

LYTTA VESICATORIA. *Lond.*

MELOE VESICATORIVS. *Ed. Dub.*

*Insecta Cleoptera, Vesicantia. Syst. Nat. Gmelin, g. 2013.*  
Spanish fly. Blistering fly.

*Off.*—The insect.

LYTTA. *Lond.*

MELOE VESICATORIVS. *Ed.*

CANTHARIS. *Dub.*

THESE insects have a longish, green, and gold-shining body, with flexible green-striped elytera, which cover the whole back of the body, and conceal brown membranous wings. On their head they have two black articulated feelers. They are found on the fraxinus, sambucus, salix, ligustrum, &c. in Spain, Italy, France, and Germany. The largest come from Italy, but the Spanish cantharides are preferred. They are gathered by shaking the trees on which they are, and catching them on a cloth spread beneath it. They are then killed by the fumes of vinegar, and dried carefully in a stove. The melolontha vitis is sometimes found mixed in considerable numbers with the cantharides. They are easily distinguished by their almost square body; and as they do not stimulate the skin, they should be picked out before the cantharides are powdered. In the East Indies the *Meloë trianthema* is used as a substitute.

The analysis of cantharides is still imperfect. Neumann got from 1920 grains, 920 watery, and afterwards 28 alcoholic extract; and inversely, 400 alcoholic, and 192 watery. Lewis ascertained that their active constituent is entirely soluble, both in water and in alcohol; for extracts made with each of these solvents blistered, as far as could be judged, equally, and as effectually as cantharides in substance. Both the residua were inactive. Thouvenel considered the vesicating power to reside in a green matter of an oily nature. Beaupoil in two substances, one yellow and the other black, both soluble in water, but separable by alcohol. Lastly, Robiquet, in a very detailed analysis, says, that neither of these three principles blisters of itself; but that this property is owing to their combination with a particular white crystalline substance, soluble in warm alcohol, separating as it cools, soluble in oils, and insoluble in water. He also found, besides known principles, free acetic acid, phosphate of magnesia, a reddish-yellow oil insoluble in alcohol, and, lastly, uric acid.

*Medical use.*—Cantharides have a peculiar nauseous smell, and an extremely acrid burning taste. Taken internally, they often occasion a discharge of blood by urine, with exquisite pain. If the dose be considerable, they seem to in-

flame and ulcerate the whole intestinal canal; the stools become mucous and purulent; the breath fetid and cadaverous; intense pains are felt in the lower belly; the patient faints, grows giddy, delirious, and dies. Applied to the skin, they first inflame, and afterwards excoriate the part, raising a more perfect blister than any of the acrid vegetables, and occasioning a more plentiful discharge of serum; but even the external application of cantharides is often followed by a strangury, accompanied with thirst and feverish heat.

The inconveniences arising from the use of cantharides, whether taken internally, or applied externally, are best obviated by drinking plentifully of bland emollient liquids, such as milk, emulsions, &c. The specific property of counteracting cantharides ascribed to camphor has no foundation.

The internal use of cantharides is at all times doubtful, and requires the most prudent management. They have, however, been sometimes employed with success in dropsy, and in diseases of the urinary organs, arising from debility, especially gleet and leucorrhœa. They are given in substance, in very small doses, or in tincture.

Applied externally, they are one of our best and most powerful remedies. By proper management, they may be regulated so as to act as a gentle stimulus, as a rubefacient, or as a blister.

Blisters are applied,

1. To increase the activity of the system in general, by means of their irritation;
2. To increase the activity of a particular organ;
3. To diminish morbid action in particular organs, by means of the irritation which they excite in the parts to which they are applied.

They may be employed with advantage in almost all diseases accompanied with typhus fever, especially if any important viscus, as the brains, lungs, or liver, be at the same time particularly affected. In these cases, the blisters are not applied to the diseased organs themselves, but as near them as may be convenient. When we wish to excite action in any organ, the blisters are, if possible, applied directly to the diseased organ.

*MALVA SYLVESTRIS.* Ed. Lond.

Willd. g. 1290, sp. 43, Smith, g. 317, sp. 1. *Monadelphia*

*Polyandria.*—Nat. ord. *Columniferae.*

Common mallow.

M

*Off.*—The leaves and flowers.

MALVÆ SYLVESTRIS HERBA.

MALVA. *Lond.*

THIS is a perennial plant, common in Britain, under hedges, near footpaths, and among rubbish. It flowers from May to August.

The whole plant abounds with mucilage. The leaves were formerly of some esteem in food for loosening the belly; at present, decoctions of them are sometimes employed in dysenteries, heat, and sharpness of urine, and in general for obdusting acrimonious humours; their principal use is in emollient glysters, cataplasms, and fomentations.

MANGANESIUM. *Dub.*

Manganese; the black oxide of Manganese.

THIS metallic oxide is now, for the first time, introduced into the materia medica. It is to be regretted that the Dublin college has given, as the officinal name of the oxide, that which scientifically belongs to the metal.

Manganese is found,

I. Metallic.

1. Native manganese (Proust).

II. Oxidized. Grey ore, containing its black oxide.

1. Foliated grey ore.

2. Radiated.

3. Compact.

4. Earthy.

III. Sulphuretted. The black ore.

IV. Carbonated. The red ore.

The varieties of the grey ore are the most common. It is found in greatest purity at Exeter, and at Howth near Dublin. It is chiefly used for destroying the colour which iron imparts to glass, and has hence been called Glass-maker's soap, and for preparing the oxymuriatic acid, now so much used in bleaching. The recent application of the same acid to the destruction of contagion, and to other medical purposes, has procured the black oxide of manganese a place in the list of the materia medica.

