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Botanical Medicine Monographs and Sundry

**ASCLEPIAS CORNUTI, DECAISNE.<sup>1</sup>**

**BY WALTER LIPPINCOTT HINCHMAN, PH. G.**

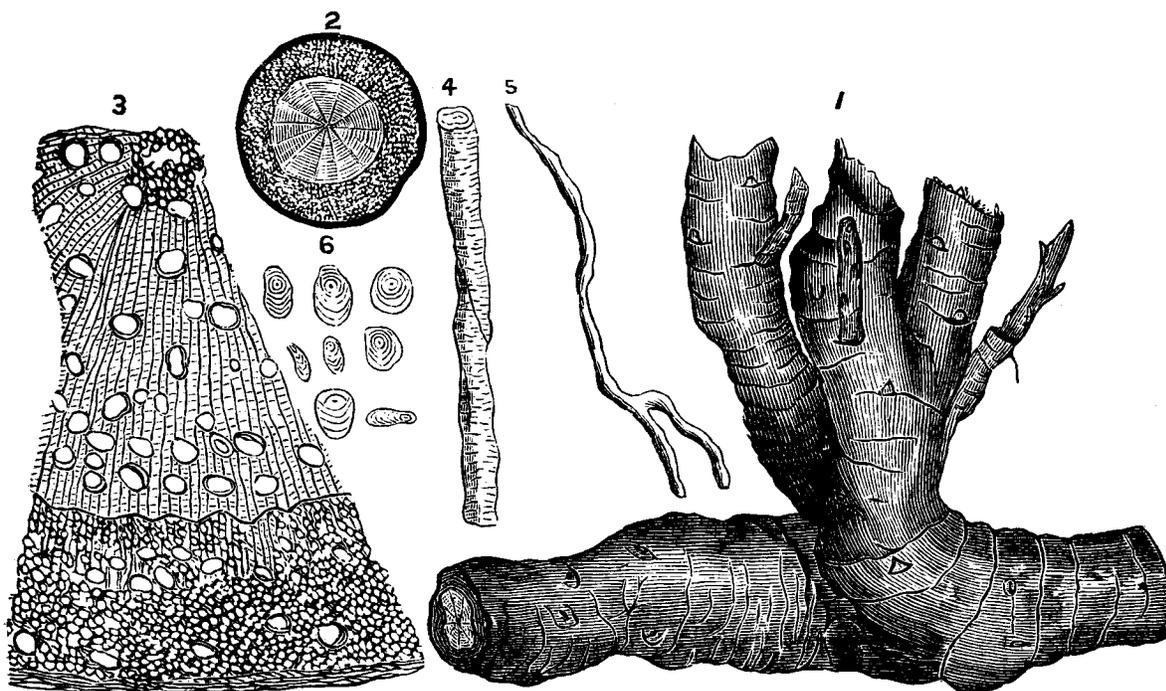
*From an Inaugural Essay.*

The rhizome of this plant is long and comparatively slender, reaching from one to six feet in length, from one-half to one inch in diameter, and runs horizontally about six inches below the surface of the ground. It is thickened at intervals of ten or twelve inches, where the overground stems shoot out, otherwise it is uniform in size and at the end has generally three rootlets. It has a thick bark, externally brown, the interior white, and contains a number of laticiferous ducts, somewhat scattered, but principally placed in two irregular lines. In drying the bark shrinks very much and is finely wrinkled longitudinally, and somewhat fissured at intervals, leaving the wood exposed. The wood, of a yellow color, is hard and brittle, breaking with a resinous fracture; it contains a large number of medullary rays and also ducts, which are visible to the naked eye. The annexed drawing has been made by Mr. F. L. Slocum. The rhizome has a disagreeable, nauseous taste and a slight odor. The fresh rhizome in air drying loses 70 per cent., the air dry in complete drying 10 per cent., and when completely dried yields 6 per cent. of ash.

A portion of the powdered drug was thoroughly exhausted with petroleum benzin. The benzin was partially distilled off and the remainder allowed to evaporate spontaneously. This left a sticky, yellow extractive, overlaying a fixed oil; these were separated. The oil has a fine yellow color, a bland taste and the odor of the drug. The sticky extract was washed with water and then exhausted with warm 95 per cent. alcohol. This alcoholic solution was concentrated with a low heat and set aside. Upon cooling, yellow, wart-like crystals formed. By numerous solutions and recrystallizations in alcohol these were obtained white. They are wart-like, odorless and tasteless, iridescent in the sunlight, volatilized at a low heat, leaving no residue, have no reaction

<sup>1</sup> Now *Asclepias syriaca*

on litmus paper, are very soluble, in chloroform, soluble in benzin, ether and alcohol, insoluble in water. In contact with strong sulphuric acid and bichromate of potassium they give a green color. With strong sulphuric acid and chlorinated lime they give at first a brown color, but on standing a short time this turns to a purple.



