

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

Plant Abstract

Element Code: PDASC020Z0

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Asclepias lemmonii* Gray

COMMON NAME: Lemmon's milkweed, bigleaf milkweed

SYNONYMS:

FAMILY: Apocynaceae

AUTHOR, PLACE OF PUBLICATION: A. Gray, Proceedings of the American Academy of Arts and Sciences 19: 85. 1883.

TYPE LOCALITY: Syntype GH-76136: Rucker Valley, Arizona, U.S.A. 1881. Syntype GH-76135: Near Fort Huachuca, Tanner's Canyon, Arizona, U.S.A. Aug 1882.

TYPE SPECIMEN: HT: CAS? J.G. Lemmon s.n., 1881. Syntype: GH, US.

TAXONOMIC UNIQUENESS: There are 26 species of *Asclepias* in Arizona, and 76 in North America. *Asclepias* is an American and African genus with about 150 species, mostly in the United States and Mexico (Hickman 1993, Lehr 1978, Sundell 1994).

Recent publications by Fishbein and others (Fishbein et al. 2011, 2018) have elucidated the phylogenetic relationship of *Asclepias* and the origin and evolution of several characteristics found within this genus of plants, including leaf trichomes and waxiness. *Asclepias lemmonii* is part of the Mexican Highland Clade of milkweeds, and some of its closest relatives include *A. quinqueidentata* and *A. senecionifolia* (Fishbein 2011, Fishbein 2018).

DESCRIPTION: Stout perennial deciduous herb. Stems erect, unbranched, 40-150 cm (1.3-5 ft) tall, shaggy pilose. Leaves opposite, subsessile, petioles 2-5 cm long, the blades ovate-elliptic, 6-25 cm (2.4-10 in) long, 3-16 cm (1.2-6.3 in) broad, rounded to shallowly cordate and more or less clasping at the base, rounded to truncate or retuse at the apex, apiculate, pilose to pubescent beneath, sparsely so above, the margins ciliate. Umbels subterminal at the uppermost nodes, 5-8 cm (2-3.2 in) broad, the peduncles 3-12 cm (1.2-4.7 in) long. Flowers large; calyx lobes 4-5 mm long; corolla green to purplish outside, greenish inside, the lobes 9-11 mm long; hoods pale pink, erect-spreading, oblong-quadrate in the lower portion, more or less recurved-divergent at the middle, attenuate to the apex, 7-8 mm long along the dorsal surface, 5-8 mm broad at the top, 4-6 mm longer than the gynostegium (crown of united stamens in milkweeds), the horns radially flat, attached at the base of the hoods, oblong, erect, exerted approximately 1 mm; anther wings 2.5-2.6 mm long; corpusculum (central part of a pollinarium, which is the whole structure that bears the pollinias) 0.4-0.5 mm long, the

pollinia 1.6 mm long. Martin et al. (1998) reports flowers cream turning pale yellow. Follicles erect on deflexed pedicels, 9-12 cm long (Sundell 1994).

AIDS TO IDENTIFICATION: The following combination of characteristics are characteristic of *Asclepias lemmonii*: Stems are very tall (up to 1-1.5 m), and persistently leafy. Leaves are very large, opposite, subsessile; blades ovate-elliptic, to 25 cm long and 16 cm broad, rounded to truncate or retuse at the apex. Stems are shaggy-pilose, herbaceous above the rootstock. Hoods are 7-8 mm long, 4-6 mm longer than the gynostegium (Kearney and Peebles 1951, Sundell 1994).

ILLUSTRATIONS: Color Photo (Rickett 1970).
Color photo of Syntype (US-47696)
Color photo of specimen (ASU-213423)

TOTAL RANGE: Southern and southeastern Arizona south into Jalisco, Mexico.

RANGE WITHIN ARIZONA: Cochise County: Huachuca and Chiricahua mountains; Pima County: Baboquivari and Santa Rita mountains; Santa Cruz County: Santa Rita Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial deciduous forb.

PHENOLOGY: Flowering June – September (Aug-Sep per Martin et al., 1998); fruiting August - October.

BIOLOGY: Plants produce milky juice. Pollinated by insects, and is considered an important food source for pollinators. Its use in restoration efforts may be limited by its rarity (Nabhan et al. 2015).

HABITAT: In southeastern Arizona this species is found in the mountains, where it occupies canyons, roadsides, and open woodlands (Sundell 1994). In Mexico, this species is known from open dry slopes, burned areas, and grazed grassland (Martin et al. 1998).

ELEVATION: Approximately 5,050 - 7,200 feet (1540-2196 m) in Arizona. Specimens from Mexico have been collected at about 3,934 - 6,885 feet (1200-2100 m), (Martin et al. 1998).

EXPOSURE: Often on north and east-facing slopes in Arizona, but has been collected from west-facing slopes. Plants have been found in shaded or partially shaded situations as well as open forest habitats.

SUBSTRATE: Known from limestone substrates (Shreve and Wiggins 1964). Probably found on volcanic and other substrates as well, based on known collection locations.

PLANT COMMUNITY: Madrean evergreen, pine-oak, and oak woodland communities. One collection (2002, ASU-242979) in mesquite grassland on alluvial outwash from east drainage slope of Huachuca Mts. Associated species include: *Acer* sp. (maple), *Agave palmeri* (Palmer's agave), *A. parryi* var. *huachucensis* (Huachuca agave), *Bouteloua curtipendula* (side-oats grama), *Bouvardia ternifolia* (Scarlet Bouvardia), *Cercocarpus montanus* (Colorado birchleaf mountain-mahogany), *Geranium* sp. (crane's-bill), *Juniperus deppeana* (Alligator juniper), *Oxalis* sp. (woodsorrel), *Pinus cembroides* (Mexican pinyon), *P. discolor* (border pinyon), *P. engelmannii* (Engelmann pine), *P. leiophylla* (Chihuahuan pine), *Platanus racemosa* (California sycamore), *Quercus arizonica* (Arizona oak), *Q. hypoleucoides* (silver-leaf oak), *Q. oblongifolia* (Mexican blue oak), and *Tradescantia* (spiderwort). (Brown 1994, SEINet accessed 2006).

In Mexico, collected in pine/oak woods on sedimentary soil, with *Pinus engelmannii*, *P. chihuahuana*, and *Quercus durifolia* (Cusi barril) (SEINet, accessed 2006).

POPULATION TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3, 2013, 1999)

MANAGEMENT FACTORS: Although this species is rather uncommon where it occurs, it does not seem to be very intolerant of disturbance.

CONSERVATION MEASURES TAKEN: This species occurs on The Ramsey Canyon Preserve, a protected area. Other known locations in Arizona are all on public or federal lands.

SUGGESTED PROJECTS: Areas with known populations should be re-surveyed to determine population trends. The location in the Santa Rita Mountains should be re-verified.

LAND MANAGEMENT/OWNERSHIP: DOD – Fort Huachuca Military Reservation; USFS - Coronado National Forest; TNC – Ramsey Canyon Preserve; Private.

SOURCES OF FURTHER INFORMATION

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MAJOR KNOWLEDGEABLE INDIVIDUALS:

Frank Reichenbacher - Southwest Field Biologists, Tucson, AZ.
Eric Sundell - University of Arkansas at Monticello, Monticello, AR.

ADDITIONAL INFORMATION:

The genus *Asclepias* was named after Asklepios, a legendary Greek physician and god of medicine.

See Sundell (1994), pg. 170, for a drawing of a typical *Asclepias* flower with the flower parts labeled.

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