

believing the roots and leaves have the same properties.⁴⁴ Asian Indians consider the root alexeteric and emetic, its aqueous extract useful in obstinate coughs. Roots are topically applied in snakebite. Leaves are steeped with mustard as a liniment for rheumatism. Since it is extremely dangerous medicine, I resort to quotation in self defense: "Taken internally by women, the seed disturbs the uterine functions and prevents conception".²⁶ The seed pasted with lumbago root is applied as a stimulant dressing to leprosy. According to Perry, "A decoction of the seeds has been used as a counteragent in treating conjunctivitis, or trachoma, but this is so drastic that the practice has been dropped."¹⁶ The Indians suggest the seeds for paralysis, sciatica, skin diseases, stiffness of the shoulder, and other nervous diseases. Chinese use the seed for dropsy, fever, headache, malaria, and worms. Indochinese use the plant for conjunctivitis, diarrhea, dysentery, and malaria. Malaysians chew or drink decoctions of the leaves or roots, for colic, colds, or cough. Indonesians use the leaves for hoarseness and sore throat and sprue. In Palau the root is used for arthritis and leprosy. Philippines, in addition to the regional uses, also bathe newly-born children in the stem and leaf decoction, especially if they are weakly. Africans, like Brazilians and Indians, also use the plant in ophthalmic remedies. Is this coincidence, doctrine of signatures, or coevolution of empirical wisdom so well founded in traditional medicines? East Africans use the seed for gonorrhea and other venereal diseases. Conversely they use the root as an aphrodisiac and for snakebite. Central Africans use the seed for ophthalmia, snakebite, ulcers, and worms. West Africans use the leaves as a CNS sedative, for conjunctivitis, constipation, cough, cancer, convulsions, enteritis, hoarseness, freckles, leucoderma, stomatitis, spermatorrhea, and syphilis; the root for chest complaints, gonorrhea, hookworm, jaundice, pleurisy, rheumatism, sore throat, and snakebite. West Indians use the leaves in teas for chest cold, cough, fever, and flu, the seeds for conjunctivitis and worms.⁷² Latin Americans use the plant for asthma, burn, colds, cough, fever, flu, headache, hernia, rheumatism, sore throat, trachoma, tuberculosis.⁴² Peruvians add the leaves to their chew of coca leaves for the licorice flavor they impart.⁷² Orientals use the leaf for colic, cold, cough; the seed for abortion, fever, ophthalmia; antimalarial in Cambodia, anthelmintic, antiperiodic, diaphoretic, expectorant, sudorific; for dropsy, fever, headache, malaria, and worms, the root for cough and cold, colic, the plant for cancer, aphthosa, and epitheliomas.⁴¹

Per 100 g, the leaves contain 62 calories, 79.0% water, 5.6% protein, 13.7% total carbohydrate, 3.7 g fiber, 1.7 g ash, 266 mg Ca, and 65 mg P.²¹ Glycyrrhizin is reported from the root (1.25%) and leaves (10%). Abrin (N-methyltryptophane) consists of two fractions, a globulin and an albuminose. In microgram levels, subcutaneous injections of abrin are lethal. Defatted seeds contain 5.9% polygalacturonic acid, 0.2% pentosan, and 32% reducing sugar calculated as galactose. Seeds contain gallic acid and hepaphorine.³³ Abraline, abrin, abrine, abruccic acid, campesterol, 5 beta-cholanic acid, cycloartenol, precatarine, squalene, and trigonelline are also listed.⁴¹

Toxicity — Juice irritates the mucous membranes. Necklaces made of the pierced seeds may induce dermatitis.⁶ Seeds contain the toxin abrin. Human fatalities are reported. One chewed seed may be lethal,⁵⁶ or 5 mg abrine.⁴² Lethal doses may run about 0.01 mg/kg body weight.³³

To the Physician — External cooling, fluids, electrolytes, calcium gluconate, arecoline.¹