

TWO TRITERPENE 1,2-DIOLS FROM *EUONYMUS REVOLUTUS*

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Two triterpene 1,2-diols were isolated from the dichloromethane extract of the stem bark of *Euonymus revolutus* (Celastraceae). IR spectra of both compounds showed the presence of a carboxylic acid group. This was confirmed by the formation of the methyl ester on treatment with diazomethane. Acetylation in each case afforded a diacetate indicating the presence of two hydroxy groups. The formation of isopropylidene derivatives with acetone and the ready oxidation with  $\text{HIO}_4$  indicated the 1,2-nature of these two diols. The  $^1\text{H-NMR}$  spectrum and the mass spectrum of the less polar diol suggested it to be a lup-20(29)-ene with the  $-\text{COOH}$  group and the two hydroxy groups in rings A and B. When (1) was refluxed with benzene containing a small amount of *p*-toluenesulphonic acid, a  $\gamma$ -lactone ( $\nu_{\text{max}}$   $1760\text{ cm}^{-1}$ ) was obtained, indicating that one of the hydroxy groups and the  $-\text{COOH}$  group have a 1,3-relationship. The  $-\text{COOH}$  group could not be reduced with  $\text{LiAlH}_4$  suggesting that the  $\text{COOH}$  group was in a sterically hindered environment, which would be C-25 in the lupane ring. Hence one of the hydroxy groups may be placed at either C-2 or C-6. The latter position was ruled out on the basis of  $^1\text{H-NMR}$  data. The second hydroxy group may be placed at either C-1 or C-3. From biogenetic considerations C-3 is to be preferred.

The more polar triterpene has been tentatively identified as  $2\alpha,3\beta$ -dihydroxy-urs-12-ene-28-oic acid by comparison of the reported m.p. and mass spectral data.