

TWO NEW FRIEDELANE α — HYDROXY KETONES FROM *EUONYMUS REVOLUTUS***N. Savitri Kumar and P. Mangala Muthukuda***(Dept. of Chemistry, University of Peradeniya)***and Sinnathamby Balasubramaniam***(Dept. of Botany, University of Peradeniya)*

Two new friedelanes isolated from *Euonymus revolutus* (Celastraceae) have been established to be 2 α -hydroxy-3-oxo-D : A-friedooleanane-28-oic acid, (1) and 3 α -hydroxy 2-oxo-D : A—friedooleanane-28-oic acid(2).

Two triterpenes of very similar R_f were isolated from the cold dichloromethane extract of the stem bark of *Euonymus revolutus*. IR spectroscopy of the more polar compound (1), indicated the presence of a carboxylic acid group, hydroxy and carbonyl groups. $^1\text{H-NMR}$ and mass spectral data indicated a friedelane derivative. Acetylation gave a monoacetate ($\delta_{\text{H}}, 4.89, m, 1\text{H}, w_{1/2} 4 \text{ Hz}; 2.09 \text{ s}, 3\text{H}$). Acetolysis with zinc and acetic acid¹

SECTION E

yielded canophyllic acid establishing that the carbonyl group and the carboxylic acid groups were at C-3 and C-28 positions respectively. (1) was reduced with sodium borohydride to give a diol which underwent ready oxidation with periodic acid, indicating that the hydroxy group in (1) was vicinal to the carbonyl group. The hydroxy group was placed at C-2, since a hydroxy group at C-4 will be tertiary and resistant to acetylation. Hence (1) was assigned the structure 2 α -hydroxy-3-oxo-D : A-friedooleanane-28-oic acid. (1) on treatment with either KOH-diethylether or acetic acid at room temperature gave rise to a second, less polar compound (2) which was also present in the plant extract. ¹H-NMR evidence (δ_{H} 3.85, *d* J 10Hz) indicated (2) to be a tautomer of (1) and hence (2) was assigned the structure 3 α -hydroxy-2-oxo-D : A-friedooleanane-28-oic acid

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Reference

1. Pelletier, S. W., *et al.* (1965). *J. Org. Chem.*, **30**, 4234.