

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDHYD0C3G0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Phacelia parishii*

COMMON NAME: Parish's Phacelia, Parish Scorpionweed

SYNONYMS:

FAMILY: Hydrophyllaceae

AUTHOR, PLACE OF PUBLICATION: A. Gray, Proc. Amer. Acad. Arts. 19: 88. 1883.

TYPE LOCALITY: United States of America, California, Dry alkaline lake near Rabbit Springs, Mohave Desert.

TYPE SPECIMEN: HT: GH-56946. S.B. Parish 1314 with W.F. Parish, May 1882. IT: DS(CAS), F, MO, NY, US.

TAXONOMIC UNIQUENESS: Species *parishii* is 1 of 158 species in the genus *Phacelia*.

DESCRIPTION: Low growing annual 5-15 cm (2-6 in) tall with stems branched at or near the base and more or less spreading; stems 15 cm (6 in) long, glandular-puberulent. Leaves chiefly basal, 1-3 cm long, 0.5-2 cm wide, fleshy, elliptic to obovate, entire to coarsely toothed; blade > petiole. Flowers small (4-6 mm long) and inconspicuous, barely surpassing the calyx, corolla is bell-shaped with lavender tube and yellow base; calyx with broad oblanceolate segments; stamens 2-4 mm, sparsely short-hairy; style 1-2 mm. Fruit 3-5 mm, oblong, short-hairy, surpassed by the calyx; seeds 20-40, pitted-reticulate, 1-1.5 mm long.

AIDS TO IDENTIFICATION: Distinguished from similar species by its spreading habit, chiefly basal, elliptic leaves, and broad calyx lobes. *Phacelia lemmonii* (Lemmon's scorpionweed) has elliptic, cauline leaves with narrow calyx lobes and an erect habit; *P. rotundifolia* (round-leaf scorpion-weed) has rounded-cordate, cauline leaves with an erect habit; *P. pulchella* (beautiful scorpion-weed) has broadly elliptic, cauline leaves and large, showy flower. (Anderson 1999).

ILLUSTRATIONS:

Line drawing (Cronquist et al., 1984: 171).

Color photo of Isotype specimen (NY-57337, in NYBG Virtual Herbarium)

Color photo of Isotype specimen (US-47071, in <http://botany.si.edu/types/>)

Color photos of plant and habitat (Margaret Williams, Nevada Native Plant Society, in <http://plants.usda.gov>)

Color photo (David A. Charlet 2004, in CalPhotos http://elib.cs.berkeley.edu/cgi/img_query)
Color photos (Thomas M. Elder 2004, in CalPhotos http://elib.cs.berkeley.edu/cgi/img_query)

TOTAL RANGE: California (San Bernardino Co.), Nevada (Clark, Lincoln, Nye, and White Pine counties), and Arizona (Mohave and Yavapai counties).

RANGE WITHIN ARIZONA: Hualapai Valley in Mohave Co. and Burro Creek in Yavapai Co.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Annual herb.

PHENOLOGY: Flowers and fruits from April to May, sometimes June.

BIOLOGY:

HABITAT: Alkaline playas in the desert, and sometimes on barren, alkaline knolls, where it may be more leafy-stemmed (Cronquist et al., 1984). Clay or alkaline soils, dry lake margins (Hickman, Ed., 1993). Edge of barren playa surrounded by semi-desert grassland and Mohave Desert; gypsum beds in lacustrine deposits of the Sonoran Desert (Anderson 1999). At Burro Creek it occurs on edaphic islands with other rare plants, *Purshia subintegra* and *Astragalus newberryi* var. *quarii* (Anderson 1999).

ELEVATION: 2,300 - 2,800 ft. (700-850 m). Hickman (1993) reports elevation in California from 2,623-3,935 ft (800-1200 m).

EXPOSURE:

SUBSTRATE: Barren playa; gypsum beds in lacustrine deposits.

PLANT COMMUNITY: Playa surrounded by semi-desert grassland and Mohave Desert; also Sonoran Desert. In the Mohave Desert (Mohave Co.) of Arizona, this species is associated with *Allium bigelovii* (Bigelow's onion), *Atriplex argentea* (Silvery saltbush), *A. canescens* (four-wing saltbush), *Bromus rubens* (Foxtail Brome), *Canotia holacantha* (Crucifixion-thorn), *Chaenactis carphoclinia* (Straw-bed pincushion), *C. fremontii* (Fremont's pincushion), *Cordylanthus* (bird's-beak), *Cryptantha cinerea* (James cat's-eye), *Eriogonum depressum* (=E.o. var. *depressum*, cushion wild buckwheat), *Monolepis nuttalliana* (Nuttall's poverty-weed), and stunted *Prosopis velutina* (velvet mesquite); and in the Arizona Upland Subdivision of Sonoran Desert (Yavapai Co.), it is associated with *Allium bigelovii*, *Arenaria eastwoodiae* (Eastwood sandywort), *Astragalus amphioxys* (a milk-vetch), *A. newberryi* var. *aquarii*, *Chaenactis fremontii*, *Eriogonum depressum*, *Monolepis nuttalliana*, and

Streptanthus cordatus (Perennial twistflower). (USDI, BLM 1993 and 1995; SEINet accessed 2005). In Nevada, associated with Big sagebrush, and greasewood-saltbush.

POPULATION TRENDS: The global short term trend is declining according to a 2001 personal communication with NatureServe (2005).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Bureau of Land Management Sensitive
(USDI, BLM AZ 2000, 2005, 2008, 2010)

MANAGEMENT FACTORS: In California, the species is threatened by military activities and by the potential expansion of a fort (CNPS 2001, in NatureServe 2005). Tank use could damage spoils and subsurface hydrology.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BLM - Kingman Field Office; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Anderson, J. 1999. *Phacelia parishii* Gray (Parish Scorpionweed), Hydrophyllaceae. Draft abstract from Arizona Rare Plant Book, in prep.
- CAS Botany Type Catalog. Accessed: 27 July 2005.
<http://www.calacademy.org/research/botany/types/FieldedSrch.asp>.
- Cronquist, A., et al. 1984. Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume Four. The New York Botanical Garden. Bronx, New York. pp. 170-171. Harvard University Herbaria. 2001. Index of Botanical Specimens.
<http://brimsa.huh.harvard.edu/cms-wb/specimens.jsp>. Accessed: 7/27/2005.
- Hickman, J.C., Ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, California. p. 704.
- Integrated Taxonomic Information System (ITIS). Retrieved 7/27/2005 from ITIS,
<http://www.itis.usda.gov>.
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Phacelia parishii* A. Gray. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 27 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 27, 2005).
- SEINet. Collections Search Result. Accessed 7/27/2005 at <http://seinet.asu.edu/collections/list.jsp>.
- The Field Museum. 2004. Botany Collection Database. Accessed: 27 July 2005. <http://emuweb.fieldmuseum.org/botany/Display.php?irn=263854>.
- The New York Botanical Garden. NYBG Specimens Detailed Results. <http://207.156.243.8/emu/vh/specimen.php?irn=403317>. (Accessed: 7/27/2005).
- U.S. National Herbarium Type Specimen Register (US). <http://ravenel.si.edu/botany/types/>. Accessed: 7/27/2005.
- 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.
- USDI, Bureau of Land Management Region 2. 2008. Arizona BLM Sensitive Species List.
- USDI, Bureau of Land Management Region 2. 2008. Arizona BLM Sensitive Species List.

MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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