

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

Plant Abstract

Element Code: PDSCR1L170

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Penstemon carnosus*

COMMON NAME: Fleshy Beardtongue

SYNONYMS:

FAMILY: Scrophulariaceae

AUTHOR, PLACE OF PUBLICATION: Pennell, Francis Whittier. Annals of the Carnegie Museum 26: 329-330. 1937.

TYPE LOCALITY: Utah: Emery Co., San Rafael Swell

TYPE SPECIMEN: NYBG: NY91033 (isotype). H.C. Cottam #5229. June 6, 1932.

TAXONOMIC UNIQUENESS: With over 250 recognized species, *Penstemon* is the third largest genus of flowering plants found in the interior west, following *Astragalus* and *Eriogonum*. Except for one minor species, the genus *Penstemon* does not occur naturally outside of North America. There are at least 47 species found in Arizona, with additional varieties and subspecies, and two hybrids.

DESCRIPTION: Perennial herb 1.5-3.5 dm tall; herbage glabrous, glaucous; stems ascending to erect, 1 or few from thick, woody sparingly branched caudex; leaves 2-9 (11) cm long, 5-32 (40) mm wide, thick and fleshy, entire, spatulate to (ob)ovate or (ob)lanceolate, the basal tuft well developed, the lowermost petioled, the upper sessile, clasping, obtuse (usually); inflorescence glabrous, the thyrses cylindrical, congested or sometimes moderately elongate, of 3-10 verticillasters, the cymes 1- or few-flowered, the peduncles rarely exceeding 1 cm; calyx 4-8 mm long, glabrous, the lobes ovate to broadly lanceolate, acute to acuminate, broadly scarious-margined; corolla (16) 18-21 (24) mm long, moderately ampliate, finely and obscurely glandular-puberulent externally (specimens from Garfield and Wayne counties sometimes glabrous), lavender pink to blue-violet (usually drying blue violet), the throat rounded above and below, the lobes about equally spreading, the palate glabrous or sparsely white-bearded, guidelines absent or obscure; stamens included or shortly exerted, the sacs 1.1-1.5 mm long, glabrous, dehiscent fully and across the connective, not explanate, staminode included to reaching the orifice, dilated (the tip 1-1.5 mm wide) and curved distally, sparsely to moderately bearded with short, yellow to yellow-brown hairs, these 0.2-0.5 mm long (Welsh et al 1993).

AIDS TO IDENTIFICATION: The most recent taxonomic key to the *Penstemon* genus is by Holmgren, and is found in Cronquist et al 1984.

ILLUSTRATIONS:

Photos and Herbarium Mounts: <http://swbiodiversity.org/seinet/taxa/index.php?taxon=94357>.
<https://www.flickr.com/photos/rwolf/18656852750>.

TOTAL RANGE: Utah and a single collection from NW Arizona.

RANGE WITHIN ARIZONA: Arizona Strip, Shivwits Plateau, Mohave County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herb.

PHENOLOGY: Flowers: May-June.

BIOLOGY:

HABITAT: Salt desert shrub, sagebrush, pinyon-juniper (usually), and mountain brush communities, often in clay or shaly soil (Welsh et al 1993)

ELEVATION: In Utah, 4920 – 7410 feet (1500-2260m). The single Arizona collection is from 4680 feet (1427m).

EXPOSURE: Not specified.

SUBSTRATE: Clay or shaly soil.

PLANT COMMUNITY: Salt desert shrub, sagebrush, pinyon-juniper and mountain brush communities. Arizona collection was from pinyon-juniper, *Cowania*, *Opuntia* community.

POPULATION HISTORY AND TRENDS: Unknown for Arizona. Known from only a single collection made in 2000, which extends the known range of this species formerly thought to be endemic to Utah. Considered vulnerable in Utah due to a limited distribution and no information on abundance, and critically impaired in Arizona due to the single known collection site.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.

STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: None specified.

PROTECTIVE MEASURES TAKEN: None specified.

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: USDI, Bureau of Land Management, Arizona Strip.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Holmgren, N.H. 1984. In: Cronquist, A. et al. Intermountain Flora. Vol. 4. New York Botanical Garden, N.Y. pp. 370-455.
- JStor| Global Plants, accessed online 8/7/2015,
<http://plants.jstor.org/stable/10.5555/al.ap.specimen.ny00091033>.
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<http://explorer.natureserve.org/>.
- Tropicos, accessed online 8/7/2015, <http://www.tropicos.org/Name/29201285>.
- Welsh, Stanley L., N. Duane Atwood, Sherel Goodrich and Larry C. Higgins, eds. 1993. A Utah Flora. 2nd ed., revised. Brigham Young University, Provo, UT.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

Revised: 2015-08-07 (BDT)

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