MARRUBIUM VULGARE. *Ed. Lond. Dub.*

*Willd. g. 1111, sp. 8. Smith, g. 270, sp. 1. Didymia*

*Gymnospermia.*—Nat. ord. *Verticillatæ.*

White horehound.

*Off.*—The leaves.

MARRUBII VULGARIS HERBA. *Ed.*

MARRUBII ALBI FOLIA. *Dub.*

MARRUBIUM. *Lond.*

THIS is a perennial plant, which grows wild on road-sides, and among rubbish, and flowers in July. The leaves have a very strong, not disagreeable smell, and a roughish, very bitter taste. Neumann got from 480 grains, 270 watery, and 30 alcoholic extract, and inversely 150 alcoholic, and 140 watery. They promote the fluid secretions in general, and liberally taken, loosen the belly.

MEL. *Lond. Dub.*

Honey.

THIS is a well-known substance; and although it is most probably of vegetable origin, it is not procured in any quantity except as an animal excretion from the bee (*apis mellifica*). This industrious insect, in the summer-time, flies from flower to flower, to collect the sweet juice secreted in them. When sufficiently loaded, it returns to its hive, where it deposits the honey, as a winter's supply, in the cells of the comb it has prepared of wax to receive it. What change it undergoes in the body of the insect is unknown; but it is certain that honey varies very much, according to the nature of the plants from which it is collected.

The best honey is that which is freest from colour, and contains the largest grains when it concretes. For medical use, it should also be as free of flavour as possible. That obtained from young bees, and which flows spontaneously from the combs, is the purest and finest, and is known by the name of *Virgin honey*. When separated from the wax by expression, it is less pure; and there is another sort still inferior, obtained by heating the combs before they are put into the press.

Honey consists principally of sugar, but it also probably contains mucilage and an acid, and is often impregnated with the essential oil of the flowers from which the bees have gathered it, as in the perfumed honey of the *Crimea*. In some parts of *Asia* and *America*, poisonous honey is met with from the bees feeding on poisonous flowers. Neumann exsiccated honey in the water-bath: the vapour which arose, he says, took fire on the approach of a candle, and diffused its smell widely; and the liquor which was condensed was manifestly impregnated both with the smell and taste of honey, and amounted to three ounces, from eight of honey. Dissolved in water, it undergoes the vinous fermentation, forming mead. Treated with alcohol, Prout says it may be

separated into two kinds, one liquid, and the other crystalline. Cavellazzi obtained crystals of sugar from it, by saturating its acid with carbonate of lime; and it is converted into oxalic acid by the action of nitric acid.

*Medical use.*—From the earliest ages, honey has been employed as a medicine. Besides the general properties of saccharine bodies, it possesses others peculiar to itself, probably depending on the presence of an acid. For internal use, sugar is commonly to be preferred, as honey, in some constitutions, produces gripes and colic pains. From its stimulus, however, it forms an excellent gargle, and facilitates the expectoration of viscid phlegm; and it is sometimes employed as an emollient application to abscesses, and as a detergent to ulcers. It is also preferable to sugar in forming electuaries, as it is not so apt to crystallize.

MELALEUCA LEUCADENDRON. *Ed. Dub.*

MELALEUCA CAJUPUTI. *Lond.*

*Willd. g. 1428. Species nova. Polyadelphia Polyandria.*

—*Nat. ord. Hesperideæ.*

The broad-leaved cajeput tree.

*Off.*—The essential oil.

OLEUM VOLATILE MELALEUCÆ LEUCADENDRI. *Ed.*

CAJUPUTI OLEUM, oleum essentielle. *Lond.*

OLEUM CAJEPUT. *Dub.*

THE tree which furnishes the cajeput oil is frequent on the mountains of Amboyna, and the other Molucca islands. Drs Maton and Smith have lately examined specimens of this tree, which correspond with Rumphius, tab. 17, vol. ii.; and, as an unclassified species, have named it *Melaleuca cajuputi*. But, as Thunberg says, it is got from the leucadendron, perhaps both species yield it. Indeed, Rumphius himself would lead us to the same opinion. The oil is obtained by distillation from the dried leaves, and is prepared in great quantities, especially in the island of Banda, and sent to Holland in copper flasks. As it comes to us, it is of a green colour, very limpid, lighter than water, of a strong smell, resembling camphor, and a strong, pungent taste, like that of cardamoms. It burns entirely away, without leaving any residuum. It is often adulterated with other essential oils, coloured with the resin of milfoil. In the genuine oil, the green colour depends on the presence of copper; for, when rectified, it is colourless.

*Medical use.*—Like other aromatic oils, it is highly stimulating, and is principally recommended in hysteria, epilepsy,

flatulent colic, and paralysis of the tongue. The dose is from one to four drops on a lump of sugar.

It is applied externally, where a warm and peculiar stimulus is requisite; and is employed for restoring vigour after luxations and sprains; and for easing violent pain in gouty and rheumatic cases, in toothach, and similar affections.

MELISSA OFFICINALIS. *Ed.*

*Willd. g. 1118, sp. 1. Didynamia Gymnospermia.*—Nat. ord. *Verticillatæ.*

Balm.

*Off.*—Herba. The herb.

BALM is a perennial plant, which grows wild on the Alps and Pyrennees, and is frequently cultivated in our gardens. It has a pleasant smell, and a weak, roughish, aromatic taste. The young shoots have the strongest flavour; the flowers, and the herb itself, when old, or produced in very moist rich soils, or rainy seasons, are much weaker, both in smell and taste.

