

-State Species Abstract-  
-Wyoming Natural Diversity Database-

*PHYSARIA DORNII*  
DORN'S TWINPOD  
Family: Brassicaceae

Status:

US Fish & Wildlife Service: None; formerly a C2 candidate for listing under the Endangered Species Act.

Agency Status: Proposed Sensitive, Wyoming BLM. Managed as a "Special Status plant species" by the BLM Rock Springs Field Office.

Heritage Rank:

Global: G1State: S1

WYNDD Plant List: State endemic (High conservation priority)

Description: Dorn's twinpod is a tufted, silvery-pubescent perennial herb up to 10 cm high. The basal rosette of leaves are erect, 5-7 cm long, oblanceolate to obovate, and acute-tipped. Flowers are yellow, 10-14 mm long, and have styles 4-5 mm long. Fruiting stems spread nearly horizontal to the ground and barely exceed the basal rosette. The fruits are inflated, two-lobed, 1-1.5 cm wide, and pubescent with thinly appressed hairs. The membranous partition (replum) between each half of the fruit is obovate and bears 4 (rarely 2-6) stubby stalks (funiculi) on each face (Fertig et al. 1994; Lichvar 1983; Rollins 1993; Fertig 1998).

Similar Species: *Physaria condensata* has shorter leaves (0.5-1.3 cm wide and 1-3.5 cm long), and these are arranged in a flattened rosette and narrower fruits (0.5-1 cm wide) with dense pubescence. *P. eburniflora* has round-tipped leaves in a flattened basal rosette, narrower fruits with coarsely spreading hairs, and pale whitish flowers. *P. integrifolia* has erect stems that exceed the



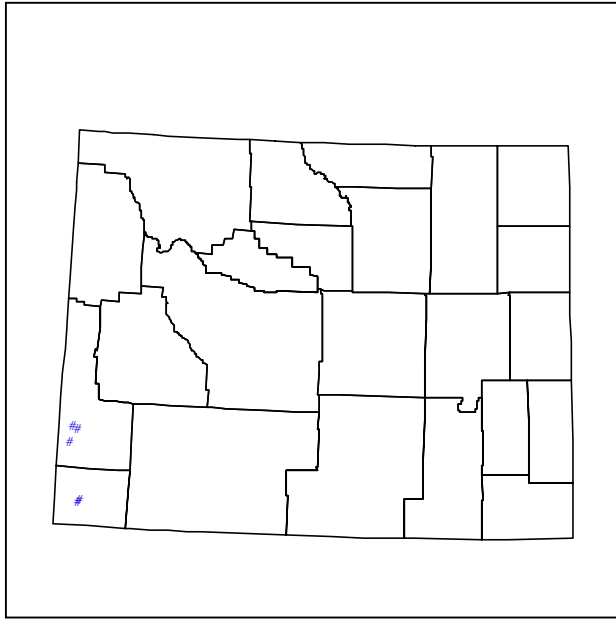
Above: *Physaria dornii* by Walter Fertig.

basal leaves by 5 cm or more and styles over 6 mm long. *P. didymocarpa* often has toothed leaves and smaller fruits with denser, spreading hairs. Vegetative specimens of *P. dornii* may be confused with vegetative individuals of *Eriogonum brevicaulis*, but differ in having shorter and broader leaf blades (Dorn 1992; Fertig 1998).

Flowering/Fruiting Period: Flowering occurs primarily from late May to mid-June, while fruiting may occur from late May-early July.

Distribution: State endemic restricted to the southern Overthrust Belt in Lincoln and Uinta counties, Wyoming.

Habitat: At the northern end of its range (Rock Creek Ridge area), Dorn's twinpod occurs primarily in openings within sparsely vegetated communities of *Cercocarpus montanus*, *Oryzopsis hymenoides*, and *Poa secunda* on whitish clay-gravel slopes of the Twin Creek Limestone. Total vegetative cover of these sites is usually about 10-15%,



Wyoming distribution of *Physaria dornii*.

but may be as low as 1%. Scattered plants may occur at the edge of *Cercocarpus* thickets in partial shade. *Artemisia tridentata* and *Symphoricarpos oreophilus* var. *utahensis* may codominate with *C. montanus* at some microsites. Occasionally, populations may also occur in openings in shrub stands where *Cercocarpus* has been replaced by *Artemisia nova*, *Chrysothamnus viscidiflorus*, or *Purshia tridentata*. Populations of *P. dornii* from Uinta County are found in cushion plant communities on semi-barren knolls or midslopes with scattered *Chrysothamnus nauseosus* or *Amelanchier utahensis* and *Oryzopsis hymenoides*. These populations occur on fine-textured red sandstone-clays (with or without a surface layer of gravel) or gray sandy-shale soils derived from the Wasatch Formation. At all sites *P. dornii* is absent from adjacent north-facing slopes and summits with dense cover of sagebrush and from shrub thickets in washes and draws. Known occurrences range in elevation from 6500-7600 feet.

