

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Plant Abstract**

**Element Code:** PDSCR1L6K2

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**



**ME:** *Penstemon pseudoputus*  
**COMMON NAME:** Kaibab Beardtongue  
**SYNONYMS:** *Penstemon virgatus* ssp. *pseudoputus* Crosswhite  
**FAMILY:** Scrophulariaceae

**AUTHOR, PLACE OF PUBLICATION:** Holmgren, N.H. 1979. Brittonia 31: 104-107.

**TYPE LOCALITY:** DeMotte Park, Kaibab Plateau, Coconino County, Arizona.

**TYPE SPECIMEN:** US. Mead (503).

**TAXONOMIC UNIQUENESS:** Approximately 250 species of *Penstemon*. The genus is restricted to North America and is most abundant in Utah. *Pseudoputus* is one of four subspecies of *Penstemon virgatus*; some consider it to be a separate species under the genus *Penstemon*.

**DESCRIPTION:** Slender perennial, from a somewhat woody base; stems tomentose (hairy), 20.0-30.0 cm (8.0-12.0 in.) tall. **Leaf blades mostly linear-lanceolate** as long as 3.0 cm (1.2 in.), 1.0-2.0 mm (0.04-0.08 in.) wide; basal leaves only rarely present at anthesis. Flowers borne in a narrow inflorescence, "pale-violet to purple with deep purple guide lines within, sometimes white, distinctly bilabiate" (McDougall 1973), 17.0-25.0 mm (0.68-1.0 in.) long. Lower lip of corolla is "more or less spreading; anther sacs opposite, straight; staminode usually glabrous (not hairy) but sometimes more or less bearded" (McDougall 1973). May retain dead, woody stems from previous year.

**AIDS TO IDENTIFICATION:** Leaves are very long and narrow; hairy stems. *P. virgatus* has a haired lower corolla lip.

**ILLUSTRATIONS:** Line drawing (USFWS).

**TOTAL RANGE:** Kaibab and Walhalla plateaus. Includes that area from the North Rim of the Grand Canyon, north to Jacob Lake, Coconino County, Arizona.

**RANGE WITHIN ARIZONA:** See "Total Range."

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Perennial herb

**PHENOLOGY:** Flowers mid-July to mid-August; fruits September.

**BIOLOGY:** Probably a stabilizing member of the meadow grassland community of the Kaibab Plateau. It is found in recently disturbed areas in greater density than in more stable areas. It also occurs on roadside berms.

**HABITAT:** On Kaibab limestone and sandstone in open subalpine grassland meadows and sporadically in pine forest; disturbed areas.

**ELEVATION:** 6,560 - 9,500 ft (2001 - 2898 m).

**EXPOSURE:** Slope and aspect do not seem to affect the distribution of this species

**SUBSTRATE:** Parent material is sandstone and Kaibab limestone.

**PLANT COMMUNITY:** Subalpine Grassland Meadows; sporadically in Ponderosa pine forest, Rocky Mountain Conifer Forest. Associated species: *Castilleja kaibabensis*, *Hymenoxys subintegra*, *Machaeranthera mucronata*, and subalpine grasses.

**POPULATION TRENDS:** Many size classes are present at most sites.

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1996)  
[3C USDI, FWS 1983]  
[Category 1 USDI, FWS 1980]  
[PTN-T USDI, FWS 1975]

**STATE STATUS:** None

**OTHER STATUS:** None

**MANAGEMENT FACTORS:** Limited range. Potential threats include: logging practices which involve surface disturbing activity; herbivory by deer and other wildlife (may be somewhat palatable to livestock); rodent and deer browse. Tolerant of disturbance and may even increase in abundance.

**CONSERVATION MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Monitoring. Studies to determine distribution, habitat, and ecological factors.

**LAND MANAGEMENT/OWNERSHIP:** BIA - Navajo Nation; NPS - Grand Canyon National Park; USFS - Kaibab National Forest (North Kaibab Ranger District).

## **SOURCES OF FURTHER INFORMATION**

### **LITERATURE CITATIONS:**

- Crosswhite, F. S. 1967. Revision of *Penstemon* section *Habroanthus* (Scrophulariaceae) III. Series *Virgati*. American Midland Naturalist 77:28-37.
- Fletcher, R. 1978. *Penstemon virgatus* subsp. *pseudopus*. Status report prepared for the United States Forest Service.
- Holmgren, N. H. 1979. Nomenclatural changes in some intermountain *Penstemons* (Scrophulariaceae). Brittonia 31:104-107.
- Kearney, T.H., R.H. Peebles with collaborators. 1960. Arizona flora. Second edition with supplement by J.T. Howell, E. McClintock and collaborators. University of California Press, Berkeley. p.778.
- Mazzoni, J., L.T. Green III, B.G. Phillips and N. Brian. 1982. Status report *Penstemon pseudopus* (Crosswhite) N. Holmgren. Submitted to U.S. Fish and Wildlife Service, Albuquerque, New Mexico.
- McDougall, W.B. 1973. Seed plants of Northern Arizona. The Museum of Northern Arizona, Flagstaff. p.452.
- USDA, Forest Service Region 3. 1990. Regional Forester's Sensitive Species List.
- USDI, Fish and Wildlife Service. 1975. Threatened or Endangered Fauna or Flora. Federal Register 40(127):27831.
- USDI, Fish and Wildlife Service. 1980. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. Federal Register 45(242):82528.
- USDI, Fish and Wildlife Service. 1983. Endangered and Threatened Wildlife and Plants; Supplement to Review of Plant Taxa for Listing; Proposed Rule. Federal Register 48(229):53668.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review. Federal Register 61(40):7596-7613.

### **MAJOR KNOWLEDGEABLE INDIVIDUALS:**

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### **ADDITIONAL INFORMATION:**

Holmgren (1979) prefers to use *P. pseudopus* at the species level while Crosswhite (1967) and Fletcher (1978) use it as a variety.

Fletcher (1978) states: *Penstemon pseudopus* has increased with grazing; *P. virgatus* is an extremely variable species although the characters delineating *pseudopus* are constant in its geographic area; different at varietal level.

Kearney et al. (1960) report this as an undescribed taxa. Reference is made to a collection from Navajo Mountain, Utah, at 9,500 feet elevation. Crosswhite (1967) in naming the taxon makes no mention of the Navajo Mountain population.

Mazzoni et al. (1982) recommend removing from consideration for federal listing.

**Revised:** 1991-12-04 (JSP)  
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