

ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDRAN080E0

Data Sensitivity: No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Clematis hirsutissima*

**COMMON NAME:** Clustered leather flower; hairy clematis; sugarbowls; Lions-beard

**SYNONYMS:** *Coriflora hirsutissima*; *Viorna hirsutissima*; *Viorna arizonica*; *Clematis arizonica*; *Clematis hirsutissima arizonica*

**FAMILY:** Ranunculaceae

**AUTHOR, PLACE OF PUBLICATION:** Pursh, *Flora Americae Septentrionalis*; or, ... 2: 385. 1814.

**TYPE LOCALITY:**

**TYPE SPECIMEN:** LT: PH-LC 64, Lewis Meriwether s.n., 27 May 1806.

**TAXONOMIC UNIQUENESS:** The species *hirsutissima* is 1 of 35 in the genus *Clematis*. Kearney and Peebles (1960) note 6 species of *Clematis* within Arizona. One was given specific status by Heller as *C. arizonica* (1899), and was renamed by Erickson (1943) to *C. hirsutissima arizonica*, but has since been placed in synonymy under *C. h. hirsutissima* (USFWS 1998).

**DESCRIPTION:** Herbaceous perennial, 20-70 cm (7.9-27.6 in) high. Erect stems from a somewhat woody base, often clustered. Stems are usually simple or branched above, and rather sparsely villous. Leaves pubescent to nearly glabrous, pinnately compound with 7-13 leaflets; lower leaves sometimes simple. These divisions narrowly linear, pubescent to nearly glabrous, usually 1-2 mm, but rarely up to 12 mm. Leaves are all at right angles to the stem, and leaf branches horizontal to the rachis. Nodding bell-shaped flowers solitary at the end of each stem, 2 – 4 cm (0.79-1.6 in) long. Flowers without petals, but with four, thick purplish sepals, and numerous stamens and pistils. Sepals are 2-4.5 cm (0.79-1.8 in) long, erect but somewhat spreading at the tip, densely hirsute on the outside. The fruit is a head of achenes, each bearing a 4 - 6 cm (1.6 - 2.4 in) plumose style.

**AIDS TO IDENTIFICATION:** Other *Clematis* are vine-forming.

**ILLUSTRATIONS:** Photographs (Galeano-Popp 1988)  
Color photo (Rickett 1970: plate 46)  
B&W line drawing (ARPC 2001)

Color photos of plant and habitat (ARPC 2001).

Color photo (Kristina Park *in*

[http://www.swsbm.com/images/C/Clematis\\_hirsutissima-2.jpg](http://www.swsbm.com/images/C/Clematis_hirsutissima-2.jpg)).

Color photos of plant and fruit

([http://www.for.nau.edu/azproject/Species/cle\\_hir1.html](http://www.for.nau.edu/azproject/Species/cle_hir1.html))

Color photo of plant in fruit (Bob Skowron August 2000 *in*

<http://www.rmrp.com/>)

Color photo of plant in flower (Rebecca Day-Skowron May 2001 *in*

<http://www.rmrp.com/>)

Color photo of plant in flower (<http://www.wsu.edu:8080/>)

**TOTAL RANGE:** Montana to Washington and Oregon, south to New Mexico and Arizona.

**RANGE WITHIN ARIZONA:** Apache and Coconino counties. Known from the Flagstaff vicinity along the Rio de Flag and Lower Lake Mary, upper Volunteer Canyon, the Tusayan area, Sonsela Butte, and the Chuska Mountains.

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** Perennial subshrub.

**PHENOLOGY:** Flowering late April through June, fruiting July to August.

**BIOLOGY:** Erect or weak and trailing stems which may be singular or clustered, usually somewhat woody at the base. Single stem plants may be indicative of an early age and large clumps may be indicative of good health, vigor and advanced age. Multi-stem groups, with more than one and less than ten stems appearing to arise from a common place, were much more common (Galeano-Popp 1988).

**HABITAT:** In Arizona, this plant occurs in moist mountain meadows, prairies, and open woodlands and thickets, usually in limestone outcroppings of ponderosa pine and mixed conifer forests with moderate shade, from 6,800 to 9,000 ft (2075-2745 m) elevation. In more northern reaches, the habitat is mixed conifer forest and much more mesic than in Arizona.

