

-State Species Abstract-  
-Wyoming Natural Diversity Database-

*PENSTEMON HAYDENII*  
BLOWOUT PENSTEMON  
Family: Scrophulariaceae

Status:

US Fish & Wildlife Service: Endangered  
Agency Status: Endangered

Heritage Rank:

Global: G1 State: S1  
Range Context: Regional Endemic  
Wyoming Contribution Rank: Very High

Description: Blowout penstemon is a perennial herb with one to many glabrous upright or decumbent stems arising from a branched caudex, rooting from buried nodes. Vegetative stems are usually less than 30 cm tall and have greenish-blue, waxy, linear leaves 2.5-12 cm long and 0.3-1 cm wide. Flowering stems have narrow basal leaves and broad-based, clasping, waxy upper stem leaves 0.7-3 cm wide that taper abruptly to a narrow tip. The inflorescence is 6-16 cm long with 6-10 compact, leafy whorls of milky-blue to pale lavender flowers (rarely pink or white). Bracts of the inflorescence are broad and heart-shaped at the base and narrow to an elongate tip. Individual flowers are 23-25 (30) mm long with tubular, bilobed and faintly vanilla-scented corollas that are broadly dilated above the glabrous, linear sepals. Anther sacs are 1.8-2 mm long and glabrous. Fruits are 13-16 mm long capsules, acute, with light-brown, disc-shaped seeds (Stubbendieck et al. 1982, 1997; Freeman 1986; Fertig 2000, 2001, Heidel 2005a).

Similar Species: *Penstemon grandiflorus* has ovate to spoon-shaped leaves that are widest near the middle, larger non-aromatic flowers, and larger fruits. *P. angustifolius* var. *caudatus* has smaller flowers.

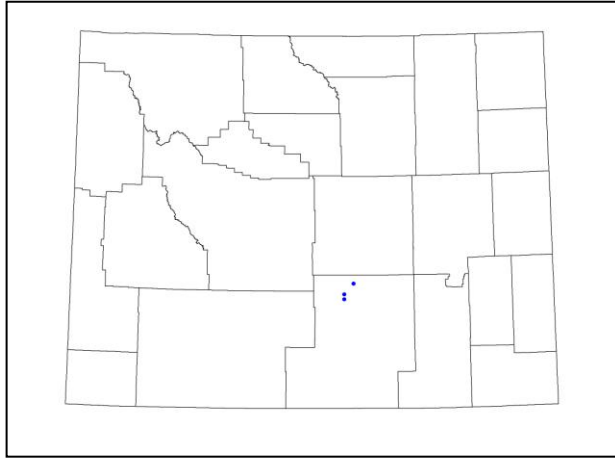


Above: *Penstemon haydenii* by B. Heidel.  
Below: *Penstemon haydenii* in flower by Walter Fertig.



Flowering/Fruiting Period: Flowers mid June - early July, and sets fruit in July - August.

Distribution: Regional endemic of the Nebraska Sandhills, and the northeastern end of the Great Divide Basin in Carbon County, Wyoming. This species was not confirmed in Wyoming until 1999. Previously, it was thought to be endemic to Nebraska.



Wyoming distribution of *Penstemon haydenii*.

**Habitat:** Blowout penstemon is restricted to sparsely vegetated, early successional, shifting sand with crater-like blowout depressions created by wind erosion. In Wyoming, blowout penstemon is found primarily on the rim and lee slopes of blowouts, and associated steep slopes deposited at the base of foothills, at elevations of 5860-7440 feet. The prevailing dominant is *Redfieldia flexuosa* sometimes with low cover of *Psoralidium lanceolatum*, and locally dominated by *Achnatherum hymenoides* or *Elymus lanceolatus* var. *lanceolatus*.

**Occurrences in Wyoming:** Known from 3 occurrences in Wyoming including multiple dunes or dune complexes; most recently surveyed in 2008.

**Abundance:** Partial population counts had a peak tally of over 17,000 plants in 2005, followed by over 8,000 plants in 2006 (Heidel 2007).

**Trends:** Populations numbers appear to have peaked in 2005, and preliminary interpretation of 2004-06 census data indicates that overall trends are stable or increasing slightly. The dune habitat has become extensively destabilized by 2006, signifying both new potential habitat and lost occupied habitat.

**Protection status:** All known occurrences in Wyoming are on federal or state lands managed for multiple use.



Above: *Penstemon haydenii* habitat on a steep, sparsely vegetated slope. Photo by Walter Fertig.

**Threats:** Threats are low under current management, but this species is potentially vulnerable to habitat loss and degradation from sand mining, water development, energy development, ORV use, and associated destabilization or spread of non-native species.

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

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Updated: 2008-09-17