

SALIX NIGRA.

The bark and aments of *Salix nigra*, Linné (Nat. Ord. Salicaceae); United States, particularly along streams in New York and Pennsylvania.

Common Names: Black Willow, Pussy Willow.

Principal Constituents.—The *bark* contains tannin and *salicin*.

Preparation.—*Specific Medicine Salix Nigra Aments. Dose*, 10 to 60 drops.

Specific Indications.—Sexual erethism, irritability, and passion; libidinous thoughts; lascivious dreams; nocturnal emissions; mild nymphomania, erotomania and satyriasis; cystitis, urethral irritation, prostatitis, and ovaritis, and allied disorders following in the wake of sexual abuse or excesses.

Action and Therapy.—*Salix nigra* is a remedy of great value in a restricted field in therapeutics. While the bark and its preparations have long been recognized as possessing antiseptic and detergent properties, the use of the aments is of more recent date and confined almost wholly to the generative organs. To be of value, however, only the freshly gathered aments should enter into its preparations to insure medicinal results. Above all other uses, its greatest value is in that form of sexual erethism and irritability due chiefly to an irritative condition of the urethra resulting in spermatorrhea, and less in such sexual perversions as give rise merely to physiological losses; nor can it take the place of the knife when losses are due to conditions requiring surgical correction. In well indicated cases it proves a decided and valuable anaphrodisiac and tonic. The mental emotions play a lesser part in the disorders requiring *salix nigra*, but when the genital tract is sensitive, when the bladder becomes involved, and when sexual excesses and masturbation are the causal factors, it is a remedy of first importance. Secondarily, it is not without value where the mentality of the victim is at fault, but will be found to moderate passion and strengthen the reproductive tract when pollutions are the result of sexual intemperance, libidinous thoughts by day, and lascivious dreams by night.

SALVIA.

The leaves of *Salvia officinalis*, Linné (Nat. Ord. Labiateae). A native of Europe, but

cultivated extensively in kitchen gardens. **Dose**, 5 to 30 grains.

Common Names: Sage, Garden Sage.

Principal Constituents.—An aromatic, volatile oil (oil of sage), the chief principle of which is thujone (50 per cent).

Preparation.—1. *Tinctura Salviae*, Tincture of Sage (Sage, 8 ounces; Alcohol (76 per cent), 16 fluidounces). **Dose**, 1 to 60 drops.

2. *Infusum Salviae*, Infusion of Sage (1/2 ounce to Water, 16 fluidounces). **Dose**, 1 to 4 fluidounces.

Specific Indications.—Skin soft and relaxed; extremities cold and circulation feeble; urine of low specific gravity; colliquative sweating.

Action and Therapy.—Sage is a feeble tonic, astringent, and diaphoretic. The infusion provides a good gargle for ulcerated and inflamed throat and for relaxation of the uvula. Taken warm, it produces free sweating, while cold sage tea, by strengthening the cutaneous functions, restrains excessive sweating, and for this purpose is highly valued in phthisis and other wasting diseases. It acts best when the skin is soft and relaxed, the extremities cold, and the circulation weak. It is of considerable value in gastric debility with flatulence and has proved a good tonic in spermatorrhea. A good indication for salvia is urine of low specific gravity.

SAMBUCUS.

The flowers and the fresh inner bark of *Sambucus canadensis*, Linné (Nat. Ord. Caprifoliaceae). An indigenous shrub growing in low, damp grounds and waste places. **Dose**, 5 to 60 grains (bark).

Common Names: Elder, American Elder.

Principal Constituents.—*Valeric acid*, tannin, volatile oil, and a resin.

Preparation.—*Specific Medicine Sambucus*. **Dose**, 1 to 60 drops.

Specific Indications.—In skin diseases when the tissues are full, flabby, and edematous, the epidermis separates and discharge of serum is abundant, forming crusts; indolent ulcers, with soft edematous edges; mucous patches with free secretions; post-scarlatinal dropsy; low deposits in or depravation of tissues.

Action and Therapy.—*External.* An ointment of sambucus has been successfully used in weeping eczema, and in old ulcers as a stimulant when the tissues are full and flabby and attended with a discharge of serum.

Internal. Sambucus is stimulant; the flowers in warm infusion are diaphoretic; the cold infusion, diuretic and alterative. Preparations of the green inner bark are excellent agents in edematous conditions, especially in skin diseases showing a tendency to ulceration, with watery discharges and boggy edges. The epiderm separates easily and the weeping secretions form crusts. Probably its most direct indication is depravation of tissue, with edema and deposits of cacoplastic material. Sambucus is useful in catarrhal nasal obstruction in infants and in the dropsy following scarlet fever. It deserves further study in edematous conditions. A strong decoction of the fresh inner bark of the root (bark 1 ounce, water 32 fluidounces, boiled down to 16 fluidounces) in doses of two to four fluidounces, will sometimes promptly empty the tissues of dropsical effusion and act slightly upon the bowels.

SANGUINARIA.

The rhizome and roots of *Sanguinaria canadensis*, Linné (Nat. Ord. Papaveraceae), gathered in autumn after the leaves and scape have died to the ground. Found in woods and clearings and along old fences in North America from Canada to the Gulf of Mexico and from the Atlantic to the western boundary of the States bordering the west bank of the Mississippi. It is one of our most beautiful vernal flowers and is rapidly becoming scarce on account of the ravages of despoilers of our native flora. *Dose*, 1 to 5 grains (expectorant); 15 to 20 grains (emetic; not used).

Common Names: Bloodroot, Red Puccoon, Puccoon, Indian Paint, Tetterwort, etc.

Principal Constituents.—*Chelerythrine* (forming yellow salts with acids), *sanguinarina* (forming red salts with acids), *gamma-homochelidionine* and *protopine*, all of which are alkaloids; alcohol soluble resin and *sanguinarinic acid*.

Preparations.—1. *Specific Medicine Sanguinaria.* Dose, 1 to 10 drops, well diluted. Usual form of Administration: Rx Specific Medicine Sanguinaria, 5-10 drops; Water, 4 fluidounces. Mix. Sig.: One teaspoonful every two or three hours.

2. *Tinctura Sanguinaria Acetata Composita*, Compound Acetated Tincture of Bloodroot (Acetous Emetic Tincture). An acetated tincture of Sanguinaria, Lobelia

and Dracontium. **Dose**, 20 to 60 drops (expectorant); 1 to 4 fluidrachms (emetic).

Specific Indications.—"Burning and itching mucous membranes, especially of fauces, pharynx, Eustachian tubes, and ears; less frequently of larynx, trachea, and bronchi, occasionally of stomach and rectum, and rarely of vagina and urethra; mucous membrane looks red and irritable; nervousness, redness of nose, with acrid discharge, burning, and constriction in fauces or pharynx, with irritative cough and difficult respiration" (Scudder). "Feeble circulation, with coldness of extremities" (Locke).

Action.—The physiological action of sanguinaria is pronounced. The powder, when inhaled, is exceedingly irritating to the Schneiderian membrane, provoking violent sneezing, and free and somewhat prolonged secretion of mucus. To the taste, bloodroot is harsh, bitter, acrid, and persistent, and, when swallowed, leaves an acidity and sense of constriction in the fauces and pharynx, and induces a feeling of warmth in the stomach. In small doses, it stimulates the digestive organs, and increases the action of the heart and arteries, acting as a stimulant and tonic; in larger doses it acts as a sedative to the heart, reducing the pulse, causing nausea, and, consequently, diaphoresis, increased expectoration, and gentle diuresis, at the same time stimulating the liver to increased action. If the dose be large, it provokes nausea, with violent emesis, vertigo, disordered vision, and great prostration. It also increases the broncho-pulmonary, cutaneous, and menstrual secretions. It is a systemic emetic, very depressing, causing increased salivary and hepatic secretions, and hypercatharsis may result. When an emetic dose has been taken, the heart's action is at first accelerated, and then depressed. Poisonous doses produce violent gastralgia of a burning and racking character, which extends throughout the gastro-intestinal canal. The muscles relax, the skin becomes cold and clammy, the pupils dilate, there is great thirst and anxiety, and the heart's action becomes slower and irregular. Spinal reflexes are reduced and paralysis of the spinal nerve centers follows. Lethal doses produce death by paralysis of medullary, respiratory, and cardiac centers, death being sometimes preceded by convulsions.

Therapy.—*External.* Sanguinaria is sternutatory, but is no longer used, as formerly, in snuff to excite secretion or to reduce polypi and other nasal growths and turgescence; to alleviate headache, neuralgia, or chronic nasal catarrh. A cataplasm of slippery elm and blood root is a

favorite domestic remedy for frozen feet and chilblains; and an acetated decoction has received professional endorsement for some forms of eczema, ringworm, and warts. An ointment has also been successfully used in tinea.

Internal. Sanguinaria fulfills a variety of uses according to the size of the dose administered. Minute doses relieve irritation, whereas large doses provoke such an effect. Though decidedly emetic it should never be used alone as such, but in combination, as in the acetous emetic tincture, it may, in rare cases, be used as a systemic evacuant where it is thought necessary to thoroughly cleanse the stomach, and to excite to activity sluggish hepatic and general glandular function. Such a course is one of the oft-neglected means once employed in prefebrile states, and was effectual sometimes in preventing the onset of continued and intermittent fevers. An occasional emetic of this type also acts well in chronic stomach disorders, with arrest of function and gaseous eructation, and succeeds in emptying the stomach of a great quantity of ropy mucus, thus preparing the way for the kindly reception of other needed remedies.

Sanguinaria has a gentle but reliable cholagogue action, and may be used in hepatic torpor, congestion of the liver, and subacute and chronic hepatitis. In hepatic debility, where the bile is deficient or vitiated and the general circulation feeble, with cold extremities and in sick headache, catarrhal jaundice, and duodenal catarrh depending upon a like condition, small doses of sanguinaria are efficient. Nor should it be overlooked for gastric catarrh and atonic dyspepsia associated with hepatic torpor and circulatory enfeeblement. Drop doses of the specific medicine (well diluted), every two or three hours, best meet these functional derangements. The alterative properties of sanguinaria are not to be underestimated.

