

Medical properties and uses. — Both the wood and the guaiac are stimulant, diaphoretic, diuretic, and purgative. The wood was introduced into Europe by the Spaniards as a remedy for lues venerea in 1508, but it had long before been used for the same purpose by the natives of St. Domingo. It obtained so much celebrity, that the exhibition of mercury was discontinued for a considerable length of time¹, and even in the eighteenth century its specific powers over this disease were maintained by Boerhaave: but frequent disappointments and more correct observations have shown that it possesses no powers of eradicating the venereal virus; and that it is useful, only after a successful mercurial course, for repairing the strength and vigour of the system; “and where a thickened state of the ligaments, or of the periosteum, remains, or where there are foul indolent ulcers²,” or in suspending the progress of some of the secondary symptoms for a short time, as ulcers of the tonsils, eruptions, and nodes. The decoction of the wood has been found more useful in cutaneous diseases, scrofulous affections of the membranes and ligaments, and in ozaena. The guaiac itself is an efficacious remedy in chronic rheumatism and arthritic affections, as well as those diseases for which the decoction of the wood is usually given; and in every respect it may be regarded as the active ingredient of the wood. Its sensible effects are a grateful sense of warmth in the stomach, dryness of the mouth, and thirst, with a copious flow of sweat, if the body be kept externally warm, or if the guaiac be united with opium and antimonials; but when the body is freely exposed, instead of producing diaphoresis, it augments considerably the secretion of urine. It may be exhibited either in substance or in tincture. The dose is from grs. x. to ʒss, in the form of pills or of bolus; or made into an emulsion with water by means of mucilage or yolk of egg. Larger doses purge.

Officinal preparations. Of the wood — *Decoctum Guaiaci comp.* E. Of the guaiac — *Mistura Guaiaci*. L. *Tinctura Guaiaci* L. E. D. *Tinctura Guaiaci ammoniata*. L. E. D.

HÆMATOXYLON.³ *Spec. Plant. Willd.* ii. 547.

Cl. 10. Ord. 1. Decandria Monogynia. Nat. ord. Lomentaceæ Linn. Leguminosæ Juss.

G. 880. *Calyx* five-parted. *Petals* five. *Capsule* lanceolate, one-celled, two-valved, with the valves boat-shaped.

Species 1. *H. campechianum*. The Logwood-tree. *Med. Bot.* 2d. ed. 455. t. 163.

¹ It was then sold for seven gold crowns a pound.

² Pearson's *Observations on the Effects of various Articles of the Materia Medica in the cure of Lues venerea*, p. 10.

³ From αἷμα blood, and ξύλον wood. *Millar's Dictionary*. The trivial name *Campechianum*, and the English term *Campechi wood* originated from *Palo Campechio*, the name imposed by the Spaniards who first discovered the wood.

Official. HÆMATOXYLI LIGNUM. *Lond. Edin. Dub.* Logwood.

Syn. Bois de Campeche (F.) Kampeesch-holz; Blauholz (G.) Campeggio (I.)

This tree is a native of South America, and attains to great perfection at Campeachy, in the bay of Honduras. It was introduced into Jamaica in 1715, and from its quick growth now grows in an abundance which much incommodes the landholders in the neighbourhood of Savannah la Mar; flowering in March and April.¹ The stem and branches are generally crooked, the former is seldom above twenty inches thick; and the tree scarcely ever rises more than twenty-four feet in height. It is covered with a dark-coloured rough bark; and has many smaller ramifications, which are close, prickly, and beset with strong spines. The leaves are abruptly pinnate, each composed of four or five pairs of sessile, obcordate, obliquely nerved leaflets. The flowers are in terminal spicular clusters: the calyx consists of brownish purple-coloured oblong obtuse segments; the petals are spreading, obtusely lanceolate, and of a reddish yellow colour. The stamens are downy, tapering, shorter than the corolla, with small oval anthers; the fruit is a double-valved pod, containing five or six small flat reniform seeds.

Logwood is brought to this country in logs, which are afterwards chipped. Those pieces which have a deeper colour are to be preferred. It is much employed as a dye-wood.

Qualities. — This wood is inodorous, but has a sweet astringent taste. It is hard, compact, heavy, and of a deep red colour, which it gives out both to water and alcohol. The recent infusions made with distilled water are yellow, but those with common water have a reddish purple colour, which is deepened by the alkalies, and changed to yellow by the acids. They form precipitates with the sulphuric, nitric, muriatic, and acetic acids; solutions of alum, sulphates of iron and of copper, acetate of lead, and tartarized antimony²; which are therefore incompatible in prescriptions with these infusions and decoctions. The colour of the precipitates varies; those with the acids are reddish brown, with alum and tartarized antimony violet, with sulphate of iron blueish black, sulphate of copper purplish blue, acetate of lead reddish black, and sulphate of magnesia, purple. According to Chevreul, logwood contains a volatile oil, tannin, two kinds of colouring matter, one of which is soluble both in water and alco-

¹ It was cultivated in this country by Mr. Miller in 1739; but is not now found in our hot-houses.

² When an infusion or decoction of logwood is kept for some time it becomes capable of producing a precipitate with gelatine; but when recent, no such effect takes place either with glue or isinglass. This was first observed by Dr. Bancroft.

hol, the other soluble in alcohol only; acetate of lime and of potash.¹

Medical properties and uses.—Logwood is supposed to be astringent: but this is a questionable opinion, for although it produces an ink with sulphate of iron, it possesses no acerbity, and does not produce a precipitate with gelatine.² It is employed in diarrhoea, and in the latter stage of dysentery; but the extract is more usually ordered. It has the advantage of giving tone to the general system, and thus obviates the lax state of the intestines. The decoction may be taken in doses of two or three fluid ounces, frequently repeated.

Official preparation. *Extractum Hamatoxyli*. L.

HELLEBORUS. *Spec. Plant. Willd.* ii. 1335.

Cl. 13. Ord. 6. Polyandria Polygynia. Nat. ord. Multisiliquæ Linn. Ranunculaceæ Juss.

G. 1089. Calyx none. Petals five or more. Nectaries bilabiate, tubular. Capsules many seeded, nearly erect.

Species 3. *H. niger*. Black Hellebore. *Med. Bot.* 2d ed. 473. t. 169.

Species 6. *H. fœtidus*. Fœtid Hellebore, or Bear's foot. *Med. Bot.* 2d ed. 477. t. 170. *Smith Flor. Brit.* 598. *Eng. Bot.* t. 613.

1. HELLEBORUS NIGER.

Official. HELLEBORI NIGRI RADIX. *Lond.* HELLEBORI NIGRI RADIX. *Edin.* —; (MELAMPEDIUM³) RADIX. *Dub.* The root of Black Hellebore.

Syn. Hellebore (F.) Schwartze Niesswurzel (G.) Ellebro negro (I.) Helleboro negro (S.) Kālī Koothie (H.) Khurbue usivud (Arab.)

