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COUMARINS OF *Zeravschania regeliana*

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Zeravschania regeliana Korov., fam. Apiaceae, is a narrowly local perennial herbaceous plant endemic to the Western Pamir-Alai that grows in fissures of vertical cliffs, along river valleys, and on flat mountain tops. The plant has not hitherto been subjected to chemical study.

The comminuted air-dry epigeal part of the plant (500 g) gathered in the flowering period in the Surkhandar'inskaya oblast, Republic of Uzbekistan, was extracted exhaustively with ethanol. The alcoholic extract was concentrated, diluted with water in a ratio of 1:2, and treated with ethyl acetate. After the solvent had been distilled off, 22 g of total extractive substances was obtained.

A chromatographic column (3 × 100 cm) with KSK silica gel was charged with 20 g of the mixture, and the substances were eluted with petroleum ether—ethyl acetate (19:1), with a subsequent increase in the concentration of the latter. Fractions with a volume of 100 ml were collected.

Six substances of coumarin nature (**1**—**6**) were collected: **1** - $C_{14}H_{14}O_3$; mp 124-125°; **2** - $C_{16}H_{14}O_4$, mp 102-103°; **3** - $C_{16}H_{14}O_5$, mp 142-143°; **4** - $C_{16}H_{14}O_5$, mp 106-107°; **5** - $C_{16}H_{16}O_6$, mp 132-134°; **6** - $C_{16}H_{16}O_6$, mp 126-128°.

Substances (**1**—**6**) were identified by a comparison of IR spectra and by mixed melting points with authentic specimens: osthole, imperatorin, oxypeucedanin, heraclenin, oxypeucedanin hydrate, and prangenin hydrate, respectively [2, 3].

In order to study the change in the qualitative composition and the dynamics of the accumulation of coumarins, we investigated the coumarin compositions of plants collected in the fruit-bearing and the end-of-vegetation periods. The coumarin compositions of plants collected at the beginning of vegetation and during flowering and budding were practically identical. In plants collected in the fruit-bearing period and at the end of vegetation the amounts of oxypeucedanin hydrate and of prangenin hydrate had increased; i.e., there had been an opening of the epoxide rings in the molecules of oxypeucedanin and heraclenin.

Thus, it has been established for the first time that *Zeravschania regeliana* is a coumarin-bearing plant and is rich in furocoumarin derivatives.

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