ASCLEPIAS CORNUTI.—1, Portion of rhizome. 2, Transverse section, natural size. 3, Transverse section, magnified. 4, Bast fibre. 5, Lacticiferous vessel, 6, Starch granules.

These crystals may also be obtained by exhausting the sticky benzin extract with ether, but on account of the fatty matter which ether takes up it is difficult to obtain them pure. Another, and probably the best method, is to percolate the drug directly with alcohol, concentrating the tincture and setting aside that crystals may form. The yellow crystals thus obtained are best purified by dissolving in a mixture of chloroform and alcohol, shaking with animal charcoal, filtering and setting aside for spontaneous evaporation, washing with diluted alcohol and drying in a cool place. In all three of the above methods it is important that the least possible amount of heat should be used.

The benzin extract, after having been exhausted with alcohol,- ether, water and dilute hydrochloric acid, consists of a yellow, sticky tenacious

substance, readily soluble in carbon bisulphide, chloroform and benzin. When heated it gives off the disagreeable odor of burning caoutchouc., When mixed with a small proportion of sulphur and heated the yellow color changes to a dark brown, and it then has the elasticity of ordinary India rubber.

The drug, after exhaustion with benzin, was next treated with 95 per cent. alcohol. From the resulting tincture the alcohol was distilled off, leaving a ruby-red liquid of a syrupy consistence, having with litmus an acid reaction. It has an intensely bitter taste, reminding one of gentian. The liquid, on being slowly mixed with a large bulk of water, yields a precipitate which, after separation and washing, is odorless and tasteless and has the characteristics of a resin. The watery solution left after precipitation of the resin was filtered and boiled to expel the alcohol; tested with solution of gelatin a flocculent precipitate was thrown down, proving the presence of tannin, and after filtering Trommer's test liquid was reduced, showing the presence of glucose. The remainder of the watery solution was evaporated and left a very bitter extractive having an acid reaction. The bitter principle was not isolated.

The drug, after exhaustion with benzin and alcohol, was next treated with hot water; alcohol precipitated gummy matter from the decoction, and compound tincture of iodine gave a deep blue color, indicating starch. The ash, on examination, showed the usual constituents. On distillation of the drug a volatile oil was obtained, but in such a small quantity that it could not be examined. It is probable that the fresh rhizome contains a volatile acrid principle which is poisonous to the skin. In collecting and slicing it the hands are often severely poisoned, small blisters forming, which cause an intense itching.

In conclusion, we find the rhizome to contain the following: Asclepion, caoutchouc, fixed oil, tannin, glucose, a bitter principle, gum, starch, volatile oil and the usual ash constituents.

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**Thapsia garganica**, Lin., nat. ord. Umbelliferæ, grows in Algeria and its root is largely employed as an excellent revulsive. Renard and Lacour-Eymard state that the active principle is contained mainly in the bark of the root. They consider the tincture as preferable to the plaster and ointment.—*Rep. de Phar.*, May, pp. 216-219.

## GLEANINGS IN MATERIA MEDICA.

BY THE EDITOR.

**Japanese and Chinese Aconite Tubers.**—Dr. A. Langgaard describes seven kinds of aconite tubers which are met with in the Japanese drug stores and which are mostly used externally, rarely internally, and are perhaps also used in the preparation of the sesso arrow poison.. The origin of these tubers has not been ascertained yet. *Aconitum lycoctonum*, Lin.y var. flor. *ochroleucis*, Savatier, is regarded by botanists as identical with *Ac. japonicum*, Thunberg, and *Ac. Fischeri*, Retch., with *Ac. chinense*, Sieb.; these plants are known in Japan as *reisin-so* and *tori kabuto*, the latter name meaning “bird’s helmet,” in allusion to the shape of the flower. A third species, *Ac. uncinatum*,. Lin., is known as *hana-dzuron*. The tubers are not derived from many different species, but are assorted according to size and prepared in various ways, by maceration in vinegar or children's urine, by pickling, drying and interring, their appearance and properties must be considerably modified. With the exception of *kusa-usu*, they are derived from carefully cultivated plants.

