

U.S. FISH AND WILDLIFE SERVICE
5-YEAR STATUS REVIEW
Dudley Bluffs Twinpod (*Physaria obcordata*)

GENERAL INFORMATION:

Species: Dudley Bluffs twinpod (*Physaria obcordata*)

Federal Register Notice of Listing Determination: February 6, 1990. Endangered and Threatened Wildlife and Plants; Final Rule to Determine *Lesquerella congesta* (Dudley Bluffs bladderpod) and *Physaria obcordata* (Dudley Bluffs twinpod) to be Threatened Species (55 FR 4152).

Classification: Threatened species

Most recent status review: June 12, 2020. Dudley Bluffs bladderpod (*Lesquerella congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*) 5-year review.

Federal Register Notice citation announcing this 5-year status review: March 13, 2023, Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of 27 Listed Species in the Mountain-Prairie Region (88 FR 15448).

Lead Region: Region 6 Mountain-Prairie Region, Colorado Ecological Services Field Office, Nathan Darnall, Western Colorado Supervisor, Nathan_Darnall@fws.gov, 970-628-7180.

Current Recovery Priority Number (RPN): 8C, moderate degree of threats with a high recovery potential, and conflict with construction, development projects, or other forms of economic activity, especially oil and gas development.

Methodology used to complete this review: In accordance with section 4(c)(2) of the Endangered Species Act of 1973 (16 U.S.C Section 1531 *et seq.*), as amended (Act), the purpose of a 5-year status review is to assess each threatened and endangered species to determine whether its status has changed and it should be classified differently or removed from the Lists of Threatened and Endangered Wildlife and Plants. Status reviews are to be completed in accordance with Sections 4(a) and 4(b) of the Act (16 U.S.C. Section 1533(c)). This 5-year status review was conducted by the U.S. Fish and Wildlife Service's (Service) Western Colorado Ecological Services Field Office. Data for this review were solicited from interested parties through a Federal Register notice announcing this review on March 13, 2023. We also contacted Federal and state agency partners, and county stakeholders to request any data or information we should consider in our review. Additionally, we conducted a literature search and a review of information in our files. Note that previous 5-year status reviews combined both Dudley Bluffs bladderpod and Dudley Bluffs twinpod. Per requests from partner agencies, separate 5-year status reviews have been completed for each species.

ASSESSMENT:

Information acquired since the last status review:

We received additional and updated survey and monitoring reports from the Bureau of Land Management (BLM), Colorado Natural Areas Program (CNAP), and the Colorado Natural Heritage Program (CNHP) in response to our Federal Notice initiating this 5-year status review. The results indicate that the species is still present at all previously known populations, and the species distribution remains the same as described in the previous 5-year status review (Service 2020a) and species biological report (Service 2020b).

Review Summary:

The Dudley Bluffs twinpod was federally listed as threatened on February 6, 1990 (55 FR 4152), along with the Dudley Bluffs bladderpod (*Lesquerella congesta*), primarily due to habitat loss, lack of regulatory mechanisms, and energy development. The Service completed a recovery plan (Service 2020c, entire) and associated recovery implementation strategy (RIS) for both species (Service 2020d, entire).

Status of the Species:

Dudley Bluffs twinpod is 4.7-7.1 inches (in) [12-18 centimeters (cm)] in height. Flowering occurs from late May through mid-June. The timing of vegetative growth initiation is estimated to begin in early May, or possibly sooner. Like Dudley Bluffs bladderpod, Dudley Bluffs twinpod is an obligate outcrosser (i.e., self-incompatible) that requires pollinators for reproduction. Based on monitoring conducted by the BLM, Dudley Bluffs twinpod individuals live for at least 8 years (Service 2020b, p. 10). Plants can reach maturity in 3 years, and in 5 or more years under less ideal conditions (Service 2020b, p. 10). Dudley Bluffs twinpod is found exclusively in the Piceance Basin in Rio Blanco County, Colorado and is restricted to barren white shale outcrops exposed through erosion of drainages predominately associated with the Thirteenmile Creek Tongue of the Green River Formation (Service 2020b, p. 11).

Population trend monitoring plays a central role in evaluating the status of Dudley Bluffs twinpod throughout the recovery process. The best available data for population trends come from the BLM Demographic Trend Monitoring Summary and Status Report (BLM 2024, summarized in Figure 1). Although these data come from discrete study sites within each population, we can extrapolate these trends across the species' range. BLM has conducted annual monitoring across two different study sites annually for at least 10 years (BLM 2024). Two of the remaining sites have too few years of data to make a meaningful assessment of trend.

