kind, from whence I have myself obtained the same beautiful and superior tint. See *Trans. Soc. Arts.* vol. 27, p. 40.

101. ULEX *europæus.* FURZE, GORSE, or WHIN.—Is used in husbandry for fences, and is also much cultivated for fuel for burning lime, heating ovens, &c. Cattle and sheep relish it much; but it cannot be eaten by them except when young, in consequence of its strong spines; to obviate which an implement has been invented for bruising it. When it grows wild on our waste land, it is common to set it on fire in the summer months, and the roots and stems will throw up from the ground young shoots, which are found very useful food for sheep and other animals. It is readily grown from seeds, six pounds of which will be enough for an acre of land.

PLANTS USEFUL IN THE ARTS.

SECT. VI.—*BRITISH TREES AND SHRUBS.*

102. ACER *Pseudo-Platanus.* SYCAMORE.—The wood of this tree is soft and of little use, unless it is for the turners' purposes, who make boxes and other small toys of it. It is not of value as timber.

103. ACER *campestre.* THE MAPLE.—Before the introduction of Mahogany and other fine woods the Maple was the principal wood used for all kinds of cabinet work, and was much esteemed: the knobs which grow on those trees in an old state afforded the most beautiful specimens, and according to Evelyn were collected by the curious at great prices. The Maple trees in this country are none of them at the present day old enough to afford that fine-veined variegation in the timber which is alluded to in this account.

104. ARBUTUS *Unedo.* THE STRAWBERRY-TREE.—Is a native of the islands in the celebrated Lake of Killarney in Ireland, where it grows to a large size. We know of no particular use to which it is applied. It is however one of our most ornamental evergreen shrubs, producing beautiful flowers, which vary from transparent white to deep red, in the winter months, at which season also the fruit appears; which taking twelve months to come to maturity affords the singular phænomenon in plants, of having lively green leaves, beautiful flowers, and fruit as brilliant as the richest strawberry, in the very depth of our winter. We have a fine variety of this plant with scarlet blossoms, and also one with double flowers, both of which are singularly ornamental to the shrubbery.

105. ARBUTUS *Uva Ursi*. Bear-berries.—A small trailing plant of great repute as a medicine, but of no use in any other respect.

106. BERBERIS *vulgaris*. Barberry.—This has long been cultivated in gardens for its fruit, which is a fine acid, and it is used as a conserve, and also for giving other sweeter fruits a flavour. The common wild kind has stones in the fruit, which renders it disagreeable to eat. There is a variety without stones called the Male Barberry, which is preferred on this account.

This tree is subject to a disease in the summer, caused apparently from a yellow fungus growing on the leaves and young shoots; and it is said that where it grows near corn fields it imparts its baneful influence to the grain, for which reason it is recommended in some of our books on agriculture to exterminate the trees.

107. BETULA *alba*. Birch-Tree.—Is in great use and of considerable value on some estates for making brooms, and the timber for all purposes of turnery-ware and carving. The sap of the Birch-tree is drawn by perforating the bark in the early state of vegetation. It is fermented, and makes a very pleasant and potent beverage called Birch Wine.

108. BETULA *Alnus*. Alder-Tree.—This is a valuable tree for planting in moors and wet places. The wood is used for making clogs, pattens, and other such purposes; and the bark for dyeing and manufacturing some of the finer kinds of leather. This wood is of considerable value for making charcoal for gunpowder. In charring it a considerable quantity of acetic acid is extracted, which is of great value for the purpose of bleaching, &c. &c.

109. BUXUS *sempervirens*. Box-Tree.—The wood of Box is of great value for musical instruments, and for forming the handles of many tools: being very hard, it admits of a fine polish. This tree is growing in quantity at Box-hill in Surry, and has given name to that place. This was planted by a late Duke of Norfolk, and has succeeded so well, that the wood has been cut twice, and sold each time for treble the value of the fee-simple of the land.

It forms a better cover for game than any other plant; and being very bitter, is not liable to be destroyed by any animal eating it down. An infusion of the leaves is frequently given as a vermifuge with good effect.

There is a smaller variety of this, much used for making edging to gravel walks in gardens.

110. CARPINUS *Betulus*. The Hornbeam.—This grows to a large tree, but is not of much account as timber: it is however very useful in forming ornamental fences, and is well adapted to this purpose from the tendency of its young branches to grow thick.

111. CLEMATIS *Vitalba*. Traveller's Joy.—A beautiful creeping shrub very useful to the farmers for making shackles for gates and hurdles, or withs for tying faggots and other articles. Whenever this plant is found in the hedges, &c. it is a certain indication of a chalky under stratum in the soil.

112. CORNUS *sanguinea*. Dog-wood.—This is planted in pleasure-grounds as an ornamental shrub, and from the red appearance of the wood in the winter forms a beautiful constrast in plantations. It is also used by butchers for making skewers.

113. CORYLUS *Avellana*. The Hazel.—Is a well known shrub of large growth producing nuts, which are much admired. The Filbert is an improved variety of this plant. The farmers in Kent are the best managers of Filberts, and it is the only place where they are grown with any certainty; which appears to be owing principally to the trees being regularly pruned of the superfluous wood. It is performed in the month of March when the plants are in bloom, and is the only time when the fruit-bearing wood can be distinguished.

114. CRATÆGUS *Aria*. White Beam-Tree.—Is a beautiful tree producing very hard wood, and is much in esteem for cogs of mill-work and various other purposes.

115. CRATÆGUS *Oxyacantha*. The Quickset, or White-Thorn.—This is in great request for making fences, and is the best plant we know for such purposes if properly managed. It is readily propagated by sowing the hips, or fruit, which does not readily grow the first season; it is therefore usual to bury them mixed with saw-dust, or sand, one year, and then to sow them in beds.

116. DAPHNE *Laureola*. Spurge- or Wood-Laurel.—Is used in medicine; which see.

We have many species of Daphne which are very ornamental to our shrubberies and green-houses: these are propagated principally by grafting; and the Wood-Laurel being hardy and of ready growth forms the stock principally used. It is readily propagated by seeds, which in three years will make plants large enough for this purpose.

The plant in all its parts is excessively acrid. I remember a man being persuaded to take the leaves reduced to powder, as a remedy for Siphylis, and he died in consequence in great agony in a few hours.

117. DAPHNE *Mezerium*. Mezerion.—Is a very beautiful shrub, and is one of the earliest productions of Flora, often exhibiting its brilliant scarlet flowers in January and February. We have also a white variety of this shrub in the gardens. The bark and roots are extremely acrimonious, and are used in medicine.

118. ERICA *vulgaris*. The Common Heath, Heather, or Ling.—This spontaneous produce of most of our sandy waste lands is of much usin rural œconomy.

It is of considerable value for making brooms, and affords food to sheep, goats, and other animals; particularly to the grouse and heath-cock. The branches of heath placed upright in a wooden frame form the couch of repose to the brave Highlander. It is also stated that an excellent beverage was brewed from the tops of this plant, but the art of making it is now lost. This is the most common of the species, but all the others have similar properties. They are very ornamental plants. A numerous variety of heaths are brought from the Cape of Good Hope, and afford great pleasure to the amateur of exotic plants, being the greatest ornaments to our green-houses.

119. EUONYMUS *europæus*. Spindle-Tree.—An ornamental shrub. The wood is in great request for making skewers for butchers, as it does not impart any unpleasant taste to the meat.

120. FAGUS *Castanea*. The Spanish Chesnut.—This tree produces timber similar to oak in point of durability, and the bark also contains a considerable quantity of tannin. The Chesnut was in greater plenty in this country many years ago than at the present day; large forests are represented to have been in the neighbourhood of London; and we are led to believe such may have been the case, as many of the old buildings when examined have been found to be built of this timber. The fruit is used as a dainty at table; but the variety which is brought from Portugal and Spain is much larger than what are grown in this country. The large kind imported from those countries is grafted, and kept on purpose for the fruit. It is an improvement to graft this variety by taking the scions from trees in bearing, and they will produce fruit in a few years and in a dwarf state.

121. FAGUS *sylvatica*. The Beech.—The timber of the Beech is valuable for making wheels, and is applied to many other useful purposes in domestic œconomy. The seeds of the Beech are very useful for fattening hogs.

This tree affords many beautiful varieties in foliage, the handsomest of which is the Copper Beech, whose purple leaves form a fine contrast in colour with the lively green of the common sort.

123. FRAXINUS *excelsior*. The Ash.—The wood of the Ash is considered the best timber for all purposes of strong husbandry utensils. The wheels and axle-trees of carriages, the shafts for carts, and the cogs for mill-work, are principally made of this timber. The young wood when grown in coppices is useful for hop-poles, and the small underwood is said to afford the best fuel of any when used green. Coppice-land usually sells for a comparatively greater price according as this wood prevails in quantity, on account of its good quality as fuel alone.

124. HEDERA *Helix.* Ivy.—A common plant in woods, and often planted in shady places to hide walls and buildings. The leaves are good food for deer and sheep in winter. The Irish Ivy, which was brought from that country, is a fine variety with broad leaves. It was introduced by Earl Camden.

125. HIPPOPHAE *Rhamnoides.* Sea Buckthorn.—This is a scarce shrub; but is very useful as a plant for forming shelter on the hills near the sea-coast, it having been found to stand the sea-breeze better than any plant of the kind that is indigenous to this country.

126. ILEX *aquifolium.* Holly.—A well-known evergreen of singular beauty, of which we have many varieties, both striped, and of different colours in the leaf. Birdlime is made from the inner bark of this tree, by beating it in a running stream and leaving it to ferment in a close vessel. If iron be heated with charcoal made of holly with the bark on, the iron will be rendered brittle; but if the bark be taken off, this effect will not be produced. *Ray's Works and Travels by Scott.*

127. JUNIPERUS *communis.* Juniper.—An evergreen shrub, very common on waste lands. The berries are used in preparing the well-known spiritous liquor gin, and have been considered of great use in medicine.

128. LIGUSTRUM *vulgare.* Privet.—A shrub of somewhat humble growth, very useful for forming hedges where shelter is wanted more than strength. It bears clipping, and forms a very ornamental fence. There is a variety of this with white berries, and another nearly evergreen.

129. MESPILUS *germanica.* The Medlar.—Is cultivated for its fruit, and of which we have a variety called the Dutch Medlar; it is larger than our English one, but I do not think it better flavoured.

130. PINUS *sylvestris.* The Scotch Fir.—A very useful tree in plantations for protecting other more tender sorts when young. It is also now very valuable as timber:—necessity, the common parent of invention, has taught our countrymen its value. When foreign deal was worth twenty pounds per load, they contrived to raise the price of this to about nine or ten pounds, and it was then thought proper for use; before which period, and when it could be bought for little money, it was deemed only fit for fuel. On the South Downs I know some plantations of this tree, which have been sold, after twenty-five years growth, at a price which averaged a profit of twenty shillings per annum per acre, on land usually let for sheep-pasture at one shilling and six-pence.

131. POPULUS *alba.* White Poplar. This is a very ornamental

tree. The leaves on the under surface are of a fine white, and on the reverse of a very dark green; and when growing on large trees are truly beautiful, as every breath of air changes the colour as the leaves move. The wood of all the species of poplar is useful for boards, or any other purposes if kept dry. It is much in demand for floor-boards for rooms, it not readily taking fire; a red-hot poker falling on a board, would burn its way through it, without causing more combustion than the hole through which it passed.

132. POPULUS *monilifera*. CANADA POPLAR.—This is also known by the name of BLACK ITALIAN POPLAR, but from whence it had this name I do not know. This species, which is the finest of all the kinds, grows very commonly in woods and hedges in many parts of Worcestershire and Herefordshire, where it reaches to prodigious sizes. Perhaps no timber is more useful than this; it is very durable, and easy to be converted to all purposes in building. The floors of a great part of Downton Castle, the seat of R. Payne Knight, Esq. are laid with this wood, which have been used forty years and are perfectly sound. Trees are now growing on his estate which are three and four feet in diameter. I have one growing in my Botanic garden which is eight years old, and measures upwards of six cubic feet of timber. The parent of this tree which grew at Brompton I converted into boards. It was nineteen years growing; and when cut down it was worth upwards of fourteen pounds, rating it at the then price of deal, for which it was a good substitute. Some fine specimens of this tree are also to be seen at Garnins, the seat of Sir J. G. Cotterell, Bart. the present worthy member for the county of Hereford.

133. PRUNUS *domestica*. THE COMMON PLUM-TREE.—This is the parent of our fruit of this name.

134. PRUNUS *Cerasus*. WILD CHERRY-TREE.—Is the parent of our fine cherries. It is cultivated much in Scotland for the timber, which is hard, and of use for furniture and other domestic purposes. It is the best and most lasting stock for grafting on. Persons who are about to plant this fruit would do well to inquire into the nature of the stock, as no fruit-tree is so liable to disease and become gummy as cherries are, and that is often much owing to the improved kinds being sown for stocks, which are of a more tender texture and of course less hardy than this.

135. PRUNUS *insititia*. SLOE-TREE.—Is of little use except when it occurs in fences. The fruit is a fine acid, and is much used by the common people, mixed with other fruits less astringent and acid, to flavour made wines. It is believed that much Port wine is improved by the same means.

136. PYRUS *communis*. PEAR-TREE.—This is the parent of all our fine varieties of this fruit, and is used as the stock for propagating them;

these are raised from seeds for that purpose. The wood of the Pear-tree is in great esteem for picture frames, it receiving a stain better than almost any other timber known.

137. PYRUS *Malus*. Crab-tree.—A tree of great account, as being the parent of all our varieties of apples, and is the stock on which the fine varieties are usually grafted. A dwarf variety of this tree, called the Paradise Apple, is used for stocks for making dwarf apple trees for gardens.

The juice of the Crab is called verjuice, which is in considerable demand for medicinal and other purposes.

138. QUERCUS *Robur*. The Oak.—Is a well known tree peculiar to Great Britain, and of the greatest interest to us as a nation. It is of very slow growth; but the timber is very strong and lasting, and hence it is used for building our shipping. The bark is supposed to contain more tannin than that of any other tree, and is valuable on that account. The acorns, or fruit, are good food for hogs, which are observed to grow very fat when turned into the forests at the season when they are ripe. The tree is raised from the acorn, which grows very readily.

We have accounts of Oak trees growing to great ages, and to most enormous sizes. One instance is mentioned by Evelyn, of one growing at Cowthorp, near Weatherby, in 1776, which within three feet of the ground was sixteen yards in circumference, and its height about eighty-five feet. *Hunter's Evelyn's Sylva*, p. 500.

139. ROSA *rubiginosa*. Sweet-briar.—Is a very fragrant shrub, for which it has long been cultivated in the gardens. There are several varieties in the nurseries; as the Double-flowering, Evergreen, &c. which are much esteemed.

140. RUBUS *Idæus*. The Raspberry.—Produces a well known fruit in great esteem, and of considerable use both as food and for medicine.

141. RUBUS *fruticosus*. Bramble.—Produces a black insipid fruit, but which is used by the poor people for tarts and to form a made wine: when mixt with the juice of sloes it is rendered very palatable.

142. RUBUS *cæsius*.—Is a dwarf kind of bramble, and produces fruit of a pleasant acid, and where it grows in plenty it is used by the poor people for pies and other purposes of domestic œconomy.

143. SALIX *Russelliana*. The Willow.—No trees in this country are of more use than the species of this genus: many are grown for basket-makers in form of osiers, and other larger sorts serve for stakes, rails, hop-poles, and many other useful purposes. The bark of several

species has been considered as useful for tanning leather. The charcoal of the Willow is also much in demand for making gunpowder.

144. SALIX *viminalis*. The Osier.—These are cultivated in watery places for making baskets, which are become a profitable article, and are the shoots of one season's growth cut every winter. The species best adapted to this purpose, besides the common osier, are

The Salix *vitellina*. Golden Willow.
The Salix *monandria*. Monandrous Willow.
The Salix *triandria*. Triandrous Willow.
The Salix *mollissima*. Silky-leaved Willow.
The Salix *stipularis*. Auriculated Osier.
The Salix *purpurea*. Bitter Purple Willow.
The Salix *Helix*. Rose Willow.
The Salix *Lambertiana*. Boyton Willow.
The Salix *Forbyana*. Basket Osier.
The Salix *rubra*. Green Osier.
The Salix *nigricans*. Dark Purple Osier.

145. SAMBUCUS *nigra*. Elder.—The timber of the Elder is useful for making musical instruments, and the berries made into wine and fermented make a useful and valuable beverage. A variety with green berries is much esteemed for wine also.

146. SORBUS *Aucuparia*. Quicken-tree, or Mountain-Ash.—In this part of Britain we usually find this tree in plantations, where it is very ornamental; and the berries, which are of a fine scarlet, are the food of many species of birds. The wood is also useful for posts, &c. and is considered lasting.

147. SORBUS *domestica*. True Service.—Produces a fruit much like the Medlar, and when ripe is in great esteem. The only tree in this country in a wild state, is growing in Bewdley Forest, Worcestershire.

148. SPARTIUM *Scoparium*. Broom.—Is a very ornamental plant, and is used for making besoms. It was once considered as a specific in the cure of the dropsy, but is now seldom used for medicinal purposes.

149. STAPHYLEA *pinnata*. Bladder-nut.—This is not a common plant in this country. I know of no other use to which it is applied, but its being cultivated in nurseries and sold as an ornamental shrub. The seed-vessel, from whence it takes its name, is a curious example of the *inflated capsule*.

150. TAMARIX *gallica*. A shrub of large growth; and being less

affected by the sea breeze than any other, is useful to form a shelter in situations where the bleak winds will not admit of trees of more tender kinds to flourish.

151. TAXUS *baccata*. THE YEW.—Was formerly much esteemed for making bows: but since those instruments of war and destruction have given place to the more powerful gun-powder, it is not so much in request. The wood is very hard and durable, and admits of a fine polish. The foliage of Yew is poisonous to cattle, who will readily eat it, if cut and thrown in their way in frosty weather.

152. TILIA *europæa*. THE LIME or LINDEN-TREE.—Is a very ornamental tree in plantations, and from its early putting forth its leaves is much esteemed. The flowers emit a very fine scent, and the inhabitants of Switzerland make a favourite beverage from them. The wood is very soft, though white and beautiful. It is much used for the ornamental boxes, &c. so well known by the name of Tunbridge-ware.

153. VACCINIUM *uliginosum*. GREAT BILBERRY. Vaccinium *Vitis Idæa*, RED WHORTLE-BERRY, and Vaccinium *Oxycoccos*, CRANBERRY,—are all edible fruits, but do not grow in this part of the kingdom. Great quantities of Cranberries are imported every winter and spring from Russia; they are much esteemed by the confectioners for tarts, &c. and are sold at high prices. These three kinds grow only in wet boggy places. A species which is native of America, called Vaccinium *macrocarpon*, has been very successfully cultivated at Spring Grove by Sir Joseph Banks, Bart. and which has also been attempted in various other places, but not with the same success. The fruit of this species is larger and of better flavour than either of the other kinds.

154. VACCINIUM *Myrtillus*. WHORTS, or BILBERRIES.—To a common observer this would appear to be a very insignificant shrub; it is not uncommonly met with on our heaths: but it is only in particular places where it fruits in abundance, and in such districts it is of considerable value.

The waste lands on Hindhead and Blackdown in Surry and Sussex are noticed for producing this fruit, which is similar to Black Currants. They are gathered in the months of August and September, and sold at the neighbouring markets.

In a calculation of the value of this plant with an intelligent nurseryman in that county, we found that from 500*l.* to 700*l.* were earned and realized annually by the neighbouring poor, who employed their families in this labour, and who are in the habit of travelling many miles for the purpose. The fruit is ripe in August, and at that season is met with in great plenty in all the neighbouring towns.

155. VISCUM *album*. MISSELTO.—A parasitical plant well known, and formerly of much repute in medicine, but wholly disregarded in the present practice. Birdlime is made from the berries.

Dr. Pulteney in tracing the history of Botanic science quotes Pliny for an account of the veneration in which this plant was held by the Druids, who attributed almost divine efficacy to it, and ordained the collecting it with rites and ceremonies not short of the religious strictness which was countenanced by the superstition of the age. It was cut with a golden knife, and when the moon was six days old gathered by the priest, who was clothed with white for the occasion, and the plant received on a white napkin, and two white bulls sacrificed. Thus consecrated, Misselto was held to be an antidote to poison, and prevented sterility. Query, Has not the custom of hanging up Misselto at merry-makings, and the ceremony so well known among our belles, some relation to the above sacrifice?

156. ULEX *europæus*. Common Furze.—The culture of this shrub is given in the Agricultural Plants, being good for feeding cattle; its principal use however is for fuel, and it is frequently grown for such purposes. It is common on most of our waste lands. It also forms good fences, but should always be kept short and young, otherwise it becomes thin, especially in good land where it grows up and makes large bushes.

157. ULMUS *campestris*. The Elm.—We have a number of varieties of the Elm; the most esteemed is that with the smooth bark. The timber has been long in request for water-pipes, and for boards, which are converted into various uses in domestic œconomy.

158. ULMUS *montana*. Broad-leaved Elm.—This has not been considered of so great value as the common sort, but it is of much more free growth; and I have been informed that in the West of England the timber has been found to be good and lasting.

Sect. VII.—*PLANTS USEFUL IN MEDICINE.*

The initial letters in this class distinguish the Pharmacopœia in which each plant is inserted.

"By the wise and unchangeable laws of Nature established by a Being infinitely good and infinitely powerful,—not only man, the lord of the creation, 'fair form who wears sweet smiles, and looks erect on heaven,' but every subordinate being becomes subject to decay and death: pain and disease, the inheritance of mortality, usually accelerate his dissolution. To combat these, to alleviate when it has not the power to avert, Medicine, honoured art! comes to our assistance.

"It will not be expected that we should here give a history of this

ancient practice, or draw a parallel betwixt the success of former physicians and those of modern times: all that concerns us to remark is, that the ancients were infinitely more indebted to the vegetable kingdom for the materials of their art than the moderns. Not so well acquainted with the œconomy of nature, which teaches us that plants were chiefly destined for the food of various animals, they sought in every herb some latent healing virtue, and frequently endeavoured to make up the want of efficacy in one by the combination of numbers: hence the extreme length of their farraginous prescriptions. More enlightened ideas of the operations of medicine have taught the moderns greater simplicity and conciseness in practice. Perhaps there is a danger that this simplicity may be carried too far, and become finally detrimental to the practice."

The above is quoted from the Preface to a Catalogue of Medicinal Plants published by my predecessor in 1783: and it may be observed, that the medical student has, at the present season, a still less number of plants to store up in memory, owing, probably, to the great advances that chemistry has made in the mean time, through which mineral articles in many instances have superseded those of the vegetable kingdom. But, nevertheless, as Dr. Woodville has justly observed, "it would be difficult to show that this preference is supported by any conclusive reasoning drawn from a comparative superiority of the former;" or that the more general use of them has led to greater success in the practice of the healing art. It is however evident, that we have much to regret the almost total neglect of the study of medical botany by the younger branches of the professors of physic, when we are credibly informed that Cow-parsley has been administered for Hemlock, and Foxglove has been substituted for Coltsfoot *, from which circumstance, some valuable lives have been sacrificed. It is therefore high time that those persons who are engaged in the business of pharmacy should be obliged to become so far acquainted with plants, as to be able to distinguish at sight all such as are useful in diet or medicine, and more particularly such as are of poisonous qualities.

The medical student has so many subjects for his consideration, that it is not desirable he should have a greater number of vegetables to consult than are necessary. And we cannot help lamenting the difficulty he has to struggle with in consequence of the great difference of names which the Pharmacopœias of the present day exhibit. The London, Edinburgh, and Dublin, in many instances, enforce the necessity of learning a different term in each for the same thing, and none of which are called by the same they were twenty years ago. Surely it would be the means of forwarding the knowledge of drugs, if each could be distinguished by one general term.

The candidate for medical knowledge, however, is not the only one who has at times to regret this confusion of names. The Linnæan system is an easy and delightful path to the knowledge of plants;

* *See the account of a dreadful accident of this nature*, in Gent. Mag. for Sept. 1815.

but, like all other human structures, it has its imperfections, and some of which have been modified by judicious alterations. Yet the teachers of this science, as well as the students, have often to deprecate the unnecesary change in names which has been made by many writers, though., in many cases, no more reason appears for it than there generally would be to change the Christian and surnames of persons.

In the following section, I shall enumerate and describe those plants which are contained in the lists of the three colleges; and afterwards a separate list of those which, although they have been expunged, are still sometimes in use by medical men.

I shall also endeavour to give such descriptions as are concise, at the same time sufficient for general knowledge, and for which reason I have taken Lewis's Materia Medica for my text, unless where improvements have been made in certain subjects I have consulted more modern authorities. It should be observed, that writers on medical plants, with few exceptions, have copied one from another: or with a little alteration as to words only.

And as some vegetables, from their affinity, may be confounded with others, whereby those possessing medical qualities may be substituted for others having none, or even by poisonous ones, I shall in some instances enumerate a list of *similar plants*, which, with attention to their botanical characters, it is hoped will prevent those dangerous errors we have lately witnessed. As it is our business, in demonstrating plants, to guard the student against such confusion, it will be proper that specimens of such as come under this head be preserved, as a work for reference and contrast wherever doubts may arise.

158. ACONITUM *Napellus*. Common Blue Monkshood. *The Leaves. L. E.*—Every part of the fresh plant is strongly poisonous, but the root is unquestionably the most powerful, and when chewed at first imparts a slight sensation of acrimony, and a pungent heat of the lips, gums, palate and fauces, which is succeeded by a general tremor and sensation of chilliness.

This plant has been generally prepared as an extract or inspissated juice, after the manner directed in the Edinburgh and many of the foreign Pharmacopœias, and, like all virulent medicines, it should be first administered in small doses. Stoerck recommends two grains of the extract to be rubbed into a powder with two drams of sugar, and as a dose to begin with ten grains of this powder two or three times a-day.

Similar Plants. — Aconitum *japonicum*; A. *pyrenaicum*; Delphinium *elatum*; D. *exaltatum*.

Instead of the extract, a tincture has been made of the dried leaves macerated in six times their weight of spirit of wine, and forty drops given for a dose.—*Woodville's Med. Bot.* 965.

The Dublin College has ordered the *Aconitum Neomontanum*, which is not common in this country *.

* In plants of so very poisonous a nature as the Aconite, it is the duty of every one who describes them to be particular. Here seems to have

160. ACORUS *Calamus.* SWEET RUSH. *The Root. L.*—It is generally looked upon as a carminative and stomachic medicine, and as such is sometimes made use of in practice. It is said by some to be superior in aromatic flavour to any other vegetable that is produced in these northern climates; but such as I have had an opportunity of examining, fell short, in this respect, of several of our common plants. It is, nevertheless, a sufficiently elegant aromatic. It used to be an ingredient in the Mithridate and Theriaca of the London Pharmacopœia, and in the aromatic and stomachic tinctures and compound arum powder of the Edinburgh. The fresh root candied after the manner directed in our Dispensatory for candying eryngo root, is said to be employed at Constantinople as a preservative against epidemic diseases. The leaves of this plant have a sweet fragrant smell, more agreeable, though weaker, than that of the roots.—*Lewis's Mat. Med.*

161. ÆSCULUS *Hippocastanum.* HORSE-CHESNUT. *The Bark and Seed. E. D.*—With a view to its errhine power, the Edinburgh College has introduced the seeds into the Materia Medica, as a small portion of the powder snuffed up the nostrils readily excites sneezing; even the infusion or decoction of this fruit produces this effect: it has therefore been recommended for the purpose of producing a discharge from the nose, which, in some complaints of the head and eyes, is found to be of considerable benefit.