It is principally used in the form of a watery infusion, which is drunk in the manner of tea.

MENTHA.

*Willd. g. 1102. Smith, g. 262. Didynamia Gymnospermia.*—Nat. ord. *Verticillatæ.*

*Sp. 7. Willd. ; sp. 3. Smith. MENTHA VIRIDIS. Lond. Dub.*  
Spearmint.

*Officinal.*—The plant.

MENTHA VIRIDIS. *Lond.*

FOLIA MENTHÆ SATIVÆ. *Dub.*

SPEARMINT is perennial, and a native of Britain. It flowers in August. The leaves have a warm, roughish, somewhat bitter taste, and a strong, not unpleasant, aromatic smell.—Their virtues are stomatic and carminative.

*Sp. 13. Willd. ; sp. 4. Smith. MENTHA PIPERITA. Ed. Dub.*  
var. *a. Lond.*

Peppermint.

*Off.*—The plant.

HERBA MENTHÆ PIPERITÆ. *Ed.*

MENTHA PIPERITA. *Lond.*

MENTHA PIPERITIS. *Dub.*

THIS species of mint is also perennial, and a native of Bri-

tain, where it is cultivated in very great quantities, for the sake of its essential oil. It flowers in August and September.

The leaves have a strong, rather agreeable smell, and an intensely pungent, aromatic taste, resembling that of pepper, and accompanied with a peculiar sensation of coldness.

Its predominant constituents are essential oil and camphor, both of which rise in distillation, and are combined in what is called Oil of Peppermint.

*Medical use.*—Peppermint is principally used as a carminative and antispasmodic. The distilled water is a domestic remedy for flatulent colic, and the essential oil is often given with advantage, in doses of a few drops, in cramps of the stomach.

*Sp. 20. Willd. ; sp. 12. Smith. MENTHA PULEGIUM. Ed. Lond. Dub.*

Penny-royal.

*Off.*—The herb.

HERBA MENTHÆ PULEGII. *Ed.*

PULEGIUM. *Lond. Dub.*

THIS is also perennial, and a native of Britain. It flowers in September. In its sensible qualities it is warm, pungent, and aromatic, somewhat similar to spearmint, but less agreeable. It is seldom used.

MENYANTHES TRIFOLIATA. *Ed. Lond. Dub.*

*Willd. g. 299, sp. 4. Smith, g. 84, sp. 1. Pentandria Monogynia.*—*Nat. ord. Rotaceæ.*

Buckbean, Marsh trefoil.

*Off.*—The leaves.

FOLIUM MENYANTHIS TRIFOLIATÆ. *Ed.*

MENYANTHES. *Lond.*

TRIFOLIUM PALUDOSUM. *Dub.*

THIS perennial plant is very common in marshy situations, and is one of the most beautiful of our native flowers. It flowers in June and July.

The leaves grow, by threes, on footstalks. They are excessively bitter, and their bitterness is extracted by infusion. They are said to be sometimes used in brewing ale, and that one ounce will go as far as half a pound of hops.

*Medical use.*—A drachm of them in powder purges and vomits. In infusion or extract, they have been recommended in intermittents, and in several cachectic and cutaneous diseases. The dose of the extract is from ten to twenty grains.

MIMOSA. *Lim. Dub. Ed.*

ACACIA. *Willd. Lond.*

*Polygamia Monoecia*, Willd. g. 1902.—Nat. ord. *Lomentaceæ*.

MIMOSA CATECHU. *Ed.*

Sp. 73. ACACIA CATECHU. *Willd. Lond.*

Catechu.

*Off.*—The extract of the wood.

LIGNI MIMOSÆ CATECHU EXTRACTUM. *Ed.*

CATECHU EXTRACTUM. *Lond.*

CATECHU. *Dub.*

THIS tree is a native of Hindostan. The extract of catechu, which was formerly termed, with peculiar impropriety, Japan Earth, is principally prepared in Bengal, from the internal coloured part of the wood, by decoction, evaporation, and exsiccation in the sun. But catechu is also prepared in India from several other species of Mimosa, and even from the woods, barks, and fruits of other genera. In Bombay, it is chiefly prepared from the nuts of the *Areca catechu*. The nuts are taken as they come from the tree, and boiled for some hours in an iron vessel. They are then taken out, and the remaining water is inspissated by continued boiling. The process furnishes the Kossu, or the most astringent terra japonica, which is black, and mixed with paddy husks and other impurities. After the nuts are dried, they are put into a fresh quantity of water, boiled again; and this water being inspissated like the former, yields the best or dearest kind of catechu, called Coury. It is yellowish-brown, has an earthy fracture, and free from the admixture of foreign bodies.

The Bombay catechu is of a uniform texture, and of a red-brown tint, its specific gravity being generally about 1.39. The extract from Bengal is more friable and less consistent. Its colour is like that of chocolate externally; but when broken, its fracture presents streaks of chocolate and of red brown.—Its specific gravity is about 1.28. Their tastes are precisely similar, being astringent, but leaving in the mouth a sensation of sweetness. They do not deliquesce, or apparently change by exposure to the air, and are not fusible.

By Mr Davy's analysis, 200 grains gave,

	Bombay.	Bengal.
Tannin, - - -	109	97
Peculiar extractive matter, -	68	73
Mucilage, - - -	13	16
Residual matter, chiefly sand and calcareous earths, - - -	10	14



This more exact analysis confirms the observations made by me, in the first edition of this Dispensatory.

*Medical use.*—Catechu is one of the most convenient and powerful astringents we possess, and may be exhibited in every case where astringents are indicated. It is particularly serviceable in diarrhœa, in hoarseness from relaxation of the fauces, ulcers and aphthæ in the mouth, and in excoriations, with lymphatic exudations.

