret eſitare coacti, reſpirandi difficultatem, gingivarum putredinem, dentium nigritiem & vacillationem, aliaque Scorbuti ſymptomata contraxerant, unde multi moriebantur, donec tandem Sinapi in foſſis circa urbem copioſe inventum, & quo dictum eſt modo adhibitum omnes liberavit." Vide *Ruii Hiſt. p.* 803.

to

to putrefcency;[d] an opinion which he was probably led to entertain from a fuppofition that it contained volatile alkali: for it is well known that fome of thefe pungent plants, when in a ftate of putrefaction, give out this alkali by diftillation, and hence have been termed alkalefcent plants; but the fermentation of thefe vegetable fubftances may be fo directed as to be of the acefcent kind,[e] and the alkali obtained from them feems not to have exifted in the vegetable in a feparate ftate.† The great pungency of thefe plants is not therefore to be afcribed to the volatile alkali, but to the effential oil which they contain. Bergius informs us, that he found Muftard of great efficacy in curing vernal intermittents; for this purpofe he directed a fpoonful of the whole feeds to be taken three or four times a day, during the apyrexia; and when the difeafe was obftinate, he added flower of Muftard to the bark.[f] Externally thefe feeds are frequently ufed as a ftimulant or finapifm.[g] Muftard-feed may be moft conveniently given entire or unbruifed, and to the quantity of a fpoonful or half an ounce for a dofe.

[d] "Ut denique dicam quæ fentio, & ipfe vidi, frequentem Sinapi ufum credo humores ad naturam putredinofam difponere, morbos que acutos redere pernicioftores, fi in muftardæ amantes homines incidernt. Neque ventriculo muftardam prodeffe putem, quæ vix ipfa coquatur, & plufculis horis ructus putridos cieat." *Hift. Stirp. Helv. n.* 465.

[e] *Cullen, l. c.* [f] *Mat. Med. vol. ii. p.* 581.

[g] "The frefh powder of Muftard fhews little pungency and much bitternefs; but when it has been moiftened with vinegar, and kept for a day, the effential oil is evolved, and it becomes confiderably more acrid, as is well known to thofe who prepare Muftard for the table; a circumftance which fhould be attended to when defigned for external ufe." *Cullen, l. c.*

† We have good reafon to fuppofe, that Boerhaave was miftaken in afferting, "Semen optimum Sinapis, folum contritum affufo acerrimo aceto effervefcere memini," Chem. vol. ii. p. 142. as it has fince been denied by the moft refpectable authorities.

PISTACIA LENTISCUS.

PISTACIA LENTISCUS. MASTICH TREE.

Ex qua fluit *Mastiche*, *Pharm. Lond. & Edinb.*

SYNONYMA. Lentiſcus vulgaris. *Bauh. Pin. p.* 399. *Tournf. Inſt. p.* 580. Lentiſcus. *Cluſ. Hiſt. i. p.* 14. *Dod. Pempt. p.* 871. *Du Hamel Arbres. t. i. tab.* 136. *Conſ. Tournef. Voyage du Levant. p.* 144.

β Piſtacia *maſſilienſis*, foliis abrupte pinnatis: foliolis lineari-lanceolatis. *Mill. Dict.*

Narrow-leaved Mastich-Tree. *Aiton. Hort. Kew.*

Claſs Dioecia. *Ord.* Pentandria. *Lin. Gen. Plant.* 1108.

Eſſ. Gen. Ch. *Masc.* Amenti. *Cal.* 5-fidus. *Cor.* 0.
Fem. diſtincta. *Cal.* 3-fidus. *Cor.* 0. *Styli* 2. *Drupa* monoſperma.

Sp. Ch. P. foliis abrupte pinnatis: foliolis 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 pinnæ, cloſely attached to the common footſtalk, which is winged or ſupplied with a narrow foliaceous expanſion: the male flowers are placed in an amentum or open catkin: the calyx (proper) is divided into five minute ovate ſegments: the filaments are five, ſometimes four, very ſhort: the antheræ 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

Pistacia Lentiscus

Edit. Aud. de W. Wendelle Inf. 1792

larger than the calyx, and supports two or three styles, terminated by reflexed clubbed stigmata: the fruit is of the drupous 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;[a] 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 Lentiscus, 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.[b]

In the island of Chio, the officinal Mastich is obtained most abundantly, and, according to Tournefort,[c] by making transverse incisions in the bark of the tree; from whence the Mastich exudes in drops, which are suffered 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 Mastich begins to appear in drops, which continue to exude till the latter end of September.[d]

Mastich 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 earthly impurities, which are commonly in no great quantity, in rectified spirit of wine, and then discovers a degree of warmth and

[a] See *Aiton's Hort. Kew.*

[b] 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.

[c] *Voyage du Levant. t. i. p.* 44. See also Du Hamel, *l. c.* De la Motraye, *Voyage &c. t. i. p.* 190. *Thevenot's Levant, p.* 180. Hasselquist *Reise. p.* 532.

[d] Vers la fin de Septembre les mêmes incisions fournissent encore du mastic, mais en moindre quantite. *Tourn. l. c.*

 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."[e]

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;[f] 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 hæmoptyſis, proceeding from ulceration, fluor albus, debility of the ſtomach, and in diarrhœas and internal ulcers.[g] 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 LENTISCI *lignum*, or wood of this tree, is received into the Materia Medica of ſome of the foreign Pharmacopœias, and is highly extolled in dyſpeptic, gouty, hæmorrhagic, and dyſenteric affections.[h]

[e] *Lewis, M. M. p.* 413. [f] *Lib. cit.*

[g] Degner *(de dyſenteria. p.* 201.) gave it ſucceſsfully in theſe complaints, in doſes of ten grains to a ſcruple, both in ſubſtance and in the way of emulſion.

[h] See *Ephem. Nat. Cur. Dec.* 3. *A.* 9. 10. *Obſ.* 135. where it is dignified with the title of vegetable aurum potabile.

PISTACIA TEREBINTHUS.

Pistacia Terebinthus

Published by Dr Woodville July 1 1792

PISTACIA TEREBINTHUS. CHIAN or CYPRUS TURPENTINE TREE.

Ex qua fluit Terebinthina chia, *Pharm. Lond.*

SYNONYMA. Terebinthus vulgaris. *Bauh. Pin. p.* 400. *Tournef. Inst. p.* 579. Terebinthus. *Clus. Hist. p.* 15. *Dod. Pempt. p.* 871. *Gerard. Emac. p.* 1433. *Raii Hist. p.* 1577. Terebinthus angustiore folio vulgatior. *Park. Theat. p.* 1526. Ic. *Du Hamel Arbres. t.* 2. *tab.* 87.

Class. Dioecia. *Ord.* Pentandria. *Lin. Gen. Plant.* 1108.

Ess. Gen. Ch. *Mas.* Amenti. *Cal.* 5-fidus. *Cor.* 0.

Fem. Distincta. *Cal.* 3-fidus. *Cor.* 0. *Styli* 2. *Drupa* monosperma.

Sp. Ch. P. foliis impari-pinnatis: foliolis ovato-lanceolatis.

THIS 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 pinnated, consisting of ovate lance-shaped, veined, entire, opposite pinnae, 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. Lentiscus. 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 courba pour donner plus d'ombre à la S. Vierge, lors qu'allant de Bethlehem à Jerusalem pour porter son Fils au Temple, elle se voulut reposer sous cet arbre." See *Voyage au Levant. p.* 284.

in Britain more than fixty years.[1] It is more hardy than the P. Lentifcus, and if planted againft a wall, it bears our winters very well.

Cyprus, or Chian Turpentine, which this tree furnifhes, is procured by wounding the bark of the trunk of the tree, in feveral places, in the month of July, leaving a fpace of about three inches between each wound; from thefe the Turpentine iffues, and is received upon ftones, which are placed at the bottom of the tree for this purpofe, and upon which it becomes fo much condenfed by the coldnefs of the night, as to admit of being fcraped off with a knife in the morning, which is always to be done before the fun rifes: after this, in order to free it of all extraneous admixture, it is again liquified by the fun's heat, and paffed through a ftrainer, when it is fit for ufe.[2] The quantity of this Turpentine produced from each tree, is very inconfiderable, in fo much that it has been obferved that four large trees, fixty years old, whofe trunks meafured five feet in circumference, only yielded two pounds nine ounces and fix drams; but in the eaftern parts of the iflands, the names of which this Turpentine bears, the trees afford fomewhat more, though ftill fo little as to render it very coftly, and on this account it is commonly adulterated, efpecially with other Turpentines. The beft Chio Turpentine is generally about the confiftence of thick honey, very tenaceous, clear, and almoft tranfparent, of a white colour, inclining to yellow, and a fragrant fmell, moderately warm to the tafte, but free from acrimony and bitternefs. The medicinal and other qualities of the Turpentines will be confidered together under the fpecies of Pinus. See Index.

[1] See a Catalogue of Trees, Shrubs, &c. which are propagated for fale in the gardens near London, publifhed in 1730, p. 78. Terebinthus i. *Aiton's Hort. Kew.*

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

DELPHINIUM STAPHISAGRIA.

Delphinium Staphisagria

Published by D.r Woodville July 1. 1792.

DELPHINIUM STAPHISAGRIA. — PALMATED LARKSPUR, Or, STAVESACRE.

SYNONYMA. Staphisagria. *Pharm. Lond. & Edinb. Bauh. Pin. p.* 324. *Dod. Pempt. p.* 366. *Gerard. Emac. p.* 495. *Raii Hist. p.* 705. *Park. Theat. p.* 227. *J. Bauh. Hist. iii. p.* 611. Delphinium Platani folio, Staphis agria dictum. *Tourn. Inst. p.* 428. Aconitum unus Ricini fere folius, flore caruleo magno, Staphis agria dictum. *Pluk. Almag. p.* 357.

Class Polyandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 681.

Ess. Gen. Ch. Cal. 0. *Petala* 5. *Nectarium* bifidum, postice cornutum. *Siliquae* 3. s. 1.

Sp. Ch. D. 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, dividing 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:[a] 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,

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

and plaited 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.

Stavesacre, which is a native of the southern parts of Europe, was cultivated here in the time of Gerard:[b] 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,[c] 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:[d] but the deleterious narcotic qualities of Stavesacre were discovered to be so powerful as to forbid its internal use. Schultz, only by keeping it sometime in his mouth, to relieve a tooth-ach, was for a time deprived of his senses;[e] and Hillefeld has related, that a dog, by taking five scruples of these seeds, became convulsed, and soon died.[f] Stavesacre 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 Louse-wort.

[b] In 1596. Vide *Aiton's Hort. Kew.*

[c] Σταφις ἀγρια Dios. eadem videtur, licet Glasti flores adscribat. *Murr. App. Med. vol. iii. p.* 32. [d] Vide *Dioscor. & De la Boe Sylvius. De purg. &c.*

[e] See his *Mat. Med. p.* 435. [f] *Diss. de Venen. p.* 20.

LAURUS CAMPHORA.

Laurus Camphora

Published by M. Woodville June 1 1792

LAURUS CAMPHORA. CAMPHOR-TREE.

Arbor ex qua obtinetur CAMPHORA, *Pharm. Lond. & Edinb.*

SYNONYMA. Camphora officinarum. *Bauh. Pin. p.* 500. *Park. Theat. p.* 1575. Laurus camphorifera Japon. vulgo Kusnoki. *Kæmpfer Amœn. exot. p.* 770. Arbor camphorifera Japonica. *Breyn. exot. plant. cent. p.* 11. *Prod. p.* 7. et *icon. rarior. p.* 16. *Raii Hist. p.* 1679. Arbor camphorifera Japonica, foliis laurinis, fructu parvo globoso, calyce brevissimo. *Commel. Hort. Amstel. tom. i. p.* 189. *tab.* 95. Conf. *Thumb. Fl. Japon. p.* 178. *Trew. in Nov. act. nat. cur. tom. ii. App. p.* 358. & *Burm. Fl. Ind. p.* 92. & *Flor. Cap. Prodr. p.* 12.

Class Enneandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 503.

Ess. Gen. Ch. *Cor.* calycina, 6-partita. *Nectarium* glandulis 3, bisetis, germen cingentibus. *Filamenta* interiora glandulifera. *Drupa* 1-sperma.

Sp. Ch. L. foliis triplinerviis 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, nerved, 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 pedicles, terminating the common peduncles, which are long, naked, erect, and proceed from the alæ of the leaves: there is no calyx: the corolla is composed of six small ovate concave unequal petals: the nectarium

nectarium consists of three tubercles, terminating in bristly points, surrounding the germen: the filaments are nine, shorter than the corolla, and furnished with round antheræ: 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,[a] and by being easily propagated it is now a common greenhouse 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,[b] 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,[c] and is very fully described by Houttuyn;[d] also by Grimm,[e] Miller,[f] Marsden,[g] 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.

[a] *Aiton. Hort. Kew.* [b] *Murray, App. Med. vol. iv. p.* 446.

[c] 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.

[d] See *Verhandelingen door de Maatschappye d. Weetensch. te Harlem, vol. xxi. p.* 266. *sqq. tab.* 8. He calls it, Laurus foliis ovalibus acuminatis lineatis, floribus magnis tulipaceis.

[e] Arbor Camphoræ. *Eph. nat. cur. Dec.* 2. *An.* 1. *p.* 371. *fig.* 33.

[f] See an account of Sumatra by Charles Miller in *Phil. Transf. vol.* 68. *p.* 169.

[g] *Hist. of Sumatra. p.* 121.

The

The Camphor is found to lodge every where 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 *Copalla* (head), are firſt picked out from the upper part of the tree; afterwards the ſmaller, named *Poeruet* (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.[h] From this tree likewiſe exudes an oily or rather reſinous fluid, named oil of Camphor;[i] 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.[k]

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 Rhyne[l] to be the only part employed; but according to Cleyer[m] the Camphor is procured not only from the root, but alſo from the young branches; and by Kæmpfer and Thunberg both the root and wood are mentioned as affording this valuable medicine.[n]

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

[h] V. Rademacher in *Verhand. van het Bataviſch Genootſchap. d. Wetens. vol.* 2. *p.* 127. [i] See authors cited above, and Ten Rhyne *Litt. ad Jac. Breynium in Prodr. p.* 13.

[k] Of theſe we might cite many of the Verticillatæ, as ſage, roſemary, lavender, hyſſop, pepper-mint, and many others: Chenopodium ambroſioides, Achillea Millifolium & Ageratum, Unxia camphorata; and more particularly Schœnanthus perſicus, (Kæmpf. Amœn. ex. p. 773) Radix Zedoariæ, (Grimm in *Eph. n. c. Dec.* 2. *an.* 3. *p.* 409.) Thyme (*Phil. Tranſ. vol.* 33. *p.* 321.) Radix Enulæ (Malouin *Chemie med. tom.* 1. *p.* 321. Anemone pratenſis. Alſo Rad. aſari, ſem. fœniculi, cubebæ, &c.

[l] l. c. [m] *Eph. N. C. Dec.* 2. *a.* 10. *p.* 79. [n] Kæmpf. l. c. p. 772. Thunb. *Flor. Japon. p.* 72.

* He ſays, "Habitat frequens, & inculta, non minus in China, quam in Japonia." *v.* 1. *p.* 250.

Camphor by the Chinese to be as follows: "They take some branches, fresh from the *Tchang*, chop them very small, and lay them to steep in spring 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 frost, they strain the whole, taking care to throw away the dregs and refuse. This juice is afterwards poured gently into a new earthen bason, 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 bason 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 bason, joining it closely to the former by means of a kind of red earth, that cements their brims together. The bason 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 basons together, should crack or fall off; otherwise the spirituous parts would evaporate and ruin the whole process. When the basons 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."[q]

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

[q] See General Description of China, translated from the French, vol. i. p. 451.

this

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.[p]

Pure Camphor is white, pellucid, ſomewhat unctuous to the touch; of a bitteriſh aromatic acrid 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.[q]

Camphor does not ſeem to have been known to the Greeks; but by the Arabians it was called Caſur, or Canfur, and was ſuppoſed to poſſeſs a refrigerant power.[r] 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 Carminati.[s] 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;[t] 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 califacient 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 leſſened ten vibrations in a minute,[u] ſufficiently eſtabliſh its ſedative character; and though ſome inſtances might

[p] The following method is directed in the *Pharm. Suecica. p.* 52.

Rec. Camphoræ crudæ libras duas,
Calcis uſtæ pulveratæ unciam unam.

Simul trita immittantur cucurbitæ vitreæ latæ et depreſſæ, atque arenæ calore ſenſim aucto liquetur Camphora. Remiſſo poſtea calore ſublimetur maſſa pellucida, a ſcoriis, contracto vitro, ſeparanda.

[q] Duncan's Edinburgh New Diſpenſatory.

[r] See Avicenna ed. Alpagi et Rinii. p. 563. Alſo Serapion.

[s] Mengh. *Comment. Bonon. tom.* 3. *p.* 314. *ſq.* Carm. *de animal. ex mephitibus interitu. p.* 186. [t] *Carm. & Mengh. l. c.* [u] *Experimental Eſſays, p.* 227.

show

ſhow a contrary effect, they are ſuch as occaſionally occur[x] 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 phyſi- " cians on the continent: among theſe I reckon the late learned and " experienced Werlhoff,[y] who often employed it in many inflamma- " tory 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,[z] of which indeed we have not many inſtances in this coun- " try: but from the very remarkable antiſeptic powers which it " diſcovers in experiments out of the body,[a] it is very probable that " when

[x] Quarin ſays, " Vidi enim in multis, quibus camphora majori doſi exhibita fuit, pulſum celerrimum, faciem ruberrimam, oculos torvos inflammatos, convulſiones et phrenitidem lethalem ſecutam fuiſſe." *Method. med. febr.* p. 57.

[y] *Comm. Norimberg.* 1734. & 1735. We may alſo notice Huxham and Hoffman, l. inf. c. [a] Pringle, l. c. app. p. 12.

[z] Pringle, *Diſ. of the Army*, p. 310. 316. Reverius, *Obſ. et hiſt. Cent. i. Obſ.* 24. & 29. *Cent.* 2. *Obſ.* 18. 62. 64. Hoffman, *Diſſ. de uſu interno Camphoræ* 1714. p. 20. Huxam, *Oper. T.* 2. p. 116. Ludwig, *Adverſ. Med. Pract. vol.* 1. *P.* i. p. 62. Collin, *Obſ. circa morb. P.* iii. p. 148. *ſqq.* Even in the Plague, ſee Tiſſot, *Epiſt. ad Hall.* p. 237. Mindereus,

" when thrown into the body in large quantities, so that at least its " more subtile parts may be diffused over the whole system, it may " be expected to produce considerable antiseptic effects. Its power " in resisting and curing gangrene in the experiments of Collin,[b] 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.[c] It is also likely that " it may be of service in favouring the eruption of exanthemata, and " of 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. Ac- " cordingly, many practitioners have reported its virtues in hysteric " and hypochondriac cases; and I myself have had frequent expe- " rience of it.

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

Mindererus, *Lib. de peste. cap.* 15. Jo. Crato, *Epist. Med. a Schulzio edit. p.* 103. Hartman in *Pract. chymiatr.* 364. Schreiber, *Observ. et cogitata de pestilentia. p.* 58. *sqq.* and others. [b] *L. c. P.* 3. *p.* 145. See also Pouteau *Melanges de Chirurgie. p.* 187.

[c] Haller, *Opusc. path. p.* 145. Tissot, *Epist. Med. Pract. p.* 237. C. L. Hoffmanns *Nachricht von e. gut. Heilart d. Kinderblattern.* 1764. *in Vogel Bib. vol.* 5. *p.* 340. Collin, *l. c. P.* 3. *cas.* 22. 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 loins, and to procure rest. But we have no reason to think with Rosenstein and Boerhaave, that the activity of the variolous miasmata is to be subdued by this medicine.

[d] Hoffman, *l. c. p.* 22. Home, *Clinical Exp. p.* 193. Locher, *Obs. Pract. p.* 42. Millar, *on Asthma, &c. p.* 104. Collin, *l. c. cas.* 8. and others.

" 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.[e]

" 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 Werlhoff on the ſubject of Camphire, he
" has the following paſſage: *Multoties hoc remedio in mea praxi utor,*
" *præcipue in inflammationibus internis, magno cum ſucceſſu, et demiror*
" *tam multos medicos ab uſu ejus interno abhorrere. Non din eſt, quod*
" *præmiſſis præmittendis maniacum eo ſanitati penitus reſtitui. In eo*
" *vero momentum præcipuum ſitum eſt, ut ſufficiente doſi et diu ſatis*
" *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-

[e] 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.

" tations.* Whether these failures have been owing to the not " employing at the same time nitre, 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 surprised 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 possessed 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

* Dr. Ferriar, who gave Camphor in eight maniacal cases, declares it to be " totally useless in these disorders:" in one of these cases two drams of Camphor, a scruple of musk, and eight grains of opium, were given daily, " without producing sleep, or the smallest impression upon the disease." *Med. Hist. & Reflections, p.* 174.

† We may here remark, that nymphomania, and other local affections producing effects of a similar kind, frequently superinduce a general state of mania, in which Camphor has been found more especially useful.

‡ See Rosenst. *Apot. p.* 7. Collin, l. c. aliique. For its good effects in fevers of the inflammatory kind, we have the testimony of Werlhof, De Berger, Albrecht, Wolf, Joerdens, all to be found in the *Commer. Norimb.*

" it

" 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 persisting 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 spasm 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 strong 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 antiphlogistic 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 in- " tended 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. " Lasonne,[t] 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. " Heberden 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. Lasonne, the father, has " observed, as I have done frequently, that Camphire, though given " very largely, never discovers its smell in the urine, whilst it fre- " quently 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 stran- " gury 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

[t] Lassone ten. in *Hist. de la Société. Roy. de Medecine de Paris, vol. 5. p. 265.*

[*] *Med. Trans. vol. i. p. 471.*

" the unction of camphorated oil, and even the exhibition of a " quantity of Camphire internally. The practitioners of this country " have loſt their faith in the 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 deobſtruent 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 ſaliva- " tion. 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 con- " dition, united with Camphire, becomes a more mild ſubſtance, leſs " irritating to the ſyſtem, while it is equally powerful in curing the " diſeaſes to which it is otherwiſe adapted.* I muſt admit the expe- " rience 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 Medecine. p.* 266.
Deſpatureaux *in Hall. Diſſ. Pract. vol. i. p.* 531.

" A peculiar

" 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 " alledged 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 Laſonne and " Halle,[h] I muſt ſuſpect that my experiments have not been made " properly or often enough.

" There is ſtill another inſtance of the improvement of a medicine " by a combination with Camphire. Mr. Laſonne 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 ſcruples 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-

[h] Hallé, *Mem. de la Société de Med. tom. cit. p.* 73.

" riments

" 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;[1] and " while it remains there, it will float on the ſurface of the other " contents, and in that way be applied to the upper oriſice 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 anodynus 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 conſtantly occaſions heat and uneaſineſs at the ſtomach. See Fothergill, *Med. Obſerv. &c. vol. i. p.* 432.

" purpoſe;

Gentiana lutea

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" 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 alledged, 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." [k]

[k] *M. M. vol. ii. p.* 309.

GENTIANA LUTEA. YELLOW GENTIAN.

SYNONYMA. Gentiana. *Pharm. Lond. & Edinb.* Gentiana major. *Gerard Emac. p.* 432. *Raii Hist. p.* 716. Gentiana major lutea. *Bauh. Pin. p.* 187. *Park. Parad. p.* 350. *Tournf. Inst. p.* 80. Gentiana vulgaris major, Ellebori albi folio. *J. Bauh. Hist. vol. iii. p.* 520. Gentiana caule folioso, foliis ovatis nervosis, floribus rotatis verticillatis. *Hall. Stirp. Helv. n.* 637. Icon, *Miller's Figures, tab.* 139. *fig.* 2.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 322.

Ess. Gen. Ch. *Cor.* monopetala. *Caps.* 2-valvis, 1-locularis. *Receptaculis* 2, longitudinalibus.

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

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 to 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 antheræ: 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.[a]

Gentian ‡ is the principal bitter now employed by physicians;* and as the intense bitters are generally admitted to be not only tonic and stomachic, but also anthelmintic, antiseptic, emmenagogue, antiarthritic, and febrifuge, this root has a better claim to the possession of these powers than most of this kind.

‖ In pratis montanis & subalpinis, post horæ adscensum ex planitie ubique, ut super *Neuenstatt* versus *Nodz*, sub *Panex*, in pratis *Jorogue*. Latos tractus occupat, quæ a pecore non tangatur. *Haller*, *l. c.*

[a] *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 lutea viz. G. purpurea, asclepiadea, Pneumonanthe, campestris, Amarella.

In

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 [h] conſtantly ſucceeded in curing intermittents, 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 officinal preparations of this root are, the infuſum gentianæ compoſitum, & tinctura gentianæ compoſita, ph. L. and the infuſum amarum, vinum amarum, tinctura amara, ſive elixir ſtomachicum, * ph. E. and by both pharmacopœias the extract is directed.

[h] *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. Brockleſby's account, Phil. Tranſ. vol.* 45 *p.* 240.) 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 ſmell, and being without bitterneſs, and of a whitiſh colour.

CHIRONIA CENTAURIUM. CENTAURY.

SYNONYMA. Centaurium minus. *Pharm. Lond. & Edinb. Raii Hiſt. p.* 1092. *Synop. p.* 286. *Bauh. Pin. p.* 278. Centaurium minus vulgare. *Park. Theat. p.* 272. Centaurium parvum. *Gerard Emac. p.* 547. Gentiana caule dichotomo; floribus infundibuliformibus, ſtriatis, quinqueſidis. *Hall. Stirp. Helv. n.* 648. Gentiana Centaurium. *Lin. Sp. Plant. p.* 332. *Hudſ. Flor. Ang. p.* 102. *Lightf. Flor. Scot. p.* 152. *Flor. Dan. Icon.* 617. Chironia Centaurium. *Withering Bot. Arrang. p.* 237. *Curtis Flor. Lond. Ic.* 247.

Claſs Pentandria.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 255.

Ess. Gen. Ch. *Cor.* rotata. *Pistillum* declinatum. *Stam.* tubo corollæ insidentia. *Antheræ* demum spirales. *Pericarp.* 2-loculare.

Sp. Ch. Gentiana corollis quinquefidis infundibuliformibus, caule dichotomo, pistillo simplici. *L. Syst. Veg.* 268.

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 antheræ, 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,[a] we have followed several respectable botanists, and separated it from the gentians, with which it was originally classed by Linnæus.

"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 inspissating the two solutions to the same consistences, the watery extract proves much less bitter than the spirituous, and its quantity above four times greater."*

[a] It is aptly observed by Mr. Curtis, that Centaurium thus assumes its proper name κενταυριον, from Chiron the Centaur. See *Plin. L.* 25. *c.* 6. *p.* 635.

* Lewis, *M. M.*

Centaury

Chironia Centaurium

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Trigonella Fenum graecum

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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,[b] 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.[c] 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[d] 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.

TRIGONELLA FŒNUM GRÆCUM. FENUGREEK.

SYNONYMA. Fœnum græcum. *Pharm. Lond. & Edinb. Gerard Emac. p.* 1196. *Raii Hist. p.* 954. Fœnum Græcum sativum. *Bauh. Pin. p.* 348. Medicago leguminibus subsolitariis sessilibus erectis reflexo-falcatis acuminatis. *Hort. Cliff. p.* 376.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 898.

Ess. Gen. Ch. *Vexillum* et *Alæ* subæquales, patentes, forma corollæ 3-petalæ.

Sp. Ch. T. leguminibus ſeſſilibus ſtrictis erectiuſculis ſubfalcatis acuminatis, caule erecto.

THE root is annual, long, tapering, whitiſh, and fibrous: the ſtalk is erect, round, ſmooth, beſet 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 alæ 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 papilionaceous kind, conſiſting of a vexillum or upper petal, which is oblong, erect, concave at the baſe, and indented at the apex: two alæ 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 antheræ: 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.[a] 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.

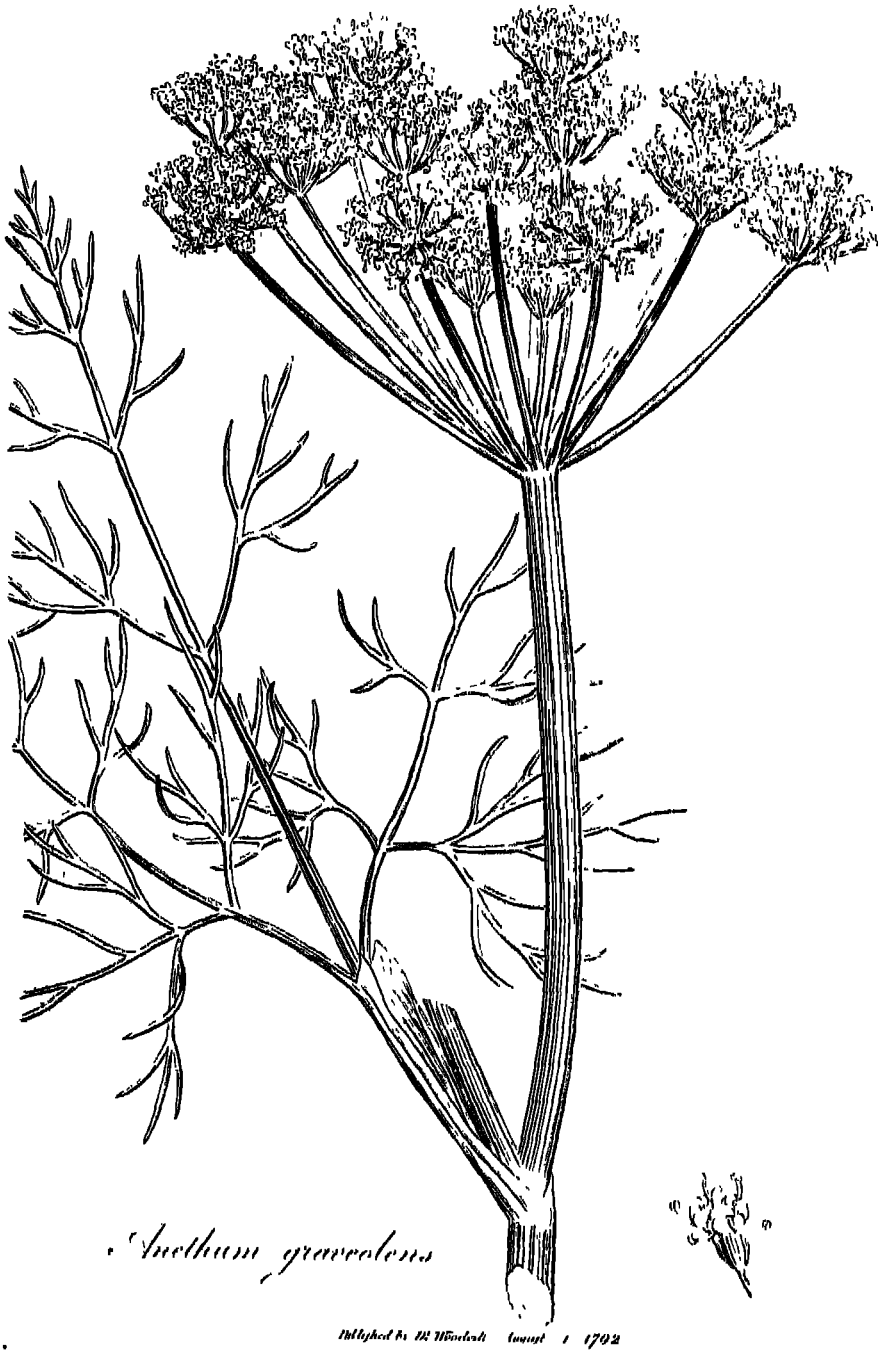
"Fenugreek ſeeds have a ſtrong diſagreeable ſmell, and an unctuous farinaceous taſte, accompanied with a ſlight bitteriſhneſs. An ounce renders a pint of water thick and ſlimy. To rectified ſpirit they give out the whole of their diſtinguiſhing ſmell and taſte, and afterwards to water a ſtrong flavourleſs mucilage."[b]

[a] *Hort. Kew.*

‡ Miller has given directions for cultivating this plant. See *Dict.*

[b] Lewis, *M. M.* p. 394.

Theſe


Anethum graveolens
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Thefe feeds are never given internally, their principal ufe being in cataplafms and fomentations, for foftening, maturating, and difcuffing tumours; and in emollient glyfters. They were alfo an ingredient in the *oleum e mucilaginibus* of the fhops: but this has no longer a place in the pharmacopœia.

ANETHUM GRAVEOLENS. COMMON DILL.

SYNONYMA. Anethum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1033. *Raii Hift. p.* 415. Anethum hortenfe five vulgare. *Park. Theat. p.* 886. Anethum hortenfe. *Bauh. Pin. p.* 147.

Clafs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 364.

Eff. Gen. Ch. *Fructus* fubovatus, compreffus, ftriatus. *Petala* involuta, integra.

Sp. Ch. A. fructibus compreffis.

THE root is annual or biennial, long, tapering, whitifh, fending off ftrong fibres, and ftriking deeply in the ground: feveral ftems ufually proceed from the fame root, and are erect, fmooth, channelled jointed, branched, covered with a glaucous exudation, and rife about two feet in height: the leaves ftand upon fheathy footftalks, placed at the joints of the ftalk, and are alternate, fmooth, doubly pinnated; pinnæ linear, pointed: the flowers are produced in terminal umbels, which are large, flat, and like the partial umbels, compofed of feveral radii: it has no involucrum: the corolla confifts of five petals, which are yellow, egg-fhaped, obtufe, concave, and have their points turned inwards: the five filaments are yellow, longer than the corolla, and furnifhed with roundifh antheræ: the germen is placed below the infertion of the petals, and is covered by the nectarium: the two ftyles are very fhort, and terminated by obtufe ftigmata: the feeds are two, oval,

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.[a] The ſeeds of Dill are directed for uſe by the London and Edinburgh Pharmacopœias; they have a moderately warm pungent taſte, and an aromatic ſmell, but like that of the plant, not of the moſt agreeable kind.[b] "Water extracts very little of their virtues either by infuſion or digeſtion for many hours. In boiling, their whole flavour exhales along with the watery vapour, and may be collected by diſtillation. Along with the water ariſes a conſiderable portion of pungent eſſential 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."[c]

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.[d] They are alſo ſaid to be more effectual than the other ſeeds of this claſs in promoting the ſecretion of milk.[e] 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 Pharmacopœias.

[a] *Hort. Kew.*

[b] Virgil does not ſeem to have been of this opinion:
Narciſſum & florem jungit bene olentis anethi. Ecl. 2. v. 45.

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

[d] Foreſtus ſpeaks highly of their uſe in allaying vomiting and hiccup. *Oper. Lib.* 6. *Obſ.* 29. & *Lib.* 18. *Obſ.* 12.

