COUMARINS OF SPECIES OF THE GENUS Artemisia

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From the epigeal part of Artemisia freyniana Krasch. (A. messerschmidtiana Bess.), collected at the end of July in the Maritime Territory, by aqueous extraction followed by chromatography on KSK silica gel we have isolated a crystalline substance with the composition $C_{10}H_8O_4$, mp 205-206°C (from ethanol), which was identified by its IR and NMR spectra and a mixed melting point as scopoletin.

From the epigeal part of A. stolonifera (Maxim.) Kom., collected in August in the Maritime Territory by aqueous extraction followed by chromatography on KSK silica gel, we have isolated a crystalline substance with the composition $C_{10}H_8O_3$, mp 115-117°C (from ether). A mixture of this substance with a sample of herniarin showed no depression of the melting point, and their IR and NMR spectra were identical.

We also isolated herniarin from A. silvatica Maxim., and scopoletin from A. japonica Thunb. Both specimens were collected in the Maritime Territory in August-September. They were isolated and identified by the method described above.

This is the first time the coumarins named have been isolated from the above-mentioned species of the genus Artemisia.

Coumarins have already been detected in 20 species of Artemisia in the flora of the USSR [1-12], most widespread being scopoletin (found in 12 species). A clear association of coumarins with definite subgenera and sections must be noted. Thus, most coumarins are found in species of the subgenus Dracunuculus Bess., and also in the section Abrotanum Bess. of the subgenus Artemisia. Coumarins are rarely found in the species of the subgenus Seriphidium (Bess.) Rauy. The wormwoods of this subgenus are characterized by the presence of sesquiterpene lactones.

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