

-State Species Abstract-
-Wyoming Natural Diversity Database-

PENSTEMON GIBBENSII
GIBBENS' BEARDTONGUE
Family: Scrophulariaceae

Status:

US Fish & Wildlife Service: Petitioned in 2007. (Former C2 candidate for listing under the Endangered Species Act.)

Agency Status: WY BLM Sensitive.

Heritage Rank:

Global: G1G2 State: S1

Range Context: Regional endemic/ Core

Wyoming Contribution Rank: Very high

Description: Gibbens' beardtongue is a perennial herb with several erect pubescent (rarely glabrous) stems 10-35 cm long. The leaves are linear to linear-lanceolate and often folded down the length of the midrib, opposite, smooth-margined, pubescent to glabrate, and mostly less than 5 mm wide. The inflorescence and flowers (including the sepals) are glandular-hairy. The bright blue corolla is tube-shaped and 15-20 mm long. Anthers sacs are dark purple, 1.2-1.5 mm long, and short hairy on the back. Fruits are oval, tawny-brownish capsules (Dorn 1982, 1989, 2001; Fertig al. 1994; Fertig and Neighbours 1996).

Similar Species: *Penstemon saxorum* has leaves over 5 mm wide and glabrous stems and sepals. *P. fremontii* (both varieties) and *P. cyananthus* have non-glandular inflorescences and wider leaves (Dorn 1982, 1989; Dorn and Lichvar 1990).

Flowering/Fruiting Period: Flowers from mid June to early August (September), depending on spring and summer moisture conditions and site differences.

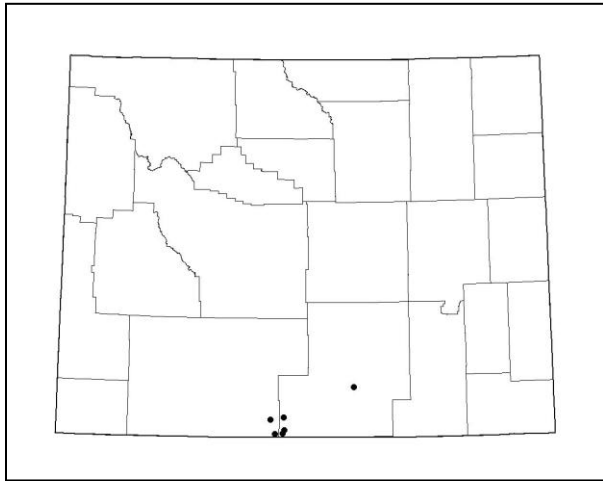


Above: *Penstemon gibbensii*, by Walter Fertig.

Below: *P. gibbensii* by Kaye Thorne from Fertig et al. (1994).



Distribution: South-central Wyoming, northwestern Colorado and adjacent northeastern Utah. Wyoming occurrences



Wyoming distribution of *Penstemon gibbensii*.

are restricted to the southern Washakie Basin and North Platte River Valley in Carbon and Sweetwater counties (Dorn 1989, Roderick et al. 1999, Spackman and Anderson 1999, Fertig and Neighbours 1996, Heidel 2009).

Habitat: Found on barren shale or sandstone slopes of the Browns Park Formation or Laney member of the Green River shale, often located below caprock, on the steep, upper or middle slopes eroding out below the resistant layer. The sites are sparsely vegetated slopes of *Elymus spicatus*, *Oryzopsis hymenoides*, and *Stipa comata* with scattered shrubs. The easternmost occurrence is found within *Cercocarpus montanus* openings. Elev. 6200-7700 feet.

Occurrences in Wyoming: Known from 6 occurrences, last surveyed in 2008 (Heidel 2009).

Abundance: Est. 6000-9000 plants (Heidel 2009).

Area of Occupancy: Est. 270 acres, across an area exceeding 50,000 acres (Heidel 2009).

Trends: Drought-induced declines were documented at two monitoring sites, observed in surveying one other occurrence, and undetermined at an original occurrence and at the two newest occurrences (Heidel 2009). It was previously reported as stable or increasing (Fertig and Neighbours 1996, Warren 1992) and estimated at 13,100-14,900 plants from four sites (Fertig and Neighbours 1996).



Above: Habitat of *Penstemon gibbensii* on erosive, whitish slopes of the Browns Park Formation near Cherokee Basin, WY. Photo by Walter Fertig.

Protection status: Part of one occurrence is on lands under easement by The Nature Conservancy's Wyoming Field Office. The BLM Rawlins Field Office has built an enclosure at one site to study species' response to grazing. All other sites are on BLM or state lands managed for multiple use.

Threats: Grazing, mineral development, recreation, roads and weeds are potential threats. Drought, climate conditions and big game herbivory may directly or indirectly impact the species and erode its habitat.

Managed Areas: Occurs on lands managed by the BLM Rawlins Field Office, state of Wyoming, and private lands.

Other Comments: The Denver Botanic Garden has a small seed bank for this species.

References:

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