[e] Murray, *App. Med. vol. i. p.* 289.

ANETHUM FŒNICULUM.

Anethum Foeniculum.

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ANETHUM FŒNICULUM. COMMON FENNEL.

SYNONYMA. Fœniculum dulce. *Pharm. Lond. & Edinb.* et Fœniculum vulgare. *Pharm. Edinb.* Fœniculum dulce, et Fœniculum vulgare germanicum. *Bauh. Pin. p.* 147. Fœniculum vulgare. *Gerard. Emac. p.* 1032. *Park. Theat. p.* 884. *Raii Hist. p.* 457. *Synop. p.* 217. *Haller Hist. Stirp. Helv. n.* 760. A. Fœniculum. *Hudson, Fl. Ang. p.* 126. *Relhan. Fl. Cantab.* 123. *Withering Bot. Arr. p.* 311. *it. Mill. Illust.*

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 364.

Ess. Gen. Ch. *Fructus* subovatus, compressus, striatus. *Petala* involuta, integra.

Sp. Ch. A. fructibus ovatis.

THE root is perennial, white, tapering, and fibrous; three or four stems usually rise from the same root, and are erect, round, striated, 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 striated sheaths, and are bipinnated, divided into long linear pointed pinnæ, 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 antheræ: the germen is smooth, cylindrical, truncated, striated, 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 style, terminated by a blunt stigma: the seeds are two, oval, and deeply furrowed. The flowers appear in June.

The ſeeds of Fœniculum dulce are admitted of the Materia Medica in both Pharmacopœias, and the root of Fœniculum vulgare alſo in that of the Edinburgh College;* but both theſe plants being conſidered as varieties of the Anethum Fœniculum, 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, inſpiſſated to the conſiſtence 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 eſſential 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 butyraceous maſs. Theſe ſeeds contain likewiſe a conſiderable quantity of a groſs oil of the expreſſed kind, which, when freed from the eſſential 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 inſpiſſating the filtered 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."[b]

* "By Fœniculum 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.

[a] "Fœniculum dulce copioſiſſime colitur in Italia & Sicilia, quarum regionum clima plus illi conciliat dulcitatis, quam in Gallia attingere poteſt, quare etiam planta junior, cum radice & herba, frequenter ibi eſtur cruda cum ſale & pane." *Bergius, M. M. p.* 220. See Labat, *Voyage en Eſpagne & en Italie. t.* 5. *p.* 170.

[b] Lewis, *M. M. p.* 303.

The


Daucus Carota

The Fœniculum of the Latins is ſuppoſed to be the Μαραθρον of the Greeks, by whom it was highly eſteemed for promoting the ſecretion of milk,[c] an opinion which the experience of ſome modern authors has tended to confirm.[d] 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 termed 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 Pharmacopœia a ſimple diſtilled water is directed to be prepared from the ſeeds of Fennel, which alſo enter ſome other officinal compoſitions.

[c] Hippoc. *De Morb. Mul. Lib.* 1. *Sect.* 5. *p.* 608. *Fœs.* Dioſcorid. *M. M. Lib.* 3. *c.* 81. *p.* 205. *Sarac.*

[d] Bergius, *Nov. Act. Upſ. vol. i. p.* 104. [e] *Lect. on the M. M. vol. i. p.* 385.

DAUCUS CAROTA. WILD CARROT, or BIRD's NEST.

SYNONYMA. Daucus ſylveſtris. *Pharm. Lond. & Edinb.* Paſtinaca ſylveſtris tenuifolia Dioſcoridis, vel Daucus officinarum. *Bauh. Pin. p.* 151. Daucus vulgaris. *Raii Synop. p.* 218. Paſtinaca ſylveſtris tenuifolia. *Gerard Emac. p.* 1028. *Park. Theat. p.* 901. *Raii Hiſt. p.* 465. Daucus involucris, cavis communibus pinnatis, peculiaribus lineari lanceolatis. *Hall. Stirp. Helv. n.* 746. Daucus Carota. *Hudſ. Ang. p.* 114. *Lightf. Scot. p.* 156. *Withering Bot. Arr. p.* 274. *Relhan. Cantab. p.* 112. *Ic. Flor. Dan. p.* 723.

[a] Paſtinaca

α Paſtinaca tenuifolia ſativa radice lutea. *C. Bauh.*
Yellow Garden Carrot.

β Paſtinaca tenuifolia ſativa radice atrorubente. *C. Bauh.*
Red Garden Carrot. *Aiton. Hort. Kew.*

Cloſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 333.

Eſſ. Gen. Ch. *Cor.* ſubradiatæ, omnes hermaphroditæ.
Fructus pilis hiſpidus.

Sp. Ch. D. feminibus hiſpidis, petiolis ſubtus nervoſis.

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 pinnulæ, 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 ſtrap-ſhaped leafits: 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 antheræ: the germen is ſmall, and ſupports two reflexed ſtyles, 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 *Hann. Magaz.* 1773. *n.* 75.

are

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.[a] It is on this account, probably, that raw carrots have been given to children as a vermifuge. The expreſſed juice, or a decoction of theſe roots, has been recommended in calculous complaints, and as a gargle for infants in apthous affections, or excoriations of the mouth;[b] and a poultice of ſcraped carrot has been found an uſeful application to phagendenic ulcers, and to cancerous and putrid ſores.[c]

The ſeeds of wild Carrot, which obtain a place in the Materia Medica, have a light aromatic ſmell, and a warm acrid 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."[d] Theſe 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,[e] 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.[f]

[a] "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.*

[b] V. Roſenſtein and Boſch.

[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 Gibſon (in *Med. Obſ. & Inquir. vol.* 4.) and others who have very generally found it to mitigate the pain and abate the ſtench of foul cancerous ulcers.

[d] *Lewis, M. M. p.* 271.

[e] In oppoſition to this opinion, Dr. Cullen ſays, "We have ſeen the ſemen dauci ſylveſtris 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.* 552.

[f] *Lewis, l. c.*

CASSIA SENNA. SENNA, Or, EGYPTIAN CASSIA.

SYNONYMA. Senna. *Pharm. Lond. & Edinb.* Senna Alexandrina, five foliis acutis. *Bauh. Pin. p.* 397. *Morris Hist. t. ii. p.* 201. *sect.* 2. *tab.* 24. *f.* 1. *Raii Hist. p.* 1742. Senna (Alexandrina) foliolis quadrijugatis lanceolatis acutis. *Miller's Dict.* Le Sené. Regnault Bot. p. 388. Ic. opt.

Senna italica, five foliis obtufis. *Bauh. l. c. Park. Theat. p.* 225.

Clafs Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 514.

Eff. Gen. Ch. Cal. 5-phyllus. *Petala* 5. *Antheræ* fupremæ 3 fteriles; infimæ. 3 roftratæ. *Legumen.*

Sp. Ch. C. foliis fejugis fubovatis, petiolis eglandulatis.

THE root is annual: the ftalk is ftrong, fmooth, branched, erect, and rifes about two feet in height: the leaves ftand in alternate order, and at their bafe are placed narrow pointed ftipulæ: each leaf is compofed of feveral pairs of oval or elliptical pointed nerved feffile pinnæ, of a yellowifh green colour: the flowers are yellow, and produced fucceffively in long axillary fpikes: the calyx confifts of five leafits, which are narrow, obtufe, concave, unequal, and deciduous: the corolla is compofed of five petals, which are roundifh, concave, entire, and of unequal fize: the filaments are ten, of which the three undermoft are longer than the others, and furnifhed with large beaked curved antheræ: the germen ftands upon a fhort pedicle, and is long, compreffed, and fupplied with a fhort ftyle, which is turned inwards, and terminated by an obtufe ftigma: the feeds are brown, roundifh, flat, and produced in a fhort compreffed curved pod, divided by tranfverfe partitions. The flowers appear in July and Auguft.

Senna is a native of Egypt: it alfo grows in fome parts of Arabia, efpecially about Mocha; but as Alexandria has ever been the great mart from which it has been exported into Europe, it has long been


Cassia Senna
Published by Dr Woodville Sep 1 1792

been diſtinguiſhed by the name of Alexandrian Senna, or Sena. 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,[a] and the negative teſtimony of Alpinus, who in his Lib. de plantis Ægypti does not notice Senna, may ſeem to ſtrengthen this opinion. But as Haſſelquiſt found this plant growing ſpontaneouſly in upper Egypt,[b] the aſſertion 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, (Provence) has been found to aſſume this change;[c] it is leſs purgative[d] than the pointed-leaved Senna, and is therefore to be given in larger doſes; it was employed as a cathartic by Dr. Wright at Jamaica, where it grows on the ſand banks near the ſea.[e]

Senna appears to have been cultivated in England in the time of Parkinſon[f] (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.[g] There can be little doubt however but that ſome of the Britiſh poſſeſſions 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 ſubacrid bitteriſh naufeous taſte: they give out their virtue both to watery and ſpirituous menſtrua,

[a] Savary, *Dict. ii.* 1537.

[b] *Roſa, p.* 532. Bergius ſays, "Senna ſponte provenit in Ægypto ſuperiori, & colliguntur folia a ruſticis Arabibus, poſtquam ſemina matura produxit planta foliaque penitus ſere exaruerunt. Hi Sennam vendunt principi (Schek) ſuo, qui illam Cairum mittit, emendam ab illo, in quem monopolium derivavit cohors Janizariorum. Hic vero Sennam poſtea vendit Europæis. Sic demum Senna ægyptiaca, revera optima, ad officinas noſtras migrat." *Act. Al p.* 338. See alſo Haſſelquiſt, l. c.

[c] Vide, Gouan's Letters to Salvador Soliva in *Diſ. Sobre el Sen de Eſpanna.* Madrid. 1774.

[d] Colte and Willemet *Eſſais ſur quelque plantes indigenes Medic.* a Nancy. p. 25.

[e] See *Lond. Med. Journ. vol.* 8.

[f] Vide, *Park. Theat. p.* 225. *cited in Hort. Kew.*

[g] See *Dict*

communicating

communicating to water and proof ſpirit a browniſh colour, more or leſs deep according to the proportions; to rectified ſpirit a fine green.[h]

Senna, which is in common uſe as a purgative, was firſt known to the Arabian phyſicians, Serapion and Meſue; and the firſt of the Greeks by whom it is noticed is Actuarius, who does not mention the leaves, but ſpeaks of the fruit. Meſue likewiſe ſeems to prefer the pod to the leaves, as being a more efficacious cathartic;[i] but the fact is contrary, for it purges leſs powerfully than the leaf, though it has the advantage of ſeldom griping the bowels, and of being without that nauſeous bitterneſs which the leaves are known to poſſeſs.* How bitterneſs 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."[k] The ſame author has remarked, "that as Senna ſeldom operates without much griping, its frequent uſe is a proof how much moſt part of practitioners are guided by imitation and habit."[l] 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 griping, he thinks the warmer aromatics, as cardamons or ginger, would be more effectual. The formulæ given of the Senna by the Colleges, are thoſe of an infuſion, a powder, a tincture, and an electuary. Its doſe in ſubſtance is from a ſcruple to a dram.

[h] *Lewis, M. M.*

[i] Folliculo quam foliis eſt efficacior, præſertim ſi is ex viridi nigricat, modice amarus, ſubadſtringit abſolutus, recens, in quo ſemen amplum, compreſſum; vetuſtate enim exanimatur. *Meſue D. Simp. l. 2. c. 15. p. 65.*

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

[k] *M. M. v. ii. p. 521.* [l] *L. c. p. 537.*

The leaves of Colutea arboreſcens, (Common Bladder Senna) are purgative, and may be ſubſtituted for thoſe of Senna, according to Bartholin. *Med. Dan. Domeſt. 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
Published by Dr Woodville Sept. 1. 1792

CASSIA FISTULA. PURGING CASSIA.

SYNONYMA. Caſſia fiſtularis. *Pharm. Lond. & Edinb.* Caſſia Fiſtula Alexandrina. *Bauh. Pin p.* 403. *Rai Hiſt. p.* 1746. Commel. Hort. Amſtel. t. i. p. 215. tab. 110. Caſſia Fiſtula. *Rumph. Herb. Amb. t.* 2. *p.* 83. *tab.* 21. Caſſia Fiſtula Chaiarx-ambar vocata. *Alpinus de plant. Ægypti. p.* 3. *ic. p.* 7. Conna. *Hort. Malab. T. i. p.* 37. *tab.* 21. Caſſia ſolutiva. *Grac. Arom. l.* 1. *c.* 29. Tlái Xiem. *Flor. Cochin.*

Claſs Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 514.

Eſſ. Gen. Ch. *Cal.* 5-phyllus. *Petala* 5. *Antheræ* ſupremæ 3 ſteriles; infimæ 3 roſtratæ. *Legumen.*

Sp. Ch. C. foliis 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 pinnated, compoſed of four to ſix pairs of pinnæ, 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.

This tree, which is a native of both the Indies, and of Egypt, was first cultivated in England by Mr. Philip Miller in 1731.[a] The pods of the East India Cassia 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 Cassia 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.[b]

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.[c]

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."[d]

We are told by C. Bauhin, that some have supposed the Siliqua Ægyptiaca of Theophrastus to be our Cassia Fistula;[e] 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.[f]

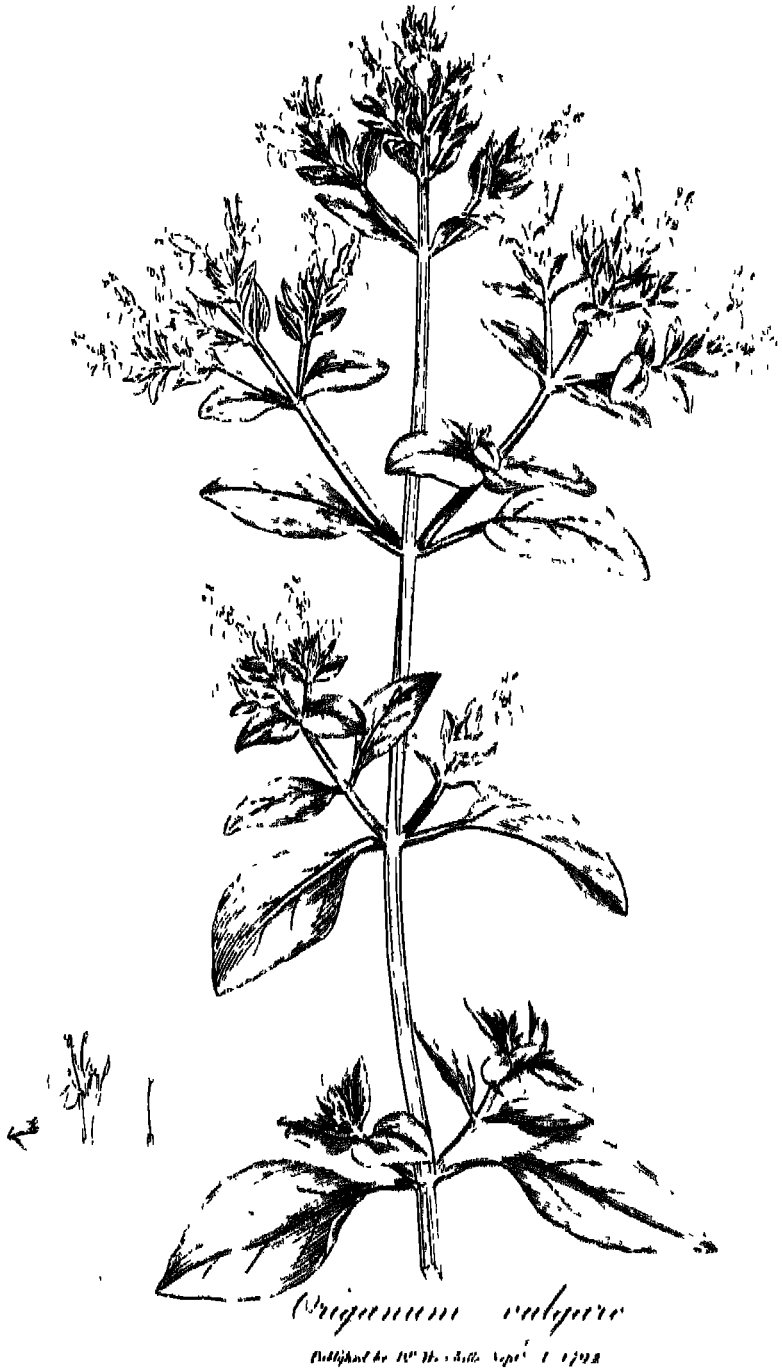
The pulp of Cassia has been long used as a laxative medicine, and being gentle in its operation, and seldom occasioning griping or uneasiness of the bowels, has been thought well adapted to children, and to delicate or pregnant women. Adults, however, find it of little effect, unless taken in a very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

[a] Hort. Kew. [b] Vide Hasselquist and Alpinus.

[c] See Pulparum extractio. [d] Lewis, M. M. p 207. [e] Siliquam Ægyptiacam Theophrasti (1 hist. 18.) nonnulli censent. *Pinax. p.* 403.

[f] Therefore to be considered the Eiarxamber of Serapion, and the Chaiarlander of Avicenna, from whom Actuarius seems to have his Κασσια μελαινα.

therefore


Origanum vulgare

therefore to them this pulp is rarely given alone, but usually conjoined with some of the brisker purgatives. It has been observed by Vallisnieri, 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 Cassia 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 Cassia."[g]

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

The officinal preparation of this drug is the electuarium e cassia: it is also an ingredient in the electuarium e senna, or e. lenitivum.

[g] *M. M. vol. ii. p.* 506.

[h] By Sennertus, Lofecke, Boerhaave, Lewis, &c.

[i] M. M. p. 341. Gmelin also denies this effect of Cassia. *Diss de Rhab. p.* 30.

ORIGANUM VULGARE. WILD MARJORAM.

SYNONYMA. Origanum. *Pharm. Lond.* Origanum sylvestre. *Bauh. Pin. p.* 223. Origanum anglicum. *Gerard Emac. p.* 666. Origanum vulgare spontaneum. *J. Bauh. Hist. iii. p.* 236. *Raii Hist. p.* 539. *Synop. p.* 236. Origanum foliis ovatis, umbellis coloratis, staminibus exsertis. *Hall. Hist. Stirp. Helv. n.* 233. Origanum vulgare. *Hudf. Flor. Ang. p.* 262. *ed.* 2*d.* *Lightf. Flor. Scot. p.* 317. *Withering Bot. Arr. p.* 621. *Curtis Flor. Lond.* 338.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 726.

Ess. Gen. Ch. *Strobilus* tetragonus, spicatus, calyces colligens.

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

THE

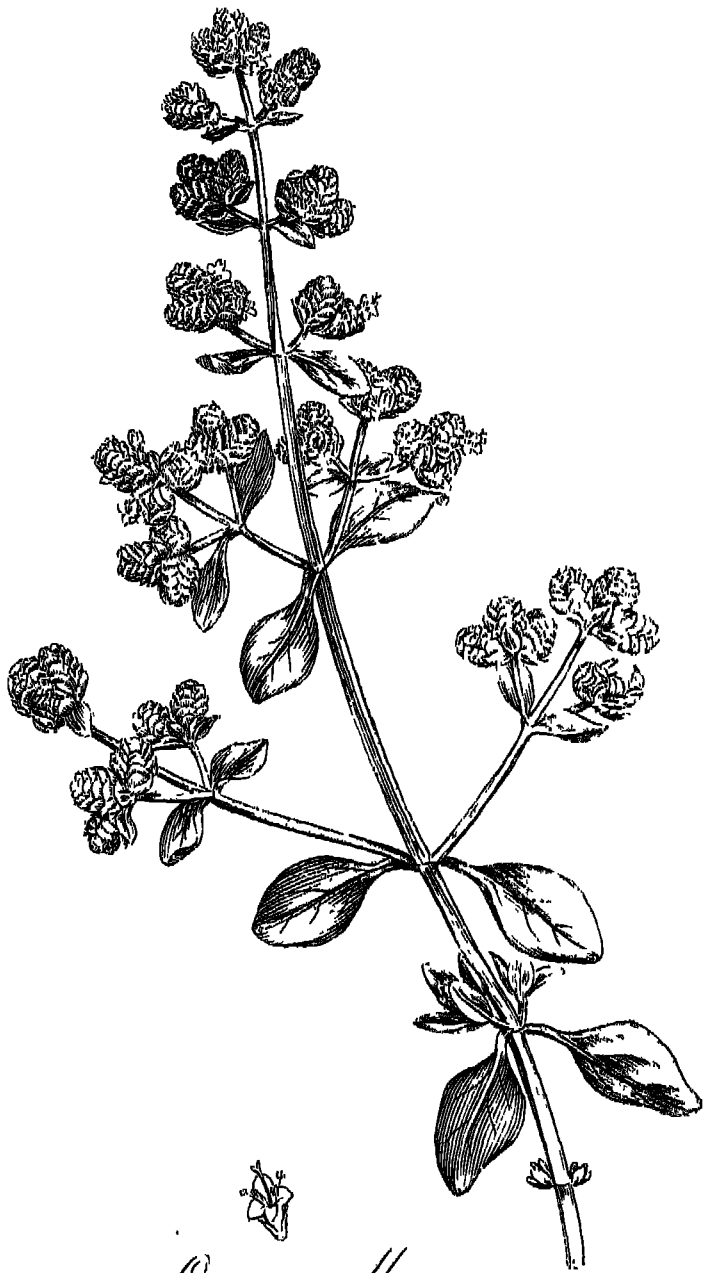
THE root is perennial, creeping, and beset with numerous slender fibres: the stem is erect, square, purplish, downy, producing opposite branches, and rises about a foot and a half in height: the leaves stand upon footstalks in pairs at the joints; and are ovate, pointed, somewhat indented at the edges, above smooth, beneath downy, and of a deep yellowish green colour: the flowers are numerous, terminal, of a pale purplish colour, and stand in pannicles or clusters: the bracteæ, 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 fringed 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 erect, bifid, 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 bifid, 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,[a] 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 likewise thought to be more nearly allied in its medicinal qualities than to any of the other verticillatæ, 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 essential oil, which has been much used for easing 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.

[a] Hence the derivation Origanum, ὀρεγανος montis gaudium, quod locis montanis delectetur. Vide *Bod. in Theoph. p.* 562.

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

ORIGANUM MAJORANA.



Origanum Majorana

Delineavit et pinxit Sept. 1792

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ORIGANUM MAJORANA. SWEET MARJORAM.

SYNONYMA. Majorana. *Pharm. Lond.* & *Edinb.* Majorana vulgaris. *Bauh. Pin. p.* 224. *Raii Hist. p.* 538. Majorana vulgaris æstiva. *Park. Theat. p.* 11. Majorana major. *Gerard Emac. p.* 664.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 726.

Ess. Gen. Ch. *Strobilus* tetragonus, spicatus, calyces colligens.

Sp. Ch. O. foliis ovatis obtusis, spicis subrotundis compactis pubescentibus.

THE root is perennial, brown, and furnished with many long tough fibres: the stalks are numerous, woody, branched, square, and rise 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 foot-stalks: 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 Σαμψυχον or Amaracus of the ancients:[a] 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

[a] The Amaracus is noticed both by Virgil and Catullus:

——— ubi mollis amaracus illum
Floribus et dulci aspirans complectitur umbrâ. *Æn. lib. i. v.* 698.

Cinge tempora floribus
Suave olentis amaraci. *Juliæ et Manlii Epithal.*

 both

both to aqueous and ſpirituous liquors by infuſion, and to water in diſtillation, affording alſo a conſiderable quantity of eſſential 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 congener, 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 ſternutatorius by both Pharmacopœias, with a view to the agreeable odour which it diffuſes to the aſarabacca rather than to its errhine power, which is very inconſiderable.

In its recent ſtate, we are told, that it has been ſucceſsfully applied to ſcirrhous tumours of the breaſts.[b]

[b] Cohauſen in *Comm. Nor. a.* 1742. *p.* 151.

TAMARINDUS INDICA. TAMARIND TREE.

SYNONYMA. Tamarindus. *Pharm. Lond. & Edinb. Gerard Emac. p.* 1607. *Park. Theat. p.* 217. *Pluck. tab.* 64. *fig.* 4. *Rumph. Herb. Amb. p.* 90. *tab.* 23. Siliqua arabica, quæ Tamarindus. *Bauh. Pin. p.* 403. Balam Pulli. *Hort. Malab. tom. i. p.* 39. *tab.* 23. Tamarindus indica. *Jacquin, Pl. Americ. p.* 10. *tab.* 10. *ed.* 2. *pict. p.* 11. *t.* 13. Conf. *Sloane's Jamaica, vol. ii. p.* 45. *Browne's Jamaica, p.* 125. *Hughes's Barbad. p.* 189. *Long's Jamaica, vol. iii. p.* 729. *Swartz. Obſ. Botan. p.* 25. *Cây Me.* Flor. Cochin. p. 403.

Claſs Monadelphia. *Ord.* Triandria. *Schreb. Gen. Plant. p.* 450.

Eſſ. Gen. Ch. Cal. 4-partitus. *Petala* 3. *Nectarium* ſetis 2 brevibus ſub filamentis. *Legumen* pulpoſum.

THIS

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THIS tree rifes to a great height, fending off numerous large branches, which fpread to a confiderable extent, and have a beautiful appearance: the trunk is erect, thick, and covered with rough bark of a greyifh or afh-colour: the leaves are pinnated, alternate, confifting of feveral pairs (about 14) of fmall pinnæ, which are oppofite, oblong, obtufe, entire, fmooth, of a yellowifh green colour, and ftand upon very fhort footftalks: the flowers approach to the papilionaceous kind, and are produced in racemi or lateral clufters: the calyx confifts of four deciduous leaves, which are patent or reflexed, oblong, or rather ovate, entire, fmooth, nearly equal in fize, and ftraw-coloured or yellowifh: the petals are three, ovate, concave, acute, indented, and plaited at the edges, about the length of the calyx, and of a yellowifh colour, beautifully variegated with red veins: the peduncles are about half an inch long, and each furnifhed with a joint, at which the flower turns inwards: the filaments are commonly three, but in fome flowers we have found four, in others only two; they are purple, united at the bafe, and furnifhed with incumbent brownifh antheræ: the germen is oblong, compreffed, incurved, ftanding upon a fhort pedicle: the ftyle is tapering, fomewhat longer than the filaments, and terminated by an obtufe ftigma: the fruit is a pod of a roundifh compreffed form, from three to five inches long, containing two, three, or four flattifh angular fhining feeds, lodged in a dark pulpy matter, and covered by feveral rough longitudinal fibres. The flowers, according to Jacquin, appear in October and November.

The generic character of Tamarindus is wholly founded upon this fpecies, as no other of the fame family has hitherto been difcovered.[a] Though Linnæus in his laft edition of the Genera plantarum has followed Jacquin's defcription of the Tamarindus, in obferving that the filaments are united at the bafe, a circumftance which ought to have placed it in the clafs monadelphia, yet notwithftanding this, they neither thought proper to remove it from the clafs Triandria, where it alfo has been fince retained in Murray's edition of the Syftema Vegetabilium; and is confequently thus claffed by us in the fyftematic arrangement prefixed to the firft volume of this work. Since that time however, we have had an opportunity of examining the recent

[a] Confiderable difference in the fhape of the pod and fweetnefs of the pulp has been obferved; 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 monadelphia class, in which we have now placed it, and for which we have lately had the authority of Schreber,‖ and that of De Loureiro.†

This tree, which appears upon various authorities, to be a native of both Indies,[b] 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 seene growing in the garden of my deceased friend Mr. Tuggy.*"[c] 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."[d] 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 strings 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 easy breaking on

‖ V. Genera plant Class Monadelph. Ord. Triand. p. 450.

† He says, A Classe Triandria ad Monadelphiam transfuli hoc genus non solum propriâ observatione fretus, sed etiam ab ipso Linnæo monitus filamenta habere internè connata. *Flor. Cochin. p.* 403.

In order to make this more evident, we have displayed the filaments as they appeared in our specimen. The rudiments of other filaments probably constituted that part of the generic character which has not been noticed in our description.

[b] Sir Hans Sloane however says, "these trees were strangers in the West Indies, and planted first at Acapulco." *L. c.* [c] *L. c. p.* 1608. [d] See *Dict.*

small

ſmall preſſure between the finger and thumb. The fruit, taken out of the pod, and cleared from the ſhelly fragments, is placed in layers in a caſk, and boiling ſyrup, juſt before it begins to granulate, is poured in, till the caſk is filled: the ſyrup pervades every part quite down to the bottom, and when cool the caſk 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 much pleaſanter flavour: 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 to be diſtinguiſhed by the greater length of the pods, and the pulp being dryer and of a darker colour.

This fruit, the uſe of which was firſt learned of the Arabians, 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 ſweet 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 caſſia, and el. e senna, or lenitive electuary.

* *L. c.* † *Cullen, M. M. vol. ii. p.* 507.

"Tourneſort relates, that an eſſential ſalt may be obtained from Tamarinds, 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 ſalt is of a ſourish taſte, and difficultly diſſoluble in water; and that a like ſalt is ſometimes found alſo naturally concreted on the branches of the tree. The ſalt, as Beaumé 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 ſhoots into cryſtals of a brown colour, and very acid taſte; but in diſſolving and cryſtalizing them again, or barely waſhing them with water, they loſe almoſt all their acidity, the acid principle of the Tamarinds ſeeming not to be truly cryſtallizable." Vide *Lewis, M. M. p.* 633.

GLYCYRRHIZA GLABRA. COMMON LIQUORICE.

SYNONYMA. Glycyrrhiza. *Pharm. Lond. & Edinb.* Glycyrrhiza vulgaris. *Gerard. Emac. p.* 1302. *Raii Hist. p.* 910. *Synop. p.* 324. Glycyrrhiza siliquosa vulgaris. *Park. Theat. p.* 1098. Glycyrrhiza radice repente, &c. *J. Bauh. Hist. ii. p.* 328. Glycyrrhiza siliquosa vel germanica. *Bauh. Pin. p.* 352. *Hist. Oxon. v. ii. p.* 89. Conf. Pallas. *Reise durchs Russ. Reich. T. i. p.* 498. *n.* 120. Γλυκυρριζα et Γλυκυρριξα *Græcorum.*

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 882.

Ess. Gen. Ch. Cal. 2-labiatus : $\frac{1}{3}$. *Legumen* ovatum, compressum.

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 pinnæ, with an odd one at the end: the leafits 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 axillæ 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 *alæ*, 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 antheræ: 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.[a] The chief places

[a] Vide *Tourn. Herb. part.* 2. *fol.* 12. published in 1562.

at

Lithographed by J.N. Woodville Oct.1st 1792

at which it has long been propagated for ſale, are Pontefract in Yorkſhire, Workſop in Nottinghamſhire, and Godalming in Surry; 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 inſpiſſated 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.[b] 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.[c]

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 [d] 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.[e] It is in common uſe as a pectoral or emollient in catarrhal defluctions on the breaſt, coughs, hoarſeneſſes, &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 drugs more effectually than ſyrups or any of the ſweets of the ſaccharine kind."[f]

[b] If the Liquorice be long boiled, its ſweetneſs is greatly impaired, and the preparation contracts an ungrateful bitterneſs and black colour.

[c] *Lewis, M. M.*

* This matter, according to Lewis, differs from that of other vegetables, "in being far leſs diſpoſed to run into fermentation." *L. c.*

[d] Hence it was named ἀδίψον, and the root directed to be chewed in dropſies and other diſorders where great thirſt prevailed. Vide *Theoph. L. 9. cap.* 13. Alſo noticed by *Pliny, Lib.* 22. *c.* 9.

[e] 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 acrid 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.

[f] *Lewis, l. c.*

ALLIUM

ALLIUM SATIVUM. COMMON CULTIVATED GARLICK.

SYNONYMA. Allium. *Pharm. Lond. & Edinb.* *Gerard Emac. p.* 177. *Park. Theat. p.* 513. *Raii Hist. p.* 1125. Allium sativum. *Bauh. Pin. p.* 73. *J. Bauh. Hist. ii. p.* 554. Allium staminibus alterne trifidis, foliis gramineis, capite bulbifero, radicibus in unum bulbum congruentibus. *Hall. Opusc. p.* 331. Σκόροδον *Græc.*

Class Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 409.

Ess. Gen. Ch. *Cor.* 6-partita, patens. *Spatha* multiflora. *Umbella* congesta. *Caps.* supera.

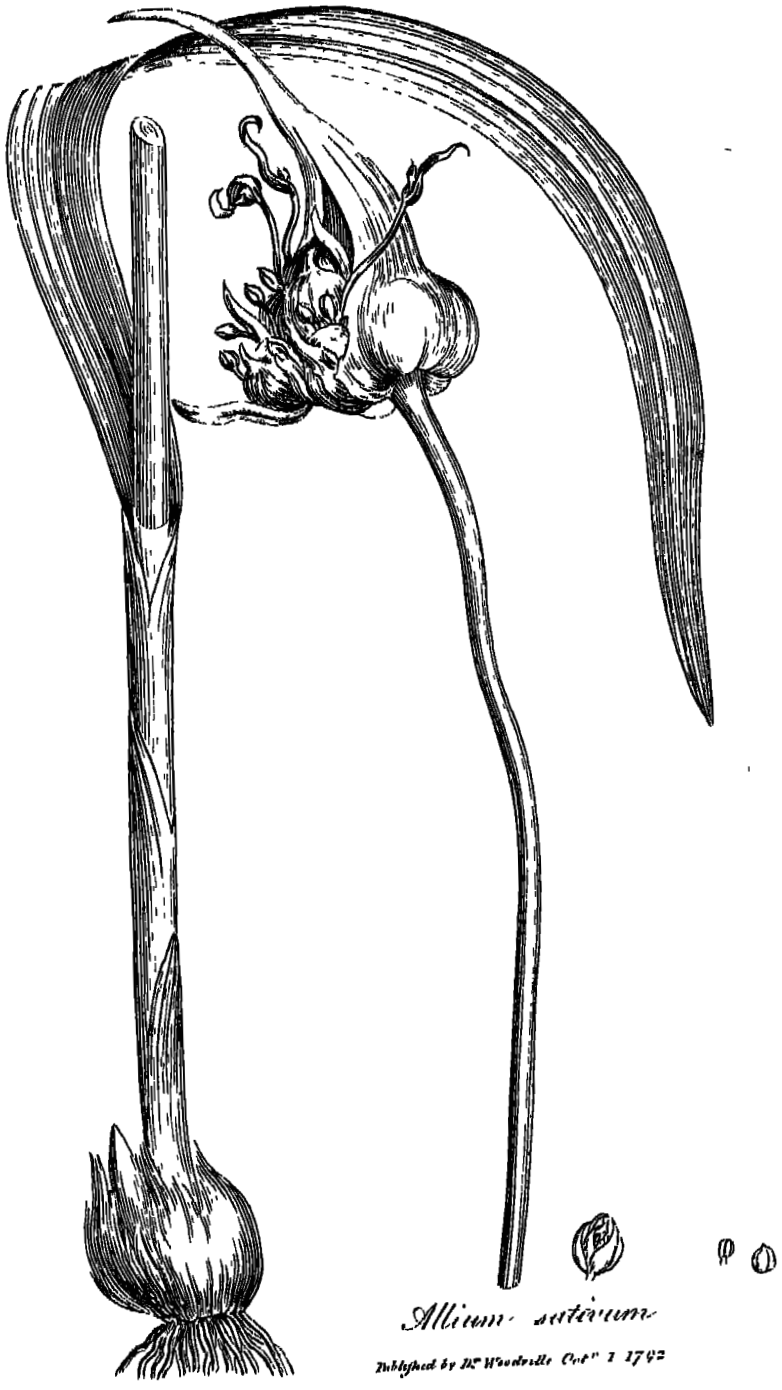
Sp. Ch. A. caule planifolio bulbifero, bulbo composito, staminibus tricuspidatis.