Bloodroot is useful in amenorrhea in anemic and chlorotic patients who suffer with chills and headache, and in dysmenorrhea in debilitated subjects. When due to vicarious menstruation, hemorrhage from the lungs is said to have been controlled by it. It may be used also for sexual debility, seminal incontinence and impotence dependent upon such conditions and relaxed genital organs.

One of the most important fields for sanguinaria is in disorders of the respiratory organs. It resembles lobelia somewhat in action. It is a

useful stimulating expectorant, but should be employed only after active inflammation has been subdued, and in atonic conditions. It favors normal secretory activity, restoring the bronchial secretions when scanty and restraining them when profuse. It is specifically indicated when chilliness is a dominant feature of respiratory disorders, and is further indicated by burning and itching of the nasolaryngeal tract, tickling or burning in the nasal passages, with superabundant secretion, irritation and tickling provoking cough; and when secretions are checked it relieves dry cough by promoting normal moisture. Keeping the specific guides in mind it will be found exceedingly effective in acute and chronic bronchitis, laryngitis, sluggish types of pharyngitis and faucitis, with deep red and irritable dry membranes, and in acute and chronic nasal catarrh. Too much must not be hoped for from its use alone in the latter, for catarrh of the nose and throat is not readily amenable to medication, unless the patient has the courage to persist in treatment in the face of many conditions disturbing to the nasal tract. In all such cases the general systemic treatment is a most important desideratum, and it is almost certain that without such care local treatment seldom effects a cure. Bloodroot, in decoction, has served well in the sluggish form of scarlatinal angina with tendency to destruction of tissue. It has been advised in whooping cough, but is too harsh in the doses required to use upon young children, and in mucous croup the same objection holds good. Its use as an emetic, once popular, in pseudomembranous croup is also inadvisable, such a condition now being recognized as almost always a laryngeal diphtheria, and it should, therefore, be treated by the more approved antidiphtheritic measures. After pneumonia, when debility persists and cough and viscid secretion continue and it is difficult to expectorate, specific medicine sanguinaria, with or without lycopodium, wild cherry, or eucalyptus, in syrup, is one of the most efficient of medicines. The dose should be regulated so that the patient receives about one or two drops of the sanguinaria every two to four hours. It similarly benefits phthisical cough with difficult expectoration, but should be withheld if it provokes gastric irritation or nausea. It has no effect whatever upon the tubercular state.

SAPO.

Soap, Hard Soap, White Castile Soap.

Soap prepared from Sodium Hydroxide and Olive Oil.

Description.—White or whitish, hard bars, easily cut when fresh; or a fine, yellowishwhite powder, having a faint, non-rancid odor, and an unpleasant alkaline taste. Soluble in water and alcohol—, more readily by the aid of heat.

Preparation.—*Linimentum Saponis*, Soap Liniment (Opodeldoc), (Soap, Camphor, Oil of Rosemary, Alcohol, and water). This liniment is an ingredient of *Linimentum Chloroformi* (Chloroform Liniment).

Action and Therapy.—*External.* Soap enters into the formation of some pills, as of aloes, rhubarb, gamboge, podophyllin, and other resinous cathartics, and asafetida, and those of compound extract of colocynth. Soap is detergent and with water may be used, as indicated, to remove scales and crusts in cutaneous diseases, but is less useful than soft soap for this purpose. It is to be preferred, however, where a very mild action is necessary, being less irritant than the softer preparation.

Internal. Soap is irritant to the stomach, but in small doses may be used as an antacid, and in cases of poisoning by the corrosive mineral acids.

SAPO MOLLIS.

Soft Soap, Green Soap.

Made by heating Hydroxide of Potassium and Cotton Seed Oil, Water, and Alcohol.

Description.—A soft, yellowish-white to brownish-yellow, unctuous mass, having an alkaline taste and a slight but distinctive odor. Soluble in water. *Dose*, 5 to 30 minims, well diluted.

Preparation.—*Linimentum Saponis Mollis*, Liniment of Soft Soap (Tincture of Green Soap). (Soft Soap, Oil of Lavender, Alcohol.)

Action and Therapy.—*External.* Soft soap is detergent and more irritating than hard soap, being more alkaline and containing some free caustic potash. It may be used in the preparation of enemas for the removal of seat worms and to cause an evacuation of feces. Owing to its softening and cleansing properties it is employed to remove dirt, crusts and scales, epithelia, etc., in the treatment of skin diseases. Soap liniment is a good vehicle for the application of other medicines to sprains, stiffened joints, and contusions and other swellings.

Internal. A solution of soft soap may be administered freely in poisoning by the mineral acids, and in smaller amounts (5 to 30 minims, well diluted) in acidity of the stomach.

SARSAPARILLA.

The dried root of (1) *Smilaxmedica*, Chamisso and Schlechtendal; or (2) *Smilax officinalis*, Kunth, or an undetermined species; or (3) *Smilaxornata*, Hooker filius (Nat. Ord. Liliaceae). Tropical America, Mexico to Brazil. **Dose**, 30 grains.

Common Names: Sarsaparilla; (1) Mexican Sarsaparilla; (2) Honduras Sarsaparilla; (3) Jamaica Sarsaparilla.

Principal Constituents.—The acrid glucoside *parillin* (*smilacin*, *salseparin*, or *parillic acid*) closely resembling saponin; resin and a volatile oil; and calcium oxalate, etc.

Preparations.—1. *Specific Medicine Sarsaparilla*. **Dose**, 1 to 30 drops.

2. *Fluidextractum Sarsaparillae Compositum*, Compound Fluidextract of Sarsaparilla (contains Sarsaparilla, Licorice, Sassafras, Mezereum). **Dose**, 10 to 60 minims.

3. *Syrupus Sarsaparillae Compositus*, Compound Syrup of Sarsaparilla (contains Fluidextracts of Sarsaparilla, Licorice, Senna, Oil of Sassafras, Oil of Anise, and Methyl Salicylate, Alcohol, Sugar, and Water). **Dose**, 2 to 6 fluidrachms.

Action and Therapy.—Sarsaparilla once held a high reputation as an alterative; it is now considered practically valueless. Almost the only use made of it at present is as a vehicle for iodides and other alteratives. For this purpose the compound syrup is largely preferred. Sarsaparilla is not wholly inert and its long-continued use may cause ulceration of the mucosa of the intestines. Some believe it also to possess an active cardiosedative principle, probably sarsaponin.

SASSAFRAS.

The bark of the root of *Sassafras albidum* (Nutt.) Nees (Nat. Ord. Lauraceae). Woods of eastern half of North America. **Dose**, 1 to 3 drachms.

Common Name: Sassafras.

Principal Constitutents.—A volatile oil (*Oleum Sassafras*), sassafrid, a decomposition product of tannic acid, resin, and tannin.

Preparations.—1. *Sassafras Medulla, Sassafras* Pith. (Insipid, light, spongy, white and odorless, cylindrical pieces.)

2. *Oleum Sassafras*, Oil of Sassafras. Yellow or reddish-yellow liquid having the taste and aroma of sassafras; soluble in alcohol. **Dose**, 1 to 15 drops, on sugar or in emulsion.

3. *Specific Medicine Sassafras*. **Dose**, 5 to 30 drops, in syrup or on sugar.

Action and Therapy.—*External.* Oil of sassafras is rubefacient and obtundant, and has been used to discuss wens, and to relieve rheumatic and other painful conditions, as bruises, sprains, and swellings. A mucilage of the pith (2 drachms to Water, 16 fluidounces) was formerly much used in acute ophthalmias. An infusion of the bark is a domestic remedy for rhus poisoning.

Internal. Sassafras tea is a popular alterative, diaphoretic, and carminative. It and the oil are decidedly stimulant. The latter, like other aromatic oils, has been used with more or less success in cystitis with much mucoid flow, and in so-called chronic gonorrhoea. The mucilage of the pith may be used as a demulcent. From ten to fifteen drops of the oil, administered in hot water or upon sugar, will sometimes relieve the pangs of dysmenorrhoea. The chief use of sassafras oil is to flavor pharmaceutical syrups and other preparations.

SCILLA.

The inner, fleshy scales of the bulb of the white variety of *Urgineanaritima* (Linné), Baker (Nat. Ord. Liliaceae), cut into fragments and carefully dried. Coast of Mediterranean Basin and in Portugal and France. **Dose**, 1 to 3 grains; average, 1 1/2 grains.

Common Names: Squill, Squills, Sea Onion.

Principal Constitutents.—*Scillitoxin*, the most active principle, insoluble in water, soluble in alcohol, and a heart poison; *scillipicrin*, a bitter body, sparingly soluble in water; *scillin*, soluble in water, causing vomiting and numbness; and a bitter glucoside *scillain*.

Preparations.—1. *Specific Medicine Squill*. **Dose**, 1 to 5 drops.

2. *Acetum Scillae*, Vinegar of Squill (Squill, 10 per cent). **Dose**, 5 to 20 minims.

3. *Syrupus Scillae*, Syrup of Squill. **Dose**, 10 to 60 minims.

4. *Syrupus Scillae Compositus*, Compound Syrup of Squill (Hive Syrup). (Contains Fluidextracts of Squill and Senega, and Antimony and Potassium

Tartrate.) *Dose*, 5 to 40 minims.

5. *Tinctura Scillae*, Tincture of Squill (Squill, 10 per cent). *Dose*, 5 to 30 minims.

Specific Indications.—Chronic cough with scanty, tenacious expectoration; dropsy dependent upon a general asthenic condition and without fever; scanty, high-colored urine, with sense of pressure in the bladder; renal overactivity with inability to retain the urine.

Action and Toxicology.—Squill is a powerful drug acting much like digitalis upon the heart muscle, and probably with greater force upon the peripheral vessels, increasing arterial tension. It is a violent gastrointestinal irritant and it disturbs the stomach more than does digitalis. Even small doses cause nausea and vomiting; and some individuals are so susceptible to its action that it cannot be taken by them in any dose. Squill likewise stimulates the kidneys to increased diuresis, both by acting upon the epithelial cells and by increasing the blood pressure within those organs. Bronchial secretion is increased by it. Fresh squill, when rubbed upon the skin, is rubefacient, and if the surface be denuded it may be absorbed with poisonous consequences.

