

ALKALOIDS OF *EVODIA ALATA* F. MUELL.*

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The isolation has previously been reported¹ of both acridone and furoquinoline alkaloids from *Evodia alata* F. Muell., a New Guinea tree belonging to the family Rutaceae. We have now examined bark and leaf alkaloids from an *Evodia* species collected near Fulleborn Harbour, New Britain, and identified as *Evodia alata* F. Muell., but which has revealed a distinctly different alkaloid composition. The alkaloids from the New Britain variety of *E. alata* are compared in Table 1 with those reported previously for the New Guinea variety.

The bark of the New Britain variety is a good source of the alkaloid skimmianine which was not found in the New Guinea material. The bark of the New Britain material, however, does not contain melicopidine, while the leaf alkaloids contain as a major constituent not evolatine but the isomeric alkaloid evoxine, previously obtained from the leaves of *Evodia xanthoxyloides*.²

TABLE 1

Alkaloids	<i>E. alata</i> from New Britain	<i>E. alata</i> from New Guinea ¹
Bark alkaloids		
Evoxanthine	1.3%	} 1%
Melicopidine	absent	
Skimmianine	0.20	absent
Kokusaginine	0.02	0.1
Leaf alkaloids		
Evoxanthine	0.6	0.4
Evolatine	absent	0.06
Evoxine	0.1	absent
2,3,4-Trimethoxy-10 methylacridone	absent	0.3

Experimental

Bark and leaf samples were collected near Fulleborn Harbour in New Britain by Mr C. D. Sayers, and identified as *Evodia alata* F. Muell. by Mr J. S. Womersley, who made the earlier identification of the New Guinea specimen. Reference herbarium samples at Lae have been designated by the New Guinea Forestry Collection number N.G.F. 21768.

Ethanol extraction of the milled plant material on a 500-g scale, and work-up for alkaloids, gave 9.6 g bark alkaloids and 4.1 g leaf alkaloids. The bark alkaloids contained evoxanthine, most of which crystallized when the crude alkaloids were warmed with chloroform. After separating evoxanthine the chloroform was removed, and when the remaining alkaloids were

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¹ Gell, R. J., Hughes, G. K., and Ritchie, E., *Aust. J. Chem.*, 1955, **8**, 114.

² Hughes, G. K., Neill, K. G., and Ritchie, E., *Aust. J. Sci. Res. A*, 1955, **5**, 401.

warmed with ethanol a large proportion of the skimmianine present crystallized. The remainder of the bark alkaloids and the leaf alkaloids were each separated by chromatography on neutral alumina. The constituents listed in Table 1 were each identified by their n.m.r. and i.r. spectra, the melting points of the purified alkaloids, and mixed melting point determinations with pure reference compounds.

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