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 spatha 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 antheræ: 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 Linnæus, grows spontaneously in Sicily;[a] but as it is much used both for culinary and medicinal

[a] Vide *Spec. Plant.*

purposes



Allium sativum

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purpoſes, it has been long very generally cultivated in gardens: it ſhews the ſame propenſity to forming bulbs inſtead of flowers as the A. Scorodopraſum 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.[b] 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 ſiliquoſe plants, ſinks in water. Applied to the ſkin, Garlick produces inflammation, and frequently veſicates 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."[a]

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 expectorant in pituitous aſthmas, and other pulmonary affections, unattended with inflammation.[d] Its utility as a diuretic in dropſies, is alſo atteſted by unqueſtionable authorities;[e]

[b] As in the urine, perſpiration, 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 *Tabidorum theat. exerc.* 29. *p.* 81. On being applied to the feet, the alliaceous taſte has been produced in the mouth. Vide *Hall. opuſc. bot. p.* 332.

[c] *Lewis, M. M. p.* 33.

[d] Dioſcorides mentions its uſe in inveterate coughs. *M. M. l.* 2. *c.* 182. Celſus employed it mixed with honey in theſe complaints. *Lib.* 4. *c.* 4 *p.* 199. *ed. Kraus.* Vide *Mead. Monit. et præc. p.* 56. Roſenſtein *Huſ-och Reſe-apot p.* 71. & 87. He recommends the Garlick to be boiled in milk, a pint of which is to be taken night and morning. [e] See the caſes related by Foreſtus, *(Obſ. lib.* 9. *obſ.* 27*)*. Bartholinus, *(Hiſt. Anat. Cent.* 2. *hiſt.* 74. Sydenham, *(Oper. p.* 500*)*.

and its febrifuge power has not only been experienced in preventing the paroxysms of intermittents,[f] but even in subduing the plague:[g]

Another virtue ascribed to Garlick is that of an anthelmintic:[h] it has likewise been found of great advantage in scorbutic cases,[i] and in calculous disorders, acting in these not only as a diuretic, but in several instances manifesting a lithontriptic power.[k] That the juice of alliaceous plants in general has considerable effects upon human calculi, is to be inferred by the experiments of Lobb;[l] and we are abundantly warranted in asserting, that by a decoction of the beards of leeks, taken liberally, and its use persevered in for a length of time, has been found remarkably successful in calculous and gravelly complaints.[m]

The penetrating and diffusive acrimony of Garlick renders its external application useful in many disorders, as a rubifacient, and more especially as applied to the soles of the feet, to cause a revulsion from the head or breast, as was successfully practised and recommended by Sydenham.[n] Garlick has also been variously employed externally to tumors and cutaneous diseases; and in certain cases of deafness a clove or small bulb of this root, wrapt in gauze or muslin, and in-

[f] Vide Celsus *l. c. p.* 142. De Haen *Rat. Med. P. ii. p.* 57. *sq.* Rosenstein *Barns sjukd. p.* 317. Bergius. Vide *M.M. p.* 255. where he says, "In febribus quoque autumnalibus repullulantibus præclara identidem præstat. Vidi plures eodem curatos, etiam quos quartana vexaverat. Incipiendum a bulbulo unico mane & vesperi, sed quotidie unus bulbulus superaddendus, usquedum 4 vel 5 bulbulos sumserit æger qualibet vice. Si febris tunc evanuit, diminuenda erit dosis, & sufficit postea sumere unicum, vel etiam binos bulbulos, mane & vesperi, per plures septimanas.

[g] For this purpose it is to be given in such a way as to excite a copious diaphoresis. See the authors cited by Zorn. *Botan. Med. p.* 40. Chenot (*De peste. p.* 108. *sq.* and others.

[h] By Hoffman, Rosenstein, Taube, and others.

[i] See Lauremberg App. plant. l. 1. p. 22. Lind on scurvy, p. 182. 188. 224.

[k] Vide Hoyer *Ephem. nat. cur. Cent. i. p.* 126. Goetz *Act. nat. cur. vol.* 2. *p.* 434. Mohring *Commerc. Nor.* 1735. 220.

[l] De Diffol. calc. cap. 10.

[m] 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 decoction, 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.

[n] Especially in the confluent small-pox, about the eighth day. *Epist. de variolis conf.*

troduced

Mentha piperita

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troduced 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 effectual, 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 Pharmacopœias, are now expunged.

° Bergius for this purpoſe recommends the juice of Garlick dropped on cotton. *l. c.*

MENTHA PIPERITA. PEPPER-MINT.

SYNONYMA. Mentha piperitis. *Pharm. Lond. & Edinb.* Mentha ſpicis brevioribus & habitioribus, foliis menthæ fuſcæ, ſapore ſervido piperis. *Raii Synop. p.* 234. *Hiſt. v. iii. p.* 284. Mentha piperita. *Hudſon Flor. Ang. p.* 251. *Withering Bot. Arrang. p.* 599. *Relhan Flor. Cantab. p.* 223. *Icon. V. Knigge Diſſ. de mentha piperitide.*

Claſs Didynamia. *Ord.* Gymnoſpermia. *Lin. Gen. Plant.* 713.

Eſſ. Gen. Ch. *Corolla* ſubæqualis, 4-fida, lacinia latiore emarginata. *Stamina* erecta, diſtantia.

Sp. Ch. M. flor. capitatis, fol. ovatis petiolatis, ſtaminibus corolla brevioribus.

THE root is perennial, creeping, and furniſhed with many ſmall fibres: the ſtems are erect, ſquare, jointed, ſtriated, ſomewhat branched towards the top, and riſe about two feet in height: the leaves are egg-ſhaped, ſerrated, pointed, nerved, of a dark green colour, and ſtand in pairs upon footſtalks: the flowers are ſmall, purple, and produced

duced in terminal ſpikes, ſeparated into cluſters: the calyx is tubular, permanent, reddiſh, ſtriated, 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 germen 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 eſſential oil of a pale greeniſh yellow colour, growing darker coloured by age, very light, ſubtile, poſſeſſing 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." [a]——

Its ſtomachic, aniſpaſmodic, and carminative qualities renders it uſeful in flatulent colics, hyſterical affections, retchings, and other dyſpeptic ſymptoms, acting as a cordial, and often producing immediate relief. Its officinal preparations are an eſſential oil, a ſimple water, and a ſpirit.

* Dr. Cullen obſerves, that "rectification is particularly neceſſary and proper for this eſſential 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.

[a] *Lewis, M. M. p.* 422.

We have already noticed that this plant yields camphor. See *Gaub. Adverſ. p.* 99. *ſqq.*

MENTHA VIRIDIS

Mentha viridis

Published by Dr Withering, Oct. 1. 1792

MENTHA VIRIDIS. SPEAR-MINT.

SYNONYMA. Mentha ſativa. *Pharm. Lond. & Edinb.* Mentha anguſtifolia ſpicata. *Bauh. Pin. p.* 227. *Raii Hiſt. p.* 532. Mentha anguſtifolia ſpicata, glabra, folio rugoſiore, odore graviore. *Raii Synop. p.* 233. Mentha romana. *Gerard. Emac. p.* 680. Mentha romana anguſtifolia, ſive Cardiaca. *Park. Theat. p.* 31. Mentha foliis elliptico-lanceolatis, ſpicis cylindricis glaberrimis. *Hall. Stirp. Helv. n.* 229. Mentha ſpicata. *Hudſon. Flor. Ang. p.* 221. Mentha viridis. *Withering. Bot. Arrang. p.* 597.

Claſs Didynamia. *Ord.* Gymnoſpermia. *Lin. Gen. Plant.* 713.

Eſſ. Gen. Ch. *Cor.* ſubæqualis, 4-fida: lacinia latiore emarginata. *Stamina* erecta diſtantia.

Sp. Ch. M. ſpicis oblongis, foliis lanceolatis nudis ſerratis ſeſſilibus, ſtaminibus corolla longioribus.

THE root is perennial, creeping, and beſet with numerous ſmall fibres: the ſtems are ſquare, hollow, erect, 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.

but to what ſpecies the Ἡδυοσμος & Μινθη of the Greeks [a] 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, ſmelling and taſting 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

[a] Mint has not eſcaped the notice of the Latin poets:

—— —— —— An tibi quondam
Fœmineos artus in olentes vertere menthas
Perſephone, licuit? OVID. MET. L. x. v. 728.

By Martial it is called "ructatrix 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 edgeways, red. *L. c.*

menthæ

menthæ sativæ. 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."[b]

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 essential 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 cholic 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."[c]

Lewis observes,[d] "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 cataplasms 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 set to macerate, did not coagulate near so soon as an equal quantity of the same milk kept by itself."[e]

The officinal preparations of Spear-mint are an essential oil, a conserve, a simple water, and a spirit.

[*] In proof of the emmenagogue power of mint, Linnæus informs us, that a woman, by the frequent use of it, became subject to menorrhagia. Vide *Diss. de Menthæ usu*, p. 9.

[b] *Lewis, M. M. p.* 419. [c] *Cullen, M. M. vol. ii. p.* 149. [d] *L. c.*

[e] We are told, that "when cows have eaten the mentha arvensis, as they will do largely at the end of summer, when the pastures are bare, and hunger distresses them, their milk can hardly be made to yield cheese; a circumstance which sometimes puzzles the dairy-maids." *With. l. c.*

MENTHA

MENTHA PULEGIUM. PENNYROYAL MINT.

SYNONYMA. Pulegium. *Pharm. Lond. & Edinb. Raii Hist. p.* 533. *Synop. p.* 235. Pulegium latifolium. *Bauh. Pin. p.* 222. Pulegium regium. *Gerard Emac. p.* 671. Pulegium vulgare. *Park. Theat. p.* 29. Mentha caule prostrato, foliis subrotundis obtuse dentatis, staminibus exsertis. *Hall. Stirp. Helv. n.* 221. Mentha Pulegium. *Hudson. Flor. Ang. p.* 254. *Withering. Bot. Arr. p.* 602. *Lightfoot. Flor. Scot. p.* 306. *Relhan. Flor. Cantab. p.* 224.

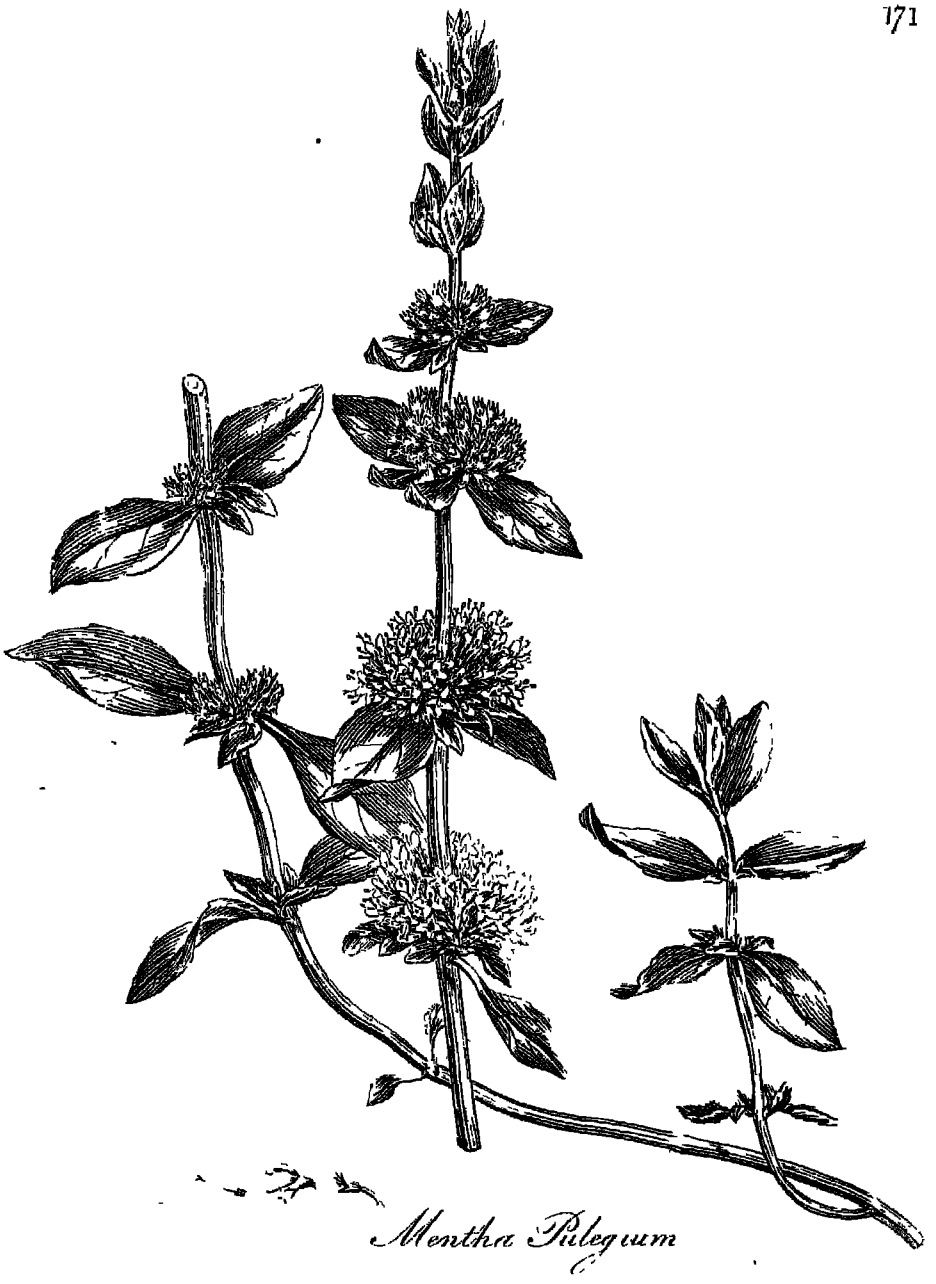
Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 713.

Ess. Gen. Ch. *Cor.* subæqualis, 4-fida: Lacinia latiore emarginata. *Stamina* erecta distantia.

Sp. Ch. M. floribus verticillatis, foliis ovatis obtusis suberenatis, caulibus subteretibus 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 least. 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 moist 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



Mentha Pulegium

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ſmell and taſte. 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."[a]

The Pulegium 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,[b] 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 ſteel, in white wine, which he never knew to fail of ſucceſs.[c] 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:"[d] 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.

[a] *Lewis, M. M. p.* 524.

[b] See his Works, Vol. iv. p. 475. Sauvages *Noſol. T.* 2. *P.* 2. *p.* 157. [c] *He ſays,* ——quod me nunquam fefellet. *Vide, l. c.*

[d] *Mat. Med. vol. ii. p.* 150.

DOLICHOS PRURIENS. COWHAGE DOLICHOS.

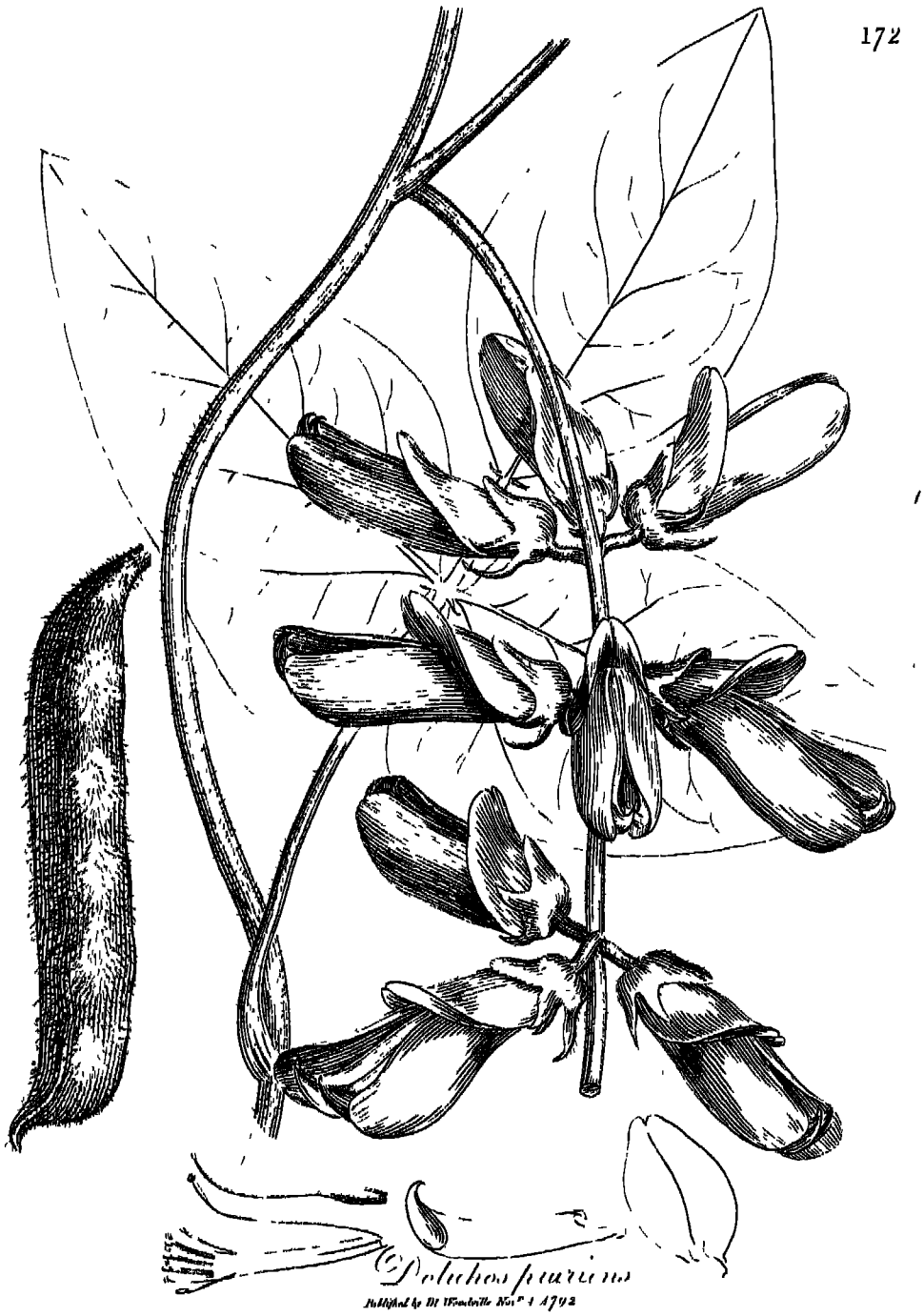
SYNONYMA. Dolichos. *Pharm. Edinb.* Phaſeolus Zurratenſis filiqua hirſuta, Couhage dicta. *Raii Hiſt. p.* 887. Phaſeolus americanus, foliis molli lanugine obſitis, ſiliquis pungentibus, ſemine fuſco punctato. *Pluk. Phyt. p.* 214. *f.* 1. Phaſeolus utriuſque Indiæ, lobis villoſis pungentibus minor. *Sloane Jam. vol. i. p.* 37. Phaſeolus virgatus hirſutus prurigineus. *Plum. Spec.* 8. Stizolobium ſpicis multifloris pendulis alaribus, floribus ternatis. *Browne Jam. p.* 290. Cacara pruritus. *Rumph. Amb. vol.* 5. *p.* 393. *t.* 142. Nai-corana. *Hort. Mal. vol.* 8. *p.* 61. *t.* 35. Dâu ngûa. *Flor. Cochin. p.* 438. *Conf. Jacquin. Amer. pict. p.* 99. *t.* 188. Kerr. *Med. Comment. vol. ii. p.* 202.

Claſs Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 867.

Eſſ. Gen. Ch. *Vexilli* baſis callis 2, parallelis, oblongis, alas ſubtus comprimentibus.

Sp. Ch. D. volubilis, legum. racemoſis: valvulis ſubcarinatis hirtis, pedunculis ternis.

THE root is perennial, fibrous: the ſtem is herbaceous, climbing, cylindrical, hairy, divided into many branches, which twiſt 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 hirſute; 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 ſtipulæ: 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 axillæ of the leaves, and



Dolichos pruriens

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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* (ſtandard) which is roundiſh, entire, concave, obtuſe, and double the length of the calyx; two *alæ* (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 alæ, 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 *ſ*, 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 Linnæus; and this error is alſo to be found in Aiton's Hortus Kewenſis.

Though the pods of both D. urens and D. pruriens are beſet with ſetaceous hairs, but of the former theſe 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;[a] 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 ſtoves: ſo that for the very correct figure ſubjoined to this ſheet we

[a] Teriæ commiſſa in horto *D. Caroli Hatton* plantas produxere. Vide *Raii Hiſt. p.* 887. In the *Hort. Kew.* 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

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 Pharmacopœia.

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 dropſie;"[b] 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 ſetacious hairy ſubſtance "growing on the outſide of the pod, which is ſcraped off, and mixed "with common ſyrup or molaſſes, to the conſiſtence 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 empyrical "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

[b] He alſo informs, that this remedy was ſucceſsfully uſed in the Eaſt Indies by Mr. Buckley. *L. c.*

"ſtools

" ſtools conſiſted 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 dele- " terious to the aſcarides, or whether it has ever been uſed againſt " them, I am uncertain."[c] Farther accounts, ſhewing the efficacy of this medicine, have ſince appeared in the Medical Commentaries,[d] and in a treatiſe, profeſſedly written on the ſubject by Mr. Chamberlaine,[e] to which a number of caſes is ſubjoined, and to which great additions lately have been made on various and indubitable authorities, proving the Cowhage 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 inſeſt the primæ viæ, have been expelled by this anthelmintic.

The manner, in which theſe hairy ſpiculæ act as a vermiſuge, ſeems to be purely mechanical; for neither the tincture, nor the decoction, poſſeſſes the leaſt anthelmintic power.[f]

[c] Vide his Eſſay on the natural hiſtory of Guiana in South America.

[d] See *Vol. ii.*

[e] Practical treatiſe on the efficacy of Stizolobium or Cowhage, publiſhed in 1785. As the Cowhage 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.

[f] 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 ſetæ. For a minute or two no viſible effect was produced; but in a little time they began to withe 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 ſetæ had pierced very deep, and others were ſticking looſely in various parts of its body, but that none of the ſpiculæ, which had once entered into the ſkin, dropped off." *L. c.*

ACORUS CALAMUS. SWEET FLAG, Or ACORUS.

SYNONYMA. Calamus aromaticus. *Pharm. Lond. & Edinb.* Acorus verus, ſive Calamus aromaticus officinarum. *Bauh. Pin. p.* 34. *Park. Theat. p.* 140. *Raii Hiſt. p.* 1313. *Synop. p.* 437. Acorus verus, officinis falsò Calamus. *Gerard Emac. p.* 62. Acorus. *Hall. Stirp. Helv. n.* 1307. Acorus Calamus. *Hudſon Flor. Ang. p.* 147. *Withering. Bot. Arr. p.* 357. *Relhan. Flor. Cant. p.* 140. Thach xuog bô. *Flor. Cochin. p.* 208.

Claſs Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 434.

Eſſ. Gen. Ch. *Spadix* cylindricus, tectus floſculis. *Cor.* 6-petalæ, nudæ. *Stylus* nullus. *Caps.* 3-locularis.

Sp. Ch. A. ſcapi mucrone longiſſimo foliaceo. *Hort. Kew.*

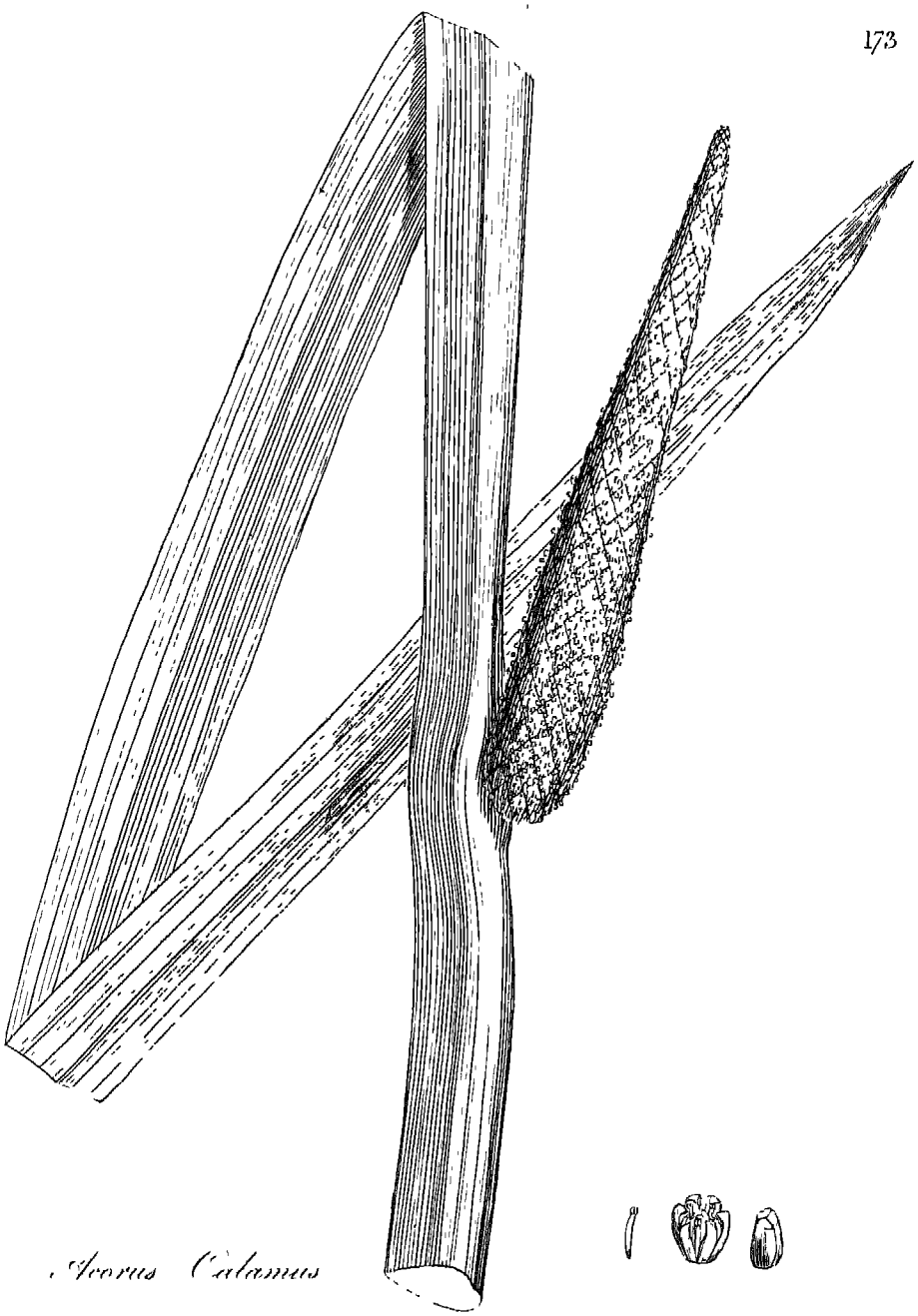
THE root is perennial, horizontal, crooked, pointed, fibrous, ſomewhat compreſſed, about an inch thick, externally yellowiſh, with a greeniſh tinge, rugoſe, internally whitiſh, and of a ſpongy texture: the leaves are long, ſword-ſhaped, ſheathing one another, and commonly undulated on one ſide: the flowers 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 anthere: the germen 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 Linnæus, 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,[a] and were formerly imported here from Aſia and the Levant;

[a] The virtues of Calamus aromaticus are noticed both by the Greeks and Arabians. See *Dioſ. L.* 1. *c.* 2. *Alpin. p.* 141.

but



Acorus Calamus

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But thoſe of Engliſh growth are now very generally ſubſtituted, and found to be little or nothing inferior to the exotic ſort, which is merely a variety of the ſame ſpecies.[b]

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 Hoffman; 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,[c] and in intermittent fevers, which we are told were cured by this root, after the bark had failed.[d] We are alſo informed of its efficacy in ſcorbutic and hæmorrhagic complaints;[e] but to this, little credit will be given, and much leſs to the ſuppoſed elexipharmic power of Calamus, though it is an ingredient in the theriaca and mithridate of dignified memory, and ſtill is much uſed in eaſtern countries as a preſervative againſt contagion.

[b] Vide *Lin. Sp. Pl. p.* 462. [c] *De Mayerne. Prax. Med. p.* 59.
[d] *Act. Societ. Med. Havn. vol.* 9. *p.* 206.
[e] See *Murray. App. Med. v.* 5. *p.* 42.

CALAMUS

CALAMUS ROTANG. ROTANG CANE.

Sanguis draconis, *Pharm. Lond. & Edinb.* e fructibus hujus arboris maxime desumitur.

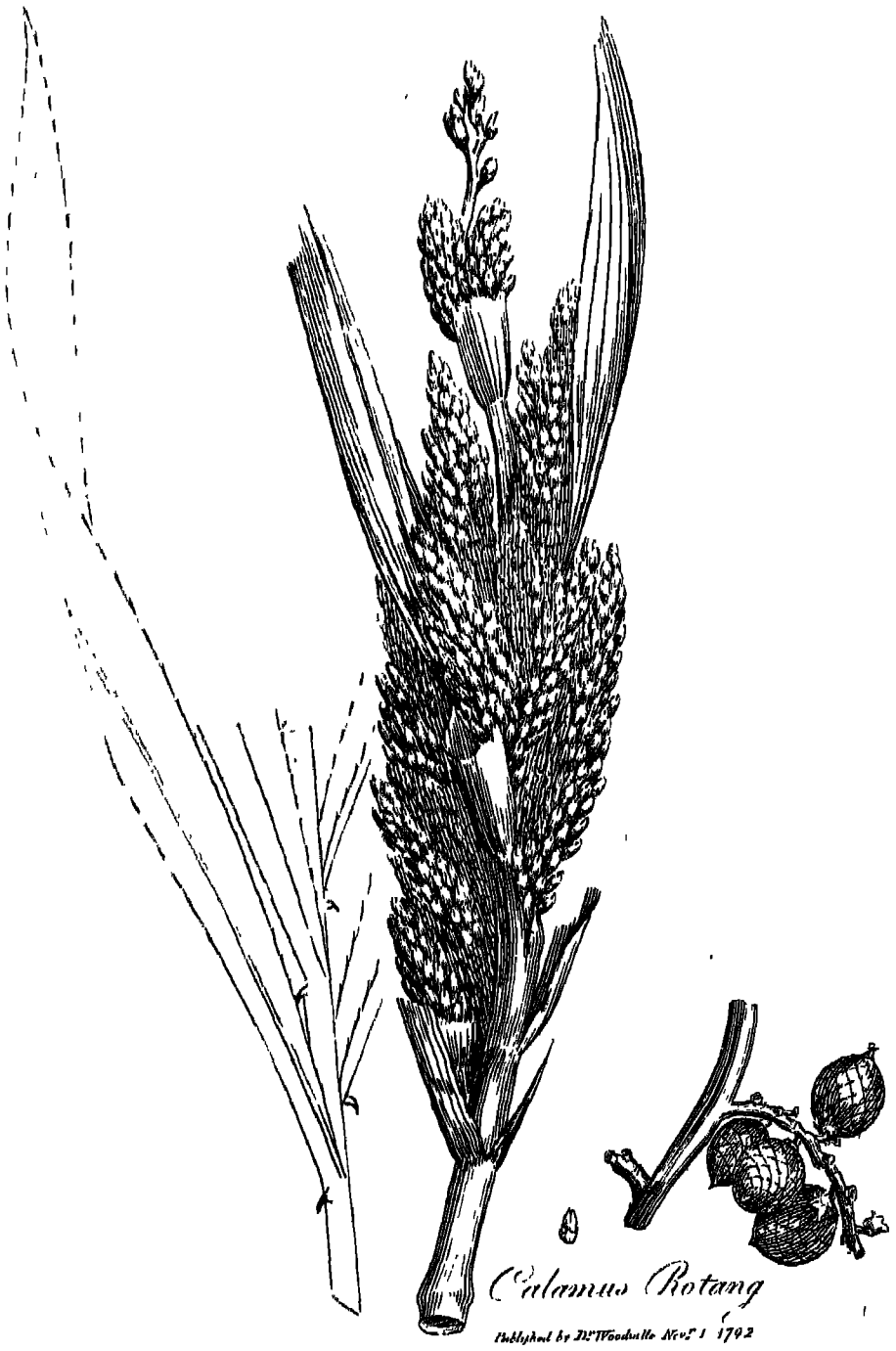
SYNONYMA. Palmijuncus Draco. *Rumph. Herb. Amb. tom.* 5. *p.* 114. *tab.* 58. *f.* 1. Dsierenang. *Kempfer. Amen. Exot. p.* 552.

Class Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 436.

Ess. Gen. Ch. Cal. 6-phyllus. *Cor.* o. *Bacca* exarida, 1-sperma, retrorsum imbricata.

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 pinnæ, 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 persistent leafits, 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 six, capillary, and furnished with round antheræ: the germen is roundish, placed above the insertion 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 filbert, membranous, round, one-celled, covered with regular inverted obtuse scales, and contains a red resinous 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-canes, which have usually been imported by the Dutch.

According


Calamus Rotang
Published by Dr. Woodville Nov.r 1 1792

According to Linnæus 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 distinct 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 Kæmpfer, conformably to the synonyms 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 monetaria, and the Pterocarpus santolinus.—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.[a] 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 Kæmpfer, by exposing 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, inspissating the strained decoction, and drying it in the same manner as the former. In Palimbania 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 be

[a] As some of the Crotons, (vide *Linn. Supp. p.* 319) and other trees noticed by Cranz, *de duabus draconis arboribus. ad, p.* 13. An exudation similar to the sanguis draconis produced from a tree at Botany Bay, was discovered by Sir Joseph Banks and Dr. Solander. Vide *Hawkesworth'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 sanguis draconis, and has been successfully employed as an astringent by Dr. Blane. See *Phillip's Voyage to New South Wales. p.* 59.

