

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PMAGA01020

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Agave x ajoensis* W.C. Hodgs.

COMMON NAME: Ajo agave

SYNONYMS: *Agave schottii* var. *treleasei*

FAMILY: Agavaceae

AUTHOR, PLACE OF PUBLICATION: Novon 11(4): 414-415, f. 2, 2001.

TYPE LOCALITY: Organ Pipe Cactus National Monument, Ajo Mountains, infrequent on rocky slopes at Bull Pasture, 980 m, Pima County, Arizona, U.S.A.

TYPE SPECIMEN: HT: DES-30831. W. C. Hodgson et al. 4478, 14 Mar 1987. IT: ORPI.

TAXONOMIC UNIQUENESS: There are more than 200 species of *Agave* recognized from the southern USA to northern South America, and throughout the Caribbean. The population of agave in Organ Pipe Cactus National Monument was formerly thought to be a population of *Agave schottii* var. *treleasei*, but based on recent genetic studies, it has been determined to be a sterile hybrid between *A. schottii* var. *schottii* and *A. deserti* var. *simplex*, and since renamed to *A. x ajoensis*.

DESCRIPTION: Perennial acaulescent succulent, freely suckering, with solitary rosettes or more commonly cespitose, 1.9-4 x 2.5-4.5 dm (7.5-15.7 x 9.8-17.7 in). Leaves are spreading, widest near the middle, 16-34 x 1.5-3 cm (6.3-13.4 x 0.6-1.2 in). The blade is light green, without bud prints, but sometimes with a lighter green midstripe. It is linear-lanceolate, rigid, and adaxially shallowly concave toward the apex, abaxially thickly convex toward the base. The blade margins are entire, straight, nonfiliferous, unarmed except for small interstitial teeth near the leaf base; apex is acute to long-acuminate, spine reddish brown, aging gray, subulate, 1.5-2.5 cm. The scape (or flowering stalk) is 2.5-3.5 m (8.2-11.5 ft). Inflorescences are subspicate to narrowly racemose-paniculate on distal 1/3; bracts caduceous, narrowly triangular, 2-3 cm; lateral branches 30-40, ascending, 4 cm or shorter. Erect, straight flowers, are (3.2-)3.5-5.3 cm, and (3-)4-6 per cluster. The perianth is yellow, tube funnellform, (4-)6-21 x 8-13 mm, limb lobes erect to ascending, slightly unequal, and 10-20 mm. Stamens are slightly exserted; filaments are inserted equally or subequally 6-16 mm above base of perianth tube, erect, light yellow, (1.7-)2-3 cm; anthers yellow, 9-14 mm; ovary 1-1.7 cm, neck constricted, 2-6 mm. The short-pedicellate capsules are ellipsoid, 1.2-2.1 cm, apex short-beaked. Seeds unknown. (Flora of North America 1993+).

AIDS TO IDENTIFICATION: *Agave x ajoensis* is not conspecific with *A. schottii* var. *treleasei* (found in the Santa Catalina Mountains), from which it differs by its distribution, light green leaves that are mainly straight (vs. curved, dark green leaves), and 4-6 flowers per cluster (vs. paired flowers). (Falk et al. 2001; Flora of North America 1993+).

ILLUSTRATIONS:

TOTAL RANGE: Ajo Mountains in Pima County, Arizona.

RANGE WITHIN ARIZONA: See "Total Range."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial succulent.

PHENOLOGY: Flowering late spring to summer.

BIOLOGY: *Agave x ajoensis* is a triploid, having a chromosome number of $2n = 90$; in the same area, *A. deserti* var. *simplex* is a diploid ($2n = 60$) and *A. schottii* var. *schottii* is a tetraploid ($2n = 120$).

HABITAT: Found in desert scrub and grasslands, on rocky slopes and on open swales of a low ridge in basin.

ELEVATION: 2,950 – 3,607 feet (900-1100 m).

EXPOSURE: All aspects on rocky slopes, and WSW-facing cliff wall of ledge outcrop.

SUBSTRATE: Rhyolite.

PLANT COMMUNITY: Desert scrub and grasslands. Associated species include: *Agave deserti* var. *simplex* (Desert agave), *A. schottii* var. *schottii* (Schott agave), *Cercidium microphyllum* (= *Parkinsonia microphylla*, Little-leaf paloverde), *Ferocactus* sp. (Barrel-cactus), *Fouquieria splendens* (Ocotillo), *Simmondsia chinensis* (Jojoba), and *Stenocereus thurberi* (Organ Pipe-cactus).

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None
OTHER STATUS: None

MANAGEMENT FACTORS: No significant threats are known.

PROTECTIVE MEASURES TAKEN: Nine clones are enclosed by wire mesh to prevent browsing. The Desert Botanical Garden retains approximately 11 plants and 20 offsets. (OPCNM 1998, 1999).

SUGGESTED PROJECTS: Continue to examine the population for evidence of damage, threats, or other management issues.

LAND MANAGEMENT/OWNERSHIP: NPS – Organ Pipe Cactus National Monument.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Arizona Plant Recovery Team. Review of recent Status Reports. August 12-13, 1991, Meeting Minutes.
- Benson, L. and R.A. Darrow. 1981. Trees and Shrubs of the Southwest Deserts. Third Edition, Revised and Expanded. The University of Arizona Press, Tucson, Arizona. Pp. 67-69.
- Falk, M., P. Jenkins, et al; Arizona Rare Plant Committee. 2001 Arizona Rare Plant Guide. Published by a collaboration of agencies and organizations. Pages unnumbered.
- Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 7+ vols. New York and Oxford. Accessed 2/16/2005 from <http://www.efloras.org>.
- Gentry, H.S. 1986. *Agave schottii* var. *treleasei*. Agaves of Continental North America. The University of Arizona Press, Tucson, Arizona. p.207.
- Hodgson, W.C. 2001. Taxonomic novelties in Arizona Agave (Agavaceae). Novon 11(4): 410-416, fig. 2.
[Http://www.ipni.org/ipni/plantsearch?id=322114-2](http://www.ipni.org/ipni/plantsearch?id=322114-2).
- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Agave x ajoensis* W.C. Hodgs. <http://mobot.mobot.org/>. Accessed: 16 Feb 2005.
- Organ Pipe Cactus National Monument (OPCNM). 1998. Annual Summary: Threatened, Endangered, and Sensitive Species. P. 11.
- Organ Pipe Cactus National Monument (OPCNM). 1998. Annual Summary: Threatened, Endangered, and Sensitive Species. P. 11.
- Phillips, A.M. III and W. Hodgson. 1991. Status report. Prepared for the U.S. Fish and Wildlife Service, Ecological Services, Phoenix, Arizona.
- SEINet. Collections Search Result. Accessed 2/16/2004 at <http://seinet.asu.edu/collections/list.jsp>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Marc Baker - Prescott, Arizona.

Wendy Hodgson - Desert Botanical Garden (Phoenix, Arizona), Curator and expert on Arizona Agaves.

ADDITIONAL INFORMATION:

The name *Agave* is derived from the Greek word *agaue*, meaning “noble,” referring to their tall flower stalk.

Hodgson 1991: 27 clones in Bull Pasture. *A. schottii* var. *treleasei* (= *A. x ajoensis* as of 2001) is 3N, *A. deserti* is 2N, and *Agave schottii* var. *schottii* is 4N based on Marc Baker's work. Could the Bull Pasture plants be hybrids or of hybrid origin?

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