

-State Species Abstract-
-Wyoming Natural Diversity Database-

CRYPTANTHA SUBCAPITATA
OWL CREEK MINER'S CANDLE
Family: BORAGINACEAE

Status:

US Fish & Wildlife Service: None.
Formerly listed as a C2 candidate by the US
Fish and Wildlife Service.

Agency Status: None.

Heritage Rank:

Global: G1 State: S1

WYNDD Plant List: State endemic
(High Conservation Priority)

Description: Owl Creek miner's candle is a mat-forming perennial herb averaging less than 15 cm high. The leaves are linear to oblanceolate, 1-3 mm wide, and densely pubescent with both appressed, short hairs and longer, spreading, bulbous-based hairs. The inflorescence is head-like, with white flowers 5-6 mm broad that barely exceed the calyx tube in length. The nutlets are wrinkled and bumpy on the back and are enclosed by the pubescent calyx lobes. The slender style persists in fruit and exceeds the nutlets by 1.5-2 mm (Dorn and Lichvar 1981; Fertig et al. 1994).

Identification Comments: Mature fruit and styles needed for confirmation. Mature fruit are most likely to be found in petal-less flowers near the base of the inflorescence with a swollen calyx. Inflorescence shape and leaf pubescence are also helpful features.

Similar Species: *Cryptantha caespitosa* has an elongate inflorescence and styles exceeding the nutlets by less than 0.5 mm. *C. spiculifera* has a longer inflorescence and

closed nutlet scars (nutlet scars are the remnants of the common point of attachment of the 4 nutlets and are open in *C. subcapitata*). Other Wyoming species of *Cryptantha* are either annual, have smooth nutlets, or non-matted stems.

Flowering/Fruiting Period: Flowers late May-June, mature fruits present from mid June-mid July. Reproduces by seed. Plants may form large mats by vegetative means.

Distribution: Narrow endemic of the Owl Creek and Bridger Mountains in the vicinity of Boysen Reservoir and the northern Wind River Basin in Fremont County, Wyoming.

Habitat: Occurs on sandy-gravelly slopes and desert ridges in sparsely vegetated cushion plant communities, often dominated by *Sphaeromeria capitata* or *Artemisia nova*. This species appears to be restricted to sandstones and conglomerates derived from the Eocene Wind River Formation, although it has been reported from limestones (Dorn 1989). Common associated species include *Astragalus simplicifolius*, *A. sericoleucus*, *Phlox muscoides*, *P. hoodii*, *Hymenoxys acaulis*, *Arenaria hookeri*, *Eriogonum brevicaulis*, *Haplopappus nuttallii*, *Elymus spicatus*, and *Poa secunda*.

Occurrences in Wyoming: Known from 3 extant populations (last surveyed in 1996). One additional occurrence (#004) has not been relocated since 1958 and may represent a different taxon according to Dorn (1989).

Abundance: Dorn (1989) estimated the total population to be ca 38,000 plants in an area of ca 1460 acres.

Trends: Assumed to be stable.

Protection status: All known populations are on public and tribal lands managed for multiple use.

Threats: Threats are generally low due to the rugged and inaccessible nature of the plant's habitat. Its small natural range makes the species vulnerable to extirpation from chance natural events.

Managed Areas: Occurs on lands managed by the BLM Lander Field Office, Boysen State Park, and the Wind River Indian Reservation.

References:

Dorn, R.D. 1989. Report on the status of *Cryptantha subcapitata*, a Candidate Threatened species. Prepared for the US Fish and Wildlife Service by Mountain West Environmental Services, Cheyenne, WY.

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

Dorn, R.D. and R.W. Lichvar. 1981. A new species of *Cryptantha* (Boraginaceae) from Wyoming. *Madrono* 28 (3): 159-162.

Fertig, W. 1993. Field survey for *Cryptantha subcapitata*, *Physaria eburniflora*, and *Sphaeromeria simplex* on Bureau of Land Management lands in Central Wyoming. Prepared for the Casper District, Bureau of Land Management by the Wyoming Natural Diversity Database, Laramie, WY.

Fertig, W. and G. Jones. 1997. Plant species of special concern and plant associations of the Copper Mountain ecosystem, Fremont County,

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.

Marriott, H.J. 1992. Field survey for *Claytonia lanceolata* var. *flava*, *Cryptantha subcapitata* and *Shoshonea pulvinata* in the Owl Creek and southeastern Absaroka Mountains. Prepared for the Bureau of Land Management by the Wyoming Natural Diversity Database, Laramie, WY.

Neighbours, M. and H. Marriott. 1991. Candidate sensitive plant species, Platte River Resource Area, Bureau of Land Management. Prepared for the BLM by the Wyoming Natural Diversity Database.

Author: Walter Fertig

Updated: 00-08-29