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 maſſes, 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 maſſes, 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 Draconis 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 hæmorrhages and alvine 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 officinal compoſition but that of emplaſtrum thuris of the London Pharmacopœia.

* Κιννάβαρι, αἷμα δράκοντος.

CUCUMIS COLOCYNTHIS. BITTER CUCUMBER, Or, COLOQUINTIDA.

SYNONYMA. Colocynthis. *Pharm. Lond. & Edinb. Gerard Emac. p.* 915. *Cam. Epit. p.* 982. *Raii Hiſt. p.* 642. Colocynthis fructu rotundo minor. *Bauh. Pin. p.* 313. Colocynthis vulgaris. *Park. Theat. p.* 160.

Claſs Monoecia. *Ord.* Syngeneſia. *Lin. Gen. Plant.* 1092.

Eſſ. Gen. Ch.

Cucumis Colocynthis

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Eſſ. Gen. Ch. *Masc.* *Cal.* 5-dentatus. *Cor.* 5-partita. *Filamenta* 3. *Fem.* *Cal.* 5-dentatus. *Cor.* 5-partita. *Piſt.* 3-fidum. *Pomi* ſemina arguta.

Sp. Ch. C. foliis multifidis, pomis globoſis glabris.

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 ſinuated, hairy, on the upper ſurface of a fine green, beneath rough, and whitiſh: the flowers are yellow, ſolitary, and appear at the axillæ 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 antheræ 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 antheræ: 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 membrane, 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 ſowing 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 membranous 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 ropy and ſlimy: even a tincture of it made in proof ſpirit is ſo glutinous as not to paſs through a filter, and not eaſily through

through a common ſtrainer. The watery decoctions inſpiſſated, yield a large proportion, half of the weight of the colocynth, or more, of a mucilaginous extract; which purges ſtrongly, but with much leſs irritation, and greater ſafety, than the colocynth itſelf, and appears to be the beſt preparation obtainable from this draſtic drug."[a]

This very powerful and irritating cathartic is the Κολοκυνθις 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, of which various inſtances are related.[b] 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 gummy farinaceous ſubſtances, or the oily ſeeds, which, without making any alteration in the colocynth itſelf, prevents its reſinous particles from cohering, and ſticking upon the membranes of the inteſtines, ſo as to irritate, inflame, or corrode them."[c]

This draſtic purgative has been recommended in various chronic complaints;[d] but as ſeveral other cathartics have all the advantages of coloquintida, and may be uſed with more ſafety, its uſe is now ſeldom reſorted to, eſpecially alone. Extractum colocinthidis compoſitum & pipulæ ex colocynthide cum aloe, are directed by the Pharmacopœias.

[a] *Lewis, M. M. p.* 246.

[b] See *Shulz Diſſ. de Colocynthide. Tulp. Obſ. lib.* 4. *c.* 26. *p.* 218. A caſe in which it proved fatal is mentioned by *Plater, Obſ. p.* 858. And *Dioſcorides* obſerves, that, employed in the way of enema, it occaſioned a bloody diſcharge. *Lib.* 4. *c.* 178.

[c] *Edinburgh New Diſpenſ. by Dr. Duncan. p.* 175.

[d] As worms, lues venerea, cephalalgia, mania, dropſy, Gonorrhæa, epilepſy, aſthma, &c.

CROCUS SATIVUS.

Carex setacea

Published by D. Woodville Dec. 1 1792

CROCUS SATIVUS. SAFFRON CROCUS.

SYNONYMA. Crocus. *Pharm. Lond. Gerard. Emac. p.* 151. *Raii Hist. p.* 1176. *Synop. p.* 374. Crocus verus sativus autumnalis. *Park. Parad. p.* 167. Crocus sativus. *Bauh. Pin. p.* 65. *Hudson. Flor. Ang. p.* 13. *Withering. Bot. Arr. p.* 37. *Relhan. Flor. Cant. p.* 15. *Miller's Figures, t.* 111. Conf. *Douglas. Phil. Transf. vol.* 32. *p.* 441. *Du Hamel, and Fougeroux De Bondaroy. Mem. de L'Acad. des Scien. de Paris,* 1728. *p.* 100. *and p.* 92. *f.* 1. 2.

Class Triandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 55.

Ess. Gen. Ch. *Cor.* 6-partita, æqualis. *Stigmata* convoluta.

Sp. Ch. C. spatha univalvi radicali, corollæ tubo longissimo.

* C. autumnalis, *foliis angustioribus margine revolutis.* Miller. Illus.

β C. vernalis, *foliis latioribus margine patulo.* Jacquin. Aust. v. 5. 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 six petals, which are nearly elliptical, equal, and turned inwards at the edges: the filaments are three, short, tapering, and support long erect yellow antheræ: the germen is roundish, from which issues a slender style, terminated by three long convoluted stigmata, 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.

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 Linnæus conſidered only as varieties of the C. ſativus. Jacquin,[a] 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."[b]

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.[c]

[a] Vide *l. c.* [b] See *Dict.* [c] For a full account of the cultivation and management of Saffron, ſee *Douglaſs* 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.[d]" The acetous, 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.[e] "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 essential 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."[f]

Saffron is evidently the Κροκος of the Greeks, Crocus of the Latins, and Zaffaran, or Zahafaran, of the Arabians. 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 asserts, 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.[h] We are also assured, that it penetrates every part of the body, tinging the solids and excretions with a yellow colour;[i] and that even the odour or effluvia of this drug, have been known to produce deleterious effects.[k] It appears, however, from the experiments of Dr. Alexander,[l] 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.*

[d] *Lewis, M. M. p.* 258. [e] *Ibid.* [f] *Ibid.*
[h] See especially *Zacut. Lusit. apud Fricc. de venen. p.* 394.
[i] Hertodt, *Crocologia. p.* 279.
[k] Borellus. *Hist. et Obs. cent.* 4. *Obs.* 35. *p.* 303. Tralles, *de Opio. sect.* 1. *p.* 114. *Zacut. Lusit. l. c.* [l] *Experimental Essays, p.* 88.

* 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, inspissated 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 despondency 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.[m] 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.[n] Another quality for which Saffron has been esteemed, is that of an antiseptic; yet though, (according to the experiments of Sir John Pringle,[o]) 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 pustles, 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,"[p] 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 usus."

At present very little confidence is placed in this medicine, though it enters several officinal compositions. The Edinburgh College directs a tinctura croci, but that of London only retains a syrup of this drug.

[m] *Opera ed. Horst. p.* 136. [n] *Cullen, M. M. vol. ii. p.* 313.
[o] *Diseases of the Army, App. p.* 20. [p] *L. c.*

COLCHICUM

Colchicum autumnale

Published by Dr Woodville Decr 1 1792

COLCHICUM AUTUMNALE. COMMON MEADOW SAFFRON.

SYNONYMA. Colchicum. *Pharm. Lond. & Edinb.* Colchicum commune. *Bauh. Pin. p.* 67. *Raii Hist. p.* 1170. *Synop. p.* 373. Colchicum purpureum & Anglicum album. *Gerard Emac. p.* 157. *Park. Parad. p.* 153. Colchicum Flore folium longe præcedente, petalis ovatis. *Hall. Stirp. Helv. n.* 1255. C. autumnale. *Hudson. Fl. Ang. p.* 136. *Ed.* 1762. *Light. Fl. Scot. p.* 192. *Withering. Bot. Arr. p.* 379. *Stoerck Lib. de Colch. autumn.*

Class Hexandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 457.

Ess. Gen. Ch. *Cor.* 6-partita: tubo radicato. *Capsulæ* connexæ inflatæ.

Sp. Ch. C. foliis planis lanceolatis erectis.
α Flore simplici. β 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,[a] 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 antheræ: 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,[b] and flowers in September.

[a] Hence it has been called *naked lady*. [b] It is not so rare a plant as the Saffron.

The recent root of this plant has been received into the Materia Medica of both Pharmacopœias, on the recommendation of Baron Stoerck, who first thought of converting this acrid poison to the purposes of medicine.[c] 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.[d] Krapf likewise says, that he ate the whole bulbs without feeling any inconvenience, except that of an ungrateful bitterish taste;[e] and Kratochvill gave this root with impunity to several in doses of two, three, and even four drams;[f] 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.[g] Ehrmann,[h] Marges,[i] Murray,[k] 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 asserts, that on cutting the fresh root into slices, the acrid particles emitted from it irritated the nostrils, fauces, and breast; and that the ends of the fingers with which it had been held, became for a time benumbed;[l] 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, tenesmus, colic pains, cephalalgia, hiccup, &c.[m] 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[n] and brute animals.[o]

[c] The external use of this root, and the wearing it inclosed in a bag, suspended about the neck, which was formerly practised for the purpose of preventing and curing pestilential fevers, will hardly be thought an exception to this assertion. [d] *L. c. n.* 1256.

[e] *Cont. Experim. in Stoerck. p.* 233. [f] Vide *Kratochvill de Colch. p.* 35. [g] *Lib. de Colch. p.* 8. 9. [h] *Diss. de Colch. Basil.* 1772. §. 5. [i] Vide *Journal de Med. tom.* 23. *p.* 32. *sq.* [k] *App. Med. vol.* 5. *p.* 196. [l] *L. c. p.* 25. [m] *L. c. p.* 11.

[n] 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.* 63. Violent symptoms have been produced by taking three of the flowers. *Garidel, Plantes d'Aix. p.* 123. The seeds likewise have been known to produce similar effects. *Bresl. Samml.* 1723. *p.* 679. [o] Deer and oxen have fallen a sacrifice to this poison; and according to Stoerck two drams 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

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 abſterged 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[p] and France,[q] where it continues to be a favourite medicine: in England, however, the Colchicum has been leſs ſucceſsful,[r] and is very generally thought a leſs efficacious diuretic than the ſquill, which excells 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.

[p] As Zach, Krapf, Plenck, Collin, Ehrmann, and others.

[q] We may here mention Marges, Planchon, Du Monceau, &c. &c.

[r] Vide *Med. Obſ. & Inq. vol. 3. præf.* See alſo *Monro's Eſſay on Dropſy, p.* 108.

RUMEX

RUMEX HYDROLAPATHUM. WATER DOCK.

SYNONYMA. Hydrolapathum. *Pharm. Edinb.* Lapathum aquaticum, folio cubitali. *Bauh. Pin. p.* 116. Hydrolapathum magnum. *Gerard Emac. p.* 389. Hydrolapathum majus. *Park. Theat. p.* 1225. *Raii Hist. p.* 171. *Synop. p.* 140. §. 1. Lapathum foliis longè lanceolatis, paniculis densissimis. *Hall. Stirp. Helv. n.* 1588. R. Hydrolapathum. *Hudson. Flor. Ang. p.* 154. *Withering. Bot. Arr. p.* 374. *Relhan. Flor. Cant. p.* 149.

Class Hexandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 451.

Ess. Gen. Ch. *Cal.* 3-phyllus. *Petala* 3, conniventia. *Semen* unicum triquetrum.

Sp. Ch. R. floribus hermaphroditis: valvulis integris graniferis, foliis lanceolatis acutis. *Hudson, l. c.*

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 stamina are six, short, slender, and furnished with erect double antheræ: 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

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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 Pharmacopœia is referred to the R. aquaticus of Linnæus, which is supposed to be a different species from the Hydrolapathum of Mr. Hudson,[a] 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.[b]

The root, which is the part of this plant directed for medicinal use, has a strong austere 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[c] were formerly officinal 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 costiveness: the roots are strongly astringent, and have been much employed both externally and internally for the cure of scurvy;[d] especially when the gums are spongy, and frequent hæmorrhages supervene. It is also recommended in various other cutaneous defœdations, 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*

[a] *L. c.* [b] *L. c.*

[c] From λαπαζω, evacuo λαπτω, idem. Alston:

——— Si dura morabitur alvus,
Mitulus & viles pellent obstacula conchæ
Et Lapathi brevis herba. HORAT. SAT. 4. lib. 2. v. 27.

[d] Linnæus speaks highly of its use. Vide *Amœn. vol.* 4. *p.* 38. *Flor. Suec. p.* 118. And in *Lind's Treatise on the Scurvy*, *p.* 264.

of the ancients;[a] 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.

[a] *Diss. Hist. Med. de vera herba Britannica.* See *Dios. l.* 4. *c.* 2. *Plin. lib.* 25. *c.* 3.
The powdered root is said by Murray to be an excellent dentrifice. *App. Med. vol.* 3. *p.* 344.

PIMPINELLA SAXIFRAGA. SMALL BURNET-SAXIFRAGE.

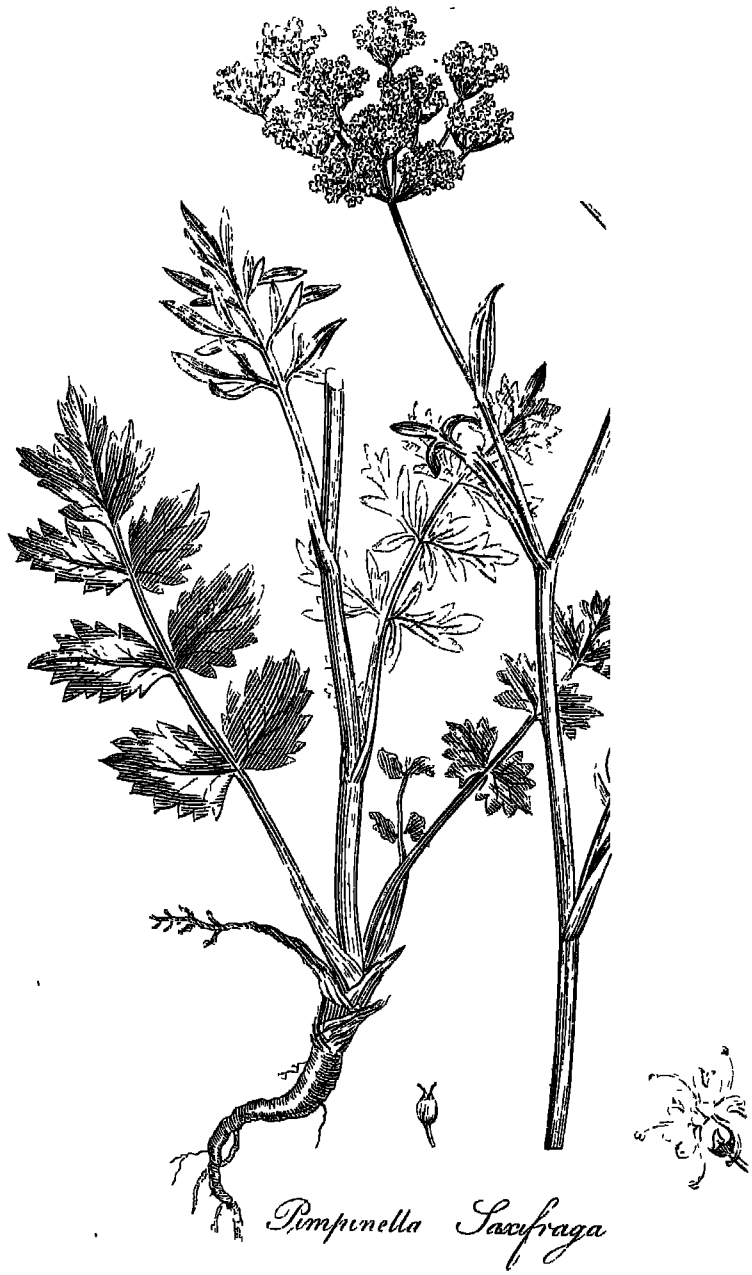
SYNONYMA. Pimpinella. *Pharm. Edinb.* Pimpinella saxifraga minor. *Bauh. Pin. p.* 160. Pimpinella seu saxifraga minor. *Gerard. Emac. p.* 1044. Saxifraga hircina minor. *Park. Theat. p.* 947. *Raii Hist. p.* 445. *Synop. p.* 213. Tragoselinum foliis pinnatis, pinnis ovatis. *Hall. Stirp. Helv. n.* 786. P. Saxifraga. *Hudson. Flor. Ang. p.* 127. *Lightfoot. Flor. Scot. p.* 169. *Withering. Bot. Arr. p.* 313. *Relhan. Flor. Cant. p.* 124. *Ic. Flor. Dan.* 395. *Flor. Dan.* 669.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 366.

Ess. Gen. Ch. *Fructus* ovato-oblongus. *Petala* inflexa. *Stigmata* subglobosa.

Sp. Ch. P. foliis pinnatis: foliolis radicalibus subrotundis; summis linearibus.

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

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linear laciniæ; toward the bottom the pinnæ 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 antheræ: 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 Pharmacopœia, 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.[a]

Bergius ſtates the virtues of this root to be reſolvent, diaphoretic, ſtomachic, and diuretic.[b] It is recommended by ſeveral writers[c] as a ſtomachic, and in all caſes where pituitous humours are thought to prevail, as aſthmas, dropſies, catarrhal coughs, hoarſeneſſes, and what has been called angina ſeroſa; and by Hoffmann[d] 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.

* *Murray, App. Med. vol. i. p.* 295.

† Hence chewing it is recommended to relieve the tooth-ach.

[a] *Lewis, Mat. Med. p.* 502.

[b] *M. M. p.* 230.

[c] Eſpecially German Phyſicians. [d] *Med. off. p.* 533.

Pimpinella

Pimpinella formerly entered the officinal pulvis ari, 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.

SYNONYMA. Aniſum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1035. *Park. Theat. p.* 911. *Raii Hiſt. p.* 450. Aniſum herbariis. *Bauh. Pin. p.* 159. Aniſum vulgare. *Clus. Hiſt. ii. p.* 202. Aniſum vulgatius minus annuum. *Hiſt. Ox. iii. p.* 297.

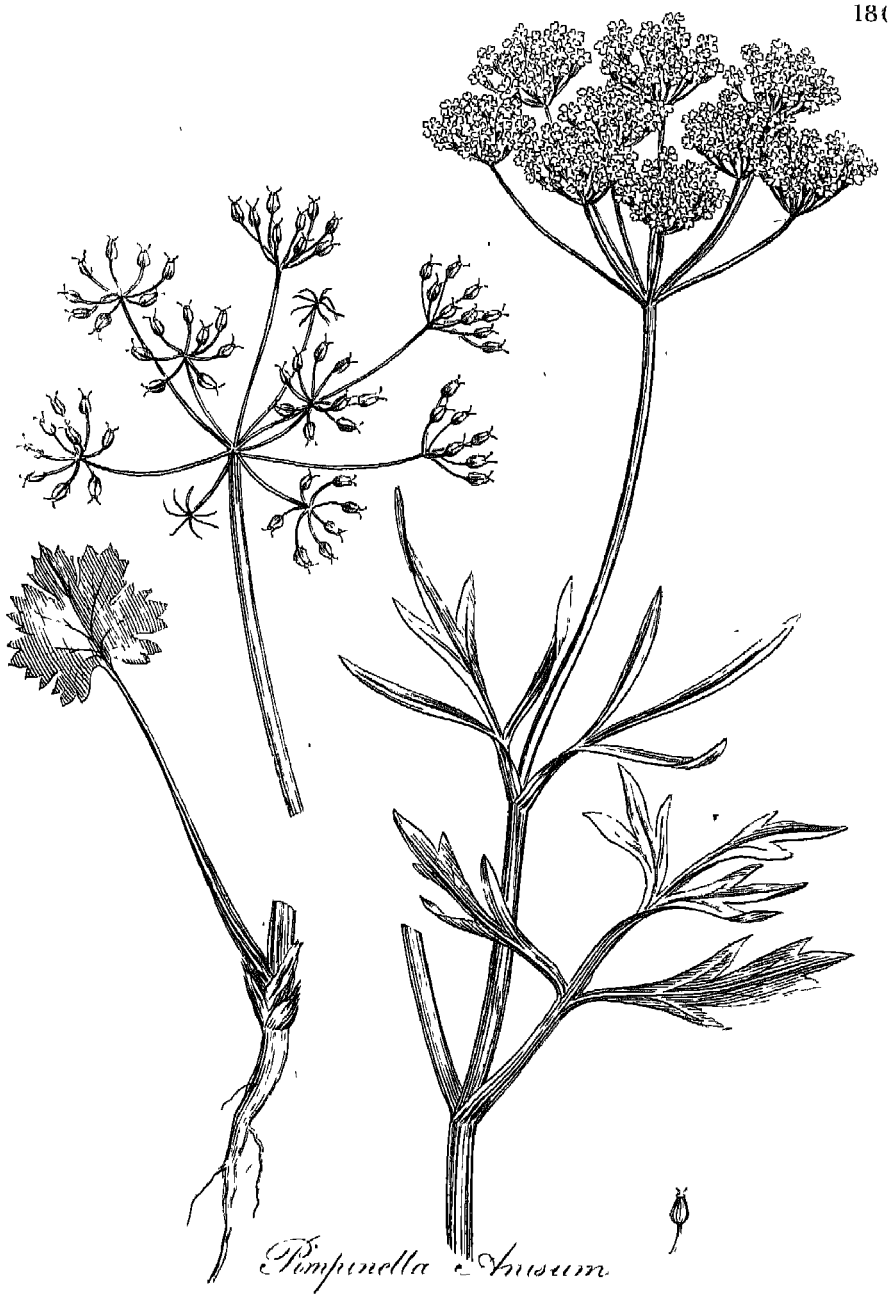
Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 366.

Eſſ. Gen. Ch. Fructus ovato-oblongus. *Petala* inflexa. *Stigmata* ſubgloboſa.

Sp. Ch. P. foliis radicalibus trifidis 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 pinnated 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,



Pimpinella Anisum.

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us, that " the Maltese and Alicant Anise is most esteemed, though not so green as the French;" and the Spanish Aniseeds are easily distinguished from those of France and Germany, by being much smaller.

Aniseeds have an aromatic smell, and a pleasant warm taste, accompanied 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 smell, 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 butyraceous white concrete. Its smell, which exactly resembles that of the Aniseeds, is extremely durable and diffusive; 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." [a]

The seeds of Anise, 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 pulmonary complaints, and to possess, like those of fennel, a power of promoting the secretion of milk. Their chief use however is in flatulencies, 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, diarrhœas, and loss of tone in the primæ viæ, are likewise complaints in which Aniseeds

[a] *Lewis, M. M. p.* 62.

are ſuppoſed to be peculiarly uſeful; and hence by V. Helmont they were called *Solamen inteſtinorum.*

The eſſential oil,* which is the only officinal preparation of Aniſeeds now directed by the Pharmacopœias, is uſually grateful to the ſtomach, and may be taken in the doſe of twenty drops. In diſeaſes of the breaſt, the oil is preferred, but in flatulencies and colics the ſeeds in ſubſtance are ſaid to be more effectual.[c]

* It is aſſerted, that this oil proves a poiſon to pigeons, Oleum Aniſi præſentaneum eſt venenum columbis, ſi paucæ guttulæ ipſarum roſtro inſtillentur & capiti infricentur, ut obſervavit RUD. A. VOGEL. (Hiſt. Mat. Med. 161) & confirmavit P. (Stralſund. Mag. p. i. p. 56.) Vide *Bergius, M. M. p.* 232.

[c] *Lewis. l. c.*

CORIANDRUM SATIVUM. COMMON CORIANDER.

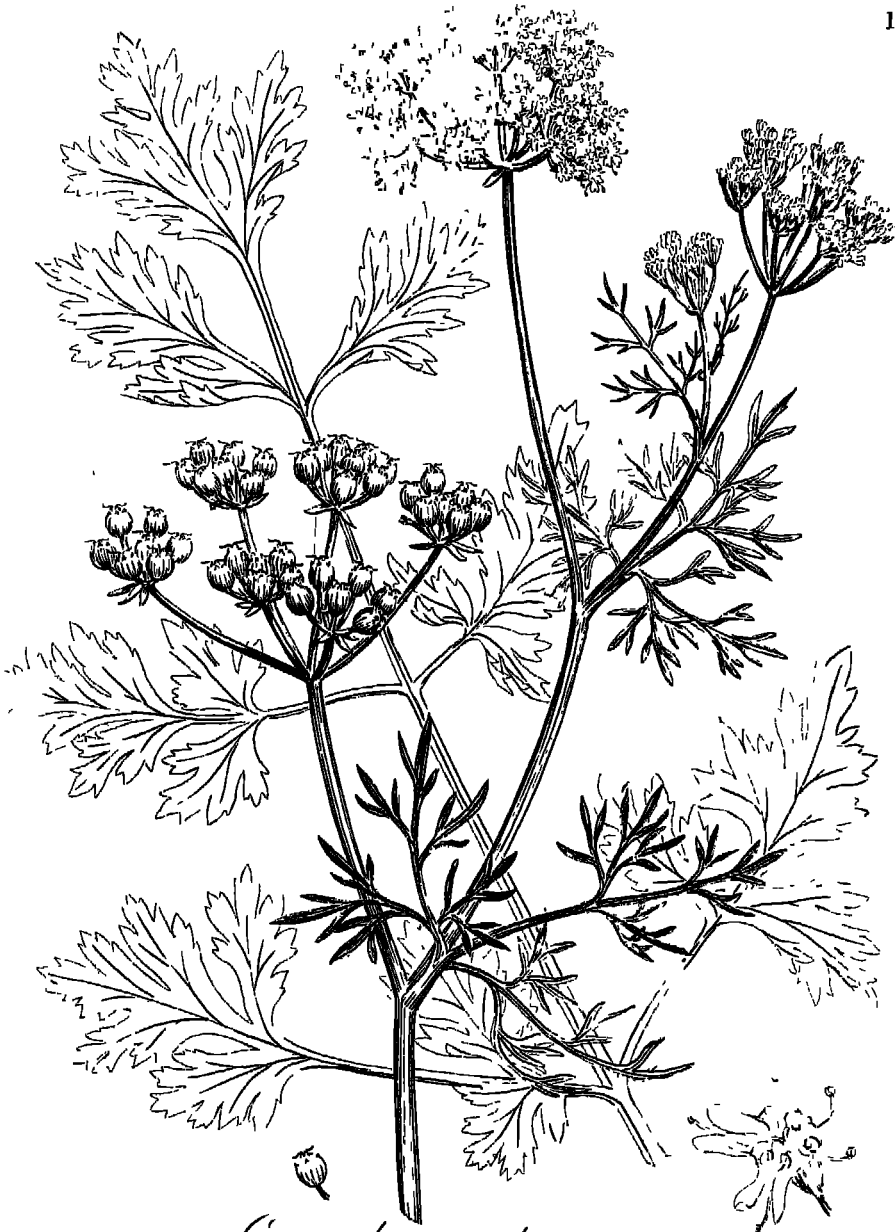
SYNONYMA. Coriandrum. *Pharm. Lond. & Edinb. J. Bauh. vol. iii. p.* 89. *Gerard. Emac. p.* 1012. *Raii Hiſt. p.* 470. *Synoſ. p.* 221. *Hall. Stirp. Helv. n.* 764. Coriandrum majus. *Bauh. Pin. p.* 158. Coriandrum vulgare. *Park. Theat. p.* 918. C. ſativum. *Hudſon. Flor. Ang. p.* 123. *Withering. Bot. Arr. p.* 302. *Sowerby's Engliſh Botany, p.* 67. Κορίον vel Κορίαννον *Dioſcorid.* Κορυαγον. *Theophr.*

Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 356.

Eſſ. Gen. Ch. *Cor.* radiata: *Petala* inflexo-emarginata. *Involucr. univerſale* 1-phyllum: *Partialia* dimidiata. *Fructus* ſphæricus.

Sp. Ch. C. Fructibus globoſis.

THE root is annual: the ſtalk is erect, branched, round, ſmooth, of a glaucous tinge, and riſes about two feet in height: the leaves are variouſly pinnated; thoſe of the upper part of the ſtalk are divided into narrow linear alternate pointed ſegments; thoſe at the bottom are cut into irregular ſerrated lobes, reſembling the leaves of common



Coriandrum sativum

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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 leafit: 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 antheræ: 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.[a] From being cultivated here as a medicinal plant, it has for ſome time become naturalized to to this country,[b] 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 diſtillation with water, they yield a ſmall quantity of a yellowiſh eſſential oil, which ſmells ſtrongly and pretty agreeably of the Coriander."[c]

Dioſcorides[d] aſſerts, 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;[e] but theſe quali-

[a] See Murray, *App. Med. vol. i. p.* 278. [b] See *Engliſh Botany, p.* 67.

* "Coriander was probably ſo called from κορις cimex, becauſe the green herb, ſeed and all, ſtinks intolerably of bugs." Alton. *Lect. on the M. M. vol. ii. p.* 349.

[c] *Lewis, M. M. p.* 253.

[d] "Si largius ſumptum fuerit ſemen, mentem, non ſine periculo, e ſua ſede & ſtatu demovet." And again, "Coriandrum propter odorem latere non poteſt: epotum vocis raucitatem facit, atque insaniam, qualis ex vinolentia proficiſcitur, ita ut qui ſumpſere varia dictu pudenda blatterant: toto vero corpore coriandri odor ſe prodit." *L.* 3. *c.* 71.

[e] Vide *C. Hoffmann. Med. Off. p.* 241.

ties

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." [f]

Theſe 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 ſennæ tartariſatum, and ſome other compoſitions of the Pharmacopœias; and according to Dr. Cullen, the principal uſe of theſe ſeeds is, "that, infuſed along with ſenna, 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 ſenna is very ready to produce." [g]

[f] *Withering, l. c.* [g] *Mat. Med. vol. ii. p.* 158.

SIUM NODIFLORUM. CREEPING WATER PARSNEP.

SYNONYMA. Sium. *Pharm. Lond.* Sium aquaticum procumbens, ad alas floridum. *Moris. Hiſt. iii. p.* 283. *ſ.* 9. *t.* 5. *f.* 3. *Petiv. t.* 26. *f.* 3. Sium umbellatum repens. *Gerard. Emac. p.* 256. *Raii Synop. p.* 211. *Hiſt.* 444. Sium foliis radicalibus ovatis, pinnatis, dentatis; caulinis appendiculatis; umbellis alaribus. *Hall. Stirp. Helv. n.* 778. S. nodiflorum. *Hudſon. Flor. Ang. p.* 119. *Withering. Bot. Arr. p.* 292. *Lightfoot. Flor. Scot. p.* 161. *Relhan. Flor. Cantab. p.* 116.

Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 348.

Eſſ. Gen. Ch. *Fructus* ſubovatus, ſtriatus. *Involucrum* polyphyllum, *Petala* cordata.

Sp. Ch. S. foliis pinnatis, umbellis axillaribus ſeſſilibus.

THE

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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 pinnated, conſiſting of three or four pairs of pinnæ, terminated by an odd one; the pinnæ or ſegments are ovate, pointed, ſerrated, 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 involucrum, but the partial one conſiſts of five, ſix, or ſeven ovate pointed leafits: 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 antheræ: the germen is ſmall, placed beneath the corolla, and ſupports two ſlender reflexed ſtyles, terminated by blunt ſtigmata: 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 Pharmacopœias 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 Beirie[b] and Ray.[c] 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 diſeaſe, 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]

[a] See *l. c.*

[b] *Dict. de la Mat. Med.* [c] *Synop. p.* 213.

CITRUS AURANTIUM. ORANGE-TREE.

SYNONYMA. Aurantium * hiſpalenſe. *Pharm. Lond. & Edinb.* Malus Arantia major. *Bauh. Pin. p.* 436. Malus Aurantia. *Gerard. Emac. p.* 1463. *Raii Hiſt. p.* 1658. Aurantium vulgare. *Ferrar. Heſp. p.* 377. *t.* 369. Malus Aurantia vulgaris. *Park. Theat. p.* 1508. *Ic. Miller Illuſt. & Regnault Botanique*, L'Oranger.

α Malus Arantia major. *Bauh. l. c.* SEVILLE ORANGE-TREE.
β Malus Arantia, cortice dulci eduli. *Bauh. l. c.* CHINA ORANGE-TREE.

Claſs Polyadelphia. *Ord.* Icoſandria. *Lin. Gen. Plant.* 901.

Eſſ. Gen. Ch. Cal. 5-fidus. *Petala* 5, oblonga. *Antheræ* 20, filamentis connatis in varia corpora. *Bacca* 9-locularis.

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 antheræ, 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,[a] 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 aureo colore corticis fructus; by others, Arantium, ab oppido Achaiæ. See *C B. l. c.* Alſo *Ray l. c.*

[a] *Hort. Kew. vol. iii. p.* 101.

brought

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brought to us is chiefly the produce of Spain and Portugal. Since the time of Parkinson,[b] 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 Pharmacopœias, 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 scurvy.[c] 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 acrid quality of it. On the other hand, however, if the acids are in greater quantity than can be, or are, properly corrected

[b] 1629, see *Park. Parad. p.* 584. [c] See *Lind on Scurvy, p.* 163.

The practice of evaporating this juice, or making it into what has been called a rob, 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 exhale it to such a consistence as would preserve it without addition, without my finding the acid a good deal changed. It acquires an acerbity and stipticity 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 Forster's observations in the voyage round the world, it was not found useful either in preventing or curing the scurvy; which perhaps may be accounted for, partly by the concentration bringing it nearer to the state of the fossile acids, or possibly by the dissipation of some volatile parts, perhaps a portion of aerial acid; both of which circumstances may render it less fit for the cure of scurvy. I have therefore a bad opinion of the acid exhaled to a thick consistence; and judge the best way of preserving its virtues to be by a diligent depuration 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 acted upon by the acid, and gives a disagreeable taint to it." *Mat. 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 diarrhœa, and the colic pains that are ready to accompany the operation of every purgative." [d]

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.[e] He adds, that he has "made several observations, which justify the opinion that Orange peel may be particularly useful in restoring the tone of the stomach when it has been much impaired; but this does not appear 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." [f]

It has been justly remarked,[g] 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.[h] It has likewise been experienced to be a powerful

[d] *L. c.* [e] *Cullen. M. M. vol. ii. p.* 87. [f] *L. c.* [g] See *Edinburgh New Dispensatory by Dr. Duncan. p.* 139.

[h] As Dubeus. *Medecin des pauvres. p.* 285. *sqq.* Both he and Nigrisolius declare it to be equal, if not superior in efficacy, to the Peruvian bark. See also Mohrungius *Com. Noric.* 1736. *p.* 20. And Werlhof. *Com. Nor.* 1735. *p.* 98. *Murray. App. Med. vol. iii. p.* 289.

remedy

remedy in menorrhagia, and in immoderate uterine evacuations; and for its good effects in these complaints, we have not only the assertions of foreign physicians, but also those of Doctors Whytt[i] and Hamilton.[k]

The flowers, which are extremely fragrant, and much used in perfumes, have a warm taste, accompanied with some degree of bitterness. "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 essentia neroli."[l]

The leaves of the Orange-tree have a bitterish taste, and, on being rubbed between the fingers and thumb, manifest considerable fragrancy; like the petals they are also beset with minute glands, which secrete an essential oil, and are easily discovered on holding the leaf betwixt the eye and the light. Both the leaves and the flowers,[m] 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,[n] 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.[o]

Their employment, however, in this country has been attended with less success; proofs of which are given by Professors Home[p] and Cullen.[q] The dose of the powdered leaves is from half a dram to a dram, two or three times a day, and proportionably in decoction.

