

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

Plant Abstract

Element Code: PDSCR1L630

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Penstemon superbus* A. Nels.
COMMON NAME: Superb beardtongue, Superb penstemon
SYNONYMS: *Penstemon puniceus* A. Gray
FAMILY: Scrophulariaceae

AUTHOR, PLACE OF PUBLICATION: A. Nelson, Proc. Biol. Soc. Wash. 17(12): 100.
1904.

TYPE LOCALITY: ST: Mexico. Sonora. Guadalupe Cañon.

TYPE SPECIMEN: ST: GH-91543. G. Thurber 394, Jun 1851, mounted with E.K. Smith s.n.
Syntype (GH-91544), date unknown. Both determined by F.S. Crosswhite, 1965. Isosyntype:
GH. IT: NY, US.

TAXONOMIC UNIQUENESS: The genus *Penstemon* contains approximately 250 species in North America (Hickman 1993); 246 reported by USDA, NRCS (2002). Forty-four species of *Penstemon* are recognized by Lehr (1978 and Lehr et al 1980, 1982) as occurring in Arizona.

DESCRIPTION: Herbaceous perennial, glaucous (bluish); stems 3-12 dm (12-47 in) tall. Cauline leaves (cordate-clasping or connate-perfoliate), broadly ovate to oblong-ovate, large, opposite, the upper ones sessile; basal leaves petiolate. The inflorescence is narrow, often more than half the plant height, glandular or glabrous. Flowers showy, paniculate, in dense fascicles separated by long internodes; calyx 5-parted. The tubular corolla is orange-pink or carmine to scarlet, glandular, obscurely bilabiate (two-lipped), the throat only slightly expanded. They usually are somewhat ventricose (swollen unequally), obscurely bilaterate, about equally erect or spreading, the upper lip 2-lobed, the lower lip 3-cleft, 17-25 mm long. The stamens are included, the fertile ones are 4 paired with arching filaments; sterile filament (staminode) attached to upper side of corolla at junction of tube and throat, extending downward and forward, and is bearded at the tip. The glabrous anthers are explanate (flat), 2-celled, the cells often confluent. The staminode is beared near the tip with a few short hairs. The capsule is septicidal (splits down the septa), and the seeds are numerous, and angled.

AIDS TO IDENTIFICATION: *Penstemon superbus* is unlikely to be confused with any other penstemon in the area because of its size, glaucous foliage, inflorescence architecture, unique flower color, and explanate anthers. When comparing it to *P. parryi*, it differs by its longer and different colored and shaped corolla (20-25 mm vs. 15-20 mm, carmine to scarlet vs. rose-magenta, narrowly funnelform vs. rather broadly funnelform), and its cauline leaves

are broadly ovate to oblong-ovate (vs. narrowly lanceolate to lance-oblong). Another showy penstemon is *Penstemon pseudospectabilis*, which is scarlet flowered, and its leaves have serrated margins, while *P. superbus* does not (Malusa, 2001). According to Kearney and Peebles (1951), *P. superbus* blackens upon drying, whereas *P. parryi* does not. A review of the specimens in ARIZ, reported by Malusa (2001), show this not to be the case among at least a third of the sheets.

ILLUSTRATIONS: Color photo (W.L. Wagner, *in* USDA, NRCS 2002)
Color photos (Wynn Anderson, *in* Chihuahuan Desert Gardens, 2000 at <http://nasa.utep.edu/chih/gardens/plants/NtoQ/pensuperv.htm>)

TOTAL RANGE: South of the Mogollon Rim in southeastern Arizona, New Mexico and Mexico (Chihuahua and Sonora).

RANGE WITHIN ARIZONA: From San Francisco River, Eagle Creek, and Mitchell Peak (near Clifton) in Greenlee County; the Gila, Peloncillo, and Santa Teresa mountains, and Aravaipa Creek and the Gila River in Graham County; Dripping Springs Mts. In Gila County; the Dripping Springs, Pedregosa, Swisshelm, and Huachuca mountains, and North of the Perilla Mountains, San Bernardino Valley and Guadalupe Canyon in Cochise County; Santa Catalina and Santa Rita mountains in Pima County; and the Tumacacori Mountains in Santa Cruz County. The Tumacacori Mts. (Rock Corral Canyon), Catalina Mts. (Sabino Canyon), and Santa Rita Mts. (Box Canyon) sites were revisited in 2001, and not re-located (Malusa 2001).

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial.

PHENOLOGY: Flowers from April and May (June).

BIOLOGY: This species is drought resistant, requires little water, but needs good drainage. It can tolerate cold winter nights that go as low as 0° F. In cultivation, this plant can be propagated by cuttings. Depending on climate, the life span is from 3-7 years.

HABITAT: Rocky canyons, dry hillsides, and along gravelly or sandy washes, in piñon/juniper and oak woodlands.

ELEVATION: 3,100 to 5,500 ft. (930-1,678 m). NatureServe (2004) reports from 3,500-5,500 feet (1068-1678 m) in eastern Arizona, and 4,500-6,000 feet (1373-1830 m) in New Mexico.

EXPOSURE: South facing and/or level exposure. In cultivation, prefers full sun to light shade.

SUBSTRATE: Varies from limestone, red clay, gravels, sandstone, and amid basalt boulders.

PLANT COMMUNITY: Riparian floodplain with deciduous woodland. Also found in desert grassland, and desert grassland transition zones. Associated species may include: *Arctostaphylos* sp. (manzanita), *Baccharis* sp. (false-willow), *Bouteloua curtipendula* (side-oats grama), *Celtis reticulata* (= *C. laevigata* var. *reticulata*: netleaf hackberry), *Larrea tridentata* (creosote bush), *Marrubium vulgare* (common hoarhound), *Platanus* sp. (sycamore), *Platanus wrightii* (Wright sycamore), *Prosopis* sp. (mesquite), *Quercus* sp. (oak), *Robinia neomexicana* (New Mexico locust), and *Rumex hymenosepalus* (Tanner's dock).

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)

MANAGEMENT FACTORS: This conspicuous and beautiful plant may be suffering from over-collection in Arizona and New Mexico. In New Mexico, current land uses apparently pose no threat to it (Bleakly 1999).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM - Safford Field Office; USFS - Coronado National Forest; USFWS - San Bernardino National Wildlife Refuge; State Land Department; TNC - Aravaipa Canyon Preserve; Private.

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

“In habitat very similar to *P. parryi*, with which it apparently intergrades” (Kearney and Peebles 1951).

“*P. superbus*, like *P. parryi*, appears to prefer lower elevations, from 3100 to 5500 feet,.... Similarly, its associates varied widely, from prickly pear and creosote to Mexican Blue Oaks and bunchgrasses. This latitude of habitat make *P. superbus* difficult to find – where to look?—particularly when the plant resembles *P. parryi*.” (Malusa, 2001).

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