1. *Dai-bushi* is imported from China, where it is known as *Fu-tsze*. in a pickled condition. The tubers are large, heavy, napiform, of a dingy gray or gray-brown color, deeply wrinkled, mostly with the shriveled bud present, with small warty protuberances and with scars of the detached rootlets; 35 to 55 millimeters long; the largest diameter up to 30 mm. thick; weight 6.7 to 16.6 grams; attract moisture, are tough but may be cut; taste saline, then burning. A transverse-section is of a dingy brown-yellow color and occasionally shows irregular curved lines which by the Japanese are likened to the convolutions of the brain; mostly, however, a circle of fibro vascular groups. is seen, each group being furnished with a circular cambium, 4 or 5-fibro vascular bundles and a central pith. These tubers yield 15 per cent. of alcoholic extract.

2. *Sen-uzu* comes from the northern part of Nipon and agrees with Hanbury's *chuen-woo* of China. The tubers are smaller than the preceding, roundish or conical, gray, smooth or somewhat finely wrinkled, above depressed, often bearing the remnants of a bud, on the sides with small wartlike protuberances, deprived of the radicles; 15 to 40 mm. long; 30 mm. and less thick; weight 2.5 to 7.4 grams,. very hard,

cut with difficulty; upon transverse section white and mealy, after soaking grayish- or yellowish-brown; the cambium line in the upper part of the tuber more or less five- to seven-rayed, in the lower part elliptic or circular. In some tubers the cambium line is not rayed but angular, or is wanting altogether, and in the broad inner bark are a number of small starlike vascular bundles, placed in a circle; the latter agree with the secondary tubers of the plant yielding *dai-bushi*. Two very poisonous alkaloids have been obtained from these tubers,, but not further investigated. Yield of extract 4.92 per cent.

3. *Katsuyama-bushi*.—These are Japanese tubers, the largest of which resemble the small *dai-bushi*. They are covered with an earthy saline incrustation, are conical or napiform, dingy gray or gray-brown, with scars of detached rootlets, deeply wrinkled, soft, tough, but the bark easily removed; length 18 to 38 mm.; weight 4.1 to 14.7 grams; almost always worm-eaten. Upon transverse section the color is yellowish; the cambium ring circular, wavy or occasionally radiating; the pith large. Yield of alcoholic extract 11.57 per cent.; nearly inert.

4. *Shirakawa-uzu*.—These tubers are elongated, somewhat napiform, often flattened and bent, truncately cut off, with scars of radicles, warty, longitudinally wrinkled, dirty gray, covered with an earthy saline incrustation, soft, tough, very hygroscopic; taste saline, afterwards burning; upon the transverse section grayish-white, the cambium with numerous obtuse rays; the pith large, deeper gray in some tubers the pith is smaller, the cambium few-rayed and surrounded by a circle of fibrovascular groups similar to those of *dai-bushi*. Yield of extract 22.32 per cent. Two alkaloids are present, one crystallizing from ether.

5. *Kusa-uzu*.—These are 1.5 to 3.5 cm. long, 0.8 to 1.5 cm. broad in the thickest part, weight 0.8 to 1.5 gram; they are small, napiform or conical, pointed or rarely obtuse, above flattened, somewhat curved, gray-brown, much wrinkled longitudinally and transversely, rarely smooth, often with stem remnants, scars of rootlets and worm-eaten; transverse section white or yellowish-white, mealy, occasionally horny and gray; bark  $\frac{1}{4}$  to  $\frac{1}{3}$  diameter; cambium line dark, mostly somewhat radiating, or rarely roundish with distinct medullary rays and in the bark numerous stone cells. Yield of alcoholic extract 8.14 per cent.

This aconite is extremely poisonous, the properties depending mainly

upon an alkaloid, readily crystallizable from ether, for which Paul and Kingzett ascertained the formula  $C_{29}H_{43}NO_9$ , while Wright and Luff (1879) called it *japaconitia*, having the composition  $C_{66}H_{88}N_2O_{21}$ , and on being boiled with alkalies found it to split into benzoic acid and a new base,  $C_{26}H_{41}NO_{10}$ . The alkaloid is a stronger poison than aconitia and pseud-aconitia, possesses strongly irritating properties and destroys life by paralyzing the heart muscles.

The tubers of an aroidea, known in Japan as *kaku-bushi* (white-bush) and in China *teh-fu-tsze*, bear some resemblance to the kusa-uzu, but are readily distinguished by their light weight and by the transverse section.

Sen-uzu and kusa-uzu yield the most poisonous extracts; then follows dai-bushi, next shirakawa-uzu and finally, as the least active, katsuyama-bushi.—*Archiv d. Phar.*, 1881, March, pp. 161-185.

