NOTEWORTHY COLLECTIONS

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Source: Madroño, 70(2) : 74-76

Published By: California Botanical Society

URL: https://doi.org/10.3120/0024-9637-70.2.74

MADROÑO, Vol. 70, No. 2, pp. 74–76, 2023

NOTEWORTHY COLLECTIONS

NEVADA

PRIMULA INCANA M.E.Jones (PRIMULACEAE). — Elko County, extreme north end of Butte Valley, in an extensive spring complex on east side of main Butte Valley Road, just south of The Narrows, T27N R62E sec 17, 40.21787°, −115.00281°, 1929 m (6330 ft), 4 June 2022, *A. Tiehm 19085* with J. Nachlinger (in flower) ARIZ, ASC, ASU, BRIT, BRY, CAS, CIC, COLO, DAO, DES, ID, MICH, MO, NY, OSC, RENO, RM, RSA, UCR, UNLV, UTC, WTU); 1 Jul 2022, *A. Tiehm 19169* with J. Nachlinger (in fruit) (CAS, COLO, MO, NY, OSC, RENO, RSA, UNLV, US). Plants growing on moist clay mounds in seepage areas with *Juncus balticus* Willd., *Thalictrum alpinum* L., *Dodecatheon pulchellum* (Raf.) Merr. var. *pulchellum*, *Carex* spp., and mosses. Well over a thousand plants, mostly flowering, were observed in this area (Fig. 1).

Previous knowledge. *Primula incana* occurs from "Alaska to Que., s. to Idaho, Mont. W. N.D., Wyo, Colo, and Utah." (Holmgren 2005). The distribution listed in Kelso (2009) is similar, but does not include Quebec. Herbarium specimens, from SEINet, show a north-south distribution from Alaska, Yukon, Northwest Territories, British Columbia, Saskatchewan, Manitoba, and Ontario. Then south into the contiguous U.S. in Montana, North Dakota, Idaho, Wyoming, Utah, and Colorado (Fig. 2).

Significance. This is the first known occurrence in Nevada. The closest known occurrences are from near Robertson in Uinta County, Wyoming and from the Bryce Canyon area in Garfield County, Utah (Holmgren 2005). The closest Wyoming sites are about 394 km (245 miles) east-northeast and the Utah sites are about 370 km (230 miles) southeast from the Nevada site. This site is now the westernmost of those in the lower contiguous U.S. Searches at other springs in the area have proved fruitless.

The overall distribution of *Primula incana* covers quite an extensive area (over 11.5 million km^2). Many mapped populations are quite remote from each other giving them a largely disjunct population distribution. For example, there are 1260 km between Manitoba and Ontario populations. Other populations, for example around Centennial, Wyoming, appear within a few kilometers of each other. Collections have been made from near sea level to 3049 m.

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FIG. 1. *Primula incana* M.E.Jones, new to Nevada. A. In bud, prior to scape elongation, with indistinctly petiolate leaves, remotely denticulate margins, and densely farinose abaxial surfaces. B. Flowers are eglandular, homostylous, and with pink to lavender bilobed petals. C. Capsules are ellipsoid elongating beyond the calyx, while petals darken with age. D. Flowering umbels have saccate involucral bracts, cylindric calyces, and a floral tube up to 1 cm long. E Plants are up to 46 cm tall, growing here along a moss-lined stream with *Juncus balticus* and *Dodecatheon pulchellum* var. *pulchellum*. F. Extensive wet meadow habitat occurs just south of The Narrows in Butte Valley. G. Alkaline hummocked ground is common from feral horse use and cattle grazing throughout the spring-fed meadow habitat. All images by Jan Nachlinger.

