

NOTE

**Constituents of the Flower of *Glycosmis pentaphylla* (Retz.)
Correa**

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Phytochemical investigation of the flower of *Glycosmis pentaphylla* (Retz.) Correa revealed isolation and identification of some alkaloids and an amide. The alkaloids, viz., arborine, arborinine, skimmianine, glycorine and glycosmicine were for the first time being reported from the flower of this plant and identification of benzamide-2-methylamino recorded its second occurrence in the plant kingdom.

Glycosmis pentaphylla (Retz.) correa (family : Rutaceae) is well distributed throughout India and different parts of this plant are used as folk medicines¹. A number of alkaloids have been isolated²⁻¹³ so far from different parts of this plant. The present communication deals with the isolation and identification of some alkaloids and an amide. This amide was first reported from a species of *Evodia*¹⁵ (family : Rutaceae) and the present investigation reports its second occurrence from any natural source. The isolation of benzamide-2-methylamine as well as presence of arborine, arborinine, glycorine, glycosmicine etc. indicate the probable role of this amide in biogenesis of this group of alkaloids.

Finely powdered, air dried flower (6 kg) was successively extracted with pet-ether (60-80°C), chloroform and methanol for 48 h in each case. During pet-ether extraction a yellow solid mass was deposited which on recrystallisation from benzene-hexane mixture and subsequent spectral analysis revealed its identity as arborinine [Co-TLC, m.p., NMR, M⁺]. The pet-ether extract was subjected to chromatography over alumina column and elution with benzene : chloroform (9:1) mixture led to the isolation of skimmianine (recrystallised from benzene-hexane), glycopyimine (recrystallised from benzene) and their structures were confirmed through comparison with the m.p., IR, NMR, MS analysis. Elution of the chloroform extract on alumina with benzene: chloroform (9:1) gave arborine (recrystallised from benzene-hexane, and confirmed through Co-TLC, IR, NMR, MS), glycorine (recrystallised from benzene and confirmed through Co-TLC, IR, NMR, MS) and an amide [1], m.p. 160-1°C (150 mg). Further elution with ethylacetate-benzene (30:70) gave glycosmicine (recrystal-

lised from methanol and structure elucidation confirmed through Co-IR, NMR, MS).

The structure of [1] was established as benzamide-2-methylamine from UV, IR, NMR and MS analysis: UV^{EtOH}, λ_{\max} , 348, 255, 226 nm; IR ν_{\max}^{KBr} 3400, 3200, 1620, 1600, 1575, 1410, 1320, 1120, 1170, 750 cm^{-1} ; ^1H NMR, δ = 7.80 (bs, 1H, NH), 6.60–7.25 (multiplet, 4H, Ar-H'S), 5.82 (bs, 2H, NH_2), 3.02 (d, 3H, $J = 5$ Hz, H_3C —); EI-MS, M^+ 150, m/z 133 [$\text{M}^+ - 17(\text{NH}_3)$], 132 (133-H), 105 [133-28(CO)], 104 [132-28(CO or $\text{H}_2\text{CN})$], 77 (C_6H_5^+). Finally structure of [1] was confirmed by synthesis of the compound following the method of Chatterjee *et al.*¹⁴ and from characterisation of products obtained through hydrolytic cleavage of [1].

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