On the continent, the Bark of the Horse Chesnut-tree is held in great estimation as a febrifuge; and, upon the credit of several respectable authors, appears to be a medicine of great efficacy.—*Woodville's Med. Bot.* 615.

162. AGRIMONIA *Eupatoria.* COMMON AGRIMONY. *The Herb. D.*—The leaves have an herbaceous, somewhat acrid, roughish taste, accompanied with an aromatic flavour. Agrimony is said to be aperient, detergent, and to strengthen the tone of the viscera: hence it is recommended in scorbutic disorders, in debility and laxity of the intestines, &c. Digested in whey, it affords an useful diet-drink for the spring season, not ungrateful to the palate or stomach.

163. ALLIUM *Porrum.* LEEK. *The Root. L.*—This participates of the virtues of garlic, from which it differs chiefly in being much weaker. See the article ALLIUM.

---

been a confusion. The *A. Neomontanum* is figured in Jacquin's Fl. Austriaca, fasc. 4. p. 381; and the first edition of Hortus Kewensis under *A. Napellus* erroneously quotes that figure: but both Gmelin in Syst. Vegetabilium, p. 838, and Willdenow in Spec. Plant. p. 1236, quote it under its proper name, *A. Neomontanum.* Now the fact is, that the *Napellus* is the *Common Blue Monkshood*; and the *Neomontanum* is altogether left out of the second edition of the Hortus Kewensis —for the best of all reasons, *it is not in this country*; or, if it is, it must be very scarce, and, of course, not the plant used in medicine.

164. ALLIUM *sativum*. GARLIC. *The Root. L. E. D.*—This pungent root warms and stimulates the solids, and attenuates tenacious juices. Hence in cold leucophlegmatic habits it proves a powerful expectorant, diuretic, and emmenagogue; and, if the patient is kept warm, sudorific. In humoral asthmas, and catarrhous disorders of the breast, in some scurvies, flatulent colics, hysterical and other diseases proceeding from laxity of the solids, and cold sluggish indisposition of the fluids, it has generally good effects: it has likewise been found serviceable in some hydropic cases. Sydenham relates, that he has known the dropsy cured by the use of garlic alone; he recommends it chiefly as a warm strengthening medicine in the beginning of the disease.

Garlic made into an unguent with oils, &c. and applied externally, is said to resolve and discuss cold tumours, and has been by some greatly esteemed in cutaneous diseases. It has likewise sometimes been employed as a repellent. Sydenham assures us, that among all the substances which occasion a derivation or revulsion from the head, none operate more powerfully than garlic applied to the soles of the feet: hence he was led to make use of it in the confluent small-pox about the eighth day, after the face began to swell; the root cut in pieces, and tied in a linen cloth, was applied to the soles, and renewed once a day till all danger was over.

165. ALLIUM *Cepa*. ONION. *The Root. D.* — These roots are considered rather as articles of food than of medicine: they are supposed to afford little or no nourishment, and when eaten liberally they produce flatulencies, occasion thirst, headachs, and turbulent dreams: in cold phlegmatic habits, where viscid mucus abounds, they doubtless have their use; as by their stimulating quality they tend to excite appetite, attenuate thick juices, and promote their expulsion: by some they are strongly recommended in suppressions of urine and in dropsies. The chief medicinal use of onions in the present practice is in external applications, as a cataplasm for suppurating tumours, &c.

166. ALTHÆA *officinalis*. MARSH-MALLOW. *The Leaves and Root. L.* —This plant has the general virtues of an emollient medicine; and proves serviceable in a thin acrimonious state of the juices, and where the natural mucus of the intestines is abraded. It is chiefly recommended in sharp defluxions upon the lungs, hoarseness, dysenteries, and likewise in nephritic and calculous complaints; not, as some have supposed, that this medicine has any peculiar power of dissolving or expelling the calculus; but as, by lubricating and relaxing the vessels, it procures a more free and easy passage. Althæa root is sometimes employed externally for softening and maturating hard tumours: chewed, it is said to give ease in difficult dentition of children.

The officinal preparations are:—Decoctio Althææ officinalis, and Syrupus Althææ.

Similar Plants.—Malva *officinalis*; M. *rotundifolia*; M. *mauritanica*; Lavatera *arborescens*.

This root gives name to an officinal *syrup* [*L. E.*] and *ointment* [*L.*]

and is likewise an ingredient in the *compound powder of gum tragacanth* [*L.E.*] and the *oil* and *plaster of mucilages* [*L.*] though it does not appear to communicate any particular virtue to the two last, its mucilaginous matter not being dissoluble in oils.—*Lewis's Mat. Med.*

167. AMYGDALUS *communis*. SWEET and BITTER ALMONDS. *L.E.D.* —The oils obtained by expression from both sorts of almonds are in their sensible qualities the same. The general virtues of these oils are, to blunt acrimonious humours, and to soften and relax the solids: hence their use internally, in tickling coughs, heat of urine, pains and inflammations: and externally in tension and rigidity of particular parts.

168. ANCHUSA *tinctoria*. ALKANET-ROOT. *E. D.*—Alkanet-root has little or no smell: when recent, it has a bitterish astringent taste, but when dried scarcely any. As to its virtues, the present practice expects not any from it. Its chief use is for colouring oils, unguents, and plasters. As the colour is confined to the cortical part, the small roots are best, these having proportionably more bark than the large.

169. ANETHUM *graveolens*. DILL. *The Seeds. L.*—Their taste is moderately warm and pungent; their smell aromatic, but not of the most agreeable kind. These seeds are recommended as a carminative, in flatulent colics proceeding from a cold cause or a viscidity of the juices. The most efficacious preparations of them are, the distilled oil, and a tincture or extract made with rectified spirit. The oil and simple water distilled from them are kept in the shops.—*Lewis.*

170. ANETHUM *Fœniculum*. FENNEL. *Seeds. E.*—These are supposed to be stomachic and carminative; but this, and indeed all the other effects ascribed to them, as depending upon their stimulant and aromatic qualities, must be less considerable than those of Dill, Aniseed, or Caraway, though termed one of the four greater hot seeds.—*Woodville's Med. Bot. p.* 129.

171. ANGELICA *Archangelica*. GARDEN ANGELICA. *The Root, Leaves, and Seeds. E.*—All the parts of Angelica, especially the roots, have a fragrant aromatic smell, and a pleasant bitterish warm taste, glowing upon the lips and palate for a long time after they have been chewed. The flavour of the seeds and leaves is very perishable, particularly that of the latter, which, on being barely dried, lose greatest part of their taste and smell: the roots are more tenacious of their flavour, though even these lose part of it upon keeping. The fresh root, wounded early in the spring, yields an odorous yellow juice, which slowly exsiccated proves an elegant gummy resin, very rich in the virtues of the Angelica. On drying the root, this juice concretes into distinct moleculæ, which, on cutting it longitudinally, appear distributed in little

veins: in this state they are extracted by pure spirit, but not by watery liquors.

This resin is considered one of the most elegant aromatics of European growth, though little regarded in the present practice, and is rarely met with in prescription; neither does it enter any officinal composition.

172. ANTHEMIS *nobilis*. CHAMOMILE. *The Flowers. L.E.D.*—These have a strong not ungrateful, aromatic smell, but a very bitter nauseous taste. They are accounted carminative, aperient, emollient, and in some measure anodyne: and stand recommended in flatulent colics, for promoting the uterine purgations, in spasmodic affections, and the pains of women in child-bed: sometimes they have been employed in intermittent fevers, and the nephritis. These flowers are also frequently used externally in discutient and antiseptic fomentations, and in emollient glysters. The double-flowered variety is usually cultivated for medicine, but the wild kind with single flowers is preferable.

Similar Plants.—Anthemis *arvensis*; A. *Cotula*; Pyrethrum *maritimum*.

173. ANTHEMIS *Pyrethrum*. PELLITORY OF SPAIN. *The Root. L.*—The principal use of Pyrethrum in the present practice is as a masticatory, for promoting the salival flux, and evacuating viscid humours from the head and neighbouring parts: by this means it very generally relieves the tooth-ach, pains of the head, and lethargic complaints. If a piece of the root, the size of a pea, be placed against the tooth, it instantly causes the saliva to flow from the surrounding glands, and gives immediate relief in all cases of that malady.

174. APIUM *Petroselinum*. COMMON PARSLEY. *The Root. E.*—Both the roots and seeds of Parsley are directed by the London College for medicinal use: the former have a sweetish taste, accompanied with a slight warmth or flavour somewhat resembling that of a carrot; the latter are in taste warmer and more aromatic than any other part of the plant, and also manifest considerable bitterness.

These roots are said to be aperient and diuretic, and have been employed in apozems to relieve nephritic pains, and obstructions of urine.

Although Parsley is so commonly used at table, it is remarkable that facts have been adduced to prove, that in some constitutions it occasions epilepsy, or at least aggravates the epileptic fit in those who are subject to this disease. It has been supposed also to produce inflammation in the eyes.—*Woodville's Med. Bot. p.* 43. A variety which produces larger roots, called Hamburgh Parsley, is commonly grown for medicinal uses.

175. ARBUTUS *Uva Ursi*. TRAILING ARBUTUS OR BEAR-BERRY. *The Leaves.*—This first drew the attention of physicians as an useful remedy in calculous and nephritic affections; and in the years 1763 and 1764, by the concurrent testimonies of different authors, it acquired remark-

able celebrity, not only for its efficacy in gravelly complaints, but in almost every other to which the urinary organs are liable, as ulcers of the kidneys and bladder, cystirrhœa, diabetes, &c. It may be employed either in powder or decoction; the former is most commonly preferred, and given in doses from a scruple to a dram two or three times a-day.—*Woodville's Med. Botany.*

176. ARNICA *montana.* Mountain Arnica. *The whole Plant. E. D.*—The odour of the fresh plant is rather unpleasant, and the taste acrid, herbaceous, and astringent; and the powdered leaves act as a strong sternutatory.

This plant, according to Bergius, is an emetic, errhine, diuretic, diaphoretic, emmenagogue; and from its supposed power of attenuating the blood, it has been esteemed so peculiarly efficacious in obviating the bad consequences occasioned by falls and bruises, that it obtained the appellation of *Panacea Lapsorum.*—*Woodville's Med. Bot. p.* 43.

177. ARTEMISIA *Absinthium.* Wormwood, *The Herb. L.*—Wormwood is a strong bitter; and was formerly much used as such against weakness of the stomach, and the like, in medicated wines and ales. At present it is rarely employed in these intentions, on account of the ill relish and offensive smell which it is accompanied with. These it may be in part freed from by keeping, and totally by long coction, the bitter remaining entire. An extract made by boiling the leaves in a large quantity of water, and evaporating the liquor with a strong fire, proves a bitter sufficiently grateful, without any disgustful flavour.

178. ARTEMISIA *Abrotanum.* Southernwood. *Leaves. D.*—Southernwood has a strong, not very disagreeable smell; and a nauseous, pungent, bitter taste; which is totally extracted by rectified spirit, less perfectly by watery liquors. It is recommended as an anthelmintic; and in cold leucophlegmatic habits, as a stimulant, detergent, aperient, and sudorific. The present practice has almost entirely confined its use to external applications. The leaves are frequently employed in discutient and antiseptic fomentations; and have been recommended also in lotions and unguents for cutaneous eruptions, and the falling off of the hair.

179. ARTEMISIA *maritima.* Sea Wormwood. *Tops. D.*—In taste and smell, it is weaker and less unpleasant than the common wormwood. The virtues of both are supposed to be of the same kind, and to differ only in strength.

The tops used to enter three of our distilled waters, and give name to a conserve. They are an ingredient also in the common fomentation and green oil.

180. ARTEMISIA *Santonica.* Roman Wormwood. *Seeds. E. D.*—It

is a native of the warmer countries, and at present difficultly procurable in this, though as hardy and as easily raised as any of the other sorts. Sea wormwood has long supplied its place in the markets, and been in general mistaken for it.

Roman wormwood is less ungrateful than either of the others: its smell is tolerably pleasant: the taste, though manifestly bitter, scarcely disagreeable. It appears to be the most eligible of the three as a stomachic; and is likewise recommended by some in dropsies.

181. ARUM *maculatum*. Biting Arum. *Fresh Root. L. E.*—This root is a powerful stimulant and attenuant. It is reckoned a medicine of great efficacy in some cachectic and chlorotic cases; in weakness of the stomach occasioned by a load of viscid phlegm, and in such disorders in general as proceed from a cold sluggish indisposition of the solids and lentor of the fluids. I have experienced great benefit from it in rheumatic pains, particularly those of the fixed kind, and which were seated deep. In these cases I have given from ten grains to a scruple of the fresh root twice or thrice a day, made into a bolus or emulsion with unctuous and mucilaginous substances, which cover its pungency, and prevent its making any painful impression on the tongue. It generally excited a slight tingling sensation through the whole habit, and, when the patient was kept warm in bed, produced a copious sweat.

The only officinal preparation, in which this root was an ingredient, was a compound *powder*; in which form its virtues are very precarious. Some recommend a tincture of it drawn with wine; but neither wine, water, nor spirit, extract its virtues.—*Lewis's Mat. Med.*

182. ASARUM *Europæum*, Asarabacca. *The Leaves. L. E. D.*—Both the roots and leaves have a nauseous, bitter, acrimonious, hot taste; their smell is strong, and not very disagreeable. Given in substance from half a dram to a dram, they evacuate powerfully both upwards and downwards. It is said that tinctures made in spirituous menstrua possess both the emetic and cathartic virtues of the plant: that the extract obtained by inspissating these tinctures acts only by vomit, and with great mildness: that an infusion in water proves cathartic, rarely emetic: that aqueous decoctions made by long boiling, and the watery extract, have no purgative or emetic quality, but prove notable diaphoretics, diuretics, and emmenagogues.

Its principal use at present is as a sternutatory. The root of asarum is perhaps the strongest of all the vegetable errhines, white hellebore itself not excepted. Snuffed up the nose, in the quantity of a grain or two, it occasions a large evacuation of mucus, and raises a plentiful spitting. The leaves are considerably milder, and may be used to the quantity of three, four, or five grains. Geoffroy relates, that after snuffing up a dose of this errhine at night, he has frequently observed the discharge from the nose to continue for three days together; and that he has known a paralysis of the mouth and tongue cured by one dose. He recommends this medicine in stubborn disorders of

the head, proceeding from viscid tenacious matter, in palsies, and in soporific distempers. The leaves are an ingredient in the *pulvis sternutatorius* of the shops.

183. ASPIDIUM *Filix-Mas.* Polypodium, *Linn.* MALE FERN. *The Roots. L.E.D.*—They are said to be aperient and anthelmintic. Simon Paulli tells us, that they have been the grand secret of some empirics against the broad kind of worms called *tænia*; and that the dose is one, two, or three drams of the powder. Two other kinds of Ferns used to be recommended; but this, being the strongest, has therefore been made choice of in preference, though the College of Edinburgh still retain them in their Catalogue of Simples.—*Lewis's Mat. Med.*

184. ASTRAGALUS *Tragacanthus.* GOATS-THORN. *The Gum. L.E.D.* —This gum is of a strong body, and does not perfectly dissolve in water. A dram will give to a pint of water the consistence of a syrup, which a whole ounce of gum Arabic is scarce sufficient to do. Hence its use for forming troches, and the like purposes, in preference to the other gums. It is used in an officinal powder, and is an ingredient in the compound powders of ceruss and amber. — *Lewis's Mat. Med.*

185. ATROPA *Belladonna.* DEADLY NIGHTSHADE. *The Leaves, L. E. D.*—Belladonna was first employed as an external application, in the form of fomentation, to scirrhus and cancer. It was afterwards administered internally in the same affections; and numerous cases, in which it had proved successful, were given on the authority of the German practitioners. It has been recommended, too, as a remedy in extensive ulceration, in paralysis, chronic rheumatism, epilepsy, mania, and hydrophobia, but with so little discrimination, that little reliance can be placed on the testimonies in its favour; and, in modern practice, it is little employed. It appears to have a peculiar action on the eye: hence it has been used in amaurosis; and from its power of causing dilatation of the pupil, when topically applied under the form of infusion, it has been used before performing the operation for cataract. A practice which is hazardous, as the pupil, though much dilated by the application, instantly contracts when the instrument is introduced. When given internally, its dose is from one to three grains of the dried leaves, or one grain of the inspissated juice.—*Murray's Mat. Med. p.* 174.

I have had a cancer of the lip entirely cured by it: a scirrhosity in a woman's breast, of such kind as frequently proceeds to cancer, I have found entirely discussed by the use of it. A sore, a little below the eye, which had put on a cancerous appearance, was much mended by the internal use of the Belladonna; but the patient having learned somewhat of the poisonous nature of the medicine, refused to continue the use of it; upon which the sore again spread, and was painful; but, upon a return to the use of the Belladonna, was again mended to

a considerable degree; when the same fears again returning, the use of it was again laid aside, and with the same consequence, the sore becoming worse. Of these alternate states, connected with the alternate use of and abstinence from the Belladonna, there were several of these alterations which fell under my own observation *.—*Cullen's Mat. Med. vol.* ii. *p.* 270.

186. CARDAMINE *pratensis.* Ladies Smock. *The Leaves. L. E. D.* —Long ago it was employed as a diuretic; and, of late, it has been introduced in nervous diseases, as epilepsy, hysteria, chorœa, asthma, &c. A dram or two of the powder is given twice or thrice a-day. It has little sensible operation.

187. CARUM *Carui.* Caraway. *The Seeds. L. E. D.*—These are in the number of the four greater hot seeds; and frequently employed as a stomachic and carminative in flatulent colics, and the like. Their officinal preparations are an essential oil and a spiritous water; they were used as ingredients also in the compound juniper water, tincture of sena, stomachic tincture, oxymel of garlic, electuary of bayberries and of scammony, and the cummin-seed plaster.

188. CENTAUREA *benedicta.* Blessed Thistle. *The Leaves. E. D.* —The herb should be gathered when in flower, great care taken in drying it, and kept in a very dry airy place, to prevent its rotting or growing mouldy, which it is very apt to do. The leaves have a penetrating bitter taste, not very strong or very durable, accompanied with an ungrateful flavour, which they are in great measure freed from by keeping.

The virtues of this plant seem to be little known in the present practice. We have frequently experienced excellent effects from a light infusion of carduus in loss of appetite, where the stomach was injured by irregularities. A stronger infusion made in cold or warm water, if drunk freely, and the patient kept warm, occasions a plentiful sweat, and promotes all the secretions in general.

The seeds of this plant are also considerably bitter, and have been sometimes used for the same purposes as the leaves.

189. CHIRONIA *Centaurium.* Lesser Centaury. *The Tops. L. E. D.* —This is justly esteemed to be the most efficacious bitter of all the medicinal plants indigenous to this country. It has been recommended as a substitute for Gentian, and, by several, thought to be a more useful medicine: experiments have also shown it to possess an equal degree of antiseptic power.

Many authors have observed, that, along with the tonic and stomachic qualities of a bitter, Centaury frequently proves cathartic;

---

* See the *Poisonous Plants*, in a future page.

but it is probable that this seldom happens, unless it be taken in very large doses. The use of this, as well as of the other bitters, was formerly common in febrile disorders previous to the knowledge of Peruvian-bark, which now supersedes them perhaps too generally; for many cases of fever occur which are found to be aggravated by the Cinchona, yet afterwards readily yield to the simple bitters.—*Woodville, p.* 277.

190. COCHLEARIA *officinalis.* Scurvy-Grass. *The Herb. E.*—Is antiseptic, attenuant, aperient, and diuretic, and is said to open obstructions of the viscera and remoter glands, without heating or irritating the system. It has long been considered as the most effectual of all the antiscorbutic plants; and its sensible qualities are sufficiently powerful to confirm this opinion. In the *rheumatismus vagus*, called by Sydenham *Rheumatismus scorbuticus*, consisting of wandering pains of long continuance, accompanied with fever, this plant, combined with Arum and Wood-Sorrel, is highly commended both by Sydenham and Lewis.

We have testimony of its great use in scurvy, not only from physicians, but navigators; as Anson, Linschoten, Maartens, Egede, and others. And it has been justly noticed, that this plant grows plentifully in those high latitudes where the scurvy is most obnoxious. Forster found it in great abundance in the islands of the South Seas.—*Woodville, p.* 395.

191. COCHLEARIA *Armoracia.* Horse-Radish. *The Root. E.*—The medical effects of this root are, to stimulate the solids, attenuate the juices, and promote the fluid secretions: it seems to extend its action through the whole habit, and affect the minutest glands. It has frequently done great service in some kinds of scurvies and other chronic disorders proceeding from a viscidity of the juices, or obstructions of the excretory ducts. Sydenham recommends it likewise in dropsies, particularly those which sometimes follow intermittent fevers. Both water and rectified spirit extract the virtues of this root by infusion, and elevate them in distillation: along with the aqueous fluid an essential oil arises, possessing the whole taste and pungency of the horse-radish. The College have given us a very elegant compound water, which takes its name from this root.

192. COLCHICUM *autumnale.* Meadow-Saffron. *The Roots. L. E. D.*—The roots, freed from the outer blackish coat and fibres below, are white, and full of a white juice. In drying they become wrinkled and dark coloured. Applied to the skin, it shows some signs of acrimony; and taken internally, it is said sometimes to excite a sense of burning heat, bloody stools, and other violent symptoms. In the form of syrup, however, it has been given to the extent of two ounces a-day without any bad consequence. It is sometimes employed as a diuretic in dropsy. It is now supposed to be a principal ingredient in the celebrated French gout medicine *L'Eau Medicinale.*

193. CONIUM *maculatum*. Hemlock. *The Leaves. L. E. D.*—Physicians seem somewhat in dispute about the best mode of exhibiting this medicine; some recommending the extract, as being most easily taken in the form of pills; others the powder, as not being subject to that variation which the extract is liable to, from being made in different ways. With respect to the period, likewise, at which the plant should be gathered, they seem not perfectly agreed; some recommending it when in its full vigour, and just coming into bloom, and others, when the flowers are going off. An extract of the green plant is ordered by the College in their last list. Dr. Cullen has for many years commended the making it from the unripe seeds; and this mode the College of Physicians at Edinburgh have thought proper to adopt in their late Pharmacopœia.

Similar Plants.—Aethusa *Cynapium*; Apium *Petroselinum*; Oenanthe *crocata*; Oe. *fistulosa*; Phellandrium *aquaticum*.

194. CORIANDRUM *sativum*. Coriander. *The Seeds. L. E. D.*—These, when fresh, have a strong disagreeable smell, which improves by drying, and becomes sufficiently grateful. They are recommended as carminative and stomachic.

195. CROCUS *sativus*. True Saffron. *The Stigmata. L. E. D.*—There are three sorts of saffron met with in the shops, two of which are brought from abroad, the other is the produce of our own country. This last is greatly superior to the two former.

This medicine is particularly serviceable in hysteric depressions proceeding from a cold cause, or obstruction of the uterine secretions, where other aromatics, even those of the more generous kind, have little effect. Saffron imparts the whole of its virtue and colour to rectified spirit, proof spirit, wine, vinegar, and water: a tincture used to be drawn with vinegar, but it loses greatly its colour in keeping. There can be little use for preparations of saffron, as the drug itself will keep good for any length of time.

196. CUMINUM *Cymini*. Cummin. *The Seeds. L.*—Cummin seeds have a bitterish warm taste, accompanied with an aromatic flavour, not of the most agreeable kind. They are accounted good carminatives, but not very often made use of. An essential oil of them used to be kept in the shops, and they gave name to a plaster and cataplasm.—*Lewis's Mat. Med.*

197. CYNARA *Scolymus*. Artichoke. *The Leaves. E.*—The bitter juice of the leaf, mixed with an equal part of Madeira wine, is recommended in an ounce dose night and morning, as a powerful diuretic in dropsy. An infusion of the leaf may likewise be used.

198. DAPHNE *Mezereum*. The Mezereon. *The Roots. L. E. D.*—This plant is extremely acrid, especially when fresh, and, if retained in the

mouth, excites great and long continued heat and inflammation, particularly of the throat and fauces. The bark and berries of Mezereon in different forms have been long externally used to obstinate ulcers and ill conditioned sores. In France, the former is strongly recommended as an application to the skin, which, under certain management, produces a continued serous discharge without blistering, and is thus rendered useful in many chronic diseases of a local nature, answering the purpose of what has been called a perpetual blister, while it occasions less pain and inconvenience.

In this country Mezereon is principally employed for the cure of some siphylitic complaints; and in this way Dr. Donald Monro was the first who gave testimony of its efficacy in the successful use of the Lisbon Diet Drink.

The considerable and long-continued heat and irritation that is produced in the throat when Mezereon is chewed, induced Dr. Withering to think of giving it in a case of difficulty of swallowing, seemingly occasioned by a paralytic affection. The patient was directed to chew a thin slice of the root as often as she could bear it, and in about a month recovered her power of swallowing. This woman had suffered the complaint three years, and was greatly reduced, being totally unable to swallow solids, and liquids but very imperfectly.—*Woodville's Med. Bot. p.* 720.

199. DATURA *Stramonium.* Thorn Apple. *The whole Plant. E.*—Dr. Woodville informs us, that an extract of this plant has been the preparation usually employed, and from one to ten grains and upwards a-day: but the powdered leaves after the manner of those directed for hemlock would seem, for the reason given, to be a preparation more certain and convenient.

It has been much celebrated as a medicine in epilepsy and convulsions and mania; but it is of a violent narcotic quality, and extremely dangerous in its effects.

Stramonium has been recommended, as being of considerable use in cases of asthma, on the authority of some eminent physicians of the East Indies; and the late Dr. Roxburgh has stated to me many instances wherein it had performed wonders in that dreadful malady.

The Datura *Metal*, Purple-flowered Thorn-Apple, is much like the Stramonium, except in the flowers and the stalks being of a purple colour. I have made particular inquiry of Dr. Roxburgh if any particular kind was used in preference, and he said not; that both the above sorts were used; and, in fact, not only these, but the Datura *Tatula*, another species which grows wild there, and is cultivated in our stoves for the sake of its beautiful flowers, is also used for the same purposes.

The mode of using it was by cutting the whole plant up after drying, and smoking it in a common tobacco-pipe; and which, in some cases in this country also, has given great ease in severe attacks; and I know several persons who use it with good effect to this day. In ve-

getables of such powerful effects as this is known to have, great care ought to be taken in their preparation, which, I fear, is not always so much attended to as the nature of this subject requires *.

