

-State Species Abstract-
-Wyoming Natural Diversity Database-

BOECHERA PUSILLA
[*ARABIS PUSILLA*]
SMALL ROCKCRESS
Family: Brassicaceae

Status:

US Fish & Wildlife Service: Petitioned in 2007 (Former C1 candidate for listing under the Endangered Species Act; dropped in 1999).

Agency Status: WY BLM: Sensitive.

Heritage Rank:

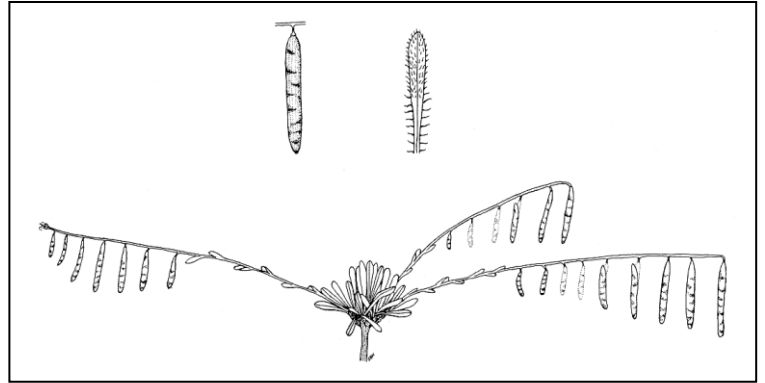
Global: G1 State: S1

Wyoming Contribution Rank: Very high (State Endemic).

Description: Small rockcress is a perennial herb with 2-several decumbent stems up to 17 cm long. The basal leaves are linear and erect with relatively sparse simple, biforked, or triforked spreading hairs. The 3-5 stem leaves are sessile, non-clasping and widely spaced. Flowers are light-lavender, 4-petaled, and 3.5-4.5 mm long. The fruits are glabrous, linear siliques (1-3.8 cm long and 2 mm wide) that spread at right angles from the drooping main stem on pedicels 3 mm or shorter (Rollins 1982; Fertig et al. 1994, Al-Shehbaz and Windham 2010).

Synonyms: *Arabis pusilla*

Similar Species: *Boechera demissa* var. *languida* differs in having narrower (usually 1.5 mm wide) drooping fruit on pedicels 3-6 mm long. *B. pendulina* var. *russeola* has mostly simple, ciliate hairs on the basal leaves and spreading to drooping fruit. Other *Boechera* species differ in having either ascending fruit or densely appressed pubescence.



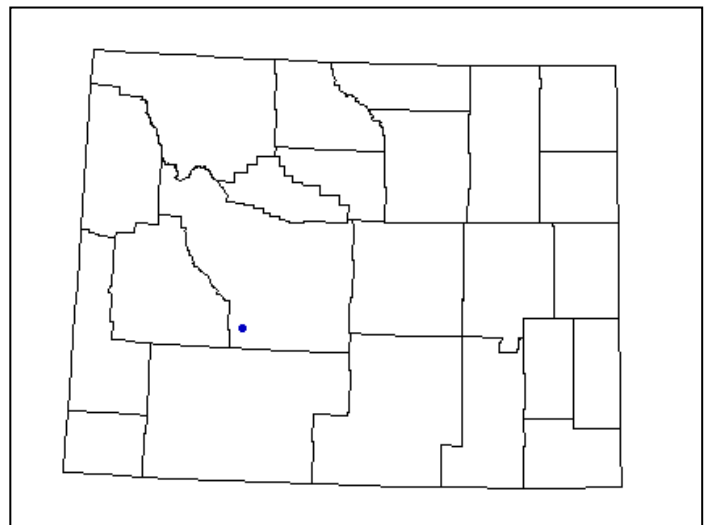
Above: *Boechera pusilla* in fruit by Isobel Nichols (from Fertig et al. 1994).

Below: *B. pusilla* by Charmaine Refsdal Delmatier



Distribution: State endemic restricted to the southern Wind River Range (South Pass area) in Fremont County, Wyoming

Below: Wyoming distribution of *Boechera pusilla*.



Habitat: Crevices and sparsely vegetated, coarse granite soil in granite-pegmatite outcrops surrounded by sagebrush grassland at 8000-8100 feet.

Occurrences in Wyoming: Known from a single population, last surveyed in 2010.

Abundance: Original population estimates place the total population at 600-1000 individuals in less than 60 acres of occupied habitat (Dorn 1990; Marriott 1988).