Black hellebore, so named from the dark colour of the root, is a native of Austria, the Apennines, and Italy; flowering from December till March; whence it has been called Christmas rose, and has obtained a place in our gardens.⁴ The root is perennial, transverse, rough, knotted, externally black, internally whitish, and sends off many depending fibres. The leaves, which are deep green, spring directly from the root on long maculated petioles; and are composed generally of five leaflets, pedate, two being supported on one partial petiole on each side, and one terminal: the leaflets are ovato-lanceolate, smooth, shining, and coriaceous, with the upper half of each sparsely serrated. The flower-stalks are scapes, six or eight inches long, erect, round, somewhat tapering, sheathed, variegated with red, and bearing one or two flowers. The floral leaves supply the place of a calyx, are oval, and indented at the apex. The corolla consists of five large, roundish, concave, spreading petals, at first white, with a tint of red, deepened by age, but finally changing to green, after the pollen is shed, and the seed

¹ *Annales de Chimie*, lxi. 254. *Thomson's Chemistry*, v. 206.

² Vide *Baucoft. Phil. of Permanent Colours*, 2d ed. v. ii. p. 395.

³ Named from Melampus, a soothsayer, who first gave it as a purgative.

⁴ It was first cultivated in Britain by Gerard in 1596.

impregnated. The nectaries are greenish yellow, tubular, two-lipped, the upper lip longer and slightly emarginate, the lower finely notched. The filaments are numerous, and thread-like, with yellow anthers. The germens, which vary in number from four to eight, become beaked pods, containing many oval, black, shining seeds.

This plant has been supposed to be the *hellebore* of Hippocrates, but there is every reason for agreeing with Willdenow, that his fifth species, *Helleborus orientalis*, is the drug of the ancients. It was found by Bellonius and Tournefort¹ growing in plenty about Mount Olympus, and the island Anticyra, which was formerly celebrated for its production. Sometimes the roots of *Helleborus viridis*, *Adonis vernalis*, *Trollius europæus*, *Actæa spicata*, *Astrantia major*, and *Aconitum neomontanum*, are either ignorantly or fraudulently substituted for those of black hellebore. These are distinguished chiefly by their colour being paler than the roots of the hellebore.

Qualities.—The fibres of the roots, which are the parts used in medicine, are about the thickness of a straw, from four inches to a foot in length, corrugated, of a deep brown black on the outside, and internally white or yellowish. They have an unpleasant odour; and a nauseous, bitterish, acrid taste, benumbing the tongue, and leaving upon it an impression, "as when it hath been a little burnt with eating or supping any thing too hot."² The acrimony is impaired by keeping; and appears to depend on a volatile matter, as water distilled from the root has an acrid taste. Both alcohol and water extract its medicinal properties; and, as the spirituous preparation is the most active, these appear to depend on its resinous part. By coction with water it yields a very considerable portion of gummy matter and some resin. (See the extract.)

Medical properties and uses.—Black hellebore root is a drastic cathartic, and on this property probably depends its emmenagogue and hydragogue powers. In smaller doses it is supposed to act as an alterative. It has been much celebrated in mania, melancholia, dropsy, scabies, and worms; but does not appear to possess any particular advantages over the other resinous purgatives, which act with less virulence. As an emmenagogue it is useful in plethoric habits, when preparations of iron are contra-indicated. When black hellebore is taken in too great quantity, it occasions violent vomitings, inflammation of the stomach, and death. These effects are to be obviated by evacuating the stomach, by drinking copiously of mild mucilaginous fluids, and then employing the most powerful antiphlogis-

¹ Bellonii Obs. l. iii. c. 41. Tournefort, Voyage, ii. let. 21. p. 189.

² Grew,

tic measures. It is seldom prescribed in substance; but either in the form of tincture, or of extract, or of decoction made with two drachms of the root to a pint of water.¹ The dose of the root is from grs. x. to ʒj, which purges strongly; but to produce its other effects two or three grains are sufficient. Of the decoction fʒj may be given every four hours.

Official preparations. *Tinctura Hellebori nigri*. L. E. D. *Extractum Hellebori nigri*. E. D.

2. HELLEBORUS FETIDUS.

Official. HELLEBORI FETIDI FOLIA. *London.* HELLEBORASTER; FOLIA. *Dub.* The leaves of Fetid Hellebore.

Syn. Hellebore foetide (F.) Stinkende Nieswurz (G.) Elleboro fetido (L.) Helleboro hediondo (S.)

This is a perennial indigenous plant, growing under hedges and in shady places, on a chalky soil, flowering in March and April. The root is small, and bent, with a great many slender dark-coloured fibres. The stem is about eighteen inches high, round, strong, naked, divided and subdivided into branches, and compressed towards the top. The leaves, which stand upon long channelled footstalks, surrounding the middle of the stem, are of a deep lurid green colour, and pedate: the leaflets long, narrow, lanceolate, obscurely serrated, generally nine in number, four united at their bases on each side, and one terminal. At each ramification of the flower-stem is a stem-clasping broad stipule, or scaly leaf, trifid at the place where the stem first branches, then bifid, and at the ultimate subdivisions entire, oval, and pointed; those on the flowering stem are of a much paler green than the proper leaves. The flowers are numerous, terminal, peduncled, and pendent: the petals are five, two of which are oval, and the other three heart-shaped; the whole concave, persistent, of a pale green colour tipped with a claret purple: the nectaries are five or eight, similar to those of the black hellebore. The stamens are numerous, and flat at the base, the length of the petals, with white anthers; the germens three or more, becoming beaked pods, containing round black seeds.

These roots were long used as domestic worm medicine, before they were introduced into the list of materia medica by the London College.²

Qualities.—The odour of the recent plant is foetid, the taste of the leaves when chewed bitterish, biting, and so acrid as to excoriate the mouth. The stipules possess these qualities in a greater degree than the proper leaves.

Medical properties and uses.—The leaves of fetid hellebore

¹ Winttingham, *Thesaurus Med.* p. 67. ² "Probably upon the authority of Dr. Bissett." *Med. Bot.* 478.

are strongly cathartic and emetic; and in overdoses prove highly deleterious. They have been successfully, although they are now rarely, used as an anthelmintic against the lumbricus teres, for which they were strongly recommended by Dr. Bissett; and Woodville tried them with advantage upon a girl of twenty years of age, in the Middlesex Dispensary. They are given dried in the form of powder; or a decoction made by boiling ʒij of the recent leaves, or ʒss of the dried, in fʒviii of water for fifteen minutes; or a syrup made with the expressed juice of the recent leaves moistened with vinegar, which is supposed to correct the violent effects of the drug.

The dose of the powder is from grs. vj to ʒj; of the decoction from fʒj; and of the syrup a tea-spoonful at bed-time, and one or two in the morning, to children betwixt two and six years of age, on two or three successive days.