200. DAUCUS *sylvestris*. Wild Carrot. *The Seeds. L.*—These seeds possess, though not in a very considerable degree, the aromatic qualities common to those of the umbelliferous plants, and hence have long been deemed carminative and emmenagogue; but they are chiefly esteemed for their diuretic powers, and for their utility in calculus and nephritic complaints, in which an infusion of three spoonfuls of the seeds in a pint of boiling water has been recommended; or the seeds may be fermented in malt liquor, which receives from them an agreeable flavour resembling that of lemon-peel.—*Woodville's Med. Bot. p.* 132.

Similar Plants.—Sison *Amomum*; Daucus *Carota*.

201. DAUCUS *Carota*. Cultivated Carrot. *The Roots. L. E. D.*—The expressed juice, or a decoction of these roots, has been recommended in calculous complaints, and as a gargle for infants in aphthous affections or excoriations of the mouth; and a poultice of scraped carrot has been found an useful application to phagedenic ulcers, and to cancerous and putrid sores.

202. DELPHINIUM *Staphis Agria*. Staves Agria. *The Seeds. L. D.*—Stavesacre was employed by the ancients as a cathartic; but it operates with so much violence both upwards and downwards, that its internal use has been, among the generality of practitioners, for some time laid aside. It is chiefly employed in external applications for some kinds of cutaneous eruptions, and for destroying lice and other insects; insomuch that it has from this virtue received its name in different languages, *Herba pedicularis*, *Herbe aux poux*, *Lauskraut*, *Lousewort*.

203. DIANTHUS *caryophyllos*. Clove-Pink. *The Petals. E.*—These flowers are said to be cardiac and alexipharmac. Simon Paulli relates, that he has cured many malignant fevers by the use of a decoction of them; which he says powerfully promoted sweat and urine without greatly irritating nature, and also raised the spirits and quenched thirst. The flowers are chiefly valued for their pleasant flavour, which is entirely lost even by light coction. Lewis says, the College directed the syrup, which is the only officinal preparation of them, to be made by infusion.

204. DIGITALIS *purpurea*. Foxglove. *The Leaves. L. E. D.*—The leaves of Foxglove have a nauseous taste, but no remarkable smell. They

* See Observations on and Directions for preparing and preserving Herbs in general, at the end of this Section.

have been long used externally to sores and scrophulous tumours with considerable advantage. Its diuretic effects, for which it is now so deservedly received into the Materia Medica, were entirely overlooked. To this discovery Dr. Withering has an undoubted claim; and the numerous cures of dropsy related by him and other practitioners of established reputation, afford incontestable proofs of its diuretic powers, and of its practical importance in the cure of those diseases. The dose of dried leaves in powder is from one grain to three twice a-day; but if a liquid medicine be preferred, a dram of the dried leaves is to be infused for four hours in half a pint of boiling water, adding to the strained liquor an ounce of any spiritous water. One ounce of this infusion given twice a-day is a medium dose; it is to be continued in these doses till it either acts upon the kidneys, the stomach, or the pulse, (which it has a remarkable power of lowering,) or the bowels.—*Woodville's Med. Bot. p.* 221.

This is now become a very popular medicine, but if used incautiously is attended with danger. Medical practitioners should make themselves perfectly acquainted with this plant, as the leaves are the only part used; and their not being readily discriminated when separated from the flowers, several accidents have occurred. In the Gent. Mag. for September 1815 is recorded a very extraordinary mistake, where the life of a child was sacrificed to the ignorance of a person who administered this instead of Coltsfoot; a plant so very dissimilar, that, had it not been well authenticated, I should not have believed the fact.

Similar Plants.—Verbascum *nigrum*; V. *Thapsus*; Cynoglossum *officinale*, or, after the above mistake, any other plant with a lanceolate leaf, we fear, may be confounded with it.

205. ERYNGIUM *maritimum*. Sea-Holly. *Roots. D.*—The roots are slender, and very long; of a pleasant sweetish taste, which on chewing for some time is followed by a light degree of aromatic warmth and acrimony. They are accounted aperient and diuretic, and have also been celebrated as aphrodisiac: their virtues, however, are too weak to admit them under the head of medicines. The candied root is ordered to be kept in the shops.—*Lewis's Mat. Med.*

206. FERULA *assafœtida*. Assafœtida. *Gum. L. E. D.*—This drug has a strong fetid smell, somewhat like that of garlick; and a bitter, acrid, biting taste. It loses with age of its smell and strength, a circumstance to be particularly regarded in its exhibition. It consists of about one-third part pure resin, and two-thirds of gummy matter; the former soluble in rectified spirit, the other in water. Proof-spirit dissolves almost the whole into a turbid liquor; the tincture in rectified spirit is transparent.

Assafœtida is the strongest of the fetid gums, and of frequent use in hysteric and different kinds of nervous complaints. It is likewise of considerable efficacy in flatulent colics; and for promoting all the fluid

secretions in either sex. The ancients attributed to this medicine many other virtues which are at present not expected from it.—*Lewis's Mat. Med.*

207. FICUS *Carica*. Common Fig. *Fruit. L. D.*—The recent fruit completely ripe is soft, succulent, and easily digested, unless eaten in immoderate quantities, when it is apt to occasion flatulency, pain of the bowels, and diarrhœa. The dried fruit is pleasanter to the taste, and is more wholesome and nutritive. Figs are supposed to be more nutritious by having their sugar united with a large portion of mucilaginous matter, which, from being thought to be of an oily nature, has been long esteemed an useful demulcent and pectoral; and it is chiefly with a view to these effects that they have been medicinally employed.

208. FRAXINUS *Ornus*. Manna. *L. E. D.*—There are several sorts of Manna in the shops. The larger pieces, called Flake Manna, are usually preferred; though the smaller grains are equally as good, provided they are white, or of a pale yellow colour, very light, of a sweet not unpleasant taste, and free from any visible impurities.

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 unkindly, producing flatulencies and distension of the viscera.—*Lewis's Mat. Med.*

209. GENTIANA *lutea*. Yellow Gentian. *Root. L.D.*—This root is a strong bitter, and, as such, very frequently made use of in practice: in taste it is less exceptionable than most of the other substances of this class: infusions of it, flavoured with orange-peel, are sufficiently grateful. It is the capital ingredient in the bitter wine; and a tincture and infusion of it are kept in the shops.

Lewis mentions a poisonous root being mixed among some of the Gentian brought to London; the use of which occasioned in some instances death. This was internally of a white colour, and void of bitterness. There is no doubt but this was the root of the Veratrum *album*, a poisonous plant so similar, that it might readily be mistaken for it.—*Lewis's Mat. Med.*

210. GEUM *urbanum*. Common Avens. *Root. D.*—This has a warm, bitterish, astringent taste, and a pleasant smell, somewhat of the clove kind, especially in the spring, and when produced in dry warm soils. Parkinson observes, that such as is the growth of moist soils has nothing of this flavour. This root has been employed as a stomachic, and for strengthening the tone of the viscera in general: it is still in some esteem in foreign countries, though not taken notice of among us. It yields, on distillation, an elegant odoriferous essential oil, which concretes into a flaky form.—*Lewis's Mat. Med.*

Similar Plants.—Geum *rivale*; G. *intermedium*.

211. GLYCYRRHIZA *glabra*. Liquorice. *Root. L. D.*—This is produced plentifully in all the countries of Europe: that which is the growth of our own is preferable to such as comes from abroad; this last being generally mouldy, which this root is very apt to become, unless kept in a dry place.

The powder of liquorice usually sold is often mingled with flower, and, I fear, too often with substances not quite so wholesome. The best sort is of a brownish yellow colour (the fine pale yellow being generally sophisticated) and of a very rich sweet taste, much more agreeable than that of the fresh root. Liquorice is almost the only sweet that quenches thirst.

This root is a very useful pectoral, and excellently softens acrimonious humours, at the same time that it proves gently detergent: and this account is warranted by experience. It is an ingredient in the pectoral syrup, pectoral troches, the compound lime waters, decoction of the woods, compound powder of gum tragacanth, lenitive electuary, and theriaca. An extract is directed to be made from it in the shops; but this preparation is brought chiefly from abroad, though the foreign extract is not equal to such as is made with proper care among ourselves.—*Lewis's Mat. Med.*

212. GRATIOLA *officinalis*. Hedge-Hyssop. *Herb. E. D.*—The leaves have a very bitter disagreeable taste: an infusion of a handful of them when fresh, or a dram when dried, is said to operate strongly as a cathartic. Kramer reports that he has found the root of this plant a medicine similar in virtue to Ipecacuanha.

Similar Plants.—Lythrum *Salicaria*; Scutellaria *galericulata*.

213. HELLEBORUS *niger*. Black Hellebore. *Root. L.*—The taste of Hellebore is acrid and bitter. Its acrimony, as Dr. Grew observes, is first felt on the tip of the tongue, and then spreads immediately to the middle, without being much perceived on the intermediate part: on chewing it for a few minutes, the tongue seems benumbed, and affected with a kind of paralytic stupor, as when burnt by eating any thing too hot.

Our Hellebore is at present looked upon principally as an alterative, and in this light is frequently employed, in small doses, for attenuating viscid humours, promoting the uterine and urinary discharges, and opening inveterate obstructions of the remoter glands: it often proves a very powerful emmenagogue in plethoric habits, where steel is ineffectual or improper. An extract made from this root with water, is one of the mildest, and for the purposes of a cathartic the most effectual preparation of it: this operates sufficiently, without occasioning the irritation which the pure resin is accompanied with. A tincture drawn with proof-spirit contains the whole virtue of the Hellebore, and seems to be one of the best preparations of it: this tincture, and the extract, used to be kept in the shops. The College of Edinburgh

used to make this root an ingredient in the purging cephalic tincture, and compound tincture of jalap; and its extract, in the purging deobstruent pills, gamboge pills, the laxative mercurial pills, and the compound cathartic extract.—*Lewis's Mat. Med.*

Similar Plant.—Helleborus *viridis*.

214. HELLEBORUS *fœtidus*. Bearsfoot. *Leaves. L.*—The root is a strong cathartic; it destroys worms, and is recommended in different species of mania. It is commonly substituted for that of the Helleborus *viridis*, which is a more dangerous mecicine. *Hill's Herbal, p.* 32. Great care ought to be used in the administering this plant: many instances of its dreadful effects are related. (See *Poisonous Plants.*)

Similar Plant.—Helleborus *viridis*.

215. HORDEUM *distichon*. Pearl Barley. *Seeds. L. E.*—Barley, in its several states, is more cooling, less glutinous, and less nutritious than wheat or oats; among the ancients, decoctions of it were the principal aliment, and medicine, in acute diseases. The London College direct a decoction of pearl barley; and both the London and Edinburgh make common barley an ingredient in the pectoral decoction.

216. HUMULUS *Lupulus*. The Hop.—The flowers and seed-vessels are used in gout and rheumatism, under the form of infusion in boiling-water. The powder formed into an ointment with lard, is said to ease the pain of open cancer. A pillow stuffed with hops is an old and successful mode of procuring sleep in the watchfulness of delirious fever.

217. HYOSCYAMUS *niger*. Henbane. *Leaves and Seeds. L. E.*—Henbane is a strong narcotic poison, and many instances of its deleterious effects are recorded by different authors; from which it appears, that any part of the plant, when taken in sufficient quantity, is capable of producing very dangerous and terrible symptoms. It is however much employed in the present day as an anodyne. Dr. Withering found it of great advantage in a case of difficult deglutition. Stoerck and some others recommend this extract in the dose of one grain or two; but Dr. Cullen observes, that he seldom discovered its anodyne effects till he had proceeded to doses of eight or ten grains, and sometimes to fifteen and even to twenty. The leaves of Henbane are said to have been applied externally with advantage, in the way of poultice, to resolve scirrhous tumours, and to remove some pains of the rheumatic and arthritic kind.

Similar Plants.—Verbascum *Lychnites*; V. *nigrum*.

The roots of the Henbane are to be distinguished by their very powerful and narcotic scent.

218. HYSSOPUS *officinalis*. Hyssop. *The Herb. L. E. D.*—The

leaves of Hyssop have an aromatic smell, and a warm pungent taste. Besides the general virtues of aromatics, they are particularly recommended in humoural asthmas, coughs, and other disorders of the breast and lungs; and said to notably promote expectoration.

219. INULA *Helenium*. ELECAMPANE. *Root*. *D.* — Elecampane root possesses the general virtues of alexipharmics: it is principally recommended for promoting expectoration in humoural asthmas and coughs; in which intention, it used to be employed in the Edinburgh Pharmacopœia: liberally taken, it is said to excite urine, and loosen the belly. In some parts of Germany, large quantities of this root are candied, and used as a stomachic, for strengthening the tone of the viscera in general, and for attenuating tenacious juices. Spirituous liquors extract its virtues in greater perfection than watery ones: the former scarce elevate any thing in distillation: with the latter, an essential oil arises, which concretes into white flakes; this possesses at first the flavour of the elecampane, but is very apt to lose it in keeping.

220. JUNIPERUS *Sabina*. SAVINE. *The Tops*. *L. E. D.*—Savine is a warm irritating aperient medicine, capable of promoting all the glandular secretions. The distilled oil is one of the most powerful emmenagogues; and is found of good service in obstructions of the uterus, or other viscera, proceeding from a laxity and weakness of the vessels, or a cold sluggish indisposition of the juices.

Similar Plants. - Juniperus *oxycedrus*; J. *Phœnicea*. These should be particularly distinguished, as Savine is attended with danger when taken immoderately.

221. JUNIPERUS *communis*. JUNIPER. *Berries*. *L. E. D.*—Juniper berries have a strong, not disagreeable smell; and a warm, pungent sweet taste, which, if they are long chewed, or previously well bruised, is followed by a bitterish one. The pungency seems to reside in the bark; the sweet in the juice; the aromatic flavour in oily vesicles, spread through the substance of the pulp, and distinguishable even by the eye; and the bitter in the seeds: the fresh berries yield, on expression, a rich, sweet, honey-like, aromatic juice; if previously pounded so as to break the seeds, the juice proves tart and bitter.

222. LACTUCA *virosa*. WILD LETTUCE. *Leaves*. *E.*—Dr. Collin at Vienna first brought the Lactuca virosa into medical repute; and its character has lately induced the College of Physicians at Edinburgh to insert it in the Catalogue of the Materia Medica. More than twenty-four cases of dropsy are said by Collin to have been successfully treated, by employing an extract prepared from the expressed juice of this plant, which is stated not only to be powerfully diuretic, but, by attenuating the viscid humours, to promote all the secretions, and to remove visceral obstructions. In the more simple cases proceeding

from debility, the extract in doses of eighteen to thirty grains a-day, proved sufficient to accomplish a cure; but when the disease was inveterate, and accompanied with visceral obstructions, the quantity of extract was increased to three drams; nor did larger doses, though they excited nausea, ever produce any other bad effect; and the patients continued so strong under the use of this remedy, that it was seldom necessary to employ any tonic medicines.—*Woodville's Med. Bot.* p. 76.

Similar Plants.—Sonchus *arvensis*; Lactuca *Scariola*.

223. LAVANDULA *Spica*. LAVENDER. *Flowers. L.D.*—Lavender has been an officinal plant for a considerable time, though we have no certain accounts of it given by the ancients. Its medical virtue resides in the essential oil, which is supposed to be a gentle corroborant and stimulant of the aromatic kind; and is recommended in nervous debilities, and various affections proceeding from a want of energy in the animal functions.—*Woodville's Med. Bot. p.* 323.

224. LAURUS *nobilis*. BAY-TREE. *Leaves and Berries. L.* — In distillation with water, the leaves of bay yield a small quantity of very fragrant essential oil; with rectified spirit, they afford a moderately warm pungent extract. The berries yield a larger quantity of essential oil: they discover likewise a degree of unctuosity in the mouth; give out to the press an almost insipid fluid oil; and on being boiled in water, a thicker butyraceous one of a yellowish-green colour, impregnated with the flavour of the berry. An infusion of the leaves is sometimes drunk as tea; and the essential oil of the berries may be given from one to five or six drops on sugar, or dissolved by means of mucilages, or in spirit of wine.—*Woodville's Med. Bot. p.* 680, 681.

225. LAURUS *Sassafras*. SASSAFRASS-TREE. *Bark. L. E. D.*—Its medical character was formerly held in great estimation; and its sensible qualities, which are stronger than any of the woods, may have probably contributed to establish the opinion so generally entertained of its utility in many inveterate diseases; for, soon after its introduction into Europe, it was sold at a very high price, and its virtues were extolled in publications professedly written on the subject. It is now, however, thought to be of very little importance, and seldom employed but in conjunction with other medicines of a more powerful nature.

Dr. Cullen found that a watery infusion of it taken *warm* and pretty *largely*, was very effectual in promoting sweat; but he adds, "to what particular purpose this sweating was applicable, I have not been able to determine." In some constitutions sassafras, by its extreme fragrance, is said to produce headache: to deprive it of this effect, the decoction ought to be employed.—*Woodville's Mat. Med. p.* 677.

226. LEONTODON *Taraxicum*. DANDELION. *Root. L.*—The roots

contain a bitter milky juice; they promise to be of use as aperient and detergent medicines; and have sometimes been directed in this intention with good success. Boerhaave esteems them capable, if duly continued, of resolving almost all kinds of coagulations, and opening very obstinate obstructions of the viscera.

227. LINUM *usitatissimum*. FLAX. *The Seeds. L. E.* — Linseed yields to the press a considerable quantity of oil; and boiled in water, a strong mucilage: these are occasionally made use of for the same purposes as other substances of that class; and sometimes the seeds themselves in emollient and maturating cataplasms. They have also been employed in Asia, and, in times of scarcity, in Europe, as food: but are not agreeable, or in general wholesome.

228. LINUM *catharticum*. PURGING-FLAX. *The Herb. L. D.* — This is a very small plant, not above four or five inches high, found wild upon chalky hills, and in dry pasture-grounds. Its virtue is expressed in its title: an infusion in water or whey of a handful of the fresh leaves, or a dram of them in substance when dried, is said to purge without inconvenience.

229. LOBELIA *siphylitica*. BLUE CARDINAL FLOWER. *The Root. E.*— Every part of the plant abounds with a milky juice, and has a rank smell. The root, which is the part directed for medicinal use, in taste resembles tobacco, and is apt to excite vomiting. It derived its name, Siphylitica, from its efficacy in the cure of Siphylis, as experienced by the North American Indians, who considered it a specific in that disease.

A decoction was made of a handful of the roots in three measures of water. Of this, half a measure is taken in the morning fasting, and repeated in the evening; and the dose is gradually increased till its purgative effects become too violent, when the decoction is to be intermitted for a day or two, and then renewed till a perfect cure is effected. But it does not appear that the antisiphylitic powers of Lobelia have been confirmed by any instances of European practice.—*Woodville's Med. Bot. p.* 251.

230. LYTHRUM *Salicaria*. WILLOW HERB. *The Herb. D.*—This is used internally in dropsies, obstinate gleets, and leucorrhœa.

Similar Plants.—Epilobium *palustre;* Epilob. *angustifolium;* Epilob. *hirsutum.*

231. MALVA *sylvestris*. COMMON MALLOW. *Herb. L. E.* — The leaves are ranked the first of the four emollient herbs: they 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 obtunding acrimonious humours:

their principal use is in emollient glysters, cataplasms, and fomentations.

232. MARRUBIUM *vulgare*. HOREHOUND. *Herb. E. D.*—It is greatly extolled for its efficacy in removing obstructions of the lungs and other viscera. It has chiefly been employed in humoural asthmas. Mention is made of its successful use in scirrhous affections of the liver, jaundice, cachexies, and menstrual suppressions.—*Woodville's Med. Bot. p.* 333.

Similar Plants.—Ballota *nigra*; B. *alba*.

233. MELISSA *officinalis*. BALM. *Herb. L. E.*—This herb, in its recent state, has a weak roughish aromatic taste, and a pleasant smell, somewhat of the lemon kind. On distilling the fresh herb with water, it impregnates the first runnings pretty strongly with its grateful flavour. Prepared as tea, however, it makes a grateful diluent drink in fevers; and in this way it is commouly used, either by itself, or acidulated with the juice of lemons.—*Woodville's Med. Bot. p.* 335, 336.

234. MENTHA *viridis*. SPEAR-MINT. *Leaves. L. D.*—The virtues of Mint are those of a warm stomachic and carminative: in loss of apppetite, nauseæ, continual retchings to vomit, and (as Boerhaave expresses it) almost paralytic weaknesses of the stomach, there are few simples perhaps of equal efficacy. In colicky pains, the gripes to which children are subject, lienteries, and other kinds of immoderate fluxes, this plant frequently does good service. It likewise proves beneficial in sundry hysteric cases, and affords an useful cordial in languors and other weaknesses consequent upon delivery. The best preparations for these purposes are, a strong infusion made from the dry leaves in water (which is much superior to one from the green herb) or rather a tincture or extract prepared with rectified spirit.

The essential oil, a simple and spirituous water, and a conserve, are kept in the shops: the Edinburgh College directs an infusion of the leaves in the distilled water. This herb is an ingredient also in the three alexitereal waters; and its essential oil in the stomach plaster and stomachic pills.—*Lewis's Mat. Med.*

235. MENTHA *Piperita*. PEPPER-MINT. *Herb. L. E. D.*—The leaves have a more penetrating smell than any of the other mints, and a much warmer, pungent, glowing taste like pepper, sinking as it were into the tongue. The principal use of this herb is in flatulent colics, languors, and other like disorders; it seems to act as soon as taken, and extends its effects through the whole system, instantly communicating a glowing warmth. Water extracts the whole of the pungency of this herb by infusion, and elevates it in distillation. Its officinal preparations are an essential oil, and a simple and spirituous water.

236. MENTHA *Pulegium.* PENNYROYAL. *Herb. L. E. D.*—Pennyroyal is a warm pungent herb of the aromatic kind, similar to mint, but more acrid and less agreeable. It has long been held in great esteem, and not undeservedly, as an aperient and deobstruent, particularly in hysteric complaints, and suppressions of the uterine purgations. For these purposes, the distilled water is generally made use of, or, what is of equal efficacy, an infusion of the leaves. It is observable, that both water and rectified spirit extract the virtues of this herb by infusion, and likewise elevate greatest part of them in distillation.—*Lewis's Mat. Med.*

237. MENYANTHES *trifoliata.* BUCK-BEAN. *Leaves. L. E. D.*—This is an efficacious aperient and deobstruent; it promotes the fluid secretions, and, if liberally taken, gently loosens the belly. It has of late gained great reputation in scorbutic and scrophulous disorders; and its good effects in these cases have been warranted by experience: inveterate cutaneous diseases have been removed by an infusion of the leaves, drunk to the quantity of a pint a-day, at proper intervals, and continued some weeks. Boerhaave relates, that he was relieved of the gout by drinking the juice mixed with whey.

238. MOMORDICA *Elaterium.* SPIRTING CUCUMBER. *Fruit. L. E. D.*—Elaterium is a strong cathartic, and very often operates also upwards. Two or three grains are accounted in most cases a sufficient dose. Simon Paulli relates some instances of the good effects of this purgative in dropsies: but cautions practitioners not to have recourse to it till after milder medicines have proved ineffectual; to which caution we heartily subscribe. Medicines indeed in general, which act with violence in a small dose, require the utmost skill to manage them with any tolerable degree of safety: to which may be added, that the various manners of making these kinds of preparations, as practised by different hands, must needs vary their power.

239. MORUS *nigra.* MULBERRY. *Fruit. L.*—It has the common qualities of the other sweet fruits, abating heat, quenching thirst, and promoting the grosser secretions; an agreeable syrup made from the juice is kept in the shops. The bark of the roots has been in considerable esteem as a vermifuge; its taste is bitter, and somewhat astringent.—*Lewis's Mat. Med.*

240. NICOTIANA *Tabacum.* TOBACCO. *Leaves. L. E. D.*—Tobacco is sometimes used externally in unguents for destroying cutaneous insects, cleansing old ulcers, &c. Beaten into a mash with vinegar or brandy, it has sometimes proved serviceable for removing hard tumours of the hypochondres.

241. ORIGANUM *Majorana.* SWEET MARJORAM. *Herb. L. E.*—It is a moderately warm aromatic, yielding its virtues both to aqueous

and spirituous liquors by infusion, and to water in distillation. It is principally celebrated in disorders of the head and nerves, and in the humoural asthmas and catarrhs of old people. An essential oil of the herb is kept in the shops. The powder of the leaves proves an agreeable errhine.

242. ORIGANUM *vulgare*. Pot Marjoram. *Herb. L. D.*—It has an agreeable aromatic smell approaching to that of marjoram, and a pungent taste much resembling thyme, to which it is likewise thought to be more nearly allied in its medicinal qualities than to any of the other verticillatæ, and therefore deemed to be emmenagogue, tonic, stomachic, &c.

The dried leaves used instead of tea are said to be extremely grateful. They are also employed in medicated baths and fomentations.—*Woodville's Med. Bot. p.* 345.

243. OXALIS *Acetosella*. Wood Sorrel. *Herb. L.*—In taste and medical qualities it is similar to the common sorrel, but considerably more grateful, and hence is preferred by the London College. Boiled with milk, it forms an agreeable whey; and beaten with sugar, a very elegant conserve.—*Lewis's Mat. Med.*

244. PAPAVER *Rhœas*. Red Poppy. *Petals. L. E. D.* — The flowers of this plant yield upon expression a deep red juice, and impart the same colour by infusion to aqueous liquors. A syrup of them is kept in the shops: this is valued chiefly for its colour; though some expect from it a lightly anodyne virtue.

245. PAPAVER *somniferum*. Opium Poppy. *Gum. L. E. D.* — Poppy heads, boiled in water, impart to the menstruum their narcotic juice, together with the other juices which they have in common with vegetable matters in general. The liquor strongly pressed out, suffered to settle, clarified with whites of eggs, and evaporated to a due consistence, yields about one-fifth or one-sixth the weight of the heads, of extract. This possesses the virtues of opium; but requires to be given in double its dose to answer the same intention, which it is said to perform without occasioning nausea and giddiness, the usual consequences of the other.

The general effects of this medicine are, to relax the solids, and render them less sensible of irritation, to cheer the spirits, ease pain, procure sleep, promote perspiration, but restrain all other evacuations. When its operation is over, the pain, and other symptoms which it had for a time abated, return; and generally with greater violence than before, unless the cause has been removed by the diaphoresis or relaxation which it occasioned.

The operation of opium is generally attended with a slow, but strong and full pulse, a dryness of the mouth, a redness and light itching of

the skin: and followed by a degree of nausea, a difficulty of respiration, lowness of the spirits, and a weak languid pulse.

With regard to the dose of opium, one grain is generally a sufficient, and often too large a one; maniacal persons, and those who have been long accustomed to take it, require three or more grains to have the due effect. Among the eastern nations, who are habituated to opium, a dram is but a moderate dose: Garcias relates, that he knew one who every day took ten drams. Those who have been long accustomed to its use, upon leaving it off, are seized with great lowness, languor, and anxiety; which are relieved by having again recourse to opium, and, in some measure, by wine or spirituous liquors.

Similar Plants.—Papaver *hybridum*; P. *Argemone*.

