

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDORO040F0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Orobanche uniflora*
COMMON NAME: Naked Broom Rape, Oneflowered cancer-root
SYNONYMS: *Aphyllon uniflorum* (basionym), *Anoplanthus imiflorus*, *Thalesia uniflora*
FAMILY: Orobanchaceae

AUTHOR, PLACE OF PUBLICATION: Linnaeus, Carl von. *Plantarum* 2: 633. 1753.

TYPE LOCALITY: U.S.A.: Virginia.

TYPE SPECIMEN:

TAXONOMIC UNIQUENESS: There are about 140 species of *Orobanche* worldwide, especially centered in the Mediterranean (Jepson eFlora 2015). NatureServe recognizes 15 species in the U.S. and Canada. *O. uniflora* is distributed throughout the U.S. and Canada, excluding Hawaii and some of the most northern Canadian territories. There are several other species found in Arizona in addition to *O. uniflora*, but these differ somewhat depending on the author. Arizona formerly tracked this plant at the subspecies level (*O. u.* subsp. *occidentalis*).

DESCRIPTION: At the species level, *Orobanche uniflora*: Stem: 0.5–5 cm. Inflorescence: generally raceme; flowers generally 1–3; bracts generally < 6, generally glabrous; pedicels 3–12 cm, scapose, bractlets 0. Flower: calyx lobes 5, generally 4–8 mm, > tube, narrowly triangular; corolla 12–35 mm, ± horizontal, generally pale ± purple to ± yellow, lobes generally rounded, minutely ciliate; anthers generally hairy; stigma lobes 2, margins recurved; orange nectary gland at base of ovary (Jepson eFlora 2015). Some authors (e.g., Abrams 1958) proposed that the western plants belong to variety *occidentalis*, which differs from the eastern variety *uniflora* by its calyx-lobes two-thirds the length of the calyx as opposed to one-half the length (Cronquist et al 1984).

AIDS TO IDENTIFICATION: The species can be distinguished from others in the western U.S, based on the following from Cronquist et al 1984:

Flowers on long pedicels 3-25 cm long, without bractlets.

Stem and axis of the inflorescence 0.5-12 (5) cm long; flowers 1-3; calyx-lobes longer than the calyx-tube.....*O. uniflora*

ILLUSTRATIONS:

Photos:

<http://swbiodiversity.org/seinet/taxa/index.php?taxon=Orobanche%20uniflora%20subsp.%20occidentalis>.

Line drawing: Cronquist et al 1984, p. 509.

Photos: <http://science.halleyhosting.com/nature/gorge/5petal/broomr/naked.htm>.

TOTAL RANGE: *O. uniflora* (full species level) is distributed throughout the U.S. and Canada, excluding Hawaii and some of the most northern Canadian territories. According to SEINet records, the distribution of the subspecies *O.u. occidentalis*, recognized by some authors, includes the four collections in Arizona and a single collection from the SW side of the San Bernardino Mountains in California.

RANGE WITHIN ARIZONA: Mohave, Coconino, Gila and Apache Counties. This very dispersed distribution in northern Arizona suggests that the four known collections of the subspecies *O.u. occidentalis* may be under-representing the presence of this plant in the State.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous.

PHENOLOGY: Flowers have been reported on plants collected in Arizona from April 30 to August 11.

BIOLOGY: Plants without chlorophyll; root-parasitic.

HABITAT: Wooded stoney hills, moderately moist places, often on rocky slopes (Cronquist et al 1984). On herbs (host plants), especially *Sedum*, Saxifragaceae, Asteraceae, less than 3000 m (Hickman 1993). One Arizona collection noted "canyon riparian" and that the plant was growing in moist humus in the streambed. USDA classifies the species as a facultative wetland plant.

ELEVATION: Collections in Arizona range from 3540 – 6900 feet (1080-2100m).

EXPOSURE: Not specified.

SUBSTRATE: Not specified, except moist and rocky.

PLANT COMMUNITY: Not specified, except one Arizona collection noted a Ponderosa pine riparian with *Solidago sparsiflora*, *Agrostis exarata*, and *Erigeron oreophilis*.

POPULATION HISTORY AND TRENDS: Unknown for Arizona. There are only four known collections for the formerly recognized subspecies covering a large portion of northern Arizona (from Mohave to Apache County and south to Gila County). Collection dates range from 1958 to 2001. There is no information on abundance in the collection records it may be under-represented by the few collections. At the subspecies level, there is only a single documented collection outside Arizona (California). NatureServe ranks this subspecies as critically imperiled. Given its wide distribution,

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.

STATE STATUS: None.

OTHER STATUS: None.

MANAGEMENT FACTORS: None specified.

PROTECTIVE MEASURES TAKEN: None.

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: Arizona State Trust Land; US Forest Service
– Tonto National Forest; USDI BIA – Navajo Nation.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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- Cronquist, Arthur, A. Homlgren, N. Holmgren. J. Reveal, and P. Holmgren. 1984. Intermountain Flora, Volume Four. New York Botanical Garden, Bronx, NY. pp. 506-510.
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- Jepson eFlora, accessed 8/25/2015, http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=35481.
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- Kearney, Thomas H. and Robert H. Peebles. 1960, with supplement. Arizona Flora. University of California Press, Berkeley, CA. p. 1085.
- NatureServe Explorer, and online encyclopedia of life, accessed 8/25/2015, <http://explorer.natureserve.org/index.htm>.
- Tropicos, accessed 5/11/2016, <http://www.tropicos.org/Name/23600068>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION: The name is derived from the Greek words for vetch strangler, because of its parasitic habit (Cronquist et al 1984). A common name for these plants is cancer-root, referring to their use by Native Americans, including the Navajo, to treat ulcers by applying the roots to the sore (Kearney and Peebles 1960).

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