HERACLEUM. *Spec. Plant. Willd. i. 1421.*

Cl. 5. Ord. 2. Pentandria Digynia. Nat. ord. Umbellatæ.

G. 541. Fruit elliptical, emarginate, compressed, striated, margined.

Corolla difform inflex emarginate. Involucre caducous.

Species H. gummiferum. Gum-bearing Heracleum. Willd. Hortus Berolin. i. t. 53, 54.

Officinal. AMMONIACUM. Lond. Edin. Dub. Ammoniac.

Syn. Gomme Ammoniaque (F.) Ammoniak (G.) Gomma Ammoniaco (L.) Ammoniac (S.) Ushok (Arab.)

The plant which yields this gum-resin is a native of Africa, and the East Indies. It has not been scientifically described by any one who has seen it growing in its native soil¹, and the description which is about to be given, is that of a plant which Willdenow reared from seed found in the ammoniacum of the shops, and has named *Heracleum gummiferum*. The London College, on his authority, has admitted it as the ammoniacum plant; it flowers in June and July. The root is tapering, a span in length, fleshy, whitish, and twice divided at the apex. The stem rises three feet in height, is branched, erect, about an inch thick at the base, deeply furrowed, and sparsely furnished with hairs. The branches are opposite and divaricated. The radical leaves are a span in length, cordate, three-lobed, toothed, pubescent on the under surface, and supported on roundish, channelled, furrowed, petioles: the stem-leaves are opposite, somewhat cordate, three or four inches long, toothed, on petioles, the margin of the base of which is leafy, ventricose, and sheathing. The umbels are large and many-rayed, composed of many-flowered convex umbellules. The involucre is polyphyllous, with the leaflets linear, lanceolate, and deci-

¹ Mr. Jackson has seen and described the plant, of which he has also given a figure, but neither can be regarded as scientifically correct; and of course not authority to be relied on. *Account of Morocco*, p. 88.

duous; as are also the involucels, which, however, are persistent. The marginal flowers are hermaphrodite and rayed, the central hermaphrodite without the germen. The margin of the calyx is obsolete. The *marginal* flowers have a pentapetalous unequal corolla, the two outer petals being large, dilated, and somewhat cordate; and the three inner inflex cordate, and half the size only of the others. The *central* flowers are pentapetalous, equal, with inflex cordate petals. The filaments are five, capillary, with roundish anthers. There is no germen in the central flowers, but in the marginal it is oblong, inferior, and crowned with two short styles inserted into a glandular body, with capitate stigmas. The fruit is oblong, slightly emarginate, consisting of two striated seeds, convex on one side, and on the other plane.

Willdenow could not obtain any of the gum-resin, from this plant; but he has no doubt of its being the plant from which it is obtained. Mr. Jackson, in his account of Marocco, informs us, that the ammoniacum plant, which in the Arabic is named *feshook*, resembles the fennel¹, is ten feet in height, and one inch thick in the thickest part of the stem. The plant grows at El-araiche and M'Sharrah Rumellah; and neither bird nor beast is seen near the spot, but it is attacked by a horned beetle which perforates the stem with its horn, and the juice runs out at the wound. The ammoniacum is, however, procured by incisions also, and allowed to drop on the ground, where it hardens by the air and sun; on which account that from Barbary is mixed with a red earth, and is not saleable in the London market. The best ammoniacum is brought from the East Indies, packed in cases and chests. It is in large masses composed of small round fragments or tears; or in separate dry tears, which is generally considered a sign of its goodness.

Qualities.—Ammoniacum has a peculiar faint but not ungrateful smell; and a bitter nauseous sweet taste. The tears are yellow on the outside, and white within; brittle, and break with a vitreous fracture. Their specific gravity is 1.207. Ammoniacum is adhesive in the warm hand, softens by heat, but does not melt; and is partially soluble in water, alcohol, ether, solutions of alkalies, and vinegar. When triturated with water the solution is milky, but after some time it lets fall a resinous matter; which is the part of the ammoniacum that is taken up by ether and alcohol. Water or alcohol, when distilled off ammoniacum, bring over nothing from it. According to the analysis of Braconnot, it is composed of 70.0 parts of resin, 18.4 gum, 4.4 glutinous matter, and 6.0 water, in 100.0

¹ Both Dioscorides and Pliny describe ammoniacum as the juice of a species of *ferula* growing in Libya. *Dioscor.* l. iii. c. 98. *Plin.* l. xii. c. 28.

parts; 1·2 parts being lost in the analysis.¹ I find that sulphuric ether takes up six grains in ten of ammoniacum, and when evaporated, leaves a yellowish white resin², which is long of hardening, and is insipid, although it possesses the odour of the gum-resin: the taste resides in the gum, which in other respects possesses the properties of acacia gum. Water, therefore, is the proper menstruum for ammoniacum.

Medical properties and uses.—Ammoniacum is a stimulating expectorant, deobstruent, and antispasmodic; and is in large doses purgative. Externally it is discutient and resolvent. It is prescribed with advantage in asthma, chronic catarrh, and some other pulmonary affections; but, on account of its stimulating properties, its use must be avoided where any inflammatory action of the chest is going forward. As a deobstruent it is useful in visceral obstructions, hysteria, and chlorosis: and in that peculiar state of the bowels often accompanying hypochondriasis and dyspepsia, in which there is an almost constant degree of colic, particularly after taking food, and which appears to arise from a viscid mucus lodged in the intestines, a combination of ammoniacum and rhubarb is singularly efficacious. As an antispasmodic, Cullen properly considers it as the least powerful of the fetid gums. It may be combined with tartarised antimony, squills, assafoetida, and ipecacuanha, to promote its expectorant powers; and with myrrh, iron, and bitters, when its deobstruent properties are required. It is given either in substance, or diffused in water in the form of emulsion. Externally, it is applied under the form of plaster to scirrhus tumours and white swellings of the joints. (See *Preparations and Compositions*.)

The dose of ammoniacum is from grs. x. to grs. xxx.

Officinal preparations. *Mistura Ammoniaci*. L. D. *Emplastrum Ammoniaci*. L. *Emplastrum Ammoniaci cum Hydrargyro*. L.

HIRUDO.³ *Syst. Nat. Gmelin*. i. 3095.

Cl. 6. Ord. 1. Vermes intestina.

G. 280. Body oblong, truncated at both extremities, cartilaginous, moving by dilating the head and tail.

Sp. 2. *H. medicinalis*. The Medicinal leech. *Amœnit. Academ.* vii. 40.

Officinal. *HIRUDO MEDICINALIS*. *Dub.* The Leech.

Syn. Sang sue (F.) Blutlul; Ægle; Lake (G.) Sanguisuga; Mignatta (I.) Sanguijuela (S.) Khêruheen (Arab.) Jone (H.) Jelauea (Sanc.)

