

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDFAB3N020

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Sophora arizonica*

COMMON NAME: Arizona Mescal Bean

SYNONYMS: *Sophora formosa* Kearney and Peebles; *Calia arizonica* (Wats.) Yakovl.;
Calia formosa (Kearney and Peebles) Yakovl.

FAMILY: Leguminosae

AUTHOR, PLACE OF PUBLICATION: Watson, S. 1876. Proc. Amer. Acad. 11:121-148.

TYPE LOCALITY: Arizona: White Cliff Creek and Cactus Pass (J.M. Bigelow in 1854).

TAXONOMIC UNIQUENESS:

DESCRIPTION: Unarmed evergreen shrub up to 3 m (10 feet) high. Leaves pinnately compound with 3-12 coriaceous, evergreen leaflets. Inflorescence a dense terminal raceme of white to lilac, pea-flowered with a corolla up to an inch long. Fruit flattened legume slightly constricted between reddish and brown seeds.

AIDS TO IDENTIFICATION: Most readily distinguished from *Sophora formosa* by the larger flowers, about 22 mm (7/8 inch) long (Benson and Darrow 1981).

ILLUSTRATIONS:

TOTAL RANGE: West-central to southeastern Arizona.

RANGE WITHIN ARIZONA: Mohave County: 8 populations. In Aquarius, Cottonwood and Hualapai mountains. Graham County: 4 populations in Pinaleno Mountains. Cochise County: 2 populations in Whetstone Mountains and 1 population in Swisshelm Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Woody Perennial

PHENOLOGY: Mid-February to April

BIOLOGY:

HABITAT:

ELEVATION: 2,000 to 4,000 feet (610 - 1,220 m).

EXPOSURE:

SUBSTRATE: Alluvium to basalt, granite, limestone, and gypsum.

PLANT COMMUNITY: Desert-grassland to pinyon-juniper woodland.

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 3C, USDI, FWS 1985]
[Category 2, USDI, FWS 1980]

STATE STATUS:

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3, 1990)

MANAGEMENT FACTORS:

PROTECTIVE MEASURES:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP:

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

- Benson, L. and R.A. Darrow. 1981. Trees and Shrubs of the Southwest Deserts. University of Arizona Press, Tucson. p. 255.
- Bingham, S. 1976. Proposed endangered and threatened plant species in the Upper Gila/San Simon Environmental Impact Statement area. Bureau of Land Management, Safford District. pp. 25-34.
- Butterwick, M. 1979. Draft URA-Hualapai Plan. Bureau of Land Management, Phoenix District. p. 19-31
- Kearney, T.H. and R.H. Peebles. 1939. Jnl. Wash. Aca. Sci. 29:482-483.
- MacDougall, W.B. 1973. Seed plants of Northern Arizona. Museum of Northern Arizona. Flagstaff.

- McManus, R. The taxonomy of the shrubby Sophoras of Arizona. Unpublished Master's Thesis, University of Arizona, Tucson.
- Northington, D.K. 1976. *Plant Sys. Evol.* 125:233-244.
- Northington, D.K., T.R. VanDevender. 1977. *Southwest Naturalist* 22:495-504.
- Rudd, V.E. 1972. *NY Bot. Gard. Ser. II part 7*:22-24, 31.
- Sacamano, C.M. and W.D. Jones. 1975. *Coll. Agri. Coop. Ext. Serv. Bull. A* 82, page 40 (use for landscaping). University of Arizona Press, Tucson.
- Spellenberg, R. 1979. Report on the survey for threatened and endangered species in Guadalupe Canyon and vicinity, Hidalgo Co., New Mexico. Prepared for New Mexico Natural Heritage Program (Department Natural Resources).
- USDI, Fish and Wildlife Service. 1980. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. *Federal Register* 45(242):82506.
- USDI, Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants; Review of Plant Taxa for Listing as Endangered or Threatened Species. Notice of Review. *Federal Register* 50(188):00021.
- USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species; Notice of Review; Proposed Rule. *Federal Register* 61(40):7596-7613.
- Watson, S. 1876. *Proc. of Amer. Aca. Arts and Sci.* 11:121-148.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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- T.R. VanDevender - Arizona-Sonora Desert Museum, Tucson, Arizona.

ADDITIONAL INFORMATION:

R. McManus: Demonstrated *S. arizonica* and *S. formosa* are conspecific.

Revised: 1981-xx-xx (ANHP)
1991-10-20 (BKP)
1998-01-09 (SSS)

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