

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

Plant Abstract

Element Code: PMORC2B0L0

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Dichromanthus michuacanus* (La Llave & Lex.) Salazar & Soto Arenas

COMMON NAME: Michoacan ladies'-tresses, Michuacan ladiestresses, Michuacan mock ladies'-tresses

SYNONYMS: *Stenorrhynchos michuacantum*, *Spiranthes michuacana*; *Spiranthes bracteolaris*; *Schiedeella michuacana*; *Neottia michuacana*; *Stenorrhynchus michuacanus*

FAMILY: Orchidaceae

AUTHOR, PLACE OF PUBLICATION: *Dichromanthus michuacantum* (La Llave & Lex) Salazar et al, American Orchid Society 17(3): 172-176. 2002. *Stenorrhynchos michuacantum* (La Llave & Lex.) Lindley, The Genra and Species of Orchidaceous Plants 480. 1840. *Neottia michuacana* La Llave & Lex., Novorum Vegetabilium Descriptiones 2: 3. 1825.

TYPE LOCALITY: Mexico, State of Michoacan, near Vallisoletto, especially toward Jesus-del-monte.

TYPE SPECIMEN: Juan José Martínez de Lexarza, s.n.

TAXONOMIC UNIQUENESS: As currently defined, *Dichromanthus* encompasses four species, two of which are found in the United States (*D. michuacanus* and *D. cinnabarinus*). The other species range from northern Mexico to Central America.

DESCRIPTION: Robust spike 2-10 mm thick from an underground, fleshy branched root. Stems with 3-6 thin sheaths, resembling smaller leaves, cauline, bladeless, striate, scarious, glabrous. Leaves 0-5, mostly basal, lanceolate, shiny, pale green, generally withering by time of flowering, 10-50 x 1-3 cm. Inflorescence is a dense raceme, 5-19 cm. Floral bracts lanceolate to triangular, green becoming reddish-brownish, especially at time of flowering. Flowers cream-colored, 10-30, with one or more green longitudinal stripes. Densely hairy, especially on the backside of the sepals, these hairs described as "tortuous". A population from the Patagonia Mountains displays atypical yellow flowers (Coleman 2009). Flowers generally face the same direction, this reported as south to southwest (Coleman 2002). Ovoid capsules, ascending; seeds pale white.

AIDS TO IDENTIFICATION: This is the only *Dichromanthus* species known to occur in Arizona.

ILLUSTRATIONS: Color photographs of plant, flowers, habitat (Coleman 2002: plate 32).

Color photographs (Coleman 2005)
Black and white drawing (FNA Vol. 26)

TOTAL RANGE: Southeast Arizona and southwest Texas to southern Mexico (Oaxaca).

RANGE WITHIN ARIZONA: Southeastern part of state in Cochise (Chiricahua, Dragoon, and Huachuca mountains), Pima (Santa Catalina Mountains), and Santa Cruz (Patagonia Mountains) counties. The Dragoon location has not been relocated since 1939, and may be extirpated.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Terrestrial, perennial herbs up to 80 cm from tuberous roots. Stems stout.

PHENOLOGY: Aboveground growth starts shortly after the onset of the monsoon rains, as early as the first week of July and always by the middle of July. Best time to look for plant is in August to early September when leaves are fresh. Flowers September to October, at the end of the summer rainy season, when leaves are brown and faded.

BIOLOGY: Plants in Arizona have a mild musty fragrance noticeable at night, where as Correll (1950 *in* Coleman 2002) reported a strong musk and honey fragrance. Both the timing of the fragrance and the color of the flowers suggest pollination by night-flying insects. The column structure favors cross-pollination. (Coleman 2002). Pollinated by a species of bumblebee, *Bombus diligens*, in Mexico (Figueroa et al. 2012). Open flowers emit an aroma that is detectable by humans (Coleman 2009).

HABITAT: Rocky hillsides, slopes, ridges, grassy hillsides, sand pine-oak woodlands, especially in zones of periodic seepage. Has also been found in dry creek beds. Often found under or near alligator juniper (*Juniperus deppeana*) in Arizona.

ELEVATION: 5,050 – 5,950 ft (1540-1813 m) in Arizona. Primarily found between 5,000 and 6,200 ft (1500-1900 m) for their range, although its total elevation range extends up to 7,000 ft (2134 m).

EXPOSURE: South and west facing slopes

SUBSTRATE: Rocky hillsides, slopes

PLANT COMMUNITY: Transition between the Sonoran desertscrub and the ponderosa pine habitats, in the Madrean evergreen woodland habitat type, consisting of open to dense stands of oak, juniper, and pinõn pine. A common associate, essentially an indicator plant, *Milla biflora*,

flowers in August and September when *S. michuacanus* is developing. When found in alligator juniper forest, *M. biflora* is an almost certain sign that the orchid is nearby. (Coleman 2002).

POPULATION HISTORY AND TRENDS: *Stenorrhynchos michuacanus* is widely scattered in southeastern Arizona and exists in sufficient numbers to be considered safe from immediate threats (Coleman 2002). Coleman (2001, 2005) monitored several sites in the Patagonia Mountains. He noted that the most common event is for plants to bloom (or attempt to) and then rest the following year, and that individuals can survive two consecutive years entirely underground (2005). At several sites, no plants appeared during monitoring years.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: Salvage Restricted (ARS, ANPL 1999)
OTHER STATUS: None

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Monitor known localities. Coleman reported a 40% average attempted bloom rate for spikes that flowered the previous year at four study sites in southern Arizona (Coleman 2001). In some sites only a few individuals have been noted. Herbivory appears to prevent successful blooms (Coleman 2001).

LAND MANAGEMENT/OWNERSHIP: USFS – Coronado National Forest, NPS – Saguaro National Park (east)

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

Revised: 2003-01-23 (SMS)
2020-05-12 (TME)

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