**Lonchocarpus Peckoiti, Wawra.** Nat. ord. Leguminosae, Papilionaceae, Dalbergieae. In Brazil many poisonous plants, like several species of *Serjania*, an araceous plant, etc., are called *timbo*; the above named is often distinguished as *timbo boticario*. It is a small tree, 4 or 5 meters high, flowers in July and ripens its fruit in November. The roots are often of the size of a child's arm, externally light brown, the bark internally yellowish and easily separated from the wood, which in small roots is white and in thick roots deep yellow. The fleshy bark is employed and has in the fresh state a penetrating musk odor, similar to that observed near poisonous serpents and crocodiles.

Dr. Peckolt obtained from the fresh bark 0.1588 to 0.1727 percent. of volatile oil, having a strong repulsive musk odor. Sulphuric-acid colors it orange-yellow, then yellowish-brown. Hydrochloric-acid colors red-brown, bluish, light blue, on boiling paler, on cooling, deep indigo blue. The decoction, after precipitation with lead acetate and evaporated, yielded to ether 10 per cent. extractive, nearly inodorous, but of repulsive taste, producing intoxication. The residue was partly insoluble in alcohol and consisted mostly of saccharine extractive. The bark contains also albumen, starch, three resins (*a* resin, soluble in ether and insoluble in alcohol; *b* resin, soluble in alcohol and ether, dark brown, soft; and *c* resin, crystalline floccules from boiling alcohol), two resin acids, a crystalline acid, lonchocarpic acid, and also a volatile poisonous alkaloid, *lonchocarpina*, which is light brown, oily, of a faint musk-like

stupefying odor, insoluble in water, easily soluble in acidulated water, ether and alcohol, the hydrochlorate very deliquescent.

In 1,000 grams of the root bark were found volatile oil 1.727, lonchocarpina 0.718, lonchocarpic acid 1.285, fatty acid of musk odor 11.500, wax 0.171, bitter principle 1.794, *a* resin 7.967, *b* resin of musk odor 4.578, *c* resin crystalline 2.000, *a* resin acid of faint musk odor 2.100, *b* resin inodorous 2.106, extractive of musk odor 0.206, albumen 21.484, starch 45.312, saccharine extractive 29.023, tartaric and malic acids and salts 2.182, dextrin, inorganic salts, etc. 28.212, moisture 725.399, cellulose 112.236 grams.

Chernowitz and Lauggaard have erroneously stated this bark to be derived from Paullinia and Serjania. The bark is used in Brazil only externally in hepatic affections, splenitis, furuncle, etc., in the form of cataplasm prepared from a decoction of 30 grams to 500 grams of water thickened with manihot starch. Also in the following forms:

*Oleum lonchocarpi*.—Timbo bark 10 grams, stronger alcohol 10 grams, groundnut oil 40 grams. Digest and filter.

*Tinctura lonchocarpi*.—Timbo bark 1 p., stronger alcohol 5 p.

*Unguentum lonchocarpi*.—Alcoholic extract of timbo 10 grams, tincture of timbo 5 grams, lard 70 grams.

*Emplastrum lonchocarpi*.—Beeswax 30 grams, Burgundy pitch and Venice turpentine each 10 grams, cocoanut oil 30 grams. Melt together and add alcoholic extract of timbo and powdered timbo bark each 15 grams.—*Zeitschr. Oest. Apoth. Ver.*, Nos. 13, 14.

**Botanical Sources of Tonga.**—This remedy has been introduced from the Fejee Islands, where it is highly valued in neuralgia. From specimens sent by Mr. R. L. Holmes and identified by Baron Von Mueller, it appears to consist of two plants. One, called by the natives “aro,” is *Premna taitensis*, D. C., nat. ord. Verbenaceæ. In open, dry places it remains shrubby and flowers while quite small, but near water courses it becomes a tall tree, the timber of which is used in building, the inner bark being the part used medicinally. The other plant, known as “nai yalu” or “walu,” is *Raphiodophora vitiensis*, Seemann, nat. ord. Araceæ. It is a creeper, with the stem of the size of a quill, growing

freely in sheltered places, climbing over stones and up on trees, when the stem becomes thicker, acquiring an inch or more in diameter. The scraped stems of this plant form the second ingredient in tonga.—*Gardeners' Chronicle*.

**Zygadenus paniculatus**, Watson.—Mr. E. Jones, of Salt Lake City, states that the bulbs of this plant contain a glucoside to which their poisonous properties are attributed. Convulsions and speedy death follow the eating of the bulbs of this plant. No antidote is yet known for it.—*Amer. Naturalist*, 1881, p. 651.

