

manna. The experiments which I have made verify these observations. The quantity of matter which a hot alcoholic solution of manna deposits on cooling is various: a saturated solution concretes into a perfectly dry, white, spongy, crystallized mass. When much less concentrated, it deposits a congeries of most beautiful snow white acicular crystals. A saturated solution in boiling water also forms a solid crystallized mass on cooling. Fourcroy says, that when a solution of manna is clarified with whites of eggs, and sufficiently concentrated, crystals of sugar may be obtained from it. But with Dr Thomson the experiment did not succeed: its crystals were always acicular, and more difficultly formed.

Medical use.—Manna is a mild agreeable laxative, and may be given with safety to children and pregnant women: nevertheless, in some particular constitutions, it acts very unpleasantly, producing flatulency, and distension of the viscera: these inconveniences may be prevented by the addition of any grateful warm aromatic. Manna operates so weakly as not to produce the full effect of a cathartic, unless taken in large doses; and hence it is rarely given by itself with this intention. It may be commodiously dissolved in the purging mineral waters, or joined with the cathartic salts, senna, rhubarb, or the like.

FUCUS VESICULOSUS. *Lond. Dub.*

Murray, g. 1205, sp. 8.—Nat. ord. Algæ.

Off.—Yellow bladder wrack.

FUCUS. *Lond.*

QUERCUS MARINA, fructibus præsentibus. *Dub.*

THIS is one of the most common sea-weeds found on our shores. Its value in the manufacture of kelp is well known. In medicine it is little used; though Dr Russel recommended the mucus of the vesicles as a resolvent, when applied externally to scrofulous swellings. The charcoal obtained by burning it in close vessels has in some places got the name of *Æthiops vegetabilis*. It is to be considered as a compound of charcoal and carbonate of soda.

GENTIANA LUTEA. *Ed. Lond. Dub.*

Willd. g. 512, sp. 1. Pentandria Digynia.—Nat. ord. Rotaceæ.

Gentian.

Off.—The root.

RADIX GENTIANÆ LUTEÆ. *Ed.*

RADIX GENTIANÆ. *Lond. Dub.*

GENTIAN is a perennial plant which grows upon the Alps, Pyrenees, Appennines, and other mountainous situations in the temperate parts of Europe.

The roots are long, thick, externally of a brown colour, and wrinkled: internally spongy, and of a yellow colour, without any remarkable smell, but surpassing in bitterness all other European vegetables. Alcohol dissolves only the bitter extractive, water both the extractive and mucilage.

Neumann got from 960 grains 390 alcoholic, and afterwards 210 insipid watery extract; and inversely, 540 watery, and only 20 alcoholic.

Medical use.—Gentian possesses the general virtues of bitters in an eminent degree, and it is totally devoid of astringency. On dead animal matter it acts as an antiseptic. Taken into the stomach, it proves a powerful tonic, and in large doses it evacuates the intestines. It is useful in debility of the stomach, in general debility, and in gout. Combined with astringents, it cures intermittents. Externally, it is applied to putrid ulcers.

GEOFFROYA INERMIS. *Dub. Geoffræa inermis. Ed.*

Willd. g. 1362, sp. 3. Diadelphina Decandria.—*Nat. ord. Papilionaceæ.*

Cabbage-tree.

Off.—The bark.

CORTEX GEOFFRÆÆ INERMIS. *Ed.*

CORTEX GEOFFRÆÆ. *Dub.*

THE bark of this tree, which grows in the low savannahs of Jamaica, is of a grey colour externally, but black and furrowed on the inside. The powder looks like jalap, but is not so heavy. It has a mucilaginous and sweetish taste, and a disagreeable smell.

Medical use.—Its medical effects are much greater than its sensible qualities would lead us to expect. When properly exhibited, it operates as a powerful anthelmintic, especially in cases of lumbrici. It is given in form of powder, decoction, syrup, and extract, but should always be given in small doses. The decoction is preferred; and is made by slowly boiling an ounce of the fresh dried bark in a quart of water, till it assume the colour of Madeira wine. This sweetened is the syrup; evaporated it forms an extract. It commonly produces some sickness and purging; sometimes violent effects, as vomiting, delirium and fever. These last are said to be owing to an over-dose, or to drinking cold water; and are relieved by the use of warm water, castor oil, or a vegetable acid.

