

Pharmacopœial Vegetable Drugs.

ACACIA

Acacia has been an article of commerce since the most remote records of historical antiquity. Representations of the Acacia tree, together with heaps of gum, were pictured in the reign of Ramses III of Egypt. Acacia was exported from the Gulf of Aden, seventeen hundred years before Christ. Mention of the gum is of frequent occurrence in Egyptian inscriptions, where it is referred to as the Gum of Canaan. Theophrastus (633), in the third and fourth centuries before Christ, described it, as also did Dioscorides (194) and Pliny (514), under the name "Egyptian Gum." It has been employed in the arts from all time and in domestic medicine and commerce, as well as by the Arabian physicians and those of the renowned school of Salerno. During the Middle Ages it was obtained from Egypt and Turkey, being an article of commerce in the bazaars of Constantinople, A. D. 1340. The drug was distributed through Europe from Venice, as early as A. D. 1521. Among the most interesting and instructive recent contributions to the subject are the reports of the Wellcome Research Laboratory, Kartoum (678), 1904.

ACONITUM

Aconite, *Aconitum napellus*, was familiar to the ancients as a poisonous plant, and was used by the ancient Chinese as well as by the hill tribes of India. In a work published for the Welsh MSS. Society, 1861, entitled "The Physicians of Myddvai," (507), aconite was designated as a plant that every physician should grow.* In 1763, Störk (617), of Vienna, introduced the drug to medical practice, from which date it crept into the practice of the dominant school. Aconite has ever been a Homeopathic favorite.

ALOE

(ALOE SUCCOTRINA.)

The genus aloe comprises a large family of succulent-leaved plants native to tropical countries. Most of the species have showy

* Physicians of Myddvai. The domestic physician of Rhys Gryg, prince of South Wales, who died 1233, made a collection of recipes used in medicine at that date in his country. He was assisted by his three sons, the collection being a valuable historical record concerning remedial agents and methods of that date. Of these, two compilations have been issued, the two appearing together, 1861, with a translation by John Pugh (470 pp). The original manuscript is in the British Museum. [See page 761 Pharmacographia.]

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flowers and many are cultivated in hot-houses. *Aloe succotrina* "grows in the Indies, and especially in the Island of Soccotera" (Lam.), but has long been cultivated in England. It is a shrub five or six feet high, with a stem marked with the scars of the fallen leaves. The stem is at first simple, but when the plant is old the stem is usually divided. At the top of each branch is borne a large cluster of thick, crowded, fleshy leaves. Each leaf is one and one-half to two feet long, rounded beneath, flattened on the upper side, the margins being each a row of white spines. The flowers are in a large terminal spike-like raceme, proceeding from the center of the leaf cluster. The flowers are orange-red, nodding, cylindrical, each borne on a short peduncle, slightly exserted. The pistil has a three-celled, many seeded ovary and a long simple style.

The earliest history of the aloe plant is somewhat obscured by the fact that the name aloe, for example as it occurs in the Bible, relates to a substance entirely different from the inspissated juice of the various species of the modern aloe plant. The aloe of the Bible is the wood of *aquilaria agallocha* (Roxburgh) or *lignaloës*, which was used among the ancient nations as an incense, and was held in high esteem on account of its scarcity. With modern cathartic aloes it has nothing in common except the bitterness.

The aloe plant is considered by modern writers to have grown wild in India from a very remote period. It was most likely introduced into that country by the Arabs, who probably were the distributors of knowledge concerning the medicinal virtues of aloes. This drug was employed by Galen (254a), and later described by the Greek and Roman writers of the first century, chief among whom are Dioscorides (194) and Pliny (514), whose descriptions of aloes and its uses, however, bear much resemblance to each other.

Socotrine aloes appears to have acquired its reputation at an early date. Clusius (153) in 1593 reports that Mesue, the Arabian pharmaceutical writer, "the father of pharmacopeias," (who died about A. D. 1028), knew of the Socotrine origin of aloes, mentioning Persia, Armenia, and Arabia likewise as sources of aloes of commerce. Ibn Baitar (1197-1248) (214) speaks of aloes from the island of Socotra as being superior to that of the Arabian district of Yemen.

