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## RHAMNACEAE

## CONSTITUENTS OF THE LEAVES AND ROOT BARK OF CEANOTHUS VELUTINUS

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Plant. Ceanothus velutinus. Trival Name: Snowbrush.<sup>1</sup>

Uses. Ornamental.

Source. Lake Kachess Dam Road, Snoqualmie Pass, Washington, U.S.A.

Previous work, Leaves.2 Root-bark.3

Leaves. Ground leaves (1.6 kg) were extracted with light petroleum (30–60°), followed by chromatography on silicic acid. Nonacosane, 1-hexacosanol, velutin (4',5-dihydroxy-3',7-dimethoxyflavone),<sup>4</sup> and cinnamic acid were isolated and identified by spectral and physical measurements.

Root Bark. Ground root-bark (2.6 kg) was extracted with light petroleum (30–60°). Concentration of the liquid afforded betulinic acid, ceanothenic acid, and  $\beta$ -sitosterol. Structural assignments were confirmed by spectra and physical comparisons.

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- <sup>4</sup> K. C. Das, W. J. FARMER and B. WEINSTEIN, J. Org. Chem. 35, 3589 (1970).

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## TRITERPENOIDS FROM DISCARIA LONGISPINA AND COLLETIA PARADOXA

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Abstract—Ceanothic and betulinic acids have been isolated from Discaria longispina. From Colletia paradoxa only ceanothic acid was isolated.