246. PASTINACA *Opoponax*. Opoponax, or Candy Carrot. *Gum Opoponax*. *L.*—The juice is brought from Turkey and the East Indies, sometimes in round drops or tears, but more commonly in irregular lumps, of a reddish-yellow colour on the outside, with specks of white, inwardly of a paler colour, and frequently variegated with large white pieces.

Boerhaave frequently employed it, along with ammoniacum and galbanum, in hypochondriacal disorders, obstructions of the abdominal viscera from a sluggishness of mucous humours, and a want of due elasticity of the solids.

247. PIMPINELLA *Anisum*. Aniseed. *The Seeds*. *L. E. D.*—These seeds are in the number of the four greater hot seeds: their principal use is in cold flatulent disorders, where tenacious phlegm abounds, and in the gripes to which young children are subject. Frederick Hoffman strongly recommends them in weakness of the stomach, diarrhœas, and for strengthening the tone of the viscera in general; and thinks they well deserve the appellation given them by Helmont, *intestinorum solamen*.

248. PINUS *sylvestris*. Scotch Fir. *Tar, yellow Resin, and Turpentine*. *L. D.*—Tar, which is well known from its œconomical uses, is properly an empyreumatic oil of turpentine, and has been much used as a medicine, both internally and externally. Tar-water, or water impregnated with the more soluble parts of tar, was some time ago a very popular remedy in various obstinate disorders, both acute and chronic, especially in small-pox, scurvy, ulcers, fistulas, rheumatisms, &c.

Turpentine is an extract also from the same tree, which is used for various purposes of medicine and the arts.

249. PINUS *Abies*. Spruce-Fir. *Burgundy Pitch*. *L. E. D.*—This is entirely confined to external use, and was formerly an ingredient in several ointments and plasters. In inveterate coughs, affections of the lungs, and other internal complaints, plasters of this resin, by acting

as a tropical stimulus, are frequently found of considerable service.—*Woodville's Med. Bot.*

250. POLYGONUM *Bistorta.* BISTORT. *The Roots. L. E. D.*—All the parts of bistort have a rough austere taste, particularly the root, which is one of the strongest of the vegetable astringents. It is employed in all kinds of immoderate hæmorrhages and other fluxes, both internally and externally, where astringency is the only intention. It is certainly a very powerful styptic, and is to be looked on simply as such; the sudorific, antipestilential, and other like virtues attributed to it, it has no other claim to, than in consequence of this property, and of the antiseptic power which it has in common with other vegetable styptics. The largest dose of the root in powder is one dram.

251. PRUNUS *domestica.* FRENCH PRUNES. *The Fruit. L. E. D.*—The medical effects of the damson and common prunes are, to abate heat, and gently loosen the belly: which they perform by lubricating the passage, and softening the excrement. They are of considerable service in costiveness accompanied with heat or irritation, which the more stimulating cathartics would tend to aggravate: where prunes are not of themselves sufficient, their effects may be promoted by joining with them a little rhubarb or the like; to which may be added some carminative ingredient, to prevent their occasioning flatulencies. Prunelloes have scarce any laxative quality: these are mild grateful refrigerants, and, by being occasionally kept in the mouth, usefully allay the thirst of hydropic persons.

252. PUNICA *Granatum.* POMEGRANATE. *Rind of the Fruit. L. E. D.*—This fruit has the general qualities of the other sweet summer fruits, allaying heat, quenching thirst, and gently loosening the belly. The rind is a strong astringent, and as such is occasionally made use of.

253. PYRUS *Cydonia.* QUINCE. *The Kernels. L.*—The seeds abound with a mucilaginous substance, of no particular taste, which they readily impart to watery liquors: an ounce will render three pints of water thick and ropy like the white of an egg. A syrup and jelly of the fruit, and mucilage of the seeds, used to be kept in the shops.

254. QUEROUS *pedunculata.* OAK. *Bark. L. E. D.*—This bark is a strong astringent; and hence stands recommended in hæmorrhagies, alvine fluxes, and other preternatural or immoderate secretions.

255. RHAMNUS *catharticus.* BUCKTHORN. *Berries. L. E.*—Buckthorn-berries have a faint disagreeable smell, and a nauseous bitter taste. They have long been in considerable esteem as cathartics; and celebrated in dropsies, rheumatisms, and even in the gout; though in these cases they have no advantage above other purgatives, and are more offensive, and operate more churlishly, than many which the

shops are furnished with: they generally occasion gripes, sickness, dry the mouth and throat, and leave a thirst of long duration. The dose is about twenty of the fresh berries in substance, and twice or thrice this number in decoction, an ounce of the expressed juice, or a dram of the dried berries.

256. RHEUM *palmatum*. TURKEY RHUBARB. *Roots. L. E. D.*—Rhubarb is a mild cathartic, which operates without violence or irritation, and may be given with safety even to pregnant women and to children. In some people, however, it always occasions severe griping. Besides its purgative quality, it is celebrated for an astringent one, by which it strengthens the tone of the stomach and intestines, and proves useful in diarrhœa and disorders proceeding from a laxity of the fibres. Rhubarb in substance operates more powerfully as a cathartic than any of the preparations of it. Watery tinctures purge more than the spirituous ones; whilst the latter contain in greater perfection the aromatic, astringent, and corroborating virtues of the rhubarb. The dose, when intended as a purgative, is from a scruple to a dram or more.

The Turkey rhubarb is, among us, universally preferred to the East India sort.

The plant is common in our gardens, but their medicinal powers are much weaker than in those from abroad.

RHODODENDRON *Chrysanthemum*. YELLOW-FLOWERED RHODODENDRON. See No. 290, p. 76.

257. RHUS *Toxicodendron*. POISON-OAK. *Leaves. L. E.*—Of considerable use in paralytic affections, and is much used in the present day.

It is, however, often substituted by the Rhus *radicans*, which has not the medical properties that this plant has; and it is to be regretted that the leaves of both species are so much alike, that, when gathered, they are not to be distinguished.

258. RICINUS *communis*. PALMA CHRISTI. *Seeds and Oil. L. E. D.*—The oil, commonly called nut or castor oil, is got by expression, retains somewhat of the mawkishness and acrimony of the nut; but is, in general, a safe and mild laxative in cases where we wish to avoid irritation, as in those of colic, calculus, gonorrhœa, &c. and some likewise use it as a purgative in worm-cases. Half an ounce or an ounce commonly answers with an adult, and a dram or two with an infant. The castor oil which is imported is not so good as the expressed oil from the nut made in this country. The disagreeable taste is from the coats of the seeds; the best kind is pressed out after the seeds are decorticated.

259. ROSA *centifolia*. DAMASK ROSE. *Petals. L. E. D.*—In distil-

lation with water, it yields a small portion of a butyraceous oil, whose flavour exactly resembles that of the roses. This oil, and the distilled water, are very useful and agreeable cordials. Hoffmann strongly recommends them as of singular efficacy for raising the strength, cheering and recruiting the spirits, and allaying pain; which they perform without raising any heat in the constitution, rather abating it when inordinate. Although the damask rose is recommended by Dr. Woodville, yet, having grown this article for sale, I find that the preference is always given to the Provence rose by those who distil them.

260. ROSA *Gallica*. Red Officinal Rose. *Petals*. *L. E. D.*—This has very little of the fragrance of the foregoing sort; it is a mild and grateful astringent, especially before the flower has opened: this is considerably improved by hasty exsiccation, but both the astringency and colour are impaired by slow drying. In the shops are prepared a conserve and a tincture.

261. ROSA *canina*. Dog-Rose. *The Pulp of the Fruit*. *L. E.*—The fruit, called heps or hips, has a sourish taste, and obtains a place in the London Pharmacopœia in the form of a conserve: for this purpose, the seeds and chaffy fibres are to be carefully removed; for, if these prickly fibres are not entirely scraped off from the internal surface of the hips, the conserve is liable to produce considerable irritation on the primæ viæ.

262. ROSMARINUS *officinalis*. Rosemary. *Tops*. *L. E. D.*—Rosemary has a fragrant smell and a warm pungent bitterish taste, approaching to those of lavender: the leaves and tender tops are strongest; next to these the cup of the flower; the flowers themselves are considerably the weakest, but most pleasant. Aqueous liquors extract great share of the virtues of rosemary leaves by infusion, and elevate them in distillation: along with the water arises a considerable quantity of essential oil, of an agreeable strong penetrating smell. Pure spirit extracts in great perfection the whole aromatic flavour of the rosemary, and elevates very little of it in distillation: hence the resinous mass left upon abstracting the spirit, proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of rosemary give over great part of their flavour in distillation with pure spirit; by watery liquors, their fragrance is much injured; by beating, destroyed.

263. RUBIA *tinctorum*. Madder. *Roots*. *L. E. D.*—It has little or no smell; a sweetish taste, mixed with a little bitterness. The virtues attributed to it are those of a detergent and aperient; whence it has been usually ranked among the opening roots, and recommended in obstructions of the viscera, particularly of the kidneys, in coagulations of the blood from falls or bruises, in the jaundice, and beginning dropsies.

It is observable, that this root, taken internally, tinges the urine of a deep red colour; and in the Philosophical Transactions we have an account of its producing a like effect upon the bones of animals which had it mixed with their food: all the bones, particularly the more solid ones, were changed, both externally and internally, to a deep red, but neither the fleshy nor cartilaginous parts suffered any alteration: some of these bones macerated in water for many weeks together, and afterwards steeped and boiled in spirit of wine, lost none of their colour, nor communicated any tinge to the liquors.

264. RUMEX *Acetosa.* SORREL. *Leaves. L.*—These have an agreeable acid taste. They have the same medicinal qualities as the Oxalis *Acetosella*, and are employed for the same purposes.

Sorrel taken in considerable quantities, or used prepared for food, will be found of great advantage when a refrigerant and antiscorbutic regimen is required.—*Woodville's Med. Bot.*

265. RUTA *graveolens.* RUE. *Leaves. L. E. D.*—These are powerfully stimulating, attenuating, and detergent: and hence, in cold phlegmatic habits, they quicken the circulation, dissolve tenacious juices, open obstructions of the excretory glands, and promote the fluid secretions. The writers on the Materia Medica in general have entertained a very high opinion of the virtues of this plant. Boerhaave is full of its praises; particularly of the essential oil, and the distilled water cohobated or redistilled several times from fresh parcels of the herb: after somewhat extravagantly commending other waters prepared in this manner, he adds, with regard to that of rue, that the greatest commendations he can bestow upon it fall short of its merit: "What medicine (says he) can be more efficacious for promoting perspiration, in cases of epilepsies, and for expelling poison?" Whatever service rue may be of generally, it undoubtedly has its use in the two last cases: the cohobated water, however, is not the most efficacious preparation.

266. SALIX *fragilis.* CRACK WILLOW. *Bark. L. D.*—The bark of the branches of this tree manifests a considerable degree of bitterness to the taste, and is also astringent; hence it has been thought a good substitute for the Peruvian bark, and, upon trial, was found to stop the paroxysms of intermittents: it is likewise recommended in other cases requiring tonic or astringent remedies. Not only the bark of this species of Salix, but that of several others, possess similar qualities, particularly of the Salix *alba pentandria*, and *capræa*, all of which are recommended in foreign Pharmacopœias. But, in our opinion, the bark of the Salix *triandria* is more effectual than that of any other of this genus; at least, its sensible qualities give it a decided preference. —*Woodville's Med. Bot.*

267. SALVIA *officinalis.* GREEN AND RED SAGE. *Herb. E. D.*—Its

effects are, to moderately warm and strengthen the vessels; and hence, in cold phlegmatic habits, it excites appetite, and proves serviceable in debilities of the nervous system.

The red sage, mixed with honey and vinegar, is used for a gargle in sore throats. Aqueous infusions of the leaves, with the addition of a little lemon juice, prove an useful diluting drink in febrile disorders, of an elegant colour, and sufficiently acceptable to the palate.

268. SAMBUCUS *nigra*. Common Elder. *Flowers and Berries. L. E. D.*—The parts of the Sambucus which are proposed for medicinal use in the Pharmacopœias, are the inner bark, the flowers, and the berries. The flowers have an agreeable flavour, which they give over in distillation with water, and impart by infusion, both to water and rectified spirit: on distilling a large quantity of them with water, a small portion of a butyraceous essential oil separates. Infusions made from the fresh flowers are gently laxative and aperient; when dry, they are said to promote chiefly the cuticular excretion, and to be particularly serviceable in erysipetalous and eruptive disorders.—*Woodville's Med. Bot.* 598.

269. SCILLA *maritima*. Squill. *Root. L. E. D.*—This root is to the taste very nauseous, intensely bitter and acrimonious; much handled, it exulcerates the skin. With regard to its medical virtues, it powerfully stimulates the solids, and attenuates viscid juices; and by these qualities promotes expectoration, urine, and perspiration: if the dose is considerable, it proves emetic, and sometimes purgative. The principal use of this medicine is where the primæ viæ abound with mucous matter, and the lungs are oppressed by tenacious phlegm.

270. SCROPHULARIA *nodosa*. Knotty Figwort. *Herb. D.*—The roots are of a white colour, full of little knobs or protuberances on the surface: this appearance gained it formerly some repute against scrophulous disorders and the piles; and from hence it received its name: but modern practitioners expect no such virtues from it. It has a faint unpleasant smell, and a somewhat bitter disagreeable taste.

271. SINAPIS *nigra*. Black Mustard. *Seeds. L. E. D.*—By writers on the Materia Medica, mustard is considered to promote appetite, assist digestion, attenuate viscid juices, and, by stimulating the fibres, to prove a general remedy in paralytic and rheumatic affections. Joined to its stimulant qualities, it frequently, if taken in considerable quantity, opens the body, and increases the urinary discharge; and hence has been found useful in dropsical complaints.—*Woodville's Med. Bot. p.* 404.

272. SINAPIS *alba*. White Mustard. *Seeds. L. E. D.*—These have been recommended to be taken whole in cases of rheumatism, and have been known to produce considerable relief.

273. SISYMBRIUM *Nasturtium.* WATER-CRESSES. *Herb. E.*—Hoffman recommends this as of singular efficacy for accelerating the circulation, strengthening the viscera, opening obstructions of the glands, promoting the fluid secretions, and purifying the blood and humours: for these purposes, the expressed juice, which contains the peculiar taste and pungency of the herb, may be taken in doses of an ounce or two, and continued for a considerable time.

274. SIUM *nodiflorum.* CREEPING WATER-PARSNEP. *The Root. D.*—This plant has not been admitted into the Materia Medica of any of the Pharmacopœias which we have seen, except that of the London College, into which it was received in the character of an antiscorbutic, or rather as the corrector of acrid humours, especially when manifested by cutaneous eruptions and tumours in the lymphatic system, for which we have the testimony of Beirie and Ray; but the best proofs of its efficacy are the following given by Dr. Withering:—"A young lady, six years old, was cured of an obstinate disease by taking three large spoonfuls of the juice twice a-day; and I have repeatedly given to adults three or four ounces every morning in similar complaints with the greatest advantage. It is not nauseous; and children take it readily if mixed with milk. In the dose I have given, it neither affects the head, the stomach, nor the bowels." *Woodville's Med. Bot.* 146.

275. SMILAX *Sarsaparilla.* SARSAPARILLA. *Root. L. E. D.*—This root was first brought into Europe by the Spaniards, about the year 1563, with the character of a specific for the cure of the lues venerea, which made its appearance a little before that time, and likewise of several obstinate chronic disorders. Whatever good effects it might have produced in the warmer climates, it proved unsuccessful in this. It appears, however, from experience, that though greatly unequal to the character which it bore at first, it is in some cases of considerable use as a sudorific, where more acrid medicines are improper.

276. SOLANUM *Dulcamara.* BITTERSWEET. *Stalk. L. D.*—The taste of the twigs and roots, as the name of the plant expresses, is both bitter and sweet; the bitterness being first perceived, and the sweet afterwards. They are commended for resolving coagulated blood, and as a cathartic, diuretic, and deobstruent.

277. SOLIDAGO *Virga aurea.* GOLDEN ROD. *Flowers and Leaves. D.*—The leaves have a moderately astringent bitter taste, and hence prove serviceable in debility and laxity of the viscera, and disorders proceeding from that cause.

278. SPARTIUM *scoparium.* BROOM. *Tops and Seeds. L. D.*—

These have a nauseous bitter taste: decoctions of them loosen the belly, promote urine, and stand recommended in hydropic cases. The flowers are said to prove cathartic in decoction, and emetic in substance, though in some places, as Lobel informs us, they are commonly used, and in large quantity, in salads, without producing any effect of this kind. The qualities of the seeds are little better determined: some report that they purge almost as strongly as hellebore, in the dose of a dram and half; whilst the author above mentioned relates, that he has given a decoction of two ounces of them as a gentle emetic.

279. SPIGELIA *marylandica.* Worm Grass. *Root. L. E. D.* — About forty years ago, the anthelmintic virtues of the root of this plant were discovered by the Indians; since which time it has been much used here. I have given it in hundreds of cases, and have been very attentive to its effects. I never found it do much service, except when it proved gently purgative. Its purgative quality naturally led me to give it in febrile diseases which seem to arise from viscidity in the primæ viæ; and in these cases it succeeded to admiration, even when the sick did not void worms.

To a child of two years of age who had been taking ten grains of the root twice a-day without having any other effect than making her dull and giddy, I prescribed twenty-two grains morning and evening, which purged her briskly, and brought away five large worms. [Communications from Dr. Gardner.]—*Woodville's Med. Bot.*

280. TANACETUM *vulgare.* Tansy. *Herb. E. D.*—Considered as a medicine, it is a moderately warm bitter, accompanied with a strong, not very disagreeable flavour. Some have had a great opinion of it in hysteric disorders, particularly those proceeding from a deficiency or suppression of the usual course of nature.

281. TEUCRIUM *Marum.* Cat Thyme. *Herb. D.* — The leaves have an aromatic bitterish taste; and, when rubbed betwixt the fingers, a quick pungent smell, which soon affects the head, and occasions sneezing: distilled with water, they yield a very acrid, penetrating essential oil, resembling one obtained by the same means from scurvy-grass. These qualities sufficiently point out the uses to which this plant might be applied; at present, it is little otherwise employed than in cephalic snuffs.

282. TEUCRIUM *Chamædrys.* Germander. *Herb. D.*—The leaves, tops, and seeds, have a bitter taste, with some degree of astringency and aromatic flavour. They were recommended as sudorific, diuretic, and emmenagogue, and for strengthening the stomach and viscera in general. With some they have been in great esteem in intermittent fevers; as also in scrophulous and other chronic disorders.

283. TORMENTILLA *erecta*. TORMENTIL, or UPRIGHT SEPTFOIL. *Root. L. E. D.*—The root is the only part of the plant which is used medicinally; it has a strong styptic taste, but imparts no peculiar sapid flavour. This has been long held in great estimation as an astringent. Dr. Cullen has used it with gentian with great effect in intermittent fevers. Lewis recommends an ounce and a half of the powdered root to be boiled in three pints of water to a quart, adding towards the end of the boiling a dram of cinnamon. Of the strained liquor, sweetened with an ounce of any agreeable syrup, two ounces or more may be taken four or five times a-day.

284. TUSSILAGO *Farfara*. COLTSFOOT. *Herb. L. E. D.*—Tussilago stands recommended in coughs and other disorders of the breast and lungs: the flowers were an ingredient in the pectoral decoction of the Edinburgh Pharmacopœia.

285. VALERIANA *officinalis*. VALERIAN. *Root. L. E. D.*—Valerian is a medicine of great use in nervous disorders, and is particularly serviceable in epilepsies proceeding from a debility in the nervous system. It was first brought into esteem in these cases by Fabius Columna, who by taking the powdered root, in the dose of half a spoonful, was cured of an inveterate epilepsy after many other medicines had been tried in vain. Repeated experience has since confirmed its efficacy in this disorder; and the present practice lays considerable stress upon it.

286. VERATRUM *album*. WHITE HELLEBORE. *Root. L. E. D.*—The root has a nauseous, bitterish, acrid taste, burning the mouth and fauces: wounded when fresh, it emits an extremely acrimonious juice, which mixed with the blood, by a wound, is said to prove very dangerous: the powder of the dry root, applied to an issue, occasions violent purging: snuffed up the nose, it proves a strong, and not always a safe, sternutatory. This root, taken internally, acts with extreme violence as an emetic, and has been observed, even in a small dose, to occasion convulsions and other terrible disorders. The ancients sometimes employed it in very obstinate cases, and always made this their last resource.

Similar Plant.—Gentiana *lutea*; which see.

287. VERONICA *Beccabunga*. BROOKLIME. *Herb. L. D.*—This plant was formerly considered of great use in several diseases, and was applied externally to wounds and ulcers; but if it have any peculiar efficacy, it is to be derived from its antiscorbutic virtue.

As a mild refrigerant juice, it is preferred where an acrimonious state of the fluids prevails, indicated by prurient eruptions upon the skin, or in what has been called the hot scurvy.—*Woodville's Med. Bot.* 364.

288. VITIS *vinifera*. GRAPE VINE. *Raisins and different Wines. L. E.*—These are to cheer the spirits, warm the habit, promote per-

spiration, render the vessels full and turgid, raise the pulse, and quicken the circulation. The effects of the full-bodied wines are much more durable than those of the thinner; all sweet wines, as Canary, abound with a glutinous nutritious substance; whilst the others are not nutrimental, or only accidentally so by strengthening the organs employed in digestion: sweet wines in general do not pass off freely by urine, and heat the constitution more than an equal quantity of any other, though containing full as much spirit: red port, and most of the red wines, have an astringent quality, by which they strengthen the tone of the stomach and intestines, and thus prove serviceable for restraining immoderate secretions: those which are of an acid nature, as Rhenish, pass freely by the kidneys, and gently loosen the belly: it is supposed that these last exasperate, or occasion gouty and calculous disorders, and that new wines of every kind have this effect.

The ripe fruit or grapes, of which there are several kinds, properly cured and dried, are the raisins and currants of the shops: the juice of these also, by fermentation, affords wine as well as vinegar and tartar.

The medical use of raisins is, their imparting a very pleasant flavour both to aqueous and spirituous menstrua. The seeds or stones are supposed to give a disagreeable relish, and hence are generally directed to be taken out: nevertheless I have not found that they have any disagreeable taste.—*Lewis's Mat. Med.*

289. ULMUS *campestris*. ELM. *Bark. L. E. D.*—The leaves have a bitterish astringent taste, and are recommended in powder, to the extent of at least two drams a day, in ulcerations of the urinary passages and catarrhus vesicæ. The powder has been used with opium, the latter being gradually increased to a considerable quantity, in diabetes, and it is said with advantage. Some use it for alleviating the dyspeptic symptoms in nephritic calculous ailments.—*Lewis's Mat. Med.*

290. RHODODENDRON *Chrysanthemum*. YELLOW-FLOWERED RHODODENDRON. *E. The Leaves.*—This species of Rhododendron has lately been introduced into Britain: it is a native of Siberia, affecting mountainous situations, and flowering in June and July.

Little attention was paid to this remedy till the year 1779, when it was strongly recommended by Kœlpin as an efficacious medicine, not only in rheumatism and gout, but even in venereal cases; and it is now very generally employed in chronic rheumatisms in various parts of Europe. The leaves, which are the part directed for medicinal use, have a bitterish subastringent taste, and, as well as the bark and young branches, manifest a degree of acrimony. Taken in large doses they prove a narcotic poison, producing those symptoms which we have described as occasioned by many of the order Solanaceæ.

Dr. Home, who tried it unsuccessfully in some cases of acute rheumatism, says, it appears to be one of the most powerful sedatives which we have, as in most of the trials it made the pulse remarkably slow,

and, in one patient, reduced it 38 beats. And in other cases in which the Rhododendron has been used at Edinburgh, it has been productive of good effects; and, accordingly, it is now introduced into the Edinburgh Pharmacopœia.

The manner of using this plant by the Siberians was, by putting two drams of the dried leaves in an earthen-pot with about ten ounces of boiling-water, keeping it near a boiling heat for a night, and this they took in the morning; and by repeating it three or four times it generally effected a cure. It is said to occasion heat, thirst, a degree of delirium, and a peculiar sensation of the parts affected.—*Woodville's Med. Bot. p.* 239.

SECT. VIII.— *MEDICINAL PLANTS not contained in either of the BRITISH DISPENSATORIES.*

FOR the use of the Medical Student I selected in the foregoing section such plants as are contained in the Pharmacopœias of the present day: but there are many mentioned in Woodville's Medical Botany, Lewis's Dispensatory, &c. which, although discarded from the College list, are nevertheless still used by medical practitioners and others.

It would be difficult to give a full history of all the plants that have from time to time been recommended for medical uses. The old writers, as Gerard, Parkinson, Lyte, &c. attributed medical virtues to all the plants which came under their notice; and, on the other hand, as we observed above, the vegetable department of the Pharmacopœias has from time to time been reduced so much, that, if we had confined ourselves to that alone, we fear our little treatise on this head would, by many persons, be thought defective. The following list is therefore given, as containing what are used, though probably not so much by practitioners in medicine, as by our good housewives in the country, who, without disparagement to medical science, often relieve the distresses of their families and neighbours by the judicious application of drugs of this nature, and many of which are also sold for the same purposes in the London herb-shops.

291. ACANTHUS *mollis.* SMOOTH BEARS-BREECH. *The Leaves.*—Are of a soft sweetish taste, and abound with a mucilaginous juice: its virtues do not seem to differ from those of Althea and other mucilaginous plants.

292. ACHILLEA *Ptarmica:* SNEEZEWORT. *The Root.*—The roots have an acrid smell, and a hot biting taste: chewed, they occasion a plentiful discharge of saliva; and when powdered and snuffed up the

nose, provoke sneezing. These are sold at the herb-shops as a substitute for pellitory of Spain.

293. ACHILLEA *Ageratum*. MAUDLIN. *The Leaves and Flowers.*—This has a light agreeable smell; and a roughish, somewhat warm and bitterish taste. These qualities point out its use as a mild corroborant; but it has long been a stranger in practice, and is now omitted both by the London and Edinburgh Colleges. It is however in use by the common people.

294. ACHILLEA *Millefolium*. YARROW. *The Leaves.*—The leaves have a rough bitterish taste, and a faint aromatic smell. Their virtues are those of a very mild astringent, and as such they stand recommended in hæmorrhages both internal and external, diarrhœas, debility and laxity of the fibres; and likewise in spasmodic hysterical affections.

295. AJUGA *reptans*. BUGLE. *The Leaves.*—These have at first a sweetish taste, which gradually becomes bitterish and roughish. They are recommended as vulnerary medicines, and in all cases where mild astringents or corroborants are proper.

296. ALCHEMILLA *vulgaris*. LADY'S MANTLE. *The Leaves.*—These discover to the taste a moderate astringency, and were formerly much esteemed in some female weaknesses, and in fluxes of the belly. They are now rarely made use of; though both the leaves and roots might doubtless be of service in cases where mild astringents are required.

