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A C_{32} TRITERPENOID FROM A HONG KONG PLANT

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From the stems (0.023%) and the leaves (0.005%) of Neolitsea pulchella (Meissn.) Merr. [LAURACEAE] of Hong Kong there has been isolated a new triterpene (I) $C_{33}H_{56}O$, m.p. 213-217°, $[\alpha]_D$ +91° (c, 0.65, chloroform) Found: C,84.2, 84.3; H,11.9, 11.8. Calcd. for $C_{33}H_{56}O$: C,84.5; H,12.0%.

Since I was shown by mass spectrometry to have a molecular weight of 468.4326 then its molecular formula is fixed as $C_{33}H_{56}O$ (Required 468.4331) and as I contains a methoxyl group (δ = 3.34) then I must be the methyl ether of a new triterpene alcohol $C_{32}H_{54}O$ (II) which appears to be the first C_{32} triterpene to be reported.

In the N.M.R. spectrum of I two double bond protons appear at δ = 4.68 and one double bond proton at δ = 5.25. Hydrogenation of I in chloroform or ethyl acetate gave a dihydro-derivative m.p. 217-220° (M^+ = 470) in which only one double bond proton remains (δ = 5.25). Hydrogenation of I in ethyl acetate-acetic acid (1:1) gave a tetrahydro-derivative, m.p. 190-193° (M^+ = 472) in which no double bond proton remains.

In the infrared spectrum of I taken in CS_2 there was a strong band at 1090 cm^{-1} indicating an ether link and weak bands at 3020, 3067 cm^{-1} indicating two types of =CH groups. This supports the information obtained from the N.M.R. spectrum wherein the proton at the carbon atom to which the methoxyl group is attached appears at δ = 2.63.

Evidence has thus been found for the presence of two double bonds and it

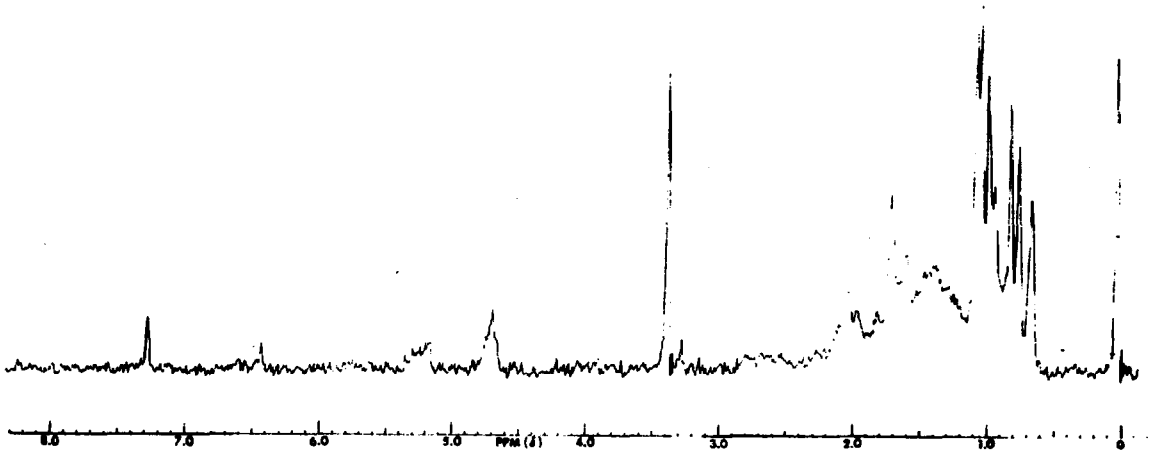

FIG 1 NMR spectrum of I in $CDCl_3$ at 60 Mc/s.

appears probable that II is a member of the class of tetracyclic triterpenes, some of which are known to be C_{31} compounds.[1]

The N.M.R. spectrum of I is reproduced in FIG. 1.

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