

LITERATURE CITED

1. "Index Kewensis, Supplementum Vol XI (1941-50)," Oxford: Oxford University Press, 1960, p. 94.
2. J.M. Calderwood and F. Fish, *J. Pharm. Pharmacol.*, **18**, 119S (1966).
3. R.F.C. Brown, J.J. Hobbs, G.K. Hughes, and E. Ritchie, *Aust. J. Chem.*, **7**, 348 (1954)
4. A.V. Robertson, *Aust. J. Chem.*, **16**, 451 (1963).

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ALKALOIDS OF *GUATTERIA MODESTA*

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Guatteria modesta Diels (Annonaceae) (1) is a shrub native to Peru. Although it has no reported folkloric uses, a phytochemical investigation of this plant was initiated because of the absence of reports in the literature concerning its constituents and to seek a source of compounds of potential phytochemical or pharmacological importance.

The root bark, twigs, and leaves were extracted with EtOH, and the concentrated EtOH extract was partitioned between dilute HCl and CHCl₃. The aqueous acidic layer was basified to pH9 with NH₄OH and subsequently extracted with CHCl₃. This fraction was chromatographed first over silicic acid and subsequently over silica gel to afford the oxoaporphine alkaloid, liriodenine, and the aporphine alkaloid, (-)-roemerine, both identical to authentic samples.

EXPERIMENTAL¹

PLANT MATERIAL.—The root bark, twigs, and leaves (40 kg) of *G. modesta* used in this study were collected in Peru in August 1973. The herbarium specimen is deposited at the National Arboretum, USDA, Acc. no. PR-80084-5; ID no. CA 2082-3.

ISOLATION OF ALKALOIDS.—Liriodenine was isolated as yellow needles (20 mg); mp 280-282° (EtOAc-MeOH); Rf 0.70 (CHCl₃-MeOH-NH₄OH) (50:10:1). (-)-Roemerine was isolated as colorless needles (80 mg); mp 101-103° (CHCl₃); [α]_D²⁵ -96° (c 0.2, EtOH); Rf 0.52 (CHCl₃-MeOH-NH₄OH) (50:10:1). Both alkaloids were found to be identical by direct comparison (uv, ir, ms, mp, mmp, [α]_D²⁵) to authentic samples available in our laboratory. Both alkaloids occur widely in the plant kingdom (2,3).

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LITERATURE CITED

1. A.W. Hill, "Index Kewensis," suppl. VII, London: Oxford Press, 1929.
2. H. Guinaudeau, M. Leboeuf, and A. Cavé, *Lloydia*, **38**, 275 (1975).
3. H. Guinaudeau, M. Leboeuf, and A. Cavé, *J. Nat. Prod.*, **42**, 325 (1979).

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¹Full details of the isolation of the compounds are available on request to the senior author.