

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDSCR1L3S1

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

ME: *Penstemon linarioides* A. Gray ssp. *maguirei* Keck
COMMON NAME: Maguire's penstemon, Maguire penstemon, Maguire's beardtongue
SYNONYMS: *Penstemon linarioides* A. Gray ssp. *maguirei* (Keck) A. Nels.
FAMILY: Scrophulariaceae

AUTHOR, PLACE OF PUBLICATION: D.D Keck, Bull. Torr. Bot. Club Vol. 64(6): 378. 1937.

TYPE LOCALITY: United States of America, Arizona, Graham County, 1 mile west of Metcalf. In limestone, west exposure, cliff sides, with *Quercus* and *Dasylerion*.

TYPE SPECIMEN: HT: UTC-18872. B. Maguire 11797, B.L. Richards, Jr. and T. Moeller. 5 June 1935. IT: CI, NY, Ph.

TAXONOMIC UNIQUENESS: The subspecies *maguirei* is 1 of 5 in the species *linarioides*, which in turn is 1 of 246 species in the genus *Penstemon*.

DESCRIPTION: Perennial, mat-forming shrub, with 1-5 dm (4-20 in) tall stems that are tufted, leafy and pubescent. Leaves are oblanceolate, 2-4 mm wide, possibly with flattened, scale-like, appressed hairs. Inflorescence is glandular. Corolla is pale lavender to blue lavender with purple-red stripes down throat; inside of throat is white, anthers are purple. Corolla is 16-20 mm long, floor 2-ridged, abruptly expanded, base of lower lobes strongly bearded. The anthers are completely dehiscent but not explanate. (Bleakly, 1999).

AIDS TO IDENTIFICATION: *P.l.* ssp. *maguirei* differs from *P.l.* ssp. *linarioides* by having oblanceolate rather than more or less linear leaves. The leaf surface of the otherwise similar species *P. crandallii*, has fine erect or retrorse hairs.

ILLUSTRATIONS: Color photo of Isotype specimen (*in* NYBG, accessed 12/10/2003 from http://scisun.nybg.org:8890/searchdb/owa/wwwcatalogrenz.detail_list?this_id=4413907)

Line drawing (DeWitt Ivey, Accessed 02/15/01 from

<http://nmrareplants.unm.edu/drawings/penlin.htm>)

Black and white photo of herbarium specimen (Theresa Wright 1302 et al. 1994, ARIZ 315742)

TOTAL RANGE: Gila River Valley in Grant County, New Mexico and Greenlee County, Arizona. In and near the Gila River Valley in both states. May now be historic in its New Mexico range.

RANGE WITHIN ARIZONA: Gila River Valley, Greenlee County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial shrub/subshrub.

PHENOLOGY: Flowers June – October.

BIOLOGY:

HABITAT: Rocky hillsides and limestone cliffs in Great Basin Conifer Woodland communities. Bleakly (1999) reports limestone cliffs in pinyon-juniper woodland.

ELEVATION: Approximately 6000 - 6500 ft. (1830-1983 m).

EXPOSURE: Collection in 1994 (Wright et al.) found on rocky south-facing hillside.

SUBSTRATE: Type found on limestone cliffs. Other known specimen in Arizona, found on rocky hillside. Presently, only known habitat contains mineral rich soils (?).

PLANT COMMUNITY: Great Basin Conifer Woodland communities. Associated species include: *Agave parryi* (Parry's agave), *Brickellia venosa* (veined brickell-bush), *Carphochaete bigelovii* (Bigelow's bristle-head), *Cercocarpus montanus* (Colorado birch-leaved mountain mahogany), *Dasyllirion wheeleri* (spoonflower), *Ericameria laricifolia* (turpentine-bush), *Eriodictyon angustifolium* (narrowleaf yerba santa), *Eriogonum wrightii* (Wright's wild buckwheat), *Erysimum capitatum* (western wallflower), *Gutierrezia sarothrae* (broom snakeweed), *Muhlenbergia emersleyi* (bullgrass), *Nolina microcarpa* (sacahuista bear-grass), *Pinus cembroides* (Mexican pinyon), *Pinus edulis* (two-needle pinyon pine), *Pinus monophylla* (single-leaf pine), and *Quercus turbinella* (shrub live oak) (Wright 1302 et al, ARIZ 315742 in 1995 letter from P. Jenkins to AGFD/HDMS).

POPULATION TRENDS: Unknown. This plant has been collected only five times, the first in Grant County, New Mexico, and the more recent four in Greenlee County, Arizona (Gila Valley 1880, somewhere in Greenlee County around 1900, and west of Metcalfe in 1935 and 1994). Theresa Wright and Marc Baker located the taxon in 1994 near the 1935 type collection west of Metcalfe (collected by Theresa Wright 1302 et al., 1994). The plants were on limestone cliffs on private property that was to be mined for copper (Phil Jenkins, pers. comm. 1999, in Bleakly 1999). Apparently several plants were seen and some specimens

collected but neither their whereabouts nor the fates of the existing plants are known. Although the plant has not been seen in New Mexico for over 100 years, it may still exist in the canyons of the Gila River. (Bleakly 1999).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS:

STATE STATUS:

Salvage Restricted (ARS, ANPL 1999)

OTHER STATUS:

MANAGEMENT FACTORS: The property where the only known population occurs, which is in Arizona, is threatened by mining activities (Jenkins 1995; Bleakly 1999).

PROTECTIVE MEASURES TAKEN: None

SUGGESTED PROJECTS: More surveys are needed to determine the distribution, abundance, and habitat needs of this taxon. Intense surveys should be done in adjacent suitable habitat.

LAND MANAGEMENT/OWNERSHIP: BLM – Safford Field Office; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Arizona Revised Statutes, Chapter 7. 1999. Arizona Native Plant Law. Appendix A.
- Bleakly, D. 1999. *Penstemon linarioides* ssp. *maguirei* (Maguire's beardtongue). Web abstract accessed 02/15/2001 from <http://nmrareplants.unm.edu/reports/penlin.htm>.
- Integrated Taxonomic Information System (ITIS). Retrieved 12/10/2003 from ITIS, <http://www.itis.usda.gov>.
- Jenkins, P.D. 1995. Letter with copy of herbarium record to S. Schwartz (HDMS, Arizona Game and Fish Department).
- Kearney, T.H., R.H. Peebles with collaborators. 1951. Arizona flora. Second edition with supplement by J.T. Howell, E. McClintock and collaborators. 1960. University of California Press, Berkeley. Pp. 776-777.
- Keck, D.D. 1937. Bull. Torr. Bot. Club 64(6): 378.
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Penstemon linarioides* subsp. *maguirei* D.D. Keck. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 10 Dec 2003.
- NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application]. Version 1.8. Arlington, Virginia. Available: <http://www.natureserve.org/explorer>. (Accessed: December 10, 2003).

The New York Botanical Garden. NYBG Specimens Detailed Results.

http://scisun.nybg.org:8890/searchdb/owa/wwwcatalog.detail_list. Accessed: 12/10/2003.

USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Phil Jenkins - University of Arizona Herbarium, Tucson, Arizona.

Marc Baker – Private consultant, Camp Verde, Arizona.

ADDITIONAL INFORMATION:

Not seen for decades until Wright's observation in 1994. It was previously believed to be extinct (Jenkins 1995).

Revised: 1995-05-30 (DBI)
1998-12-17(DJG)
2004-01-27 (SMS)

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