The young unripe fruit formerly had a place in the Edinburgh Pharmacopœia, under the name of Aurantia curaflavensia, 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.

[i] See his *Works*, *p.* 662. [k] *De prax. reg. p.* 20. [l] *Edinb. New Disp. p.* 139. Also called oleum distillatum florum naphæ. [m] Bergius states the former to be tonic and the latter analeptic. *M. M. vol. ii. p.* 638. [n] *Rat. Med. T.* 6. *p.* 305. *sqq.*

[o] Locher, who gave this medicine to fifteen epileptic patients, says, that nine were evidently much relieved by it, though not cured. *Obs. Pract. p.* 47.—See the authorities cited by Murray. *l. c.* [p] *Clinical Experiments. p.* 211. [q] *L. c.*

CITRUS MEDICA. LEMON-TREE.

SYNONYMA. Limon. *Pharm. Lond. & Edinb.* Malus medica. *Bauh. Pin. p.* 435. *Gerard. Emac. p.* 1462. Malum citreum vulgare. *Ferrar. Hesp. p.* 56. *t.* 69. Malus citria sive medica. *Raii Hist. p.* 1654. *Park. Theat. p.* 1506. Le Citronier. *Regnault. Botanique.* Μηλεα μηδικη *Theophrast. & Dioscor.* β Malus Limonia acida. *Bauh. Pin. p.* 436. Lime-Tree.

Class Polyadelphia. *Ord.* Icosandria. *Lin. Gen. Plant.* 901.

Ess. Gen. Ch. Cal. 5-fidus. *Petala* 5, oblonga. *Antheræ* 20, filamentis connatis in varia corpora. *Bacca* 9-locularis.

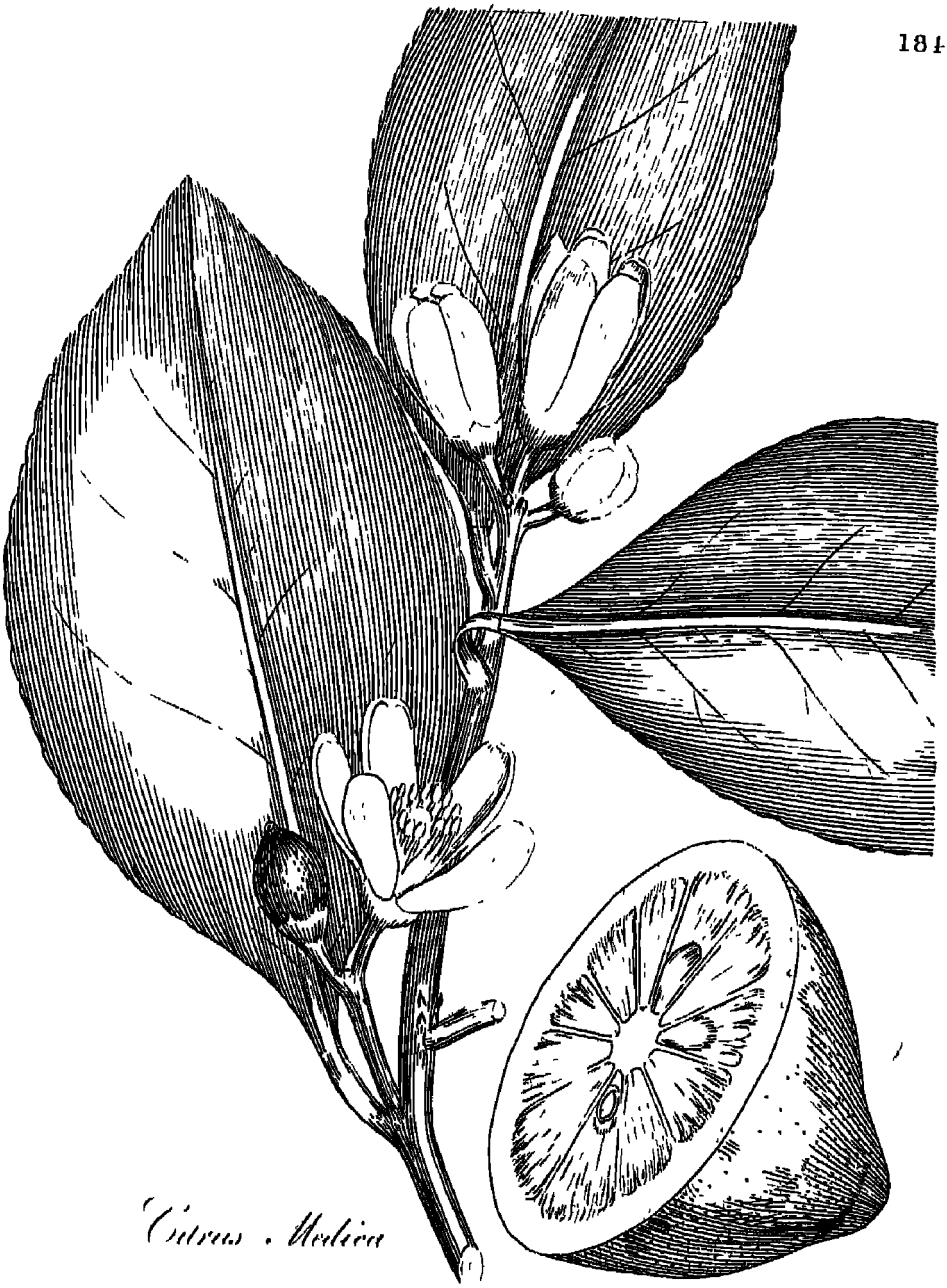
Sp. Ch. C. petiolis linearibus.

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.[a] 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;[b] nor is its cultivation noticed by Varro, Cato, or Columella.

[a] Etenim Citrus apud Medos et Persas imprimis frequens, dein Paladii diligentia in Italiam translata fuit: postea in Hispania in usum devenit, ut nemora & campos occuparit. *Bauh. Pin. p.* 435. [b] See *Hist. Nat. l.* 12. *c.* 3.

After



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After its introduction into Europe, we find Spain, Portugal, and France, became successively possessed of this valuable plant, with its congeners; 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.[c]

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 antiscorbutic, Lemon juice is also very generally taken on board ships, destined 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;[d] 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

[c] See *Hort. Oxon. ed.* 1.

[d] 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. *sqq.*

[e] *Forster's Voyage, p.* 638.

remaining

remaining juice, we are informed, has been concentrated to eight times its original ſtrength, and kept without ſuffering any material change for ſeveral years.[f] The ice firſt formed is wholly void of acidity, but the ſubſequent congelations 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;[g] 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.[h]

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 Pharmacopœias 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 amoniæ compoſitus, and other formulæ.

[f] See *Georgii, l. c.*

Lemon juice alſo may be evaporated by the heat of the ſun, till it forms a ſolid ſalt, 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.

[g] *On Nervous Diſorders.* See his Works, *p.* 649.

[h] Vide Saunders *Elements of the Practice of Phyſic*, *p.* 170.

PAPAVER SOMNIFERUM.


Papaver somniferum
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PAPAVER SOMNIFERUM. WHITE POPPY.

OPIUM Pharmacopœiarum plantæ capſularum ſuccus denſatus.

SYNONYMA. Papaver album. *Pharm. Lond.* & *Edinb.* Papaver hortenſe ſemine albo, & β Papaver hortenſe nigro ſemine. *Bauh. Pin. p.* 170. *Raii Hiſt. p.* 853. *Synop. p.* 308. Papaver ſativum album. *Gerard. Emac. p.* 369. Papaver ſimplex album ſativum. *Park. Theat. p.* 366. Papaver. *Hall. Stirp. Helv. n.* 1065. P. ſomniferum. *Hudſon. Flor. Ang. p.* 231. *Withering. Bot. Arr. p.* 552. *Relhan. Flor. Cant. p.* 204. Μήκων *Græcis.*

Claſs Polyandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 648.

Eſſ. Gen. Ch. Cor. 4-petala. *Cal.* 2-phyllus. *Capſula* 1-locularis, ſub ſtigmate perſiſtente poris dehiſcens.

Sp. Ch. P. calycibus capſuliſque glabris, foliis amplexicaulibus 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 antheræ: 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

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;[a] 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 emulſion, in catarrhs, ſtranguaries, &c.

The heads or capſules of the Poppy, which are directed for uſe in the Pharmacopœias, like the ſtalks and leaves, have an unpleaſant ſmell, ſomewhat like that of opium, and an acrid bitteriſh taſte. Both the ſmell and taſte reſide 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 conſiſtence, 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;[b] and a ſimilar one is now received in the Edinburgh Pharmacopœia. 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

[a] Hermann, *Cynoſur. Mat. Med. p.* 436. Junker, *Conſpec. Ther. Gen. p.* 279.
[b] *Medical Eſſays & Obſ. by a Society at Edinb. vol.* 5. *p.* 108.

in

in which it is collected has been described long ago by Kæmpfer 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 superficies, it is then divided into quadrangular areas of " seven feet long, and five feet in breadth, leaving two feet of inter- " val, which is raised five or six inches, and excavated into an aque- " duct 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 strews all over " the areas a nutrient compost of ashes, human excrements, cow " dung, and a large portion of nitrous earth, scraped from the high- " ways and old mud walls. When the plants are nigh flowering, " they are watered profusely 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 " spissitude. It is then formed into cakes of a globular shape, and " about four pounds in weight, and laid into little earthen basins to

‖ Kaempfer says, that in Persia, a five-pointed knife is used for making the incisions. *Amœn. Exot. Obs.* 15.

" be

"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 extract of "the Poppy plant procured by boiling, and various other substances, "which they keep in secresy." —— "Opium is here a considerable "branch of commerce. There are about 600,000 pounds of it "annually exported from the Ganges." [c]

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, phœnomena, are all the same; only, if carefully collected, it is more pure and more free of feculencies." [d]

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 prepared 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.[e]

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 indissoluble impurities.[f]

The use of this celebrated medicine, though not known to Hippocrates, can be clearly traced back to Diagoras, who was nearly his cotemporary, and its importance has ever since been gradually advanced

[c] See *Medical Observations and Inquiries, vol.* 5. *p.* 317.

[d] *Medical Essays & Obs. vol.* 5. *p.* 116.

[e] Hence the ancients justly deemed the "Meconium multum opio ignavius."

[f] Vide *l. c.*

by

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.[s] 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 œconomy, by which any noxious influence is reſiſted by a conſequent re-action 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 uſed 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 ſpaſmodic affections, opium is a ſovereign remedy, and may be employed

[s] See Cullen's *Mat. Med.* C. ſedantia. See alſo what is ſaid of opium.

in large doſes every eight hours, unleſs a remiſſion of the ſymptoms and ſleep take place.[h]

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;[i] 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.[k]

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:"[l] this however has been much diſputed;[m] 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 conſtriction of the ducts, I have "employed opium for taking off this with great advantage. Similar

[h] Vide Cullen *l. c.*

[i] Berryat, who is a ſtrenuous advocate for the uſe of opium in intermittents, recommends it to be given along with an infuſion of centaury an hour before the acceſſion of the paroxyſm. See *Memoires preſentés à L'Acad. Royal des Scien.* 1755. *T.* 2. *p.* 254.

Lind prefers giving it half an hour after the commencement of the hot fit. Vide *Diſ. in hot climates*, *p.* 316. See alſo Murray's *Med. Pract. Bib. vol. p.* 321. On this ſubject ſee Brandreth, *Diſſ. inaug. de febr. interm. Ed.* 1770. Stoerck, *Ann. Med.* 1. *p.* 77. Tralles, *De Opio Sect.* 2. *p.* 70. And others.

[k] Cullen *l. c.* [l] *Treatiſe on Opium*, *ſect.* 39.

[m] See Remmet *Diſſ. inaug. de opii uſu in morb. inflam. Ed.* 1774. Triller, *Diſſ. de ſuſpecta opii ope in pluritide*, *p.* 4. Alſo Tralles *l. c.* De Haen *Rat. Med. P. i. p* 24. &c.

"circumſtances

" circumſtances have frequently occurred in the caſe of urinary " calculi paſſing 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 pro- " bably 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 aggra- " vating 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 mode- " rated 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." [a]

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

[a] Cullen *l. c.*

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 tartariſati, taking care always to keep the body ſufficiently open by the frequent uſe of a proper cathartic.

In hæmorrhagic diſorders the uſe of opium is inferred from its known effects in reſtraining all the excretions, except that of ſweat; but unleſs the hæmorrhages 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 diarrhœa, 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.[a] Even in ileus and in incarcerated hernia, it is often found to allay the vomiting, the ſpaſms, 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 aſſiſt 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 ſpaſmodic and convulſive ſymptoms occuring in ſeveral diſeaſes, which it would exceed our limits to deſcribe partially; of theſe we may mention aſthma, epilepſy, dyſpepſia, hypochondriaſis, rabies canina, chorea ſancti viti, mania, &c. &c.

[a] See Mead, *Mon. et præcepta medica*, *p.* 64. Pringle, *Diſ. of the Army*. *p.* 152. Haen *Rat. Med. P.* 3. *p.* 94. *P.* 9. *p.* 137.

Reſpecting

Respecting the external application of opium authors seem not sufficiently agreed. Some alledge that when applied to the skin it allays 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 officinal preparations of this drug are opium purificatum, pilulæ ex opio, pulvis opiatus, tinctura opii, and tinctura opii camphorata; it also enters the pulvis sudorificus, balsamum anodynum, electuarium japonicum, pulvis e creta composita, &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, sound 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 *Garcias Ab Horto Arom. vers. Clus.*

PAPAVER RHŒAS. RED or CORN POPPY.

SYNONYMA. Papaver erraticum. *Pharm. Lond.* Papaver erraticum majus. *Bauh. Pin. p.* 171. Papaver erraticum Rhœas, ſive ſylveſtre. *Park. Theat. p.* 367. Papaver laciniato folio, capitulo breviore glabro, annuum, Rhœas dictum. *Raii. Synop. p.* 308. Ποιας *Theoph. Dioſc.* Papaver foliis ſemipinnatis hiſpidis fructu ovato glabro. *Hall. Hiſt. Stirp. Helv. n.* 1064. P. Rhœas. *Gerard. Emac. p.* 371. *Hudſon. Flor. Ang. p.* 230. *Withering. Bot. Arr. p.* 551. *Relhan. Flor. Cantab. p.* 203. *Curtis, Flor. Lond. iii. n.* 36.

Claſs Polyandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 648.

Eſſ. Gen. Ch. *Cor.* 4-petala. *Cal.* 2-phyllus. *Caps.* 1-locularis, ſub ſtigmate perſiſtente poris dehiſcens.

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 antheræ: the germen is eggſhaped, 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

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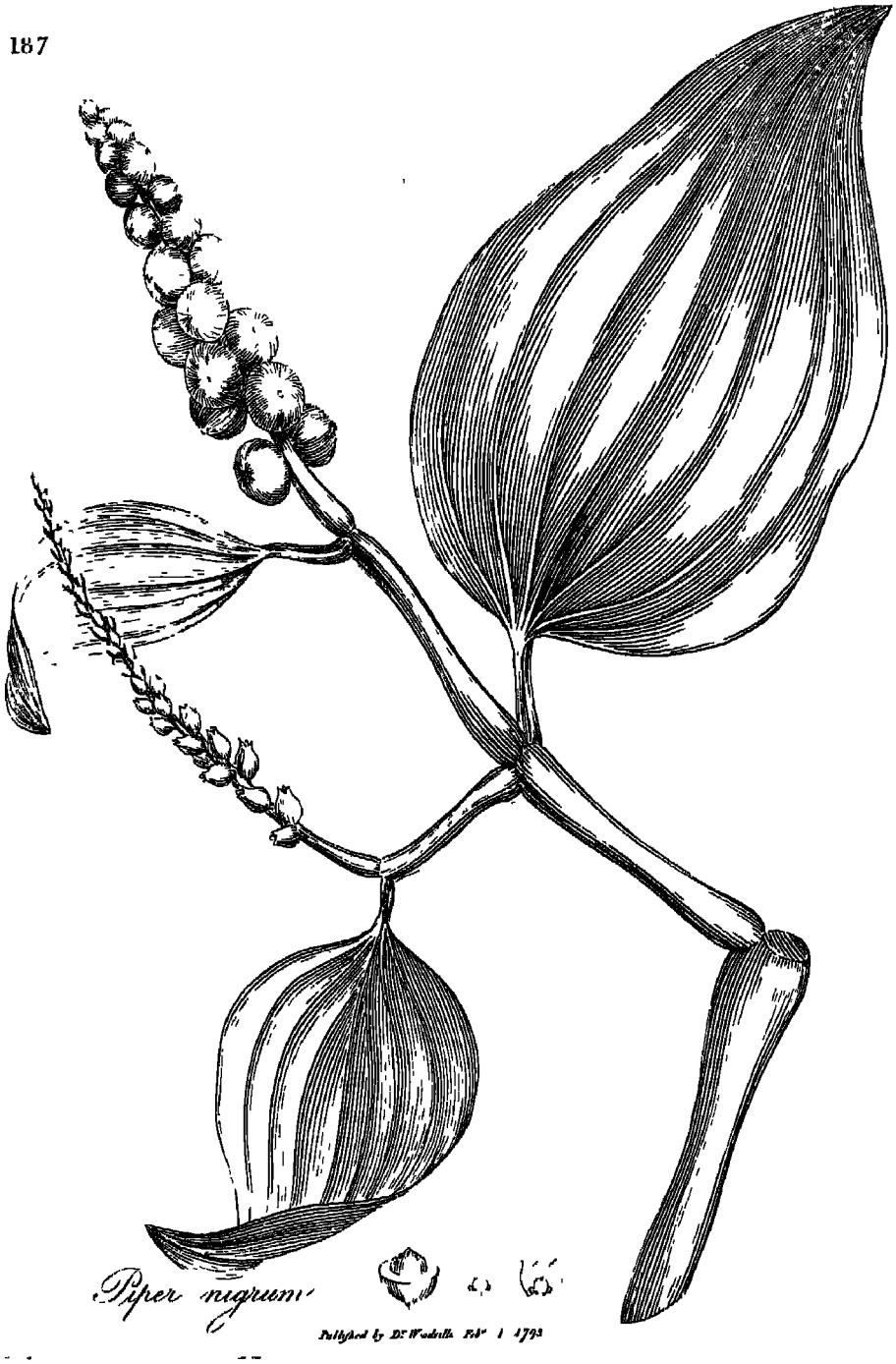
Piper nigrum
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This plant is common in corn fields, and flowers in June and July. It may be diſtinguiſhed from *P. dubium*, to which it bears a general reſemblance, by its urn-ſhaped capſules, and by the hairs upon the peduncles ſtanding in a horizontal direction.

The capſules of this ſpecies, like thoſe of *ſomniferum*, 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.[a]

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 Pharmacopœia, 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.

[a] *Boulduc Hiſt. de L'Acad. Royal des Scien. de Paris*, 1712. *p.* 52. *Chomel. Pl. uſuell. T. i. p.* 125. Fouquet of Montpellier prefers this extract to opium. See Murray, *App. Med. vol. ii. p.* 213.

PIPER NIGRUM. BLACK PEPPER.

SYNONYMA. Piper nigrum. *Pharm. Lond. & Edinb. Gerard Emac. p.* 1538. *Park. Theat. p.* 1603. Piper rotundum nigrum. *Bauh. Pin. p.* 411. *Raii Hiſt. p.* 1341. *Plukenet. Almag. p.* 297. *t.* 437. *fig.* 1. Piper nigrum. *Camel. Phil. Tranſ. vol.* 24. *p.* 1773. Molago codi. *Hort. Malab. vol.* 7. *p.* 23. *tab.* 12. Pepper Plant. *Marſden's Hiſtory of Sumatra, p.* 105. *Ic. Miller's Illuſtr.*

Claſs Diandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 43.

Eſſ. Gen. Ch. Cal. o. *Cor.* o. *Bacca* monoſperma.

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, ſcandent, 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 antheræ 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 eſtabliſhed.

According to Mr. Marſden,[a] 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 chinkareens, 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 looſened 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 plentifully 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

[a] See *l. c. p.* 107.

or

or leſs ſhrivelled, according to their degree of maturity. Theſe are imported here under the name of *black pepper*.

White pepper [b] 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 ſpices the black ſort 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.[c] 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, inſpiſſated, 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 aſſerts, that on taking it in large quantities he never found it to warm his ſtomach, nor to increaſe the frequency of his pulſe.[d] 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.[e]

Black Pepper is generally uſed as an aromatic and ſtimulant. It has been ſucceſsfully employed in ſome caſes of vertigo,[f] and in paralytic and arthritic diſorders.[g] Given in large doſes it has been found a remedy for intermittents; but its uſe in theſe has, in ſome inſtances, produced fatal conſequences.[h]

[b] White Pepper was formerly thought to be a different ſpecies from the black, and was ſold at the ſales of the Eaſt India Company (who have the monopoly of the Sumatran pepper trade) for treble the price of the black. *Marſden, l. c.*

[c] Gaubius found that the Pepper required to be boiled forty-three times in freſh quantities of water before its whole pungency was extracted. *Adverſar. p.* 52.

[d] *L. c. p.* 73. [e] *Mat. Med. vol.* 2. *p.* 208. [f] *Hoffmann. Rem. domeſt.* §. 26. and others. [g] *Obſ. phyſ. & lit. vol.* 3. *p.* 449. [h] See *Act. Soc. Med. Hav. vol.* 1. *p.* 386.

PIPER LONGUM. LONG PEPPER.

SYNONYMA. Piper longum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1539. *Park. Theat. p.* 1604. *Raii. Hist. p.* 1343. *Rumph. Amb. vol.* 5. *p.* 333. *t.* 116. *f.* 2. *Pis. Mant. Aromat. p.* 182. *Clus. Exot. p.* 20. 183. Piper longum orientale. *Bauh. Pin. p.* 412. Piper longum pistolochiæ foliis absque pediculis, maderaspatanum. *Pluk. Alm. p.* 297. *t.* 104. *f.* 4. Cattu-tripali. *Rheed. Hort. Mal. V.* 7. *p.* 27. *t.* 14.

Class Diandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 43.

Ess. Gen. Ch. Cal. o. *Cor.* o. *Bacca* monosperma.

Sp. Ch. P. foliis cordatis petiolatis sessilibusque.

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, nerved, 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 to the taste 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.[a]

It is observed by Dr. Cullen, that Long pepper has precisely the same qualities with those of black, only in a weaker degree:* Bergius 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 aliorumque quorundam sensum, in lingua acrius et calidius adhuc est Piper longum reliquis dictis speciebus."[b]

[a] *Rumph. l. c.* * *Mat. Med. vol. ii. p.* 209. [b] *App. Med. vol.* 5. *p.* 36.

BRYONIA

Piper longum

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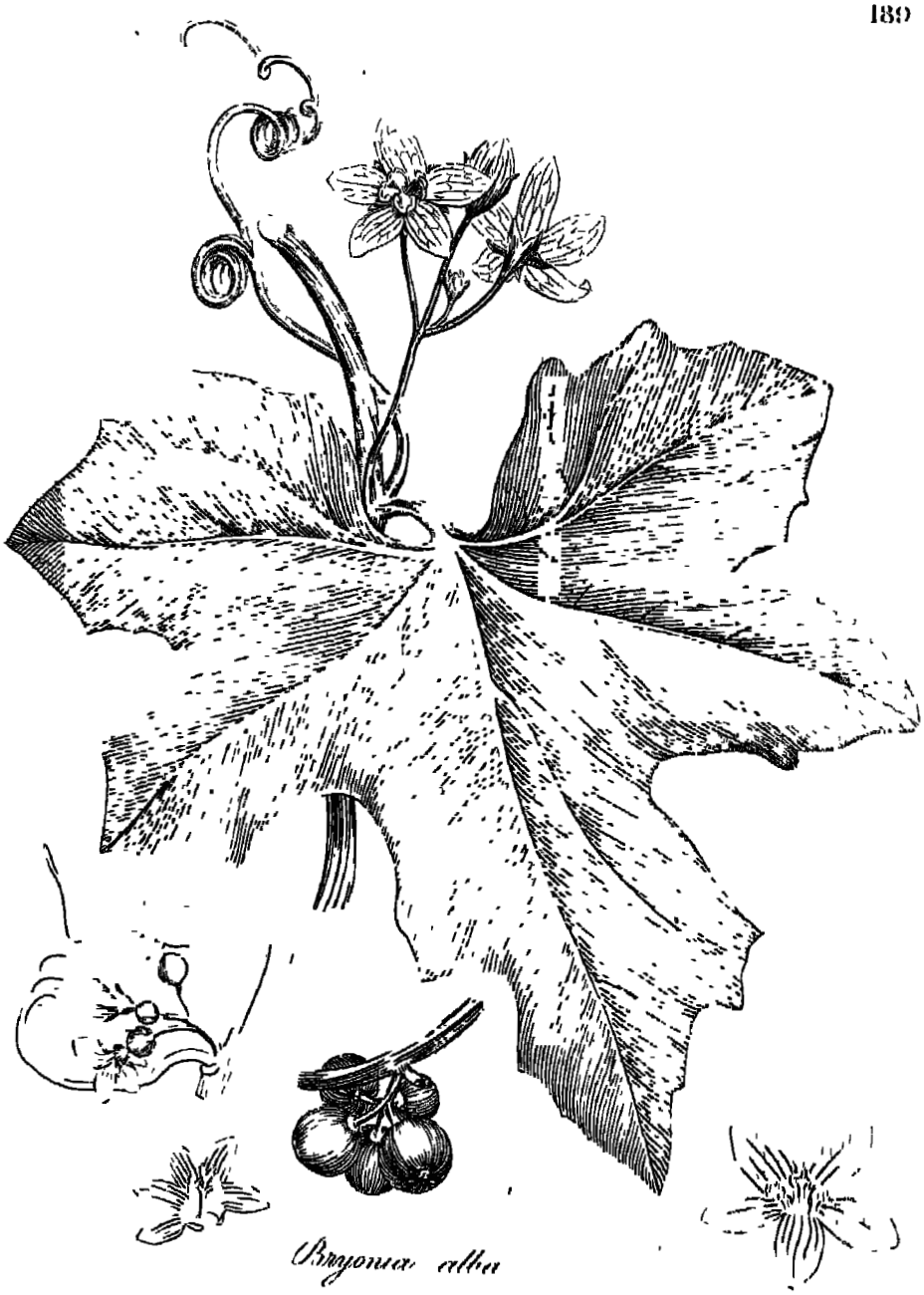

Bryonia alba

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BRYONIA ALBA. WHITE BRYONY.

SYNONYMA. Bryonia. *Pharm. Edinb.* Bryonia aſpera ſive alba, baccis rubris. *Bauh. Pin. p.* 297. Bryonia alba vulgaris. *Park. Theat. p.* 178. Bryonia alba. *Gerard. Emac. p.* 869. *Raii. Hiſt. p.* 659. *Synop. p.* 261. *Hall. Hiſt. Stirp. Helv.* 574. *Hudſon. Flor. Ang. p.* 437. *Relhan. Flor. Cantab. p.* 375. *Lightfoot. Flor. Scot.* Bryonia *dioica. Withering. Bot. Arr. p.* 1133. *Ic. Flor. Dan. t.* 813. *Jacq. Flor. Auſt. t.* 199. *Miller. t.* 70.

Claſs Dioecia. *Ord.* Syngeneſia. *Lin. Gen. Plant.* 1093.

Eſſ. Gen. Ch. *Masc. Cal.* 5-dentatus. *Cor.* 5-partita. *Filamenta* 3.
Fem. Cal. 5-dentatus. *Cor.* 5-partita. *Stylus* 3-fidus.
Bacca ſubgloboſa, polyſperma.

Sp. Ch. B. foliis palmatis utrinque calloſo-ſcabris.

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 flowers 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.

Linnæus

Linnæus places this plant in the clafs Monoecia, though he tells us that Jacquin defcribes it as dioecious, and we have always feen it fo in this country; nor have we ever found it to bear black berries. Some doubt may alfo arife whether it be properly referred to the order Syngenefia, as the antheræ upon the different filaments do not unite; a circumftance which we have endeavoured to repref ent in a feparate difplay of the flower.

"Frefh Bryony root, taken up in the beginning of fpring, abounds with a thin milky juice: if the upper part of the root be bared of earth, and the top cut over tranfverfely, the juice continues to rife gradually to the furface, in notable quantity, for two or three days fucceffively, and may be collected by forming a cavity in the middle to receive it. Both the root in fubftance, and the juice, have a difagreeable fmell, and a naufeous bitter biting tafte: applied for fome time to the fkin, they inflame or even veficate the part. On drying the one, or infpiffating the other, they lofe moft of their acrimony, and nearly the whole of their ill fcent. In fummer, the root proves much lefs juicy and weaker both in fmell and tafte."[a]

Bergius[b] ftates the virtues of this root to be purgans, hydragoga, emmenagoga, diuretica; *recent. rad.* fubemetica; and recommends it in dropfy and afthma.

This powerful and irritating cathartic, though now feldom prefcribed by phyficians, is faid to be of great efficacy in evacuating ferous humours, and has been chiefly employed in hydropical diforders.[c] Inftances of its good effects in other chronic difeafes are alfo mentioned, as afthma, mania,[d] and epilepfy.[e] In fmall dofes it is reported to operate as a diuretic, and to be refolvent and deobftruent: given in powder, from a fcruple to a dram, it proves ftrongly purgative; and the juice, which iffues fpontaneoufly in dofes of a fpoonful or more, has fimilar effects, but is more gentle in its operation. An extract, prepared by water, acts more mildly, and with greater fafety, than the root in fubftance, and may be given from half a dram to a dram. Externally the frefh root has been employed in cataplafms, as a refolvent and difcutient; alfo in ifchiadic and other rheumatic affections.

[a] *Lewis, M. M. p.* 165. [b] *Mat. Med. p.* 786.

[c] See *Buregraf, Lexicon Med. p.* 1710. where he gives a particular account of a fucceffful method of employing this root. [d] *Sydenham, Proceff. integr. in op. p.* 606.

[e] *Arnoldus De Villa Nova. Brev. pract. L.* 1. *c.* 22. *Reuffner, Curat. & Obferv. p.* 158.

LIGUSTICUM LEVISTICUM.


Ligusticum Levisticum
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LIGUSTICUM LEVISTICUM. COMMON LOVAGE.

SYNONYMA. Levisticum. *Pharm. Edinb.* Ligusticum vulgare. *Bauh. Pin. p.* 157. Ligusticum vulgare, foliis apii. *J. Bauh. iii. p.* 122. Levisticum vulgare. *Gerard. Emac. p.* 1008. *Park. Theat. p.* 936. *Raii Hist. p.* 437. Angelica montana perennis, Paludapii folio. *Tourn. Inst. p.* 313.

Class Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 346.

Ess. Gen. Ch. Fructus oblongus, 5-sulcatus utrinque. *Corollæ* æquales. *Petalis* involutis, integris.

Sp. Ch. L. foliis multiplicibus: foliolis superne incisis.

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; pinnæ 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 involucra, 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 antheræ: the germen is truncated at the top, upon which are placed two nectarious corpuscles, supporting two short styles, crowned with simple stigmata: 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.

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 Foreſtus,[a] ſaid to be a ſecret remedy of extraordinary efficacy in ſlow or laborious parturition. The leaves, eaten as ſallad, are accounted emmenagogue.[b] The root, which is leſs ungrateful than the leaves, is ſaid to poſſeſs ſimilar virtues, and may be employed in powder.

[a] See Foreſt. lib. 28. obſ. 32. in ſchol. [b] Chomel. Uſuelles, t. 2. p. 216.

CUMINUM CYMINUM. CUMMIN.

SYNONYMA. Cuminum. *Pharm. Lond. & Edinb.* Cuminum ſemine longiore. *Bauh. Pin. p.* 146. Cuminum ſativum Dioſcoridis. *Gerard. Emac. p.* 1066. Cyminum, ſive Cuminum ſativum. *J. Bauh. iii. p.* 22. *Raii Hiſt. p.* 433. Cuminum vulgare. *Park. Theat. p.* 887. Cuminum. *Mor. Umb.* 4. *Hiſt. Oxon. iii. p.* 271. Fœniculum orientale, Cuminum dictum. *Tourn. Inſt.* 312. *Icon. Rivin. Pentap. t.* 40.

Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 351.

Eſſ. Gen. Ch. Fructus ovatus, ſtriatus. *Umbellulæ* 4. *Involucra* 4-fida.