Large doses of squill are violently poisonous, causing severe and painful vomiting and purging, gastro-intestinal inflammation, decreased, and sometimes bloody and albuminous urine, with strangury, and not infrequently complete suppression due to the acute nephritis induced. Dullness and stupor or intermittent paralysis and convulsions ensue. Death usually takes place in from ten to twenty-four hours. Some contend that squill acts more powerfully upon the heart muscle than foxglove, and that by overstimulation with excessive doses cardiac arrhythmia and heartblock may be induced. Squill, therefore, while usually causing death by gastro-enteritis, may establish a fatal nephritis, or cause a sudden stoppage of the heart.

Therapy.—Squill is a stimulating diuretic and expectorant, and if given in small doses when there is general atony and special lack of tone in the renal and respiratory tracts it is a good medicine. It must be used, however, with care and judgment. If there is the least reason to suspect, or evidence to show, undue renal irritation or inflammation its use should be stopped at once. In very small doses squill allays irritation of mucous membranes and lessens excessive secretion. It

was at one time very largely employed for the elimination of dropsical effusion; and still is used for the absorption and removal of pleural, pericardial, and especially peritoneal effusion, but with more care than formerly. In large ascitic collections in curable conditions paracentesis is a more rational measure than long and harsh medication by drastic renal hydragogues.

Squill is one of the most certain remedies for dropsy of cardiac origin, or from congestion (not inflammation) of the kidneys; and is proportionately less valuable where dependent upon structural changes in the renal glands. Nevertheless it frequently is used in chronic nephritis to excite the surviving cells to activity and thus increase the output of urine. When renal dropsy depends upon general atony of the system-the kidneys included and the disorder is one of functional weakness, squill may be used with good effect. Its diuretic action is increased by digitalis and the alkaline diuretics, notably acetate and citrate of potassium. Squill, in powdered substance, is usually more effective than any of its preparations; therefore the best form of administration is by pill or capsule. When there is a feeble circulation the following is advisable: Rx Pulv. Scillae; Pulv. Digitalis, 10 grains each. Make into Pilulae, No. 10. Sig.: One pill after meals. Squill is contraindicated, even in dropsy, by a dry, hot skin, rapid circulation, elevated temperature, or any evidence of renal irritation or inflammation. But the greater the atony of the general system the more salutary its action. In dropsy requiring urgent relief two or three grains of squill may be given every three hours, withholding the medicine upon the slightest indication of nausea. When it acts strongly as an expectorant it frequently fails to cause increased diuresis. Neither should it be expected to cure when anasarca or ascites is caused by malignant disease or renal destruction. Locke employed for cardiac dropsy, with feeble heart action and weak rapid pulse, teaspoonful doses of infusion of digitalis to which is added two (2) grains of squill, or one (1) drop of specific medicine squill.

Squill has been quite generally used by some physicians for subacute and chronic bronchitis when secretion is scanty and viscid and expectorated with difficulty, and oppositely when the secretions are profuse and debilitating. The dosage should be regulated according to the condition, the fuller doses short of nausea for the former, and minute doses for the latter. These results are attributed to its power to regulate normal equilibrium in the bronchial mucosa. When fever is

absent and the sputum scanty and tenacious, the following is useful: Rx Syr. Scillae, 1 fluidounce; Syr. Pruni virg., 3 fluidounces. Mix. Sig.: One teaspoonful four (4) times a day (Locke); and in chronic bronchial catarrh: Rx Syr. Scillae, Syr. Senegae, 1 fluidounce each, Syr. Pruni virg., 2 fluidounces. Mix. Sig.: One teaspoonful every three hours. Syrup of squill has been largely used and is still popular in the domestic treatment of croup, people little realizing the danger invited. We have seen it cause convulsions and prostration in a young child when thus employed. It has also been advised by physicians for emphysema. While of unquestionable value in bronchial affections, one must be guarded in its employment lest more damage be done to the kidneys than good to the respiratory tract.

SCOPARIUS.

The tops of *Cytisus Scoparius* (Linné), Link (Nat. Ord. Leguminosae). Europe and the United States. Cultivated. **Dose**, 5 to 15 grains.

Common Names: Broom, Broom Tops, Irish Broom.

Principal Constituents.—The volatile, oily, alkaloid *sparteine*, and *scoparin*, a diuretic and purgative yellow coloring body.

Preparations.—1. *Infusum Scoparii*, Infusion of Scoparius. **Dose**, 1 to 2 fluidounces.

2. *Decoctum Scoparii*, Decoction of Scoparius (1/2 ounce to Water 16 fluidounces, boiled down to 8 fluidounces). **Dose**, 1 to 2 fluidounces.

Action and Therapy.—Excessive doses of broom have produced impaired vision, staggering gait, and profuse vomiting and purging. The effects of broom are in milder degree practically those of its chief alkaloid, sparteine. When the latter is not desirable, aqueous preparations of the crude drug may be used; and indeed, they often succeed in causing profound diuresis when the alkaloid fails. As a heart tonic and stimulant sparteine sulphate should be preferred.

Infusion of broom and to a greater degree the decoction, in doses of one ounce every three hours, are decided and certain diuretics for use in dropsies of cardiac origin. The action of scoparin has not been fully determined, but is believed to be both diuretic and purgative. Some believe it to be the real diuretic in scoparius.

SCUTELLARIA.

The fresh green herb of *Scutellaria lateriflora*, Linné (Nat. Ord. Labiatae). Common in damp situations throughout the United States. *Dose*, 5 to 30 grains.

Common Names: Scullcap, Skullcap, Madweed.

Principal Constituents.—A volatile and a fixed oil and an unnamed, bitter, crystallizable glucoside.

Preparation.—*Specific Medicine Scutellaria.* *Dose*, 5 to 30 drops.

Specific Indications.—Nervousness attending or following illness, or from mental or physical exhaustion, or teething; nervousness with muscular excitation; tremors; subsultus tendinum; hysteria, with inability to control muscular action; functional heart disorders of a purely nervous type, with intermittent pulse.

Action and Therapy.—Scutellaria is calmative to the nervous and muscular systems and possesses feeble tonic properties. By controlling nervous irritability and muscular incoordination it gives rest and permits sleep. It may be exhibited to advantage during acute and chronic illness to maintain nervous balance, control muscular twitching and tremors, and is sometimes effectual in subsultus tendinum during grave prostrating fevers. Too much, however, must not be expected from it in the latter condition; nor can it be expected to aid much in delirium tremens, and not at all in epilepsy and paralysis agitans, in both of which it has been injudiciously advised. It appears to be most useful in chorea when reinforced by the addition of macrotys and valerian; in restlessness following prolonged sickness; and in functional heart disorders of a purely nervous character, with intermittent pulse whether accompanied or not by hysterical excitement. When insomnia is due to worry, or nervous irritability or even exhaustion, relief may be expected from it. It once had a great reputation as a cure for hydrophobia, based upon the reports of New Jersey physicians, a claim which time has totally failed to sustain.

SENECIO.

The whole plant of *Senecio aureus*, Linné (Nat. Ord. Compositae). Northern and western parts of the United States. *Dose*, 5 to 60 grains.

Common Names: Golden Senecio, Life Root, Ragwort, Female Regulator, etc.

Principal Constituents.—Probably an acrid resin and a bitter and tannin; it has not been satisfactorily analyzed.

Preparation.—*Specific Medicine Senecio.* *Dose,* 5 to 60 drops.

Specific Indications.—Atony and relaxation of the pelvic contents, with dragging painful sensations; uterine enlargement, with uterine or cervical leucorrhœa and impairment of function; vaginal prolapse; slight uterine prolapse; pelvic weight and vascular engorgement; increased flow of mucus or muco-pus from weakness; suppressed or tardy menstruation; pain, soreness, and bearing down of the uterus; vicarious menstruation; difficult and tardy urination in both sexes. In the male tenesmic micturition, testicular dragging, and pelvic weight. In both sexes, dyspepsia, with flatulence after meals; cardialgia, associated with sour stomach and increased flow of gastric juice.

Therapy.—Senecio is a remedy of decided value in the treatment of diseases of women. It was formerly much employed, but in the onward movement of therapeutics seems for some reason to have passed into unmerited neglect. Without doubt this is due to failure to observe and prescribe it according to its specific indications, and somewhat to its tardy action. To get results from senecio it must be given in appreciable doses for a long period, and while slow, its results justify its use. A general relaxed condition of the female generative tract, with or without mucous or mucopurulent discharge, or vaginal or uterine prolapse, is the direct indication for its selection. Atony is the key to its use. The parts lack vigor and tone, or may be irritable and hyperæmic; at any rate, the pelvic circulation is poor and the whole pelvic floor seems about to let the pelvic contents escape. The uterine ligaments are lax, and the prolapses benefited are those partial displacements due to the weakening of the ligaments and surrounding tissues. Senecio is an ideal emmenagogue and the best single remedy for the amenorrhœa of debility. As such for amenorrhœa in the young in whom the menstrual function is not yet well established, we know of no better or more prompt agent than senecio. We select it with as great certainty as we would macrotys for muscular pain, or bryonia for pleuritic stitches. It matters little, however, what the non-surgical female disease, so long as one is guided by the indications, senecio will not be found wanting in power to improve or to cure. It is with certainty a leader in gynecic therapy. It relieves irritation, imparts tone

and vigor, and restrains undue and vitiated secretions. Atony of the ovaries with impairment of function is always present in cases requiring senecio. There is also perineal weight and fullness, and in chronic cases an enlargement of the womb, with cervical leucorrhoea, dysmenorrhoea, menorrhagia, metrorrhagia, chlorosis, functional sterility, leucorrhoea, dyspepsia, and the capillary bleeding of haematuria and the bloody discharges of albuminuria are the cases in which it is also especially indicated and in which more or less success may be expected from it. While holding the greatest reputation in diseases and disorders of the female, it is of some, though relatively less, usefulness in functional aberrations of the male reproductive organs, sometimes relieving pelvic weakness, with sense of dragging and testicular pain, and frequent and painful urination. The dose of specific medicine senecio, the best preparation of it, is from five to sixty drops in water, three or four times a day.