MIMOSA NILOTICA. *Ed. Dub.*

Sp. 87. ACACIA VERA. *Willd. Lond.*

Gum Mimosa.

*Officinal.*—The gum. Gum-Arabic.

GUMMI MIMOSÆ NILOTICÆ. *Ed.*

ACACIÆ GUMMI. *Lond.*

GUMMI ARABICUM. *Dub.*

THIS species of Mimosa grows in the sandy deserts of Africa, Arabia Petræa, and Egypt. The greatest quantity of pure gum, commonly called Gum Arabic, is furnished by this tree, from which it exudes either spontaneously, or from incisions made into the bark, and afterwards hardens in the air. But a similar gum may be obtained from all the species of Mimosa, and from many other trees, such as the Swietenia febrifuga, Melia azadirachta, and the different species of Terminalia. It is remarkable that the barks of all the trees which furnish this bland mucilaginous substance are highly astringent; that of the Mimosa Nilotica itself is used in India for tanning; and in our country, the cherry and plumb trees, which sometimes yield a little gum, have very astringent barks.

There are two kinds of gum found in the shops, and sold promiscuously; distinguished by the names of Gum Arabic, and East-India gum. Gum Arabic consists of roundish transparent tears, colourless, or of a yellowish colour, shining fracture, without smell or taste, and perfectly soluble in water. The pieces which are most transparent, and have least colour, are reckoned the best. They are sometimes selected from the Gum Arabic in sorts, and sold for about double the price, under the title of Picked gum. The East-India gum is darker coloured than Gum Arabic, and is not so readily soluble in water. I possess a mass of gum, gathered from a Mimosa in New South Wales, by Mr Jamieson. It is darker coloured even than East-India gum, and is also less soluble than it; for when suspended in water, it gives off white films, which float through the mucilage. But its most remarkable property is, that it does not precipitate silicized potass; in which respect it agrees, as far as my experiments go, with gum col-

lected in this neighbourhood from the common cherry and plum trees. It is also remarkable, that the coarsest gum forms the thickest mucilage; at least Botany-Bay gum forms a thicker mucilage than East-India gum, and this than Gum Arabic.

Gum Arabic was originally brought from Arabia, by the way of Egypt, to Marseilles; and it was not until the beginning of the seventeenth century that the Dutch made the gum of Senegal known in Europe. After the French got possession of that river, they directed their attention to it, as an important object of commerce, and ascertained, by experiments made in the latter half of the seventeenth century, that gum Senegal was superior to the best gum of Arabia; and for about fifty years it has had the preference.

M. Adanson examined all the gum trees of West Africa with great care, and has given the best description of them. They amount to forty in number; but the three great forests which supply the Senegal market consist chiefly of two kinds; one which produces a white gum, called *Vereck*, and another, called *Nebueb*, which yields a red gum.

About the middle of November, that is, after the rainy season, which begins early in July, a gummy juice exudes spontaneously from the trunk and principal branches. In about fifteen days, it thickens in the furrow, down which it runs, either in a vermicular shape, or more commonly assuming the form of round or oval tears, about the size of a pigeon's egg, of different colours, as they belong to the white or red gum-tree. About the middle of December, the Moors encamp on the borders of the forest, and the harvest lasts six weeks. The gum is packed in very large sacks of tanned leather, and brought on camels and bullocks to certain ports, where it is sold to the French and English merchants. In 1787, the annual quantity purchased by the former was about 800,000 pounds, and by the latter 400,000, according to the information of M. Golberry.

Mr Jackson, in his account of the Empire of Morocco, informs us, that from Mogodor they export two sorts of gum, one the common Gum Arabic, the produce of Morocco, and called *Barbary-gum*; the other finer, called *Gum Soudan*, or *Senegal*, brought from Timbuctoo by the caravans. He also says, but it must be observed that he is no botanist, that the gum called *Morocco* or *Barbary gum* is produced from a thorny tree called *Attaleh*, having leaves similar to the juniper, whereas all the acacias have pinnated leaves. It yields most gum during the hot and parching heat of July and August; and the hotter the weather, and the more sickly the tree ap-

pears, the more gum it yields. A wet winter and a mild summer are unfavourable to gum.

Gum is highly nutritious. During the whole time of the harvest, of the journey, and of the fair, the Moors of the desert live almost entirely upon it; and experience has proved that six ounces are sufficient for the support of a man during twenty-four hours.

*Medical use.*—It possesses the powers of a mucilaginous demulcent in a high degree; and is frequently exhibited in diarrhœa, dysentery, chincough, hoarseness, strangury, &c.; and is an extremely useful article for giving form to some remedies, and for correcting the acrimony of others.

M. Golberry says, that he saw a young Englishman in Gambia recover from a very severe hæmoptysis, by taking three ounces of gum daily, dissolved in milk.

MOMORDICA ELATERIUM. *Ed.*

*Monoecia Syngenesia. Willd. g. 7139, sp. 13.*—Nat. ord. Cucurbitaceæ.

Wild cucumber.

*Off.*—The fresh fruit when almost ripe.

FRUCTUS RECENS SUBMATURUS MOMORDICÆ ELATERII. *Ed.*

ELATERII POMA. *Lond.*

ELATERII FRUCTUS. *Dub.*

THIS plant is a native of the south of Europe, and is perennial. When cultivated in this country it does not survive the winter. The fruit is oblong, about an inch and a half long, and an inch in diameter. It is of a green colour, and beset with stiff hairs. When nearly ripe, it bursts on a slight touch, separates from its stalk, and sheds its seeds with great violence. From this circumstance it was named by the Greeks *Elate-rium*, which name was also applied to the fecula of the juice of the fruit, the only preparation used in medicine. Planche found it to contain animo-vegetable matter.