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, graſs-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 conſiſt of four narrow pointed ſegments: all the florets are fertile: the corolla

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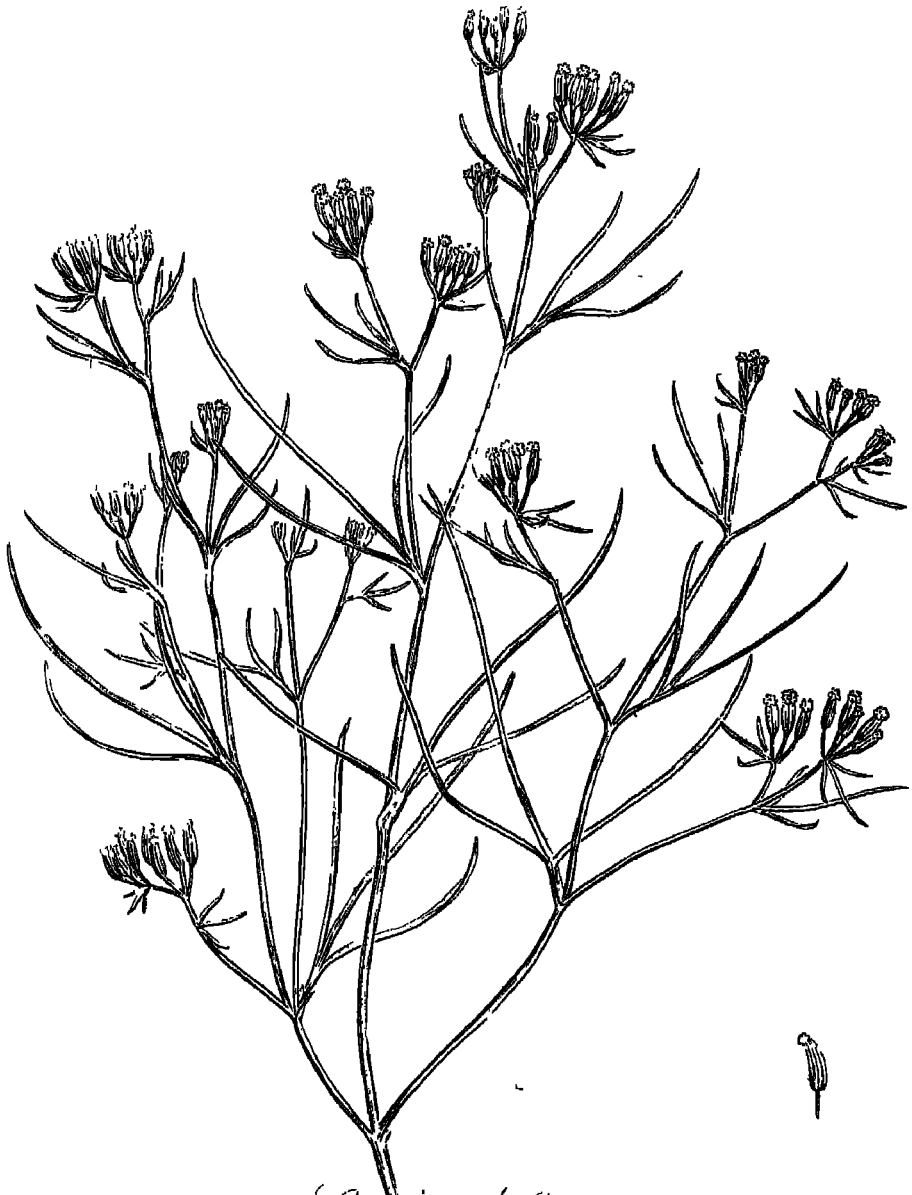

Cuminum Cyminum

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is composed of five petals, which are unequal, bent inwards, and notched at the apex: the filaments are five, and furnished with simple antheræ: the germen is large, ovate, and placed below the corolla: the two styles are minute, and terminated by simple stigmata: 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.[a]

"Cumin seeds have a bitterish warm taste, accompanied with an aromatic flavour, but not agreeable. They give out great part of their smell 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 cummin by infusion, and leaves them nearly uninjured in evaporation."[b]

Cummin has been thought to be the Κυμινον 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.[c] They are generally preferred to the other seeds for external use in discussing indolent tumours, and give name both to a plaster and cataplasm in the Pharmacopœias.

[a] It was cultivated in England in 1594 by Sir Hugh Plat. See *Plat's Garden of Eden. part. ii. p.* 134. *Hort. Kew.*

[b] *Lewis. Mat. Med. p.* 268. [c] *Cullen. M. M. vol. ii. p.* 159.

AMYRIS GILEADENSIS.

AMYRIS GILEADENSIS. BALSAM of GILEAD AMYRIS.

Balſamum Gileadenſe. *Pharm. Edinb.* Conf. *Bruce's Travels to diſcover the Source of the Nile. Appendix. p.* 16. *Belon. Obſervations de pluſieures ſingularitéz trouvées en Grece-Arabie, &c. Lib.* 2. *cap.* 39. *p.* 110. *Alpinus, in Lib. de plantis Ægypti, p.* 48. *fig. p.* 60. Forſkal Flor. Ægyptiaco-Arab. *p.* 79. *Bauh. Pin. p.* 400. *Gerard. Emac. p.* 1528. *Park. Theat. p.* 1528.

Claſs Octandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 473.

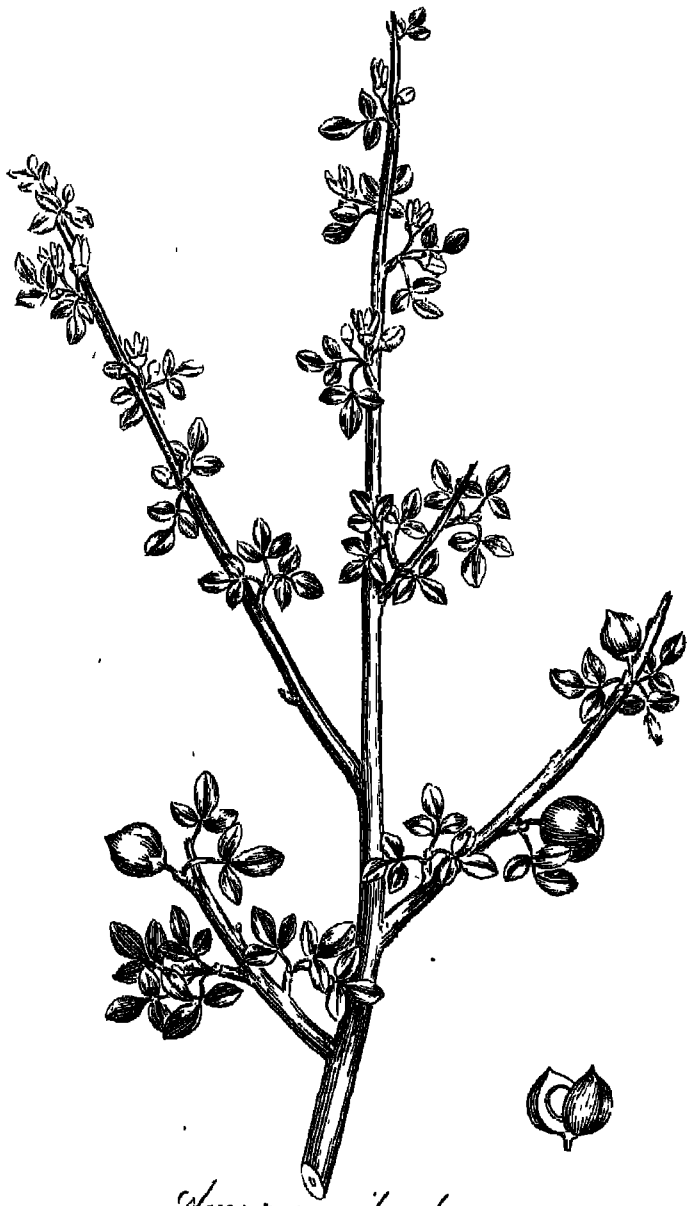
Eſſ. Gen. Ch. Cal. 4-dentatus. *Petala* 4. oblonga. *Stigma* tetragonum. *Bacca* drupacea.

Sp. Ch. A. foliis ternatis integerrimis, pedunculis unifloris lateralibus.

ACCORDING to Mr. Bruce the Baleſſan 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 conſiſting of one pair of pinnæ, with an odd one at the top: the pinnæ are ſeſſile, 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 antheræ: 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 Babelmandeb; 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.

Theophraſtus,



Amyris gileadensis.

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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 Balſamum Judaicum, or Balm of Gilead. Forſkal, who firſt diſcovered this tree to belong to the genus Amyris, tranſmitted a branch of it to Linnæus, 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 Linnæus 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 foliola, 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 Linnæus refers the A. Opobalſamum, the number of the leafits varies much, being five, ſeven, and ſometimes three; and in that publiſhed by Mr. Bruce, the larger leaves conſiſt of five leafits, 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;[a] we ſhall therefore leave this author without making any further remark.

This Balſam, which has been received in the different Pharmacopœias under the names of Balſamum de Mecca, Opobalſamum, Balſamum verum, and Balſamum Gileadenſe, iſſues 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 Carpobalſamum 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,[b] when the juice is in its ſtrongeſt

[a] See *Schrift. d. Berlin. Geſellſchaft Naturforſch. Freunde. vol.* 3. *p.* 103.

[b] 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.

" circulation in July, August, and the beginning of September. It " is then received into a small earthen bottle, and every day's pro- " duce gathered and poured into a larger, which is kept closely corked. " The Opobalsamum, 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 cast, 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 salts " when rashly 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."[c]

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.[d] 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

[c] *L. c.*

[d] Lady Mary Wortley Montague says, that even at Constantinople it was not without difficulty procured. See *Letters, vol. ii. p.* 116.

* 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 *Gerlachs Tagebuch s. Reise nach Constantinopel. p.* 227.

Balsam

Balſam 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.[e]

It appears on ſcripture authority, that the great value and uſe of this drug remounts to very early ages,[f] 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 balſams 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.[g]

[e] This teſt of the goodneſs of the Balſam, which is mentioned by Alſton, is not to be depended upon, as ſeveral reſinous fluids, and even oil of juniper, produce the ſame phœnomena.

[f] Balm and Myrrh were carried by the Iſhmaelites to Egypt. See *Gen. c. xxxvii. v.* 25.

[g] 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.

TOLUIFERA BALSAMUM.

TOLUIFERA BALSAMUM. BALSAM OF TOLU TREE.

Balſamum tolutanum. *Pharm. Lond. & Edinb.*

SYNONYMA. Balſamum Tolutanum, foliis ceratiæ ſimilibus. *Bauh. Pin. p.* 401. Balſamum de Tolu. *Monard. Clus. Exot. p.* 304. *Park. Theat. p.* 1570. *J. Bauh. Hiſt. vol. i. p.* 296. *Raii. Hiſt. p.* 1758.

Claſs Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 524.

Eſſ. Gen. Ch. Cal. 5-dentatus, campanulatus. *Petala* 5, inſimo maximo, obcordato. *Stylus* nullus.

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 racemi: 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 *unguis* 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.[a] It grows in Spaniſh America, in the Province of Tolu, behind Cartha-

[a] 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.

gena,

Myrospira Balsamum

Delineavit C. L. L'Heritier Mai 1. 1793

gena, 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.[b] 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 leſs 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 benzoine.

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 ſaid to be an efficacious corroborant in gleets and ſeminal weakneſſes. It is directed by the Pharmacopœias in the ſyrupus tolutanus, tinctura tolutana, & ſyrupus balſamicus.

* *Monard. l. c.*

[b] See Murray, *App. Med. vol. vi. p* 118.

SMILAX SARSAPARILLA. SARSAPARILLA SMILAX.

SYNONYMA. Sarſaparilla. *Pharm. Lond. & Edinb.* Smilax aſpera peruviana ſive Sarſaparilla. *Bauh. Pin. p.* 296. *Park. Theat. p.* 173. *Raii Hiſt. p.* 656. *Gerard. Emac. p.* 856. Smilax caule angulato aculeato, foliis ovatis acutis inerinibus. *Roy. Lugdb. p.* 228. Smilax viticulis aſperis virginiana, folio hederaceo leni Zarga nobiliſſima. *Pluck. Phytogr. tab.* 111. *f.* 2.

Claſs Dioecia. *Ord.* Hexandria. *Lin. Gen. Plant.* 1120.

Eſſ. Gen. Ch. *Masc.* *Cal.* 6-phyllus. *Cor.* 0.
Fem. *Cal.* 6-phyllus. *Cor.* 0. *Styli* 3. *Bacca* 3-locularis. *Sem.* 2.

Sp. Ch. S. caule aculeato angulato, foliis inermibus ovatis retuſo-mucronatis trinerviis.

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 ſtand 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 antheræ: 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.

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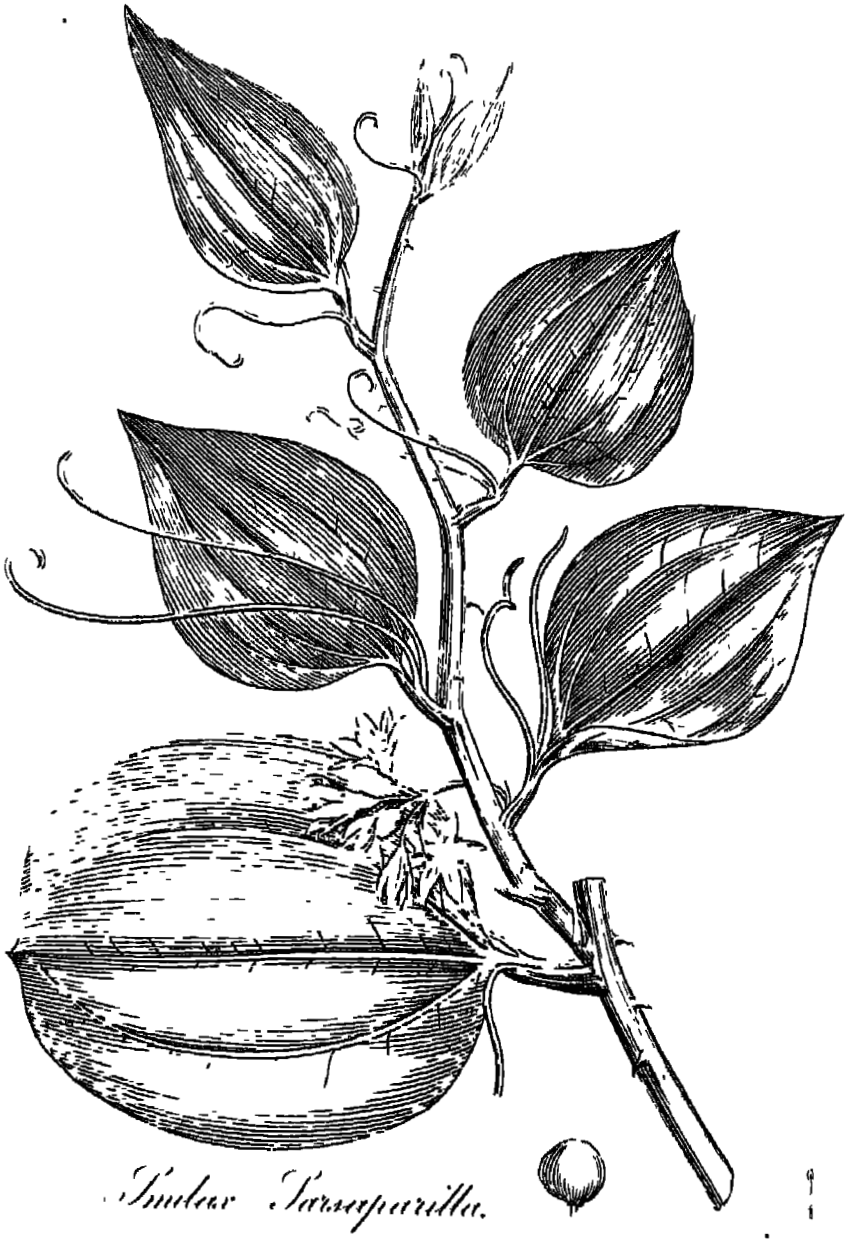

Smilax Sarsaparilla.

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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.[a]

Though this is the plant which is considered by Linnæus as furnishing the officinal Sarsaparilla, 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 Sarsaparilla in every respect.[b] Sir Wm. Fordyce, 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 Sarsaparilla, or *Smilax aspera peruviana dicta* of C. Bauhine."[c] But this synonym is referred to the Smilax Sarsaparilla by Linnæus, 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 Sarsaparilla is still employed, and imported at a great expence. It is probable however that these two species of the same genus, and of the same subdivision of *caule aculeato, angulato*, may have roots of similar appearance and properties: we have already noticed that not only different species, but even different genera in some instances, 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 inspissating 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."[d]

Sarsaparilla was more than two centuries ago introduced into Spain[e]

[a] Vide *Hort. Kew.*

[b] See *P. Alpinus Plant. Ægypt. p.* 136. Also Fallopius, Amatus Lusitanus, Guilandinus, Tobias Aldinus, Monardes, &c. who all either think it the same, or of equal efficacy.

[c] See *Med. Obs. & Inq. vol. i. p.* 173. [d] *Lewis M. M. p.* 586.

[e] 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 Sarsaparilla is of Spanish origin. "Zarsa siquidem Hispanis rubrum; parra autem vitem, & parilla viticulam significat." *C. Bauh. l. c.*

as

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 Sarsaparilla 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 resisted the effects of repeated salivations, have afterwards disappeared by the continued use of Sarsaparilla. 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 Sarsaparilla, 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, scrophula, 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 vinifera

Published by H. Woodcock March 1 1793

VITIS VINIFERA. COMMON VINE.

SYNONYMA. Vitis. *Pharm. Lond.* Vitis vinifera. *Bauh. Pin. p.* 299. *J. Bauh. Hist. iii. p.* 67. *Gerard. Emac. p.* 875. *Park. Theat. p.* 1555. *Raii Hist.* 1613. *Kniph. Bot. orig. cent.* 6. *Duhamel. Arb. ii. p.* 360. *t.* 106. *Schmidel. Ic. plant. t. vii.*
β. Vitis corinthiaca s. apyrena. *Bauh. Hist. ii. p.* 72.

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 284.

Ess. Gen. Ch. *Petala* apice cohærentia, emarcida. *Bacca* 5-sperma, supera.

Sp. Ch. V. foliis lobatis sinuatis nudis.

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 antheræ: 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 diarrhœas, hemorrhages, and other disorders, requiring refrigerant and styptic medicines. The juice, or sap, of the Vine, named *lachryma*, 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 ſour 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 paſſa, of which two kinds were formerly mentioned in our Pharmacopœias, viz. Uvæ paſſæ majores & minores, or raiſins and currents; the latter is a variety of the former, or the fruit of the Vitis corinthiaca ſeu apyrena, 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.[a] Theſe fruits are uſed as agreeable lubricating aceſcent 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 Decoctum hordei compoſitum, Tinctura ſennæ, 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 officinal uſe. Theſe are the vinum album hiſpanicum, mountain; vinum canarium, canary or ſack; vinum rhenanum, rheniſh; and vinum rubrum, red port.

On a chemical inveſtigation, all wines conſiſt chiefly of water alcohol, a peculiar acid, the aërial acid, tartar, and an aſtringent gummy reſinous matter, in which the colour of red wines reſides, 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 unaſſimilated

[a] See Antill in *American Philoſophical Tranſact. vol. i. p.* 194.

juice;

juice; or if it be too active, or too long protracted, it may be converted into vinegar.[b]

New wines are liable to a ſtrong degree of aceſcency 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 diarrhœas. Sweet wines are likewiſe more diſpoſed to become aceſcent in the ſtomach than others; but as the quantity of alcohol which they contain is more conſiderable than appears ſenſibly to the taſte, their aceſcency is thereby in a great meaſure counteracted. Red port, and moſt of the red wines, have an aſtringent 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 rheniſh, 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 acetous 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, exhilerate 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 putrefaction; 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 thoſe who indulge in the uſe of wine, are leſs ſubject to fevers, both of the malignant and intermittent kind. In the putrid ſore throat, in the ſmall-pox, when attended with great debility and ſymptoms of putreſcency, in gan-

[b] See *Cullen M. M. vol. i. p.* 413.

grenes,

grenes, and in the plague, wine is to be considered a principal remedy. And in almost all cases of languors, and of great prostation 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 officinal article, and consists of the vegetable alkali supersaturated 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 dropsies, 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 dropsy. 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 officinal 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, resolvens, antiputridenosa, alexiteria, antiphlogistica, digestiva, antiscorbutica, 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


Saccharum officinarum
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and it has been given ſucceſsfully in mania, and in rabies canina. Diſtilled and neutralized with volatile alkali, it forms the aqua ammoniæ acetatæ, 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 freezing 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.

Saccharum non purificatum, & purificatum. *Pharm. Lond.*

SYNONYMA. Arundo ſaccharifera. *Bauh. Pin. p.* 18. *Park. Theat. p.* 1210. Arundo ſaccharina. *Gerard. Emac. p.* 38. *Raii Hiſt. p.* 1278. *Conf. Sloane's Jamaica, tom. i. p.* 108. *t.* 66. *Rumph. Herb. Amb. tom.* 5. *p.* 186. *t.* 74. *f.* 1. *Hughes's Barbadoes, p.* 244. *t.* 23. *f.* 1. *Browne's Jamaica, p.* 129. *Cazaud in Phil. Tranſ. vol.* 69. *P.* 1. *t.* 3.

Claſs Triandria. *Ord.* Digynia. *Lin. Gen. Plant.* 73.

Eſſ. Gen. Ch. Cal. 2-valvis, lanugine involucratus. *Cor.* 2-valvis. *Hort. Kew.*

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

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 leafits: 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] 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 Kamſchatſka it is produced from the Heracleum Syphondylium and fucus ſaccharinus.[b]

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.[c] 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 conſiſtence, it is ſuffered to cool in a proper veſſel, and the ſaccharine matter concretes into a cryſtalized maſs. This, after being ſeparated from the melaſſes, is ſold under the name of brown

[a] See *Piſon. Mant. Aromat. p.* 186. It is alſo procured from the Boraſſus flabelliformis & Cocos nucifera.

[b] Several roots and fruits likewiſe afford Sugar. [c] The uſe of this is to imbibe the ſuperfluous acid.

or

or moist Sugar; the saccharum non purificatum, of the London Pharmacopœia.

This Sugar may be purified in conical moulds, by spreading on the upper broad surface some moist clay, which gradually transfuses its watery moisture through the mass of Sugar, and carries with it a considerable part of the remains of the treacly matter; it is then called clayed Sugar. The saccharum 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 strained through a woollen cloth, and boiled again until it becomes of a proper consistence; it is then poured into a refrigeratory, 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 crystals of candy, (saccharum crystalinum).

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:[d] and it since appears that several other substances, both vegetable and animal, contain an acid similar to that of Sugar.[e] 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

[d] See his *Diss. de acido saccheri, published in* 1776. [e] See *Berthollet in Mem. de l'Acad. &c.* 1780. *p.* 120. Also *Scheele in Vet. Acad. Handl.* 1785. *p.* 23. *sq.*

sensation.

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 unctuous 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,[f] thinks that by the fermentation which Sugar undergoes in the ſtomach, and by its relaxing 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 ſurpriſed, that Mr. John Hunter ſhould lately recommend Sugar and honey as the beſt reſtoratives to thoſe ſuffering from great debility by a long courſe of mercury.[g] 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 happens ſometimes for a ſeaſon to be confined to melaſſes, 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

[f] See *App. Med.* vol. 5.

[g] He ſays, "Miror ideo, quod adhuc nuper Cl. J. Hunter (Treatiſe on the Venereal diſeaſe, p. 354. ſq.) ſaccharum tanquam optimum reſtaurans in hominibus diuturno jejunio debilitatis vel mercurii uſu emaciatis propoſuerit, &c." *L. c. p.* 410.

* In Aſia, Elephants and other animals are fed upon Sugar. See *Abridgment of Evidence on Slave Trade.*

them

them in a ſolution of Sugar, or ſprinkling it upon their bodies;[h] 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:[i] 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.[k]

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 diſeaſe are ſaid to have been produced. Stark[l] for many days took from four ounces of Sugar to eight, ten, ſixteen, and even twenty, with bread and water, by which nauſea, flatus, 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.[m] 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 claſſes it with the attenuantia; and Bergius ſtates it to be ſaponacea, edulcorans, relaxans, pectoralis, vulneraria, antiſeptica, nutriens. In catarrhal 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-

[h] See *Redi obſ. de animalcul. vivis in corp. viv. p.* 166. *ſq.*
[i] *Carminati Opuſc. Therap. vol i. p.* 113. [k] *Carm. l. c.*
[l] Vide *Clinical & anatomical obſervations with experiments dietetical & ſtatical.*
[m] *Rezia in Carminati, l. c. p.* 129.

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.

SYNONYMA. Ulmus. *Pharm. Lond. & Edinb.* Ulmus campeſtris et Theophraſti. *Bauh. Pin. p.* 426. Ulmus vulgaris. *Park. Theat. p.* 1404. Ulmus vulgatiſſima folio lato, ſcabro. *Gerard. Emac. p.* 1480. *Raii Hiſt. p.* 1425. *Synop. p.* 468. *Hall. Stirp. Helv. n.* 1586. U. campeſtris. *Hudſon Flor. Ang. p.* 109. *Withering Bot. Arr. p.* 258. *Relhan Flor. Cant. p.* 106. *Ic. Flor. Dan.* 632. *Evelyn's Sylva by Hunter. p.* 118.

Claſs Pentandria. *Ord.* Digynia. *Lin. Gen. Plant.* 316.

Eſſ. Gen. Ch. Cal. 5-fidus. *Cor.* nulla. *Bacca* exſucca, compreſſo-membranacea.

Sp. Ch. U. foliis duplicato-ſerratis; baſi inæqualibus.

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 ſerrated, 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 antheræ, 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

Ulmus campestris

Le Chevalier et Mademoiselle Gaut 1 ejus

large berry, which is without juice, and of a membranous texture: the feed is round, but fomewhat compreffed.

This tree, of which there is one variety with fmaller leaves, and another with fmooth leaves, grows plentifully in Worcefterfhire and Middlefex, but is faid not to be found to the north of Stamford.

The inner tough bark, which is directed for ufe by the Pharmacopœias, has no remarkable fmell, but has a bitterifh tafte, and abounds with a fliny juice, which has been recommended in nephritic cafes, and externally as a ufeful application to burns. The external bark is brittle, contains but little mucilage, and is wholly deftitute of both fmell and tafte. 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 thofe of the cutaneous kind allied to herpes and lepra. Dr. Lyfons[a] mentions five cafes of inveterate eruptions, both dry and humid, or thofe forming incruftations, which were fucceefsfully treated by a decoction of this bark, prepared from four ounces of it taken frefh, and boiled in two quarts of water to one; of this the patients were ufually directed to drink half a pint twice a day. But as he added nitre to the decoction, and alfo frequently had recourfe to purgatives, it may be doubted if thefe cures ought to be wholly afcribed to the Elm bark.

Dr. Lettfom[b] found this bark moft effectual in what he fuppofes to be the lepra ichthyofis of Sauvages, in which it fucceeded after all the medicines ufually employed in fuch cafes had failed. A remarkable inftance of its efficacy alfo in lepra vulgaris, affecting the whole body, is related by Banau;[c] who propofes the ufe of Elm bark in various other difeafes, as fluor albus, rheumatifm, old ulcers, cancerous and fcrophulous affections, tinea capitis, fcurvy, &c. In very obftinate cafes it is neceffary to perfevere in the ufe of the decoction for fome months.

[a] See *Med. Tranfactions, vol. ii. p.* 203.

[b] See *Medical Memoirs, p.* 152. [c] See *Journ. de Paris*, 1783. *n.* 255.

SALIX FRAGILIS.

SALIX FRAGILIS. CRACK WILLOW.

SYNONYMA. Salix. *Pharm. Edinb.* Salix folio longo latoque ſplendente, fragilis. *Raii Synop. p.* 448. Salix fragilis. *Bauh. Pin. p.* 474. *Hall. Stirp. Helv. n.* 1638. *Hudſon. Flor. Ang. p.* 426. *Withering. Bot. Arr. p.* 1102. *Relhan. Flor. Cant. p.* 365. *Flor. Lap. t.* 8. *f.* 6. *Hunter's Evelyn's Sylva, p.* 245.

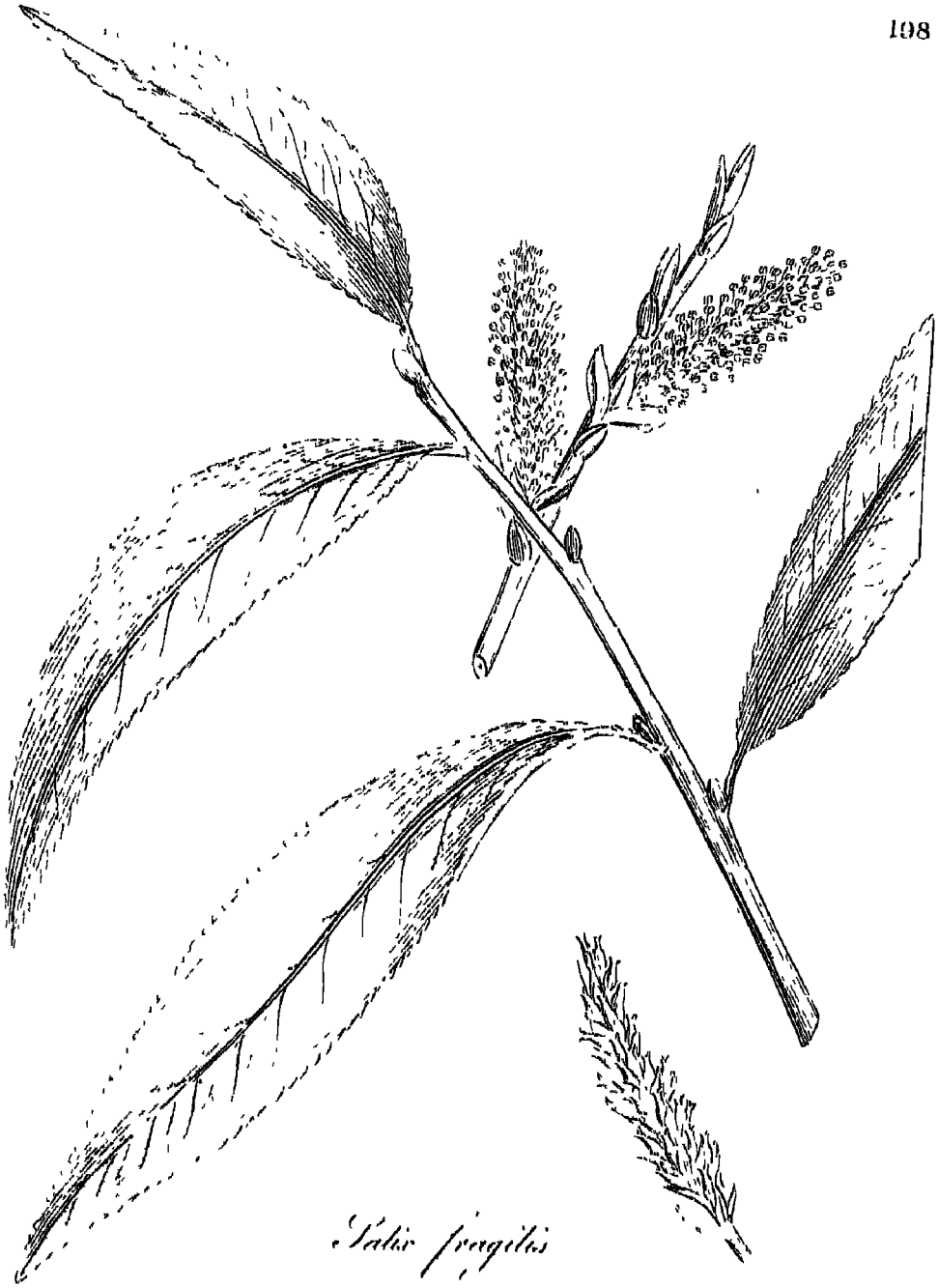
Claſs Dioecia. *Ord.* Diandria. *Lin. Gen. Plant.* 1098.

Eſſ. Gen. Ch. *Masc.* *Amenti* ſquamæ. *Cor.* o. *Glandula* baſeos nectarifera.

Fem. *Amenti* ſquamæ. *Cor.* o. *Stylus* 2-fidus. *Caps.* 1-locularis, 2-valvis. *Sem.* pappoſa.

Sp. Ch. S. foliis ſerratis glabris ovato-lanceolatis, petiolis dentato-glanduloſis.

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, ſerrated, 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 catkin 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 antheræ of four cells: in the female flower the ſcaly catkin reſembles 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 capſule is ovate, one-celled, and furniſhed



Salix fragilis

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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 intermittents:* 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. pentandria, both of which are recommended in the foreign pharmacopœias. But in our opinion the bark of the S. triandria is more effectual than that of any other of this genus; at least its sensible qualities give it a decided preference.

* See *Gerhard. Mat. Med. p.* 301. *Phil. Transact. vol.* 53. *p.* 195. And *Medical Comment. vol.* 5. *p.* 298. Instances of the efficacy of Willow bark are also related by Closius (*nov. variol. Med. Meth. p.* 128.) And Gunz. *Diss. binæ de cortice salicis. Lips.* 1772.

With Bergius however this bark did not succeed. He says, Ego hunc corticem in febribus intermittentibus iterum iterumque exhibui, sed irrito conatu

CYNARA SCOLYMUS, COMMON ARTICHOKE.

SYNONYMA. Cinara. *Pharm. Lond. & Edinb.* Cinara hortenſis foliis non aculeatis. *Bauh. Pin. p.* 383. Cinara maxima alba. *Gerard. Emac. p.* 1153. Cinara ſativa alba. *Park. Parad. p.* 519. Carduus ſive Scolymus ſativus non ſpinoſus. *J. Bauh. Hiſt. vol. iii. p.* 48. *Raii Hiſt. p.* 299.

α Cinara hortenſis aculeata. C. B. *French Artichoke.*

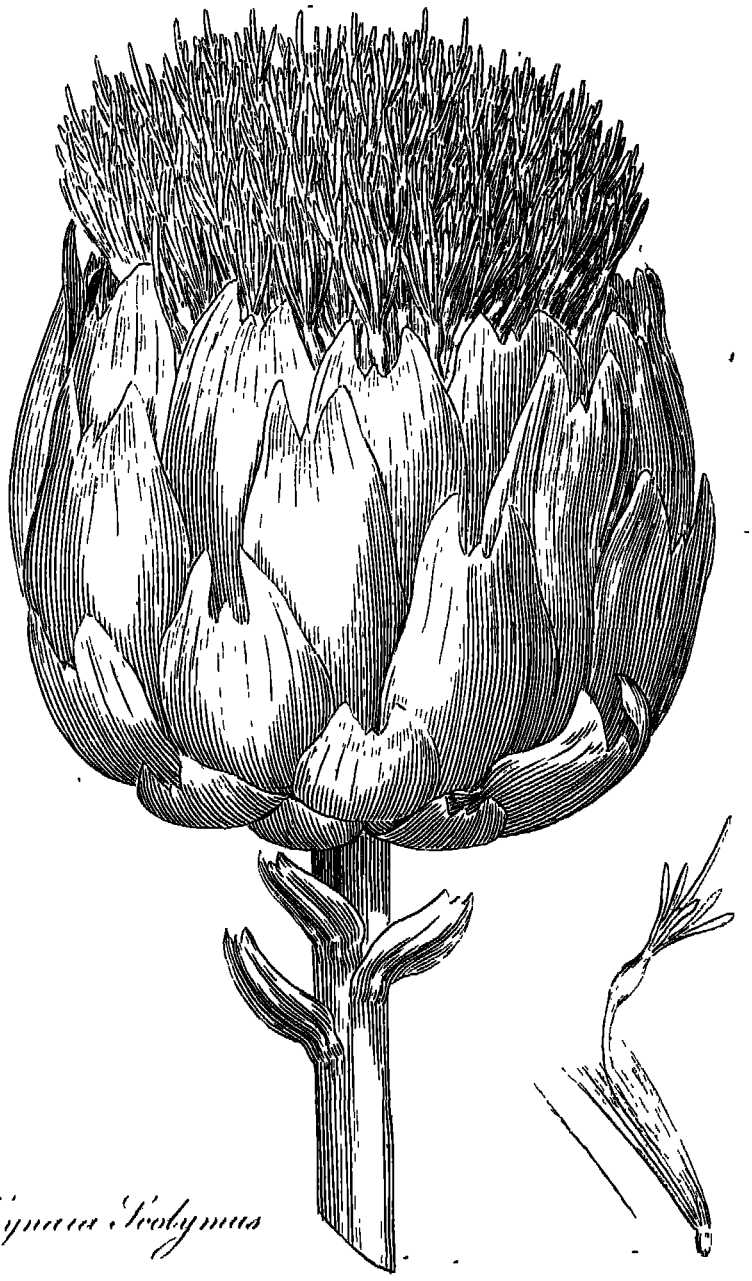
β C. hortenſis foliis non aculeatis. C. B. *Globe Artichoke.*

Claſs Syngeneſia. *Ord.* Polygamia Æqualis. *Lin. Gen. Plant.* 928.

