

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDBOR0A070

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Cryptantha atwoodii* Higgins
COMMON NAME: Atwood catseye, Atwood's catseye
SYNONYMS: *Cryptantha cinerea* var. *cinerea*
FAMILY: Boraginaceae

AUTHOR, PLACE OF PUBLICATION: L.C. Higgins, The Southwestern Naturalist 19(2): 127-129, f. 1. 1974.

TYPE LOCALITY: Arizona: Coconino County, 7 miles north of junction of highway 89 and 164 on hwy 89.

TYPE SPECIMEN: HT: BRY. N.D. Atwood 2624, 20 May 1970. IT: WTS.

TAXONOMIC UNIQUENESS: Species *atwoodii* is 1 of 115 in the genus *Cryptantha*.

DESCRIPTION: Small woody biennial with pustulate hairs on the leaves, 5-30 cm (2-12 in) tall. Leaves and stems are very hairy as is typical of the borage family. Stems, usually several, arise from the branched caudex, 3-25 cm (1.2-10 in) long, spreading. The leaves are oblanceolate, folded, obtuse, 0.2-0.6 cm wide, 1-4 cm long. Inflorescence capitate or with several reduced clusters below, 1-13 cm (0.4-5 in) long. Calyx segments are lanceolate, setose, 3-4 mm long in anthesis, in fruit becoming 5-7 mm long. The flowers are white with yellow centers. The corolla tube is 4-4.5 mm long, with the base lacking crests. Style exceeds mature fruit. Depressed globular fruit is smooth and glossy; nutlets are ovate. (Higgins 1974).

AIDS TO IDENTIFICATION: *Cryptantha atwoodii* has much larger flowers than the two annual associated *Cryptanthas*, *C. capitata* (Capitate cat's-eye) and *C. jamesii* (= *C. cinerea* var. *jamesii*, James cat's-eye). In addition to its biennial habit, *C. atwoodii* differs from *C. capitata* by its broader leaves, shorter calyx segments, shorter flower and style lengths, and smaller nutlets. It differs from *C. jamesii* in that it is a biennial, with capitate or narrow inflorescence, longer corolla tube that lacks crests at the base; however, the fruit is very similar in appearance. (Higgins 1974).

ILLUSTRATIONS: B&W drawing (Higgins 1974: fig. 1)
Color photos of genus (W.L. Wagner, in PLANTS Database,
<http://plants.usda.gov/>).

TOTAL RANGE: Endemic to northern Arizona, between Cameron and The Gap, in the Hamblin Wash vicinity, Coconino County. Also reported on the west rim of Marble Canyon.

RANGE WITHIN ARIZONA: See “Total Range.”

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial subshrub/shrub.

PHENOLOGY: Flowers April to May.

BIOLOGY:

HABITAT: Occurs on white shaley outcrops of low rolling hills of the Moenkopi soils in the Great Basin desertscrub at about 4,500 feet. Also reported on west rim of Marble Canyon on Kaibab limestone. NatureServe (2002) reports habitat as “Sandy to clayey soils in sagebrush, pinyon-juniper, mountain bush and ponderosa pine communities at 1,650 to 2,480 meters.”

ELEVATION: 4,740 – 5,340 ft (1446-1629 m), potentially up to 5,800 ft (1770 m).

EXPOSURE: All aspects of 0-20% slope.

SUBSTRATE: Sandy shale soils, Kaibab limestone, and gravelly loam.

PLANT COMMUNITY: Grama-galleta steppe (*Bouteloua-Hilaria*) and Great Basin sagebrush (*Artemisia*) of the Great Basin Desertscrub community. NatureServe (2005), reports in sagebrush, pinyon-juniper, mountain bush and ponderosa pine communities. Associated species include: *Abronia* (sandverbena), *Aristida* (three-awn grass), *Artemisia bigelovii* (flat sagebrush), *Astragalus nuttallianus* (Nuttal milkvetch), *Atriplex canescens* (four-wing saltbush), *A. confertifolia* (shadscale), *Bouteloua eriopoda* (black gramma), *Bromus* (brome), *Coldenia* (=Tiquilia), *Coleogyne ramosissima* (blackbrush), *Ephedra torreyana* (Torrey’s Mormon-tea), *E. viridis* (Green Mormon-tea), *Eriogonum fasciculatum* (California wild buckwheat), *Erioneuron pulchellum* (fluffgrass), *Gutierrezia sarothrae* (broom snakeweed), *Hilaria belangeri* (common curly-mesquite), *Hordeum jubatum* (fox-tail barley), *Lycium andersonii* (red-berried desert-thorn), *Opuntia*, *Oryzopsis* sp. (=Achnatherum, mountain-ricegrass), *Pediocactus peeblesianus* var. *fickeiseniae* (Fickeisen hedgehog cactus), *Prunus fasciculata* (desert almond), *Rhus trilobata* (sumac), *Sphaeralcea* (globemallow), *Sporobolus* (dropseed), *Stipa neomexicana* (New Mexico needlegrass), and *Vulpia* (six-weeks grass). (SEINet accessed 2005).

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: No status (NNDFW, NESL 2005)
[Group 4 (NNFWD, NESL 2000)]

MANAGEMENT FACTORS: Damage from grazing sheep, goats, and insects, may be a potential threat to this species, mainly during dry years.

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA – Navajo Nation; BLM – Arizona Strip Field Office.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

The species is named in honor of Dr. Nephi Duane Atwood, who is a collector of the Boraginaceae, and who was the first to collect this rare and local species (Higgins 1974).

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