*Medical use.*—In a few grains it operates as a drastic purgative, and was sometimes used in dropsies. It is high priced and seldom used, though lately recommended by Dr Ferriar.

MORUS NIGRA.

*Monoecia Tetrandria. Willd. g. 1664, sp. 5.*—Nat. ord. *Scabridæ.*

Mulberry tree.

*Off.*—The fruit.

MORI BACCÆ. *Lond.*

THIS tree, which is supposed to have come originally from Persia, bears the cold of our winters, and ripens its fruit in England. The fruit has the same properties with other sub-acid fruits. Its juice contains tartaric acid.

**MOSCHUS MOSCHIFERUS.**

*Mammalia.*

The musk deer.

*Off.*—The substance called *Musk*, contained in a follicle situated near the navel.

*Materia in folliculo prope umbilicum collecta, Moschus dictus. Ed.*

*MOSCHUS. Lond. Dub.*

THE musk animal is an inhabitant of the most elevated region of Asia, particularly of the Altayan Alps, and the mountains which divide Thibet from China. It is gentle and timid, and its chase is difficult and dangerous. It is about three feet in length, and in its general form resembles the deer tribe. In the male, behind the navel, and before the prepuce, there is situated an oval bag, flat on one side, and convex on the other, about three inches long, and two broad, projecting about an inch, and having a small open orifice, beset with short hairs. In the young animal it is empty, but in the adult it is filled with a secreted matter, known by the name of Musk. When the bag becomes too full, the animal expresses part of its contents, by rubbing itself against stones or trees. The musk expressed in this manner is said to be the purest, but none of it probably reaches this country. The best musk is brought from Tonquin, an inferior sort from Agria and Bengal, and a still worse from Russia.

Fine musk comes to us in round thin bladders, which are generally about the size of a pigeon's egg, covered with short brown hairs, lined with a thin brown membrane, well filled, and without any appearance of having been opened. The musk itself is dry, with a kind of unctuousity, of a dark reddish brown or rusty blackish colour, in small round grains, with very few hard black clots, and perfectly free from sandy, or other visible foreign matter. If chewed, and rubbed with a knife on paper, it looks smooth, bright, yellowish, and is free from grittiness. Laid on a red-hot iron, it catches flame, and burns almost entirely away, leaving only an exceedingly small quantity of light greyish ashes. The largest and fullest bag scarcely contains more than two drachms of musk.

Its taste is somewhat bitterish, and its smell extremely powerful and peculiar. Neumann got from thirty grains of

musk twelve of watery and four of alcoholic extract; and inversely, ten of alcoholic, and six of watery. Its smell and taste were elevated in distillation with water, but not with alcohol. Neither the fixed nor volatile oils dissolve it.

The very great price of musk has given rise to many modes of adulterating it. To increase its weight, sand, and even particles of lead, are introduced through very small openings into the bags. The real musk is frequently abstracted from the bag, and its place supplied with dry blood, coarsely powdered, or some mixture with asphaltum. These adulterations are to be detected by discovering that the bag has been opened. The presence of blood is also known by the fetid smell it emits when heated sufficiently, and by the formation of ammonia, when rubbed with potass. Asphaltum is known by its shining fracture, and melting on hot iron, while musk is converted into charcoal. But there are even artificial bags filled with a composition containing some real musk. These are in general thicker, and covered with longer hair, and want the internal brown membrane which lines the real musk-bag.

*Medical use.*—Musk is said to be a medicine of very great efficacy, and for which, in some cases, there is hardly any substitute. When properly administered, it sometimes succeeds in the most desperate circumstances. It raises the pulse, without heating much; it allays spasms, and operates remarkably on the brain, increasing the powers of thought, sensation, and voluntary motion.

It may be employed in every instance of typhus fever, especially when attended with delirium, or spasmodic affection of any particular organ, or of the whole system, or subsultus tendinum, &c. It is also used with the greatest benefit in exanthematous and phlegmonic diseases, accompanied with typhoid fever; and in many spasmodic affections, as chincough, epilepsy, trismus, &c.

It is most conveniently given in substance in powder, in doses of three grains or upwards, repeated every one or two hours. Its best preparation is the tincture.

#### MURIAS.

MURIATE is the generic term for those secondary compounds which contain muriatic acid. Their general properties have been already mentioned.

The muriates may be divided into three families;

1. Alkaline muriates,—soluble in water, fusible and vaporizable without decomposition, forming no precipitate with alkaline carbonates.

2. Earthy muriates,—generally soluble in water, decomposable by heat, forming a white precipitate with alkaline carbonates.

3. Metalline muriates.—The muriatic acid is capable of combining with many metals, in two states of oxidizement. The muriates which contain the metal in the state of protoxide, are in general very acrid, and soluble both in water and in alcohol. The muriates which contain the metal in the state of peroxide are often insoluble, have a white colour, and contain an excess of base, or are sub-muriates. The muriates are also the most volatile of the metalline salts, and often rise undecomposed in sublimation or distillation.

MURIAS AMMONIÆ, v. s. Sal ammoniacus; ammonia muriata. *Ed.*

AMMONIÆ MURIAS, s. s. Murias ammoniæ. *Lond.*

SAL AMMONIACUM, s. s. Murias ammoniæ. *Dub.*

Muriate of ammonia. Sal ammoniac.