**Arachis hypogœa**, Lin.—Formerly peanuts came to the United States almost exclusively from South America and Africa; of late years, however, they have been grown here so extensively that the importations have almost entirely ceased. The bulk of the crop in the United States comes from Virginia, North and South Carolina, Georgia and Tennessee, the best nuts being raised in the vicinity of Wilmington, N. C. For the three States of Virginia, North Carolina and Tennessee alone the crop last year was upward of 2,000,000 bushels. The use of peanuts in different kinds of confectionery and cake has largely increased the sale of the nuts, and they are also used for an oil, which is expressed in considerable quantities from the seeds, and which is said to be in no way inferior to olive oil. —*The Cultivator*.

**Euphoria litchi**, Desf. s. *E. punicea*, Lamarck. Nat. ord. Sapindaceæ. Stanislas Martin describes the fruit as being 10 centimeters (4 inches) in circumference and 12 cm. long; fleshy; the seed with a hard testa; the embryo exalbuminous, hard. The arillus is covered with rough and sharp projections, weighs 35 centigrams, is brittle, contains tannin and brown resin, burns with flame and leaves little ash. The pulp of each fruit weighs 2 to 3 grams and contains much sugar, pectin, mucilage, tartaric acid and an aromatic principle.<sup>2</sup> — Bull. gén. de Thérap., April, p. 325.

**Mulberry bark** has enjoyed some reputation as a taenifuge since Dioscorides. Dr. Berenger-Feraud has experimented with the fresh bark of the black and white mulberry, taken from vigorous trees in the neighborhood of Toulon, and did not observe any appreciable physiologic effect. The bark was given in the form of infusion, in doses varying from 16 to 300 grams.—*Ibid.*, March, p. 220.

<sup>2</sup> The litchi fruit is used in China and India in febrile diseases for its refrigerant acidulous properties.—EDITOR.

**Eupatorium Ayapana**, Vent.—H. Paschkis describes these leaves as attaining a length of 9 and a breadth of 2 centimeters, lanceolate, gradually acuminate, and at the base narrowed into a short petiole, of the thickness of paper and appearing finely hairy under a magnifying glass. The lowest two lateral nerves spring at a very acute angle from the principal nerve, and each anastomoses in the form of a noose near the margin. The upper surface has few, the lower surface numerous almost circular stomata, with one or two contiguous cells scarcely larger than the guard cells. The hairs are several-celled, either pointed or glandular, and contain a yellow granular substance becoming darker with potassa solution.—*Zeitschr. Oest. Apoth. Ver.; Phar. Jour. and Trans.*, June 4.

**Liatriis odoratissima**, Willd.—The leaves attain a length of 25 and a breadth of 2.5 centimeters, and are naked on both sides, but covered with small pits and furrows. Upon the surface, but very plentifully upon the petiole, are found glistening scales of coumarin. The leaves are oval, almost oblanceolate, the upper end truncate, the margin delicately undulate, the base diminishing into a long-winged petiole, midrib thick, lateral nerves at very acute angles, anastomosing in the form of double nooses near the margin. The stomata are numerous on both sides, in the mesophyll are found roundish or oblong cavities filled with a greenish or golden yellow oil, enclosing smaller strongly refracting drops. Both surfaces contain many funnel-shaped depressions, in which glands are imbedded.—*Ibid.*

**Preservation of Hops**.—Naumann and Pohl have patented a process according to which hops are dampened with alcohol and then pressed into any suitable vessel, which is afterwards well closed. The pressed hops become uniformly permeated with the alcohol and retain their properties for a long time.—*Archiv d. Phar.*, 1881, March, p. 201.

**Castor** is secreted, according to Jos. Fuchs, by glands contained on the inner surface of the castor sacs, and in the fresh state is of an unctuous consistence, but never liquid. Canadian castor has a rather weak odor resembling that of old willow bark; the odor of Siberian and European castor is much stronger, and has been likened to that of birch oil or Russian leather. The difference in odor is regarded as the best character for distinguishing the two kinds. Their shape is similar, frequently pyriform; egg-shaped bags of Siberian or European castor are apt to

contain a large amount of calcium carbonate. Adulterations with resinous and gum-resinous substances are best detected by breaking the bags in the middle, when membranes should be observed pervading the contents.—*Archiv d. Phar.* 1881, March, 189-195.

**Varieties of Amber.**—O. Helm describes, under the name of *glessite*, a peculiar variety of amber, which is dark colored, translucent. or opaque, of spec. grav. 1.015 to 1.027, contains 0.44 per cent. of sulphur and behaves to solvents like ordinary amber, but on dry distillation yields probably formic (not succinic) acid.

Amber from Sicily is found of different shades of red or red-yellow, frequently displaying different colors, surrounded by a thin darker stratum, and of spec. grav. 1.052 to 1.068. Hardness, fracture, electrical behavior and amount of sulphur (0.52 per cent.) are the same as in amber from the Baltic, but it yields only 0.4 per cent. of succinic acid and the vapors are less irritating.