Above: Pegmatite granite outcrop habitat of *Boecheera pusilla* near South Pass, Wyoming. Photo by Hollis Marriott.

Trends: Population numbers based on partial census have ranged from 800-1000 (Marriott 1988) to 150-250 (Heidel 2005).

Protection status: The Pine Creek area has been designated a Special Status Plant Area of Critical Environmental Concern in the final Green River Resource Area Resource Management Plan (1997). A mineral withdrawal for the area has been completed by the BLM and critical habitat has been fenced to keep out livestock. Due to the conservation actions taken by the BLM, *A. pusilla* was dropped as a candidate for listing under the Endangered Species Act in 1999.

Threats: Potentially threatened by recreation development, mining, and trampling. Small population size makes this plant vulnerable to disturbance.

Managed Areas: Known only from lands managed by the BLM Rock Springs Field Office.

References:

Al-Shehbaz, I. A. and M. D. Windham. 2010. *Boecheera*. In: Flora of North America Editorial Committee. Flora of North America, North of Mexico. Volume 7. Magnoliophyta: Salicaceae to Brassicaceae. pp. 348-412.

Cramer, T. and R.L. Hartman. 1996. General floristic/sensitive plant species survey of the Upper Green River Basin, Wyoming, final report. Unpublished report prepared for the Bureau of Land Management by the Rocky Mountain Herbarium, University of Wyoming.

Dorn, R.D. 1990. Report on the status of *Arabis pusilla*, a candidate Threatened species. Prepared for the US Fish and Wildlife Service by Mountain West Environmental Services.

Dorn, R.D. 2001. Vascular Plants of Wyoming, third edition. Mountain West Publishing, Cheyenne, WY.

Fertig, W. 1992. Checklist of the Vascular plant flora of the west slope of the Wind River Range and status report on the sensitive plant species of Bridger-Teton National Forest. Unpublished report prepared for the Bridger-Teton National Forest by the Rocky Mountain Herbarium, University of Wyoming.

Fertig, W. 1992. Checklist of the vascular plant flora of the west slope of the Wind River Range and status report on sensitive

plant species occurring in the Rock Springs District, Bureau of Land Management. Rocky Mountain Herbarium.

Fertig, W. 1992. A floristic survey of the west slope of the Wind River Range, Wyoming. Unpublished Master's Thesis, University of Wyoming, Department of Botany.

Fertig, W., C. Refsdal, and J. Whipple. 1994. Wyoming Rare Plant Field Guide. Wyoming Rare Plant Technical Committee, Cheyenne Wyoming.

Fertig, W., L. Welp, and S. Markow. 1998. The status of rare plants in southwest Wyoming. Report prepared for the Bureau of Land Management by the Wyoming Natural Diversity Database, Laramie, WY.

Green River Resource Area. 1994. *Arabis pusilla* (small rockcress) Habitat Management Plan. HMP WY-048-WHA-P1 and Environmental Assessment EA WY-048-EA-93-64. Prepared by the Green River Resource Area, Rock Springs District, Bureau of Land Management.

Heidel, B. 2005. Status of *Boechea pusilla* (small rockcress) in Wyoming. Prepared for Bureau of Land Management. Wyoming Natural Diversity Database, Laramie, WY.

Marriott, H.J. 1986. A report on the status of *Arabis pusilla*, a Candidate Threatened

species. Prepared for the US Fish and Wildlife Service by the Wyoming Natural Diversity Database, Laramie, WY.

Marriott, H.J. 1988. Draft habitat management plan for threatened, endangered and sensitive plant species and their habitats on the Rock Springs District, Bureau of Land Management. Prepared for the Bureau of Land Management by the Wyoming Natural Diversity Database, Laramie, WY.

Rollins, R.C. 1983. Studies in the Cruciferae of western North America. *Journal of Arnold Arboretum* 64: 491-510.

Rollins, R.C. 1993. The Cruciferae of Continental North America, Systematics of the Mustard Family from the Arctic to Panama. Stanford Univ. Press, Stanford, CA.

Welp, L.A. 1997. A floristic survey of the Great Divide Basin, Green Mountains, and Upper Sweetwater Plateau in southwest Wyoming. Unpublished Master's thesis, University of Wyoming Botany Department, Laramie WY.

Weynand, B., and B. Amidon. 1990. An illustrated field guide to the sensitive plants of the Rock Springs District. Bureau of Land Management.

Author: Walter Fertig

Updated: Bonnie Heidel 10 March 2011