SENEGA.

The root of *Polygala Senega*, Linné (Nat. Ord. Polygalaceae). Indigenous to the United States. *Dose*, 5 to 20 grains.

Common Names: Senega, Senega Snakeroot, Seneka Root, Seneca Snakeroot. Principal Constituent.—Saponin (Senegin).

Preparation.—*Specific Medicine Senega*. Dose, 1 to 20 drops.

Specific Indications.—Relaxed respiratory mucosa and skin, with deep, hoarse cough, excessive secretion; mucous rales, nausea and vomiting; cough of chronic bronchitis; bronchorrhea.

Action and Therapy.—Senega has an acrid taste and leaves a disagreeable sensation when swallowed. In ordinary doses it is sialagogue, stimulant, diuretic, expectorant, and is reputed emmenagogue. It may be used in subacute forms of cough as is found in chronic bronchitis with profuse secretion. It is contraindicated in active febrile conditions. Dropsy of renal origin has been benefited by it, but it is of no value when due to cardiac lesions. It is little used, and then chiefly in syrups containing other medicaments. It is an ingredient of the once celebrated Coxe's Hive Syrup, a vicious preparation now represented by compound syrup of squill, and containing also squill and tartar emetic.

SENNA.

The dried leaflets of (1) *Cassiaacutifolia*, Delile, or of (2) *Cassiaangustifolia*, Vahl (Nat. Ord. Leguminosae). (1) Eastern and central Africa; (2) cultivated from eastern Africa to India. **Dose**, 60 to 120 grains.

Common Names: Senna, (1) Alexandria Senna, (2) India or Tinnivelly Senna.

Principal Constituents.—An amorphous, water-soluble, sulphurated glucoside—*cathartinic acid* (which may be split into cathartogenic acid and glucose), *emodin*, sennacrol and sennapicrin (water-insoluble glucosides), and chrysophanic acid.

Preparations.—1. *Specific Medicine Senna*. **Dose**, 5 to 60 drops.

2. *InfusumSennaCompositum*, Compound Infusion of Senna (Black Draught). (Senna, Manna, Magnesium Sulphate, Fennel, Boiling Water.) **Dose**, 2 to 8 fluidounces.

3. *Pulvis Glycyrrhiza Compositus*, Compound Powder of Glycyrrhiza (Compound Licorice Powder), (Senna, Glycyrrhiza, Oil of Fennel, Washed Sulphur, Sugar). **Dose**, 1 to 2 drachms.

4. *Pulvis Jalapa Compositus*, Compound Powder of jalap (Antibilious Physic). Contains Senna. See Jalapa.

Specific Indications.—Flatulence and colic; a laxative for non-inflammatory conditions of the intestinal tract.

Action and Therapy.—Senna is a manageable and useful cathartic producing copious yellowish-brown evacuations, and causing considerable griping when used alone. While it influences the whole intestinal tract, exciting peristalsis as it passes along, the greater action is exerted upon the colon. This renders it a certain purgative, for by this sequence the whole canal is the more readily emptied. It does not produce after-constipation, as does rhubarb and some other laxatives; and it may purge a nursing infant when administered to the mother. Senna is neither sedative nor refrigerant, but if anything somewhat stimulant, and is, therefore, not to be given in irritated or acutely inflamed conditions of the alimentary tube nor when there is great debility, or hemorrhoids, or prolapse of the rectum. Notwithstanding, it is effectual and safe to cleanse the bowels at the beginning of fevers, when such an effect is desired. It may be used as a laxative or more complete cathartic in children and adults when a severe action is not indicated. In most individuals it occasions nausea,

tormina and flatulence when given alone, as in senna tea, but these effects may be mitigated by infusing it with coffee, or by the addition of cloves, ginger, peppermint, cinnamon, or other aromatic corroborants. Cream of tartar added to it increases its action, producing a hydragogue and refrigerant effect, while bitters in general seem to increase its action. Senna is one of the anthracene group of cathartics, and its action is largely, though not wholly, due to the presence of cathartinic acid. The latter taken up by the blood, or injected, is emptied into the intestinal canal, thereby causing or prolonging catharsis.

Compound Powder of Jalap. A most thorough action may be obtained from the Antibilious Physic, especially in auto-intoxication, and intestinal toxemia, giving rise to a violent, burning, diffuse rash, such as sometimes follows prolonged constipation, or the ingestion of tainted foods—particularly sea foods and fruit. This preparation is less irritant than senna alone, and unless there is very marked gastrointestinal inflammation, it is seldom contraindicated. The physicing dose is one drachm, in hot water, cooled and sweetened; or milk, lemonade, or coffee may be used as a vehicle. It may also be given in large-sized gelatin capsules.

Compound Licorice Powder. A pleasant and efficient laxative in doses of 30 to 120 grains (average 60), given in plenty of water, at bedtime, for the general cleansing of the bowels of undigested material, relieving headache arising therefrom; and an admirable laxative for the pregnant and parturient woman, and for children. It may be given in water, or the ready-prepared lozenges may be used, the patient partaking also of plenty of water.

SERENOA.

The fruit of *Serenoaserrulata*, Bentham and Hooker (Nat. Ord. Palmaceae). Atlantic Coast from Florida to South Carolina. **Dose**, 10 to 60 grains.

Common Name: Saw Palmetto.

Principal Constituents.—An aromatic oil (*Oil of Saw Palmetto*) and sugar.

Preparation.—*Specific Medicine Saw Palmetto.* **Dose**, 10 to 60 drops.

Specific Indications.—Relaxation with copious catarrhal secretion; lack of development or wasting of testicles, ovaries, or mammae; prostatic irritation with painful micturition, and dribbling of urine, especially in the aged; tenderness in the glands and other parts of the reproductive organs.

Action and Therapy.—Saw Palmetto is a nerve sedative, expectorant, and a nutritive tonic, acting kindly upon the digestive tract and tending to improve the appetite, digestion, and assimilation. Its most direct action appears to be upon the reproductive organs when undergoing waste of tissue; in some nutritional way it is asserted to enlarge the breasts, ovaries, and testicles, while the paradoxical claim is also made that it reduces hypertrophy of the prostate. This can only be explained, if, indeed, it has such opposite effects, by assuming that it tends toward the production of a normal condition, increasing parts when atrophied, and reducing them when unhealthily enlarged. Evidence is forthcoming that it alleviates much of the prostatic suffering of the aged, and this is probably due to its relieving urethral irritation, thereby reducing a swollen condition not really amounting to hypertrophy. It is asserted to increase the tonus of the bladder, and help to better contraction and more perfect expulsion of the contents of that viscus. Tenesmic pain especially is relieved. It is further, and rationally, indicated to relieve dull aching, throbbing pain in the prostatic urethra and to control excessive mucoid and prostatic discharges. The gleet results of a badly treated gonorrhoea sometimes yield to it. As it tones relaxed tissue this probably explains its asserted value in so-called uterine hypertrophy, the latter being more properly a large, loosely relaxed and flabby organ, actively leucorrhoeal. It has been recorded also that it increases the sexual appetite and restores lost power from excesses, in both man and woman; and to have given relief in ovaritis, ovaralgia, orchitis, orchialgia, and epididymitis. Its best action is that of a nutritive tonic to wasting organs and to control irritation and mucoid discharge.

SERPENTARIA (*Aristolochia serpentaria*).

The rhizome and roots of (1) *Aristolochia serpentaria*, Linné, and of *Aristolochia reticulata*, Nuttall (Nat. Ord. Aristolochiaceae). Eastern half of the United States; the latter chiefly in the southwest. *Dose*, 1 to 30 grains.

Common Names: (1) Virginia Snakeroot; (2) Red River or Texas Snakeroot.

Principal Constituents.—A volatile oil containing *borneol* (C₁₀H₁₈O) and a *terpene* (C₁₀H₁₆), and resins.

Preparation.—*Specific Medicine Serpentaria.* *Dose*, 1 to 30 drops.

Specific Indications.—Renal torpor, the result of cold; fullness of chest with dyspnea; sensation of weight and dragging in the loins, with scanty renal secretion; severe sore throat, with tendency to destruction of tissue; cutaneous torpor.

Action and Therapy.—In small doses Virginia snakeroot stimulates the appetite and promotes digestion; long continued it tends to derange digestion producing nausea, emesis and intestinal griping and tenesmus. In full doses it stimulates to a considerable degree, but may occasion gastrointestinal discomfort with nausea, vomiting, headache, and drowsiness, but with disturbed sleep. The warm infusion is decidedly diaphoretic. Under the latter action it is sometimes useful to hasten the eruption in tardy exanthemata. Small doses, given for a brief period, are beneficial in atonic dyspepsia. After periodic fevers it may be administered with cinchona or quinine to overcome depression and give tone to the debilitated system. When renal torpor or menstrual tardiness is due to cold, serpentaria will act as a stimulant diuretic and as an emmenagogue. The best use for serpentaria, in our opinion, is for the severely congested but sluggish and very sore angina of scarlatina. It may be used both as a gargle and internally. As a rule, serpentaria is contraindicated by active fever or severe inflammation; but is a remedy of much value in atonic states.

SINAPIS ALBA.

The ripe seeds of *Brassica alba* (Linné), Hooker filius et Thompson (*Sinapis alba*, Linné) (Nat. Ord. Cruciferae). Asia and South Europe; cultivated. *Dose* (emetic), 1 to 3 drachms, with plenty of water.

Common Names: White Mustard, Yellow Mustard.

Principal Constituents.—A bland, fixed oil, average of 25 per cent; the glucoside *sinalbin*, the most important constituent, and myrosin, an enzyme which converts sinalbin into an acrid, and other bodies. Volatile oil of mustard is not obtained from white mustard.

