

BARNEBY RIDGE- CRESS

Lepidium barnebyanum Reveal

Plant Symbol = LEBA

Contributed by: USDA NRCS Idaho and Utah Plant Materials Program



Barneby ridge-cress (*Lepidium barnebyanum*). Photo by Ben Franklin, Courtesy of Utah DNR

Alternate Names

Lepidium montanum ssp. *demissum* Hitchcock
Barneby pepper cress
Ridgecress

Uses

There are no known human uses of Barneby ridge-cress.

Status

Barneby ridge-cress was listed as an endangered species by the USDI Fish and Wildlife Service in 1990 (USDI-FWS, 1990). It is restricted to a single population in Duchesne County, Utah comprised of three disjunct stands. It is considered a species with a high degree of threat and a low recovery potential for which there are conflicts with economic activities (USDI-FWS, 1993).

Consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Description

General: Mustard family (Brassicaceae). Barneby ridge-cress is a pulvinate-caespitose (mound forming) perennial forb arising from a thickened branched woody taproot. The plants grow 7 to 12 cm (3 to 5 in) tall and forms clumps or cushions up to 20 cm (8 in) across. The stems are smooth or minutely hairy. The leaves are narrow, 1 to 6.5 cm (0.4 to 2.5 in) long and 1 to 3 mm (0.04 to 0.12 in) wide. The flowers are small, four-petaled, with white petals 3.5 to 4 mm (0.14 to 0.16 in) long. The fruit is a silicle (an oval pod), 3 to 6 mm (0.12 to 0.24 in) long and 3 to 4 mm (0.12 to 0.16 in) wide (Welsh et al., 2003).

Distribution:

Barneby ridge-cress is endemic to Indian Canyon Drainage in Duchesne County, Utah approximately 5 km (3 mi) south of Starvation Reservoir. The single population contains approximately 5,000 individuals and covers nearly 500 acres (CPC, 2011). All known stands exist on the Ouray Reservation of the Ute Indian Tribe (USDI-FWS, 1993).

For current distribution, consult the Plant Profile page for this species on the PLANTS Web site.

Habitat:

Barneby ridge-cress grows on a series of marly shale barrens on three ridgelines on either side of Indian Creek. The habitat for Barneby ridge-cress occurs in pockets in pinyon-juniper woodlands. Barneby ridge-cress grows in close association with other mound forming species including stemless woolybase (*Hymenoxys acaulis*), plateau Townsendia (*Townsendia mensana*), Hooker's sandwort (*Arenaria hookeri*), and low feverfew (*Parthenium ligulatum*).

Adaptation

Barneby ridge-cress is endemic to marly shale barrens derived from the Uinta and Green River Formations in a 10 to 14 inch precipitation area. These shale barrens form pockets or islands of suitable habitat surrounded by unsuitable soils (USDI-FWS, 1993).

Management

Threats to Barneby ridge-cress include off-road vehicle damage and oil and gas development. The entire population is currently located in an established oil and gas field (USDI-FWS, 1993). Short term management objectives include

preventing extinction and continued habitat degradation by maintaining and protecting the existing population. Long term goals include conducting inventories of suitable habitat to better determine the species distribution, and establishing new stands if suitable habitat is located (USDI-FWS, 1993).

Pests and Potential Problems

There are no known pests associated with Barneby ridge-cress.

Environmental Concerns

There are no known environmental concerns associated with Barneby ridge-cress.

Seed and Plant Production

Reproduction of Barneby ridge-cress is sexual. The flowers bloom in April and May and fruiting occurs in late May through June. Pollinators are unknown.

References

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- USDI-Fish and Wildlife Service. 1990. Endangered and threatened wildlife and plants; endangered status for the plant *Lepidium barnebyanum* (Barneby ridge-cress). In: Federal Register 55(189): 39860-39864.
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Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins. 2003. A Utah Flora. Third Edition, revised. Brigham Young University, Provo, UT.

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