MURIATE of ammonia is found native, especially in the neighbourhood of volcanoes. It was first prepared in Egypt from the soot of camel-dung by sublimation; but the greatest part of that now used is manufactured in Europe, either by combining ammonia directly with muriatic acid, or by decomposing the sulphate of ammonia by means of muriate of soda; or the muriates of lime and magnesia by means of ammonia.

In commerce, muriate of ammonia occurs, either sublimed in firm, round, elastic, concavo-convex cakes, or crystallized in conical masses. The latter commonly contain other salts, especially muriate of lime, which renders them deliquescent; and, therefore, the sublimed muriate of ammonia is to be preferred for the purpose of medicine.

Muriate of ammonia has an acrid, pungent, urinous taste. It is soluble in about three times its weight of water at 60°, and in an equal weight at 212°. During its solution, it produces 32° of cold. It is also soluble in about 4.5 parts of alcohol. It is permanent in the ordinary state of the atmosphere. By a gentle heat, it may be deprived of its water of crystallization, and reduced to the form of a white powder. At a higher temperature it sublimes unchanged. Its crystals are either six-sided pyramids, aggregated in a plumose form, or still more commonly, four-sided pyramids. It consists of 32.75 muriatic acid, 25.00 ammonia, and 32.25 water. It is decomposed by the sulphuric and nitric acids; by baryta, potass, soda, strontia, and lime; by several secondary salts

containing these acids or bases; and by those metalline salts whose bases form with muriatic acid an insoluble compound.

*Medical use.*—Muriate of ammonia is now seldom used internally. It was formerly supposed to be a powerful aperient and attenuant of viscid humours.

Externally applied, it is a valuable remedy. It may act in two ways.

1. By the cold produced during its solution.

It is from this cause that fomentations of muriate of ammonia probably prove beneficial in mania, apoplexy from plethora, lesions of the head, and in violent headachs. When used with this intention, the solution should be applied as soon as it is made.

2. By the stimulus of the salt.

On this principle we may explain its action as a discutient, in indolent tumours of all kinds, contusions, gangrene, psora, ophthalmia, cynanche, and in stimulating clysters. In some cases, as in chilblains, and other indolent inflammations, both modes of action may be serviceable. When first applied, the coldness of the solution will diminish the sense of heat and uneasiness of the part, and the subsequent stimulus will excite a more healthy action in the vessels.

MURIAS SODÆ, v. s. Soda muriata; sal marinus. *Ed.*

SODÆ MURIAS, s. s. Murias sodæ. *Lond.*

SAL COMMUNE, s. s. Murias Sodæ. *Dub.*

Muriate of soda. Common sea-salt.

THIS is the most common of all the neutral salts. It is not only found in immense masses on and under the surface of the earth, and contained in great quantities in many salt springs, but it is the cause of the saltiness of the sea.

There are two varieties of native muriate of soda, the lamellar and fibrous. It is found in Poland, Hungary, Spain, England, &c. When necessary, it is purified by solution and crystallization.

Salt springs occur in many parts of the world. The quantity of muriate of soda contained in these, varies from an inconsiderable quantity even up to one-third.

Sea-water also varies much in strength. It is said to contain most salt in warm climates, and at great depths.

Muriate of soda, as obtained from its natural solutions by evaporation and crystallization, is commonly mixed with earthy muriates, which, being deliquescent salts, dispose it to attract moisture from the atmosphere. It may, however, be purified by precipitating the earths by means of carbonate of soda, or by washing the crystallized salt with a saturated solution of muriate of soda, heated to ebullition. In this state it is not

capable of dissolving any more muriate of soda, but will dissolve a considerable quantity of the earthy muriates.

Muriate of soda has a pure salt taste, is soluble in 2.8 times its weight of water at 60°, and in 2.76 at 212°. It is not soluble in alcohol. By the action of heat it first decrepitates, then melts, and, lastly, sublimes without decomposition. The primitive form of its crystals is cubic, and they are permanent in the atmosphere. According to Kirwan, they consist of 38.88 muriatic acid, 53 soda, and 8.12 water. It is decomposed by the sulphuric and nitric acids, by potass and baryta, by secondary salts containing these, and by metalline salts whose base forms an insoluble compound with muriatic acid; it is also gradually decomposed by lime, iron, and litharge.

*Medical use.*—Muriate of soda is one of the most important articles in the arts, and in domestic economy. As a medicine, it is useful in some cases of dyspepsia; and in large doses it is said to check vomiting of blood. It is a common ingredient in stimulating clysters, and is sometimes applied externally, as a fomentation to bruises, or in the form of bath, as a gentle stimulus to the whole surface of the body.

MYRISTICA MOSCHATA. *Ed. Dub. Lond.*

*Willd. g.* 1351, *sp.* 1. *Monoecia Monandria.*—*Nat. ord.* Oleraceæ.

The nutmeg tree.

*Off.*—Nutmeg; oil of nutmeg; oil of mace; mace.

a) MYRISTICÆ moschatæ fructus nucleus, NUX MOSCHATA dictus.