Description.—A yellowish or light, brownish-yellow powder, odorless and mildly pungent and acrid to the taste. *Dose*, 1 to 3 drachms (as an emetic).

SINAPIS NIGRA.

The ripe seeds of *Brassica nigra* (Linné), Koch (Nat. Ord. Cruciferae). Asia and southern Europe; cultivated. *Dose* (emetic), 1 to 3 drachms.

Common Names: Black Mustard, Brown Mustard.

Principal Constituents.—Fixed oil of mustard (average of 35 per cent); *sinigrin* (a glucoside) and myrosin, which in the presence of water and distillation converts the former into glucose, a potassium salt, and Volatile Oil of Mustard (*Oleum Sinapis Volatile*), (see below) an oil not derived from white mustard.

Description.—A pale-brown or greenish-brown powder, having an acrid, pungent taste, and developing, when moistened, a pungent and irrespirable odor. *Dose*, 1 to 3 drachms (as an emetic).

Preparation.—*Emplastrum Sinapis*, Mustard Plaster. Powdered black mustard deprived of its fixed oil mixed with solution of rubber and spread upon paper or other fabric. It is to be moistened with tepid water before being applied.

Derivative.—*Oleum Sinapis Volatile*, Volatile Oil of Mustard. An oil derived from black mustard or prepared synthetically and consisting largely of Allyl Isothiocyanate. A colorless or pale-yellow liquid having a very pungent and irrespirable odor and an acrid taste. The greatest caution should be taken when smelling this liquid; and it should not be tasted except when greatly diluted. *Dose*, 1/12 to 1/4 drop. There is no justification for its internal use.

Specific Indications.—*External*. Deep-seated pain and inflammations; vomiting from gastric irritability; and repressed secretion.

Internal. Emetic for poisoning by narcotics.

Action and Toxicology.—Volatile oil of mustard is an extremely diffusible and penetrating irritant, quickly exciting heat and burning pain through its dilating action upon the peripheral vessels and irritation of the sensory nerve endings. If too long applied it will blister, and cause inflammation, sloughing and deep ulceration; and not infrequently gangrene. To a degree local anesthesia is produced in some instances and the patient is then not aware of the possible destruction of tissue. Removed in time only induration is caused, followed sometimes by desquamation. Mustard applied in the same

manner acts similarly but more slowly and with gradually increased intensity, as the volatile oil is but slowly formed from the moistened powder by the action of its ferment myrosin. The local action of mustard may stimulate reflex cardiac and respiratory activity in sufficient force to arouse one from an attack of fainting. Internally, mustard is a stimulating condiment and appetizer, and excites gastric activity and promotes digestion. If the amount be large, however, it is intensely irritant and promptly causes vomiting. This is not attended by depression, however, owing to the fact that both the breathing and circulation are stimulated by its reflex action upon the respiratory centers and the heart. Overdoses may induce acute gastritis, and if long continued chronic gastric catarrh. The volatile oil is an intense irritant poison, producing intense burning pain and destruction of tissue. Profound depression, renal hyperaemia, and insensibility precede death.

Therapy.—*External.* The mustard plaster and the sinapism (mustard poultice) are popular with physicians and the laity as rubefacients and counterirritants to relieve deep-seated pain and inflammation, check vomiting, reestablish suppressed urine, excite and restore menstruation, to arouse from insensibility in narcotic poisoning, syncope and asphyxia, and as a derivative generally. For this purpose they should be applied *temporarily* only and their effects carefully watched. Sometimes they act best when applied a little remote from the actually involved tissue, and they are necessarily so used when the internal organs are the seat of disease. For the purposes named the mustard plaster or sinapism may be applied to the chest and the abdomen in acute inflammation of the viscera, to the epigastrium and spine to check persistent vomiting from gastric irritability, and in gastralgia, gastritis, flatulence, to the abdomen in colic, over the loins in suppression of urine, lumbago and backache, to the nape of the neck in congestive headache and cerebral congestion, to the spine, legs, and soles of the feet to arouse from apoplexy, stupor, and coma, to the praecordial region in syncope, and locally to the areas involved in myalgia, neuralgias, muscular rheumatism, and inflammations of the joints. They should be used with great care upon children and debilitated individuals. Never more than one fourth mustard and three fourths white or rye flour should be employed in either, and the strength of the poultice can be regulated better in this manner than by using the ready prepared plaster. However, for general purposes the plaster, mustard leaves or papers, are most convenient, always ready

for immediate use, and quickly and cleanly applied, first dipping them in water. It must be remembered that they are exceedingly energetic and usually stronger than a domestically prepared poultice. When necessary to use extra precaution, and in children, it is best to interpose a moistened layer of thin fabric between the skin and the application. When long and gentle action is desired, about one-twentieth part of mustard may be incorporated into flaxseed or other poultices. A blanket wrung from hot mustard water is sometimes used to restore retrocession of eruption in the exantheams, but special care should be had in scarlet fever, lest the already endangered kidneys be damaged. It should only be used as a last resort in this disease, but is less liable to do harm in measles. Warm water increases the activity of mustard applications; and the smarting sensation arising from the local use of mustard may be mitigated by sponging the parts with cold water, or spraying with ether.

Internal. The only rational use for mustard internally is to cause emesis in cases of narcotic poisoning. Besides acting as a prompt emetic, there is the added value of reflex stimulation of the heart and breathing organs, and consequently no depression. It should not be used for irritant or corrosive poisons. Its employment would seem rational in food poisoning (bromatotoxism) when there is depression of the nervous system and no irritation or gastro-intestinal inflammation present, provided there is still poisonous food in the stomach. As an emetic, from one to four teaspoonfuls may be administered in plenty of luke-warm water. It acts promptly and thoroughly, except in cases where the vomiting apparatus is paralyzed. In such instances the stomach pump or lavage tube should be used.

SOLANUM CAROLINENSE.

The root and fruit of *Solanum Carolinense*, Linné (Nat. Ord. Solanaceae). Waste places and fields in eastern half of the United States. **Dose**, 10 to 30 grains.

Common Names: Horse-Nettle, Bull-Nettle, Sand Brier, Treadsoft.

Principal Constituents.—Solanine, solanidine, solanic acid, and solnine, a crystallizable alkaloid isolated by John Uri Lloyd, and physically resembling hydrastine.

Preparation.—*Specific Medicine Solanum.* **Dose**, 10 to 30 drops.

Specific Indications.—Epileptiform convulsions of idiopathic origin; hystero-epilepsy; spasmodic cough.

Action and Therapy.—Solanum is antispasmodic, and for this effect has been extolled as a remedy for idiopathic epilepsy, in which extraordinary claims are made for it; and of lesser value, in petit mal. As large doses are required its effects may border upon the poisonous. Hare asserts that he has reduced the force and frequency of epileptic attacks with it; and most observers claim that it acts best when the attacks are severest at or when provoked by or occurring in the menstrual period. It has been used also in chorea, but not with marked benefit. We have found it a good modifier of the paroxysms of whooping cough. Altogether its virtues are much overrated .

SPIGELIA.

The dried rhizome and roots of *Spigelia marilandica*, Linné (Nat. Ord. Loganiaceae). Southern United States; less plentiful in northern parts of eastern half of the Northern States. **Dose**, 1 to 2 drachms for adults; less for children.

Common Names: Pinkroot, Maryland Pink, Carolina Pink, Worm-grass.

Principal Constituents.—A volatile alkaloid, *spigeline* (resembling coniine and nicotine), volatile oil, resin, and a bitter body.

Preparations.—1. *Specific Medicine Spigelia.* **Dose**, 5 to 60 drops (full dose as anthelmintic).

2. *Fluidextractum Spigelia et Senna*, Fluidextract of Spigelia and Senna. **Dose**, 30 to 60 drops.

Specific Indication.—Lumbricoids.

Action and Toxicology.—In large doses spigelia is toxic, causing increased cardiac action, cerebral disturbances, as dizziness, dimness of vision, dilated pupils, facial and palpebral spasms, general convulsions and stupor. Purgation often results from such quantities. Catharsis minimizes the danger of unpleasant symptoms, therefore it is usually administered with a cathartic, as senna.

Therapy.—Pink root is an active and very certain vermifuge, removing the round or lumbricoid intestinal worm. The powdered root (5 to 20 grains for a young child; 1 to 2 drachms for an adult) or the

fluidextract, or specific medicine in equivalent dosage may be given twice a day, together with or followed by an active purgative. Senna is usually preferred. Ellingwood advises Rx Fluidextract of Spigelia, 2 fluidrachms; Santonin (powdered), 15 grains; Simple Elixir, enough to make 2 fluidounces. Mix. Sig.: One teaspoonful every night and morning, followed on the third day by a non-irritating laxative. Many who are old enough will recall the days of domestic medication when pink and senna (popularly pronounced seeny) tea was a regular feature of child raising.

Interest has been attracted to spigelia, chiefly of homeopathic origin, as a remedy in heart affections, particularly endocarditis of rheumatic origin and to guard against relapses of cardiac rheumatism. Cardiac neuralgia with palpitation and pain extending along the arm is also said to be relieved by it. For these purposes the fractional dose is to be preferred. Rx Specific Medicine Spigelia, 10-15 drops; Water, 4 fluidounces. Mix. Sig.: One teaspoonful every two hours. Large doses are said to debilitate the heart.

SPONGIA USTA.

Burnt Sponge, Spongia Tosta.

The skeleton of *Spongiaofficinalis*, Linné, Class: Poriphera; Order: Ceratospongia, roasted brown in a closed vessel and reduced to powder. *Dose*, 30 to 180 grains.

Preparation.—*Specific Medicine Spongia.* *Dose*, 1 to 10 drops.

Specific Indications.—Croup; enlarged thyroid.

Action and Therapy.—Spongia is believed by some to have alterative properties depending upon iodine and bromine and associated compounds derived from the sea. For this purpose it has been quite largely used in cases in which iodine is apparently indicated, as goitre. It is thought to act better than iodine in some forms of the latter. Spongia is much employed also as a remedy for laryngeal irritation, and it seems to have been remarkably effective in croup and croupal types of cough.