GEUM URBANUM. *Dub.*

Willd. g. 1002, sp. 3. Smith, g. 237, sp. 1. Icosandria Polygynia.—Nat. ord. *Senticosæ.*

Common avens. Herb Bennet.

Off.—The root.

RADIX GEI URBANI. *Dub.*

AVENS is a common perennial plant in shady uncultivated places, and flowers from May to August. The root is fibrous, externally of a dark red colour, internally white, and has the flavour of cloves, with a bitterish astringent taste. Its virtues are said to be increased by cultivation, and the large roots are preferred to the smaller fibres. It must be dug up in spring, when the leaves begin to appear, for the smell is then strongest; indeed, it is hardly to be perceived when it flowers. It must be dried in the air, but not with a strong heat, as its flavour would be dissipated, and its virtues diminished. It tinges both water and alcohol red. Half an ounce yielded 30 grains of resinous, and 20 of gummy extract; the former had the smell of the root, the latter was without smell, and merely astringent. Water distilled from it has a pleasant flavour, and carries over a little thickish essential oil. It has been more recently analyzed by Melandri and Moretti, who got from two ounces 118 grains of tannin, 181 extractive, 61 of saponaceous extract and saline matter, 92 of mucous extract, 23 of resin, 496 of woody fibres, and 76 of volatile oil, water and loss.

Medical use.—Avens is an old febrifuge mentioned by Ray, but again brought into notice by Buckhave. It is recommended as a substitute for cinchona, in intermittent fevers, dysentery, and chronic diarrhœas, flatulent colic, affections of the primæ viæ, asthmatic symptoms and cases of debility. Half a drachm or a drachm of the powder may be given four times a-day, simply, or made up into an electuary with honey or rhubarb. Two table spoonfuls of the decoction may be given every hour; or a table spoonful of a tincture, made with an ounce of the root to a pound of alcohol, three or four times a-day. As an indigenous remedy it deserves notice.

GLYCYRRHIZA GLABRA. *Ed. Lond. Dub.*

Willd. g. 1366, sp. 4. Diadelphia Decandria. Nat. ord. *Papilionaceæ.*

Liquorice.

Off.—The root and the extract.

a) RADIX GLYCYRRHIZÆ GLABRÆ. *Ed.*

RADIX GLYCYRRHIZÆ. *Lond. Dub.*

b) EXTRACTUM GLYCYRRHIZÆ GLABRÆ. *Ed.*

LIQUORICE is a perennial plant, and a native of the south of Europe; but the roots, which are raised for medical purposes in considerable quantities in England, are preferred to those imported from abroad, which are very frequently mouldy and spoiled. The roots are very long, about an inch thick, flexible, fibrous, externally of a brown colour, internally yellow, and, when fresh, juicy. Their taste is very sweet, combined with a slight degree of bitter when long kept in the mouth. They are prepared for use by peeling them, cutting away all the fibres and decayed parts. It is necessary to preserve them in a very dry place, as they are extremely apt to spoil.

The powder of liquorice usually sold is often mingled with flour, and perhaps also with substances not so wholesome. The best sort is of a brownish yellow colour, the fine pale yellow being generally sophisticated, and it is of a very rich sweet taste, much more agreeable than that of the fresh root.

Neumann got from 960 parts of dried liquorice, 300 alcoholic extract, and afterwards 210 watery; and inversely, 540 watery, and only 30 alcoholic. The original alcoholic extract is the sweetest.

Robiquet obtained from liquorice root, 1. Amylaceous feculum; 2. A saccharine substance having no resemblance to sugar; 3. A new crystalline substance; 4. A resinous oil, which is the cause of the acrimony in the decoctions; 5. Phosphate and malate of lime and magnesia; 6. Woody fibre.

Medical use.—Its predominant constituents being saccharine and mucilaginous matter, its only action is that of a mild demulcent, and as such it is frequently used in catarrh, and in some stomach complaints, which seem to arise from a deficiency of the natural mucus which should defend the stomach against the acrimony of the food, and the fluids secreted into it.

On account of its bulk it is rarely exhibited in substance, but more frequently in infusion or decoction.

EXTRACT OF LIQUORICE.

As this extract is never prepared by the apothecary, but commonly imported from other countries, the Edinburgh college have inserted it in their list of materia medica. It is imported in cylindrical rolls, covered with bay leaves. It should be perfectly black, brittle when cold, and break with a smooth and glassy fracture, have a sweet taste, without empyreuma, and be entirely soluble in water. It is prepared from the fresh roots by expression, decoction, and inspissation.