Eſſ. Gen. Ch. Cal. dilatatus, imbricatus ſquamis carnoſis, emarginatis cum acumine.

Sp. Ch. C. foliis ſubſpinoſis pinnatis indiviſiſque, 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



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which are capillary, very ſhort, and furniſhed with antheræ, which form a cylindrical tube of the length of the corolla, and five toothed: a germen of an ovate form, which ſupports a ſlender ſtyle, longer than the ſtamina, 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;[a] 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 Arabians noticed their diuretic qualities, and therefore deemed them uſeful to carry off morbid matter by the kidneys.[b]

The leaves are bitter, and afford by expreſſion a conſiderable quantity of juice, which when ſtrained and mixed with an equal part of white wine, has been given ſucceſsfully in dropſies;[c] 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 *Sebizius de Aliment. facult. p.* 346.

[c] Vide *Journal etranger*, and Aaſkow in *Act. Soc. Med. Havniens. vol. i. p.* 201.

CINCHONA

CINCHONA OFFICINALIS. OFFICINAL CINCHONA; Or PERUVIAN BARK TREE.

Peruvianus cortex. *Pharm. Lond. & Edinb.*

SYNONYMA. Quinquina. *De La Condamine*, in *Mem. de L'Acad. des Scien. de Paris.* 1738. *p.* 226. *cum icone tab.* 5. 6. recusa in *Rosen. Diss. de Cort. peruv. Lursen. Diss. de Cort. peruv. et Pultney. Diss. de Cinchona off.*

Class Pentandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 228.

Ess. Gen. Ch. *Cor.* infundibulif. apice lanata. *Caps.* infera, 2-locularis, dissepimento parallelo.—*Sem.* imbricata. *Jacq.*

Sp. Ch. C. foliis ellipticis subtus 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 oblong, spreading, on the upper side red, on the under woolly, and fringed at the edges: the five filaments are bristly, placed in the middle of the tube, and furnished with oblong antheræ, 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

Cinchona officinalis

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This figure we have not scrupled to copy from that given by Mons. de la Condamine,[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.[b] This author also informs us, that the propereſt 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 entirely stripped of their bark they soon perish; and as the number of these trees to which access could be had, was said to be not very considerable, it has been supposed that a sufficient quantity of bark

[a] *L. c.* [b] *Phil. Trans. vol.* 40, *p.* 83.

* "The propereſt 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, through 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 slice 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 "tough withs at proper distances, like the steps of a ladder, always slicing 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 "mules 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, aſſerts 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.[a] 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 intermitting 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.[b] 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 comitiſſæ, or the Counteſs's powder; alſo called, cortex china china, or chinchina; kina kina, or

[a] Ulloa, *Voyage de l'Amerique meridionale. T. i. p.* 271.
[b] *Mat. Med., Traité, p.* 78.

kinkina;

kinkina; and quina quina, or quinquina. On the recovery of the Countefs fhe diftributed a large quantity of the bark to the Jefuits, in whofe hands it acquired ftill greater reputation, and by them it was firft introduced into Europe,* and thence called cortex, or pulvis jefuiticus, pulvis patrum; and alfo Cardinal de Lugo's powder, becaufe that charitable prelate bought a large quantity of it at a great expenfe for the ufe of the religious poor of Rome.

"This bark is brought to us in pieces of different fizes, fome rolled up into fhort thick quills, and others flat: the outfide is brownifh, and generally covered in part with a whitifh mofs: the infide is of a yellowifh reddifh or rufty iron colour. The beft fort breaks clofe and fmooth, and proves friable betwixt the teeth: the inferior kinds appear when broken of a woody texture, and in chewing feparate into fibres. The former pulverizes more eafily than the latter, and looks, when powdered, of a light brownifh colour, refembling that of cinnamon, or fomewhat paler. It has a flight fmell, approaching as it were to muftinefs, yet fo much of the aromatic kind as not to be difagreeable. Its tafte is confiderably bitter, aftringent, very durable in the mouth, and accompanied with fome degree of aromatic warmth, but not fufficient to prevent its being ungrateful." ‡

Befides this bark, that of feveral other fpecies of Cinchona have been recommended for medical ufe by different authors, efpecially the cortex peruvianus ruber, or red bark; alfo that of the cinchona caribæa, or the Jamaica bark; that of cinchona floribunda produced at St. Lucie; and that of two or three other fpecies difcovered at Santa Fé. The firft of thefe "is in much larger and thicker pieces than the common, moft of the pieces are concave, though not rolled together like the quilled bark. They break fhort, like the beft common bark, and appear evidently compofed of three layers. The outer is thin, rugged, frequently covered with a moffy fubftance, and of a reddifh brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and refinous. The innermoft layer is more woody and fibrous, and of a brighter red. In pow-

* Louis the fourteenth, when Dauphin, was faid to be one of the firft in Europe who experienced its efficacy. ‡ *Lewis, M. M. p.* 485.

dering

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, leſt the moſt active part ſhould be leſt 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 ſort. 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 ſhewn 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 intermittents: and hence it is thought to be that which, according to Arrot, the Spaniards called Caſcarilla colorada, and was probably the kind originally brought to Europe, and which proved ſo ſucceſsful in the hands of Sydenham, Morton, and Liſter; for it appears from the teſtimony of the oldeſt practitioners, that the bark firſt employed here was of a much deeper colour than the common bark.[a] The red bark was firſt imagined by Dr. Saunders[b] to be that of the trunk of full grown trees, the branches or young trees of which yield the pale or common bark; but this opinion the Doctor ſeems afterwards to have abandoned, for in the third edition of his pamphlet on this ſubject he ſays, "that he has lately ſeen ſome exceedingly good red bark imported by a Spaniſh merchant, a conſiderable part of which was as ſmall as

* Lewis, l. c. ‡ *Irving's and Skeete's Experiments.*

[a] Baker, *Med. Tranſ. Vol. iii. p.* 161. [b] *Obſervations on the ſuperior efficacy of the red Peruvian Bark in the cure of fevers.*

the

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 Caribæa is deſcribed and figured by Jacquin[a] and Dr. Wright;[b] 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.[c] 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,[d] 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.[e]

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,

[a] *Amer. pict. tab.* 23. [b] *Phil. Tranſ. Vol.* 67. [c] *Exper. p.* 339.

[d] See *Kentiſh. Exp. and Obſerv. on the Peruvian Bark.* Davidſon in *Phil. Tranſ. Vol.* 74. *and Tranſ. of the American Phil. Soc. Vol.* 2. Mallet in *Mem. ſur le Quinquina de la Martinique, &c.*

[e] See *Memoria o Diſſertazione ſopra la nuova China del regno de St. Fé, &c.*

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 farther addition of the alkali. Lime-water precipitates leſs from a freſh infuſion than from a freſh decoction; and in the precipitate of this laſt, 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 extracted 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 affuſions of cold water; and water extracts aſtringency, but no bitterneſs, from the reſiduum of as many affuſions 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

* *Ed. New Diſpenſ. p.* 251.

order

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 as that doſe muſt not be under two drams of pale bark, ſo 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."[a] 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[b] as upon the whole preferable, from being beſt ſuited to moſt ſtomachs. When

[a] *Mat. Med. Vol. p.* 97. [b] See *New Edinburgh Diſpenſatory.*

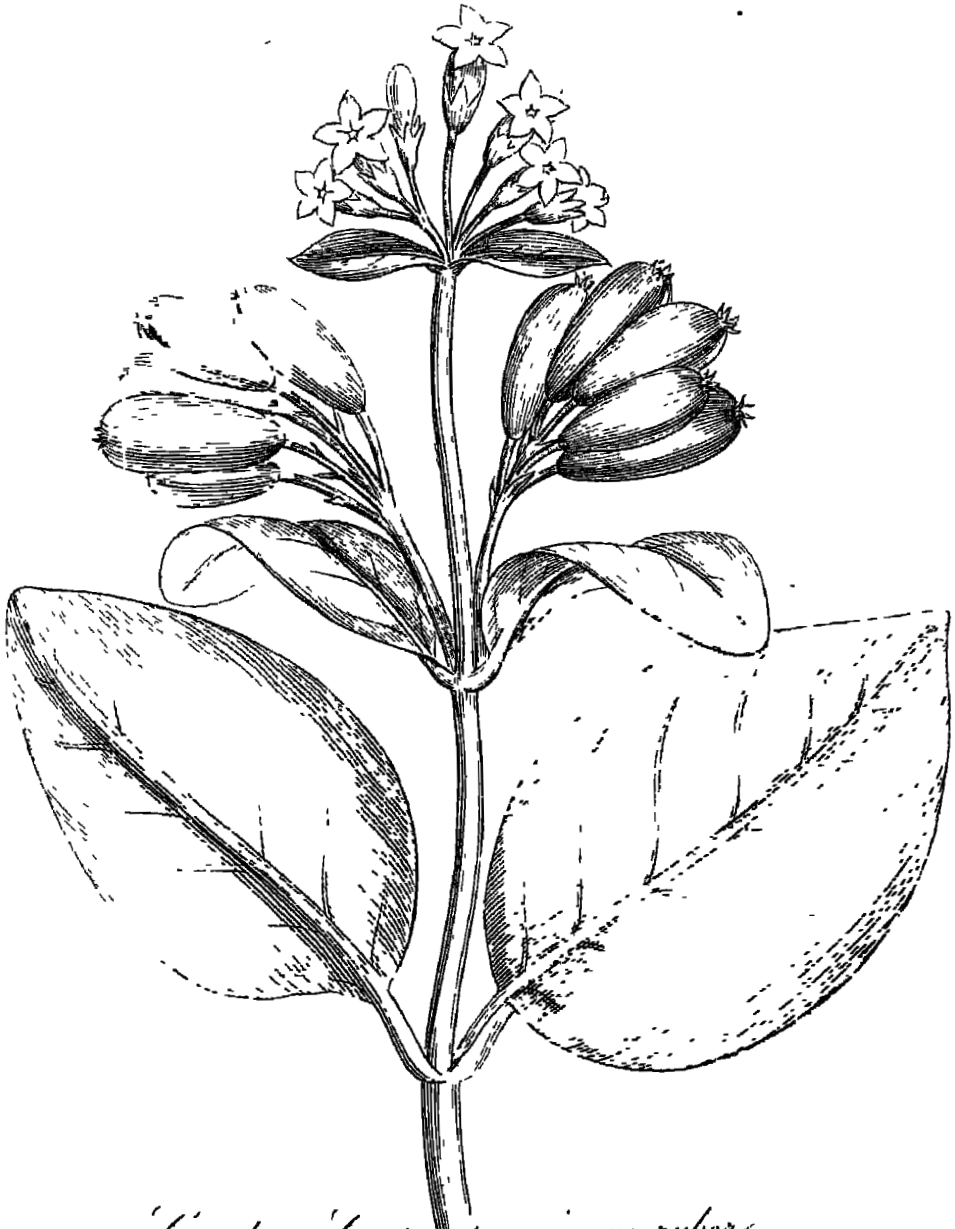
the

the bark pukes, or purges, or oppresses the stomach, it is to be counteracted 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 seasons, 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 putrescency 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 headach, redness of the eyes, and phrenitic delirium. And whenever delirium is accompanied with much subsultus 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



Cinchona Cortex peruvianus ruber

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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 maturition 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 dropſy, eſpecially when unattended with any particular local affection, ſcrophula, ill conditioned ulcers, rickets, ſcurvy, ſtates of convaleſcence, certain ſtages of phthiſis pulmonalis, &c.

The officinal 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 PERUVIANUS RUBER. RED PERUVIAN BARK-TREE.

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] a drawing of it was ſent to Linnæus 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

[a] See *Blumenbach Med. Biblioth. V. 2. p.* 486.

the bark. On these authorities, and on that of Murray, who, in his sixth vol. of the *App. Medicam.*[a] 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.

[a] See p. 45.

ALOE PERFOLIATA SOCOTORINA. SOCOTORINE ALOE.

SYNONYMA. Aloë socotorina. *Pharm. Lond. & Edinb.* Aloe Americana ananæ floribusque suave rubentibus. *Pluk. Almag. t.* 240. *f.* 4. Aloe (vera) foliis longissimis et angustissimis, marginibus spinosis, floribus spicatis. *Mill. Dict.*

Class Hexandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 430.

Ess. Gen. Ch. Cor. erecta, ore patulo, fundo nectarifero. *Filam.* receptaculo inserta.

Sp. Ch. A. foliis caulinis dentatis amplexicaulibus vaginantibus, floribus corymbosis cernuis pedunculatis subcylindricis.[1]

[1] *A. S.* foliis longissimis et angustissimis, 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

Aloe perfoliata Socotorina.

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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 antheræ: 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 ſocotorine aloes, which is the inſpiſſated juice of the plant here repreſented, but alſo the hepatic or Barbadoes aloes is directed for officinal uſe in our pharmacopœias. This however being obtained from another variety of the ſame ſpecies, viz. the aloe (π *vera*) foliis ſpinoſis confertis dentatis vaginantibus planis maculatis L. 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 miſled; 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]

A tract of mountains about fifty miles from the Cape of Good Hope is wholly covered with the aloes plants, which renders the

[a] See *Commentatio de ſucci aloës amari initiis* in *Murr. Opuſc. tom.* 2. *p.* 488. This author found the bitereſt ſpecies to be the following: 1. Aloe elongata, floribus ſpicatis tubuloſo-triquetris ſubtingentibus oblique dependentibus, foliis aggregatis dentato-ſpinoſis. It ſeems to be the variety π 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 1788.

2. Aloe ſpicata *Thunb.* (ſee *ſupp. plant.*) this is ſaid to afford the beſt hepatic aloes.

3. Aloe linguæformis (ſee *ſyſt. veg. ed.* 14.) This plant in the interior parts of the Cape, is ſelected by ſome as producing the beſt and pureſt aloes. *Thunb. de Med. African. p.* 7. But the greateſt quantity of aloes exported from the Cape of Good Hope, is prepared from another ſpecies, not defined by Thunberg, though not uncommon in our botanic gardens V. *Phyſiogr. Sälſk. Handl. P.* 1. *p.* 112. and Sparrman *Reſa til Goda Hopps-udden. p.* 742, it is probably the *A.* ſpicata *of Thunb.*

planting

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 leſs 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 *ſocotorine aloes*, and is the cleareſt and moſt tranſparent, as well as the higheſt in eſteem and value." [b] The method of procuring the common aloes he ſtates to be nearly the ſame with that mentioned by Mr. Hughes,[c] and lately by Mr. Millington:[d] 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 inſpiſſated, by a conſtant but regular fire, it is ladled forward from boiler to boiler, and freſh juice is added to that fartheſt from the fire, till the juice in that neareſt to the fire (by much the ſmalleſt of the three, and commonly called by the name of tatch, as in the manufactory of ſugar) becomes of a proper conſiſtency 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 tatch, is when it is arrived at what is termed a reſin height, or when it cuts freely, or in thin flakes from the edges of a ſmall wooden ſlice, that is dipped from time to time into the tatch for that purpoſe. A little

[b] See *Browne's Jamaica*, p. 198. [c] See his Hiſtory of Barbadoes, p. 159.
[d] See *London Med. Journal*, V. 8. p. 422.

lime-water.

lime-water is uſed by ſome aloe boilers during the proceſs, when the ebullition is too great." He adds, "as to the ſun-dried aloes which is moſt approved for medicinal purpoſes, very little is made in Barbadoes. 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, pewter, 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"[e].

Theſe accounts of procuring the aloes differ conſiderably from that given by Dr. Wright, who ſays "Hepatic aloes is obtained in the following manner. The plant is pulled up by the roots and careſully 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 fæculent 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 ſocotorine aloes may be prepared as above."[f]

The aloe ſocotorina or ſocotorine aloes is ſo named, from being formerly[g] 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 pellucid; in the lump of 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:

[e] Millington, l. c.

[f] V. Dr. Wright's *account of the Medicinal plants growing in Jamaica, in Lond. Med. Jour. Vol. 8. p. 219.*

[g] It is now ſaid to be imported from the Cape by the Dutch Eaſt India Company.

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 aloes, is chiefly brought from Barbadoes; the beſt ſort in large gourd ſhells, an inferior kind in pots, and a ſtill worſe in caſks; is darker coloured than the foregoing, and not ſo clear or bright. It is generally drier and more compact, though ſometimes, eſpecially the caſk 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 ſocotorine.

Another kind of aloes obtained from the aloe guineenſis caballina vulgari ſimilis ſed tota maculata*, is alſo kept in the ſhops, and called aloe caballina, or horſe aloes. 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 diſtinguiſhable by the eye, even from the ſocotorine, but its offenſive ſmell readily betrays it; and if this alſo ſhould be diſſipated by art, its wanting the aromatic flavour of the finer aloes will be a ſufficient criterion. This aloe is not admitted into the Materia Medica, and is employed chiefly by farriers.

All the kinds of aloes 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 leſt. They diſſolve alſo by the aſſiſtance of heat in water alone; but as the liquor grows cold, the reſinous parts ſubſide.

The hepatic aloes is found to contain more reſin and leſs gum than the ſocotorine, and this than the caballine. The reſins of all the ſorts, purified by ſpirit of wine, have little ſmell: that obtained from the ſocotorine 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 aloes: the extract of ſocotorine aloes has very little ſmell, and is in taſte not unpleaſant: that of the hepatic has a ſomewhat ſtronger ſmell, but is rather more agreeable in taſte than the extract of the ſocotorine: the gum of the caballine retains a conſiderable ſhare of the peculiar rank ſmell of

* *Commel. Prael. bot. p.* 4.

this

this ſort of aloes, but its taſte is not much more unpleaſant than that of the extracts made from the two other ſorts.[h]

Aloes is neither noticed by Hippocrates nor Theophraſtus, but Dioſcorides mentions two kinds; and Avicenna tells us, that of the different kinds the ſocotorine is the beſt. Celſus, however, who frequently employed aloes, 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.[i] This cathartic quality of aloes 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 aloes to be an effectual and ſafe cathartic, but though we may have little to fear from its hypercathartic 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, aloes 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 coſtiveneſs than to operate ſtrongly, this ought to be no objection to its uſe. Reſpecting the choice of the different kinds of aloes, it may be obſerved that the ſocotorine, 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 aloes is from half a ſcruple to half a dram, but it is ſeldom given alone. Several preparations of it are directed in the

[h] See *Edinburgh new Diſpenſatory.*

[i] V. *Monro's Works*, p. 306. *and Mem. de la Soc. R. de Medec. à Paris*, *Vol.* 2. p. 162.

pharma-

pharmacopœias, as pilulæ ex aloe, pilulæ ex aloe cum myrrha, extractum colocynthidum compositum. *Pharm. Lond.* pilulæ aloeticæ, pilulæ communes, v. Rufi, pilulæ ex colocynthide cum aloe, pilulæ stomachicæ, *Pharm. Ed.* tinctura aloes, tinctura aloes composita, vinum aloes *P. L.* elixir aloes v. proprietatis, elixir aloes sive proprietatis vitriolicum, vinum aloeticum. *P. E.* the pulvis aloeticus or hiera picra, and other powders.

IPECACUANHA. IPECACUAN.

Ipecacuanha. *Pharm. Lond. & Edinb.*

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, psychotria, &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 Linnæus; 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 (preserved 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.

Piso divides this root into two sorts, the white and the brown, or according to Geoffroy, the Peruvian and Brazilian Ipecacuanha [a]; but three sorts are evidently distinguishable in our shops, viz. ash-

[a] *Pison. Ind. res. Med. et Nat. p.* 231.

coloured

Ipecacuanha

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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 ſiſſures, 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 ſubacrid, 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 ſort 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 acetous acid, inſomuch that thirty grains of the powder taken in two ounces of vinegar, produced only ſome looſe 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 Methodes, 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 tense; 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.[e] In the spasmodic asthma, Dr. Akenside[f] 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.[g] Several cases of menorrhagia are mentioned by Dahlberg,[h] 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,[i] 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. Thompson, 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

[e] Dr. Cullen attributes its good effects entirely to its purgative quality, *M. M. Vol.* 2. *p.* 477. [f] *Med. Trans. vol.* 1. *p.* 96.

[g] See Gianella de admirabili Ipec. virtute in curandis febribus. Patav. 1754. Also Bergius (M. M. p. 103.) and others. [h] *Vet. Acad. Handl. vol.* 31. *p.* 316. *a* 1770.

[i] l. c.

indicated;

Publish'd by D.r Woodville Mar 1 1793

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 ipecacuanhæ.

ASPLENIUM TRICHOMANES. COMMON MAIDENHAIR, Or SPLEEN-WORT.

SYNONYMA. Trichomanes. *Pharm. Edinb. Park. Theat. p.* 1051. *Raii Hist. p.* 140. *Synop. p.* 119. *Hall. Hist. Stirp. Helv. p.* 1693. Trichomanes Mas. *Ger. Emac. p.* 1146. Trichomanes sive Polytrichum officinarum, *Bauh. Pin. p.* 356. Aspl. Trichomanes. *Hudson. Flor. Ang. p.* 452. *Withering. Botan. Arr. Vol.* 3. *p.* 52. *Relhan. Flor. Cant. p.* 388. *Ic. Flor. Dan. p.* 119. *Bolton. Fil. Brit. p.* 22. *t.* 13.

Class Cryptogamia. *Ord.* Filices. *Lin. Gen. Plant.* 1178.

Ess. Gen. Ch. *Fructificationes* in lineolis disci frondis sparsis.

Sp. Ch. A. frondibus pinnatis: pinnis subrotundis crenatis.

THE root is perennial, consisting of numerous slender fibres, of a dark brown colour: the general leaves are numerous, pinnated, six or eight inches in length; the ribs of which are smooth, and of a shining blackish colour; the pinnæ are sessile, 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 feed veffels, are placed on the back of the pinnæ or lobes of the leaf, and form a row of three or four on each fide of the midrib: at firft they are yellowifh, and are covered with a thin membrane, which when at maturity burfts, and difcharges the contents over the other leaves.

It is common in this country, and is ufually found on old walls and rocks in moift and fhaded fituations.

This plant we figure on the authority of the Edinburgh Pharmacopœia.

The leaves have a mucilaginous fweetifh fubaftringent tafte, without any particular flavour; they are efteemed ufeful in diforders of the breaft, proceeding from a thicknefs and acrimony of the juices; and are likewife fuppofed to promote the expectoration of tough phlegm, and to open obftructions of the vifcera. They are ufually directed in effufion or decoction, with the addition of a little liquorice. A fyrup prepared from them, though it has now no place in our pharmacopœias, is frequently to be met with in our fhops, both as prepared at home and imported from abroad. A little of thefe fyrups mixed with water makes a very pleafant draught. The fyrup brought from abroad has an admixture of orange flower-water. [a]

[a] *Ed. N. Difpenf. p.* 209.

LICHEN ISLANDICUS. ERYNGO-LEAVED LICHEN.

SYNONYMA. Lichen iflandicus. *Pharm. Edinb.* Lichen foliis oblongis laciniatis: marginibus conniventibus ciliatis. *Flor. Lapp. p.* 445. *Roy. Lugdb. p.* 508. *Hall. Stirp. Helv.* 75. Lichen terreftris, foliis eryngii. *Buxb. cent.* 2. *p.* 11. *t.* 6. *f.* 1. 2. Lichenoides rigidum, eryngii folia referens. *Dill. Hift. Mufc. p.* 209. *t.* 28. *f.* 111. Lichenoides iflandicum. *Hoffm. Pl. Lichenof. vol.* 1. *fafc.* 2. *tab.* 9. *f.* 1. *p.* 41. *Flor. Dan.* 155. *Gifcke* 50. *Mich. t.* 44. *f.* 4. Conf. *Withering. Bot. Arr. p.* 196.

Clafs

Lichen islandicus

Published by J. Wrightsello May 1 1793

Class Cryptogamia. *Ord.* Algæ. *Lin. Gen. Plant.* 1202.

Ess. Gen. Ch. *Masc.* *Receptaculum* subrotundum, planiusculum, nitidum.

Fem. Farina foliis adspersa.

D. Foliacei.

Sp. Ch. L. foliaceus adscendens laciniatus: marginibus elevatis ciliatis.

THIS Lichen is foliaceous, erect, large: the leaves are crowded, connected together, tough, membranous, two or three inches long, variously sinuated, 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 Pharmacopœia. 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, yeilded 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,[a] but when deprived of this quality, and properly prepared, we are told that it is an efficacious remedy in consumptions, coughs, dysenteries, and diarrhæas. Scopoli seems to have been the first who of late years

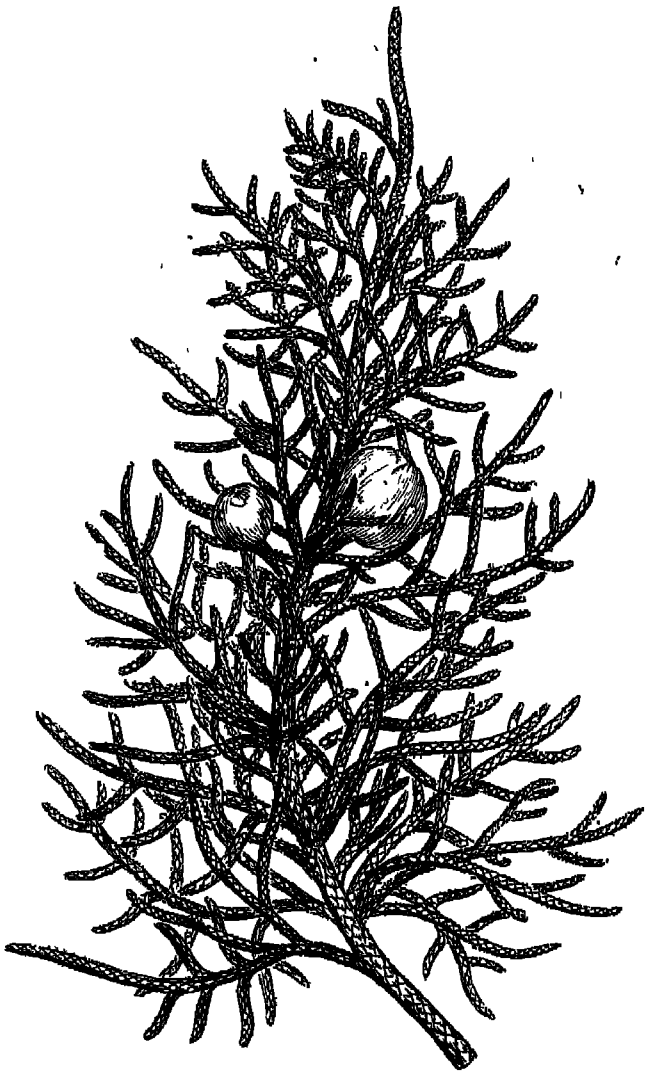
[a] See Borrichius in Bartholini, *Act. Med. Hafn.* 1671. *p.* 126. Olafsen *Reise igiennem Island. tom. i. p.* 159.

called the attention of phyſicians to this remedy in conſumptive diſorders;[b] and further inſtances of its ſucceſs are related by Herz,[c] Cramer,[d] Tromſdorff,[e] Ebeling,[f] Paulizky,[g] Stoll,[h] 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,[i] 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 hæmoptoica*, and the *phthiſis pituitoſa*, 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.

[b] *Ann. hiſt. nat. i.* 1769. *p.* 112. & *Ann. ii. p.* 141.
[c] *Briefe an Aerzte, vol.* 2. [d] *Diſſ. de Lichene Iſlandico.*
[e] *Diſſ. de Lichene Iſlandico.* [f] *Diſſ. de Quaſſia et Lichene Iſlandico.*
[g] *Med. Pract. Beob.* 2. *Samml.* 104.
[h] *Rat. Med. P.* 2. [i] See *Medical Journal, vol.* 10. *p.* 233.

JUNIPERUS LYCIA.



Juniperus Lycia

Published for the Woodville Plates 1 1793

JUNIPERUS LYCIA. LYCIAN JUNIPER, or CEDAR.

Olibanum. *Pharm. Lond. & Edinb.*

SYNONYMA. Cedrus folio cupreſſi major, fructu flaveſcente. *Bauh. Pin. p.* 487. Cedrus phœnicia altera Plinii & Theophraſti. *Lob. Icon.* 221. *Du Hamel, Arbres, T.* 1. *p.* 140.

Claſs Dioecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1134.

Eſſ. Gen. Ch. *Masc. Amenti* Calyx ſquamæ. *Cor.* 0. *Stam.* 3. *Fem. Cal.* 3-partitus. *Petala* 3. *Styli* 3. *Bacca* 3-ſperma, tribus tuberculis calycis inæqualis.

Sp. Ch. J. foliis ternis undique imbricatis ovatis obtuſis.

THIS ſpecies riſes but to an inconſiderable height, ſending off erect branches, covered with brown bark: the leaves are ſmall, round, blunt, variouſly divided, and every where 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 ſcaly 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 ſaid to ouze 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 *thus*: when two are joined together, *thus maſculum*, and when two are very large, *thus femininum*: if ſeveral adhere to the bark *thus corticoſum*: the fine powder, which rubs off from the tears, *mica thuris*; and the coarſer *manna thuris*.

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."[a] 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,[b] 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[c] 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.

[a] *Lewis, M. M. p.* 460.

[b] It is the λιβανος of Theophraſtus & Dioſcorides, λιβανωτον of Hippocrates.

[c] *Mat. Med. Traité. T.* 4. *p.* 71.

PINUS SYLVESTRIS. SCOTCH FIR.

Pix liquida. *Pharm. Lond. & Edinb.*

SYNONYMA. Pinus ſylveſtris. *Bauh. Pin. p.* 491. *Gerard. Emac. p.* 1356. *Raii Hiſt. p.* 1399. Pinus rubra foliis geminis brevioribus glaucis, conis parvis mucronatis. *Mill. Dict.* Pinus ſylveſtris foliis brevibus glaucis, conis parvis albicantibus. *Du Hamel. Arb.* 2. *p.* 125. *t.* 30. *Raii Synop. p.* 442. *Hudſon. Flor. Ang. ed.* 1. 361. *Lightfoot, Flor. Scot. p.* 587. *Withering. Bot. Arr. p.* 1092. *Ic. Miller Illuſt. The Scotch Fir Tree. Hunter's Evel.*

Claſs

Pinus Picea

Ex Lapland A. Tilli Ms. 1 Iun. 1703

Class Monoecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1077.

Ess. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* o. *Stam.* plurima. *Antheræ* nudæ.

Fem. Cal. strobili: squama 2-flora. *Cor.* o. *Pist.* 1. *Nux* ala membranacea excepta.

Sp. Ch. P. foliis geminis rigidis, conis ovato-conicis longitudine foliorum subgeminis basi rotundatis. *Hort. Kew.*

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 germen is very small, producing a tapering style, terminated by a simple stigma: there is no capsule, but the scales of the cone, which before stood 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

 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 Pix liquida, or Tar, but alſo from it may be obtained the common turpentine, and the white and yellow reſins.

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 diſtillatio per deſcenſum.

Tar, which is well known from its œconomical 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 ſolubile 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." [a]

* 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 Cloyne properly preferred the Norway tar to that of New England, as the former contains more acid than the latter.

[a] *Mat. Med. vol. ii. p.* 334.

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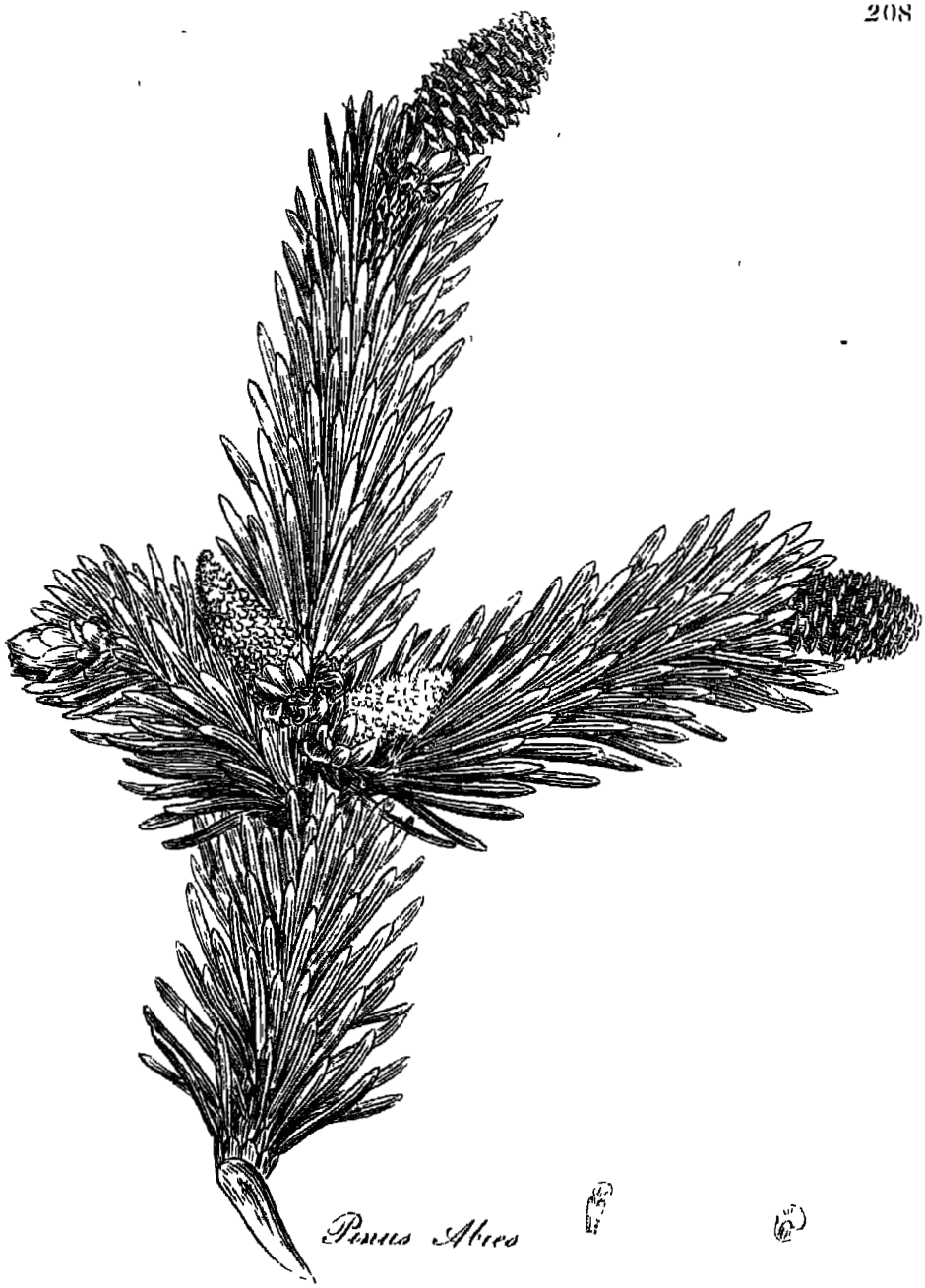


Pinus Abies

Published by D.r Wendelle Tome 1 1793

An ointment of tar is directed in both Pharmacopœias, which has been chiefly employed in cutaneous diſorders. Dr. Cullen ſays, " I have met with an empcrical 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 icthyoſis with great ſucceſs: but for reaſons readily to be apprehended, I have not had opportunities of repeating the practice." [b]

[b] *L. c.*

PINUS ABIES. NORWAY SPRUCE FIR TREE.