STAPHISAGRIA.

The ripe seeds of *DelphiniumStaphisagria*, Linné (Nat. Ord. Ranunculaceae).

Mediterranean Basin; cultivated. **Dose**, 1 to 2 grains.

Common Name: Stavesacre.

Principal Constituents.—Fixed oil; a poisonous crystalline alkaloid, *delphinine* (C₂₂H₃₅O₆N), acting like aconite; an amorphous narcotic alkaloid delphinoidine (C₄₂H₆₈O₇H₂), delphisine (C₂₇H₄₆O₄N₂), a crystalline alkaloid, a slightly water-soluble alkaloid, staphisagrine (C₂₂H₃₂O₅N), and the alkaloid staphisagroine (C₂₀H₂₄NO₄). The first three alkaloids are soluble in alcohol, chloroform and ether.

Preparation.—*Specific Medicine Staphisagria*. **Dose**, 1 to 5 drops.

Specific Indications.- “Irritation and chronic inflammatory conditions of the genito-urinal tract; painful, scalding micturition; prostatorrhoea; urinal incontinence in aged men; urethral irritation, with a sensation of incomplete urethral evacuation—a sensation as if a drop of urine were rolling along in the canal; menstrual derangements, with long intermenstrual intervals and prolonged flow; spermatorrhoea in anemic subjects; depression of spirits; hypochondriasis; hysteria, with uterine or ovarian irritation, despondency, moroseness, and violent outbursts of passion; black specks before the eyes in reading; mental irritability and restlessness in painful and exhaustive diseases; uterine disorders, with feeble pelvic circulation; deep-seated soreness, dragging and bearing-down pains; leucorrhoea; and painful urination.” (*American Dispensatory*.)

Action and Toxicology.—In small doses staphisagria quiets nervous irritation. In large doses it is a depressive poison, acting very much like aconite to which it has a close botanic relationship, but does not produce such intense benumbing and tingling effects as the latter. It causes decided gastro-intestinal irritation and depresses the heart and circulation, and the motor tracts of the cord. Its topical use has proved fatal to a child, and its toxic symptoms are closely analogous to those of poisoning by aconite. It kills by paralyzing the respiratory centers (asphyxia). One of its alkaloids has narcotic properties; and another, delphinine (dose 1/60 to 1/10 grain), has an acrid and benumbing taste and an action much like aconitine, an action which is possessed in greatest force by the combined alkaloids of stavesacre. It is exceedingly poisonous.

Therapy.—External. Locally staphisagria seeds are parasiticide and analgesic. Delphinine, though it should not be employed, acts upon painful areas like veratrine. The powdered seeds may be mixed with fats and applied for the destruction of pediculi. An ointment (4 parts in 20 of benzoinated lard) is a good form. Equally effectual and more manageable is an equivalent dilution of the specific medicine with vinegar, dilute acetic acid or ether. It must not be used unless the skin is intact, and then with caution as to quantity. It is also said to be fatal to the itch mite which causes scabies.

Internal. Staphisagria is sedative and a remedy of limited power in irritation of the mucous membrane of the genito-urinary tract and some phases of nervous disorders. It is contraindicated by active inflammation. From a very early date its local application has been credited with the destruction of pediculi. As Scudder recorded some years ago, the nervous conditions best met with staphisagria are those shown by hysteria and hypochondriasis with depression of spirits, despondency, moroseness, and violent outbursts of passion. As a rule, the sexual disorders benefited by staphisagria are those accompanied by nervous depression, or at least by marked irritability. When properly indicated, it proves useful in the treatment of prostatorrhoea, spermatorrhoea resulting from masturbation, in chronic irritation or inflammation of the genito-urinary tract resulting from gonorrhoea or from cold, and in prostatitis, gonorrhoeal or otherwise, all of these conditions being associated with depression of spirits and a sense of restlessness and irritation along the course of the urethra. It is especially useful in renal incontinence of old men with teasing desire to urinate frequently, and in the urinary annoyances attendant upon uterine disorders. It will not relieve all cases of spermatorrhoea, but if carefully prescribed, according to indications it will prove beneficial in the majority of cases. The best marked indication we have found for staphisagria is a sense of incomplete urination with a feeling as if a drop of urine were constantly attempting to pass along the urethral canal. The indications for staphisagria, as concisely stated by us in the *American Dispensatory*, are given here under *Specific Indications*.

STICTA.

The lichen *Sticta Pulmonaria*, Linné (Nat. Ord. Lichenes). Found upon tree trunks and rocks in England and the eastern United States, mostly in mountainous districts.

Common Names: Lungwort Lichen, Lung Moss, Oak Lungwort, Tree Lungwort.

Principal Constituent.—Stictic acid, allied to cetraric acid from Iceland moss.

Preparation.—*Specific Medicine Sticta.* *Dose,* 1/10 drop to 10 drops.

Specific Indications.— “Pain in the shoulders, back of neck, and extending to the occiput” (Scudder). Soreness and dull pain in the pectoral muscles, increased by deep breathing; irritation of the medulla, and parts supplied by the vagus; irritative cough; persistent dry, rasping wheezing, or short, hacking cough, with quick-darting pains in the thoracic walls; hay fever with headache; catarrhal disorders with frontal tension, sneezing, coryza and conjunctival hyperaemia or inflammation.

Action and Therapy.—*Sticta* relieves pain and muscular soreness confined chiefly to the neck, head, and chest, and irritation in parts supplied by the vagus. Thus it proves useful in so-called subacute rheumatic pain extending from the shoulder to the base of the occiput, or in the chest walls, or the smaller joints. Muscular pain accompanying catarrhal fever and epidemic influenza is relieved by it. Over the various types of cough described under specific indications it has a controlling force, provided there is atony and the pneumogastric is involved. When these conditions prevail it has aided in the reduction of fever, and checked chills and night sweats, thus giving comfort in pulmonary tuberculosis. Sick headache, acute catarrhal disorders, whooping cough, summer colds, etc., accompanied by cough and muscular soreness, have been reported benefited by it. The pulse in *sticta* cases while soft, has a peculiar wire-like vibration or thrill. The chest soreness relieved by it simulates lameness, is increased by taking a deep breath, and feels like that arising from a bruise or muscular overexertion.

STILLINGIA.

The dried root of *Stillingia sylvatica*, Linné (Nat. Ord. Euphorbiaceae). Southern United States growing in sandy soils. *Dose,* 5 to 60 grains.

Common Names: Queen's Root, Queen's Delight, Silver Leaf, Yaw Root.

Principal Constituents.—Tannin, sylvacrol, an acrid resin-volatile oil;

doubtfully an alkaloid, stillingine.

Preparations.—1. *Specific Medicine Stillingia*. *Dose*, 1 to 30 drops.

2. *Linimentum Stillingia*, Compositus, Compound Stillingia Liniment (Stillingia Liniment). (Contains Oil of Stillingia, 1 fluidounce; Oils of Lobelia and Cajuput, each, 1/2 fluidounce; Alcohol and Glycerin, each, 2 fluidounces.) *Dose*, 1 to 5 drops.

Specific Indications.—Feeble tissues, with tardy removal of brokendown material, and slow reconstruction of tissues; mucosa red, glistening and tumid, with scanty secretion; skin lesions, with irritation and ichorous discharge; periosteal pain and nodes; syphilitic and strumous cachexia; laryngeal irritation with paroxysmal hoarse croupal cough; post-faucial irritation with cough; irritative winter cough.

Action and Therapy.—Stillingia is an important alterative when a good preparation can be procured. Much of the failure to achieve results with it has come from the use of medicines prepared from old and worthless material. Large doses of an active preparation will cause increased cardiac activity, excessive bronchial secretion, vomiting and bilious purging, with a peculiar gastro-intestinal burning sensation, and more or less resultant prostration. For a long time it has been praised as a remedy for syphilis, and discordant views are expressed by clinicians as to its value as such. We do not believe it antisiphilitic, but it is one of the best alteratives that can be exhibited in syphilitic and strumous cachexias, greatly aiding other and more powerful agents, as the iodide of potassium. In all phases of secondary syphilis—cutaneous syphilides, mucous patches, ulcers, and periosteal pain and nodular and glandular enlargements—it renders good auxiliary service through its depurative action. It must not be misunderstood, however, that any claim to a cure of syphilis by stillingia can be justified by past experience. Nevertheless, it is one of the best of remedies to modify the disease and assist other agents to cure. The best indication for it is the red, shining or glistening mucous membranes with scanty secretion, and the presence of retained debris of tissue waste with tardy repair of structure.

While sometimes used early in syphilis, during the primary stage, we can see no reason for its use before broken-down products begin to appear as it is not *per se* an antisiphilitic; and experience has shown the drug to be of the greatest value in the secondary stage of the

disorder.

Stillingia is valuable, though less so than Stillingia Liniment (see below) in laryngeal irritation and cough, and other irritative states of the bronchi and faucial arch, with repressed secretion. Thus it may be used in chronic laryngitis, chronic bronchitis, the chronic coughs of the strumous individual, where glandular swelling and scanty elimination are evident. It is one of the most effectual drugs we have ever used for the irritable winter cough of the middle-aged and old. Stillingia may be used in chronic periosteal rheumatism, so-called, of unproved origin, but probably syphilitic; and in skin diseases having a remote syphilitic history.

Hare advises its use in chronic constipation to increase intestinal secretion, and for hemorrhoids depending upon "hepatic engorgement and intestinal atony. Likewise for 'pasty-looking', white, 'putty-faced' children, who are anemic or strumous, and who never have any appetite, or are subject to middle-ear trouble and general debility"; the remedy to be used for some time.

