

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDSCR1LAZO

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Penstemon petiolatus* Brandegee

COMMON NAME: Sheep range beardtongue, Petiolate beardtongue, Lime penstemon, Crevice penstemon

SYNONYMS: *Penstemon calcareous* M.E. Jones

FAMILY: Scrophulariaceae

AUTHOR, PLACE OF PUBLICATION: Brandegee, Botanical Gazette 27(6): 455. 1899.

TYPE LOCALITY: Sheep Mountain, Nevada, USA; alt. 5000 ft. 1524 m.

TYPE SPECIMEN: HT: UC. C.A. Purpus 6136, May 1898. IT: GH, NY, US.

TAXONOMIC UNIQUENESS: Species *petiolatus* is 1 of 247 species in the genus *Penstemon*, and 1 of 43 in Arizona.

DESCRIPTION: Low rounded shrub, covered with a fine waxy powder, 5-15(-40) cm [2-6(-16) in] tall and up to 60 cm (24 in) across. Shrub at first green to blue-glaucous, puberulent, eventually becoming trunk-like, gnarled, and blackish near the base. Stems branching, with thick holly-like basal leaves, 7-40 mm long. The dentate leaves 2-3 cm () long, 8-17 mm wide, broadly ovate, obtuse or acute, all but the uppermost petiolate; thyrse short and broad with divergent peduncles. The cymes are (1)2- to 4(5)-flowered, glandular-pubescent; calyx is 4-7(8) mm long, the segments narrowly lanceolate to lanceolate, glandular-pubescent, and the margins narrowly scarious. The corolla is 13-17 mm long, moderately ampliate, the lobes spreading, magenta with dark violet lines inside the throat, glandular-pubescent externally, the palate bearded with whitish-yellow hairs; staminode slightly exserted, with short yellow hairs nearly the full length. The fertile stamens included to slightly exserted, the anther-cells 0.5-0.9 mm long, dehiscing the full length and becoming peltately explanate; capsule about 6-8 mm long. (Cronquist et al. 1984; Falk et al. 2001).

AIDS TO IDENTIFICATION:

ILLUSTRATIONS: Line drawing (Cronquist et al. 1984: p. 427)

Line drawing (Falk et al. 2001).

Color photos of plant and habitat (Falk et al. 2001).

Color photo of Isotype specimen (NY-130474, in

<http://207.156.243.8/emu/vh/specimen.php?irn=315342>)

Color photo of Isotype specimen (US-348204, in

<http://ravenel.si.edu/botany/types/fullRecords.cfm?myFamily=>)
Color photos (James L. Reveal, in Norton-Brown Herbarium Images,
<http://www.life.umd.edu/emeritus/reveal/PBIO/slides/slides500-699.html>)
Color photo of Herbarium Collection (ASU-90811, in SEINet at
<http://seinet.asu.edu/collection/TaxaDetails.jsp>)

TOTAL RANGE: Known from an area near the intersection of the Nevada, Utah, and Arizona state borders.

RANGE WITHIN ARIZONA: Virgin and Beaver Dam Mountains, Mohave County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial shrub/subshrub.

PHENOLOGY: Flowers in May; fruits in May and June.

BIOLOGY:

HABITAT: Found on limestone cliffs (in crevices), ledges, and boulders.

ELEVATION: 2,000-5,800 ft (610-1770 m). In Arizona, found at 2,000 ft (610 m).

EXPOSURE: East and northeast exposures in Arizona.

SUBSTRATE: Limestone rock crevices.

PLANT COMMUNITY: Eastern Mohave Desert endemic. Through its range, this species can be found in Joshua tree, blackbrush, creosote bush, indigo bush, and pinyon-juniper communities. In Nevada, this species is found to associate with *Aristida* (three-awn grass), *Atriplex confertifolia* (shadscale), *Brickellia microphylla* (little-leaved Brickell-bush), *Buddleja utahensis* (Utah butterfly-bush), *Gutierrezia* (snakeweed), and *Stipa speciosa* (desert needlegrass).

POPULATION HISTORY AND TRENDS: A rare plant with few threats due to its inaccessible habitat (Falk et al. 2001). Locally common within its limited distribution.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None

OTHER STATUS:

[Bureau of Land Management Sensitive
(USDI, BLM AZ 2000, 2005)]

MANAGEMENT FACTORS:**PROTECTIVE MEASURES TAKEN:****SUGGESTED PROJECTS:**

LAND MANAGEMENT/OWNERSHIP: BLM – Arizona Strip Field Office, Virgin River
ACEC; Private.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Clokey, I. 1951. Flora of Charleston Mts., Nevada. U. of Calif. Publ. in Botany 24: 208.
- Cronquist, A., A.H. Holmgren, et al. 1984. Intermountain Flora, Vascular plants of the Intermountain West, U.S.A. Volume Four, Subclass Asteridae (except Asteraceae). The New York Botanical Garden. Bronx, New York. Pp. 426-427.
- Falk, M., P. Jenkins, et al; Arizona Rare Plant Committee. 2001. Arizona Rare Plant Guide. Published by a collaboration of agencies and organizations. Pages unnumbered.
- Harvard University Herbaria. 2001. Index of Botanical Specimens. <http://brimsa.huh.harvard.edu/cms-wb/specimens.jsp>. Accessed: 11/13/2002.
- Integrated Taxonomic Information System (ITIS). Retrieved 7/13/2005 from ITIS, <http://www.itis.usda.gov>.
- Missouri Botanical Garden Nomenclatural Data Base. *Penstemon petiolatus* Brandegees. http://mobot.mobot.org/cgi-bin/search_vast. (Accessed: 15 May 2002).
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Penstemon petiolatus* Brandegees. <http://mobot.mobot.org/>. Accessed: 13 Jul 2005.
- NatureServe. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.4. NatureServe, Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: July 13, 2005).
- Pennel. 1920. Scrophularaceae of the Central Rocky Mt. States. Contr. U.S. Natl. Herb. 20: 344. SEINet. Collections Search Result. Accessed 7/13/2005 at <http://seinet.asu.edu/collections/list.jsp>.
- The New York Botanical Garden. NYBG Specimens Detailed Results. <http://207.156.243.8/emu/vh/specimen.php?irn=403317>. (Accessed: 7/13/2005).
- U.S. National Herbarium Type Specimen Register, Department of Systematic Biology-Botany, Smithsonian Institution. <http://rathbun.si.edu/botany/types/fullRecords.cfm?myFamily=>. (Accessed: May 15 2002).
- U.S. National Herbarium Type Specimen Register (US). <http://ravenel.si.edu/botany/types/>. Accessed: 7/13/2005.

USDA, NRCS. 2004. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

USDI, Bureau of Land Management. 2000. Arizona BLM Sensitive Species List. Information Memorandum No. AZ-2000-018.

USDI, Bureau of Land Management. 2005. Arizona BLM Sensitive Species List.

Welsh, S.L., N.D. Atwood, S. Goodrich, and L.C. Higgins, eds. 1993. A Utah Flora. Second Edition, revised. Print Services, Brigham Young University. Provo, Utah. P. 677.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

Revised: 2002-05-23 (SMS)
2005-07-28 (SMS)

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