

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

Plant Abstract

Element Code: PDCAC0D224

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Opuntia engelmannii* var. *flavispinga*

COMMON NAME: Prickly Pear, Engelmann Prickly Pear, Cactus Apple, Yellow Spine Prickly Pear

SYNONYMS: *Opuntia phaeacantha* var. *flavispinga*

FAMILY: Cactaceae

AUTHOR, PLACE OF PUBLICATION: *Opuntia engelmannii* var. *flavispinga*, Parfitt & Pinkava, Madrono 35 (4): 348. 1988. *Opuntia phaeacantha* var. *flavispinga* (L. Benson), Cactus and Succulent Journal 46:79, 1969 or 1974. There is a discrepancy in the literature concerning the date of the publication.

TYPE LOCALITY: Alamo Canyon, Ajo Mountains, Organ Pipe Cactus National Monument, Arizona, 2300 ft, 1939-4-27.

TYPE SPECIMEN: POM 306987, A.A. Nichol. IT: ARIZ 64930 and 83680, Organ Pipe Cactus National Monument Herbarium, NPS at Santa Fe.

TAXONOMIC UNIQUENESS: There are at least 300 species of *Opuntia* in the world with 28 of these species being in Arizona.

DESCRIPTION: The pads are thick and oval or rounded. The joint shape is obovate and basally acute with a size of 17.5-27.5 cm long and 12.5-20 cm broad. The spine distribution on the joint is on the lower edges of all but a few basal areoles, the longer in upper and marginal areoles. There are 2 or 3 spines (plus 1 or 2 smaller ones) per areole. The colors of the spines are yellow with an irregular distribution of red. The spines are up to 6.2 cm long and 1.25 mm broad and often curved. The fruits are obovoid and 4-5 cm long. The flowers of the species are funnel shaped and yellow or orangey red. The plant is 1.5m high and the branches are held well above the ground.

Opuntias are distinguished from other cacti by four characteristics. First, the stems grow in distinctly jointed segments. The elongation of joints is permanently terminated by the onset of the dry season; subsequent growth of the plant occurs by the initiation of new joints by branching from the areoles (other cacti have indeterminate growth). Second, whether or not they have regular spines, opuntoid areoles bear glochids. Third, rudimentary leaves are

present on new joints. Fourth, the seeds have a pale covering called an aril; most other cacti have shiny black seeds.

AIDS TO IDENTIFICATION: The long yellow and red spines are the special feature of this large prickly pear. Differs from var. *engelmannii* by the relatively fewer and bright yellow (not white coated) spines, and the plant is somewhat more robust.

ILLUSTRATIONS: Color photo (ASU in http://ces.asu.edu/collections/vasc_image_library/ViewPhotos.jsp?id=74434)
Color photo of species flower (Moore in http://ag.arizona.edu/pima/gardening/aridplants/Opuntia_engelmannii.html)
Color photo of species flower (Virginia Tech in <http://www.cnr.vt.edu/dendro/dendrology.Syllabus2/oengelmannii.htm>)

TOTAL RANGE: Maricopa, Pima, and Yavapai counties in Arizona.

RANGE WITHIN ARIZONA: From south of Tres Alamos Peak in the Black Mountains, Yavapai County south through the foothills of the Harcuvar, Harquahala, Vulture and White Tank mountains. Also in the Sierra Estrella, Salt River, and Ajo mountains, and in suitable habitat between the northern and southern populations.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Evergreen

PHENOLOGY: For the species the flowers bloom April to May.

BIOLOGY: All desert species of *Opuntia* are pollinated by a few species of bees that specialize in cacti. Many mammals, birds and insects feed on the fleshy fruits as may desert tortoises and spiny iguana. Humans extensively use opuntias for food and other purposes.

HABITAT: Flats, washes and hillsides in the desert. Generally on exposed rocky foothills of desert mountains at 1,250 to 3,500 ft. elevation in west central and south central Arizona. Occasionally in washes and on plains at similar elevation in the same region. (Stallings 1980).

ELEVATION: 1250-3500 ft (381-1067 m)

EXPOSURE: Full sun.

SUBSTRATE: Gravelly to rocky clay-loam seem to provide optimum substrate conditions for growth, on up to fifteen degrees slope (Stallings 1980).

PLANT COMMUNITY: Upper Sonoran Desert Scrub. In White Tank Regional Park, associated with *Larrea*, *Cercidium*, *Ambrosia*, *Ferocactus*, *Prosopis*, *Cereus giganteus*, *Opuntia chlorotica*, *O. acanthocarpa*, and *O. bigelovii*. In Sierra Estrella Regional Park, associated with *Larrea*, *Fouquieria*, and *Hilaria*.

POPULATION HISTORY AND TRENDS:

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI FWS 1990)
[3C USDI, FWS 1985]
[3C USDI, FWS 1983]
[C2 USDI, FWS 1980]
[Threatened USDI, FWS 1975]

STATE STATUS: Salvage Restricted (ARS, ANPL 1999)

OTHER STATUS:

MANAGEMENT FACTORS: As with most cacti, this species is subject to horticultural collecting.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: White Tanks Regional Park, USFS Coronado National Forest, NPS Organ Pipe Cactus National Monument.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

Arizona Revised Statutes. 1999. Arizona Native Plant Law, Appendix A.

ASU Herbarium. Available:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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