**ELEVATION:** 6,400 – 9,050 ft. (1952 - 2760 m).

**EXPOSURE:** North, south, southeast and east, although most common on north- to east-facing slopes.

**SUBSTRATE:** Kaibab limestone outcroppings in Arizona.

**PLANT COMMUNITY:** In Arizona, mainly found in ponderosa pine forests. They are also found in oak woodland forests in New Mexico. In Utah, this plant is found in sagebrush,

mountain brush, ponderosa pine, aspen, aspen-tall forb, and spruce-fir communities (Welsh et al. 1993). Associated species found in a study conducted in Arizona by Galeano-Popp (1988) include *Pinus ponderosa*, *Pinus edulis*, *Juniperus scopulorum*, *Festuca arizonica*, *Thalictrum fendleri*, *Solidago*, *Zygadenus elegans*, *Pseudocymopterus montanus* and *Vicia americana*.

**POPULATION TRENDS:****SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None  
**STATE STATUS:** *C.h. var. arizonica* HS (ARS, ANPL 1999)  
 [*C.h. var. arizonica* HS (ARS, ANPL 1993)]  
**OTHER STATUS:** Group 4 (NNFWD, NESL 2000)

**MANAGEMENT FACTORS:** Insects and browsing animals, possibly rodents or squirrels feed on seeds in fall. Logging, recreational activities and land developments could pose threats.

**PROTECTIVE MEASURES:** Following comments pertaining to the old variety *C. h. arizonica*, which is now synonymized under *C. h. hirsutissima*: "Much of the fieldwork has been completed. U.S. Forest Service has created 100 foot "buffer zones" around known populations growing in timber sale areas. Coconino National Forest has underwritten contracts to study the biology of this plant. Seed research and a status report being done at Northern Arizona University."

**SUGGESTED PROJECTS:** Resolution of taxonomic problems within this species. Projects to determine the potential impact of exotic species on known populations.

**LAND MANAGEMENT/OWNERSHIP:** BIA – Navajo Nation; DOD – Navajo Army Depot; NPS – Grand Canyon National Park; USFS - Coconino and Kaibab National Forests; State Land Department; Private.

**SOURCES OF FURTHER INFORMATION****REFERENCES:**

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**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

- Renee Galeano-Popp U.S. Forest Service, Lincoln National Forest, New Mexico.
- Joyce Maschinski - The Arboretum, Flagstaff, Arizona.
- Art Phillips - Private consultant, Flagstaff, Arizona.
- Barbara Phillips - U.S. Forest Service, Zone Botanist, Flagstaff, Arizona.
- Randy Scott - Northern Arizona University, Flagstaff, Arizona.

**ADDITIONAL INFORMATION:**

The Floy Arboretum has conducted a study on shade effect. When plants were removed from the shade, seed set decreased. When shade added, seed set increased (Phillips, 1993).

The following comments are from the Federal Register dated January 9, 1998, Notice of reclassification of *Clematis hirsutissima arizonica*:

“Finding: *Clematis hirsutissima* var. *arizonica* (Arizona leatherflower) was considered to be restricted to certain limestone soils in northern Arizona and possibly New Mexico. However, the results of a recently completed floristic review of the genus *Clematis* in North America (Pringle 1997) show no clear differences between *C. hirsutissima* var. *arizonica* and *C.h.* var. *hirsutissima* with respect to such features as the width of the leaflet lobes and the degree of spreading of the leaves, both of which had been considered distinguishing characteristics of *C.h.* var. *arizonica*. Pringle’s review indicates that *C.h.* var. *arizonica* should be placed in synonymy under *C.h.* var. *hirsutissima*. The Service is now removing *Clematis hirsutissima* var. *arizonica* from candidate status, because it no longer meets the Act’s definition of “species.”

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***Clematis hirsutissima***

*Clematis hirsutissima* var. *hirsutissima* is a widespread taxon, known from nine western states (Pringle 1997). And is not in danger of extinction within the foreseeable future. The taxon is not subject to a degree of threats sufficient to warrant candidate status.

Based on the above information, acceptance of either *Clematis hirsutissima* var. *arizonica* or *C.h.* var. *hirsutissima* as a candidate taxon is not warranted. Should additional study of systematics of the species result in a peer-review treatment that resurrects *C.h.* var. *arizonica*, the Service will reconsider according candidate status to that entity.”

**Revised:** 1998-03-04 (SMS)  
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