

IDENTIFICATION OF (—)-ARMEPAVINE AS THE MAJOR LEAF ALKALOID OF *CRYPTOCARYA ARCHBOLDIANA* (LAURACEAE)

By S. R. JOHNS,* J. A. LAMBERTON,* and H. J. TWEEDDALE*

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Extraction of the leaves of *Cryptocarya archboldiana* Allen. (family Lauraceae), a large rain-forest tree found in New Guinea, afforded a 0.24% yield of crude alkaloids of which the major constituent has been identified as the known 1-benzyl-1,2,3,4-tetrahydroisoquinoline alkaloid (—)-armepavine. (—)-Armepavine makes up at least 70% of the total alkaloids and its isolation is recorded as it may be of some chemotaxonomic interest. The alkaloids previously obtained from species of the genus *Cryptocarya* include such diverse types as the phenanthroquinolizidine alkaloid cryptopleurine from *C. pleurosperma*,¹ the dibenzopyrrocoline alkaloids cryptausoline and cryptowolline from *C. bowiei*,² the aporphine alkaloids from *C. angulata* and *C. triplinervis*,³ and a benzyloisoquinoline alkaloid from *C. konishii* Hayata⁴ of which armepavine is the tetrahydro analogue.

Experimental

Bark was collected from a tree (50 ft high, 1 ft diameter) growing in primary rain forest near Waisa, 15 miles southwest of Okapa in New Guinea (Voucher specimen TGH 13,108). Extraction of the milled dried leaves (2 kg) by a previously described⁵ method gave 4.8 g of crude alkaloids. When the crude alkaloids were dissolved in chloroform and chromatographed on neutral alumina, a series of fractions eluted by chloroform was found to consist essentially of the major alkaloid (c. 70% of the total crude alkaloids). After purification as a crystalline oxalate, m.p. 210–211°, the major base was obtained as colourless crystals from acetone solution, m.p. 143–145°, $[\alpha]_D -115^\circ$ (c, 0.032 in CHCl_3). The n.m.r. spectrum⁶ and the mass spectrum⁷ were identical with those recorded for armepavine, and the identification was confirmed by *O*-methylation with diazomethane, followed by reaction with methyl iodide, to form *O*-methylarmepavine methiodide, m.p. 134–135°, which was identified by a mixed m.p. determination and spectroscopic comparison.

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* Division of Applied Chemistry, CSIRO Chemical Research Laboratories, P.O. Box 4331, Melbourne, Vic. 3001.

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