

## MONOECISM IN JUNIPERUS SCOPULORUM

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It seems appropriate here to correct a "slip of the typewriter" and to offer an emendation of a statement in my paper in PHYTOLOGIA, vol. 4, no. 1, of March 1952, pages 34, lines 12, 13 and 14, as follows: for "dioecious", read monoecious, and to the American species known to contain monoecious elements, add J. scopulorum.

Through the courtesy of Dr. J. F. Brenckle, of Mellette, South Dakota, I received lately a clearly monoecious specimen of J. scopulorum (Brenckle 52010), collected by him in November 1952 in a gulch along Highway 14/16 between Wall and Wasta, S.D., north of the Badlands and east of the Black Hills, where the species occurs freely on steep, ungrazed slopes of barrancas, together with more or less pure J. virginiana and various intermediates between the two species. In July 1949 I collected in several of the gulches in this same area, but since staminate cones were not in evidence at that time, monoecism could not then be ascertained.

The Brenckle specimen contains numerous male cones as well as several berries. The fruit is all of 1952 inception -- still immature, globose or nearly so. It is not until in the second summer that the fruit of J. scopulorum develops its distinctive form: usually broader than long, and truncate at the apex. The leaves on the ultimate branchlets in the specimen are not or only slightly overlapped, and the dorsal gland is at least as long as the leaf-scar above it.

The Brenckle specimen is the first evidence I have seen of monoecism in J. scopulorum. I know of no reference to it in literature, and there is none among the J. scopulorum sheets in the New York Botanical Garden herbarium.

In the paper cited above I expressed the thought that (among the heterophyllous Junipers) monoecious materials are indicative of comparatively primitive elements, and the areas where they occur of centers of origin. From that viewpoint the geography of monoecious elements should yield useful data for the study of distribution histories. While for a species with so wide a dioecious distribution as J. scopulorum a considerable number of monoecious collections would be necessary to constitute an adequate concept of a center of origin, every such collection that comes into view contributes toward it. The Brenckle collection, then, points in the general direction of the Black Hills.

Incidentally, in July 1949 I found J. scopulorum abundant in Weston Co., Wyo., and also in Pennington Co., S.D., to the east of the Black Hills. But in a day's travel I found no trace of it within the forest reserves of the Hills in Custer and Pennington Counties, where, apparently, it had been eradicated.



Van Melle, P. J. 1953. "Monoecism in *Juniperus scopulorum*." *Phytologia* 4, 172–172.

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