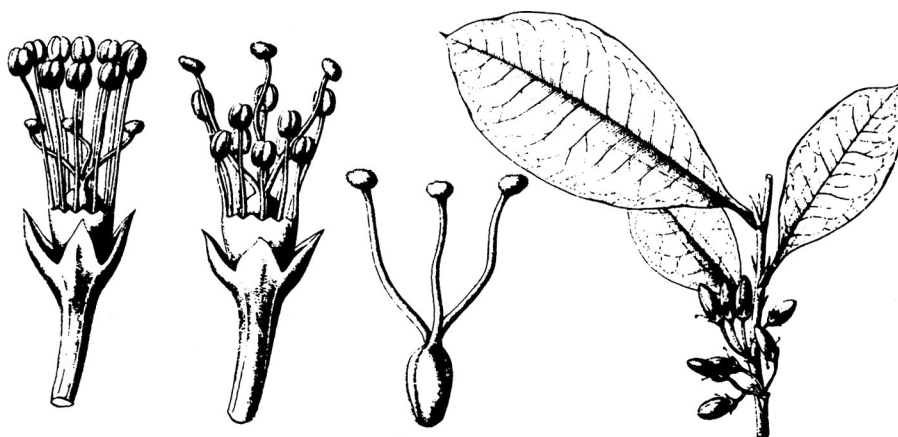


133. *ERYTHROXYLUM COCA* Lam. (ERYTHROXYLACEAE) — Coca

Cocaine, the widely known anesthetic, is derived from the shrub. Inca Indians regarded coca as a divinity. Coca is the only source of cocaine, which rapidly stimulated the higher levels of the brain, giving one a sense of boundless energy and freedom from fatigue. "It was one of the ingredients of Coca Cola, together with *Cola nitida*, until 1904 when the U.S. courts ruled against its use."⁵⁴ Cocaine ointment has been used for eczema, pruritus, urticaria, the pain of hemorrhoids, and facial neuralgia. Cocaine exerts a powerful bactericidal action on Gram-negative and coccus organisms but not on sporogenic organisms.¹

Reported to be anesthetic, anodyne, aperient, aphrodisiac, astringent, bactericidal, carminative, deobstruent, depurative, digestive, diuretic, hallucinogenic, mydriatic, narcotic, nervine, psychedelic, stimulant, coca is a folk remedy for asthma, cancer, conjunctivitis, dyspepsia, edema, epistaxis, fractures, gout, headache, hoarseness, hypochondria, itch, melancholy, nausea, nervousness, neuralgia, neurasthenia, neuritis, piles, rheumatism, sideache, sores, soroche, splenosis, stomachache, stomatitis, swellings, syncope, throat, and wounds.^{32,33} Wine fortified with coca was once sold as *Vin Mariani* as analgesic and anesthetic; claimed, also, to alleviate gastritis, gingivitis, and stomatitis.

Per 100 g, the leaves are reported to contain 305 calories, 6.5 g H₂O, 18.9 g protein, 5.0 g fat, 60.6 g total carbohydrate, 14.4 g fiber, 9.0 g ash, 1540 mg Ca, 911 mg P, 45.8 mg Fe, 41 mg Na, 2020 mg K, 11,000 µg β-carotene equivalent, 0.35 g thiamine, 1.91 mg riboflavin, 1.29 mg niacin, and 1 mg ascorbic acid.²¹ Leaves contain 0.4 to 2.5% alkaloids, with cocaine constituting half the total alkaloids. Also present are benzoylecgonine, cinnamylcocaine, ecgonine, hygrine, tropacocaine, truxilline, nicotine, methylecgonine, hygroline. Young leaves may contain 0.13% methyl salicylate, also carotene, palmityl-beta-amyrin, and various acids,³³ as well as isoquercitrin, quercitrin, and rutin.

Toxicity — Classed as a narcotic euphoriant and hallucinogen.⁵⁴ Small doses may produce some pleasant excitement. Large doses cause restlessness, tremors, and hallucinations and sometimes death due to paralysis of the respiratory center. In April 1884, Sigmund Freud ordered 1 g of cocaine from Merck and took 1/20 g internally. He also administered it to his colleague, Dr. Fleischl, to rid him of morphine addiction. Testing the influence of cocaine on muscular strength, Freud and Koller, a collaborator, noticed its numbing effect on the mouth and lips. Koller pursued the observation that cocaine could be used to desensitize the eye tissue which made it a viable anesthetic for surgeons, especially ophthalmologic surgeons. In 1885, a lifelong friend of Freud, Königsteih, operated on Freud's father to relieve his glaucoma, while Koller and Freud administered the anesthetic.¹⁵⁸