This species of leech is common throughout Europe, inhabiting lakes and stagnant pools. The body is about three inches long, tapering towards the head, composed of rings,

¹ *Annales de Chim.* lxxviii. 69. *Thomson's Chemistry*, v. 143.

² Nitric acid converts this resin into a yellow matter, which imparts a permanent yellow colour to silk.

³ Named from *haurio*, expressive of its well known peculiar action.—*Johnson's Treatise*, p. 40.

and capable of being very much lengthened and contracted. The colour of the back is dark olive, divided by four yellow or buff-coloured longitudinal lines, two of which are lateral, with a black line running through their centres; and the other two, which are on the upper part of the back, dividing it into three nearly equal parts, are broken with black. Within these lateral and upper lines are two others, which appear like chains of black and yellow. The belly is pale olive, thickly maculated with black or very dark blue irregular spots. The mouth is triangular, placed in the centre of a horse-shoe sucker which is under the head; and at the anal extremity is a broad circular sucker, by which it attaches itself to different bodies.

Leeches are oviparous. All the ova are discharged in one involucre, near the surface and the margins of pools, and are hatched by the heat of the sun. They do not cast the skin, as has been generally supposed; but at certain times throw off a tough slimy substance from their bodies, apparently the production of disease; and from which they get disincumbered by drawing themselves through between the moss and the matted roots of rushes.¹ During winter they remain almost torpid, hid amongst the thick network of aquatic roots which surround the pools.

Norfolk supplies a great part of the leeches which are brought to the London market; some are taken also in Suffolk, Hampshire, Kent, Essex, and Wales, but many are imported from Bourdeaux and Lisbon.² They are caught in spring and autumn by people who wade into the pools and allow them to fasten on their limbs; or more generally, the catchers beat, as they wade in, the surface of the water with poles, which sets the leeches in motion, and brings them to the surface; when they are taken with the hand and put into bags. As they come to the surface just before a thunder storm this is regarded as a good time for collecting them. They are best preserved in vessels half filled with soft water, kept in an equal and moderate temperature, (50° Fahr.) and covered over with a coarse cloth, so as to admit the air. The water should be changed once a week; and all the dead or sickly leeches removed from the general stock, for they are subject to much disease and great mortality. Leeches which have been used should not be returned to the stock till they appear to have completely regained their health and vigour, which is known by their feeling hard and firm when handled. As we are ignorant of their proper and na-

¹ I give this on the authority of Mr. Dickson of Covent Garden, who has made many curious observations on the economy of the leech.

² These differ from English leeches chiefly in having the belly of one uniform colour.

tural food, it is useless to attempt to feed them¹; but in winter it would perhaps be advantageous to put some moss into the vessel in which they are preserved.

Medical uses. — Leeches appear to have been first used by Themison. They are applied in cases where local blood-letting is necessary, as in ophthalmia, and particularly to places where cupping-glasses cannot be applied. In some habits, where there is a disposition to erysipelatous inflammation, their bites, which are triangular, occasion a considerable degree of irritation, and cedematous swellings follow, which are exceedingly troublesome; but in general they easily heal, and occasion no inconvenience. It is sometimes exceedingly difficult to make them bite, which they never will do when they are sick. The best mode of applying them, is to take them out of the water for some minutes before they are to be used, and to dry them well with a very soft cloth directly before they are applied. The part should also be well cleaned with soap and water, then washed with a little pure water, and made very dry. If there are any hairs on the spot, these must be close shaved. I have found this method preferable to that of wetting the part with milk and sugar, blood, or any other matter. When they, nevertheless, will not readily fix, or when it is wished to apply them very exactly on a particular spot, as, for instance, close to the angle of the eye in ophthalmia, Dr. Johnson recommends to puncture the part with a lancet; but I find that putting them into a large quill cut at both ends, and applying the end at which the head of the animal lies to the part, with the finger over the other end, is a never-failing mode of making them bite. The quill is withdrawn after they are firmly fixed. They drop off spontaneously, whenever they have gorged themselves with blood; and they may be separated at any time by sprinkling a little salt on the head. Very few leeches can draw more than half a fluid ounce of blood; and therefore it is necessary, in order to increase the quantity, to keep the orifices bleeding, by bathing them with hot water. It has been recommended to cut off the tail of the leech, so as to allow the blood to be discharged as fast as it is sucked, the leech continuing to suck notwithstanding this mutilation. After leeches drop off, the application of a little salt makes them disgorge all the blood they have sucked; and if they be immediately thrown into clean water, and this repeatedly changed for three or four times, they soon recover their health and vigour. Dr. Johnson advises the use of vinegar instead of salt, which is not apt to blis-

¹ Dr. Johnson says they live by adhering to and sucking the fluids of fish, frogs, &c.; but they take no kind of solid food. *Treatise on the Medicinal Leech*, p. 61.

ter the lips as salt does, preventing it from sucking for some considerable time.

HORDEUM *Spec. Plant. Willd. i. 472.*

Cl. 3. Ord. 2. Triandria Digynia. Nat. ord. Gramineæ.

G. 151. Calyx lateral, two-valved, one-flowered, three-fold.

Species 3. H. distichum. Common Barley. Viborg-Cereal. 35 t. 3.

Officinal. HORDEI SEMINA Lond. HORDEI DISTICHI SEMINA. Edin.

HORDEUM DISTICHUM; SEMINA. Dub. Barley.

Syn. Orge (F.) Gerstengraupen (G.) Orzo (L.) Cebada (S.) Iow (H.) Barlee Arise (Tam.)

Barley is asserted by Reidesel to be a native of Tartary, but the fact is not well ascertained.¹ It is an annual plant, and cultivated in almost every country of Europe. This species, which is the most generally cultivated in Britain, has a long flat spike or ear, with a double row of defective or male florets on each flat side, and a single row of fertile florets at each edge. The valves of the calyx, or outer chaff, are linear, and one half shorter than the corolla or inner chaff, which terminates in a straight, serrated awn or beard sixteen times its own length. When ripe the husk is coriaceous, angular, and continues close about the grain, which, when freed from it, is ovate, grooved, and angular.

Barley is used as an article of food, but less so than it was in former times; and it is now chiefly cultivated for the purpose of forming malt liquors and ardent spirits. It is formed into pearl barley by two different operations: the barley is first spread out and moistened; and then, in this state, by means of machinery is denuded of the cuticle, or shelled. It is afterwards rounded in a mill, which at the same time polishes the little granules into which it is formed.

Qualities.—Pearl barley is inodorous, and has a slightly sweetish taste. It consists of roundish granules of a pearly whiteness, composed almost entirely of starch, with some gluten, mucilage, and saccharine matter², which are dissolved in boiling water. The decoction very soon runs into the acetous fermentation. Barley is never used medicinally in substance.

Officinal preparations.—*Decoctum Hordei. L. E. D. Decoctum Hordei compositum. L. D.*

HUMULUS. *Spec. Plant. Willd. iv. 769.*

¹ Cardan asserts that it is a native of Athol in Scotland. Diodorus Siculus refers it to Egypt, where, he says, Osiris found it wild, and first cultivated it.