Occurrences in Wyoming: Known from 4 extant occurrences (consisting of 53

essentially contiguous subpopulations), all from an area of less than 35 square miles in southwestern Wyoming. Formerly considered to consist of 8 occurrences, but 7 of these were combined due to their overlapping distribution. One additional reported location could not be relocated in 1996 and is suspected to be erroneous (Fertig 1998).

Abundance: Total known habitat covers less than 450 acres. Population size estimated at 20,000 plants in 1996-97 survey (Fertig 1998). Individual subpopulations range in size from 50-5000 plants in areas of 0.5-20 acres. 97% of the global population occurs along Rock Creek Ridge in Lincoln County. Overall density is often low, with as few as 0.4 plants per square meter in monitoring plots (Fertig 1998).

Trends: Long-term monitoring data from Rock Creek Ridge suggests that this population is probably stable, although the discovery of new colonies since 1996 makes comparisons difficult. Trend data are not available for other sites.

Protection status: No occurrences are currently protected within special management areas. 4 small subpopulations of the Rock Creek Ridge occurrence (EO # 001) are designated as No-Surface Occupancy areas by the BLM (Kemmerer Resource Area plan).

Threats: Threats currently low, although potential impacts from ORV use are moderate. Small total range makes the species extremely vulnerable to habitat disturbance from off-road vehicle recreation, road construction, and mineral exploration. Grazing is not believed to be a threat (Fertig 1998).

Managed Areas: All known occurrences are on lands managed by the BLM Kemmerer



Above: Habitat of *Physaria dornii* in openings within Mountain mahogany shrublands on barren whitish slate, Rock Creek Ridge, Lincoln County, WY. Photo by Walter Fertig.

Field Office or on adjacent state and private lands.

References:

Dorn, R.D. 1988. Vascular Plants of Wyoming. Mountain West Publ., Cheyenne.

Dorn, R.D. 1992. Vascular Plants of Wyoming, second edition. Mountain West Publishing, Cheyenne, WY.

Fertig, W. 1998. Status report on Dorn's twinpod (*Physaria dornii*) in southwestern Wyoming. Unpublished report prepared for the BLM Wyoming State Office by the Wyoming Natural Diversity Database, Laramie, WY.

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.

Hartman, R.L., T. Cramer, and B.E. Nelson. 1996. General floristic/sensitive plant species survey of the Kemmerer Resource Area (west side), Lincoln County, Wyoming. Unpublished report prepared for the Bureau of Land Management by the Rocky Mountain Herbarium, University of Wyoming.

Hartman, R.L. and C.H. Refsdal. 1995. Status report on the general floristic inventory of southwest Wyoming and adjacent northeast Utah. Unpublished report prepared for the BLM Wyoming State Office, Vernal, UT BLM, US Fish and Wildlife Service, and Region 4, US Forest Service, by the Rocky Mountain Herbarium, University of Wyoming.

Lichvar, R.W. 1982. Taxonomy of *Physaria condensata*. Unpublished report prepared for the Wyoming Bureau of Land Management by the Wyoming Natural Heritage Program.

Lichvar, R.W. 1983. A new species of *Physaria* (Cruciferae) from Wyoming. *Brittonia* 35: 150-155.

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.

Refsdal, C.H. 1996. A general floristic inventory of southwest Wyoming and adjacent northeast Utah, 1994-1995. Unpublished report prepared for the Bureau of Land Management Wyoming State Office, Bureau of Land Management Vernal Supervisor's Office, US Fish and Wildlife Service, and US Forest Service Region 4 by

the University of Wyoming, Rocky Mountain Herbarium, Laramie, WY.

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.

Weynand, B., and B. Amidon. 1990. An illustrated field guide to the sensitive plants

of the Rock Springs District. Bureau of Land Management.

Whiskey Basin Consultants. 1982. Threatened and endangered plants inventory for the Bureau of Land Management. Unpublished report prepared by Whiskey Basin Consultants.

Author: Walter Fertig

Updated: 01-01-10