The best foreign extract of liquorice is prepared in Catalo-

nia, but it is not so pure as the refined liquorice sold in the shops, in small cylindrical pieces, not thicker than a goose-quill.

Neumann got from 480 parts of Spanish extract, 460 watery extract, and the residuum was not affected by alcohol; and inversely, he got 280 alcoholic, and 180 watery extract. In this last case the alcoholic extract contained all the sweetness, the watery having scarcely any taste. From the similarity of their taste, and its not being crystallizable, Dr Thomson has referred its saccharine matter to his new genus *sarcocoll*.

The extract possesses the same properties with the root, and is used for the formation of several kinds of troches.

GRATIOLA OFFICINALIS. *Ed. Dub.*

Willd. g. 49, sp. 1. Decandria Monogynia.—Nat. ord. *Personateæ.*

Hedge-hyssop.

Off.—The plant.

HERBA GRATIOLÆ OFFICINALIS. *Ed.*

HERBA GRATIOLÆ. *Dub.*

THIS is a perennial plant, a native of marshy situations in the south of Europe. It is gathered for use when in flower. It has no smell, but a very bitter, somewhat nauseous taste. It is a drastic purgative and emetic, and a very powerful anthelmintic, but its use requires caution. In substance it may be given to the extent of half a drachm, and in infusion to three drachms.

Vauquelin has analysed hedge-hyssop. Its expressed juice contains, in a state of solution, 1. A brown gummy matter; 2. A particular resinous matter extremely bitter; 3. A small quantity of animal matter; 4. Muriate of soda, and perhaps malate of potass. What remains after expression, contains malate and phosphate of lime and iron, probably in the state of phosphate. M. Vauquelin thinks, that the active and purgative ingredient is the substance soluble in alcohol, which he has called a resinoid, as it is the only one possessing taste. Its solubility in water, which is increased by the gum and salts, explains why the infusion, and still more the decoction, are drastic purgatives.

GUAIACUM OFFICINALE. *Ed. Lond. Dub.*

Willd. g. 819, sp. 2. Decandria Monogynia.—Nat. ord. *Gruinales.*

Guaiac.

Off.—The wood and resin.

a) LIGNUM GUAIACI OFFICINALIS. *Ed.*

LIGNUM GUAIACI. *Lond. Dub.*

b) RESINA GUAIACI OFFICINALIS. *Ed.*

RESINA GUAIACI. *Lond.*

GUMMI-RESINA GUAIACI. *Dub.*

THIS tree is a native of the West Indies, and grows to a middling size. The wood is heavier than water, very hard, resinous, and of a greenish-black colour. Its taste is bitterish, and when kindled it gives out a pleasant smell. It is brought either in pieces which are sometimes covered with a pale yellow alburnum, or already rasped, when by division its colour appears greenish-brown, or yellow. The bark is thin, of an ash-grey, or blackish colour, and apparently composed of several laminae. It is less resinous than the wood. Neumann got from 7680 parts of the wood, 1680 alcoholic, and 280 watery extract; and inversely, 740 watery, and 960 alcoholic. From 3840 of the bark he got 560 alcoholic, and 320 watery; and inversely, 620 watery, and 240 alcoholic. The resin exudes spontaneously in tears, but is principally obtained by sawing the wood into billets about three feet long, which are then bored with an augre longitudinally. One end of these is laid upon a fire, so that a calabash may receive the melted resin, which runs through the hole as the wood burns. It may be also obtained by boiling the chips or sawings of the wood in water and muriate of soda. The resin swims at the top, and may be skimmed off.

Guaiac resin has a brownish yellow colour externally; when held against the light is transparent, breaks with an uniform smooth shining fracture, of a bluish-green colour, is pulverizable, and the powder has a white colour, gradually becoming bluish-green; is fusible in a moderate heat, but not softened by the heat of the fingers; without proper smell or taste, but when thrown on hot coals diffusing an agreeable odour, and when swallowed in a state of minute division, causing an insufferable burning and pricking in the throat. Its specific gravity is 1.23. Neumann got from 480 parts, 400 alcoholic, and only 10 watery extract; and inversely, 80 watery, and 280 alcoholic. Mr Brande has more lately investigated this substance with much care. Digested with water, about one-tenth of it is dissolved, the water acquiring a sweetish taste and greenish-brown colour. The liquid, when evaporated, leaves a brown substance, soluble in hot water and alcohol, but scarcely in sulphuric ether, and precipitating the muriates of alumina and tin. Alcohol readily forms with guaiac a deep