² Einhof, who analysed barley both in the unripe and ripe state, found that 3840 parts of barley in grain afforded 430 of a volatile matter, 720 husk, and 2690 of meal; and from the same quantity of barley meal he obtained 360 of volatile matter, 44 albumen, 200 saccharine matter, 176 mucilage, 9 phosphate of lime, with some albumen, 135 gluten, 260 husk, with some gluten and starch, and 2580 of starch; 76 parts were lost in the analysis. When this meal is macerated in alcohol it yields a yellow-coloured acrid thick oil, which is supposed to give the peculiar flavour to spirits from raw grain, and to be lost in malting. *Thomson's Chemistry, v. 254.*

Cl. 22. Ord. 5. Diæcia Pentandria. Nat. Ord. Scabridæ Linn.
Urticæ Juss.

G. 1795. Male. Calyx five-leaved. Corolla 0.

Female. Calyx. one-leaved, obliquely spreading, entire,

Corolla 0. Styles two. Seed one, within a leafy calyx.

Species 1. H. Lupulus. The Hop. Eng. Bot. t. 427. Smith's Flor.
Brit. 1077.

Offi. HUMULI STROBILI. Lond. Edin. The strobiles of the Hop.

Syn. Houblon grim pant (F.) Hopfen (G.) Luppolo (I.) Hoblon (S.)

The hop is an indigenous perennial plant growing in hedges, and flowering in July. It is very abundantly cultivated in Kent, Essex, Surry, and Suffolk; and the strobiles are picked about the end of August or the beginning of September.¹ The root sends up many long, striated, angled, rough, flexible stems, which support themselves by twining round upright bodies in a spiral direction from left to right. The leaves are opposite in pairs, petiolate, heart-shaped, serrated, entire, or lobed, and of a dark green colour on the upper disk. Both the leaves and petioles are scabrous, with minute prickles; and at the base of each leafstalk are two interfoliaceous, entire, reflected, smooth stipules. The flowers are axillary, and furnished with bractes: the males are yellowish white, in panicles and drooping: the females, which are on distinct plants, are in solitary cones or strobiles, ovate, and pendulous; composed of membranous scales of a pale greenish colour, tubular from being rolled in at the base, and two-flowered, each containing one round flattish seed, of a bay-brown colour, surrounded with a sharp rim, and compressed at the tip.

At the proper season, while the strobiles are yet scarcely ripe, the plants are cut about three feet from the ground, the poles on which they are twined pulled up, and the strobiles carefully picked off, one by one. Those that are over-ripe or defective are separated from those that are ripe enough, and both kinds are carried to the kiln as soon as possible after they are picked. The heat of the kiln requires to be regulated with great nicety; and in order to prevent them from drying too fast, many kilns have two floors, on the uppermost of which the greener hops are laid, and gradually dried before being brought to support the heat of the lower floor.² Charcoal is the fuel usually employed: other kinds of fuel injuring the flavour of the hops. The strobiles are considered sufficiently

¹ The culture of the hop plant was introduced into England from Flanders in 1524; and the strobiles were first used for preserving English beer in the latter part of the reign of Henry VIII; but the prejudice against them was very considerable, and the city of London, a hundred years afterwards, petitioned the parliament to prevent their use. There are now, however, severe penalties inflicted on brewers who use any other bitter for preserving their beer.

² This is the case at Farnham in Surry. See Stevenson's Survey, 363.

dried when they become crisp; but they acquire a degree of toughness and tenacity before they are bagged, from being laid in heaps in the store-houses. Five pounds of moist or under-ripe hops make one pound only when taken from the kiln. The best hops are brought to market in fine canvas sacks called "pockets," each of which contains about $1\frac{1}{4}$ cwt. of hops.

Qualities.—Hops have a strong, peculiar, fragrant, sub-narcotic odour, and a very bitter, aromatic, astringent taste. They have a pale greenish yellow hue, appear like thin transparent veined leaves; and although not tough, yet are difficult to pulverize. Their virtues are extracted by boiling water, or alcohol, or ether. The watery infusion has a pale straw colour, is rendered muddy by the mineral acids; alkalies deepen its colour; it strikes an olive with sulphate of iron; is precipitated by alcohol, solutions of superacetate of lead, nitrate of silver, and tartarized antimony: and when rubbed with magnesia or lime, a rod dipped in muriatic acid discovers the presence of ammonia. The ethereal tincture, when evaporated on water, leaves a pellicle of greenish intensely bitter resin, and deposits some extractive. By distillation in water, hops yield a volatile aromatic oil. From these experiments they appear to contain resin, extractive, mucilage, volatile oil, tannin, an ammoniacal salt, and what has been termed the bitter principle.

Medical properties and uses.—Hops are narcotic, tonic, diuretic; and, externally applied, anodyne and discutient. Their use as a preservative of beer has been long known, and also their narcotic powers in procuring sleep in the delirium of fever, and in mania, when used as a pillow; and owing to this effect having been lately confirmed, their efficacy as a general narcotic, when introduced into the stomach, has been investigated.¹ Dr. Maton observed that, besides allaying pain and producing sleep, the preparations of hops reduce the frequency of the pulse, and increase its firmness in a very direct manner. One drachm of the tincture and four grains of the extract given once in six hours, reduced the pulsations from 96 to 60 in twenty-four hours.² He found the extract exceedingly efficacious in allaying the pain of articular rheumatism, and our own experience has not ultimately afforded us sufficient proof of its utility as a sedative, and Dr. Bigsby's³ experiments have lessened very much the confidence practitioners were disposed to give to it; and we are rather surprised that the Edinburgh College has adopted it into their list of *Materia Medica*. An ointment compounded with the powder of the hop and lard is

¹ De Roche's. *De Humuli Lupuli Viribus medicis.*

² *Observations on the Humulus Lupulus, &c.* by A. Freake.

³ *Vide London Medical Repository.* vol. v. p. 97.

recommended by Mr. Freake as an anodyne application to cancerous sores. We have seen a fomentation of it afford much relief in painful swellings and tumours. It may be given in the form of powder, infusion, tincture, or extract. The dose of the powder is from grs. iij. to ʒj; that of the infusion, which is made with ʒfs of the hops and ʒj of boiling water, fʒjfs with fʒfs of cinnamon water, twice or thrice a day.

Official preparations — *Extractum Humuli*. L. *Tinctura Humuli*. L. E.

HYDRARGYRUM.¹ Mercury or Quicksilver.

Syn. Mercure (F.) Quicksilber (G.) Mercurio (I.) Azogue (S.) Abue (Arab.) Pára (H.) Páradá (San.)