Roumanian amber is scarcely to be distinguished from the Baltic amber; it is usually rather harder, contains 1.15 per cent. of sulphur, has a density of 1.06 to 1.10, and on heating yields water sulphuretted hydrogen and 5.2 per cent. of succinic acid.—*Archiv d. Phar.*, 1881, April, p. 307; *Danzig Naturf. Ges.*

**Naphthol**, a New Remedy for Cutaneous Diseases.—Chemists distinguish two isomeric compounds, *a* naphthol and *b* naphthol. The latter, which has been experimented with by Prof. Kaposi, is extensively used in dyeing, and is met with in commerce in large lumps, violet-brown, of a crystalline texture, friable, with a slight odor resembling that of carbolic acid, easily soluble in alcohol, liquid and solid fats, also in dilute alcohol. It has been used in the form of a 10 per cent. alcoholic solution and of an ointment containing 15 per cent. of naphthol. It colors the skin faintly brown and produces only slight desquamation. It is rapidly absorbed, the urine is on the following day turbid, but contains no albumen. The ointment does not color the clothes or bandages, the alcoholic solution gives them a rose-red color, which is easily removed by hot water and soap.

Further observations must decide in which diseases naphthol is best indicated; also whether it may not be possible and useful to give it internally and let it act by secretion through the skin.—*Phar. Cen-*

tralh., p. 238; *Allg. Wien. Med. Ztg.*

## **THE GROWTH OF CROCUS SATIVUS, THE SOURCE OF HAY SAFFRON, IN KASHMIR.**

**BY DR. DOWNES, Medical Missionary.**

Paper read before the Edinburgh Botanical Society, May 12. from the "Gardeners' Chronicle," May 21, 1881.

According to the late Dr. Elmslie, the native names are Kóng-posh (*Crocus sativus*), n.m. saffron-flower, and Kóngs, n.m. saffron (*Crocus sativus*). Cake saffron is largely an adulteration of the stigmata of wallflower and other plants. The *Crocus sativus* is the only plant grown in Kashmir the stigmata of which compose hay saffron. The famous saffron fields are situated in the vicinity of Pampur, on a plain fully fifty feet above the valley. The bulbs grow on soil said to have been specially imported for the purpose. In dry seasons the produce averages nearly a ton, though the crop was in 1871 only half that quantity. Some 1,500 lbs. of saffron are exported yearly from Kashmir to Laddahk. From 9d. to 1s. sterling is given for 180 grains. The bulbs are planted out in June, and the stigmata are collected in October. It is principally used as a condiment, its power on the system, whether in health or disease, being trivial. The mark on the forehead of a Hindu Pundit is partially derived from it. The Mussulmans of the valley are generally unable to buy it. According to O'Shaughnessy the odor is fragrant, and the taste bitter but agreeable. It tinges the saliva yellow. Pereira makes one grain of good saffron to contain the stigmata and styles of nine flowers, so that the formation of an ounce would require 4,320 flowers. Bulbs received by Dr. Royle in 1826 from Kashmir, when in charge of the Saharunpore Botanical Gardens, which flowered, and were afterwards figured, turned out to be varieties of *Crocus sativus*. This author has little doubt of the Asiatic derivation of this species.

The four stations of saffron cultivation, called "Warewas," are flat treeless table lands, on the borders of the hills, 50 to 150 feet higher than the Kashmir Valley, which is 5,200 feet above the sea-level. They are little, if at all, irrigated. The soil is a stiff clay. Dr. Downes has been informed that saffron has been successfully cultivated in the gardens of the city of Kashmir; indeed, he believes that the oppression and greed of government officials is the sole cause preventing its general growth. He

does not think a special soil needed for the cultivation of *Crocus sativus*. In a hopeful experiment of this kind at Alwar, near Delhi, Mr. Landseer started bulb growing on earth brought in barrels from Kashmir. But in the second year the five beds of bulbs had increased to nine, and as there was no further import of Kashmir earth, native soil had to be partly used, and with success. In Kashmir the *C. sativus* is cultivated on raised parterres, and drained and carefully weeded; though Dr. Downes believes not irrigated. As the half of the price of the produce, which is the due of the cultivator, very seldom comes his way—owing to the plundering of intermediate government officials—the plant is left very much to its own care. During the last two famine years no saffron has been gathered, though this year a small crop is expected. According to one native tradition, the *Crocus sativus* miraculously appeared in Pampur, after the prayer of a holy man some three hundred years ago; while others assert its introduction from the direction of Kabul by a ruler named Bar-Sháh. —*Phar. Jour. and Trans.*, July 2, 1881.

