

SHORT COMMUNICATION

TWO NEW OCCURRENCES OF METHYL SALICYLATE FROM THE AUSTRALIAN FLORA

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DURING a systematic survey of the oil-bearing species of the Australian flora it was noticed that the freshly crushed leaves of *Styphelia tubiflora* Sm. (family Epacridaceae) and roots of *Comesperma ericinum* DC. (family Polygalaceae) exhibited a pronounced oil of wintergreen-like odour. Steam distillation yielded in both cases gas chromatographically pure methyl salicylate in 0.2–0.4 per cent and 0.04 per cent yields respectively. Its physical constants (n_D^{20} , d_{15}^{15}) compared well with published values. The identification was further confirmed by a comparison of the i.r. spectrum with that of an authentic specimen. Salicylic acid was obtained on alkaline hydrolysis. Prolonged maceration of the plant material in water, prior to steam distillation, did not result in an increase in the yield of methyl salicylate. This appears to indicate that methyl salicylate is present free and not combined as a glycoside.¹

The presence of methyl salicylate in *C. ericinum* is not surprising; it has been reported from several genera within the family Polygalaceae.^{2a,b} On the other hand its presence in *S. tubiflora* is of greater taxonomic interest. Methyl salicylate occurs as the primeveroside (gaultherin, monotropitoside) in several genera of the family Ericaceae.^{2a,b} Our finding is therefore consistent with the suggestion that the Epacridaceae and Ericaceae (both belonging to the order Ericales) are chemically similar.³

¹ E. GUENTHER, *The Essential Oils*, Vol. VI, p. 4, Van Nostrand, New York (1952).

² (a) E. GILDEMEISTER and F. HOFFMANN, *Die Ätherischen Öle*, 3rd edition, Vol. I, pp. 634–6, Akademie-Verlag, Berlin (1928). (b) *Ibid*, 4th edition, Vol. III, pp. 561–3, Akademie-Verlag, Berlin (1966).

³ R. HEGNAUER, *Chemotaxonomie der Pflanzen*, Vol. IV, p. 64, Birkhäuser Verlag, Basel und Stuttgart (1966).