MYRISTICÆ NUCLEI. *Lond.*

NUX MOSCHATA. *Dub.*

b) MACIS. *Ed.*

Nucis moschatus involucreum, MACIS dictum. *Dub.*

c) MACIS OLEUM VOLATILE. *Ed.*

NUCIS MOSCHATE OLEUM ESSENTIALE. *Dub.*

d) NUCIS MOSCHATE OLEUM EXPRESSUM. *Dub.*

THE tree which furnishes this elegant spice is a native of the Molucca islands. It is not, however, cultivated in any of them except Banda, from which all Europe has been hitherto supplied with mace and nutmeg. The entire fruit is about the size of a peach, and is marked with a longitudinal furrow. The external covering is smooth, fleshy, and bitter. As the fruit ripens, this bursts, and discloses the mace, which is an oily membranous pulp, of a dark red colour, and aromatic flavour, divided into narrow branched slips. Within the mace is inclosed the nut, which consists of a brown, thin hard shell,



and a fatty parenchymatous kernel, of an oval shape. The fruit is gathered three times a-year. The external covering is separated on the spot, and the mace and nut carried home, where they are carefully dried in the sun. After they are dried, the nutmegs are dipt in lime water, and the mace is sprinkled with salt water, probably to preserve them from the attacks of insects.

*Mace*, by drying, acquires a reddish-yellow colour. When good, it is flexible, thin, oily, of a deep colour, has a strong agreeable smell, and an aromatic, bitterish acrid taste. When brittle, divided into fewer slips, of a whitish, or a pale yellow colour, and of little smell or taste, it is to be rejected.

Neumann got from 7680 parts of mace, 2160 alcoholic, and 1200 watery extract; and inversely, 1920 watery, and 1440 alcoholic extract, with 300 of volatile oil heavier than water, which arose during the inspissation of the watery extract. The expressed oil of mace is less consistent than that of nutmegs.

*Nutmegs* are oval, flattened at both ends, of a grey-brown colour, and reticularly furrowed on the outside, of a yellow colour within, variegated with brown undulating lines, solid, hard, unctuous to the feel, and easily cut with a knife, and have a balsamic smell, and agreeable aromatic taste. The small round nutmegs are better than the large oval ones; and they should have a strong smell and taste, and should neither be worm-eaten, musty, nor variegated with black lines. Their activity is, however, confined to the dark-coloured veins, which are not apt to be worm-eaten.

Neumann got from 1920 parts of nutmeg, 480 of an oily alcoholic extract, and 280 watery, with 320 fixed oil: these two last were both insipid: and inversely, 600 watery extract, with 50 of fixed oil, which rose to the surface during the inspissation, and 10 of volatile oil which distilled over; and afterwards, 120 unctuous alcoholic extract, and 300 more of fixed oil. By expression 1920 gave 540 of oil, and afterwards 480 of watery extract, a pretty strongly tasted distilled water, and 80 unctuous alcoholic extract, with 60 of insipid fixed oil.

*Volatile oil of nutmeg.* By distillation nutmegs yield a considerable quantity of essential oil, of a whitish-yellow colour, lighter than water, and possessing the aromatic taste and smell in an eminent degree. In doses of a few drops, it is a powerful carminative and stomachic.

*Expressed oil of mace.* Nutmegs also yield by expression a considerable quantity of limpid yellow oil, which, on cooling,

acquires a sebaceous consistence. They are first beaten to a soft paste in a warm mortar, then inclosed in a linen bag, exposed to the vapour of hot water, and squeezed in a press, of which the plates have been heated.

It is a mixture of the volatile oil on which the flavour depends, and of a fixed oil, of a white colour, without taste or smell; and as the properties which characterize it depend on the presence of the volatile oil, the denomination of Fixed oil, applied to it by the Edinburgh college, is less correct than that of Expressed oil, given to it by the Dublin college, from the manner of its preparation.

In the shops we meet with three sorts of unctuous substances called Oil of mace, though really expressed from the nutmeg. The best is brought from the East Indies, in stone jars; this is of a thick consistence, of the colour of mace, and of 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 suet, palm oil, and the like, flavoured with a little genuine oil of nutmeg. 7680 of the second sort yielded to Neumann 330 volatile oil heavier than water, 2880 of fluid expressed oil, and 4560 of solid but fusible sebaceous matter, perfectly insipid, inodorous, and of a chalky whiteness.

*Med. use.*—Both mace and nutmegs are rather to be considered as aromatic spices, than as articles of medicine. From the essential oil they contain, they are heating and stimulating; and they are added to other medicines for the sake of their agreeable flavour.

MYROXYLON PERUIFERUM. *Ed. Lond. Dub.*

*Willd. g. 829, sp. 1. Decandria Monogynia.*—*Nat. ord. Lomentaceæ.*

Sweet-smelling balsam tree.

*Off.*—Peruvian Balsam.

MYROXYLI PERUIFERI BALSAMUM, *vulgo* Balsamum Peruvianum. *Ed.*

BALSAMUM PERUVIANUM. *Lond. Dub.*

THIS tree grows in the warmest provinces of South America, and is remarkable for its elegant appearance. Every part of it abounds with resinous juice; even the leaves are full of transparent resinous points, like those of the orange tree.

The balsam, as brought to us, is commonly of the consistence of thin honey, of a reddish-brown colour, inclining to

black, an agreeable aromatic smell, and a very hot biting taste.

It is very often adulterated; and sometimes what is sold for Peruvian balsam is a spurious mixture of resin and essential oil, flavoured with benzoin. These frauds are not easily detected, and fortunately they are of little importance.

It is said to be obtained by boiling the cuttings of the twigs in water, and skimming off with a spoon the balsam, which swims on the top.

By incision this tree yields a much more fragrant white or colourless balsam, which, when inspissated by the heat of the sun, forms the red or dry balsam of Peru; but it is very rarely used in Britain, and almost never to be met with in our shops.

Peruvian balsam consists of a volatile oil, resin, and benzoic acid; it is, accordingly, entirely soluble in alcohol, and in essential oils. Water dissolves part of the benzoic acid, and fixed oil combines with the resin. It may be suspended in water by trituration with mucilage and yolk of egg.