297. AMMI *majus*. BISHOPS-WEED. *The Seeds.*—The seeds of common bishops-weed are large and pale-coloured: their smell and taste are weak, and without any thing of the origanum flavour of the true ammi, which does not grow in this country. They are ranked among the four lesser hot seeds, but are scarcely otherwise made use of than as an ingredient in the theriaca.—*Lewis's Mat. Med.*

298. AMYGDALUS *Persica*. ALMONDS. *Flowers.*—They have a cathartic effect, and especially to children have been successfully given in the character of a vermifuge for this purpose; an infusion of a dram of the flowers dried, or half an ounce in their recent state, is the requisite dose. The expressed oil of almonds has been for a long time, and is at present, in use for many purposes in medicine. The concentrated acid of the bitter almond is a most dangerous poison to man and all other animals.

299. ANAGALLIS *arvensis*. PIMPERNEL. *The Leaves.*—Many extraordinary virtues have been attributed to them. Geoffroy esteems

them cephalic, sudorific, vulnerary, anti-maniacal, anti-epileptic, and alexiterial.

300. ANCHUSA *angustifolia*. BUGLOSS. *The Roots, Leaves, and Flowers.*—Bugloss has a slimy sweetish taste, accompanied with a kind of coolness: the roots are the most glutinous, and the flowers the least so. These qualities point out its use in hot bilious or inflammatory distempers, and a thin acrimonious state of the fluids. The flowers are one of the four called cordial flowers: the only quality they have that can entitle them to this appellation, is, that they moderately cool and soften, without offending the palate or stomach; and thus in warm climates, or in hot diseases, may in some measure refresh the patient.

301. ANEMONE *Hepatica*. HEPATICA. *The Leaves.*—It is a cooling gently restringent herb; and hence recommended in a lax state of the fibres as a corroborant.

302. ANTIRRHINUM *Elatine*. FLUELLIN. *The Root, Bark, and Leaves.*—They were formerly accounted excellent vulneraries, and of great use for cleansing and healing old ulcers and cancerous sores: some have recommended them internally in leprous and scrophulous disorders; as also in hydropic cases.

303. ANTIRRHINUM *Linaria*. TOAD FLAX. *The Flowers.*—An infusion of them is said to be very efficacious in cutaneous disorders; and Hammerin gives an instance in which these flowers, with those of verbascum, used as tea, cured an exanthematous disorder, which had resisted various other remedies tried during the course of three years.—*Woodville's Med. Bot. p.* 372.

304. AQUILEGIA *vulgaris*. COLUMBINE. *The Leaves, Flowers, and Seeds.*—It has been looked upon as aperient; and was formerly in great esteem among the common people for throwing out the small-pox and measles. A distilled water, medicated vinegar, and conserve, were prepared from the flowers; but they have long given place to medicines of greater efficacy.

305. ARISTOLOCHIA *longa*. LONG BIRTHWORT. *The Roots.*—This is a tuberous root, sometimes about the size of the finger, sometimes as thick as a man's arm: great virtues used to be ascribed to this plant as a specific in most uterine obstructions and gout: the outside is of a brownish colour; the inside yellowish.

306. ARTEMISIA *vulgaris*. MUGWORT. *The Leaves.*—These have a light aromatic smell, and an herbaceous bitterish taste. They are principally celebrated as uterine and anti-hysteric: an infusion of them is sometimes drunk, either alone or in conjunction with other substances, in suppressions of immoderate fluxes. This medicine is certainly a very

mild one, and considerably less hot than most others to which these virtues are attributed.

307. ASCLEPIAS *Vincetoxicum*. Swallow Wort. *The Root.*—This root is esteemed sudorific, diuretic, and emmenagogue, and frequently employed by the French and German physicians as an alexipharmic, sometimes as a succedaneum to contrayerva; whence it has received the name of Contrayerva Germanorum. Among us it is rarely made use of.

308. ASPERULA *odorata*. Sweet Woodroof. *The Flowers.* — It has an exceedingly pleasant smell, which is improved by moderate exsiccation; the taste is sub-saline, and somewhat austere. It imparts its flavour to vinous liquors. Asperula is supposed to attenuate viscid humours, and strengthen the tone of the bowels: it was recommended in obstructions of the liver and biliary ducts, and by some in epilepsies and palsies: modern practice has nevertheless rejected it.

309. ASPLENIUM *Ceterach*. Spleenwort.—It is recommended as a pectoral, and for promoting urine in nephritic cases. The virtue which it has been most celebrated for, is that which it has the least title to, *i. e.* diminishing the spleen.

310. ASPLENIUM *Scolopendrium*. Harts-Tongue. *The Leaves.*—These have a roughish, somewhat mucilaginous taste. They are recommended in obstructions of the viscera, and for strengthening their tone; and have sometimes been made use of for these intentions, either alone, or in conjunction with maiden-hair, or the other plants of similar properties.

311. ATROPA *Mandragora*. Mandrake. *The Leaves.*—The qualities of this plant are very doubtful: it has a strong disagreeable smell resembling that of the narcotic herbs, to which class it is usually referred. It has rarely been any otherwise made use of in medicine, than as an ingredient in one of the old officinal unguents. Both that composition and the plant itself are rejected from our Pharmacopœias.

312. BALLOTA *alba*. Base Horehound. *The Leaves.*—These are doubtless an useful aperient and deobstruent; promote the fluid secretions in general, and liberally taken loosen the belly. They are an ingredient only in the theriaca.

313. BELLIS *perennis*. Daisies. *The Leaves.*—They have a subtile subacrid taste, and are recommended as vulneraries, and in asthmas and hectic fevers, and such disorders as are occasioned by drinking cold liquors when the body has been much heated.

214. BERBERIS *vulgaris*. Berberry. *The Bark and Fruit.*—The outward bark of the branches and the leaves have an astringent acid

taste; the inner yellow bark, a bitter one: this last is said to be serviceable in the jaundice; and by some, to be an useful purgative.

The berries, which to the taste are gratefully acid, and moderately restringent, have been given with good success in bilious fluxes, and diseases proceeding from heat, acrimony, or thinness of the juices.

315. BETONICA *officinalis*. Wood Betony. *The Leaves*.—These and the flowers have an herbaceous, roughish, somewhat bitterish taste, accompanied with a very weak aromatic flavour. This herb has long been a favourite among writers on the Materia Medica, who have not been wanting to attribute to it abundance of good qualities. Experience does not discover any other virtue in betony than that of a mild corroborant: as such, an infusion or light decoction of it may be drunk as tea, or a saturated tincture in rectified spirit given in suitable doses, in laxity and debility of the viscera, and disorders proceeding from thence.

316. BETULA *alba*. Birch Tree. *The Bark and Sap*.—Upon deeply wounding or boring the trunk of the tree in the beginning of spring, a sweetish juice issues forth, sometimes, as is said, in so large quantity, as to equal in weight the whole tree and root: one branch will bleed a gallon or more in a day. This juice is chiefly recommended in scorbutic disorders, and other foulnesses of the blood: its most sensible effect is to promote the urinary discharge.

317. BORAGO *officinalis*. Borage. *The Flowers*.—An exhilarating virtue has been attributed to the flowers of borage, which are hence ranked among the so called cordial flowers: but they appear to have very little claim to any virtue of this kind, and seem to be altogether insignificant.

318. BRYONIA *alba*. White Bryony. *The Roots*.—This is a strong irritating cathartic; and as such has sometimes been successfully exhibited in maniacal cases, in some kinds of dropsies, and in several chronical disorders, where a quick solution of viscid juices, and a sudden stimulus on the solids, were required.

319. CALENDULA *officinalis*. Marigold. *The Flowers*.—These are supposed to be aperient and attenuating; as also cardiac, alexipharmic, and sudorific: they are principally celebrated in uterine obstructions, the jaundice, and for throwing out the small-pox. Their sensible qualities give little foundation for these virtues: they have scarcely any taste, and no considerable smell. The leaves of the plant discover a viscid sweetishness, accompanied with a more durable saponaceous pungency and warmth: these seem capable of answering some useful purposes, as a stimulating, aperient, antiscorbutic medicine.

320. CANNABIS *sativa*. Hemp. *The Seeds*.—These have some smell of the herb; their taste is unctuous and sweetish; on expression

they yield a considerable quantity of insipid oil: hence they are recommended (boiled in milk, or triturated with water into an emulsion) against coughs, heat of urine, and the like. They are also said to be useful in incontinence of urine; but experience does not warrant their having any virtues of this kind.

321. CARTHAMUS *tinctorius*. SAFFLOWER. *The Seeds.*—These have been celebrated as a cathartic: they operate very slowly, and for the most part disorder the bowels, especially when given in substance; triturated with aromatic distilled waters, they form an emulsion less offensive, yet inferior in efficacy to more common purgatives.

322. CENTAUREA *Cyanus*. BLUE-BOTTLE. *The Flowers.*—As to their virtues, notwithstanding the present practice expects not any from them, they have been formerly celebrated against the bites of poisonous animals, contagious diseases, palpitations of the heart, and many other distempers.

323. CENTAUREA *rhapontica*. GREATER CENTAURY. *The Root.*—It has a rough somewhat acrid taste, and abounds with a red viscid juice; its rough taste has gained it some esteem as an astringent; its acrimony as an aperient; and its glutinous quality as a vulnerary: the present practice takes little notice of it in any intention.

324. CHELIDONIUM *majus*. GREAT CELANDINE. *The Leaves and Juice.*—This is an excellent medicine in the jaundice; it is also good against all obstructions of the viscera, and, if continued a time, will do great service against the scurvy. The juice also is used successfully for sore eyes, removing warts, &c. It should be used fresh, for it loses the greatest part of its virtue in drying.

325. CHENOPODIUM *olidum*. STINKING GOOSEFOOT. *The Leaves.*—Its smell has gained it the character of an excellent anti-hysteric; and this is the only use it is applied to. Tournefort recommends a spirituous tincture, others a decoction in water, and others a conserve of the leaves, as of wonderful efficacy in uterine disorders.

326. CHRYSANTHEMUM *Leucanthemum*. OX-EYE DAISY. *The Leaves.*—Geoffroy relates that the herb, gathered before the flowers have come forth, and boiled in water, imparts an acrid taste, penetrating and subtile like pepper; and that this decoction is an excellent vulnerary and diuretic.

327. CISTUS *ladanifetus*. GUM CISTUS.—The gum labdanum is procured from this shrub, and is its only produce used in medicine. This is an exudation from the leaves and twigs in the manner of manna, more than of any thing else. They get it off by drawing a parcel of

leather thongs over the shrubs. It is not much used, but it is a good cephalic.—*Hill's Herbal, p.* 72.

328. CLEMATIS *recta*. Upright Virgin's Bower.—The whole plant is extremely acrid. It was usual for Dr. Stoerck to employ the leaves and flowers in ulcers and cancers, as well as an extract prepared from the former; yet the preparation which he chiefly recommended was an infusion of two or three drams of the leaves in a pint of boiling water, of which he gave four ounces three times a-day, while the powdered leaves were applied as an escharotic to the ulcers. — *Woodville's Med. Bot. p.* 481.

329. COCHLEARIA *Coronopus*. Swines-Cress.—This is an excellent diuretic, safe and yet very powerful. The juice may be taken; and it is good for the jaundice, and against all inward obstructions, and against the scurvy: the leaves may also be eaten as sallet, or dried and given in decoction.—*Hill's Herbal, p.* 105.

330. CONVALLARIA *Polygonatum*. Solomon's-Seal. *The Root*.—The root has several joints, with some flat circular depressions, supposed to resemble the stamp of a seal. It has a sweetish mucilaginous taste. As to its virtues, practitioners do not now expect any considerable ones from it, and pay very little regard to the vulnerary qualities which it was formerly celebrated for. It is used by pugilists to remove the black appearance occasioned from extravasated blood, and for curing bruises on the face, particularly black-eyes obtained by boxing.

331. CONVALLARIA *majalis*. May Lily. *The Roots and Flowers*.—The roots of this abound with a soft mucilage, and hence they have been used externally in emollient and maturating cataplasms: they were an ingredient in the suppurating cataplasm of the Edinburgh Pharmacopœia. Those of the wild plant are very bitter: dried, they are said to prove a gentle errhine; as also are the flowers.

332. CONVOLVULUS *sepium*. Bind-Weed.—The poor people use the root of this plant fresh gathered and boiled in ale as a cathartic; and it is found generally to answer that purpose. It would, however, nauseate a delicate stomach; but for people of strong constitutions there is not a better medicine.

333. CUSCUTA *europæa*. Dodder. The whole plant gathered green is to be boiled in water with a little ginger and allspice, and this decoction operates as a cathartic; it also opens obstructions of the liver, and is good in the jaundice and many other disorders arising from the like cause.—*Hill's Herbal.*

334. CYNOGLOSSUM *officinale*. Hounds-tongue. *The Root.*—The virtues of this root are very doubtful: it is generally supposed to be narcotic, and by some to be virulently so: others declare that it has no virtue of this kind, and look upon it as a mere glutinous astringent.

335. CYPERUS *longus*. Long Cyperus. *The Root.*—This is long, slender, crooked, and full of knots: outwardly of a dark-brown or blackish colour, inwardly whitish; of an aromatic smell, and an agreeable warm taste: both the taste and smell are improved by moderate exsiccation. Cyperus is accounted a good stomachic and carminative, but is at present very little regarded.

336. DICTAMNUS *albus*. White or Bastard Dittany. *The Root.*—The cortical part of the root, dried and rolled up into quills, is sometimes brought to us. This is of a white colour, a weak, not very agreeable smell; and a durable bitter, lightly pungent taste. It is recommended as an alexipharmic.

337. EQUISETUM *palustre*. Horse-tail. *The Herb.*—It is said to be a very strong astringent: it has indeed a manifest astringency, but in a very low degree.

338. ERYSIMUM *officinale*.—It is said to be attenuant, expectorant, and diuretic; and has been strongly recommended in chronical coughs and hoarseness. Rondeletius informs us that the last-mentioned complaint, occasioned by loud speaking, was cured by this plant in three days. Other testimonies of its good effects in this disorder are recorded by writers on the Materia Medica, of whom we may mention Dr. Cullen, who for this purpose recommends the juice of the Erysimum to be mixed with an equal quantity of honey and sugar; in this way also it is said to be an useful remedy in ulcerations of the mouth and throat. —*Woodville's Med. Bot. p.* 407.

339. ERYSIMUM *Alliaria*. Sauce Alone.—The leaves of this plant are very acrimonious, and have a strong flavour of onions. It is considered as a powerful diaphoretic, diuretic, and antiscorbutic.—*Woodville's Med. Bot.*

340. EUPATORIUM *cannabinum*. Hemp Agrimony, &c. *Leaves.* —They are greatly recommended for strengthening the tone of the viscera, and as an aperient; and said to have excellent effects in the dropsy, jaundice, cachexies, and scorbutic disorders. Boerhaave informs us, that this is the common medicine of the turf-diggers in Holland, against scurvies, foul ulcers, and swellings in the feet, which they are subject to. The root of this plant is said to operate as a strong cathartic.

341. EUPHORBIA *Esula*. SPURGE FLAX. *Its Berries*. — These are useful in removing warts and excrescences, if bruised and laid thereon. They are so acrid in their nature as to be altogether unfit for internal use.

342. EUPHRASIA *officinalis*. EYEBRIGHT. *Leaves*. — It was formerly celebrated as an ophthalmic, both taken internally and applied externally. Hildanus says he has known old men of seventy, who had lost their sight, recover it again by the use of this herb.

343. FRAGARIA *vesca*. THE STRAWBERRY. *The Leaves and Fruit*.— They are somewhat styptic, and bitterish; and hence may be of some service in debility and laxity of the viscera, and immoderate secretions, or a suppression of the natural evacuations depending thereon: they are recommended in hæmorrhages and fluxes; and likewise as aperients, in suppressions of urine, obstructions of the viscera, in the jaundice, &c. The fruit is in general very grateful both to the palate and stomach: like other fruits of the dulco-acid kind, they abate heat, quench thirst, loosen the belly, and promote urine.

344. FUMARIA *officinalis*. FUMITORY. *The Leaves*.—The medical effects of this herb are, to strengthen the tone of the bowels, gently loosen the belly, and promote the urinary and other natural secretions. It is principally recommended in melancholic, scorbutic, and cutaneous disorders; for opening obstructions of the viscera, attenuating and promoting the evacuation of viscid juices.

345. GALEGA *officinalis*. GOAT'S RUE. *The Herb*. — This is celebrated as an alexipharmic; but its sensible qualities discover no foundation for any virtues of this kind: the taste is merely leguminous; and in Italy (where it grows wild) it is said to be used as food.

346. GALIUM *Aparine*. GOOSEGRASS, OR CLEAVERS. *The Leaves*.— It is recommended as an aperient, and in chronic eruptions; but practice has little regard to it.

347. GALIUM *verum*. LADIES BEDSTRAW, OR CHEESE-RENNET. *The Herb*.—This herb has a subacid taste, with a very faint, not disagreeable smell: the juice changes blue vegetable infusions to a red colour, and coagulates milk, thus exhibiting marks of acidity. It stands recommended as a mild styptic, and in epilepsy; but has never been much in use.

348. GERANIUM *robertianum*. HERB ROBERT. *The Leaves*. — They have an austere taste, and have hence been recommended as astringents: but they have long been disregarded in practice.

349. GLECHOMA *hederacea*. GROUND-IVY. *The Leaves*.—This herb

is an useful corroborant, aperient, and detergent; and hence stands recommended against laxity, debility, and obstructions of the viscera: some have had a great opinion of it for cleansing and healing ulcers of the internal parts, even of the lungs; and for purifying the blood. It is customary to infuse the dried leaves in malt liquors, to which it readily imparts its virtues; a practice not to be commended, unless it is for the purpose of medicine.

350. HEDERA *Helix.* Ivy. *The Leaves and Berries.*—The leaves have very rarely been given internally; notwithstanding they are recommended (in the *Ephem. natur. curios.* vol. ii. obs. 120.) against the atrophy of children; their taste is nauseous, acrid, and bitter. Externally they have sometimes been employed for drying and healing ichorous sores, and likewise for keeping issues open. The berries were supposed by the ancients to have a purgative and emetic quality; later writers have recommended them in small doses, as diaphoretics and alexipharmics; and Mr. Boyle tells us, that in the London plague the powder of them was given with vinegar, with good success, as a sudorific. It is probable the virtue of the composition was rather owing to the vinegar than to the powder.

351. HERNIARIA *glabra.* Rupturewort. *The Leaves.* — It is a very mild restringent, and may, in some degree, be serviceable in disorders proceeding from a weak flaccid state of the viscera: the virtue which it has been most celebrated for, it has little title to, that of curing hernias.

352. HYPERICUM *perforatum.* St. John's Wort. *The Leaves and Flowers.*—Its taste is rough and bitterish; the smell disagreeable. Hypericum has long been celebrated as a corroborant, diuretic, and vulnerary; but more particularly in hysterical and maniacal disorders: it has been reckoned of such efficacy in these last, as to have thence received the name of *fuga dæmonum.*

353. JASMINUM *officinale.* Jasmine. *The Flowers.*—The flowers have a strong smell, which is liked by most people, though to some disagreeable: expressed oils extract their fragrance by infusion; and water elevates somewhat of it in distillation, but scarcely any essential oil can be obtained from them: the distilled water, kept for a little time, loses its odour.

354. IRIS *Pseudacorus.* Flower-de-Luce. *The Root.*—The roots, when recent, have a bitter, acrid, nauseous taste, and taken into the stomach prove strongly cathartic; and hence the juice is recommended in dropsies, in the dose of three or four scruples. By drying they lose this quality, yet still retain a somewhat pungent, bitterish taste: their smell in this state is of the aromatic kind.

355. IRIS *florentina*. Florentine Iris, or Orris-Root.—The roots grown in this country have neither the odour nor the other qualities that those possess which are grown in warmer climates: so that, for the purposes of medicine, they are usually imported from Leghorn.

The root in its recent state is extremely acrid, and, when chewed, excites a pungent heat in the mouth which continues several hours; but on being dried, this acrimony is almost wholly dissipated, the taste becomes slightly bitter, and the smell approaching to that of violets. It is now chiefly used in its dried state, and ranked as a pectoral or expectorant. The principal use of the roots is, however, for the purposes of perfumery, for which it is in considerable demand.

356. LACTUCA *sativa*. Garden Lettuce. *The Leaves and Seeds.*—It smells strongly of opium, and resembles it in its effects; and its narcotic power, like that of the poppy heads, resides in its milky juice. An extract from the expressed juice is recommended in small doses in dropsy. In those diseases of long standing proceeding from visceral obstructions, it has been given to the extent of half an ounce a-day. It is said to agree with the stomach, to quench thirst, to be greatly laxative, powerfully diuretic, and somewhat diaphoretic.

357. LAMIUM *album*. White Archangel, or Dead Nettle. *The Flowers.*—The flowers have been particularly celebrated in female weaknesses, as also in disorders of the lungs; but they appear to be of very weak powers.

358. LAVENDULA *Stœchas*. Arabian Stœchas, or French Lavender. *The Flowers.*—They have a very fragrant smell, and a warm, aromatic, bitterish, subacrid taste: distilled with water, they yield a considerable quantity of a fragrant essential oil; to rectified spirit it imparts a strong tincture, which inspissated proves an elegant aromatic extract, but is seldom used in medicine.

359. LEONURUS *Cardiaca*. Motherwort. *The Leaves.*—These have a bitter taste, and a pretty strong smell: they are supposed to be useful in hysteric disorders, to strengthen the stomach, to promote urine; and indeed it may be judged from their smell and taste, that their medical virtues are considerable, though they are now rejected both from the London and Edinburgh Pharmacopœias.

360. LILIUM *candidum*. White Lily. *The Roots.*—These are used in poultices. The good housewife doctors cut the roots in slices and steep them in brandy; and they are said to be an excellent remedy for all bruises and green wounds: for which purposes it is applied by them with considerable effect.

361. LITHOSPERMUM *officinale*. Gromwell. *The Seeds.*—These are roundish, hard, and of a whitish colour, like little pearls. Pow-

dered, they have been supposed peculiarly serviceable in calculous disorders. Their taste is merely farinaceous.

362. LYSIMACHIA *Nummularia*. MONEYWORT, OR HERB TWOPENCE. *The Leaves.*—Their taste is subastringent, and very slightly acid: hence they stand recommended by Boerhaave in the hot scurvy, and in uterine and other hæmorrhagies. But their effects are so inconsiderable, that common practice takes no notice of them.

363. MALVA *alcea*. VERVAIN-MALLOW. *The Leaves.*—Alcea agrees in quality with the Althæa and Malva *vulgaris*; but appears to be less mucilaginous than either.

364. MATRICARIA *Parthenium*. COMMON WILD FEVERFEW. *The Leaves and Flowers.*—Simon Pauli relates, that he has experienced most happy effects from it in obstructions of the uterine evacuations. I have often seen, says he, from the use of a decoction of Matricaria and chamomile flowers with a little mugwort, hysteric complaints instantly relieved, and the patient from a lethargic state, returned as it were into life again. Matricaria is likewise recommended in sundry other disorders, as a warm stimulating bitter: all that bitters and carminatives can do, says Geoffroy, may be expected from this. It is undoubtedly a medicine of some use in these cases, though not perhaps equal to chamomile flowers alone, with which the Matricaria agrees in sensible qualities, except in being weaker.

365. NEPETA *Calamintha*. FIELD CALAMINT. *The Leaves.*—This is a low plant, growing wild about hedges and highways, and in dry sandy soils. The leaves have a quick warm taste, and smell strongly of pennyroyal: as medicines, they differ little otherwise from spearmint, than in being somewhat hotter, and of a less pleasant odour; which last circumstance has procured calamint the preference in hysteric cases.

366. NEPETA *cataria*. NEP, OR CATMINT. *The Leaves.*—This is a moderately aromatic plant, of a strong smell, not ill resembling a mixture of mint and pennyroyal; it is also recommended in hysteric cases.

367. NIGELLA *romana*. FENNEL-FLOWER. *The Seeds.*—They have a strong, not unpleasant smell; and a subacrid, somewhat unctuous disagreeable taste. They stand recommended as aperient, diuretic, &c. but being suspected to have noxious qualities should be used with caution.

368. NYMPHÆA *alba*. WHITE WATER-LILY. *The Root and Flowers.*—These have a rough, bitterish, glutinous taste, (the flowers are the

least rough,) and when fresh a disagreeable smell, which is in great measure lost by drying: they are recommended in alvine fluxes, gleets, and the like. The roots are supposed by some to be in an eminent degree narcotic.

369. OCYMUM *Basilicum*. BASIL. *The Leaves.*—These have a soft, somewhat warm taste; and when rubbed, a strong unpleasant smell, which by moderate drying becomes more agreeable. They are said to attenuate viscid phlegm, promote expectoration, and the uterine secretions.

370. OPHIOGLOSSUM *vulgatum*. ADDERS-TONGUE. *The Leaf.*—An ointment is made of the fresh leaves, and it is a good application to green wounds. It is a very antient application, although now discarded from the apothecary's shop.

371. PÆONIA *corolloides*. MALE PEONY. *The Seeds.*—These are strung, and worn round the neck to assist detention, and are probably as good as other celebrated anodyne beads which have been so long recommended for the same purpose.

372. PHELLANDRIUM *aquaticum*. HONEWORT.—The seeds of this plant, according to Dr. Lange, when taken in large doses, produce a remarkable sensation of weight in the head, accompanied with giddiness, intoxication, &c. It may probably prove, however, an active medicine, especially in wounds and inveterate ulcers of different kinds, and even in cancers; also in phthisis pulmonalis, asthma, dyspepsia, intermittent fevers, &c. About two scruples of the seed, two or three times a-day, was the ordinary dose given. Medicines of this kind should be used with great caution.—*Woodville's Med. Bot.* p. 91, 92.

373. PIMPINELLA *saxifraga*. BURNET SAXIFRAGE. *The Root, Leaves, and Seeds.*—This root promises, from its sensible qualities, to be a medicine of considerable utility, though little regarded in common practice. Stahl, Hoffman, and other German physicians, are extremely fond of it, and recommend it as an excellent stomachic, resolvent, detergent, diuretic, diaphoretic, and alexipharmic.

374. PLANTAGO *major*. COMMON BROAD-LEAVED PLANTAIN.—The leaves are slightly astringent, and the seeds said to be so; and hence they stand recommended in hæmorrhages, and other cases where medicines of this kind are proper. The leaves bruised a little, are the usual application of the common people to slight flesh wounds. The Edinburgh College used to direct an extract to be made from the leaves.

375. POTENTILLA *anserina*. SILVERWEED. *The Leaves.*—The

sensible qualities of Anserina promise no great virtue of any kind; for to the taste it discovers only a slight roughness, from whence it was thought to be entitled to a place among the milder corroborants. As the astringency of Tormentil is confined chiefly to its root, it might be thought that the same circumstance would take place in this plant; but the root is found to have no other than a pleasant sweetish taste, like that of parsnip, but not so strong.