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brown-coloured solution, rendered milky by water, and precipitated pale green by the muriatic and sulphuric acids, brown by the nitric, and pale blue by the oxy-muriatic, but not by the acetic acid or alkalies. The solution in ether exhibits nearly the same properties. Guaiac is soluble in about 15 parts of solution of potass, and in 38 of ammonia; and the solutions are precipitated by the nitric, muriatic, and diluted sulphuric acids. Sulphuric acid dissolves it, and nitric acid converts it into oxalic acid. On being burnt it leaves a large proportion of charcoal. Dr Wollaston has discovered a curious property of guaiac. By exposure to air and light, it acquires a green colour. This effect is produced in the greatest degree by the most refrangible rays. In the least refrangible rays it is disoxydized, and the yellow colour is restored. The same effect is produced by hot metal. According to this analysis, it differs from the resins in the changes of colour produced on it by air and light, and the action of the acids, in not forming tannin when treated with nitric acid, and in the large proportion of charcoal it affords when burnt. It is sometimes adulterated with colophony or common resin; but the fraud is easily detected by the smell of turpentine emitted when thrown on live coals.

Medical use.—Taken internally, guaiac commonly excites a sense of warmth in the stomach, a dryness of the mouth, with thirst. It increases the heat of the body, and quickens the circulation. If the patient be kept warm, it produces diaphoresis; if exposed freely to the air, an increased flow of urine. In large doses it is purgative.

Guaiac is a useful remedy,

1. In rheumatism and gout.
2. In certain venereal symptoms; as in foul indolent ulcers, and a thickened state of the ligaments or periosteum, remaining after the body is reduced by a mercurial course. Guaiac will also suspend the progress of some of the secondary symptoms; but it is totally incapable of eradicating true syphilis.
3. In cutaneous diseases.
4. In ozena, and scrofulous affections of the membranes and ligaments.

The wood is always exhibited in decoction. From the resinous nature of the active constituent of this substance, this cannot be a very active preparation, as the menstruum is totally incapable of dissolving, though it may suspend a little of the resin. The decoction of an ounce may be drunk in cups in the course of a day.

The resin may be exhibited,

1. In substance, made either into pills, or suspended in water in the form of an emulsion. In this way, from 10 to 30 grains of the resin may be taken in the day.
2. In solution; in alcohol. About half an ounce of the tincture, with three ounces of water, is a sudorific dose for an adult, if he attend to keep himself warm.
3. Combined with an alkali.

HÆMATOXYLON CAMPECHIANUM. *Ed. Dub. Lond.*

Willd. g. 830, sp. 10. Decandria Monogynia.—Nat. ord. Lomentaceæ.

Logwood.

Off.—The wood.

LIGNUM HÆMATOXYLI CAMPECHIANI, v. s. Lignum Campechense. *Ed.*

LIGNUM HÆMATOXYLI. *Lond. Dub.*

THIS tree was introduced from the Honduras into Jamaica, where it is now very common. The wood is firm, heavy, and of a dark red colour. Its taste is sweet, with a slight degree of astringency. It forms a precipitate with a solution of gelatine, very readily soluble in excess of gelatine, and with sulphate of iron it strikes a brighter blue than any other astringent I have tried. It is used principally as a dye-wood, but also with considerable advantage in medicine.

Its extract is sweet and slightly astringent; and is therefore useful in obstinate diarrhœas, and in chronic dysentery.

HELLEBORUS.

Willd. g. 1089. Smith, g. 256. Polyandria Polygynia.—Nat. ord. *Multisiliquæ.*

Sp. 2. Willd. HELLEBORUS NIGER. Ed. Lond. Dub.

Black Hellebore.

Off.—Radix. The root.

THIS plant, which was formerly called *Melampodium*, is perennial, and grows wild in the mountainous parts of Austria, and on the Pyrenees and Appennines. The earliness of its flowers, which sometimes appear in December, has gained it a place in our gardens.

The roots consist of a black furrowed roundish head, about the size of a nutmeg, from which sort articulated branches arise, sending out numerous corrugated fibres, about the thick-