## VARIETIES

**HOW MILK SHOULD BE TAKEN.**—Milk is a food that should not be taken in copious draughts like beer, or other fluids, which differ from it chemically. If we consider the use of milk in infancy, the physiological ingestion, that is, of it, we find that the sucking babe imbibes little by little the natural food provided for it. Each small mouthful is secured by effort, and slowly presented to the gastric mucous surface for the primal digestive stages. It is thus gradually and regularly reduced to curd, and the stomach is not oppressed with a lump of half-coagulated milk. The same principle should be regarded in the case of the adult. Milk should be slowly taken in mouthfuls, at short intervals, and thus it is rightly dealt with by the gastric juice. If milk be taken after other food, it is almost sure to burden the stomach, and to cause discomfort and prolonged indigestion, and this, for the obvious reason that there is insufficient digestive agency to dispose of it. And, the better the quality of the milk, the more severe the discomfort will be under these conditions.—*Dr. Dyce Duckworth in Popular Science Monthly for August.*

**FOREST CULTURE.**—Probably fifty years hence there will be abundance of trees in the West.<sup>3</sup> Agriculturists are rapidly awaking to

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<sup>3</sup> So—what happened? MM

the necessity of planting them. The Fort Scott and Gulf Railroad Company has begun the planting of hundreds of acres of trees on its lands. A Boston capitalist has engaged a company of raisers of forest seedlings in Illinois to break and plow a large area in Kansas, and plant no less than 2,720 trees to the acre, and cultivate these until they shade the ground. At the end of that time—say ten years—the plantations will be delivered over to the owner. No trees less than six feet high are to be counted. The Fort Scott Railroad has adopted this plan, one advantage of which is that the tree enterprise will be attended by experienced men, whose interest it will be to make as much of a success of it as possible.—*Manuf. and Builder*, June.

**WINTERGREEN AS AN ANTISEPTIC.**—From the fact that the best salicylic acid is obtained from wintergreen oil, it is scarcely surprising to learn that Gosselin and Bergeron (“Archives Générales,” January, 1881) have found that wintergreen is almost as antiseptic as carbolic acid. They have used two alcoholic solutions of varying strength; the stronger is composed of five parts oil of wintergreen, one hundred parts alcohol and fifty parts water; the weaker, of two and a half parts of oil of wintergreen, one hundred alcohol and one hundred water. No toxic effect or caustic action resulted from the use of these solutions. It is probable that while the cost of this antiseptic solution may be as claimed by Gosselin and Bergeron, still physicians engaged in rural practice may find in the use of these alcoholic solutions of wintergreen oil an economical means of practising anti-septicism, as wintergreen is an exceedingly common plant east of the Mississippi river.—*Chic. Med. Rev.*, May 5.

**OIL OF CAJEPUT IN ECZEMA.**—Dr. Claiborne (“Gaillard's Medical Journal,” April, 1881) claims to have secured very good results from the use of the oil of cajeput in infantile eczema. The drug was used in the form of a lotion composed of oleum cajeput four drachms, sapo viridis four drachms and alcohol two ounces, with which the eczematous patches were washed at least once a day. An ointment composed of two ounces of oxide of zinc ointment and two drachms of oil of cajeput was kept locally applied to the eczematous patches. The oil of cajeput has often been used in other dermatoses, though without much effect, but this is perhaps the first contribution to its use in any form of eczema.—*Chic. Med. Rev.*, May 5.

**CHAULMOOGRA AND GURJUN OIL IN LEPROSY.** — John D. Hillis, F.R.C.S.I., West Indies.—I have tried, and with much success, chaulmoogra oil in true leprosy. I give it internally in doses commencing with ten minims in emulsion with milk; and externally I apply a liniment of one part of chaulmoogra to fifteen of olive oil to the eruption, the diseased nerves or the tubercular surfaces. I find that the oil causes Constipation; and in consequence I am in the habit of administering it with castor oil.

I have, however, obtained much better results at the General Leper Asylum with gurjun oil—wood oil. The cases in which gurjun oil has failed have either been too far advanced or with hereditary taint, or where the disease had been preceded by small pox, syphilis or yaws (framboesia); these are much less amenable to treatment.—*N. Y. Med. Abstract.*

**KAVA KAVA IN GONORRHŒA.**—Dr. French has recently prescribed this remedy with great success in gonorrhoea in conjunction with other remedies, as follows: Ex. fl. eucalyptus 2 drams, ex. fl. kava kava 5½ drams, acid benzoic ½ drachm, pulv. acid boracic 3 drachms. M. S. 1 dram 3 times a day. Kava kava has recently been shown by Dupuy to be a sialogogue, bitter tonic, mild excitant of the nervous system, diuretic and blenostatic. It is, however, probable all the supposed virtues of this plant depend on the oleoresin which directly affects the mucous membrane like other oleoresins.—*Chic. Med. Rev.*, 1881, p. 123.

