Bell's Twinpod

Photo credit: BCPOS employee

Background

Bell's twinpod (*Physaria bellii*) is a rare perennial mustard native to Colorado and found only in Boulder, Larimer, and Jefferson Counties. This species is found in association with grassland and shrubland habitats, in rocky areas and road cuts. This species has been declared a Species of Special Concern by Boulder County and has been given S2S3 status by the state of Colorado and G2G3 status by CNHP due to its threats and limited range.

Distribution & Range

Bell's twinpod has a limited range but is locally abundant. It grows along the Front Range foothills in shale and limestone outcrops. There are 28 extant documented populations with a total of approx. one million individual plants.

Species Description

Description: Bell's twinpod is a perennial forb and a member of the mustard family. It forms a basal floret of hairy, silvery-green leaves from which several to many stems emerge. These stems bear a cluster of yellow flowers generally arranged circularly around the plant. The fruit is a small (4–6 mm), inflated silique consisting of two valves, each of which can hold a maximum of two seeds. Flowers April through June, fruits July through August.

Look Alikes: Roundtip twinpod (*Physaria vituliflora)* has larger, fiddle shaped leaves, and the constriction separating the locules of the fruit is much deeper above than below.
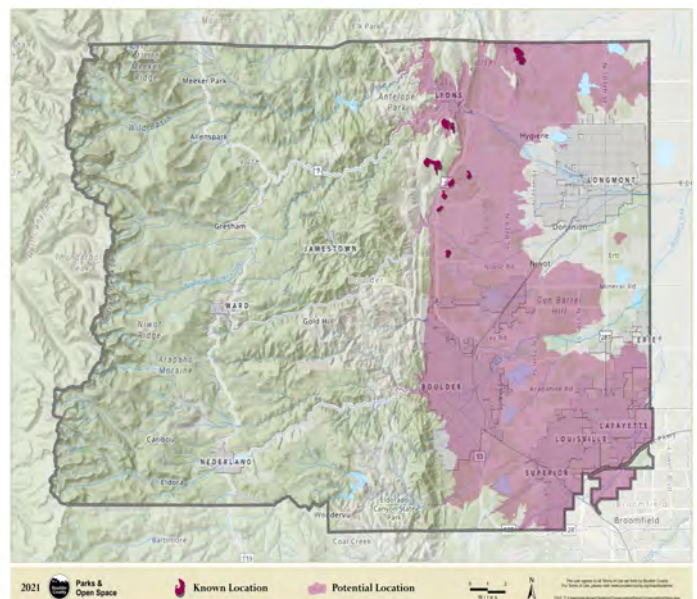
Habitat: The plant is found on limestones and shales barrens, and along natural outcrops, such as ridge crests. Generally, they can be found in loose, gray shale washes, slopes of hogbacks, sloping down to grassy meadows containing some scattered seeps.

Threats

- *Habitat loss & fragmentation:* Development and limestone mining are the main threats.

- *Invasive Species:* Cheatgrass, smooth brome, and knapweed are the main threats.

- *Grazing*: This is minimal threat as the habitat it prefers is not conducive to grazing.

- *Recreation:* Trampling and soil compaction from recreational users.

- *Road maintenance*: Roadside activities, such as grading,, mowing and herbicide application.

Photo credit: BCPOS employee

Management Considerations

- *Habitat preservation:* Prior to any construction or maintenance in potential Bell's twinpod habitat, land owners and managers should assess the planned work area to determine if this rare plant is present.

- *Invasive plant management:* Herbicide applications should be kept at least 200 m (650 ft) from known populations, unless specifically targeting encroachment that threatens habitat integrity.

- *Fire management:* : The response of Bell's twinpod to fire is not well known and should be avoided.

- *Restoration:* Any revegetation that is to be undertaken near or in Bell's twinpod habitat should include a very low rate of select native plants, including Indian ricegrass (*Achnatherum hymenoides*), New Mexico feathergrass (*Hesperostipa neomexicana*), or shortstem buckwheat (*Eriogonum brevicaule*). Seed mixes should contain no non-native species, or even aggressive native species such as western wheatgrass.

Photo credit: BCPOS employee

Parks &
Open Space

Boulder County

2021

The areas displayed in this map indicate known and potential locations of the following species of special concern in Boulder County:

Physaria bellii

Bell's Twinpod

Bell's Twinpod is a rare perennial mustard endemic to Colorado and found only in Boulder, Larimer, and Jefferson Counties. The species is found in association with grassland and shrubland habitats, in rocky areas and road cuts of limestones and shale barrens and along natural outcrops and ridge crests. It is a Boulder County Species of Special Concern, and It is imperiled (S2) in Colorado due to its limited range and threats, which include habitat loss and fragmentation, invasive species, and some road maintenance activities.

This map shows only known locations from documented herbaria records in the county, and where there is a potential for the species to occur based on its known elevation range.

Legend

- Known Location
- Potential Location

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