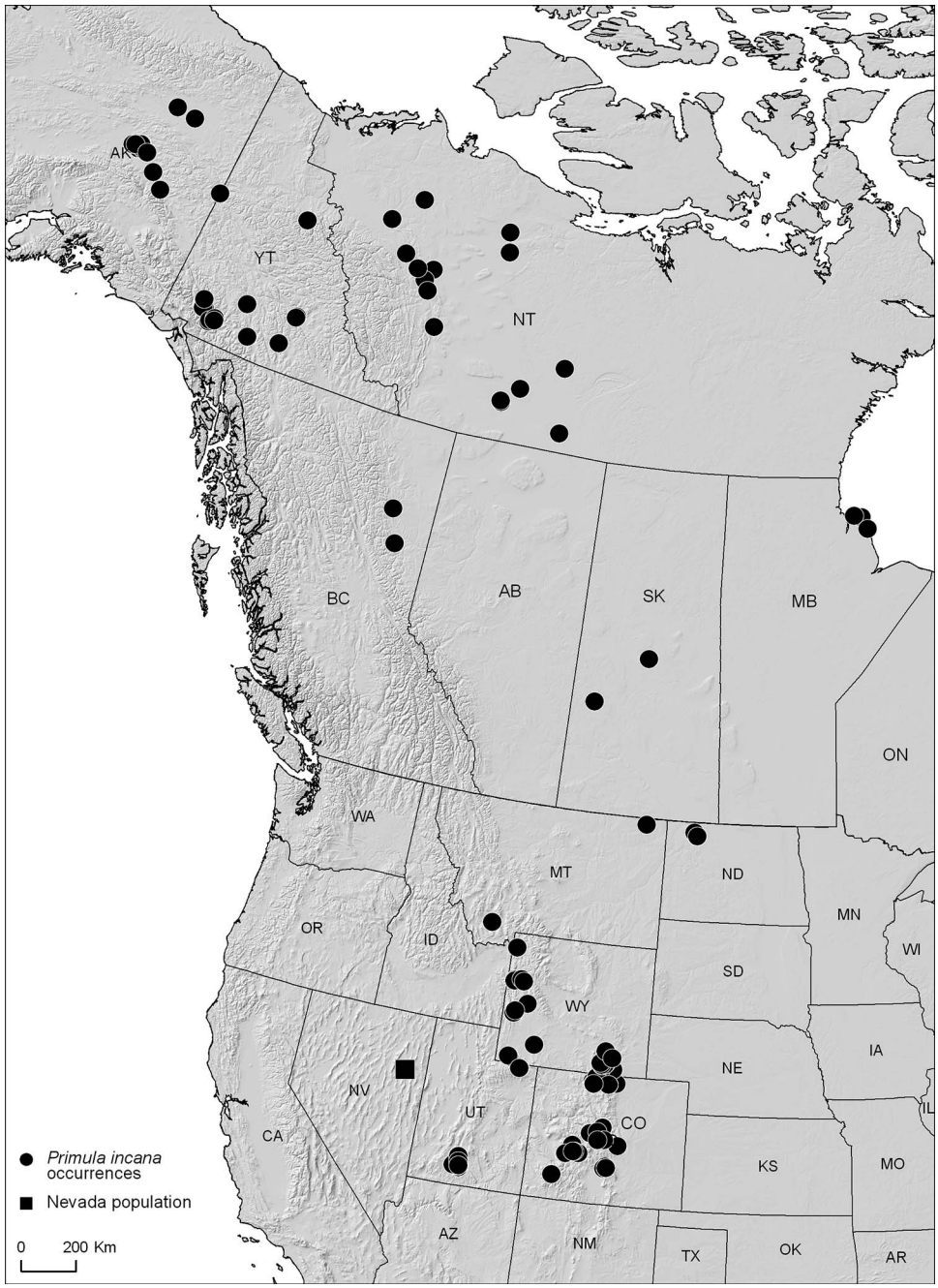

FIG. 2. Georeferenced collections of *Primula incana* in North America (circles) accessed from the Consortium of Intermountain Herbaria on 21 March 2023. The recent collections in Elko County, Nevada (square) are now the westernmost known location in the lower contiguous U.S. of a largely disjunct distribution among isolated alkaline spring-seep and wet meadow systems.