

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

Plant Abstract

Element Code: PDVER0A030
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Glandularia chiricahensis*
COMMON NAME: Chiricahua Vervain
SYNONYMS: *Verbena chiricahensis* (Umber) Moldenke
FAMILY: Verbenaceae

AUTHOR, PLACE OF PUBLICATION: Ray E. Umber, Systematic Botany 4(1): 92-94. 1979.

TYPE LOCALITY: Arizona, Cochise County, Rustler's Park, Chiricahua Mountains.

TYPE SPECIMEN: The Gray Herbarium (Harvard University) GH00094765 (Holotype).

TAXONOMIC UNIQUENESS: *Glandularia* is a new world genus found in both North and South America. In North America, species can be found from South Dakota to Guatemala, and from Virginia-Florida to Arizona. Depending on the source, there are 18-19 species in North America. NatureServe lists 17 species, 4 varieties and 1 hybrid. *G. chiricahensis* is one of nine species/varieties found in Arizona.

DESCRIPTION:

Perennial herb; stems several from a common base, ascending or erect, 20-80 cm tall, with an indumentum of stiff white hairs, 1-2 mm long; leaves petiolate, 3.5-7 cm long, 3-parted-pinnatifid, with short, white, appressed hairs on both surfaces; spikes pedunculate, congested, hardly elongating in fruit; floral bracts slightly less than the calyx, lanceolate, with an indumentum of long and short stiff hairs, essentially eglandular, ciliate; calyx 8-10 mm long, the veins with long, stiff white hairs, essentially eglandular, the lobes unequal, about 2 mm long; corolla of various shades of purple (HCC 32-34(35)), the tube about 3 mm longer than the calyx, villous on the outer surface, the corolla limb 0.8-1.0(-1.2) cm wide; anther connective appendaged; nutlets cylindrical, black about 2.5 mm long, the commissural face rounded at the top, not reaching the tip of the nutlet, with white ridges, papillose or smooth, the outer surface raised reticulate apically to raised striate basally, (n = 10), from Umber, 1979.

AIDS TO IDENTIFICATION: *G. chiricahensis* can be recognized by a very robust, erect habit; congested, short, eglandular spikes; and flowers which are somewhat longer than the calyx (Umber, 1979). Not fragrant.

ILLUSTRATIONS:

Herbarium Mount (Isotype): <http://www.tropicos.org/Image/65752>.

TOTAL RANGE: Found mostly in southeastern Arizona, but also as far north as Bill Williams Mountain (Coconino Co.), at least two collections in New Mexico's Gila National Forest, northeast of Silver City, and several locations in northeastern Sonora, Mexico.

RANGE WITHIN ARIZONA: Known from several of the Sky Island mountain ranges in southeast Arizona (Chiricahua, Pinaleno, Pinal, Huachuca and Santa Rita) but also from near Bill Williams Mountain, west of Flagstaff.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: A perennial herb, with several stems from a common base, ascending or erect, 20-80cm tall (10-40in).

PHENOLOGY: In general, *Glandularia* species flower during all warm weather months, but primarily in the spring and again in late summer or fall. Based on collection data from Arizona, *G. chiricahensis* is in flower from at least mid-June through the end of August. The collection near Flagstaff, on July 22, noted fruits on the plant.

BIOLOGY:

HABITAT: Most common in openings, often disturbed, in coniferous forests at elevations above 6000 feet.

ELEVATION: Rangewide, the author (Umber, 1979) states that *G. chiricahensis* occurs between 6,500 and 10,000 feet (1,980 to 3,050m). Collections from Arizona extend this range down to 5,700 feet (1,740m). The highest elevation collection in Arizona is 9,000 feet (2,745m).

EXPOSURE: Reported as open, with one Arizona site identified as a south slope. Others were described as rolling pineland, recently lumbered and open, semi-timbered slopes.

SUBSTRATE: The only data available was from two collection sites. Near Mt. Graham, the substrate was described as sandy loam, pH 6.5. At Barfoot Park in the Chiricahuas, the substrate was identified as andesitic.

PLANT COMMUNITY: Open pine forests and woodlands. Other plants notated with Arizona collections include *Pinus*, *Alnus* and *Quercus* (Gambel's oak at one site), also Douglas Fir and Birch, and *Cercocarpus breviflorus*, *Juniperus deppeana*, and *Pinus leiophylla*.

POPULATION HISTORY AND TRENDS: There is really no population data available for *G. chiricahensis*. The species has been collected in Arizona since 1898, and most recently

in 2002. The author (Umber, 1979) states that the plant is “found very commonly” in the Chiricahua Mountains, its type locality. It has also been documented on five of the other Sky Island mountain ranges in SE Arizona, as well as near Flagstaff. Since the species is endemic to Arizona, one known locality in New Mexico and two areas in NE Sonora, Mexico, it is classified globally as a imperiled plant by NatureServe, and subnationally (i.e., AZ and NM) as possibly critically imperiled. However, given its distribution among multiple isolated mountain ranges, its known presence in Arizona for over 100 years, and the fact that it seems to prefer disturbed (i.e., post-logging) sites, there does not appear to be any imminent threat for the species.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: None identified.

PROTECTIVE MEASURES TAKEN: None.

SUGGESTED PROJECTS: Alert land management agencies (in particular the U.S. Forest Service) as well as university and other botanists, to continue to seek and document occurrences of *G. chiricahensis* during surveys in appropriate habitat localities.

LAND MANAGEMENT/OWNERSHIP: All collections mapped in Arizona are on U.S. Forest Service lands, and specifically, the Coronado National Forest. The only exception was a collection near Flagstaff, but the location was too vague to be mapped.

SOURCES OF FURTHER INFORMATION

REFERENCES:

NatureServe. <http://www.natureserve.org/explorer/>, accessed 6/19/2013.

Tropicos, <http://www.tropicos.org/Name/33700026>, accessed 6/17/2013.

Umber, Ray E. 1979. The Genus *Glandularia* (Verbenaceae) in North America. Systematic Botany 4(1) pp. 72-102.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION: The specific name derived from the Chiricahua Mountains, the type locality of the species.

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