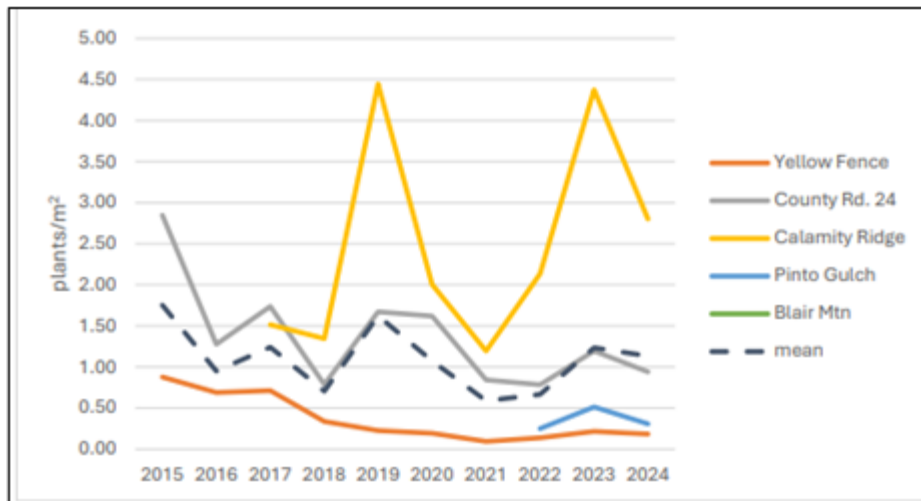


Figure 1. Dudley Bluffs twinpod trends across five study sites from 2015 through 2024. Trend is determined by the change in mean plant density (average number of plants/square meter [m^2]) across years. The mean trend is defined by using a ratio estimator, whereby the total of plants among all sites is divided by the average combined area of all sites. Note monitoring at the Pinto Gulch site was initiated in 2022, and Blair Mountain is not displayed because 2024 was the first year of data at this site.

Annual monitoring at four Dudley Bluffs twinpod study sites revealed a slight to statistically significant decrease in population density from 2019 to 2020 (BLM 2020) followed by a decreasing trend at three study sites in 2021 (BLM 2021). In 2022, slight increases were observed at two study sites, and a slight decrease was observed at one study site (BLM 2022). Following above average precipitation, increases were observed at all four study sites in 2023 (BLM 2023). Decreasing trends were observed across the study system in 2024. Both study sites that have 10 or more years of monitoring data have experienced statistically significant decreases in plant density since their respective establishment dates – declining by an average of 60 percent since 2017. There appears to be a divergence in trend between the three study sites in the central Pinnacle Creek Basin and the study sites at Calamity Ridge and Blair Mountain, where plant density is higher (BLM 2024).

CNAP visits occurrences within Colorado Natural Areas (CNAs) every three years, with the last visit occurring in 2024. All three CNAs with Dudley Bluffs twinpod have presence only information. Drought conditions have improved in all CNAs since 2021 (CNAP 2024).

The CNHP assigns ranks to each known occurrence of Dudley Bluffs twinpod based on population size, condition of plants, quality of habitat, and landscape context. Of the 13 extant occurrences, two are A-ranked (excellent estimated viability) one is AB-ranked (good to excellent estimated viability) – which is a lesser ranking from its previous ranking of A; three are B-ranked (good estimated viability), four are C-ranked (fair estimated viability), two are D-ranked (poor estimated viability) and one is X-ranked (possibly extirpated) (CNHP 2025, entire).

Conservation Efforts for Dudley Bluffs Twinpod:

Multiple agencies are committed to the conservation and preservation of Dudley Bluffs twinpod. Past and ongoing conservation actions include identification of Key Conservation Areas (KCAs), designation of BLM Areas of Critical Environmental Concern (ACECs), designation of CNAP protected areas located on BLM lands, and various conservation projects funded by Federal grants, which we summarize below.

In 2023, a group of Federal, state, local, and private stakeholders formed to implement priority recovery actions included in the recovery plan (Service 2020c) and associated RIS (Service 2020d). This group identified nine KCAs for Dudley Bluffs twinpod to focus analysis and implement recovery actions aimed at reducing or ameliorating threats associated with habitat loss or degradation. A KCA is an area that includes all occupied habitat of Dudley Bluffs twinpod and Dudley Bluffs bladderpod within an occurrence and the surrounding areas of potential impact where indirect effects impact plants (BLM 2025). The KCAs were defined based on existing regulatory assurances prescribed in several regulatory documents. These nine KCAs are: Alkali Flats, Black Sulphur, Blair Mountain, Calamity Ridge, Dudley Bluffs, Greasewood, Pinto Gulch, Ryan Gulch, and Yank's Gulch.

The BLM White River Field Office (WRFO) has designated four Areas of Critical Environmental Concern (ACECs), three of which encompass roughly 54 percent of bladderpod and twinpod occupied habitat (Service 2021). A BLM ACEC is a designation that highlights an area where special management attention is needed to protect important historical, cultural, and scenic values, protect fish and wildlife, or protect other natural resources (Service 2020c). These four ACECs protect approximately 9,247 acres of both bladderpod and twinpod habitat as well as other resources. These ACECs are also designated Colorado Natural Areas and receive management support from CNAP. An additional 36,219-acre area is under review by the BLM to be designated as the *Physaria* ACEC and would encompass much of the remaining occupied Dudley Bluffs twinpod and Dudley Bluffs bladderpod habitat on BLM land (Service 2021).

