

PLANT MATERIAL.—*S. excelsa* was collected in August 1978, on the road between Colonia Tovar and El Limón (Estado Aragua), about 40 km southwest of Caracas, Venezuela. Voucher specimens are deposited at the Herbarium of the Botanic Gardens, Caracas, Venezuela.

ISOLATION.—Air-dried leaves of *S. excelsa* (10.0 kg) were milled to a powder and extracted with light petroleum ether (40-60°) to afford a residue (190.5 g). The crude extract (10.0 g) was chromatographed on silica gel (320 g) column (C₆H₆-CHCl₃, 2:1 eluant). Fractions 18-25 (50 ml each) yielded *n*-tricosyl alcohol (2.59 g, 0.03%), which was identified from its mp, ir, nmr, microanalysis, and phenylisocyanate derivative. The chromatography fractions 43-114 yielded β-sitosterol (2.86 g, 0.03%), which was identified from its mp, optical rotation, ir, nmr, and by direct chromatographic comparison with an authentic sample.

Leaves were extracted with EtOH, providing 1.23 kg of dark green solid. This was processed to yield anabasine (80 mg, 0.001%), identified by physical and spectral data, and authentic sample comparison (from FLUKA, AG.)

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FLINDERSINE FROM *FAGARA HEITZII*

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During our work on irritant timbers, we chemically investigated the heartwood of a central African (Gabon) plant *Fagara heitzii* Auber and Pellegr (1, 2). The petroleum-ether extract of the heartwood yielded the known alkaloid flindersine.

EXPERIMENTAL

EXTRACTION AND ISOLATION OF FLINDERSINE.—The ground heartwood of the timber *F. heitzii* (14 kg) was continuously extracted with petroleum ether (60-80°) for 48 h. After evaporation of the solvent under reduced pressure, a thick oil was obtained, which crystallized from MeOH (9.0 g) as colorless needles mp 199-201° (decomp.) (Lit [4] 185-186° decomp.). Ir ν max (Nujol) cm⁻¹ 1660, 1603. Uv λ max nm (MeOH) 235, 333, 348, 365 (log ϵ 4.45, 3.92, 4.02, 3.83). Pmr (CDCl₃ δ) 1.53 (6H, s); 5.57 (1H, d, $J=10$ Hz), 6.87 (1H, d, $J=10$ Hz); 7.92 (1H, d, $J=7$ Hz); 7.10-7.53 (3H, m); 12.70 (1H, br. s). Found: C, 74.04; H, 5.71; N, 5.88 calculated for C₁₄H₁₃NO₂; C, 74.0; H, 5.77; N, 6.16%. Treatment of flindersine with methyl iodide gave *N*-methylflindersine, while hydrogenation gave dihydroflindersine. The spectral data of both the derivatives were found to be identical to the known data (3, 4). Finally, the natural product on direct comparison with an authentic specimen of flindersine was found to be identical in all respects (ir, uv, nmr).

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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, lirioidenine, 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.—Lirioidenine 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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¹Full details of the isolation of the compounds are available on request to the senior author.