The name aloe socotrina was undoubtedly derived from the island of Socotra off the entrance to the Red Sea. Yet, some authors maintain that this appellation was by some given to the inspissated juice of aloe (*succus citrinus*) on account of the lemon-yellow color of its powder.* Not all of the earlier medico-pharmaceutical writers who afterwards considered the drug refer to Socotrine or any other special kind of aloes. Hieronymus Bock (1556) (82) merely alludes to the drug being brought from India and Arabia, a statement already found in Dioscorides. He relates an instance where the aloe plant is cultivated in Germany under the name *sempervivum* as an indoor ornamental plant.

*Usage accepts that *Aloe Succotrina* is the plant described by Lamarck, and that *Aloe Socotrina* is the commercial extract derived from certain species of aloes. Exceptions in the spelling of the latter word have occurred in older pharmacopeias.

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Samuel Purchas (1625) (527), however, in his important collection of travels, gives prominence to Socotrine aloes, and places on record the commercial transactions of British merchants with the king of Socotra. One of his contributors (William Finch, merchant) gives the following interesting information which he gathered about A. D. 1607, concerning the occurrence and preparation of aloes in the island of Socotra:

"I could learne of no merchandise the iland yeeldeth, but Aloes, Sanguis Draconis, and Dates and, as they say on the shore of Aba del Curia, Blacke Ambergreese. Of Aloes I suppose they could make yearly more then Christendome can spend, the herbe growing in great abundance, being no other than *Semper vivum*, in all things agreeing to that description of Dioscorides in seed, stalke, etc. It is yet all of a red pricklie sort, and much chamfered* in the leaves, so full of a rosin-uyce that it is ready to breake with it. The chiefe time to make it, is when the winds blowe northerly, that is, about September, and that after the fall of some raine, which being then gathered, they cut in small pieces, and cast into a pit made in the ground, well cleansed from filth and paved; there it lieth to ferment in the heat of the sunne, whereby it floweth forth. Thence they take and put it in skinnes, which they hang up in the wind to dry, where it becommeth hard. They sold us for 20 Rials a Quintall which is 103 pounds English, but we were after told that they sold to others for 12, which considering the abundance and easie making, may be credible." Elsewhere the statement is made that "the Aloe of Socotra exceedeth in goodnesse that which is gathered in Hadhramut of the land of Jaman, Arabia, or anywhere else." 1800 lbs. of Socotrine aloes were bought at one time and 2,722 lbs. at another.

The ancient trade of the island has never increased, and in 1833, we are informed, only two tons were exported, while at present the manufacture and export seem to have ceased altogether. No doubt this results from unfavorable local conditions as well as the intrusive competition of other countries. In the sixteenth century or perhaps before, the aloe plant was introduced into the West Indies and was especially dwelt on by Ligon (1763) (383) as having occurred in Barbadoes as early as 1647-1650, which is only about twenty years after the English came into possession of this island (365). It soon became an article of export, appearing in the London market in 1693 (239). In this connection, however, it is strange that J. B. Labat, a French monk and careful student of nature, having visited the island of Barbadoes in 1700, fails to mention Barbadoes aloes among the staples (365). He says on this point: "Formerly much tobacco was planted, and subsequently ginger and indigo; cotton is now grown up in some parts of the island, but sugar is at present the only article to which attention is devoted." That his omission could not be from ignorance is shown by his careful reference to aloes when twenty-eight years afterwards (1728) he refreshingly describes the resources and the people of Senegambia on the west coast of Africa (365), and strongly advocates the use of aloes that may be made from aloe plants grown in

*Grooved.

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abundance in that district, in the place of aloes from the island of Socotra which, in his opinion, possessed an imaginary superiority only "because it comes from afar and costs much." The three commercial forms of the drug then known, Socotrine, hepatic, and caballine aloes, Labat ascribes to one and the same origin, the differences resulting only from the mode of preparation, caballine "or horse aloes, the lowest grade, being made from refuse material."

Yet, Barbadoes aloes is not herein referred to. Whether this neglect is due to interruption of cultivation or to some other cause difficult to determine may never be settled. It is established, however, that Barbadoes aloes was exported from the island both before and soon after these reports. Samuel Dale, in 1751, expressly states (179) that aloes is brought to England from the island of Barbadoes in large gourds and that the inspissated juice has the properties of aloe succotrina.

From Cape Colony, Africa, where it was made at that date by Peter Van Wett (239), aloes has been an article of export since 1773.

Curacao aloes was known in the Dutch market in 1847, and appeared in the English market for the first time as late as about 1876.