Table 1. Acres of Dudley Bluffs twinpod occupied habitat within three BLM ACECs (Service 2020b)

ACEC Name	Area
Ryan Gulch	84.2 (34.1 hectares)
Dudley Bluffs	43.4 acres (17.6 hectares)
Yanks Gulch/Upper Greasewood Creek	18.9 acres (7.6 hectares)
Total	146.5 acres (59 hectares)

CONCLUSION:

The Act defines an endangered species as any species that is "in danger of extinction throughout all or a significant portion of its range" and a threatened species as any species that is "likely to

become an endangered species within the foreseeable future throughout all or a significant portion of its range." After reviewing the best available scientific information, as documented in our biological report (Service 2020b) and summarized in this 5-year status review, we conclude that Dudley Bluffs twinpod is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Although progress towards recovery has been made to provide protections for this species, the threats present at the time of listing, including mineral extraction and energy development, wildfire, invasive species, off-highway vehicle use (factor A); livestock and wild horse grazing (factor A and factor C); inadequacy of existing regulatory mechanisms (factor D); and small population sizes, limited geographic range, and the effects of climate change (factor E) are present and ongoing. The evaluation of threats affecting the species under the factors in 4(a)(1) of the Act and analysis of the status of the species included in this 5-year status review does not change our evaluation of the species' status and the threats affecting the species. Following this review, we recommend no change in status under the Act for Dudley Bluffs twinpod at this time.

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CURRENT CLASSIFICATION: Threatened

RECOMMENDATION RESULTING FROM THE 5-YEAR STATUS REVIEW:

- Downlist to Threatened
- Uplist to Endangered
- Delist (Indicate reasons for delisting per 50 CFR 424.11):
 - Extinction
 - Recovery
 - Original data for classification in error
 - No change is needed

APPROPRIATE LISTING/RECLASSIFICATION PRIORITY NUMBER, IF APPLICABLE:

RECOMMENDATIONS FOR FUTURE ACTIONS: *(optional, but may be helpful to identify priorities for management actions and information needs for next 5-year review)*

Lead Field Office Approval:

Signature: _____ Date: _____

Literature Cited:

- Bureau of Land Management (BLM). 2020. Dudley Bluffs bladderpod and twinpod (*Physaria congesta* and *Physaria obcordata*) Population Trend Monitoring Summary. 15 pages.
- Bureau of Land Management (BLM). 2021. Dudley Bluffs bladderpod and twinpod (*Physaria congesta* and *Physaria obcordata*) Population Trend Monitoring Summary. 19 pages.
- Bureau of Land Management (BLM). 2022. Dudley Bluffs bladderpod and twinpod (*Physaria congesta* and *Physaria obcordata*) Population Trend Monitoring Summary. 20 pages.
- Bureau of Land Management (BLM). 2023. Dudley Bluffs bladderpod and twinpod (*Physaria congesta* and *Physaria obcordata*) Population Trend Monitoring Summary. 16 pages.
- Bureau of Land Management (BLM) 2024. Dudley Bluffs bladderpod (*Physaria congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*) Population Trend Monitoring Summary. 22 pages.
- Colorado Natural Areas Program (CNAP). 2024. 2024 Field Report. 8 pages.
- Colorado Natural Heritage Program (CNHP) 2024. Threatened and Endangered Plant Database Development, Field Surveys, and Monitoring; 2023 Interim Report. 43 pages.
- Colorado Natural Heritage Program (CNHP) 2025. Threatened and Endangered Plant Database Development, Field Surveys and Monitoring: 2024-2025 Final Report. 38 pages.
- U. S. Fish and Wildlife Service (Service). 2020a. 5-year review: Dudley Bluffs (*Physaria [Lesquerella] congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*). 9 pages.
- U. S. Fish and Wildlife Service (Service). 2020b. Species biological report: Dudley Bluffs bladderpod (*Physaria [Lesquerella] congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*). Grand Junction, Colorado. 43 pages.
- U. S. Fish and Wildlife Service (Service). 2020c. Final recovery plan for Dudley Bluffs bladderpod (*Physaria [Lesquerella] congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*). U.S. Fish and Wildlife Service, Mountain-Prairie Region, Denver, Colorado. 14 pages.
- U.S. Fish and Wildlife Service (Service). 2020d. Recovery implementation strategy (RIS) for Dudley Bluffs bladderpod (*Physaria [Lesquerella] congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*). U.S. Fish and Wildlife Service, Mountain-Prairie Region, Denver, Colorado. 17 pages.
- U.S. Fish and Wildlife Service (Service) 2021. Programmatic Biological Opinion for Oil and Gas, Oil Shale, Nahcolite, and County Road Actions that May Affect Dudley Bluffs

bladderpod and Dudley Bluffs twinpod in the Bureau of Land Management White River Field Office. 19 pages.