This metal is found in Spain, Germany, and Hungary; Siberia, the Philippines, China, and Peru. The most productive mines are those of Idria, Carinthia, and the Palatinate; Almaden near Cordova in Spain², and Guanica Velica near Potosi in Peru.³ It is procured

A. In its metallic state :

- | | |
|--------------------------|--|
| i. Unalloyed | Sp. 1. <i>Native mercury</i> . |
| ii. Alloyed with silver. | 2. <i>Native amalgam</i> . |
| iii. With sulphur. | 3. <i>Cinnabar</i> . Var. a. Dark red.
b. Bright red. |
| | 4. <i>Hepatic mercurial ore</i> .
Var. a. Compact.
b. Slaty. |

B. Oxidized.

- | | |
|--|--------------------------------|
| iv. Combined with the muriatic
and a portion of sulphuric acid. | } 5. <i>Corneous mercury</i> . |
|--|--------------------------------|

Native quicksilver is found either in globules, disseminated on the surface, or collected in the crevices of other mercurial ores, and in marlite, calcareous spar, or other fossils. It has the lustre, opacity, fluidity, and other qualities of the pure metal; but owing to the small quantity which is found of it, the quicksilver of commerce is usually obtained from cinnabar. This ore is red, varying in the shades of its colour and in the degrees of its lustre. It occurs massive, disseminated, and crystallized; in the two former states always opaque, and in the latter translucent, or transparent. To obtain the metal, the ore, after being sorted, is reduced to powder, and mingled with about one-fourth of quicklime in powder. This mixture is put into large iron retorts, which are placed in a long furnace, and glass receivers adapted to each, but not luted until all the moisture it contains be driven off; the joinings of the vessels are then closely stopped with well-tempered clay, and a full red

¹ Ὑδράργυρος Græcorum.

² This is the oldest and the richest mine of Cinnabar in Europe. It was wrought by the Romans two thousand years ago: and yields about 6000 quintals of fluid mercury annually.

³ These were discovered in 1566 and 1567, by Henry Garces, a Portugeze.

heat kept up for seven or eight hours, in which time the mercury is volatilized, and condensed in the receiver. About ten ounces of mercury are usually obtained from 100lbs. of the ore.¹
Officinal. HYDRARGYRUS. *Lond. Edin.* HYDRARGYRUM. *Dub.* Quicksilver.

Syn. Mercure coulant (F.) Vide *Hydrargyrum*.

The greater part of the quicksilver which is used in this country is brought from Germany, in leathern skins, each of which contains from 60lbs. to 1 cwt. of the metal; and two or three of these are generally packed together in one cask. Sometimes, however, it is brought over in iron bottles. It is often adulterated by the admixture of lead, bismuth, zinc, or tin: and when the metal quickly loses its lustre, is covered with a film, or is less fluid and mobile than usual, leaves a stain on a delft plate, or does not readily divide into round globules, but into those with tails, it may be suspected. Lead is discovered by dissolving a portion of the suspected mercury in nitric acid, and adding to the solution water saturated with sulphuretted hydrogen gas, which gives a brown precipitate if it be present; and by this means one part of lead may be detected in 15260 of mercury. Bismuth is detected by pouring the above-mentioned nitric solution into distilled water, when the bismuth will appear as a white precipitate. Exposing the mercury to heat detects zinc; and tin is discovered by a weak nitro-muriatic solution of gold, which is precipitated purple by tin. It is purified by distillation with iron-filings; or by agitation in diluted sulphuric acid, until the acid ceases to become turbid; and then, after washing and drying the globules into which it has been divided, passing them through a pin-hole in the bottom of a funnel of writing paper.²

Qualities.—Pure mercury is inodorous, insipid, and of a bright white or silver colour. Its specific gravity is 13.568.³ It is always fluid at the ordinary temperature of the atmosphere; but becomes a solid malleable metal in a degree of cold sufficient to sink the thermometer to 39° below 0 of Fahrenheit.⁴ It boils at 656°, and is volatilized unchanged in close vessels, but is not capable of combustion.⁵ Mercury is oxidised by the air at its usual temperature, when subject to agitation; and is fully saturated with oxygen in a continued heat of 600°. It is oxydized by, and combines with, the sulphuric, nitric, and oxy-muriatic acids; and its oxides also enter into combinations with the other acids. It unites with sulphur and phosphorus; and combines with many other metals, forming what are called amalgams.

¹ *Aikin's Chemical Dictionary.*

Brunchi, of Pisa. Vide *Phil. Mag.* iv. p. 348.

⁴ Crichton. *Phil. Mag.* xiv. 49.

² This method was invented by Professor Cavendish.

⁵ Thomson's *Chemistry*, i. 175. If, however, the galvanic fluid be passed through it, the beautiful luminous stars in which it is dispersed seem to prove its combustibility.

Medical properties and uses.—Mercury in its metallic state exerts no action on the animal system. It has nevertheless been administered in doses of a pound or more with the view of operating mechanically, and overcoming by its weight the obstruction of the intestines which exists in ileus: but as it cannot act by its gravity on the ascending part of the bowels, it is not easy to conceive how it should have been ever recommended; and the events of the cases in which it has been given have sufficiently proved the futility of the practice.

Mercury, however, when prepared for medicinal use, is a remedy of the most extensive application. It is a powerful and general stimulant, but its effects are certainly different from those of other articles which are ranked in the same class. It enters into the circulation, quickens the vascular action, and excites powerfully the whole of the glandular system; increasing all the secretions and excretions. It has been supposed, that it is peculiarly determined to the salivary glands; but if, as there is every reason to suppose, these glands are endowed with more irritability¹, it is easy to conceive that the same degree of stimulus, which is operating on the whole system, will produce a greater effect on them in a direct ratio according to their greater susceptibility. But although its general action is stimulant, yet the various preparations of it produce different effects, operating sometimes as stimulants, cathartics, or emmenagogues, and locally as errhines: and hence the great variety of diseases in which it has been found useful: as febrile affections, spasms, cachetic diseases, glandular obstructions, cutaneous eruptions, and membranous inflammation. (See *Preparations and Compositions.*)

But the most important effect of the preparations of mercury is their specific operation in syphilis. They were used, and their effects when accumulated in the habit were known, so early as the 13th century; and the writings of Theoderick² contain cautions against catching cold during the course; but the first notice of mercury as a remedy in lues venerea is contained in a tract by Jo. Almenar, a Spaniard, published in 1516; who recommends it after the manner of the Arabians, but condemns pushing the remedy so as to promote salivation. Physicians, however, did not venture to give mercury internally, till Paracelsus broke the fetters of ancient authority, and proved that it might be exhibited not only with safety, but with advantage. Since his time, a period of nearly 300 years,

¹ That the salivary glands and their excretories are very excitable, is evident from the flow of the saliva being much increased by affections of the mind, as the thinking of any kind of food which is particularly grateful to the taste.