Pix burgundica. *Pharm. Lond. & Edinb.*

SYNONYMA. Picea major prima, ſive Abies rubra. *Bauh. Pin.* 493. Picea major. *Ger. Emac. p.* 1354. *Park. Theat. p.* 1538. Abies mas Theophraſti. *Raii Hiſt. p.* 1396. *Synop. p.* 441. P. Abies. *Hudſon. Flor. Ang. ed.* 1. *p.* 361. Abies tenuiore folio, fructu deorſum inflexo. *Du Hamel Arb.* 1. *p.* 3. *t.* 2. The Spruce Fir Tree. *Hunter's Evelyn.* 178.

Claſs Monoecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1077.

Eſſ. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* o. *Stam.* plurima. *Antheræ* nudæ.

Fem. Cal. ſtrobili: ſquama 2-flora. *Cor.* o. *Piſt.* 1. *Nux* ala membranacea excepta.

Sp. Ch.

Sp. Ch. P. foliis ſolitariis ſubtetragonis acutiuſculis diſtichis, ramis infra nudis, conis cylindraceis. *Hort. Kew.*

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 concretes 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 Pharmacopœias *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 sylvestris

PINUS PICEA. SILVER FIR TREE.

Terebinthina communis. *Pharm. Lond. & Edinb.*

SYNONYMA. Abies conis ſurſum ſpectantibus, ſeu mas. *Bauh. Pin. p.* 505. Abies. *Ger. Emac. p.* 1363. *Park. Theat. p.* 1539. Abies Taxi foliis. *Raii Hiſt. p.* 1394. *Synop. p.* 441. Abies foliis ſolitariis emarginatis, conis oblongis erectis, ſquamis ſubrotundis planis baſi acuminatis. *Du Roy. Baumz. T.* 2. *p.* 95. *Hall. n.* 1657. Pinus Picea. *Hudſon. Flor. Ang. p.* 361. Abies taxi folio, fructu ſurſum ſpectante. *Du Hamel. Arb.* 1. *p.* 3. *t.* 1. The Silver Fir Tree. *Hunter's Evelyn. Sylva.* 178.

Claſs Monoecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1077.

Eſſ. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* 0. *Stam.* plurima. *Antheræ* nudæ.

Fem. Cal. Strobili: ſquama 2-flora. *Cor.* 0. *Piſt.* 1. *Nux* ala membranacea excepta.

Sp. Ch. P. foliis ſolitariis planis emarginatis pectinatis, ſquamis coni obtuſiſſimis adpreſſis. *Hort. Kew.*

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 obtuſely pointed, and grow ſo cloſe as almoſt to conceal the bark; on the lower branches they are emarginated, and ſtand in a pectinated 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

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 Linnæus, and ſeveral other writers on the Materia Medica, refer the common turpentine to the pinus ſylveſtris, and the terebinthina argentoratenſis, 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.*

SYNONYMA. Larix. *Bauh. Pin. p.* 493. *Ger. Emac. p.* 1385. *Park. Theat. p.* 1533. Pinus foliis faciculatis deciduis, conis ovato-oblongis, ſquamis ovatis ſubſcabris margine laceris. *Du Roy Baumz. T.* 2. *p.* 61. Larix folio deciduo conifera. *Du Hamel. Arb.* 1. *p.* 332. *t.* 131. *Bauh. Hiſt.* 1. *p.* 265. *Hall. Hiſt. n.* 1658. The Larch Tree. *Hunter's Evel.* 179.

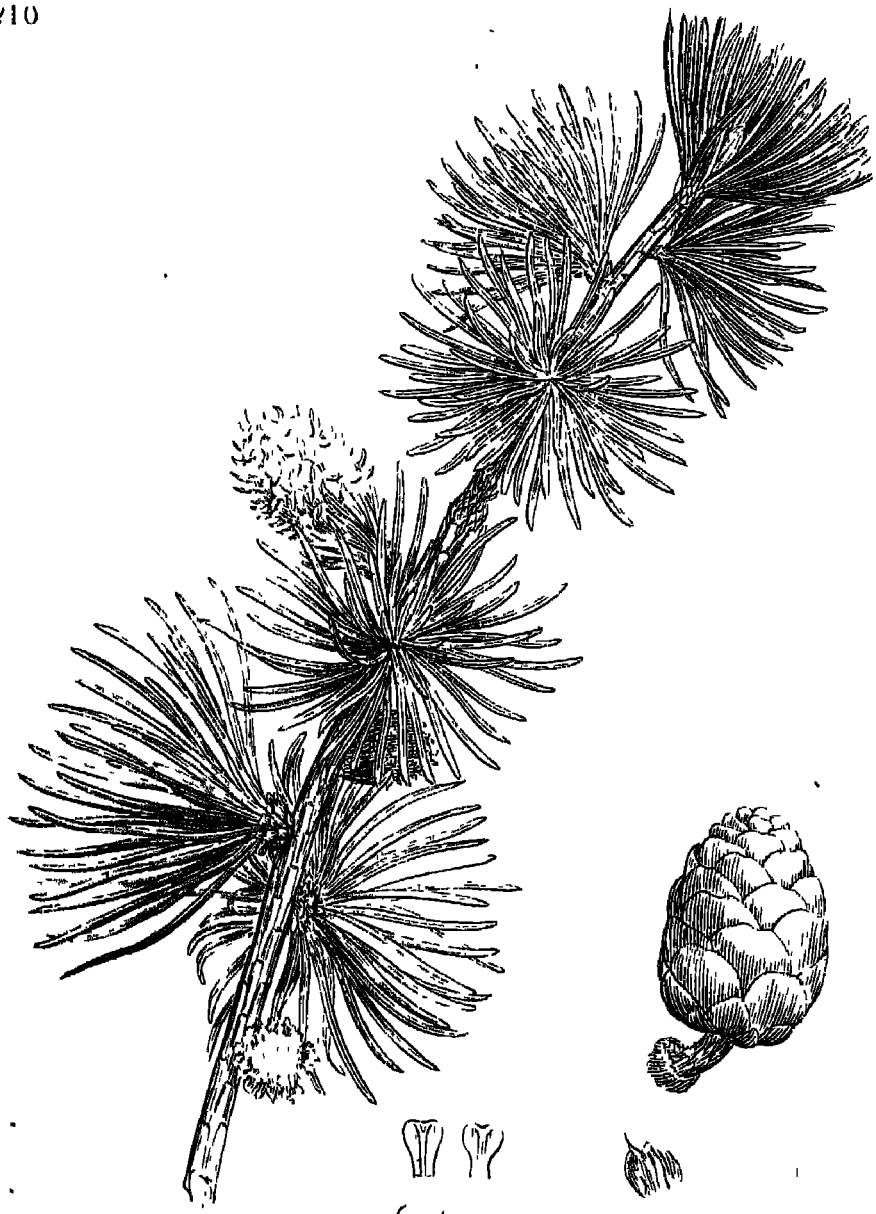
Claſs Monoecia. *Ord.* Monadelphia. *Lin. Gen. Plant.* 1077.

Eſſ. Gen. Ch. *Masc. Cal.* 4-phyllus. *Cor.* o. *Stam.* plurima. *Antheræ* nudæ.

Fem. Cal. ſtrobili: ſquama 2-flora. *Cor.* o. *Piſt.* 1. *Nux* ala membranacea excepta.

Sp. Ch. P. foliis faciculatis mollibus obtuſiuſculis, bracteis extra ſquamas ſtrobilorum exſtantibus. *Hort. Kew.*

THE



Pinus Larix

Published by W. Curtis Lane 1 1793

THE long ſlender pendent branches and whitiſh bark readily diſtinguiſh the Larch from the preceding ſpecies of pine: the leaves are deciduous, ſlender, 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 bitteriſh 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 Piſtacia Terbinthius, (ſee page 415.) 2. the Common, from the Pinus Picea: to this tree is alſo referred the Terebinthina argentoratenſis, or Straſburgh turpentine: 3. the Venice turpentine: and here we may include the balſamum canadenſe, or Canada balſam, 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 ſubtile penetrating eſſential oil, vulgarly called ſpirit; a yellow or blackiſh reſin remaining in the ſtill, which is the common roſin of the ſhops. The eſſential oil, on being diſtilled in a retort, becomes more ſubtile, and in this ſtate is called ethereal oil of turpentine.

All the turpentines have been conſidered as hot ſtimulating corroborants and detergents, qualities which they poſſeſs in common.[a]

[a] Venice turpentine is thought to be the moſt powerfully diuretic and detergent: the Cyprus and Straſburgh kinds the moſt corroborant.

They

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 coſtiveneſs. When turpentine is carried into the blood-veſſels, 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 inſtances, 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 rubifacient, &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.

F I N I S.

INDEX TO THE THIRD VOLUME.

GENERAL LATIN INDEX,

In which the OFFICINAL NAMES are diſtinguiſhed by Roman Letters, the SYSTEMATIC by italics.

GENERAL ENGLISH INDEX.

The following ARRANGEMENT is extracted from the MATERIA MEDICA, publiſhed by Dr. CULLEN.

MATERIÆ MEDICÆ TABULA GENERALIS.

In qua Medicamenta ad Capita quædam ſecundum indicationes morborum curatorias quibus reſpondent, referuntur.

MATERIA MEDICA conſtat ex

- NUTRIMENTIS quæ ſunt,
  - *Cibi*, Sect. I.
  - *Potus*, S. II.
  - et quæ cum his aſſumuntur *Condimenta*, S. III.
- MEDICAMENTIS quæ agunt in
  - Solida.
    - Simplicia.
      - *Aſtringentia*, Cap. I.
      - *Tonica*, C. II.
      - *Emollientia*, C. III.
      - *Erodentia*, C. IV.
    - Viva.
      - *Stimulantia*, C. V.
      - *Sedantia*.
        - *Narcotica*, C. VI.
        - *Refrigerantia*, C. VII.
      - *Antiſpaſmodica*, C. VIII.
  - Fluida.
    - Immutantia.
      - Fluiditatem.
        - *Attenuantia*, C. IX.
        - *Inſpiſſantia*, C. X.
      - Miſturam.
        - Acrimoniam corrigentia.
          - In genere
            - *Demulcentia*, C. XI.
          - In ſpecie
            - *Antacida*, C. XII.
            - *Antalkalina*, C. XIII.
            - *Antiſeptica*, C. XIV.
    - Evacuantia.
      - *Errhina*, C. XV.
      - *Sialogoga*, C. XVI.
      - *Expectorantia*, C. XVII.
      - *Emetica*, C. XVIII.
      - *Cathartica*, C. XIX.
      - *Diuretica*, C. XX.
      - *Diaphoretica*, C. XXI.
      - *Menagoga*, C. XXII.

CATALOGUE of the VEGETABLE MATERIA MEDICA,

According to the preceding TABLE.

I. NUTRIMENTA.

A. FRUCTUS.

a. *Acido-dulces recentes.*

Prunum
Aurantium
Limonium
Rubus idæus
Ribes rubrum
—— nigrum
Morum
Uvæ vitis

b. *Acido-dulces siccatæ.*

Uvæ passæ majores
—— —— minores
Caricæ

B. HERBÆ OLFRACEÆ.

Nasturtium aquaticum
Taraxacum
Petroselinum
Cinara

C. RADICES.

Daucus
Allium
Satyrion

D. SEMINA *Nuces.*

Amygdalæ
—— dulces
—— amaræ
Juglans
Olivæ

II. MEDICAMENTA.

I. ADSTRINGENTIA.

Rosa rubra
Pentaphyllum
Tormentilla
Rubia
Acetosa
Hydrolapathum
Bistorta
Filix
Trichomanes
Granatum
Quercus
Gallæ
Lignum campechense
Cydonia
Morum
Pruna sylvest.
Acacia
Catechu
Sanguis draconis
Adstringentia varia
Anchusa
Balustina
Hypericum
Millefolium
Plantago
Convallaria
Uva ursi

II. TONICA.

Gentiana
Centaureum minus
Quassia
Simaroubra
Trifolium palustre
Fumaria
Chamæmelum
Tanacetum
Absynthium
Abrotanum
Absynthium maritimum
Scordium
Serpentaria virginiana
Arnica
Cortex peruvianus

III. EMOLLIENTIA.

a. *Columniferæ.*

Althæa
Malva

b. *Farinosa.*

Cydonium semina
Fœnum græcum
Linum

Emollientia varia.

Parietaria
Verbascum
Lilium album

IV. ERODANTIA SIVE CORROSIVA.

V. STIMULANTIA.

A. *Verticillatæ.*

Lavendula
Melissa
Majorana

Origanum
Marum
Rosmarinus
Hyssopus
Hedera terrestris
Mentha
Mentha piperitis
Pulegium
Thymus
Serpyllum
Salvia

B. *Umbellatæ.*

Anethum
Angelica
Anisum
Caruon
Coriandrum
Cuminum
Fœniculum
Pimpinella

C. *Siliquosæ.*

Cochlearia
Nasturtium aquat.
Raphanus rusticanus
Sinapi

D. *Alliaceæ.*

Allium

E. *Coniferæ.*

Abies
Pinus
Juniperus

F. *Balsamica.*

Terebinthina veneta
——— communis
Balsamum canadense
——— copaiva
——— tolutanum
——— gileadense

G. *Resinosa.*

Guaiacum
Ladanum
Styrax calamita
Benzoe

II. *Aromatica.*

Cinnamomum
Nux Moschata
Macis
Caryophyllus arom.
Pimento
Canella alba
Cascarilla
Piper nigrum
——— longum
——— indicum
Zingiber
Cardamomum minus
Zedoaria
Serpentaria virginiana
Ginseng
Calamus aromaticus

I. *Acria.*

Arum
Pyrethrum
Staphisagria

SEDANTIA.

VI. NARCOTICA.

a *Rhœades.*

Papaver album
——— erraticum

b. *Umbellatæ.*

Cicuta
Cicuta aquatica

c. *Solonaceæ.*

Belladonna
Hyoscyamus
Nicotiana
Solanum
Stramonium

d. *Variæ.*

Laurus
Camphora
Crocus
Vinum

VII. REFRIGERANTIA.

Plantarum Fructus
Herbæ et Radices acidi

VIII. ANTISPASMODICA.

Herbæ fœtidæ.

Artemisia
Atriplex fœtida
Cuminum
Pulegium
Ruta
Sabina

Gummi fœtidæ.

Asafœtida
Galbanum
Opoponax

———

Valeriana sylvestris

IX. DILUENTIA.

X. ATTENUANTIA.

Alkalina
Saccharum
Glycyrrhiza
Fructus siccatæ

XI. INSPISSANTIA.

Acida
Demulcentia farinosa et mucilaginosa.

XII. DEMULCENTIA.

Mucilaginosa
Gummi arabicum
——— tragacantha
Farinosa
Oleosa blanda

XIII. ANTACIDA.

XIV. ANTALKALINA.

XV. ANTISEPTICA.

Plantarum partes acidæ
Olera acescentia

Saccharum
Plantæ ſiliquoſæ
——— alliaceæ
Aſtringentia
Amara
Aromatica
Olea eſſentialia
Camphora
Gummi-reſinæ
Crocus
Contrayerva
Valeriana ſylv.
Opium
Papaver album
Vinum

XVI. ERRHINA.

Aſarum
Helleborus albus
Iris paluſtris
Pyrethrum

XVII. SIALOGOGA.

Angelica
Caryophylli arom.
Imperatoria
Nicotiana
Piper
Pyrethrum

XVIII. EXPECTORANTIA.

Hedera terreſtris
Marrubium
Pulegium
Enula campana
Iris florentina
Nicotiana
Scilla
Tuſſilago
Benzoe
Styrax
Balſamum canad.
——— tolutanum

XIX. EMETICA.

Aſarum
Ipecacuanha
Nicotiana
Scilla
Sinapi
Raphanus ruſt.
Amara

XX. CATHARTICA.

1 *Mitiora*
Aſceſcentia
Fructus acido-dulces
Caſſia fiſtularis
Tamarindus

Dulcia.

Saccharum
Manna
Radices dulces
Olera blanda

———

Roſa damaſcena
Viola
Polypodium
Olea blanda
Sinapi
Amara
Balſamica

2 *Acriora*
Rhabarbarum
Seneka
Geniſta
Sambucus
Ricinus
Senna
Helleborus niger
Jalapium
Scammonium
Spina cervina
Nicotiana
Helleborus albus
Colocynthis
Elaterium

XXI. DIURETICA.

Petroſelinum
Daucus
Fœniculum
Pimpinella
Eryngium
Rubia tinctorum

Varia.

Bardana
Dulcamara
Arum
Aſarum
Digitalis
Enula camp.
Geniſta
Nicotiana
Ruta
Sabina
Seneka
Scilla
Amara
Balſamica
Siliquoſæ
Alliaceæ

XXII. DAPHORETICA.

Crocus
Dulcamara
Opium
Camphora
Contrayerva
Serpentaria
Salvia
Scordium
Guaiacum
Saſſafras
Seneka
Acida vegetab.
Olea eſſentialia
Vinum
Diluentia

XXIII. MENAGOGA.

Aloe
Gummi fœtida
Plantæ fœtidæ
Crocus

[*This Arrangement, though evidently defective, yet conſidering the authority on which it ſtands, we have thought proper to publiſh it without any material alteration.*]

Systematic Names.	English.	Officinal.
Glycyrrhiza *glabra*	Common Liquorice	Glycyrrhiza
Aſtragalus *Tragacantha*	Goats Thorn Milk Vetch	Tragacantha, *gummi*
Trigonella *Fœnum græcum*	Common Fenugreek	Fœnum græcum
XXV. *LOMENTACEÆ.*		
Caſſia *Senna*	Senna Caſſia	Senna
—— *Fiſtula*	Purging Caſſia	Caſſia fiſtularis
Mimoſa *Catechu*	Catechu Mimoſa	Catechu, *extractum*
—— *nilotica*	Egyptian Thorn Mimoſa	Arabicum, *gummi*
Tamarindus *indica*	Tamarind Tree	Tamarindus
Hæmatoxylum *campechianum*	Logwood Tree	Lignum Campechenſe
Polygala *Senega*	Rattleſnake-Root Milk-Wort	Seneka
Fumaria *officinalis*	Common Fumitory	Fumaria
XXVI. *MULTISILIQUÆ.*		
Aconitum *Napellus*	Common Wolf's-Bane	Napellus
Delphinium *Staphiſagria*	Staveſacre	Staphiſagria
Helleborus *niger*	Black Hellebore	Helleborus niger
—— *fœtidus*	Bears'-Foot	Helleboraſter
Anemone *pratenſis*	Meadow Anemone	Pulſatilla nigricans
Clematis *recta*	Upright Virgin's Bower	Flammula Jovis
Dictamnus *albus*	Baſtard Dittany	Dictamnus albus
Ruta *graveolens*	Common Rue	Ruta
XXVII. *SENTICOSÆ.*		
Potentilla *reptans*	Cinquefoil	Pentaphyllum
Rubus *idæus*	Raſp-Berry	Rubus idæus
Roſa *centifolia*	Hundred-leaved Roſe	Roſa damaſcena
—— *gallica*	Red Officinal Roſe	Roſa rubra
—— *canina*	Hip, or Dog Roſe	Cynoſbatus, *fructus*
XXVIII. *POMACEÆ.*		
Pyrus *Cydonia*	Quince Tree	Cydonium malum
Prunus *domeſtica*	Prune, or Plum Tree	Prunum gallicum
—— *ſpinoſa*	Sloe Tree	—— ſylveſtre
Amygdalus *communis*	Common Almond	Amygdala
Punica *Granatum*	Pomegranate	Granatum
Citrus *Medica*	Lemon Tree	Limon
—— *Aurantium*	Orange Tree	Aurantium hiſpalenſe

Systematic Names.	English.	Officinal.
Ribes *rubrum*	Red Currant	Ribes rubrum
—— *nigrum*	Black Currant	—— nigrum
	XXIX. *HESPERIDEÆ.*	
Myrtus *Pimenta*	All-Spice	Pimento
Caryophyllus *aromaticus*	Clove Tree	Caryophyllum aromaticum
	XXX. *SUCCULENTÆ.*	
	XXXI. *COLUMNIFERÆ, S. MALVACEÆ.*	
Althæa *officinalis*	Marſh Mallow	Althæa
Malva *ſylveſtris*	Common Mallow	Malva
	XXXII. *GRUINALES.*	
Guaiacum *officinalis*	Guaiacum	Guaiacum
Quaſſia *amara*	Bitter Quaſſia	Quaſſia
——— *Simaruba*	Simaruba Quaſſia	Simarouba
Linum *uſitatiſſimum*	Common Flax	Linum
Oxalis *Acetoſella*	Wood-Sorrel	Acetoſella
	XXXIII. *CARYOPHYLLEÆ.*	
Dianthus *Caryophyllus*	Clove Pink	Caryophyllum rub.
	XXXIV. *CALYCANTHEMÆ.*	
	XXXV. *ASCYROIDEÆ.*	
Ciſtus *creticus*	Cretan Ciſtus	Ladanum, *reſina.*
Hypericum *perforatum*	St. John's Wort	Hypericum
Fraxinus *Ornus*	Flowering Aſh	Manna
	XXXVI. *COADUNATÆ.*	
	XXXVII. *DUMOSÆ.*	
Rhamnus *catharticus*	Purging Buckthorn	Spina cervina
Sambucus *nigra*	Common Black Elder	Sambucus
Amyris *Elemifera*	Gum Elemi Tree	Elemi, reſina
——— *gileadenſis*	Balſam of Gilead Tree	Balſamum gileadenſe
Copaifera *officinalis*	Balſam of Capaiva Tree	Balſamum Copaiva
Myroxylon *peruiferum*	Balſam of Peru Tree	Balſ. peruvianum
Toluifera *Balſamum*	Balſam of Tolu Tree	Balſ. tolutanum
	XXXVIII. *TRIHILATÆ.*	
Æſculus *Hippo-caſtanum*	Horſe-Cheſnut	Hippocaſtanum

Systematic Names.	English.	Officinal.
	XXXIX. *TRICOCCÆ.*	
Croton *Cascarilla*	Willow-leaved Croton	Cascarilla
Ricinus *communis*	Palma Christi	Ricinus
Stalagmitis *Cambogioides*	Gamboge Tree	Gambogia
	XL. *OLERACEÆ.*	
Salsola *Kali*	Prickly Salt-Wort	Barilla, Natron
Chenopodium *Vulvaria*	Stinking Goosefoot	Atriplex fœtida
Rumex *aquaticus*	Water Dock	Hydrolapathum
——— *Acetosa*	Common Sorrel	Acetosa
Rheum *palmatum*	Officinal Rhubarb	Rhabarbarum.
Polygonum *Bistorta*	Bristort Snakeweed	Bistorta
Laurus *Cinnamomum*	Cinnamon Tree	Cinnamomum
——— *nobilis*	Sweet Bay	Laurus
——— *Sassafras*	Sassafras Tree	Sassafras
——— *Camphora*	Camphor Tree	Camphora
Canella *alba*	Laurel-leaved Canella	Canella alba
Myristica *Moschata.*	Nutmeg Tree	Nux moschata
	XLI. *SCABRIDÆ.*	
Parietaria *officinalis*	Wall Pellitory	Parietaria
Dorstenia *Contrayerva*	Contrayerva	Contrayerva
Ficus *Carica*	Fig Tree	Carica
Urtica *dioica*	Common Nettle	Urtica
Morus *nigra*	Mulberry Tree	Morum
Ulmus *campestris*	Common Elm	Ulmus
	XLII. *VERPECULÆ.*	
Daphne *Mezereum*	Mezereon	Mezereum
	XLIII. *PALMÆ.*	
Cocos *butyracea*	Oil Palm Tree	Palma, *oleum*
	XLIV. *PIPERITÆ.*	
Piper *nigrum*	Black Pepper	Piper nigrum
—— *longum*	Long Pepper	—— longum
—— *Cubeba*	Cubeb Pepper	Cubebæ
Acorus *Calamus*	Sweet Flag	Calamus aromaticus
Arum *maculatum*	Common Arum	Arum

XLV. *SCITAMINEÆ.*

Systematic Names.	English.	Officinal.
Amomum *Zingiber*	Ginger	Zingiber
——— *Cardamomum*	Cardamom	Cardamomum minus
Curcuma *longa*	Turmeric	Curcuma
Kæmpferia *rotunda*	Zedoary	Zedoaria

XLVI. *LILIACEÆ.*

Lilium *candidum*	Common White Lily	Lilium album
Scilla *maritima*	Officinal Squill	Scilla
Allium *sativum*	Common Garlick	Allium
Veratrum *album*	White Hellebore	Helleborus albus
Colchicum *autumnale*	Common Meadow Saffron	Colchicum
Crocus *sativus*	Saffron	Crocus
Aloès *species variæ*	Aloe	Aloé
Convallaria *Polygonatum*	Solomon's Seal	Convallaria

XLVII. *ENSATÆ.*

Iris *florentina*	Florentine Orris	Iris florentina
— *Pseudo-acorus*	Yellow Water Flag	Iris paluftris

XLVIII. *ORCHIDEÆ.*

Orchis *mascula*	Male Orchis	Satyrium

XLIX. *TRIPETALOIDEÆ.*

Calamus *Rotang*	Dragon's Blood Tree	Sanguis draconis

L. *CALAMARIÆ.*

LI. *GRAMINA.*

Triticum *hybernum*	Wheat	Triticum
Hordeum *distichon*	Barley	Hordeum
Avena *sativa*	Oat	Avena
Saccharum *officinarum*	Sugar Cane	Saccharum

LII. *FILICES.*

Polypodium *Filix mas*	Male Fern	Filix
Asplenium *Trichomanoides*	Maidenhair	Trichomanes

LIII. *MUSCI.*

LIV. *ALGÆ.*

Lichen *islandicus*	Eryngo-leaved Lichen	Lichen islandicus

LV. *FUNGI.*

Boletus *igniarius*	Agaric	Agaricus chirurgorum

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.

SYSTEMATIC NAMES.	ENGLISH.	OFFICINAL.
Pinus *sylvestris*	Scotch Fir	Pix liquida
—— *Picea*	Silver Fir Tree	Terebinthina vulgaris
—— *Abies*	Norway Spruce Fir Tree	Pix Burgundica
—— *Larix*	Common White Larch Tree	Terbinthina veneta
Juniperus *communis*	Common Juniper	Juniperus
——— *Lycia*	Olibanum Juniper	Olibanum, *gummi resinæ*
——— *Sabina*	Common Savin	Sabina

II. *AMENTACEÆ.*

Salix *fragilis*	Crack Willow	Salix
Juglans *regia*	Common Wallnut Tree	Juglans
Quercus *Robur*	Common Oak Tree	Quercus
Pistacia *Terebinthus*	Common Turpentine Tree	Terebinthina chia
——— *Lentiscus*	Common Mastich Tree	Mastiche

III. *COMPOSITÆ.*

Arctium *Lappa*	Common Burdock	Bardana
Centaurea *benedicta*	Holy Thistle	Carduus benedictus
Leontodon *Taraxacum*	Common Dandelion	Taraxacum
Artemisia *Abrotanum*	Common Southernwood	Abrotanum
——— *Absinthium*	Common Wormwood	Absinthium
——— *vulgaris*	Common Mugwort	Artemisia
——— *maritima*	Sea Wormwood	Absinthium maritimum
——— *Santonica*	Tartarian Wormwood	Santonicum
Tanacetum *vulgare*	Common Tansy	Tanacetum
Tussilago *Farfara*	Colt's Foot	Tussilago
Anthemis *nobilis*	Common Camomile	Chamæmelum
——— *Pyrethrum*	Pellitory of Spain	Pyrethrum
Inula *Helenium*	Elecampane	Enula campana
Arnica *montana*	Mountain Arnica	Arnica
Achillea *Millefolium*	Common Yarrow	Millefolium.

IV. *AGGREGATÆ.*

Systematic Names.	English.	Officinal.
Valeriana *officinalis*	Officinal Valerian	Valeriana ſylveſtris

V. *CONGLOMERATÆ.*

Plantago *major*	Great Plantane	Plantago

VI. *UMBELLATÆ.*

Eryngium *maritimum*	Sea Eryngo	Eryngium
Daucus *Carota*	Wild Carrot	Daucus ſylveſtris
Conium *maculatum*	Common Hemlock	Cicuta
Ferula *Aſſa fœtida*	Aſafœtida Gigantic Fennel	Aſafœtida, *gummi reſina*
Angelica *Archangelica*	Garden Angelica	Angelica
Bubon *Galbanum*	Lovage-leaved Bubon	Galbanum, *gummi reſina*
Cuminum *Cymynum*	Cumin	Cuminum
Coriandrum *ſativum*	Common Coriander	Coriandrum
Sium *nodiflorum*	Creeping Water Parſnep	Sium
Imperatoria *Oſtruthium*	Common Maſterwort	Imperatoria
Paſtinaca *Opopanax*	Rough Parſnep	Opopanax, *gummi reſina*
Anethum *graveolens*	Common Dill	Anethum
——— *Fœniculum*	Common Fennel	Fœniculum
Carum *Carui*	Common Carraway	Caruon
Pimpinella *Saxifraga*	Small Burnet Saxifrage	Pimpinella
——— *Aniſum*	Aniſe	Aniſum
Apium *Petroſelinum*	Common Parſley	Petroſelinum

VII. *HEDERACEÆ.*

Vitis *vinifera*	Common Vine	Vitis
Panax *quinqefolium*	Ginſeng	Ginſeng

VIII. *SARMENTACEÆ.*

Smilax *Sarſaparilla*	Sarſaparilla Smilax	Sarſaparilla
Ciſſampelos *Pareira*	Pareira brava Ciſſampelos	Pareira brava
Ariſtolochia *Serpentaria*	Snakeroot Birthwort	Serpentaria virginiana
——— *clematitis*	Upright Birthwort	Ariſtolochia tenuis
Aſarum *europæum*	Aſarabacca	Aſarum

IX. *STELLATÆ.*

Rubia *tinctorum*	Dyer's Madder	Rubia tinctorum
Spigelia *marilandica*	Perennial Worm-graſs	Spigelia marilandica

X. *CYMOSÆ.*

XI. *CUCURBITACEÆ.*

Systematic Names.	English.	Officinal.
Cucumis *Colocynthis*	Bitter Cucumber	Colocynthis
Momordica *Elaterium*	Wild Cucumber	Cucumis agreſtis
Bryonia *alba*	White Briony	Bryonia

XII. *SALONACEÆ.*

Solanum *Dulcamara*	Woody Nightſhade	Dulcamara
Atropa *Belladonna*	Deadly Nightſhade	Belladonna
Hyoſcyamus *niger*	Black Henbane	Hyoſcyamus
Datura *Stramonium*	Common Thorn Apple	Stramoinum
Nicotiana *Tabacum*	Tobacco	Nicotiana
Capſicum *annuum*	Annual Capſicum	Piper indicum
Verbaſcum *Thapſus*	Common Mullein	Verbaſcum
Digitalis *purpurea*	Common Foxglove	Digitalis

XIII. *CAMPANACEÆ.*

Convolvulus *Scammonia*	Scammony Bindweed	Scammonium
——— *Jalappa*	Jalap Bindweed	Jalapium
Lobelia *ſiphilitica*	Blue Lobelia	Lobelia
Viola *odorata*	Sweet Violet	Viola

XIV. *CONTORTÆ.*

Cinchona *officinalis*	Peruvian Bark Tree	Peruvianus cortex

XV. *ROTACEÆ.*

Gentiana *lutea*	Yellow Gentian	Gentiana
Chironia *Centaurium*	Leſſer Centaury	Centaurium minus
Menyanthes *trifoliata*	Buck-Bean	Trifolium paludoſum

XVI. *SEPIARIÆ.*

Olea *europæa*	Common European Olive	Oliva

XVII. *BICORNES.*

Arbutus *Uva urſi*	Bear-Berry	Uva urſi
Styrax *officinale*	Storax Tree	Styrax, *reſina*
Styrax *Benzoin*	Gum Benjamin Tree	Benzoe, *reſina*
Santalum *Album*	Yellow Saunders Tree	Santalum Citrinum

XVIII. *ASPERIFOLIÆ.*

Anchuſa *tinctoria*	Dier's Bugloſs	Anchuſa

XIX. *VERTICILLATÆ.*

Systematic Names.	English.	Officinal.
Teucrium *Marum*	Herb Maſtich	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	Lavendula
Origanum *vulgare*	Common Majoram	Origanum
——— *Marjorana*	Sweet Marjoram	Majorana
Mentha *piperita*	Pepper-Mint	Mentha piperitis
——— *viridis*	Spear-Mint	——— ſativa
——— *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. *PERSONATÆ.*

Gratiola *officinalis*	Hedge-Hyſſop	Gratiola
Veronica *Beccabunga*	Brooklime	Becabunga

XXI. *RHOEADES.*

Papaver *Rhœas*	Red Poppy	Papaver erraticum
——— *ſomniferum*	Common White Poppy	Papaver album, Opium

XXII. *PUTAMINEÆ.*

XXIII. *SILIQUOSÆ.*

Siſymbrium *Naſturtium*	Water-Creſſes	Naſturtium aquaticum
Cardamine *pratenſis*	Ladies-Smock	Cardamine
Sinapis *nigra*	Common Muſtard	Sinapi
Cochlearia *officinalis*	Scurvy-Graſs	Cochlearia hortenſis
——— *Armoracia*	Horſe-Radiſh	Raphanus ruſticanus

XXIV. *PAPILIONACEÆ.*

Dolichos *pruriens*	Cowhage Dolichos	Dolichos
Geoffroya *inermis*	Smooth Baſtard Cabbage-tree	Geoffræa
Spartium *ſcoparium*	Common Broom	Geniſta