Compound Stillingia Liniment. This compound produces both stimulation and relaxation. Locally applied to the throat and chest and given internally on sugar or in syrup this is one of the most perfect remedies for spasmodic and catarrhal croup of young children. A cloth wet with cold water applied around the neck and covered with a dry binder enhances the value of the treatment. Many cases of acute cold and sore throat are speedily arrested by the same treatment. We would be at a loss to treat croup and croupal coughs without this admirable heritage from the Eclectic pioneer physicians. Sometimes spasmodic asthma is promptly checked by it. Pushed too far stillingia liniment causes nausea and vomiting, but it is never necessary to carry it to such a stage. A few drops upon sugar, or in glycerin or syrup, promptly relieve dry, rasping, laryngeal cough, and in chronic bronchial cough with either scant or profuse expectoration it gives splendid results. Stillingia liniment is sometimes used like other embrocations for lame, rheumatic, inflamed, and otherwise painful parts; and with very gentle massage it gives relief to the soreness of the chestwalls from difficult breathing experienced by consumptives, as well as the pains in the limbs so frequently a torture to this class of sufferers.

STRAMONIUM (*Datura spp.*).

The dried leaves of *Datura Stramonium*, Linné, or of *Datura Tatula*, Linné (Nat. Ord. Solanaceae). A common weed everywhere in the United States, especially the latter. *Dose*, 1 to 2 grains.

Common Names: Jamestown Weed, Jimson Weed, Thornapple. h

Principal Constituents.—The chief datura alkaloids are *hyoscyamine*, and some *atropine*, and *hyoscyne*. *Daturine* is probably a mixture of the first two. (See also *Hyoscyamus* and *Belladonna*.)

Preparations.—1. *Specific Medicine Stramonium*. *Dose*, 1/30 to 5 drops.

2. *Unguentum Stramonii*, Ointment of Stramonium. Best preparation is that carefully prepared by simmering fresh stramonium leaves with petrolatum, on a water bath, so that burning cannot take place. The official ointment is prepared from extract of stramonium.

Specific Indications.—Cerebral irritation; furious raging and destructive delirium; face deeply congested, red, and bloated; loquaciousness; restlessness and fearfulness; superficial and localized pain; spasms with pain; convulsive cough; purely spasmodic asthma; the opium habit.

Action and Toxicology.—The action of stramonium is closely similar to that of belladonna. If anything, it has a more profound effect upon the sympathetic system and upon the vagus. If the dose be large enough it will disturb the rhythm of the heart action and induce delirium, exerting these effects more readily and more powerfully than does belladonna. Stramonium is probably the most violent deliriant of the solanaceae. Its alkaloid daturine is closely akin to, if not identical with, hyoscyamine. American manufacturers are now utilizing stramonium for the preparation of atropine from daturine, and during the year 1917 of the great World War this source practically prevented an atropine famine in the American drug markets.

Therapy.—*External*. Fomentations of stramonium leaves, or the bruised fresh leaves may be applied to inflamed and painful parts to reduce swelling and relieve pain. In this manner it is often useful in mammitis, orchitis, swollen joints, and painful external hemorrhoids. An ointment of stramonium, carefully prepared without burning it, is an excellent application for painful and engorged piles, or as the

ointment basis for other agents to be used for the same purpose. It is also soothing in cutaneous hypertrophy around the anus with intolerable itching and sometimes semipurulent secretion. It is rendered more effective by incorporating with it 5 to 10 per cent of salicylic acid. Stramonium leaves, alone, or with tobacco, lobelia, grindelia, and nitrate of potassium are universally employed as an "asthma powder". It is used by igniting the powder and inhaling the vapors, or by smoking it in a pipe or in the form of cigarettes. It is among the most prompt of measures for the temporary relief of the paroxysms of purely spasmodic asthma.

Internal. The specific indications for stramonium are those indicating impaired innervation. The face is red and bloated and of a deeper congestive appearance than that for belladonna; there is continual talking and the patient is uneasy, cannot rest well in any position, and is possessed of an ungrounded fear. There may or may not be furious, enraged, or destructive delirium. Localized and superficial pain, or spasm with pain, is experienced. It is also indicated by convulsive cough, and purely spasmodic asthmatic attacks. When the dyspnea is dependent upon respiratory or cardiac lesions it is less useful. In all stramonium cases there is ***cerebral irritation***—causing most often violent excitability or less frequently depressive irritability. The dose, therefore, should be governed accordingly; medium doses for the former, minute doses for the latter. In no instances are the full physiologic doses necessary except in the cure of the opium habit, when the drug may be pushed to the full limit of endurance. It remains to be seen whether permanent damage may be done to the intellectual faculties from such dosage, as is the case with atropine.

In medicinal doses stramonium is an anodyne antispasmodic, without causing constipation or lessening of the excretion of urine, and will prove serviceable in many instances where opium cannot be given. Unlike hyoscyamus it does not readily produce sleep, but if sleep results from its administration, it is generally due to the fact that the stramonium alleviates the pain, or allays the nervous irritability upon which the insomnia depends. It is quite remarkable that a plant so closely allied to belladonna chemically should be so different in some of its therapeutical effects, and particularly in regard to alleviating pain. Thus for deep-seated pain, as of neuralgia, it is far less effective than belladonna, but for superficial neuralgia, and especially when locally applied, it is more effective than the former. It illustrates well

the fallacy of claiming certain effects from a medicine because of the known physiological action of the drug—the therapeutical effects often being widely at variance. Bartholow well expressed the situation and unconsciously forecast colloidal therapy when he observed: “Identity of chemical constitution does not always mean identity in physiological action and in therapeutic power. Differences in molecular arrangement, not appreciable by chemical analysis, may influence to a great extent mode of action”.

Stramonium is useful for the relief of pain, but less so in general than belladonna. When pain is due to irritability, as in enteralgia, gastritis, and enteritis, neuralgic dysmenorrhea, spasmodic intestinal pain, tic douloureux, sciatica, and the pains of chronic rheumatism, it is useful but does not compare with either belladonna or hyoscyamus, either of which are incapable of subduing severe pain. Stramonium serves well, however, in headache, with dizziness and hyperacidity of the stomach, and in gastric headache when associated with nervous erethism and unsteadiness.

Like hyoscyamus, stramonium meets two classes of nervous and mental disorders—the mentally excited, with furious delirium and motor-excitability; and the depression of nervous debility. The first requires medium doses; the last the small dose. In the acute delirium of acute mania it quiets the violent, boisterous and angry patient bent upon destruction of everything and everybody, including himself. Equally effective is it in the quieter and busy delirium of acute fevers. It finds a use in delirium tremens, nymphomania, in epilepsy followed by maniacal excitement, in hysterical mania with alternate fits of weeping and laughter, and in globus hystericus.

Stramonium has been revived in recent years as a remedy to assist in breaking away from the opium habit, and considerable success has attended its use. This is now possible since the nature of the alkaloidal contents of this and the allied solanaceous drugs are better understood. Many years ago Locke advised the following formula: Rx Specific Medicine Stramonium, 1/2 fluidounce; Tincture of Cardamom, 3 1/2 fluidounces. Mix. Sig.: Begin with ten drop doses and increase as may be necessary.

Stramonium is invaluable in convulsive forms of cough and should have wider recognition for this purpose, in which it is fully equal to

hyoscyamus. It is the best agent we have used to control whooping cough where the paroxysms are severe and bleeding from the mouth or nose occurs. As a general cough medicine it is better and safer than opium, because it does not restrain the excretions. Like atropine it is useful in hemoptysis brought on by fits of coughing or during spasms.

STROPHANTHUS.

The dried ripe seeds of *StrophanthusKombé*, Oliver, or of *Strophanthus hispidus*, DeCandolle, deprived of their long awns (Nat. Ord. Apocynaceae). West and east coast of tropical Africa. *Dose*, 1 to 2 grains.

Principal Constituents.—*Strophanthin* (C₃₁H₄₈O₁₂—8 to 10 per cent), a bitter glucoside yielding glucose and strophanthidin (see below), kombic acid, inert alkaloid ineine and tanginin.

Preparation.—*Tinctura Strophanthi*, Tincture of *Strophanthus*. *Dose*, 1 to 10 drops.

Derivative.—*Strophanthinum*, Strophanthin. Commercial strophanthin is a glucoside or mixture of glucosides occurring as a permanent white or yellowish powder, readily soluble in water and diluted alcohol; less soluble in absolute alcohol; and almost insoluble in ether and chloroform. It should not be tasted except in very dilute solution. *Average Dose*, 1/60 grain (by mouth); 1/80 grain (intravenously).

Specific Indications.—Weak heart, due to muscular debility; muscular insufficiency; rapid pulse, with low blood pressure; cardiac pain, with dyspnea.

Action.—Externally applied, strophanthus preparations appear to exert no special effects unless mixed with hydrous wool fat, when the action of the drug is said to be apparent. The seeds, however, applied to the cornea produce prolonged anesthesia (Steinbach). Three or four drops of a solution of strophanthin (1 to 1000) applied to the cornea also produce total anesthesia, including insensibility to heat and cold (difference from cocaine), these sensations being the last to yield and the first to revive after its application. De Schweinitz and Hare found that ocular anesthesia occurs only in dogs, not in man. A disagreeable irritation of the conjunctiva has been produced by this use of strophanthin; it has no effect on intraocular pressure or upon vision - accommodation. *Strophanthus* is a muscle poison. When taken internally it acts primarily upon the voluntary muscles, increasing

their contractility, and if the dose be poisonous it causes tetanic paralysis, the muscles being unable to regain their former normal flexibility. Under its toxic influence the muscles first become enfeebled, then somewhat rigid, fibrillary twitchings, which are spontaneous, non-rhythmical and increasing contractions, somewhat similar to those of chorea, are observed, and finally the muscles become pallid, non-contractile and hard. It is these effects that render strophanthus an efficient arrowpoison, the muscular paralysis produced rendering the animal an easy prey to its pursuer. When the muscles are in extreme paralysis, lactic acid has been observed to replace the normal alkaline condition. Strophanthus muscular paralysis consists chiefly in diminishing the ability of the muscles to relax, and then in destroying this capability, producing a condition difficult to distinguish from rigor mortis.