376. POTENTILLA *reptans*. Cinquefoil, or Five-leaved Grass. *Root.*—The root is moderately astringent: and as such is sometimes given internally against diarrhœas and other fluxes; and employed in gargarisms for strengthening the gums, &c. The cortical part of the root may be taken, in substance, to the quantity of a dram: the internal part is considerably weaker, and requires to be given in double the dose to produce the same effect. It is scarcely otherwise made use of than as an ingredient in Venice treacle.—*Lewis's Mat. Med.*

377. POPULUS *niger*. The Black Poplar. *Its Buds.*—The young buds or rudiments of the leaves, which appear in the beginning of spring, abound with a yellow, unctuous, odorous juice. They have hitherto been employed chiefly in an ointment, which received its name from them; though they are certainly capable of being applied to other purposes: a tincture of them made in rectified spirit, yields upon being inspissated, a fragrant resin superior to many of those brought from abroad.

378. PRIMULA *officinalis*. Cowslip. *The Flowers.*—The flowers appear in April; they have a pleasant sweet smell, and a subacrid, bitterish, subastringent taste. An infusion of them, used as tea, is recommended as a mild corroborant in nervous complaints. A strong infusion of them, with a proper quantity of sugar, forms an agreeable syrup, which for a long time maintained a place in the shops. By boiling, even for a little time, their fine flavour is destroyed. A wine is also made of the flowers, which is given as an opiate.

379. PRUNELLA *vulgaris*. Selfheal. *The Leaves.* — It has an herbaceous roughish taste, and hence stands recommended in hæmorrhages and alvine fluxes. It has been principally celebrated as a vulnerary, whence its name; and in gargarisms for aphthæ and inflammations of the fauces.

380. PULMONARIA *officinalis*. Spotted Lungwort. *The Leaves.* —They stand recommended against ulcers of the lungs, phthisis, and other like disorders.—*Lewis's Mat. Med.*

381. RANUNCULUS *Ficaria*. Pilewort. *The Leaves and Root.*—The roots consist of slender fibres, with some little tubercles among

them. These, with the leaves, are considered of considerable efficacy in the cure of hæmorrhoids; for which purpose, considerable quantities are sold at herb-shops in London.

382. RANUNCULUS *Flammula.* SMALL SPEARWORT.—It has been lately discovered that this plant possesses very active powers as an emetic, and it is supposed to be useful in some cases of vegetable poisons.

383. RHAMNUS *Frangula.* THE BLACK OR BERRY-BEARING ALDER. *Its Bark.*—The internal bark of the trunk or root of the tree, given to the quantity of a dram, purges violently, occasioning gripes, nausea, and vomiting. These may be in good measure prevented by the addition of aromatics; but we have plenty of safer and less precarious purgatives.

384. RHUS *coriaria.* ELM-LEAVED SUMACH.—Both the leaves and berries have been employed in medicine; but the former are more astringent and tonic, and have been long in common use, though at present discarded from the Pharmacopœias.

385. RIBES *nigrum.*—The juice of black currants boiled up with sugar to a jelly, is an excellent remedy against sore throats.

386. RUMEX *Hydrolapathum.* THE GREAT WATER DOCK.—The leaves of the docks gently loosen the belly, and have sometimes been made ingredients in decoctions for removing a costive habit. The roots, in conjunction with other medicines, are celebrated for the cure of scorbutic and cutaneous disorders, for which the following receipt is given by Lewis.

Six ounces of the roots of the water dock, with two of saffron; and of mace, cinnamon, gentian root, liquorice root, and black pepper, each three ounces, (or, where the pepper is improper, six ounces of liquorice,) are to be reduced into coarse powder, and put into a mixture of two gallons of wine, with half a gallon of strong vinegar, and the yolks of three eggs; and the whole digested, with a moderate warmth, for three days, in a glazed vessel close stopped: from three to six ounces of this liquor are to be taken every morning on an empty stomach, for fourteen or twenty days, or longer.

387. SALVIA *Sclarea.* GARDEN CLARY. *The Leaves and Seeds.*—These have a warm, bitterish, pungent taste; and a strong, not very agreeable smell: the touch discovers in the leaves a large quantity of glutinous or resinous matter. They are principally recommended in female weaknesses, in hysteric disorders, and in flatulent colics.

388. SAMBUCUS *Ebulus.* DWARF ELDER, OR DANEWORT. *The Root,*

Bark, and Leaves.—These have a nauseous, sharp, bitter taste, and a kind of acrid ungrateful smell: they are all strong cathartics, and as such are recommended in dropsies, and other cases where medicines of that kind are indicated. The bark of the root is said to be strongest: the leaves the weakest. But they are all too churlish medicines for general use: they sometimes evacuate violently upwards, almost always nauseate the stomach, and occasion great uneasiness of the bowels. By boiling they become (like the other drastics) milder, and more safe in operation. Fernelius relates, that by long coction they entirely lose their purgative virtue. The berries of this plant are likewise purgative, but less virulent than the other parts. A rob prepared from them may be given to the quantity of an ounce, as a cathartic; and in smaller ones as an aperient and deobstruent in chronic disorders: in this last intention, it is said by Haller to be frequently used in Switzerland, in the dose of a dram.

389. SANICULA *officinalis.* SANICLE. *The Leaves.*—These have an herbaceous, roughish taste: they have long been celebrated for sanative virtues, both internally and externally: nevertheless their effects, in any intention, are not considerable enough to gain them a place in the present practice.

390. SAPONARIA *officinalis.* SOAPWORT. *The Herb and Root.*—The roots taste sweetish and somewhat pungent; and have a light smell like those of liquorice: digested in rectified spirit they yield a strong tincture, which loses nothing of its taste or flavour in being inspissated to the consistence of an extract. This elegant root has not come much into practice among us, though it promises, from its sensible qualities, to be a medicine of considerable utility: it is greatly esteemed by the German physicians as an aperient, corroborant, and sudorific; and preferred by the College of Wirtemberg, by Stahl, Neumann, and others, to sarsaparilla.

391. SAXIFRAGA *granulata.*—Linnæus describes the taste of this plant to be acrid and pungent, which we have not been able to discover. Neither the tubercles of this root, nor the leaves, manifest to the organs of taste any quality likely to be of medicinal use; and therefore, though this species of Saxifraga has been long employed as a popular remedy in nephritic and gravelly disorders, yet we do not find, either from its sensible qualities or from any published instances of its efficacy, that it deserves a place in the Materia Medica.—*Woodville's Med. Bot. p.* 551.

392. SCABIOSA *succisa.* DEVIL'S BIT. *The Leaves and Roots.*—These stand recommended as alexipharmics, but they have long given place to medicines of greater efficacy.

393. SCANDIX *Cerefolium.* CHERVIL. *The Leaves.*—Geoffroy as-

sures us, that he has found it from experience to be of excellent service in dropsies: that in this disorder it promotes the discharge of urine when suppressed, renders it clear when feculent and turbid, and when high and fiery of a paler colour; that it acts mildly without irritation, and tends rather to allay than excite inflammation. He goes so far as to say, that dropsies which do not yield to this medicine are scarce capable of being cured by any other. He directs the juice to be given in the dose of three or four ounces every fourth hour, and continued for some time, either alone, or in conjunction with nitre and syrup.

394. SEDUM *Telephium*. ORPINE. *The Leaves*.—This is a very thick-leaved juicy plant, not unlike the houseleeks. It has a mucilaginous roughish taste, and hence is recommended as emollient and astringent, but has never been much regarded in practice.

395. SEMPERVIVUM *tectorum*. GREATER HOUSE-LEEK. *The Leaves*.—These are principally applied in cases of erysipelatous and other hot eruptions of the skin, in which they are of immediate service in allaying the pain arising therefrom: great quantities are cultivated in Surrey, and brought to the London markets. It is remarkable of this plant, that its juice, when purified by filtration, appears of a dilute yellowish colour upon the admixture of an equal quantity of rectified spirit of wine; but forms a beautiful white, light coagulum, like the finer kinds of pomatum: this proves extremely volatile; for when freed from the aqueous phlegm, and exposed to the air, it altogether exhales in a very little time.

396. SENECIO *Jacobæa*. RAGWORT. *The Leaves*.—Their taste is roughish, bitter, pungent, and extremely unpleasant: they stand strongly recommended by Simon Pauli against dysenteries; but their forbidding taste has prevented its coming into practice.

397. SOLANUM *nigrum*. COMMON NIGHTSHADE. *The Leaves and Berries*.—In the year 1757, Mr. Gataker, surgeon to the Westminster Hospital, called the attention of the Faculty to this plant, by a publication recommending its internal use in old sores, scrophulous and cancerous ulcers, cutaneous eruptions, and even dropsies; all of which were much relieved or completely cured by it.

398. SPIRÆA *Ulmaria*. MEADOW-SWEET. *The Leaves and Flowers*.—The flowers have a very pleasant flavour, which water extracts from them by infusion, and elevates in distillation.

399. SPIRÆA *Filipendula*. DROPWORT. *The Root*.—The root consists of a number of tubercles, fastened together by slender strings; its taste is rough and bitterish, with a slight degree of pungency. These qualities point out its use in a flaccid state of the vessels, and a slug-

gishness of the juices: the natural evacuations are in some measure restrained or promoted by it, where the excess or deficiency proceeds from this cause. Hence some have recommended it as an astringent in dysenteries, a diuretic, and others as an aperient and deobstruent in scrophulous habits.

400. SYMPHYTUM *officinale*. COMFREY. *The Root.*—The roots are very large, black on the outside, white within, full of a viscid glutinous juice, of no particular taste. They agree in quality with the roots of Althæa; with this difference, that the mucilage of it is somewhat stronger-bodied. Many ridiculous histories of the consolidating virtues of this plant are related by authors.

401. TAMUS *communis*. BLACK BRYONY. —The root is one of the best diuretics known in medicine. It is an excellent remedy in the gravel and all obstructions of urine, and other disorders of the like nature.

402. TANACETUM *vulgare*. TANSY. *The Leaves.*—These have a bitterish warm aromatic taste; and a very pleasant smell, approaching to that of mint or a mixture of mint and maudlin. Water elevates their flavour in distillation; and rectified spirit extracts it by infusion. They have been recommended in hysteric cases.

403. TEUCRIUM *Chamæpitys*. GROUND PINE. *The Leaves.*—These are recommended as aperient and vulnerary, as also in gouty and rheumatic pains.

404. THYMUS *vulgaris*. THYME. *The Leaves and Flowers.*—A tea made of the fresh tops of thyme is good in asthmas and diseases of the lungs. It is recommended against nervous complaints; but for this purpose the wild thyme is preferable. There is an oil made from thyme that cures the tooth-ache, a drop or two of it being put upon lint and applied to the tooth; this is commonly called oil of origanum.

405. TRIGONELLA *Fœnum-græcum*. FŒNUGREEK. *The Seeds.*—They are of a yellow colour, a rhomboidal figure; have a disagreeable strong smell, and a mucilaginous taste. Their principal use is in cataplasms, fomentations, and the like, and in emollient glysters.

406. VERBASCUM *Thapsus*. MULLEIN. *The Leaves and Flowers.*—Their taste discovers a glutinous quality; and hence they stand recommended as an emollient, and is in some places held in great esteem in consumptions. The flowers of mullein have an agreeable, honey-like sweetness: an extract prepared from them by rectified spirit of wine tastes extremely pleasant.

407. VERBENA *officinalis*. COMMON WILD VERVAIN. *The Leaves*

and Root.—This is one of the medicines which we owe to the superstition of former ages; the virtue it has been celebrated for is as an amulet, on which a pamphlet was some years ago published. It was recommended to wear the root by a ribband tied round the neck for the cure of the scrophula, and for which purpose, even now, much of the root is sold in London. As the age of superstition is passing by, it will be needless to say more on the subject at present.

408. VERONICA *officinalis*. MALE SPEEDWELL. *The Leaves.*—Hoffman and Joh. Francus have written express treatises on this plant, recommending infusions of it, drunk in the form of tea, as very salubrious in many disorders, particularly those of the breast.

Observations on the Drying and Preserving of Herbs, &c. for Medicinal Purposes.

THE student who has paid attention to the subject described in the foregoing sections, will be struck with the admirable contrivance of Divine Wisdom; that has caused such astringent substances as are contained in the oak and Peruvian bark, to be produced from the same soil, and in a similar way to those mucilaginous and laxative ones which we find in the juice of the marsh-mallow, and the olive oil. It is not intended in this small elementary work to enter into any investigation of the primitive parts of the vegetable creation, or how such different particles are secreted. It may therefore suffice, that, although the science of vegetable physiology admits of many very beautiful and instructing illustrations, yet they only go so far as to prove to us, that the first and grand principle of vegetable life and existence, as well as of the formation of all organic substances, consists in a system of attraction and combination of the different particles of nature, as they exist and are imbibed from the soil and the surrounding atmosphere. Thus, during their existence, we observe a continual series of aggregation of substance; but no sooner does the principle of life become extinct, than the agents of decomposition are at work, dividing and selecting each different substance, and carrying it back from whence it came:—"From dust thou comest, and to dust thou shalt return." This, there-

fore, seems to be the sum total of existence; the explanation of which, with all its interesting ramifications, is more fully explained by the learned professors in what is called the science of chemistry.

As plants of all descriptions, and their several parts, form a link of that chain by which the welfare of the universe is connected, the industry of mankind is excited to preserve them for the different purposes to which they are applicable, in the œconomy of human existence, to whose use the greater part of the animal and vegetable creation appears to be subservient. As men, then, and rational beings, it becomes our duty so to manage those things, when necessary, as to counteract as much as possible the decomposition and corruption which are natural to all organized bodies when deprived of the living principle.

We find that some vegetables are used fresh, but the greater part are preserved in a dry state; in which, by proper management, they can be kept for a considerable time afterwards, both for our own use as well as for that of others who reside at a distance from the place of their production.

In the preparation of the parts of plants for medicinal purposes, we should always have in view the extreme volatility of many of those substances, and how necessary it therefore is, that the mode of preparation and drying should be done as quickly as possible, in order to counteract the effects of the air and light, which continue to dissipate, without intermission, these particles, during the whole time that any vegetable, either fresh or dried, is left to its influence.

If we consider the nature of hops, which I shall take as an example, as being prepared in this way on the largest scale, we shall find they consist of three different principles; namely, an aroma, combined with an agreeable bitter taste, and a yellow colour; all of which properties are, by the consumers and dealers therein, expected to exist in the article after drying.

The art of drying hops, therefore, has been a subject of speculation for many years; and although we find the kiln apparatus for preserving them differ in many places, from the various opinions of the projectors, yet they are all intended for the same mode of action, *i. e.* the producing of a proper degree of heat, which must be regulated according to the state of the atmosphere at the gathering season, and the consequent quantity of the watery extract that the

hops contain at the time: thus it is usual to have two kilns of different temperatures at work at the same time. It should, however, be observed, that the principal art of drying hops is in doing it as quickly as possible, so as not to injure them in their colour. As soon as they are dried, it is considered necessary to put them up into close and thick bags.

It should be observed, that all vegetables contain at every period of their growth two distinct species of moisture: the one called by naturalists the *common juice*, which is the ascending sap, and is replete with watery particles: the other is termed *the proper juice*, which having passed up through the leaves, and being there concocted and deprived of the watery part, contains the principle on which the various properties and virtues of the plants depend. We therefore find that the operations above described only go to this, that the watery particles in the common juice should be evaporated, as being a part necessary to be got rid of; and the proper juice being of a volatile nature, the less time the plants are exposed for that purpose, the less of this precious material will be lost: and as those parts are flying off continually from all dried vegetables, there should be one general rule made with regard to their preparation; for, if we instance mint, balm, pennyroyal, &c., the longer these are kept in the open air, the weaker are they found to be in their several parts.

From hence we may naturally infer, that the usual mode in which the generality of herbs are dried, is not so good for the purpose, as one would be if contrived on similar principles, as, during the length of time necessary for the purpose, a great deal of the principal parts of the plants must of course be evaporated and lost; for little else is regarded than to dry them so as to prevent putrefaction. Although the generality of herbs met with are prepared as above described, yet in such articles as Digitalis, Hyoscyamus, Conium, Toxicodendron, &c., where the quantity necessary for a dose is so small, and so much depends on its action, practitioners are often obliged to prepare it themselves. I shall therefore relate the following mode as the best adapted to that purpose. The Digitalis is prepared by collecting the leaves in the summer, and stripping them off from the foot-stalks; these should be then carefully exposed to a slow heat, and the watery extract slowly thrown off; in which they should not be exposed to any great degree of

heat, which by its action will deprive them of their fine green colour. When this is effected, the whole may be put in contact with a heat that will enable the operator to reduce it to a fine powder. And in order to keep it with its virtues perfect, it will be necessary to deprive it as much as possible of the influence of air and light. Hence it is preserved in close glass bottles which are coated, and also placed in a dark part of the elaboratory. Now, it is necessary that all plants intended to be used in a dried state, should be prepared and protected in a similar manner; and although it may be considered as a superfluous trouble, so far as regards the more common kinds, particular attention should be *paid* to these, when a *small quantity* is *a dose*, and an *over-dose* a *certain poison*.

Other kinds of vegetables require a certain degree of fermentation, as Tobacco. The principal art of preserving it consists in this operation being duly performed; for which purpose, as soon as the leaves of the herb are fit, the foot-stalks are broken, and the leaves left on, in order for the moisture in part to be evaporated. Afterwards these are gathered and tied in handfuls, and hung up in the shade to dry; and when sufficiently divested of moisture, the bundles are collected together and laid in large boxes or tubs, in which these are fermented, and afterwards taken out again and dried; when it is found fit to pack up for the market.

The properties of *Stramonium*, which has been so much recommended for curing asthma, consist principally in the aroma, which is only to be preserved in a similar manner: and I have found from experience, that if the leaves are separated from the plant in a manner similar to that of tobacco, and the rest of the plant, both roots, stalks, and seed-vessels, be slit and sufficiently dried in the sun or in an oven, and the whole fermented together, a very different article is the produce than what it is when dried in the usual way, and left entirely to the chance influence of the atmosphere.

In the common operation of hay-making it may also be observed, that the continued turning it over and admitting its parts to the action of the sun and the air, is for the purpose of getting rid of the watery particles contained in it; and the quicker this is done, the better it is. And although this operation is so essentially necessary, yet care should be taken at the same time, that it be not made too dry, so as to prevent

a due degree of fermentation being allowed to take place in the rick. And it may be observed that the best grasses, or other plants used for hay, if made too dry, so as to prevent the natural fermentation which their proper juices will excite, can never make either palatable or nutritive food for cattle. Neither can the same be effected if the article is used in too small quantities. It should be observed, that herbs of all kinds should be gathered for preserving when in full bloom; but when roots or barks are recommended, these should be collected in the autumnal months. The principles laid down for preserving dried plants generally, will apply to these parts also.

SECTION IX. — *PLANTS USED FOR CULINARY PURPOSES.*

"Man's first great ruling passion is to eat."

IN the following section I have confined myself principally to such as are in cultivation. There are many of our indigenous plants which, in times of scarcity, and in other cases of necessity, are used as food by the people in the neighbourhood where they grow. But of these I shall make a separate list.

409. ARTICHOKE. *Cynara Scolymus.*—We have several varieties of this plant in cultivation; but the most approved are the large green and the globe. They are propagated by taking off the young suckers from the old roots in May, and planting them in a piece of rich land. Artichokes have been raised from seed, but they are seldom perfected in this country.

410. ARTICHOKE, JERUSALEM. *Helianthus tuberosus.*—Is cultivated for the sake of its tubers, similar to the potatoe; but they are not generally esteemed.

411. ASPARAGUS. *Asparagus officinalis.*—A very delicious vegetable in the spring, and well known to all amateurs of gardening.

There is a variety called the Gravesend Asparagus, and another called the Battersea; but it is the richness of the soil and manure that makes the only difference.

412. BASIL, SWEET. *Ocymum Basilicum.*—A pot-herb of considerable use for culinary purposes. It is an annual; and the seeds

should be sown in a hot-bed in March, and transplanted into the open ground. It is usually dried as other pot-herbs.

413. BEANS. *Vicia Faba.*—The varieties of the garden-beans are as follow:—

The early Mazagan and Longpod are planted in November. These will usually be fit for use in June.

The Windsor.
The Toker.
The Sword Longpod.
The Green Toker.
The White-blossomed.

} These varieties are sown usually in succession from January to March, and afford a continuance of crop during the season.

414. BEANS, FRENCH or KIDNEY. *Phaseolus vulgaris.*—The kidney beans are of two kinds; such as run up sticks and flower on the tops. Of this description we have in cultivation the following:—

The Scarlet Runner.
The Dutch Runner.

} Both these are much esteemed.

Of dwarf kinds we have many varieties. The pollen of these plants is very apt to become mixed; and, consequently, hybrid kinds differing in the colour of the seeds are often produced. The season for sowing these is from April till June.

The Black, or Negro Beans.
The Blue Dwarf.
The Early Yellow.
The Black Speckled.
The Red Speckled.
The Magpie.
The Canterbury.

} All these varieties are good and early beans. The white Canterbury is the kind most esteemed for pickling; the other sorts being all of them more or less discoloured: and this kind is the sort generally sold for such purpose in the London markets.

415. BEET, RED. *Beta vulgaris* v. *rubra.* — The roots of this variety are used both in soups and for early spring salads: it is cultivated by sowing the seeds in March; and the roots are usually kept all winter.

The white beet is only a variety of the other; and it is the tops that are usually eaten of this kind as a substitute for spinach. Its culture is the same as that of the red kind.

416. BORECOLE. *Brassica Rapa.*—Of borecole we have two varieties; the purple, and green. The former is in much esteem amongst the Germans, who make a number of excellent dishes from it in the winter.

The culture is the same as for winter cabbage of other kinds.

417. BRUSSELS SPROUTS. *Brassica Rapa.*—This is also a use-

ful variety of the cabbage species, which is very productive, forming a large number of beautiful small close-headed cabbages on their high stalks in the winter season. The seeds are sown in March.

418. BURNET. *Poterium Sanguisorba.*—The young leaves of this plant are eaten with other tender herbs in the spring, and are considered a wholesome addition to mustard, cress, corn-salad, &c.

419. CABBAGE. *Brassica oleracea.*—The varieties of cabbage are numerous. The most esteemed are,

The Early York.
The Early Sugar-loaf.
The Early Battersea.
The Early Russia.
} They are all sown in August, and planted out for an early summer-crop, and are usually in season in May and June.

The Large Battersea.
The Red Cabbage.
The Green Savoy.
The White Savoy.
} These are usually sown in March, and planted for a winter crop.

The use and qualities of the cabbage are too well known to need any further description.

420. CAULIFLOWER. *Brassica oleracea* var.—The varieties are,

The Early.
The Late.

The early cauliflower is sown in the first week in September, and usually sheltered under bell or hand glasses during the winter. By this means the crop is fit for table in the months of May and June.

The late sort is usually sown in the month of March, and planted out for a succession to the first crop.

421. CAPPARIS. *Capparis spinosa.*—This is the flower-pod before it opens of the above shrub, and is only kept as an ornamental plant here. I am induced to notice this plant, as I have known some things used in mistake for capers that are dangerous. I once saw an instance of this, in the seed-vessels of the Euphorbia Lathyris (which is a poisonous plant) being pickled by an ignorant person.

422. CAPSICUM. *Capsicum annuum.*—Cayenne pepper is made from a small variety of this plant.

We have many varieties cultivated here in hot-beds; namely, yellow and red, of various shapes, as long, round, and heart-shaped. All these are very useful, either pickled by themselves, or mixed with any other substances, as love-apple, radish pods, &c. to which they impart a very fine warm flavour.

423. CARROT. *Daucus Carota.*—

The Orange Carrot.—For winter use.
The Early Horn ditto.—For summer use.—The former is

usually sown in March; the latter being smaller, and more early, is commonly raised on hot-beds. The Early Horn Carrot may likewise be sown in August, and is good all winter.

424. CELERY. *Apium graveolens.* — Celery is now so generally known as to render a description of the plant useless; nor need it be told, that the stalks blanched are eaten raw, stewed, &c. It should be used with great caution, if grown in wet land, as it has been considered poisonous in such cases. The season of sowing celery is in April. We have a variety of this, which is red, and much esteemed.

425. CELERIAC. This is a variety of the Apium *graveolens.* It is hollow in the stem, and the roots particularly large: although this is much used in Germany, it is not so much esteemed by us as the celery.

426. CHAMPIGNON. *Agaricus pratensis.*—This plant is equal in flavour to the mushroom when boiled or stewed: it is rather dry, and has little or no scent whatever.

427. CHARDOONS. *Cynara Cardunculus.*—The gardeners blanch the stalks as they do celery; and they are eaten raw with oil, pepper, and vinegar; or, if fancy directs, they are also either boiled or stewed.

428. CHERVIL. *Scandix Cerefolium.*—This plant is so much used by the French and Dutch, that there is scarcely a soup or salad but what chervil makes part of it: it is grateful to the taste. See article Œnanthe *crocata* in the Poisonous Plants.

429. CIVES. *Allium Schœnoprasum.* — This is an excellent herb for salads in the spring: it is also useful for soups, &c. &c. It is perennial, and propagated by its roots, which readily part at any season.

430. CLARY. *Salvia Sclarea.* — The seeds are sown in autumn. It is biennial. The recent leaves dipped in milk, and then fried in butter, were formerly used as a dainty dish; but now it is mostly used as a pot-herb, and for making an useful beverage called Clary Wine, viz. — Put four pounds of sugar to five gallons of water, and the albumen of three eggs well beaten; boil these together for about sixteen minutes, then skim the liquor; and when it is cool, add of the leaves and blossoms two gallons, and also of yeast half a pint; and when this is completed, put it all together into a vessel and stir it two or three times a-day till it has done fermenting, and then stop it close for two months: afterwards draw it into a clean vessel, adding to it a quart of good brandy. In two months it will be fit to bottle.

431. COLEWORT. *Brassica oleracea* var.—This is a small variety of the common cabbage, which is sown in June, and planted out for autumn and winter use. These are often found to stand the severe frosts of our winter when the large sort of cabbages are killed; but its principal use with gardeners is, to have a crop that will occupy the land after the beans and pease are over, and perhaps Colewort is the most advantageous for such purposes.

432. CORN SALAD. *Valeriana Locusta.*—An annual, growing wild in Battersea fields, and many other parts of this kingdom.

It is usually sown in August, and stands the winter perfectly well; it is very similar to lettuce, and is a good substitute for it in the spring and winter seasons.

433. COSTMARY. *Tanacetum Balsamita.*—Is used as a herb in salad. This is a perennial plant of easy culture.

434. CRESS. *Lepidium sativum.*—There are two varieties of cress, the curled and common. This is an ingredient with mustard in early salads.

435. CRESS, AMERICAN. *Erysimum Barbarea.*—This is cultivated for salads, and is much esteemed. It is increased by sowing the seeds in the spring. This is only good in the winter and spring seasons.

436. CUCUMBERS. *Cucumis sativus.*—Many sorts of cucumbers are cultivated by gardeners. The most esteemed are,

The Southgate Cucumber.
The Long Prickly.
The Long Turkey.
The White Spined.

The early crop is usually sown in hot-beds in the spring, and is a crop on which most gardeners have always prided themselves, each on his best mode of management of this crop. They will also grow if sown in April, and planted out in the open ground.