ALTHAEA

This drug (*Althæa officinalis*), known as Marshmallow, was described by Dioscorides (194) under the Greek name signifying *to heal*. It has been used in domestic medicine from the earliest periods. Charlemagne (A. D. 724-814), over a thousand years ago, demanded that it be cultivated in his domain. It grows throughout Europe, Asia Minor, western and northern Asia and adjacent districts, being employed more or less in domestic medication in all localities. Its domestic use introduced this demulcent drug to early "professional" medication.

AMYGDALA AMARA

The seeds of Bitter Almonds (*Prunus amygdalus*, var. *amara*), known to be poisonous in the days of antiquity, were yet used medicinally throughout the Middle Ages. Valerius Cordus (169) employed them as an ingredient of trochisci. They are referred to by Scribonius Largus (589) in the century preceding Christ. Their poisonous qualities were shown to depend on hydrocyanic acid by Bohm of Berlin at the beginning of the last century. Bitter almonds have never been a favorite in domestic medicine, although as stated, used in that direction. They have been scarcely more a favorite in licensed medication.

AMYGDALA DULCIS

The Almond, *Prunus amygdalus*, var. *dulcis*, is one of the trees mentioned in the Old Testament. In the Book of Genesis the patriarch Israel commands his sons to carry the fruit, as a production of Palestine, as a present to Egypt. Theophrastus (633) makes copious ref-

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erences to the Almond, and its name threads the stories of the Arabian Nights (25 and 88). It was mentioned with groceries and spices a thousand years ago, in a charter granted the monastery of Corbie, in Normandy, by Chilperic II, king of France (A. D. 539-584). Charlemagne, A. D. 812, wisely ordered the Almond tree introduced on the imperial farms. Almonds became an important item of Venetian trade in the fourteenth century. In 1411, the Knight Templars of Cyprus (Flückiger) taxed almonds, honey, and sesame seed. Mediæval cookery consumed almonds in enormous quantities, and as a nourishing food in the form of an emulsion the fruit crept into domestic medicine, and thence into professional use.

ANISUM

This drug, *Pimpinella anisum*, is among the oldest known medicines and spices. Theophrastus (633) and later writers, such as Dioscorides (194), Pliny (514), and Edrisi (221), mention it. Charlemagne commanded that it be cultivated on the imperial farms in Germany. Its ancient source was the island of Crete, and Egypt. It was one of the drugs enumerated by Edward I (1305), to be taxed when carried across the Bridge of London. Anise is mentioned in the expenses of King John of France (A. D. 1319-1364) during his abode in England. The Grocers' Company of London had its oversight (1453). The Royal Wardrobe of Edward IV (A. D. 1480) was perfumed thereby. It was used in England as a pot herb prior to 1542, and during the reign of Charlemagne it was enormously taxed. Throughout all this period anise was employed both as a spice and as a domestic medicine.

ANTHEMIS

Anthemis nobilis has been cultivated for centuries in English gardens and used in domestic medicine from the beginning of the records. It was introduced into Germany from Spain about the close of the Middle Ages. It now is grown in favorable localities throughout every section of Europe and especially in Saxony as well as Belgium and France. The name Roman Chamomile was given the drug growing near Rome, by Joachim Camerarius (120) 1598.

APOCYNUM

American "Indian Hemp," *Apocynum cannabinum*, is the name given to various species and varieties of this plant, in contradistinction to the true Indian hemp of India, *Cannabis indica*. The root of apocynum has been used in decoction as an active hydragogue cathartic, and also as a diuretic, in domestic medicine, since the days of the earliest settlers, who learned of its qualities from the Indians. Thus introduced into medication, it came to the attention of the profession. As a remedy in "dropsy" apocynum has been extensively used in home medication, and thus became known to physicians of American education. Finally it was introduced to the pages of the Pharmacopœia.

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The Eclectic literature of America for nearly a hundred years has been prolific in the praises of this remedy. (Drug Treatise by Lloyd Brothers, now in process.)

ARNICA

All parts of this plant, (*Arnica montana*.) were popular remedies in Germany at a very early period. The early botanists, such as Matthioli (414), Gesner (264), and Clusius (153) had a knowledge of its medicinal qualities, as used by the common people. Franz Joël (341), of Greifswald, Germany, expressly recommended it in the sixteenth century. During 1678-'79 arnica experienced an enthusiastic crusade as a "new remedy" in the cure of fevers, the hope being to supplant Peruvian bark by this domestic drug. Collin (162), of Vienna, reported a thousand patients in the Pazman Hospital cured of intermittents by the flowers, whilst other physicians were scarcely less enthusiastic. The herb was thus recognized in the London Pharmacopœia (1788) but fell into disuse, regaining in later years a position as an application in the form of a tincture for bruises, sprains, etc., in this direction being now commended in modern medical and domestic literature.

