

ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PMLIL16030

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Hypoxis mexicana*  
**COMMON NAME:** Yellow Star Grass  
**SYNONYMS:** *Hypoxis decumbens* var. *mexicana*  
**FAMILY:** Liliaceae (Hypoxidaceae)

**AUTHOR, PLACE OF PUBLICATION:** Schultes, Josef August and Julius Hermann  
Schultes, Systema Vegetabilium 7(2) 761. 1830.

**TYPE LOCALITY:** Unknown.

**TYPE SPECIMEN:** LINN-HL427-2, Linnean Society of London Herbarium (Lectotype of *H. decumbens*, stored under name). P. Brown (SN). No date.

**TAXONOMIC UNIQUENESS:** Of seven species of *Hypoxis* in the US, *H. mexicana* is the only one found in Arizona, and it is only found in Arizona.

**DESCRIPTION:** Leaves (1-)2-4(-9) mm wide, soft, stiff, densely pubescent. Scape 4-12(-16) cm, topped by 2 opposite bracts. Inflorescences racemose, 1-3-flowered; proximal 2 flowers, when present, always paired; bracts (3-)4-8(-11) mm. Flowers: tepals (3-)4-7(-8) × 1.3-2.5 mm, shorter to longer than pedicel, ± equaling ovary; anthers 1-2 mm; ovary oblanceoloid, 3-6(-9) × 1-2 mm, densely pubescent; pedicel 1-6 mm, shorter than bracts. Seeds light brown, dull, 1-1.4(-1.5) mm, muricate.

**AIDS TO IDENTIFICATION:**

**ILLUSTRATIONS:**

Photo and Herbarium Mount: [http://swbiodiversity.org/seinet/taxa/index.php?taxon=Hypoxis Mexicana](http://swbiodiversity.org/seinet/taxa/index.php?taxon=HypoxisMexicana).

**TOTAL RANGE:** Arizona, Mexico (Sierra Madres in Sonora and S to Mexico City). The Arizona collections appear to be the northern extreme of the distribution.

**RANGE WITHIN ARIZONA:** Known only from four sites in southern Arizona: three SW of the Huachuca Mountains, and one SW of the Mule Mountains, all in Cochise County.

## **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Perennial herb.

**PHENOLOGY:** Arizona collections/observations confirm flowers in August through mid-September. Flowers open only in the morning.

**BIOLOGY:**

**HABITAT:** Pine-oak woodlands, oak-juniper grasslands and wet areas adjacent to streams in ravine bottoms.

**ELEVATION:** The four Arizona collections ranged from 5800 – 6200 feet (1770-1890m). Range-wide elevations are reported as 6550 – 8200 feet (2000-2500m).

**EXPOSURE:** Not specified.

**SUBSTRATE:** Both “wet places, marsh areas” and “rocky limestone ridges” mentioned.

**PLANT COMMUNITY:** Pine-oak woodlands, oak-juniper grassland and marsh/ riparian communities. Plant species associated with Arizona collections include: *Pinus discolor*, *Juniperus deppeana*, *Quercus arizonica*, *Talinum marginatum*, *Juncus* sp, and *Eleocharis* sp.

**POPULATION HISTORY AND TRENDS:** *H. mexicana* is reported to be common in Mexico, but rarely collected in Arizona. The species was first collected in the late 1800's by Lemmon (#2891) and was not collected again until 1979 (McLaughlin and Bowers, #1790), Madrono 1982. Until recently, there was only one known collection site in Arizona (and the entire US), so NatureServe has ranked the species as critically imperiled. Presently (2014), there are four known collection sites. The original 1979 site has been visited twice more and expanded. During one of the visits, the species was considered to be “common to abundant.” A second site was identified in 2009 in another mountain range over 20 miles to the east. The third site, also SW of the Huachucas was first discovered in 2002 and monitored almost every year through 2013. This site has been ranked as good or fair estimated viability for the plant. The fourth site, a little more than a mile from the third but in a different drainage, was discovered during an exploration in 2013. It was noted that “many” plants were in bloom. Based on this accumulated information, the following can be surmised. Although the distribution of *Hypoxis mexicana* is very limited in the US, it is likely that some more populations exist. For most of the known populations, the species seems to be well established and persistent, and the population trend seems to be stable.

**SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None.  
**STATE STATUS:** None.  
**OTHER STATUS:** None.

**MANAGEMENT FACTORS:** None specified. Given the highly limited distribution in the State, susceptibility to loss or damage by wild fires may be of concern. The perennial nature of *H. mexicana*, its cormlike rootstock, and its affinity for moist riparian habitats may serve as protection, but this matter should be investigated.

**PROTECTIVE MEASURES TAKEN:** None known.

**SUGGESTED PROJECTS:** Inventory similar habitat settings throughout the Huachucas and adjacent mountain ranges to determine if additional populations can be found. Determine if the species is susceptible to damage by fire.

**LAND MANAGEMENT/OWNERSHIP:** All known collections are on Federal lands: DOD Fort Huachuca Military Reservation, BLM, or USFS Coronado National Forest.

**SOURCES OF FURTHER INFORMATION****REFERENCES:**

- Flora of North America, accessed 6/10/2014,  
[http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=242101690](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242101690).  
JStor| Global Plants, accessed 6/10/2014, <http://plants.jstor.org/specimen/linn-hl427-2?s=t>.  
Madrono 1982, 29:57. Noteworthy Collections-Arizona.  
NatureServe Explorer, an Online Emcyclopedia of Life, accessed 6/10/2014,  
<http://explorer.natureserve.org/servlet/NatureServe?searchSciOrCommonName=Hypoxis&x=14&y=7>.  
Tropicos, accessed 6/10/2014, <http://www.tropicos.org/Name/50002550>.

**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

**ADDITIONAL INFORMATION:**

**Revised:** 2014-06-11 BDT

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