The short prickly cucumber is grown for gerkins.

437. DILL. *Anethum graveolens.*—This is similar to fennel, and used in pickling. It is esteemed useful as a medicinal herb also; which see.

438. ENDIVE. *Cichorium Endivia.*—Of this we have three varieties in cultivation.

The Green Curled.
The White Curled.
The Batavian, or Broad-leaved.

These are sown usually in June and July, and planted out for use in the autumn and winter. Endive is well known as forming a principal part of our winter salads; for which purpose, it is usual with gardeners to blanch it, by tying the plants up together, and laying them in dry places.

439. ESCHALOT. *Allium ascalonicum.* — This species of allium is very pungent: its scent is not unpleasant, but is very strong, and, in general, it is preferred to the onion for making soups and gravies. It is propagated by planting the bulbs in September or October: tney are fit to take up in May and June, when they are dried and kept for use.

440. FENNEL. *Anethum Fœniculum.*—The use of this plant is so well known in the kitchen, as to render an account of it useless. It is propagated by sowing seeds in the spring.

441. GARLICK. *Allium sativum.*—This is used in the art of cookery in various ways, for soups, pickles, &c. It is cultivated by planting the small cloves or roots in the month of October. It is fit to pull up in spring; and the roots are dried for use.

442. GOURD. *Cucurbita Melopepo.* — The inhabitants of North America boil the squash or melon gourds when about the size of small oranges, and eat them with their meat. The pulp is used with sour apples to make pies. In scarcity it is a good substitute for fruit.

443. KOHLRABBI, or Turnep-rooted Cabbage. *Brassica Rapa* var.—We have two kinds of this in cultivation; but although these are both much eaten in Germany, they are not esteemed with us: in fact, we have so many varieties of the cabbage kind all the year round for culinary purposes, that nothing could much improve them. In countries further north than we are, this is probably an acquisition, as, from its hardiness, it is likely to stand the frost better than some of the more delicate varieties.

444. LEEKS. *Allium Porrum.* — There are two kinds of leeks: the Welsh and London.

Leeks are used principally in soups; they partake much of the nature of onions, but for this purpose are in general more esteemed. This plant has been so long cultivated in this country, that its native place is not known.

The seeds are sown in the spring, and it is in use all the winter.

445. LETTUCE. *Lactuca sativa.* — The varieties of lettuce are many. They are,

Green Coss.	Brown Dutch.
White do.	White Cabbage.
Silesia do.	Imperial.
Brown do.	Hammersmith Hardy.
Egyptian do.	Tennis-ball.

These are sown every summer month. The brown and Egyptian coss are sown in August, and commonly stand the winter; and in the spring are fit for use.

446. LOVE-APPLE. *Solanum Lycopersicum.*—The Portuguese and Spaniards are so very fond of this fruit, that there is not a soup or gravy but what this makes an ingredient in; and it is deemed cooling and nutritive. It is also called Tomatas, or Tomatoes.

The green fruit makes a most excellent pickle with capsicums and other berries. It is annual, and raised in hot-beds, and planted out.

447. MARJORAM, WINTER. *Origanum vulgare.*—This is used as a sweet herb, and is a good appendage to the usual ingredients in stuffing, &c. It is a perennial plant, and propagated by planting out its roots in the spring of the year.

448. MARJORAM, SWEET. *Origanum Marjorana.*—This is also used for the same purpose as the last mentioned. It is an annual, and not of such easy culture as the last, requiring to be raised from seeds in an artificial heat. It is usually dried and kept for use.

449. MARYGOLD. *Calendula officinalis.*—An annual plant usually sown in the spring. The petals of the flowers are eaten in broths and soups, to which they impart a very pleasant flavour.

450. MUSHROOM. *Agaricus campestris.*—Is cultivated and well known at our tables for its fine taste and utility in sauces. These plants do not produce seeds that can be saved; they are therefore cultivated by collecting the spawn, which is found in old hot-beds and in meadow lands.

Various methods have been lately devised for raising mushrooms artificially: but none seem to be equal to those raised in beds, as is described in all our books of gardening. Raising this vegetable in close rooms by fire heat has been found to produce them with a bad flavour; and they are not considered so wholesome as those grown in the open air, or when that element is admitted at times freely to the beds.

451. MUSTARD, WHITE. *Sinapis alba.*—This is sown early in the spring, to be eaten as salad with cress and other things of the like nature; it is of easy culture. A salad of this kind may be readily raised on a piece of thick woollen-cloth, if the seeds are strewed thereon and

kept damp; a convenient mode practised at sea on long voyages. Cress and rape may be raised in the same manner.

452. ONION. *Allium oleraceum.*—The kinds of onions in cultivation are,

The Deptford.	The Portugal.
The Reading.	The Globe, and
The White Spanish.	The Silver skinned.

All these varieties are usually sown in the spring of the year, and are good either eaten in their young state, or after they are dried in the winter. The silver skinned kind is mostly in use for pickling. The globe and Deptford kinds are remarkable for keeping late in the spring. A portion of all the other sorts should be sown, as they are all very good, and some kinds will keep, when others will not.

453. ONION, WELSH. *Allium fistulosum.*—This is sown in August for the sake of the young plants, which are useful in winter salads, and are more hardy than the other cultivated sorts.

454. PARSLEY. *Petroselinum vulgare.*—A well known potherb sown in the spring; and the plants, if not suffered to go to seed, will last two years. See Æthusa *Cynapium*, in Poisonous Plants.

455. PARSNEP. *Pastinaca sativa.*—This is a well known esculent root, and is raised by sowing the seeds in the spring.

456. PEA. *Pisum sativum.*—This is a well known dainty at our tables during spring and summer. The varieties in cultivation are

Turner's Early Frame.	Golden Hotspur.
Early Charlton.	Double Dwarf.

These are usually sown in November and December, and will succeed each other in ripening in June, if the season is fine, and afford a crop all that month.

The Dwarf Marrow-fat.	The Prussia Blue.
The Royal Dwarf.	The Spanish Dwarf.

These varieties are usually sown in gardens when it is not convenient to have them grow up sticks, being all of a dwarf kind.

The Tall Marrow-fat.	The Spanish Morotto.
The Green Marrow-fat.	Knight's Marrow Pea.
The Imperial Egg Pea.	The Grey Rouncival.
The Rose, or Crown Pea.	The Sickle Pea.

This last variety has no skin in the pods. These are used as kidney beans, as also in the usual way. These varieties are of very large growth, and are only to be cultivated when there is considerable room, and must be supported on sticks placed in the ground for that purpose.

The grey pea is usually eaten when in a dry state boiled. Hot grey peas used to be an article of common sale among our itinerant traders in London streets, but it has been dropped for some years. One or other of the different kinds of the larger varieties should be put into the ground every three weeks from March to the 1st week in June, and a crop is thereby insured constantly till the beginning of October.

It should be remarked, that peas, as well as all vegetable seeds, are liable to sport and become hybrid sorts; some of which are at times saved for separate culture, and are called, when found good, by particular names; so that every twenty or thirty years many of the kinds are changed. Thus Briant, in his Flora Dætetica, enumerates fourteen varieties, a few only of which bear the same name as those now in the list of the London seedsmen.

457. POMPION. *Cucurbita Pepo.*—This is of the gourd species, and grows to a large size. It is not much in use with us: but in the south of Europe the inhabitants use the pulp with some acid fruits for pastry, and it is there very useful. It is also sometimes used in a similar manner here with apples. Almost all the gourd species are similar in taste and nutriment when used this way.

458. PURSLANE. *Portulaca oleracea.* — Two kinds of Purslane, the green and the golden, are cultivated. These are eaten with vinegar, &c. the same as other salad oils, and are a fine vegetable in warm weather. The seeds are usually sown in the spring.

459. RADISH. *Raphanus sativus.*—The varieties in cultivation are,

The Early Scarlet.	The White Turnip Radish.
The Early Purple Short-top.	The Red Turnip Radish.
The Salmon Radish.	The Black Spanish.

The above are sown almost every month in the year, and when the weather is fine, every good garden may have a supply all the year of those useful and wholesome vegetables.

The black Spanish radish is a large rooted variety usually sown in August, and is eaten in the winter season.

The poor labouring man's fare, which is usually eaten under the hedge of the field of his employment, is often accompanied with a dried onion; and was this root more known than it generally is, it would yield him, at the expense of two-pence, with a little labour in his cottage garden, an equally pleasant and more useful sauce to his coarse but happy meals. I have observed many instances of this œconomy amongst the labouring classes in my youth, but fear it is not quite so commonly made use of in the present day.

460. RADISH, Horse. *Cochlearia Armoracea.* — The root of this vegetable is a usual accompaniment to the loyal and standard English

dishes, the smoking baron and the roast surloin; with which it is most generally esteemed.

It should not be passed unnoticed here, that this very grateful and wholesome root is not at all times to be eaten with impunity. One or two instances of its deleterious effects have been witnessed by my much esteemed friend Dr. Taylor, the worthy Secretary at the Society of Arts, and which he has communicated to me. I shall insert his own words, particularly as it may be the means of preventing the botanical student from falling into the same error, after arriving with the usual good appetite, from his recreative task of herborizing excursions. "Some gentlemen having ordered a dinner at a tavern, the cloth was laid, and the usual appendages placed on the table, of which scraped horse-radish was one; some persons in company took a small quantity, and, dipping it in salt, ate of it: these were soon seized with a suppression of urine, accompanied with inflammation of the kidneys, which shortly after proved fatal to one of the company. The Doctor was consulted; but not knowing exactly the cause of the complaint, of course was at a loss to apply a remedy in time. But another circumstance of the like nature having come under his notice, and being apprized of it, by a well applied corrective medicine he recovered the patient. It should, therefore, be made a general observation, under such circumstances, and those are not the most unpleasant we meet with in our researches, 'never to eat horse-radish on an empty stomach.'"

461. RAMPION. *Campanula Rapunculus.* — This plant is remarkable for its milky juice. In France, it is cultivated for its roots, which are boiled and eaten with salads; but in England it is little noticed, except by the French cooks, who use it as an ingredient in their soups and gravies. It is propagated by planting its roots in the spring.

462. RHAPONTIC RHUBARB. *Rheum Rhaponticum.*—The radical leaf-stalks of this plant being thick and juicy, and having an acid taste, are frequently used in the spring as a substitute for gooseberries before they are ripe, in making puddings, pies, tarts, &c. If they are peeled with care, they will bake and boil very well, and eat agreeably.

463. ROCAMBOLE. *Allium sativum.* — The rocambole is merely the bulbs on the top of the flower-stalk of the garlic, it being a viviparous plant. The flavour of this being somewhat different, is used in the kitchen under the above name.

464. SAGE. *Salvia officinalis.*—Of this we have two varieties, green and red. The latter is considered the best for culinary purposes: it is the well-known sauce for geese and other water-fowl. It is propagated by cuttings in the spring.

465. SALSAFY. *Tragopogon portifolium.*—A biennial, sown in March, and is usually in season during winter. The roots are the parts used, which are very sweet, and contain a large quantity of milky juice: it is a good vegetable plain boiled, and the professors of cookery make many fine dishes of it.

466. SAVORY, SUMMER. *Satureja hortensis.*

467. SAVORY, WINTER. *Satureja montana.*

Both sorts are used for the same purposes, as condiments among other herbs for stuffing, and are well known to cooks. The former is an annual, and raised by sowing the seeds in March and April. The other, being perennial, is propagated either by the same means or by cuttings in the spring of the year. It is also dried for winter use.

468. SAVOY CABBAGE. *Brassica oleracea*, (var.)

The Green Savoy.

The White or Yellow Savoy.

A well-known species of cabbage grown for winter use, and is one of our best vegetables of that season. It is raised by sowing the seeds in May, and planting the plants in any spot of ground in July after a crop of peas or beans. Savoys stand the frost better than most other kinds of cabbages with close heads.

469. SCORZONERA. *Scorzonera tingitana.*—The roots of this are very similar to salsafy, and its culture and use nearly the same.

470. SEA KALE. *Crambe maritima.*—This grows wild on our sea-coasts, particularly in Devonshire, where it has long been gathered and eaten by the inhabitants thereabouts. It was used also to be cultivated; but it was in general lost to our gardens, till my late partner, Mr. Curtis, having paid a visit to his friend Dr. Wavell at Barnstaple, found it at that gentleman's table; and on his return he collected some seeds, and planted a considerable spot of ground with it at Brompton in 1792; at which time it was again introduced to Covent-Garden, but with so little success, that no person was found to purchase it, and consequently the crop was useless.

This celebrated botanist, however, published a small tract on its uses and culture, which met with a considerable sale, and introduced it again into general cultivation.

The seeds should be sown in March, and the following year the plants are fit for forming plantations, when they should be put out in rows about three feet apart, and one foot in the row. The vegetable is blanched either by placing over the crowns of the root an empty garden-pot, or by earthing it up as is usually done with celery. It is easily forced, by placing hot dung on the pots; and is brought forward in January, and from thence till May.

It has been noticed of sea-kale, that, on eating it, it does not impart to the urine that strong and unpleasant scent which asparagus and other vegetables do.

471. SKIRRETS. *Sium Sisarum.*—The roots of this plant are very similar to parsneps, both in flavour and quality; they are rather sweeter, and not quite so agreeable to some palates. It is a biennial sown in March, and used all the winter.

472. SORREL, COMMON. *Rumex Acetosa.*—Bryant says the Irish, who are particularly fond of acids, eat the leaves with their milk and fish; and the Laplanders use the juice of them as rennet to their milk. The Greenlanders cure themselves of the scurvy, with the juice mixed with that of the scurvy-grass. The seeds may be sown, or the roots planted, in spring or autumn; it is not in general cultivation, but is to be found abundantly wild in meadows, &c.

473. SORREL, ROUND-LEAVED, OR FRENCH. *Rumex scutatus.*—The leaves of the plant have more acidity in them than the common; and although not in general use, it is one of the best salad herbs in the early part of the year: it is propagated in the same mode as the common sort.

474. SPINACH, *Spinacia oleracea.*—Two sorts of this vegetable are cultivated. The Round-leaved, which is very quick in its growth, is sown for summer use; and if the seeds are put into the ground every three weeks, a constant succession is obtained while the weather is warm; but frost will soon destroy it.

The Prickly Spinach is not so quick in growth, and is hardy enough to stand our winters: it is therefore sown in August, and succeeds the round-leaved sort; and is a good vegetable all our winter months.

475. TARRAGON. *Artemisia Dracunculus.*—The leaves of this make a good ingredient with salad in the spring; and it also makes an excellent pickle. It is propagated by planting the small roots in spring or autumn, being a perennial.

476. THYME. *Thymus vulgaris.*—This is a well-known potherb used in broths and various modes of cookery: it is propagated by seeds and cuttings early in the spring.

477. TRUFFLES. *Lycoperdon Tuber.*—Not in cultivation. The poor people in this country find it worth their while to train up dogs for the purpose of finding them, which, by having some frequently laid in their way, become so used to it, that they will scrape them up in the

woods; hence they are called Truffle-dogs. The French cooks use them in soups, &c. in the same manner as mushrooms. The truffle is mostly found in beech woods: I have mentioned this, because it is very generally met with at table, although it is not in cultivation.

478. TURNEPS. *Brassica Rapa.*—The varieties in use for garden culture are, the Early Dutch, the Early Stone, and the Mouse-tail Turnep. The culture and uses of the turnep are too well known to require any description.

The country people cut a raw turnep in thin slices, and a lemon in the same manner: and by placing the slices alternately with sugar-candy between each, the juice of the turnep is extracted, and is used as a pleasant and good remedy in obstinate coughs, and will be found to relieve persons thus afflicted, if taken immediately after each fit. Although this is one of the remedies my young medical friends may be led to despise, yet I would, nevertheless, advise them to make use of it when need occasions.

The yellow turnep is also much esteemed as a vegetable; but is dry, and very different in taste from any of the common kinds.

SECTION X.—*CULINARY PLANTS NOT IN CULTIVATION.*

THE following section cannot be too closely studied by people in all ranks of life. Many of our most delicate vegetables are found growing wild; and in times of scarcity, and after hard winters, many articles of this department will be found highly acceptable to all, and the condition of the poorer classes would be bettered by a more intimate knowledge of those plants. In fact, these and the medicinal plants ought to be known to every one: and in order to facilitate the study of them, I have been thus particular in my description of the different kinds.

479. AGARIC, ORANGE. *Agaricus deliciosus.*—This agaric well boiled and seasoned with pepper and salt, has a flavour similar to that of a roasted muscle. In this way the French, in general, make use of it. It is in high perfection about September, and is chiefly to be found in dry woods.

480. ALEXANDERS. *Smyrnium Olusatrum.*—If the poorer people were aware of the value of this plant, which is now quite neglected,

it might be turned to good account as an article of food, and that, in all likelihood, of the most wholesome kind.

Bryant thinks it was much esteemed by the monks, and states that it has, ever since the destruction of the abbeys in this country, remained in many places growing among the rubbish: hence the reason of its being found wild in such places.

481. ALEXANDERS, ROUND-LEAVED. *Smyrnium perfoliatum.* — It is said that the leaves and stalks boiled are more pleasant to the taste than the other kind of Alexanders.

482. ARROWHEAD. *Sagittaria sagittifolia.* — The roots of this plant are said to be very similar to the West-India arrow-root. They are sometimes dried and pounded, but are reported to have an acrid unpleasant taste; but this might perhaps be got rid of by washing the powder in water.

483. BLACKBERRY. *Rubus fruticosus.* — The berries of this plant are well known in the country; but if too many be eaten, they are apt to cause swelling in the stomach, sickness, &c.

484. BRIONY, BLACK. *Tamus communis.*—Although this is considered a poisonous plant, the young leaves and shoots are eaten boiled by the common people in the spring.

485. BURDOCK. *Arctium Lappa.*—Mr. Bryant in his *Flora Diætetica* says that many people eat the tender stalks of this plant boiled as asparagus.

486. BURNET. *Sanguisorba officinalis.*—The young leaves form a good ingredient in salads. They have somewhat the flavour of cucumbers.

487. BUTTERWORT. *Pinguicula vulgaris.* — The inhabitants of Lapland and the north of Sweden give to milk the consistence of cream by pouring it warm from the cow upon the leaves of this plant, and then instantly straining it and laying it aside for two or three days till it acquires a degree of acidity.

This milk they are extremely fond of; and once made, they need not repeat the use of the leaves as above, for a spoonful or less of it will turn another quantity of warm milk, and make it like the first, and so on, as often as they please to renew their food. — *Lightfoot's Flor. Scot. p.* 77.

488. CHAMPIGNON. *Agaricus pratensis.* — There is little or no smell to be perceived in this plant, and it is rather dry; yet when

boiled or stewed it communicates a good flavour, and is equal to the common mushroom.

489. CHANTARELLE. *Agaricus Chantarellus.*—This agaric, when broiled with pepper and salt, has a taste very similar to that of a roasted cockle, and is considered by the French a great delicacy. It is found principally in woods and old pastures, and is in good perfection about the middle of September.

490. CHARLOCK. *Sinapis arvensis.* — The young plant is eaten in the spring as turnep-tops, and is considered not inferior to that vegetable. The seeds of this have sometimes been saved and sold for feeding birds instead of rape; but being hot in its nature, it has been known to cause them to be diseased.

491. CHICKWEED. *Alsine media.* — This is a remarkably good herb boiled in the spring; a circumstance not sufficiently attended to.

492. CLOUD-BERRY. *Rubus Chamæmorus.* — This plant grows wild in some parts of the north of England: the fruit has nearly the shape of the currant, and is reckoned in Norway, where it grows abundantly, a favourite dish.

493. COTTON-THISTLE. *Onopordon Acanthium.* — The tender stalks of this plant, peeled and boiled, are by some considered good; but it has a peculiar taste which is not agreeable to all.

Bryant in his *Flora Diætetica* says that the bottoms of the flowers are eaten as artichokes.

494. COW-PARSNEP. *Heracleum Sphondylium.*—The inhabitants of Kamschatka about the beginning of July collect the foot-stalks of the radical leaves of this plant, and, after peeling off the rind, dry them separately in the sun; and then tying them in bundles, they lay them up carefully in the shade. In a short time afterwards, these dried stalks are covered over with a yellow saccharine efflorescence tasting like liquorice, and in this state they are eaten as a delicacy.

The Russians, not content with eating the stalks thus prepared, contrive to get a very intoxicating spirit from them, by first fermenting them in water with the greater bilberry (*Vaccinium uliginosum*), and then distilling the liquor to what degree of strength they please; which Gmelin says is more agreeable to the taste than spirits made from corn. This may, therefore, prove a good succedaneum for whisky, and prevent the consumption of much barley, which ought to be applied to better purposes. Swine and rabbits are very fond of this plant. —*Lightfoot's Fl. Scot.*

495. DANDELION. *Leontodon Taraxacum.*—This is a good salad

when blanched in the spring. The French, who eat more vegetables than our country people do, use this in the spring as a common dish: it is similar to endive in taste.

496. DEWBERRY. *Rubus cæsius.*—The dewberry is very apt to be mistaken for the blackberry; but it may be easily distinguished by its fruit being not so large, and being covered with a blue bloom similar to that seen on plums: it has a very pleasant taste, and is said to communicate a grateful flavour to red wine when steeped in it.

497. EARTH-NUT. *Bunium Bulbocastanum.*—The roots are eaten raw, and considered a delicacy here, but thought much more of in Sweden, where they are an article of trade: they are eaten also stewed as chesnuts.

498. ELDER. *Sambucus nigra.* — The young shoots of elder are boiled with other herbs in the spring and eaten; they are also very good pickled in vinegar. Lightfoot says, in some countries they dye cloth of a brown colour with them.

499. FAT-HEN. *Chenopodium viride et album.*—These are boiled and eaten as spinach, and are by no means inferior to that vegetable.

500. FUCUS, SWEET. *Fucus saccharatus.* — This grows upon rocks and stones by the sea-shore. It consists of a long single leaf, having a short roundish foot-stalk, the leaf representing a belt or girdle. This is collected and eaten the same as laver, as are also the two following kinds.

501. FUCUS, PALMATED. *Fucus palmatus.*—This plant also grows by the sea-side, and has a lobed leaf.

502. FUCUS, FINGERED. *Fucus digitatus.*—This is also to be found by the sea-side, growing upon rocks and stones; it has long leaves springing in form of fingers when spread.

503. GOOD KING HENRY. *Chenopodium Bonus-Henricus.* — The leaves and stalk of this plant are much esteemed. The plant was used to be cultivated, but of late years it has been superseded by the great number of other esculent vegetables more productive than this is. The young shoots blanched were accounted equal to asparagus, and were made use of in a similar manner.

504. HEATH. *Erica vulgaris.*—Formerly the young tops are said to have been used alone to brew a kind of ale; and even now, I am informed, the inhabitants of Isla and Jura (two islands on the coast of Scotland) continue to brew a very potable liquor, by mixing two-thirds of the tops of heath with one of malt.—*Lightfoot's Fl. Scot.*

505. HOPS. *Humulus Lupulus.*—Independently of the great use of hops in making beer, and for medicinal uses, where the plant grows wild, it affords the neighbours a dainty in the spring months. The young shoots, called hop-tops, when boiled, are equal in flavour to asparagus, and are eagerly sought after for that purpose.

506. LADIES-SMOCK. *Cardamine pratensis.*—This is good as a salad herb.

507. LAVER. *Fucus esculentus.*—This is collected by sailors and people along the sea-coasts; is eaten both raw and boiled, and esteemed an excellent antiscorbutic. The leaves of this *Fucus* are very sweet, and, when washed and hanged up to dry, will exude a substance like that of sugar.

508. MAPLE. *Acer Pseudo-platanus.* — By tapping this tree it yields a liquor not unlike that of the birch-tree, from which the Americans make a sugar, and the Highlanders sometimes an agreeable and wholesome wine.—*Lightfoot's Fl. Scot.*

509. MARSH MARIGOLD. *Caltha palustris.* — The flower-buds, before opening, are pickled, and are considered as a good substitute for capers.

510. MEADOW-SWEET. *Spiræa Filipendula.*—The roots of this, in Sweden, are ground and made into bread.

511. MILK-THISTLE. *Carduus marianus.*—The young leaves in the spring, cut close to the root with part of the stalks on, are said to be good boiled.

512. MOREL. *Phallus esculentus.*—The morel grows in wet banks and moist pastures. It is used by the French cooks, the same as the truffle, for gravies, but has not so good a flavour: it is in perfection in May and June.

513. MUSHROOM, VIOLET. *Agaricus violaceus.*—This mushroom requires more broiling than all the rest; but when well done and seasoned, it is very good. It is found in dry woods, old pastures, &c. where it grows to a large size.

514. MUSHROOM, BROWN. *Agaricus cinnamomeus.*—The whole of this plant has a nice smell, and when stewed or broiled has a pleasant flavour. It is to be found as the one above, and is fit for use in October.

515. ORPINE. *Sedum telephium.*—The leaves are eaten in salads, and are considered equal to purslane.

516. OX-TONGUE, Common. *Picris Echioides.*—The leaves are said to be good boiled.

517. PEAS, Earth-Nut. *Orobus tuberosus.*—The roots of this, when boiled, are said to be nutritious. The Scotch Highlander chews the root as a substitute for tobacco.

518. PILEWORT. *Ranunculus Ficaria.*—The young leaves in spring are boiled by the common people in Sweden, and eaten as greens. The roots are sometimes washed bare by the rains, so that the tubercles appear above ground; and in this state have induced the ignorant in superstitious times to fancy that it has rained wheat, which these tubercles somewhat resemble.

519. SALOOP. *Orchis Morio.*—The powder of these roots is used for a beverage of that name. This is imported chiefly from Turkey. It grows in this country, although it is never noticed: the roots are smaller than those imported, but will answer the purpose equally well.

520. SALTWORT. *Salicornia europæa.*—This is gathered on the banks of the Thames and Medway, and brought to London, where it is sold as samphire. It makes a very good pickle, but by no means equal to the true kind.

521. SAMPHIRE. *Crithmum maritimum.*—This has long been in much esteem as a pickle: it grows on the high cliffs on the Kentish coast, where people make a trade of collecting it by being let down from the upper part in baskets. A profession of great danger.

522. SCURVY-GRASS. *Cochlearia officinalis.*—The leaves are hot and pungent, but are considered very good, and frequently eaten between bread and butter.

523. SAUCE ALONE. *Erysimum Alliaria.*—This is very good boiled with salt-meat in the spring, when other vegetables are scarce. It is valuable to the poor people; and is, in general, a common plant under hedges.

524. SEA BINDWEED. *Convolvulus Soldanella.*—This plant is to be found plentifully on our maritime coasts, where the inhabitants pluck the tender stalks, and pickle them. It is considered to have a cathartic quality.

525. SEA-PEAS. *Pisum maritimum.*—These peas have a bitterish disagreeable taste, and are therefore rejected when more pleasant food is to be got. In the year 1555 there was a great famine in England, when the seeds of this plant were used as food, and by which thousands of families were preserved.