**EUCALYPTUS IN CHRONIC DISEASES OF THE STOMACH.**—Dr. Charles James Fox has successfully treated the diseases mentioned with tincture of eucalyptus in doses of 1 dram twice a day, continued for a few weeks, or if necessary, several months.

In a class of cases of symptoms of ulcers of the stomach, threatening perforation, he has found that a strict regimen and light diet, conjoined with the use of the drug, exempted the patient from the recurrence of attacks.—*Medical Bulletin*, April.

**POULTICE OF JABORANDI.**—Cases of mammary inflammation are successfully treated by Dr. H. B. Stehman with a poultice composed of two parts flaxseed meal and one part crushed jaborandi leaves, the latter infused in a quantity of hot water necessary to make the poultice of the proper consistency; a diaphoretic mixture is given at the same

time.

In mumps this treatment proved equally gratifying, and in the inflammatory stages of buboes the poultices prevented suppuration.—*Lancaster Med. Soc. Trans.*; *Med. and Surg. Reporter*, June 25.

**PAPAIN FOR TÆNIA**—In the “Lyon Medical” M. Bouchut reports that he has used papain, or vegetable trypsin, as well as animal pepsin, as a vermifuge, and he states that he not only finds it more active, but that he has relieved several children by its means. After its use a child had passed yellow softened segments of tapeworm, twenty-five centimeters long, and in a partially digested state. These facts, taken with those which have been derived from the colonies in which the juice of carica papaya has been successfully used for worms, go far to prove that this new remedy will in future be of service as an anthelmintic.—*Med. and Surg. Rep.*, July 30.

**APOCYNUM CANNABINUM IN ANASARCA**.—Bright's disease is becoming the fashionable disease to study, more especially since Charcot, who sets the fashion for many physicians in the United States, has been paying much attention to it; these symptoms have been chiefly pathological and symptomatological. However, many independent observers have dealt with it from the therapeutical aspect, and Dr. J. S. Dabney (New Orleans “Medical and Surgical Journal,” Feb., 1881) has found, he claims, that apocynum cannabinum is one of the best diuretics and hydragogue cathartics that can be employed in the disease, as it causes not only marked diminution of the anasarca, but also decrease in the albumen and casts. He claims for it certain advantages: First, a small quantity only is necessary to produce diuresis, emesis or catharsis. Second, it has an agreeable aromatic taste. Third, it has tonic properties. Fourth, its harmlessness, free emesis resulting from an overdose. While many of these claims seem rather strained, still there appears to be but little doubt that the remedy is of much value in ascites, anasarca and allied conditions.—*Buffalo Med. and Surg. Jour.*, June; *Medical Review*.

**DESICCATED OX BLOOD AND HEMOGLOBIN**.—Dr. Le Bon says that desiccated ox blood and hemoglobin has been thoroughly tried in the Paris-hospitals and found very efficacious in debilitated patients. It is indicated in those cases that require raw meat, iron or the phosphates. The elixirs or wines sold as containing the essential principles of blood or

meat are of comparatively little value, and are devoid of the nutritive properties contained in the albuminoid principles which are so essential.—*St. Louis Courier*, April, p. 327; *Med. Times and Gazette*.

**SUGAR OF MILK AS A LAXATIVE.**—A writer in the “*Deutsche Med. Wochenschrift*” recommends sugar of milk as an efficient and agreeable laxative. He gives from quarter to half an ounce in half a pint of warm - water, or of milk and water, fasting, in the morning.—*Med. and Surg. Rep.*, July 30.

**ACTION OF CONINE.**—Dr. Bouchefontaine recently reported (“*Bulletin generale de Therapeutique*”) before the Académie des Sciences some experiments which proved, he claimed, that conine first acted on the nerve centres themselves before affecting the nervous connective substance between the nerves and muscles. In the dog and the batrachians the alkaloid ends by completely decreasing the nervous motor excitability if given in sufficient quantity, but is then fatal to both classes of animals. These results fully accord with clinical experience, for it has frequently happened that cases of acute mania and progressive paresis in which delusions existed based on the motor disturbance, have had both removed by the use of sufficient doses of either the alkaloid or the fluid extract of the drug which has calmed the motor excitement, thus removing the delusions and preventing the establishment of a vicious circle which would soon exhaust the patient.—*Chic. Med. Review*, 1881, p. 132.