

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDSCR1L210

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Penstemon discolor* Keck

COMMON NAME: Catalina Beardtongue

SYNONYMS: None

FAMILY: Scrophulariaceae

AUTHOR, PLACE OF PUBLICATION: Keck, D.D. 1937. Bull. Torr. Bot. Club 64:357-381.

TYPE LOCALITY: Arizona: Pima County: Santa Catalina Mountains: Bear Canyon.

TYPE SPECIMEN: UC 277189. F. Shreve 5319. 30 June 1917.

TAXONOMIC UNIQUENESS: *Penstemon* is the largest genus of flowering plants endemic to North America. There are approximately 250 species in this genus, with 44 species occurring in Arizona (Hickman 1993, Lehr 1978, Lehr and Pinkava 1980, Lehr and Pinkava 1982). This species belongs to the *P. linarioides* group and is closely related to *P. linarioides* (Keck 1937).

DESCRIPTION: Perennial, herbaceous sub-shrub from a decumbent woody base. Stems erect, 19.0-35.0 cm tall, numerous, from a woody base and numerous fibrous roots. Leaves opposite, linear, crowded on lower part of the stems and widely spaced above, 5.0-10.0 (to 18.0) mm long and 1.0-1.5 mm wide, fleshy, white-puberulent flat dorsal surface; deep green, glabrous, rounded ventral surface. Raceme few-flowered, twiggy, 2.0-6.0 cm long. Flowers born in twos and threes on upper stems, white to pinkish-white with violet-purple lines in throat, 8.0-14.0 mm long, puberulent. Sepals 3.5-5.0 mm long and 2.0 mm wide. Capsules 4.0-8.0 mm long and 3.0-4.0 mm wide (Phillips et al. 1982, Keck 1937, ADA 1994, Kearney and Peebles 1960).

AIDS TO IDENTIFICATION: This species is most likely to be confused with *P. linarioides*. *P. discolor* has shorter corollas and leaves than *P. linarioides*. *P. discolor* has fleshy leaves that are white on the upper surface and deep green and glabrous on the lower surface. *P. linarioides* has non-fleshy leaves that are grayish or greenish on both surfaces. Also the color of the corollas of *P. discolor* is white tinged with lavender, while the corollas of *P. linarioides* are blue-purple or, rarely, pinkish (Kearney and Peebles 1960, Keck 1937, Phillips et al. 1982).

ILLUSTRATIONS: Line drawing (USFWS)
Line drawing and color photo (ADA 1994)
Line drawing, color photos of plant and habitat (AZ Rare Plant Field Guide, in prep.)

TOTAL RANGE: Southern Arizona.

RANGE WITHIN ARIZONA: Cochise County: Winchester and Dragoon Mountains; Graham County: Santa Theresa Mountains; Pima County: Santa Catalina Mountains; Pinal County: Galiuro Mountains; Santa Cruz County: Atascosa and Tumacacori Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial sub-shrub.

PHENOLOGY: Flowers and sets seed from June to September.

BIOLOGY: Pollinated by several species of bombylid Diptera as well as megachilid and halictid Hymenoptera. The plants are highly localized on rock outcrops in thin soil pockets (Santa Catalina Mountains and Dragoon Mountains) or on outcropping beds of whitish volcanic tuff (Peck and Bartolo canyons). In both habitats, *P. discolor* avoids significant competition from other plants.

HABITAT: Bare rock outcrops, barren soil outcrops, and bedrock openings in chaparral or pine-oak woodland.

ELEVATION: Approximately 4,120 - 7,600 feet (1236-2280 m).

EXPOSURE: South, southeast, and all.

SUBSTRATE: Most often found on pockets of decomposed granite in crevices on granitic bedrock outcrops and boulders. Also found on outcropping lenses of whitish volcanic ash, in the Atascosa Mountains.

PLANT COMMUNITY: This species occurs in madrean evergreen woodland communities dominated by oak and pine, as well as interior chaparral communities, as defined by Brown (1994).

POPULATION TRENDS: Population of marked study plants on Lizard Rock is stable. Seedlings few or none, but plants flower and set viable seed annually. Mortality is low.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 1 USDI, FWS 1993]
[Category 1 USDI, FWS 1990]
[Category 1 USDI, FWS 1985]
[Proposed Endangered USDI, FWS 1976]
[PTN-E USDI, FWS 1975]

STATE STATUS: Highly Safeguarded (ARS, ANPL 1993)

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
[Forest Service Sensitive USDA, FS Region 3 1990]

MANAGEMENT FACTORS: Apparently some populations are threatened by rock climbers. Peck and Bartolo canyons are grazed, but cattle may avoid the plants and do not excessively trample the sites.

CONSERVATION MEASURES TAKEN: This species has been listed as “Forest Service Sensitive” since 1990. Monitoring plot established at Lizard Rock by Reichenbacher.

SUGGESTED PROJECTS: Monitor known populations to some extent. Search areas of suitable habitat for new populations, especially those areas adjacent to known populations.

LAND MANAGEMENT/OWNERSHIP: USFS Coronado National Forest, TNC Aravaipa Canyon Preserve, and BLM Safford Field Office.

SOURCES OF FURTHER INFORMATION**LITERATURE CITATIONS:**

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- USDI, Fish and Wildlife Service. 1975. Threatened or Endangered Fauna or Flora. Federal Register 40(127):27828.
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- Art Phillips - Private Consultant, Flagstaff, Arizona.
- Frank Reichenbacher - Southwestern Field Biologists, Tucson, Arizona.
- Bob Schmalzel - Oracle, Arizona.

ADDITIONAL INFORMATION:

In December of 1999, only 14 populations of this species were known in Arizona.

Revised: 1990-02-01 (SST)
1991-11-14 (FWR)
1998-01-09 (SSS)
1999-12-21(DJG)

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Penstemon discolor

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