

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

Plant Abstract

Element Code: PDPAS01040

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Passiflora bryonioides*
COMMON NAME: Mossy Passionflora
SYNONYMS: *Decaloba bryonioides*, *Passiflora bryonifolia*, *P. inamoena*, *P. karsteniana*, *P. serrata*
FAMILY: Passifloraceae

AUTHOR, PLACE OF PUBLICATION: Kunth, Karl (Carl) Sigismund, in Humboldt, Friedrich Wilhelm Heinrich Alexander von, et al., *Nova Genera et Species Plantarum* (quarto ed.) 2: 140–141. 1817.

TYPE LOCALITY: Mexico: Guanajuato: Santa Rosa [21 10'N, 101 08'W]

TYPE SPECIMEN: P 307397. Humboldt, F.W.H.A.v, #s.n. No date. See Killip 1938 for a discussion on the type.

TAXONOMIC UNIQUENESS: The Passionflower family has some 19 genera and 650 species, mainly in tropical regions (MacDougal 2001). For the genus *Passiflora*, NatureServe (2015) lists 29 species with seven additional varieties in the U.S. Arizona has four species and one variety. Three of the species, including *bryonioides*, occur only within the State.

DESCRIPTION: Plant: Perennial tendril-climbing vine; (0.5-)1-2 m long, with annual stems from thickened roots, pubescent to short hirsute throughout, with uncinat trichomes
LEAVES: (3-)5-lobed, not variegated, the margins serrate to serrate incised or lobed; laminar nectaries absent or 1-2 per sinus, submarginal; petioles 2 glandular in distal quarter; stipules widely falcate to narrowly ovate auriculate, long caudate, entire
INFLORESCENCE: with peduncles paired or solitary, arising colateral to the tendril; peduncles articulate distal to the bracts; bracts in ours setaceous to foliaceous or pinnatifid; bracts 2-7 mm long, 0.2-0.6 mm wide, setaceous to linear lanceolate
FLOWERS: ca. 2.5-4.5 cm in diameter, whitish with purplish bands on corona; sepals slightly longer than petals; coronal filaments 1 series, 7-12 mm long; ovary glabrous
Fruit: **FRUITS** berries, 3-4.5 cm long, 2-2.5 cm wide, ovoid, conical at apex, pale green with green stripes, whitish apically; **SEEDS** minutely pitted, arillate, dark, compressed (MacDougal 2001).

AIDS TO IDENTIFICATION: The plant is a perennial, tendril-forming vine up to 2 m tall, with palmately-lobed leaves. Flowers are white with purple stripes along the petals. Fruits are pale green and ovoid (EOL 2015).

The four Arizona species can be distinguished using the following key from MacDougal 2001:

1. Leaves deeply bi-lobed, the central vein shortest; floral corona red or reddish purple; fruit purplish black; seeds transversely grooved.....*P. Mexicana*
- 1' Leaves 3-5 lobed, the central vein longest; floral corona white or white with purple or violet; fruit yellowish, greenish, brown or whitish; seeds reticulately pitted.
2. Stipules subfalcate to narrowly ovate auriculate, entire, without gland tipped segments; petioles conspicuously 2 glandular in distal quarter; bracts less than 8mm long, setaceous to linear lanceolate, entire; trichomes hooked (uncinated) at tips.....*P. bryonioides*
- 2' Stipules deeply cleft nearly to base into elongate segments, the segments gland tipped or not; petioles not glandular, or glands only on numerous trichome-like cilia; bracts more than 15mm long, deeply bi-pinnatisect; trichomes straight.....3
3. Stipules divided into numerous obviously gland tipped segments; plant body densely pilose; bracts lightly pilose, heavily glandular; seeds more than 3mm wide.....*P. foetida*
- 3' Stipules divided into several segments, one much longer than the rest, these not gland tipped; plant body densely pale lanate; bracts lanate, not glandular, seeds less than 2.5mm wide.....*P. arida*

ILLUSTRATIONS:

Photos and Herbarium Mounts:

<http://swbiodiversity.org/seinet/taxa/index.php?taxon=Passiflora%20bryonioides>.

<http://eol.org/pages/584515/media>.

TOTAL RANGE: Mexico: from NW of Mexico City, Oaxaca, N through Sonora Sierra Madres, into central southern Arizona.

RANGE WITHIN ARIZONA: SW Santa Cruz County, vicinity of Pena Blanca Lake and Sycamore Canyon.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial vine.

PHENOLOGY: Flowers: June-September. Fruits: August-October.

BIOLOGY:

HABITAT: Riparian, shrub transition, and up to rocky canyon walls.

ELEVATION: 3600 – 4100 feet (1100-1250m), MacDougal 2001. Arizona collections expand this published range to 3500 – 4250 feet (1070-1295m).

EXPOSURE: Several collections indicated an E or SE aspect.

SUBSTRATE: Sand substrates mentioned at some collections sites; also rocky canyon walls.

PLANT COMMUNITY: Riparian woodland, oak woodland, desert scrub, grasslands. Associated plants include: *Talium*, *Rhynchosia*, *Sapindaria saponaria*, *Gossypium thurberi*, *Salix gooddingii*, *Lobelia cardinalis*, *Dasyilirion whelleri*, *Quercus toumeyi*, *Erythrina*, *Artemisia ludoviciana*, *Brickellia betonicaefolia*, *Coreocarpis arizonica*, *Prosopis*.

POPULATION HISTORY AND TRENDS: Unknown for Arizona. *P. bryonioides* is known from only four collections in SW Santa Cruz County; more specifically from Sycamore Canyon and around Pena Blanca Lake. Collections date back to the 1930's. The species does not seem to be very common, with some collections noting only one or two plants. Its presence in this part of southern Arizona probably reflects the northern-most extension of its range. Due to its very limited distribution, *P. bryonioides* is listed as critically imperiled by NatureServe (2015). Given that the plant has been collected along the riparian of Sycamore Creek for some eight decades, the population trend might be stable.

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: Determine if the species occurs along any of the other southern Arizona riparians.

LAND MANAGEMENT/OWNERSHIP: U.S. Forest Service, Coronado National Forest.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Encyclopedia of Life (EOL), accessed 8/15/2015, <http://eol.org/pages/584515/overview>.

JStor| Global Plants, accessed 8/14/2015,

<http://plants.jstor.org/stable/10.5555/al.ap.specimen.p00307397>.

Killip, E. P. 1938. The American species of Passifloraceae [prim.]. Publ. Field Mus. Nat. Hist., Bot. Ser. 19(1): 109.

MacDougal, John, M. 2001. Passifloraceae: Passionflower Family. Jour. Ariz-Nev Acad. Sci. 33(1): 41-45.

NatureServe Explorer, an online Encyclopedia of Life, accessed 8/14/2015,

Porter-Utley, Kristen. 2014. A revision of *Passiflora* L. subgenus *Decaloba* (DC.) Rchb. supersection *Cieca* (Medik.) J. M. MacDougal & Feuillet (Passifloraceae). *PhytoKeys*. 2014; (43): 1–224.

Tropicos, accessed 8/13/2015, <http://www.tropicos.org/Name/24200156>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

John M. MacDougal, Harris-Stowe State University, St. Louis, MO.

ADDITIONAL INFORMATION:

Revised: 2015-08-20 (BDT)

To the user of this abstract: you may use the entire abstract or any part of it. We do request, however, that if you make use of this abstract in plans, reports, publications, etc. that you credit the Arizona Game and Fish Department. Please use the following citation:

Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.