ASAFŒTIDA

Under the name "*Laser*," a substance supposed to have been asafœtida, (*Ferula foetida*), has from all time been used in India and Persia, and thence long exported, a duty being levied thereon at the Roman Custom House of Alexandria. Under the name *Hingu* it is mentioned in Sanscrit works, as well as in Susruta (622). Arabian and Persian travelers of the Middle Ages knew it. Ali Istakhri (337), of ancient Persepolis, in the tenth century, states that it was abundantly produced between Sistan and Makran of Beluchistan, and was used by the people as a condiment. It has ever been employed in Arabic therapy. Matthæus Platearius (513), nearly a thousand years ago, mentioned it in his work on simple medicines, "*Circa instans*." Otho of Cremona, near that period, states that the more fetid the drug, the better its qualities. The "Physicians of Myddvai" (507)* valued it highly. Briefly, this drug drifted into European conspicuity from the Orient, where it had been empirically used from the remotest antiquity.

ASPIDIUM

The root of *Aspidium*, *Dryopteris filix-mas*, was used by the ancients as a vermifuge. Theophrastus (633), Dioscorides (194), and Pliny (514) all describe it. It passed as a domestic remedy through the Middle Ages, was noticed, 1790, by Valerius Cordus (169), and had a place as a drug to be taxed in Germany, in the sixteenth century. Neglected then, it was subsequently revived as a chief constituent, combined with purgatives, in a secret remedy for tape-worm, one of the promoters being Daniel Mathieu, an apothecary of Berlin. His treat-

* (See Footnote to *Aconitum*.)

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ment was so successful that Frederick the Great purchased the formula for an annuity of thirty pounds, conferring on its originator the dignity of "Aulic Councillor." Madame Nuffler, the widow of a surgeon at Murten, Switzerland, was paid 18,000 livres by Louis XIV for a tape-worm cure consisting chiefly of powdered fern root. J. Peschier 1825, a pharmacist of Geneva, introduced the ethereal extract, which was not, however, employed in England to any extent until the middle of the last century. Its empirical record introduced male fern to the orthodox medical profession.

AURANTII DULCIS ET AMARI CORTEX

Sweet and Bitter Orange. The orange, (*Citrus*), was unknown to the ancient Greeks and Romans. The Arabs, (Galesio, 255), are accepted as having introduced it into Europe, first through Africa, Arabia, and Syria, from its original home in Northern India. In that country a wild orange still grows, supposedly the parent of the cultivated fruit, be it sweet or bitter. The first specimen to find its way into Europe was the bitter orange, cultivated in Rome in A. D. 1200, the sweet orange not being introduced until the fifteenth century, when it was imported by the Portuguese. The first oranges brought into England, seven in number, were imported by a Spanish ship in 1290. An Arabian physician of the twelfth century, Avicenna (30), employed the juice of the bitter orange in medicine.

BALSAMUM PERUVIANUM

This drug, obtained from the *Toluifera pereiræ*, came to the attention of the earlier Spanish explorers in South America as a substance commonly employed by the natives as a remedy for wounds. It constituted a part of the tribute paid by the natives to the Indian chiefs of Cuscatlan, to whom it was presented in curiously ornamented earthen jars.* On its first importation into Europe it brought enormous prices, as much as \$45 an ounce, and in Rome 100 ducats, or over \$200 an ounce. Pope Pius V permitted the Bishop of the Indies to substitute this Balsam of Guatemala for that of Egypt in the preparation of the chrism used in the Catholic churches. Various early descriptions of travelers refer to it more or less enthusiastically, between the conquest of Guatemala (A. D. 1524), and 1628, at which date Hernandez (314) described the tree. From the domestic use of the drug it crept into German pharmacy in the beginning of the seventeenth century. In consequence of the fact that the exports of Guatemala came through the port of Lima, Peru, the misleading name of "Peruvian Balsam" was in the early days affixed to it, paralleling somewhat the record of Mocha coffee, which is not grown in Mocha or even thereabout, but was exported therefrom in the early days of Arabian coffee.

* This reminds us of the curious jars in which we observed Mastich sold on the island of Scio by the collectors. These jars, holding a few ounces of the purest and clearest tears, have been thus an article of local commerce since before the Moslem rule.