*Medical use.*—Balsam of Peru is a very warm aromatic medicine, considerably hotter and more acrid than copaiva. Its effects are stimulating and tonic. Hence its use in some kinds of asthmas, gonorrhœas, dysenteries, suppressions of the uterine discharges, and other disorders proceeding from debility. It is also employed externally for cleansing and healing wounds and ulcers, and sometimes against palsies and rheumatic pains.

MYRRHA, gummi-resina. *Ed. Lond. Dub.*

Myrrh. The gum-resin of a non-descript tree.

THE tree which produces this gum-resin is not yet ascertained. Mr Bruce has given some reasons for supposing that it is a mimosa; but we may observe, that all the mimosas, with which we are sufficiently acquainted, furnish a pure gum, and not a gum-resin. The best myrrh is brought from Troglodytitia, a province of Abyssinia, on the borders of the Red Sea; but what we receive comes from the East Indies, and is produced on the eastern coast of Arabia Felix.

The best myrrh is in the form of tears, of a yellow or reddish-yellow colour, becoming redder when breathed on; light, brittle, of an unctuous feel, pellucid, shining; presenting white semicircular striæ in their fracture; of a very bitter aromatic taste, and a strong, peculiar, not unpleasant odour. It is not good if whitish, dark-coloured, black, resinous, ill smelled, or mixed with impurities, which is too commonly the case.

Neumann ascertained that water and alcohol are both of them capable of taking up the whole of the taste and smell of the myrrh, the extract made by either after the other being insipid. The alcohol distilled from the tincture elevated none of the flavour of the myrrh; but during the inspissation of the decoction a volatile oil arose, containing the whole of the flavour of the myrrh, and heavier than water, while the extract was merely bitter. From 7680 parts of myrrh, he got 6000 watery extract, 180 volatile oil, and 720 alcoholic: and inversely, 2400 alcoholic, and 4200 watery. Braconnot found that myrrh chiefly consisted of a gum, differing from all others. 1. It acquires cohesion by heat, which renders it partly insoluble in water, when the solution is evaporated; 2. It furnishes ammonia by distillation, and azote with nitric acid. 3. It precipitates lead, mercury and tin from their solution. Myrrh also contains 2.3 parts in the 100 of a bitter, very fusible, resinous matter. I have observed that the tincture is transparent, and when poured into water, forms a yellow opaque fluid, but lets fall no precipitate, while the watery solution is always yellow and opaque; and that myrrh is not fusible, and is difficultly inflammable. Mr Hatchett found it soluble in alkalies.

Vauquelin obtained from the root of the *Andropogon Schoenanthus*, by means of alcohol, a thick brown oil, having an acrid, burning taste, like an essential oil, and exactly the smell of myrrh. It differs from myrrh chiefly in having less solidity; but Vauquelin thinks, that if it was united to a gummy matter, it would exactly resemble it. He does not suppose, however, that this is the plant which produces the myrrh of commerce, but considers it as a proof that myrrh is formed in various vegetables.

*Medical use.*—Myrrh is a heating stimulating medicine. It frequently occasions a mild diaphoresis, and promotes the fluid secretions in general. Hence it proves serviceable in cachectic diseases arising from inactivity of the system, and is supposed to act especially upon the uterine system, and to resist putrefaction.

It is exhibited,

1. In substance, in the form of powder, or made up into pills, in doses of 10 to 60 grains.
2. Dissolved in water, as in Griffith's celebrated, but unchemical, myrrh mixture.
3. Dissolved in alcohol.

MYRTUS PIMENTA. *Ed. Lond. Dub.*

*Willd. g. 973, sp. 28. Icosandria Monogynia.*—Nat. ord. *Hesperideæ.*

Pimento tree.

*Off.*—The fruit of the Pimento, commonly called Jamaica Pepper.

FRUCTUS MYRTI PIMENTÆ, *vulgo* Piper Jamaicense. *Ed.*

PIMENTÆ BACCÆ. *Lond.*

PIMENTO; (Piper Jamaicense) baccæ. *Dub.*

THIS is a native of Jamaica, and grows in all the woodlands on the north side. Soon after the trees have blossomed, the berries become fit for gathering, without being suffered to ripen, as when ripe they are moist and glutinous, and therefore difficult to cure, and when dried become black and tasteless. The berries are dried by spreading them on a terrace, exposed to the sun for about seven days, during which time they gradually lose their green colour, and become of a reddish-brown.

The smell of this spice resembles a mixture of cinnamon, cloves, and nutmegs; its taste approaches to that of a mixture of the whole three; whence it has received the name of *all-spice*.

Neumann ascertained that its flavour resides entirely in a volatile oil, heavier than water, and its pungency, in a resin or a substance soluble in alcohol, and insoluble in water. From 480 parts, he got 120 watery extract, 30 volatile oil, and 20 alcoholic extract; and inversely, 66 alcoholic, and 100 watery.

*Medical use.*—Pimento is a warm aromatic stimulant, and is much used as a condiment in dressing food. As a medicine, it may be advantageously substituted for the more costly spices, especially in hospital practice.

NICOTIANA TABACUM. *Ed. Lond. Dub.*

*Willd. g. 379, sp. 1. Pentandria Monogynia.*—Nat. ord. *Solanaceæ.*

Tobacco.

*Off.*—The dried leaves.

NICOTIANÆ TABACI FOLIUM. *Ed.*

TABACI FOLIA. *Lond.*

NICOTIANÆ FOLIA. *Dub.*

TOBACCO is an annual plant, a native of America, from whence it was brought into Europe, about the year 1560. It is now sometimes cultivated, for medicinal use, in our gar-