

called adzharin. The isolation of the acylated pyranocoumarins from Caucasian species of *Angelica* of the section *Angelicoides* [5, 6] and far-eastern species of the subsections *Anisopleura*, *Stenophyllum*, and *Angelophyllum* of the section *Callisaceae* [4, 7, 8] shows that they are close to one another biochemically.

Hydrolysis of the glycosidic fraction of the roots (3% HCl solution) gave dihydroseselin  $C_{14}H_{14}O_3$ , mp 104–106° C (from petroleum ether) and umbelliferone  $C_8H_6O_3$ , mp 228–229° C (from water), identified by their IR spectra and by mixed-melting-point tests. The presence of glucose in the hydrolysate was shown by paper chromatography with reference materials.

The formation of dihydroseselin under these conditions can be explained by the presence in the plant of an ostheno-glucoside, which loses the sugar residue on hydrolysis, and the resulting ostheno then undergoes cyclization into dehydro-seselin [9]. Umbelliferone could be formed from one of its glycosides or from glycosides of p-hydroxycoumarinic acid.

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#### SCOPOLETIN FROM CENTAUREA MEYERIANA

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*Centaurea meyeriana* Tzvel. = *Ambyopogon meyeriana* (Tzvel.) Karjag. (Meyer's centaurea) is a perennial herbaceous plant of the family *Compositae*. The plant is endemic, being found only in the southeastern part of Azerbaidzhan.

From the epigeal part of this centaurea collected on May 21, 1968, near the settlement of Pirasor (Lerik region, Azerbaidzhan SSR) we have isolated by aqueous extraction [2] a crystalline substance with the composition  $C_{10}H_8O_4$ . Yield 0.15%, mp 203.5–205° C (from ethanol). IR spectrum,  $cm^{-1}$ : 3340 (OH), 1707 (C=O), 1630, 1610, 1570, 1515.

Alkaline aqueous and ethanolic solutions possess a blue fluorescence in daylight.

A mixed-melting-point test and a comparison of IR spectra has shown that the substance obtained is scopoletin [3].

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