² He was a friar, afterwards bishop of Cervia, and died between the years 1270 and 80. See *Fremd's History of Physic*, ii. 360.

experience has fully sanctioned its use; and, as Mr. Pearson justly observes, "not one medicine besides derived from the animal, vegetable, or mineral kingdom, has maintained its credit, with men actually employed in extensive practice during a tenth part of that period¹:" yet, it is remarkable, that in the present day its utility in syphilis has been questioned.² Many various theories of the operation of mercury have been advanced; the most satisfactory of which is that of Mr. Hunter, who supposed that the stimulant operation of the mercury induces and maintains an action which is incompatible with the morbid action produced by the venereal virus, until the poison is either destroyed, or evacuated from the body by the excretions. But whatever may be the principles on which it operates, its efficacy in this disease is certain, when it is judiciously and cautiously administered. The mode of giving it, and the morbid effects which it produces under certain circumstances, shall be mentioned when its preparations are described: it is only necessary to observe further in this place, that although men of the first medical talents have occasionally declaimed against its use³, and although much mischief may have of late years arisen from its indiscriminate employment by the temerity of the speculative, and by ignorance; yet, in the hands of judicious and cautious practitioners it will continue to rank as one of the most useful of the articles of the materia medica.

Official preparations.⁴

- I. By distillation to purify the metal.
 1. *Hydrargyrum purificatum*. L. E. D.
- II. By trituration; (*suboxidized*.)
 - a. With animal fat.
 2. *Unguentum Hydrargyri fortius*. L. *Ung. Hydrargyri*. D.
 3. ——— *Hydrargyri*. E.
 4. ——— *mitius*. L. D.
 5. *Linimentum Hydrargyri*. L.
 6. *Emplastrum Ammoniaci cum Hydrargyro*. L. D.
 - *Hydrargyri*. L. E.
 - b. With saccharine substances.
 7. *Pilula Hydrargyri*. L. E. D.
 - c. With carbonate of lime.
 8. *Hydrargyrum cum Creta*. L. D.
 - d. With carbonate of magnesia.
 9. *Hydrargyrum cum Magnesia*. D.
- III. By the action of heat and air; (*oxidized*.)
 10. *Hydrargyri Oxidum rubrum*. L. *Oxydum Hydrargyri*. D.
- IV. By the action of acids.
 - a. With sulphuric acid; (*suboxidized*.)

¹ Observations, &c. p. 97.

² Medico-Chirurg. Trans. vol. ix.

³ Saunders—Observations on the Hepatitis of India, &c.

⁴ In forming this table, we have been much assisted by the excellent table drawn up by Doctor Duncan, J. M. in The Edinburgh New Dispensatory; and we trust our alterations will render it more practically useful.

11. *Subsulphas Hydrargyri flavus*. E. *Oxydum Hydrargyri sulphuricum*. D.
 - b. With nitric acid; (suboxidized.)
 12. *Unguentum Hydrargyri nitratis*. L. E. *Unguentum Supernitratis Hydrargyri*. D.
 13. *Unguentum Nitratis Hydrargyri mitius*. E.
(oxidized.)
 14. *Hydrargyri Nitrico-oxydum*. L. *Oxydum Hydrargyri rubrum per Acidum nitricum*. E. *Oxydum Hydrargyri nitricum*. D.
 15. *Unguentum Hydrargyri nitrico-oxydi*. L. *Unguentum Oxidi Hydrargyri rubri*. E. *Unguentum Subnitratis Hydrargyri*. D.
 - c. With muriatic acid.
† sublimated; (oxidized.)
 16. *Hydrargyri Submurias*. L. *Submurias Hydrargyri mitis*. E. *Submurias Hydrargyri sublimatum*. D.
 17. *Pilulæ Hydrargyri submuriatis*. L.
(oxidized and acidified.)
 18. *Oxymurias Hydrargyri*. L. *Murias Hydrargyri corrosivus*. E. *Murias Hydrargyri corrosivum*. D.
 19. *Liquor Hydrargyri Oxymuriatis*. L.
†† precipitated; (oxidized.)
 20. *Submurias Hydrargyri præcipitatus*. E. D.
 - d. With acetous acid; (suboxidized.)
 21. *Acetis Hydrargyri*. E. *Acetas Hydrargyri*. D.
 - V. By precipitation with earths and alkalies from acid solutions.
 - a. By lime-water from the nitric solution; (suboxidized.)
 22. *Hydrargyri Oxydum cinereum*. L.
 - b. By ammonia from the nitric solution; (suboxidized.)
 23. *Oxydum Hydrargyri cinereum*. E. *Pulvis Hydrargyri cinereus*. D.
 - c. By ammonia from the muriatic solution; (oxidized.)
 24. *Submurias Hydrargyri ammoniatum*. D. *Hydrargyrus Præcipitatus albus*. L.
 25. *Unguentum Submuriatis Hydrargyri ammoniati*. D. *Ung. Hydrargyri Præcipitati albi*. L.
 - VI. Combined with sulphur.
 - a. By trituration.
 26. *Sulphuretum Hydrargyri nigrum*. E. D.
 - b. Sublimated.
 27. *Hydrargyri Sulphuretum rubrum*. L. D.
- HYOSCYAMUS.**¹ *Spec. Plant. Willd.* i. 1010.
Cl. 5. *Ord.* 1. Pentandria Monogynia. *Nat. ord.* Luridæ Linn.
Solanææ Juss.
G. 378. Corolla funnel-shaped, obtuse. Stamens inclined. Capsule covered with a lid, two-celled.
Spec. 1. *H. niger*. Common Henbane. *Med. Bot.* 2d edit. 204.
t. 76. *Smith Flor. Brit.* 598. *Eng. Bot.* 591.
Officinal. *HYOSCYAMI FOLIA ET SEMINA*. Lond. *Hyosciami*

¹ Ὑος κνυμὸς; Hog-bane.

NIGRI HERBA; SEMINA *Edin.* HYOSCYAMUS; HERBA. *Dub.*
The leaves and seeds of Henbane.

Syn. Jusquiamé (*F.*) Belsenkraut (*G.*) Giusquiamo nero (*I.*) Khorassānie Ajocan (*H.*) Sickran (*Arab.*)

Common henbane is an indigenous annual, frequent on waste grounds, and at the sides of roads, particularly on a calcareous soil, flowering in July. The root is long, tapering, compact, and fibrous; the stem erect, woody, round, and branched, rising about three feet in height. The leaves are alternate, sessile, and embracing the stem; large, the lower ones being above a foot in length; deeply sinuated, undulated, woolly, and of a sea-green colour. The flowers are in terminal, recurved, leafy simple spikes; and each is simple and erect. The calyx is permanent, pitcher-shaped, with a regular five-cleft border reticulated with veins: the corolla straw-coloured, and beautifully pencilled with a net-work of purple veins. The filaments are inserted into the tube of the corolla, tapering, downy at the base, and supporting purple anthers. The style is purplish, with a blunt round stigma. The capsule is globular, invested with the body of the calyx, bilocular, and closed with a convex smooth lid. It contains numerous small irregular brown seeds.¹

The whole of the plant is covered with soft white hairs, feels clammy and slightly adhesive, and is poisonous when eaten.

