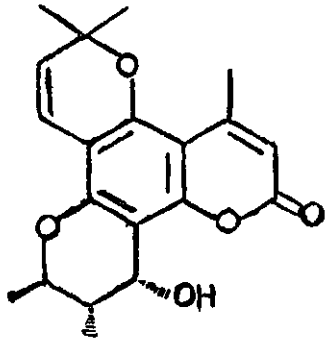
TWO NEW STEREOISOMERIC COUMARINS FROM THE LEAF EXTRACTIVES OF *CALOPHYLLUM CORDATO-OBLONGUM* THW. (GUTTIFERAE)

H. R. W. Dharmaratne, S. Sotheeswaran
(*Dept. of Chemistry, University of Peradeniya*)

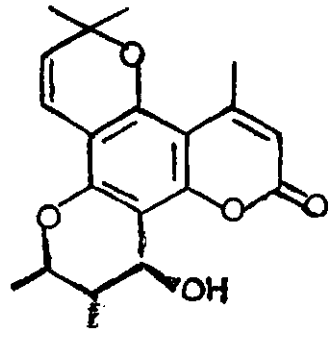
and **S. Balasubramaniam**
(*Dept. of Botany, University of Peradeniya*)

As a part of continuing studies of the extractives of the plant family Guttiferae, the foliar constituents of *Calophyllum cordato-oblongum* Thw. were investigated. The light petroleum extract of the leaves had four coumarins, two of which have been characterised. Both had molecular formula $C_{20}H_{22}O_5$. Both had similar mass spectral fragmentations having the base peak at m/z 327(M^+-CH_3). This fragmentation is typical of the compounds having 2, 2-dimethyl-2H pyran system(1) (2) The presence of the following protons were confirmed from the ^1H n.m.r. data: $-C\underline{H}=C\underline{H}$(J=10Hz): $C\underline{H}_3-C=CH$; $-C\underline{H}-OH$; $2xCH_3-CH-$; $-\overset{O}{\overset{\|}{\underline{C}}}=C\underline{H}=C-$. The i.r. absorption at 1735 cm^{-1} ($\rangle C=O$) for both compounds suggested that they are coumarins. This proposal is quite reasonable since the u.v. spectra of both compounds were identical and were very similar to those reported for a number

of 5, 7-dioxygenated coumarins. Besides, both of these compounds gave the same oxidised product. The spectroscopic and chemical evidence show that these coumarins are 11, 12-dihydro-12∝-hydroxy-4, 6,6, 10β, 11∝-pentamethyl-2H, 6H, 10H-benzo [1, 2, 6; 3, 4, 6′; 5, 6, 6″]-tripyran-2-one (A) and 11,12-dihydro-12β-hydroxy-4, 6, 6, 10β, 11∝ -pentamethyl-2H, 6H, 10H-benzo [1, 2, 6; 3, 4, 6′; 5, 6, 6′] -tripyran-2-one (B).



(A)



(B)

References

1. Barnes, C. S., *et al Tetrahedron Letters*, 281 (1963).
2. Stout, G. E. *and* Stevens, K. L., *J. Org. Chem.*, **29**, 3604 (1964).