Strophanthus does not appear to affect either the spinal cord or to act upon its nerve trunks. Its specific action upon the heart is due to direct contact (through the blood) with the muscular fibres of that organ, and not to any effect upon the cardiac nerves. A large dose so increases contractility that a more perfect, energetic, and prolonged systole is the result, and the capability of the muscle to relax is lost, or so diminished that diastole can not take place; after death the ventricle is so completely contracted as to almost efface the cavity, the heart passing from life directly into *rigor mortis*. According to some it may cease either in systole or diastole. The caliber of the blood vessels is but little influenced by strophanthus, it having no effect upon the vaso-motor control. It is strongly diuretic in so far as lack of secretion depends upon low blood pressure, i. e., it increases diuresis in so far as increased blood pressure produces an increased urinary product. It is also thought by some to act especially upon the renal secreting structures. When one is in good physiological condition it is said to have little or no diuretic action; but in diseased conditions, with low blood pressure, it is asserted to excel digitalis in diuretic power.

If strophanthus be given in large doses it produces gastro-intestinal irritation with vomiting and diarrhoea. Small doses, however, act as a bitter tonic, improve the appetite, augment gastric action, and promote digestion. In proper doses it strengthens the heart-muscle, slows cardiac action, increases the interval between beats, reduces the pulse-rate, and powerfully increases arterial tension (but less so than digitalis), not by any effect (to any extent at least) upon the vessels, but

by strengthening the heart-muscle, giving increased power. Whether or not the drug is cumulative is still an unsettled question, though it probably is not unless given too freely in overlapping doses. The action of a good strophanthus upon the heart is probably greater than that of any other drug, and its active principle, when pure, is of far greater potency than the digitalis derivatives.

Therapy.—Strophanthus is a remedy for *weak heart* from debility of the cardiac muscle, with lack of proper contractile power, as shown by a rapid, weak pulse, and very low blood pressure. The disordered action of the heart is due to lack of tonicity and not from weak walls due to deposition of fat, in which case the drug must be used with extreme circumspection, though in small doses it has been recommended by some as a remedy for cardiac fatty degeneration, as it has also in atheroma of the arteries in the aged. It is also a remedy for praecordial pain and for cardiac dyspnea. It has been strongly endorsed in heart affections with disorders of compensation. Strophanthus is useful in valvular heart disease only so far as there is muscular insufficiency, where the compensatory increase of muscular action is not sufficient to offset the valvular insufficiency. “It has been reported useful in cases of mitral regurgitation with dilatation; mitral stenosis with regurgitation; regurgitation with edema, anasarca, dyspnea, etc.; mitral insufficiency with palpitation, praecordial pain, cyanosis, dyspnea, etc.” (*Annual of Eclectic Medicine and Surgery*, Vol. I, page 25.) Schiller (*ibid.*, page 40) says: “When the balance in the circulation has become impaired, as a result of insufficiency of the valves of the heart from organic disease with a general dropsical condition, strophanthus, although affording temporary relief in some cases, has failed in every case in my hands to reestablish the compensation. The result was the same whether the mitral, the tricuspid, or the semilunar valves were most involved.” These are the cases of heart disease in which digitalis is the remedy. However, evidence is strong to show that when the muscular insufficiency can be corrected in these cases then the remedy will do good service. Schiller looks upon the drug as a remedy for what is ordinarily termed functional heart disease, when not sympathetic. The heart-action is rapid or abnormally slow, or the rhythm is bad, a condition common in school children at puberty when forced to overstudy. Strophanthus is well endorsed as a remedy for the irritable heart of tobacco smokers, masturbators, and those addicted to the use of alcoholics and narcotics.

Acute endocarditis and the reflex palpitation of neurasthenic, hysterical, and chlorotic subjects have been signally benefited by strophanthus, while it appears to give better cardiac power during or after typhoid and other adynamic fevers, when heart failure threatens. It should be remembered as a remedy for threatened cardiac failure in any disease. Full doses should be given for the relief of angina pectoris, and the remedy should be continued for a period after the attack. It is less efficient, because slower in action, than amyl nitrite or nitroglycerin, but may be given for more permanent effects after the evanescent action of these agents has passed off. In pulmonary congestion and in acute bronchitis or acute pneumonia it may be employed when there is deficient heart power.

Strophanthus has been praised for prompt results in cardiac asthma and bronchial asthma, with edema; in whooping cough it has many advocates. Goitre is asserted to have been cured with it, and large doses (8 to 25 drops of the tincture several times a day) have been said to cure a large proportion of cases of exophthalmic goitre, with irregular cardiac action. Schiller reported great relief to the heart symptoms in two cases of exophthalmic goitre, with disappearance of the bronchocele in one case (*Annual of Eclectic Medical and Surgery*, Vol. I, page 40). Strophanthus has also been lauded as a remedy for chronic nephritis, with albuminuria, in anasarca, and in ascites from hepatic cirrhosis. It is of little value in edema and other forms of dropsy or kidney affections unless dependent upon cardiac disorders.

Strophanthus does not take the place of digitalis, each having its own field of action. It may, however, follow the use of other heart tonics, and particularly those evanescent in action, as amyl nitrite and nitroglycerin. As it does not affect the caliber of the vessels, it may be used in preference to digitalis when it is not desirable to add extra work to the heart. It is well borne by the aged and by children. Wilcox (*Materia Medica*) sums up the advantages of strophanthus over digitalis as follows: "Greater rapidity, modifying pulse-rate within an hour or two; less marked vaso-constrictor effects; greater diuretic powers; no disturbance of digestion from properly made preparations; absence of so-called cumulation; greater value in children; great safety in the aged." He further summarizes its uses as follows: "It should, therefore, be the remedy of choice for all patients in whom we wish to establish compensation; for arterial degeneration in which a remedy which causes more energetic cardiac contraction is required; for cardiac

disease when a diuretic is necessary; for weak or irritable hearts; and for the treatment of cardiac disease in childhood or old age." These we would qualify by adding when the heart-muscle is at fault.

Strophanthus should be avoided or very cautiously used in advanced muscular degeneration, in pronounced mechanical defects of the heart, and in fully and over-compensated hearts. Strophanthus is also contraindicated in aneurism, advanced myocardial degeneration, and in well developed atheroma and arteriosclerosis. Unfortunately there is a great variation in strength in various batches of tincture of strophanthus owing to lack of uniformity in the crude drug employed. The dose of tincture of strophanthus is from one to ten drops; of strophanthin, 1/500 to 1/60 grain, all of which should be cautiously administered.

SUMBUL (*Ferula sumbul*).

The dried rhizome and roots of *Ferula Sumbul* (Kauffmann), Hooker filius (Nat. Ord. Umbelliferae). Northeastern and central Asia, coming into market through Russia. *Dose*, 5 to 60 grains.

Common Names: Sumbul, Musk-Root, Jatamansi.

Principal Constituents.—A musk-odored volatile oil, aromatic resin, balsam, and angelic, valeric, and sumbulic acids.

Preparation.—*Fluidextractum Sumbul*, Fluidextract of Sumbul. *Dose*, 10 to 60 drops.

Action and Therapy.—Sumbul is a stimulating tonic to the nervous system, and for that purpose is employed chiefly with associated nervines, in asthenia and nervous depression. It is particularly adapted to neurasthenia and nervous exhaustion of anemic or chlorotic women to allay nervous unrest and impart tone. Many physicians employ it as a nervetonic and reconstructive in convalescence from prolonged illness.

SYMPHYTUM.

The root of *Symphytum officinale*, Linné (Nat. Ord. Boraginaceae). Europe; naturalized in the United States.

Common Name: Comfrey.

Principal Constituents.—Mucilage in quantity, tannin and asparagine.

Preparation.—*Tinctura Symphyti*, Tincture of Symphytum (recent root, 8 ounces; Alcohol, 16 fluidounces). Dose, 1 to 10 drops.

Action and Therapy.—This drug is chiefly mucilaginous and used, therefore, as a demulcent in pulmonary, gastric, and renal irritation and inflammations. With many it is a favorite for irritative cough, with bloody expectoration; and in mucous disorders with a tendency to hemorrhage. In ancient days it was lauded as a vulnerary, even to promoting the quick healing of fractured bones, a myth that was more recently revived in England because of the discovery of a principle (allantoin) found in the plant.

monographs extracted from
The Eclectic Materia Medica, Pharmacology and Therapeutics
by Harvey Wickes Felter, M.D. (1922)

NOTE: Throughout these monographs are references to “Specific Medicines”. In some respects Specific Medicines are the single reason that Eclecticism survived so long in the face of “Organized Medicine” and were still being manufactured for the surviving Eclectic M.D.s as late as the early 1960s. Using up to eight organic solvents and the Lloyd Extractor, Specific Medicines represented the strongest possible concentration of the bioactive aspects of botanicals that would stay in a colloidal solution.

Perfected over four decades by John Uri Lloyd, each Specific Medicine was prepared according to the nature of THAT specific plant. You cannot translate a Specific Medicine into “tincture” or “fluidextract”. The latter are GENERIC or standard strengths applied across the board to ALL botanicals. A Specific Medicine represented the greatest strength, without degradation, for a PARTICULAR plant, using anywhere from several to all of the solvents to achieve this. The Eclectic physician was trained to use botanicals in an oftentimes rural setting, and these medicines had to resist breakdown in the deepest winter and the hottest summer. Since they needed to contain even the most ephemeral constituents of a plant remedy, Lloyd approached each plant separately.

The amazing quality of these preparations assuredly maintained the Eclectic Movement long after others had faded. Lloyd’s recipes were Patent Medicines, were not “official”, and when relatives finally closed down the Lloyd Brother’s Pharmacy in Cincinnati, these formulae disappeared. One of the hottest topics for many years amongst professional herbalists in North America and Europe has been “So who has the Lloyd Formulas, already?” Since we cannot access them, the best approach is the use of well made tinctures, capsules or tea. I might suggest the preparations and doses recommended in my Herbal Materia Medica 5.0 as a starting place...in many respects I am perhaps a “Neo-Eclectic” at heart, and have tended to follow the later Eclectics in my approach to plants and dosages.

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October, 2001