Qualities.—The odour of the recent leaves is strong, somewhat foetid and narcotic², and the taste mucilaginous, and slightly acrid: but when dry, they have scarcely either odour or taste. Its virtues are completely extracted by diluted alcohol. The watery infusion is of a very pale yellow colour, and insipid; and has the narcotic odour of the plant. It is not altered by the acids: the alkalies change the colour to a deep greenish yellow, which, on the addition of an acid, disappears, and a brownish flocculent precipitate is produced. It is copiously precipitated by solutions of superacetate of lead white; and by nitrate of silver black. Sulphate of iron strikes with it a pale olive-colour, and a dark precipitate is slowly formed. Hence henbane appears to contain resin, mucus, extractive, an ammoniacal salt, and gallic acid.

Medical properties and uses.—Henbane is narcotic. Its operation is very similar to that of opium, increasing at first the strength of the pulse, and producing some sense of heat; effects which are followed by proportional diminution of excitement, and sleep. In some habits it occasions diaphoresis, or diuresis,

¹ The seeds abound with oil, and may be eaten with impunity. The roots resemble parsnips, and have occasionally been eaten for them, and fatal effects produced.

² In the recent state the odour of the leaves occasions stupor and delirium.

and sometimes a pustular eruption; at other times it purges; and in overdoses produces sickness, stupor, dimness of sight, hard pulse, delirium, and coma, with dilatation of the pupils; until the pulse gradually becoming weak and tremulous, petechiæ make their appearance, and death ensues. Dissections show the effects of inflammation both in the stomach and bowels, and the membranes of the brain. After an emetic is given, and the stomach fully cleared, vinegar is the best antidote.

The effects of henbane as an anodyne were known to the ancients¹: but as those were ill-understood, and its use was almost completely relinquished till the time of Baron Stoerck, he may be regarded as having introduced it. It may be employed in all the cases in which the use of opium is indicated, where the latter disagrees with the habit, or where its constipating effect is wished to be avoided. In painful and spasmodic affections, hysteria, rheumatism, and gout, much benefit has resulted from its use; and we have found it particularly serviceable when united with colocynth, or other powerful cathartics, in colica pictonum. It is used externally to lessen and allay the irritation of very sensible parts: hence fomentations of the leaves have been found serviceable in scrophulous and cancerous ulcers, hæmorrhoids, and other painful swellings; and Hufeland recommends the leaves and marsh-mallow flowers boiled in milk, with the addition of a few grains of acetate of lead, as a topical application in scrophulous ophthalmia. Its effects in dilating the pupil, when an infusion of it is dropped into the eye, are similar to those of Belladonna, and hence it is also employed as a preparative to the operation for cataract. It is used, generally, in the forms of extract and tincture only.

Official preparations. *Extractum Hyoscyami*. L. E. D. *Tinctura Hyoscyami*. L. E. D.

HYSSOPUS. *Spec. Plant. Willd.* iii. 47.

Cl. 14. Ord. 1. Didynamia Gymnospermia. Nat. ord. Verticillatæ Linn. Labiatae Juss.

G. 1096. Corolla, lower lip three-parted, with a small intermediate subrenate segment. Stamens straight, distant.

Species 1. *H. officinalis*. Common Hyssop. *Med. Bot.* 2d ed. 318. t. 113.

Official. HYSSOPI OFFICINALIS HERBA. *Edin.* HYSSOPUS; FOLIA. *Dub.* The herbaceous part and leaves of Hyssop.

Syn. Hyssope (F.) Isop (G.) Isopo (L.) Hyssop (S.) Zuffiy yaibus (Arab.)

This is a perennial plant, a native of Siberia and Austria; cultivated in our gardens², and flowering from June to Sep-

¹ Hyosciamus in potu cibove sumptus, qualem ebriorum mentis alienationem infert. *Dioscorid. Alexif.* c. xv. 407.

² It was first cultivated in England by Gerard in 1596. It is not the esof of the Hebrews, nor the *hyoscyamus* of the Greeks. It has been supposed to be the *zufe* or *cife* of the Arabians. *Alston's Mat. Med.* ii. 153.

tember. The root is knobbed, woody, and fibrous: the stalk about two feet in height, obscurely quadrangular, erect, shrubby, and branching. The leaves do not exceed an inch in length, and one third of an inch in breadth, are sessile, of a somewhat glaucous deep green colour, elliptical, entire, punctured, and stand in pairs. The flowers are produced on one side, in long half-verticillated terminal spikes, and intermixed with leaves. The calyx is persistent, nearly tubular, divided at the edge into five acute teeth, striated, and of a purplish colour at first, but afterwards green: the corolla is violet-coloured, with a long whitish tube; the upper lip short, round, and notched at the apex; the lower one separated into three segments, the undermost of which is inversely ovate. The filaments are crowned with simple anthers; the style is slender and bifid; and the seeds are four, at the bottom of the calyx.

Qualities. — The leaves of hyssop have an agreeable aromatic odour, and a bitterish moderately warm taste; qualities that appear to depend on a volatile oil of a yellow colour, which can be obtained separate by distillation with water. It is elevated by alcohol also; but soon exhales, and the spirit loses the odour it had when newly distilled.

Medical properties and uses. — Hyssop is stimulant and tonic. It has been recommended in hysteria; and was formerly employed in catarrhal and other pulmonary affections with the view of promoting expectoration; but the stimulant properties of hyssop render its use doubtful in these diseases; and as a tonic it scarcely merits the least attention.

INULA. *Spec. Plant. Willd.* iii. 2089.

Cl. 19. Ord. 2. Syngenesia Superflua. Nat. ord. Compositæ discoideæ Linn. Corymbiferae Juss.

G. 1489. Receptacle naked. Pappus simple. Anthers ending in two bristles at the base.

Species. I. *Helenium*. Elecampane. *Med. Bot.* 2d edit. 64. t. 26.

Smith Flora Brit. 890. *Flora Danica*, t. 728.

Officinal. ENULA CAMPANA; RADIX. *Dub.* Elecampane root.

Syn. Inula Laleniere (F) Alantwurz (G.) Enula Campana (L.) Enula Campana (S.) Usululason (Arab.)

This species of inula is an indigenous perennial, found occasionally in pastures and rich moist soils¹, flowering in July and August, and ripening its seed in September. The root is thick, branched, externally of a brown or grey colour, and internally white. The stem, which rises about three feet in height, is leafy, round, and furrowed; branched near the top and villous. The leaves are large, ovate, serrated, veined, of

¹ Not unfrequent in Essex. *Hudson.* Between Worcester and Ludlow, and Bishop's Castle and Newton. *Smith.* I have seen it near Ewell, Surry.