526. SEA-WORMWOOD. *Artemisia maritima.*—Those who travel the country in searching after and gathering plants, if they chance to meet with sour or ill-tasted ale, may amend it by putting an infusion of sea-wormwood into it, whereby it will be more agreeable to the palate, and less hurtful to the stomach.—*Threlkeld. Syn. Pl. Hibern.*

This is an ingredient in the common purl, the usual morning beverage of our hardy labouring men in London.

527. SEA-ORACH, GRASS LEAVED. *Atriplex littoralis.*—This plant is eaten in the same manner as the *Chenopodium.*

528. SEA-BEET. *Beta maritima.*—This is a common plant on some of our sea-coasts. The leaves are very good boiled, as are also the roots.

529. SILVER-WEED. *Potentilla anserina.*—The roots of this plant taste like parsneps, and are frequently eaten in Scotland either roasted or boiled.

In the islands of Tiras and Col they are much esteemed, as answering in some measure the purposes of bread, they having been known to support the inhabitants for months together during a scarcity of other provisions. They put a yoke on their ploughs, and often tear up their pasture-grounds with a view to get the roots for their use; and as they abound most in barren and impoverished soils, and in seasons when other crops fail, they afford a most seasonable relief to the inhabitants in times of the greatest scarcity. A singular instance this of the bounty of Providence to these islands. — *Lightfoot's Fl. Scot.*

530. SOLOMON'S-SEAL. *Convallaria Polygonatum.*—The roots are made into bread, and the young shoots are eaten boiled.

531. SPATLING-POPPY. *Cucubalus Behen.* — Our kitchen-gardens scarcely afford a better-flavoured vegetable than the young tender shoots of this when boiled. They ought to be gathered when they are not above two inches long. If the plant was in cultivation, no doubt but what it would be improved, and would well reward the gardener's trouble: it sends forth a vast quantity of sprouts, which might

be nipped off when of a proper size; and there would be a succession of fresh ones for at least two months.

It being a perennial too, the roots might be transplanted into beds like those of asparagus.—*Bryant's Fl. Diæletica, p.* 64.

532. SPEEDWELL. *Veronica spicata.*—This is used by our common people as a substitute for tea, and is said to possess a somewhat astringent taste, like green tea.

533. SPOTTED HAWKWEED. *Hypochæris maculata.*—The leaves are eaten as salad, and are also boiled.

534. STINGING-NETTLE. *Urtica dioica.*—The young shoots in the spring are eaten boiled with fat meat, and are esteemed both wholesome and nutritive.

535. SHRUBBY STRAWBERRY. *Rubus arcticus.* — The fruit of this plant is very similar in appearance to a strawberry: its odour is of the most grateful kind; and its flavour has that delicate mixture of acid and sweet, which is not to be equalled by our best varieties of that fruit.

536. SWEET CICELY. *Scandix odorata.* — The leaves used to be employed in the kitchen as those of chervil. The green seeds ground small, and used with lettuce or other cold salads, give them an agreeable taste. It also grows in abundance in some parts of Italy, where it is considered as a very useful vegetable.

537. WATER-CRESS. *Sisymbrium Nasturtium.* — A well known herb in common use, but is not in cultivation, although it is one of our best salads.

538. WILLOW-HERB. *Epilobium angustifolium.* — The young shoots of these are eaten as asparagus.

SECTION XI.—*PLANTS USEFUL IN DYEING.*

THERE is no department of the œconomy of vegetables in which we are more at a loss than in the knowledge of their colouring principles; and as this subject presents to the student an opportunity of making

many interesting and useful experiments, I trust I shall stand excused, if I enter more fully into the nature of it than I have found it necessary to do in some of the former sections.

The following list of plants, which is given as containing colours of different kinds, are the same as have been so considered for many years past: for, latterly, little has been added to our stock of knowledge on this head. It may however be proper to observe, that a great number of vegetables still contain this principle in a superior degree, and only want the proper attention paid to the abstracting it.

Most of our dyeing drugs are from abroad; and even the culture of madder, which was once so much grown by our farmers, is now lost to us, to the great advantage of the Dutch, who supply our markets. But there is no reason why the agriculturist, or the artisan, should be so much beholden to a neighbouring nation, as to pay them enormous prices for articles which can be so readily raised at home; and, according to the general report of the consumers, managed in a way far superior to what it generally is when imported.

Let the botanical student therefore pay attention to this particular; for it is a wide field, in which great advantages may be reaped, either in this country or in any other part of the world where he may hereafter become an inhabitant.

The art of dyeing, generally considered, is kept so great a secret, that few persons have had the opportunity of making experiments. The extracting colours from their primitive basis is a chemical operation, and cannot be expected in this place; but as some persons may be inclined to ascertain these properties of vegetables, I shall go just so far into the subject as to give an idea of the modes generally used; and to state the principles on which the colouring property is fixed when applied to the purposes of dyeing cloth.

In the article Madder, page 32, I mentioned having made an extract similar to the Adrianople red. For which purpose, a sufficient quantity of the roots should be taken fresh out of the ground, washed clean from the dirt, bruised in a mortar, and then boiled in rain-water till the whole become tinged of a red colour, then put into a cloth and all the colouring matter pressed out. This should again be put into hot water in a clean glazed earthen-pan, to which should be added a small quantity of water in which alum had been dissolved, and the whole stirred up together; then immediately add a lump of soda or pot-ash,

stirring the whole up, when an effervescence will take place, the alum that had united with the juice of the madder will be found to become neutralized by the pot-ash, and the result will be a precipitate of the red fecula. This may be washed over in different waters, and either put by for use in a liquid state, or filtered and dried in powder or cakes. Most vegetable colours will not, however, admit of being extracted by water, and it is necessary to use an acid for that purpose: vinegar is the most common. But in making the extract from roots with acids, great care should be taken that they are sufficiently cleared from mould, sand, &c.; for, if the same should contain either iron, or any metallic substance, its union with the acid will cause a blackness, and of course spoil the tint. In a similar mode are all the different colouring principles extracted, either from leaves, flowers, fruits, or woods. The preparation of woad is a curious process on similar principles; which see in page 31.

Weld, or dyers weed, is generally used after it is dried. The whole plant is ground in a mill, and the extract made by boiling it. It is then managed with alum and acids agreeably to the foregoing rules, which are necessary for throwing out the colour.

Instructions how Substances may be tried, whether they are serviceable in Dyeing, from Hopson's Translation of Weigleb's Chemistry.

"In order to discover if any vegetable contains a colouring principle fit for dyeing, it should be bruised and boiled in water, and a bit of cotton, linen, or woollen stuff, which has previously been well cleaned, boiled in this decoction for a certain time, and rinsed out and dried. If the stuff becomes coloured, it is a sign that the colour may be easily extracted; but if little or no colour be perceived, we are not immediately to conclude that the body submitted to the trial has no colour at all, but must first try how it will turn out with the addition of saline substances. It ought, therefore, to be boiled with pot-ash, common salt, sal ammoniac, tartar, vinegar, alum, or vitriol, and then tried upon the stuff: if it then exhibit no colour, it may safely be pronounced to be unfit for dyeing with. But if it yields a dye or colour, the nature of this dye must then be more closely examined, which may be done in the following manner:—

Let a saturated decoction of the colouring substance be well clarified, distributed into different glass vessels, and its natural colour observed. Then to one portion of it let there be added a solution of common salt; to the second, some sal ammoniac; and to the third, alum; to the fourth, pot-ash; to the fifth, vitriolic or marine acid; and to the sixth, some green vitriol: and the mixtures be suffered to stand undisturbed for the space of twenty-four hours. Now in each of these mixtures the change of colour is to be observed, as likewise whether it yields a precipitate or not.

If the precipitate made by the pure acid dissolve in an alkaline lixivium entirely, and with a colour, they may be considered as resino-mucilaginous particles, in which the tingeing property of the body must be looked for, which, in its natural state, subsists in an alkalino-saponaceous compound. But if the precipitate be only partly dissolved in this manner, the dissolved part will then be of the nature of a resinous mucilage, which in the operation has left the more earthy parts behind. But if nothing be precipitated by the acids, and the colour of the decoction is rendered brighter, it is a mark of an acido-mucilaginous compound, which cannot be separated by acids. In this there are most commonly more earthy parts, which are soon made to appear by the addition of an alkali.

When, in the instances in which green vitriol has been added, a black precipitate is produced, it indicates an astringent earthy compound, in which there are few mucilaginous particles. The more the colour verges to black, the more of this acid and mucilaginous substance will be found in it.

The mixture of alum with a tingeing decoction shows by the coloured precipitate that ensues from it, on the one hand, the colour it yields, and on the other hand, by the precipitate dissolving either partly or entirely in a strong alkaline lixivium, whether or not some of the earth of alum has been precipitated together with the colouring particles. Such substances as these must not, in general, be boiled with alum, although this latter ingredient may be very properly used in the preparation of the stuff.

When a tingeing decoction is precipitated by an alkaline lixivium, and the precipitate is not redissolved by any acid, for the most part neither one nor the other of these saline substances ought to be used, but the neutral salts will be greatly preferable. In all these

observations that are made with respect to the precipitation effected by means of different saline substances, attention must be paid at the same time to the change of colour which ensues, in order to discover whether the colour brightens, darkens, or entirely changes.

When the colour of a decoction is darkened by the above-mentioned additions without becoming turbid, it shows that the colouring matter is more concentrated and inspissated. When the colour is brightened, a greater degree of solution and attenuation has taken place in the colouring matter in consequence of the addition. If the colour becomes clearer, and after a little time some of the tingeing substance is separated, it shows that part of the colour is developed, but that another part has been set loose from its combination by the saline substance.

But if the colouring matter is separated in great abundance by the saline addition, (the colour being brightened at the same time,) it may be considered as a sign that the colouring substance is entirely separated from the decoction, and that only an inconsiderable part, of a gummy nature, remains behind united with the additaments, which is in a very diluted state.—This is an effect of the solution of tin, as also sometimes of the pure acids.

If, indeed, a portion of the colouring substance be separated by a saline addition, but the rest of the colouring decoction becomes notwithstanding darker, it shows that the rest of the colouring particles have been more concentrated, and hence have acquired a greater power of tingeing. With regard to the proportion of the addition, the following circumstances may serve by way of guide:

When the colour of a decoction is darkened by the addition, without any precipitate being produced, no detriment can easily arise from using a redundancy of it, because the colour will not be further darkened by it. But if the colour be required to be brighter, the trial must first be made, which is the proportion by which the colour is darkened the most, and then less of it must be employed.

When the colour of a decoction is brightened by an addition without a precipitation ensuing, this addition can never be used in a larger quantity without hurting the colouring particles; because the colouring particles would be made too light, and almost entirely destroyed. —Such is the consequence of too large an addition of the solution of tin or of a pure acid.

When the addition produces a brighter colour, and part only of the colouring substance is separated without a further addition occasioning a fresh separation, somewhat more of it than what is wanted may be added to produce the requisite shading; because experience shows that, by this means, a greater quantity of tingeing particles is united with the woolly fibres of the cloth, and is capable of being, as it were, concentrated in them: for which purpose, however, these barks must be boiled down. This effect is chiefly observed with sal ammoniac and wine vinegar.

When by an addition which causes a separation of the colouring substance the colour becomes brighter in proportion the more there is used of it, it must be employed in a moderate quantity only; because otherwise, more and more of the colouring substance will be separated, and its tingeing power diminished. But when a colour is rendered dark at first by an addition, and afterwards, upon more of the same substance being added, becomes brighter, and this in proportion to the quantity that is added, it will be found that the darkening power has its determined limits; and that, for producing the requisite degree of darkness, neither too much nor too little must be taken.

To the before-mentioned principles also, the different proofs bear a reference, by which the fixity and durability of the colour with which a stuff has been dyed may be tried. Of these, some may be called natural, others artificial. The natural proof consists in exposing the dyed stuff to the air, sun, and rain. If the colour is not changed by this exposure in twelve or fourteen days, it may be considered as genuine; but if it is, the contrary is allowed. This proof, however, is not adapted to every colour: because some of them resist it, and yet will fade in consequence of the application of certain acids; others, on the contrary, that cannot resist the natural proof remain unchanged by the latter. Colours, therefore, may be arranged in three classes; and to each of these a particular kind of artificial proof allotted. The first class is tried with alum, the second with soap, and the third with tartar.

For the proof with alum: Half an ounce of this is dissolved in one pound of boiling water in an earthenware vessel; into this is put, for instance, a drachm of yarn or worsted, or a piece of cloth of about two fingers breadth; this is suffered to boil for the space of five mi-

nutes, and is then washed in clean water. In this manner are tried crimson, scarlet, flesh-colour, violet, ponceau, peach-blossom colour, different shades of blue, and other colours bordering upon these.

For the proof with soap: Two drachms of this substance are boiled in a pint of water, and the small piece of dyed stuff that is to be tried is put into it, and likewise suffered to boil for the space of five minutes. With this all sorts of yellow, green, madder-red, cinnamon, and similar colours, are tried.

In the same manner is made the proof with tartar; only this should be previously pounded very small, in order that it may be more easily dissolved. With this all colours bordering upon the fawn are tried.

From the above we discover that the art of applying and fixing colours in dyeing depends on the chemical affinity between the cloth and the dyeing principle: and accordingly as this is more or less strong, so is the facility with which the substance is coloured, and on this the deepness of the dye depends: for frequently one kind of cloth will be found to receive no colour at all, whilst another will receive from the same composition a deep tinge. Cotton, for instance, receives scarcely any tinge from the same bath that will dye woollen a deep scarlet. Wool is that which appears to have the strongest affinity to colouring matter; next to it is silk; then linen; and cotton the weakest, and is therefore the most difficult of all to dye perfectly. Thus, if a piece of linen cloth be dipped into a solution of madder, it will come out just tinged with the colour; but if a piece of the same be previously dipped into a solution of alum or copperas, and dried previously to being dipped in the madder, the alum will become so far impregnated with the colouring principle, that the cloth will receive a perfect dye, and be so fixed that it cannot be separated by any common means. Thus it will be observed, that the art of dyeing permanent colours depends on this intermediate principle, which is termed a mordant. These mordants are very numerous; and on a knowledge of them appears to rest the principal secret of dyeing. The following mode is, however, a very convenient one for making experiments on fixing the colouring principles of any vegetable extract: To have several pieces of cloth, woollen, cotton, silk, and linen, dipped in the different mordants, and by keeping a small vessel filled with the colouring solution on a fire in a state a little below boiling, by cutting small pieces of each, and immersing them in the colour, and examining and comparing with each

other. Experiments of this kind are well worth the attention of persons; for, when we refer to this department, we shall find very few plants which are either now, or ever have been, cultivated for this purpose, *although it is well known* that so many contain this principle. I have inserted the following, as being known to contain the different colours mentioned; but there are many other plants equally productive of this principle that remain quite unnoticed at present.

539. ACANTHUS *mollis*. BEAR'S-BREECH.—This gives a fine yellow, which was in use among the ancients.

540. ACTÆA *spicata*. BANEBERRY.—The juice of the berries affords a deep black, and is fixed with alum.

541. ANCHUSA *officinalis*. YELLOW ANCHUSA, or BLUE-FLOWERED BUGLOSS.—The juice of the corolla gives out to acids a beautiful green.

542. ANTHEMIS *tinctoria*.—The flowers afford a shining yellow.

543. ANTHYLLIS *vulneraria*. KIDNEY-VETCH.—The whole plant gives out a yellow, which is in use for colouring the garments of the country-people.—*Linn.*

544. ARBUTUS *Uva ursi*. BEARS'-BERRY.—The leaves boiled in an acid will dye a brown.

545. ASPERULA *tinctoria*. WOODROOF.—The roots give a red similar to madder.

546. ANEMONE *Pulsatilla*. PASQUE-FLOWER.—The corolla, a green tincture.

547. ARUNDO *Phragmites*. COMMON REED-GRASS.—The panicle, a green.

548. BERBERIS *vulgaris*. BARBERRIES.—The inner bark, a yellow.

549. BROMUS *secalinus*. BROME-GRASS.—The panicle, a green.

550. BIDENS *tripartita*. HEMP AGRIMONY..—The herb, a good yellow.

551. BETULA *alba*. BIRCH.—The leaves, a yellow.

552. BETULA *nana*. DWARF-BIRCH.—The leaves, a yellow.

553. BETULA *Alnus.* ALDER.—The bark affords a brown colour; which with the addition of copperas becomes a black.

554. CALENDULA *officinalis.* COMMON MARIGOLD.—The radius of the corolla, if bruised, affords a fine orange. The corolla dried and reduced to powder will also afford a yellow pigment.

555. CALTHA *palustris.* MARSH-MARIGOLD. — The juice of the corolla, with alum, gives a yellow.

556. CAMPANULA *rotundifolia.* ROUND-LEAVED BELL-FLOWER. — A blue pigment is made from the corolla; with the addition of alum it produces a green colour.

557. CARPINUS *Betulus.* HORNBEAM.—The bark, a yellow.

558. CHÆROPHYLLUM *sylvestre.* COW-PARSLEY. — The umbels produce a yellow colour, and the juice of the other parts of the plant a beautiful green.

559. CARTHAMUS *tinctorius.* SAFFLOWER.—The radius of the corolla, prepared with an acid, affords a fine rose-coloured tint.

560. CENTAUREA *Cyanus.* BLUE-BOTTLE.—The juice of the corolla gives out a fine blue colour.

561. COMARUM *palustre.* MARSH-CINQUEFOIL. — The dried root forms a red pigment. It is also used to dye woollens of a red colour.

562. CUSCUTA *europæa.* DODDER.—The herb gives out a lightish red.

563. CRATÆGUS *Oxycantha.* HAWTHORN.—The bark of this plant, with copperas, is used by the Highlanders to dye black.

564. DATISCA *cannabina.* BASTARD-HEMP.—This produces a yellow; but it is not easily fixed, therefore it presently fades to a light tinge.

565. DELPHINIUM *Consolida.* BRANCHING LARKSPUR.—The petals bruised yield a fine blue pigment, and with alum make a permanent blue ink.

566. FRAXINUS *excelsior.* MANNA.—The bark immersed in water gives a blue colour.

567. GALIUM *boreale.* CROSS-LEAVED BEDSTRAW.—The roots yield a beautiful red, if treated as madder.

568. GALIUM *verum*. YELLOW BEDSTRAW. — The flowers treated with alum produce a fine yellow on woollen. The roots, a good red.

569. GENISTA *tinctoria*.—The flowers are in use among the country-people for dyeing cloth yellow.

570. GERANIUM *sylvaticum*. MOUNTAIN CRANESBILL. — The Icelanders use the flowers of this plant to dye a violet colour.

571. HIERACIUM *umbellatum*. HAWKWEED. — The whole herb bruised and boiled in water gives out a yellow dye.

572. HUMULUS *Lupulus*. HOP.—The strobiles are used for dyeing; but although they yield a yellow colour, the principal use is as a mordant.

573. HYPERICUM *perforatum*. PERFORATED ST. JOHN'S WORT.—The flowers dye a fine yellow.

574. IRIS *germanica*. GERMAN IRIS. — The juice of the corolla treated with alum makes a good permanent green ink.

575. ISATIS *tinctoria*. WOAD. — The leaves steeped in water till the parts are decomposed, produce a fine blue fecula, which is made into cakes, and sold to the woollen-dyers. For its culture, see p. 32.

576. LICHEN *Roccella*. ORCHIL.—The fine purple called orchil is extracted from this moss.

577. LITHOSPERMUM *officinale*. GROMWELL.—The roots afford a fine red, which is used by the young girls in Sweden to colour their faces.

578. LYCOPODIUM *complanatum*. CLUB-MOSS. — The juice of this plant extracted by an acid forms a most beautiful yellow.

579. LYCOPUS *europæus*. WATER-HOREHOUND.—The juice of this gives out a black colour, and is sometimes used by the common people for dyeing woollen cloth. The gypsies are said to use the juice of this plant to colour their faces with.

580. LYSIMACHIA *vulgaris*. LOOSESTRIFE.—The juice of the whole herb is used to dye woollen yellow.

581. MYRICA *Gale*. SWEET GALE.—The whole shrub tinges woollen of a yellow colour.

582. NYMPHÆA *alba*. White Water-Lily. — The Highlanders make a dye with it of a dark chesnut colour.—*Light. Fl. Sc.*

583. ORIGANUM *vulgare*. Wild Marjoram.—The tops and flowers contain a purple colour, but it is not to be fixed.

584. PHYTOLACCA *decandra*. Virginian Pokeweed.—The leaves and berries produce a beautiful rose-colour, but it is very fugacious.

585. PRUNUS *domestica*. Plum. — The bark is used by the country people to dye cloth yellow.

586. PYRUS *Malus*. Apple,—The bark of this plant, also, produces a yellow colour.

587. QUERCUS *Robur*. Oak.—The juice of the oak mixed with vitriol forms a black ink; the galls are employed for the same purpose.

588. RESEDA *Luteola*. Dyers' Weed, or Weld.—The most usual plant from which the yellow dye is extracted. For its culture, see p. 32.

589. RHAMNUS *Frangula*. Buckthorn.—The bark produces a slight yellow, and the unripe berries impart to wool a green colour.

590. RHAMNUS *catharticus*. Purging Buckthorn. — The bark yields a most beautiful yellow colour; and the ripe berries in the autumn produce a brilliant scarlet.

591. RHUS *Cotinus*. Venus's Sumach.—The bark of the stalks produces a yellow colour; the bark of the roots produces a red.

592. RHUS *coriaria*. Elm-leaved Sumach.—This plant is possessed of the same qualities as the one above.

593. RUBIA *tinctorum*.—The root produces a red colour. For its culture, see p. 32.

594. RUMEX *maritima*. Dock.—The whole herb gives out a yellow colour.

595. SALIX *pentandra*. Willow.—The leaves produce a yellow colour.

596. SCABIOSA *succisa*. Devil's Bit Scabious.—The dried leaves produce a yellow colour.

597. SERRATULA *tinctoria*. Saw-Wort. — The whole herb produces a yellow tincture.

598. SENECIO *Jacobæa*. Ragwort.—The roots, stalks, and leaves, before the flowering season, give out a green colour which can be fixed on wool.

599. STACHYS *sylvatica*. Hedge-Horehound.—The whole herb is said to dye a yellow colour.

600. THALICTRUM *flavum*. Yellow Meadow-Rue.—The roots and leaves both give out a fine yellow colour.

601. THAPSIA *villosa*. Deadly Carrot. — The umbels are employed by the Spanish peasants to dye yellow.

602. TORMENTILLA *erecta*. Erect Tormentil.—This root is red, and might probably be usefully employed.

603. TRIFOLIUM *pratense*. Meadow-Clover. — The inhabitants of Scania employ the heads to dye their woollen cloth green.

604. URTICA *dioica*. Nettle.—The roots of nettles are used to dye eggs of a yellow colour against the feast of Easter by the religious of the Greek church, as are also madder and logwood for the same purpose.

605. XANTHIUM *strumarium*. Lesser Burdock.—The whole herb with the fruit dyes a most beautiful yellow.

Section XII. — *PLANTS USED IN RURAL ŒCONOMY.*

The following few plants are such as are used for domestic purposes which do not fall under any of the foregoing heads, and I therefore have placed them together here.

606. CONFERVA.—This green thready substance has the power of rendering fœtid water sweet; for which purpose, when water is scarce, it is usually put into water-tubs and reservoirs.

607. CORYLUS *Avellana*. Hazel Nut.—The young shoots of hazel

put into casks with scalding water, render them sweet if they are musty, or contain any bad flavour.

608. CROCUS *vernus*. Spring Crocus.—Is well known as a spring flower, producing one of the most cheerful ornaments to the flower-garden early in the spring. It affords a great variety in point of beauty and colour, and is an article of considerable trade among the Dutch gardeners, who cultivate a great number of varieties, which every year are imported into this and other countries.

609. EQUISETUM *hyemale*. Dutch Rush. — Of this article great quantities are brought from Holland for the purpose of polishing mahogany. The rough parts of the plant are discovered to be particles of flint.

610. ERIOPHORUM *polystachion*. Cotton Grass.—The down of the seeds has been used, instead of feathers, for beds and cushions; and the foliage in the north of Scotland is considered useful as fodder.

611. GALIUM *verum*. Yellow Ladies' Bedstraw. — The foliage affords the dairy-maid a fine rennet for making cheese.

612. JUNCUS *glaucus*. } These are collected by persons to
———— *conglomeratus*. } make mats with, and by which many of the travelling people in the country earn a livelihood.

613. JUNCUS *effusus*. Blueish Rush.—This is collected in Holland, and brought to this country for candle wicks. The poor people in Hampshire collect these and peel them, and after dipping them in any kind of greese or fat use them for lights instead of candles.

614. PHILADELPHUS *coronarius*. Syringa. — The good housewives in Wales rub the floors of their best rooms and the furniture with the leaves of this plant, which gives them a beautiful polish and colour.

615. PLANTAGO *major*. Great Plantain. — The seeds of this plant are gathered for food for Canary birds, and are much in request by the breeders of this species of feathered choristers. It is considered a good alterative, and necessary to the health of these and other birds that are kept in cages.

616. RUSCUS *aculeatus*. Butcher's Broom.—This is in considerable request for making brooms for butchers, who clean their stalls down with them.

617. SCIRPUS *lacustris*. Bull-Rush —This grows principally in the shallow muddy parts of rivers and ponds; is in great demand for making mats, bottoms of chairs, and other domestic purposes.

618. SONCHUS *arvensis*. Field Sow-Thistle.—This is a very excellent food for hogs and tame rabbits.

619. TAMUS *communis*. Black Bryony. — The yonng shoots of this plant are collected by the cottagers as food for hogs, and are said to make them fat.

620. THUJA *occidentalis*. Arbor-Vitæ.—The leaves of this tree bruised and applied to the soles of the feet are said to cure the tertian ague. The usual mode is, to put it close to the soles in a bag, and renew it every other morning.

621. ULMUS *campestris*. Common Elm. — The leaves of this tree are stripped off in Worcestershire and boiled as food for hogs, and are found to be very nutritive to that animal.

622. ULMUS *montana*.—Witch Elm.—The wood of his will strip into thongs, which are used to tie different articles, similar to bass-matting.

Section XIII. — *POISONOUS PLANTS GROWING IN GREAT BRITAIN.*

"*On the day that thou eatest thereof thou shalt surely die.*"

I have found it necessary to be particular in my description of the articles in this section, as I find that, although the knowledge of Botany has in some measure increased, yet, in general, we are not better acquainted with the Poisonous Vegetables than we were thirty years ago. Many and frequent are the accidents which occur in consequence of mistakes being made with those plants; but it in general happens that, from feelings easily appreciated, persons do not like to detail such misfortunes; which not only hides the mischief, but prevents, in a great measure, the antidotes becoming so well known as for the good of society we could wish they were. This I experienced in my researches after several facts which I wished to ascertain regarding this subject. However, whilst we have in common use such plants as Foxglove, Hemlock, and Henbane, and which are now so generally sold in our herb-shops, people who sell them ought to be particularly careful not to let such fall into the hands of ignorant persons, and thereby be administered either in mistake or in improper quantities. Our drug-