

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

Plant Abstract

Element Code: PDASC0A030

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Pherotrichis schaffneri* A. Gray

COMMON NAME: Huachuca Milkweed Vine; Huachuca Milkweed; Balbis' Milkvine

SYNONYMS: *Matelea balbisii* (Decnaisne) Woodson

Pherotrichis balbisii (Decaisne) A. Gray

Lachnostoma balbisii Decnaisne (basionym)

Asclepias villosa Balbis (basionym)

FAMILY: Apocynaceae

AUTHOR, PLACE OF PUBLICATION: Gray, Asa. 1886. Syn Fl. N. Amer. 2 2(1):462.

TYPE LOCALITY: In montibus San Miguelito, San Luis Potosi, Mexico.

TYPE SPECIMEN: Lectotype: J. Schaffner 63, GH.

TAXONOMIC UNIQUENESS: Currently, *Pherotrichis* consists of four species, all of them known from Mexico and northern Guatemala. At one time, Gray annotated specimens from San Luis, Mexico and the specimen from Arizona to *P. schaffneri*, a new species. He based the separation of these specimens from *P. balbisii* on the following characters: less hirsute, corolla lobes lineate-veined, crown scales shorter and more truncate than the globular very large boss of the stigma (Gray 1886). These specimens were later re-annotated to *P. balbisii* and *P. schaffneri* became a synonym of this species. However, Stevens (2005) showed that *P. balbisii* is an illegitimate name, and *P. schaffneri* again became the correct name.

DESCRIPTION: Perennial herbs; latex white. Stems erect, to 50 cm tall, from a thick, woody tuber-like taproot, densely hirsute, the long straight hairs mixed with shorter, glandular, typically dark-tipped trichomes; leaves ovate to orbicular below, more or less grading to lanceolate or elliptic above, the bases subcordate to rounded 2 - 10 cm long; petioles 0.8 - 2 (up to 4) cm long, less than one-third as long as the blades; inflorescences umbelliform, the peduncles 2 - 5 mm long; flowers ca. 6 mm long; calyx lobes 3 - 4 mm long, 1 - 2 mm longer than the corolla tube; corolla whitish to yellow-green, hirsute outside, densely matted-hirsute inside, campanulate, the tube 2 - 3 mm long, the lobes ovate-triangular, spreading-erect, ca. 4 mm long; crown arising from the region of union of the corolla tube and filament, of 5 distinct, obovate-elliptic segments opposite the anthers, 1.2 - 2 mm long, 1 - 1.5 mm wide, about as long as the stigma head, broadly retuse at the apex with rounded lateral lobes, the margins more or less folded inward at the base; gynostegium subsessile, the anther head disk-shaped, the anther wings ca. 0.2 mm long; corpusculum ca.

0.25 mm long, the pollinia horizontal from the translator arms, asymmetrically obovate, 0.3 - 0.4 mm long; stigma head apically projected into a cylindrical protuberance ca. 1 mm long and broad; follicles pendulous on deflexed pedicels, 6 - 10 cm long, hirsute and glandular (Sundell 1994, Kearney and Peebles 1960).

AIDS TO IDENTIFICATION: *Pherotrichis schaffneri* is often placed within the genus *Matelea*, such as in Sundell's 1994 treatment of Asclepiadaceae. It differs from all species of *Matelea* in Arizona by having the following combination of characters: erect stems, corolla lobes that are densely and prominently matted-hirsute inside, and mature follicles that have a dense covering of long straight hairs and shorter glandular trichomes (Sundell 1994, Martin et al. 1998). Kearney and Peebles (1960) use the following characters to separate the genus *Pherotrichis* in Arizona from the genus *Asclepias* in Arizona: *Pherotrichis*: Corolla bearded within with stiff, white hairs; segments of the corona flat or slightly concave, not crested within. *Asclepias*: Corolla not bearded (at most puberulent) within; segments of the corona strongly concave, at least at base, usually crested or appendaged within.

ILLUSTRATIONS: Color photos (Fishbein 1999 web site).
Syntype photo here:

<https://s3.amazonaws.com/huhwebimages/CA08C86B9ADC4A5/type/full/40975.jpg>

Isosyntype photo here: <https://www.tropicos.org/Image/19474>

TOTAL RANGE: Southern Arizona and Mexico (Sonora and Chihuahua), south to Guatemala.

RANGE WITHIN ARIZONA: One specimen taken from Huachuca Mountains, Cochise County, in 1882 (Lemmon 2816). It is possible that the specimen label locality was erroneous (Bowers and McLaughlin 1996). In 2015, Jason Ksepka collected (*Ksepka s.n.* [OKLA]) an unknown Apocynaceae near the western flanks of the Huachuca Mountains, and sent it to Mark Fishbein to identify. Fishbein tentatively assigned it to *P. schaffneri*, cautioning that the Arizona and northern Mexico plants may belong to an entirely new species (M. Fishbein, pers. comm.) The new collection gives further weight to the Lemmon collection as coming from within Arizona.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous perennial.

PHENOLOGY: June - October, according to Sundell (1994).

BIOLOGY: Aboveground herbaceous growth occurs with the onset of summer monsoon rains.

HABITAT: In Sonora and Chihuahua, this species has been collected from canyons, flats, and grazed grassland within oak forests and pine-oak forests (Martin et al. 1998).

ELEVATION: In Arizona, 1,700 m (5,577 ft). In Sonora and Chihuahua: Approximately 4,920 - 6,232 ft (1,500 - 1,900 m), according to Martin et al. (1998). Sundell (1994) lists the elevation as 3,500 - 7,500 ft (1,050 - 2,300 m).

EXPOSURE: Various.

SUBSTRATE: Unknown

PLANT COMMUNITY: This species is found in madrean evergreen woodland communities in Sonora and Chihuahua, as defined by Brown (1994). Within these communities, this species is found in oak forests and pine-oak forests (Martin et al. 1998). Found in open pine-oak-juniper woodland in Arizona.

POPULATION TRENDS: None known. A locality discovered and vouchered in 2015 (*Ksepka s.n.*) observed two plants in 2018 and again in 2019.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
[Forest Service Sensitive USDA, FS Region 3 1990]

MANAGEMENT FACTORS: If this species was collected from the Huachuca Mountains and the specimen was labeled correctly as to location, then it is either extremely rare there or it has been extirpated from those mountains. Bowers and McLaughlin collected extensively in the Huachuca Mountains, for their 1996 flora of the Huachuca Mountains, and never found this species. In 2015, this species was again collected near the Huachuca Mountains, confirming its presence within Arizona.

CONSERVATION MEASURES TAKEN: This species has been listed as “Forest Service Sensitive” since 1990.

SUGGESTED PROJECTS: Surveys for this species are recommended.

LAND MANAGEMENT/OWNERSHIP: USFS Coronado National Forest.

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

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- Stevens, W. D. 2005. New and Interesting Milkweeds (Apocynaceae, Asclepiadoideae). *Novon*. Vol. 15 (4):602-619.
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MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

Revised: 1981-xx-xx (ANHP)
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