

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

Plant Abstract

Element Code: PDROS1B010

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Potentilla albiflora* L. O. Williams
COMMON NAME: White-Flowered Cinquefoil, Whiteflower Cinquefoil, Pinaleno Cinquefoil
SYNONYMS:
FAMILY: Rosaceae

AUTHOR, PLACE OF PUBLICATION: Williams, L. O. 1934. Bull. Torrey Bot. Club 61(5): 260-261.

TYPE LOCALITY: Arizona: Graham County: Pinaleno Mountains.

TYPE SPECIMEN: R. M. L. N. Gooding 1045.

TAXONOMIC UNIQUENESS: The genus *Potentilla* contains approximately 200-500 species (Hickman 1993). Twenty-seven species are recognized by Lehr (1978) as occurring in Arizona. *P. albiflora* is endemic to southeastern Arizona (NatureServe 2019).

DESCRIPTION: Plants perennial, mostly herbaceous. Basal leaves digitate or nearly so, the rachis, if any very short. Leaves not white-tomentose (dense, soft, wooly hairiness) beneath, mostly much reduced; styles elongate, slender. Leaflets of the basal leaves 3; inflorescence viscid (sticky) but without tack-shaped hairs. Plants sparsely villous or subhirsute, often also glandular-puberulent, especially in the inflorescence. Flowers commonly showy; petals usually surpassing the sepals, pale yellow. Plants subcaulescent, strongly caespitose (mats or clumps), the flowering stems spreading or prostrate (sprawl sideways), less than 20 cm long; inflorescence few-(usually not more than 5) flowered. Receptacle sessile; calyx with bractlets. Styles terminal or nearly so. Stamens seldom fewer than ten, inserted close to the pistils, these five or more: section *Eupotentilla*.

AIDS TO IDENTIFICATION: *Potentilla albiflora* can be distinguished from *Potentilla subviscosa*, in that its leaflets of the basal leaves are three (vs. 5, occasionally 7), and its inflorescence lacks tack-shaped hairs, whereas *Potentilla subviscosa* usually has numerous tack-shaped, glandular hairs. *Potentilla subviscosa* is also more widespread than *Potentilla albiflora*; spreading into New Mexico (Kearney et al. 1960).

ILLUSTRATIONS:

Photo and herbarium mounts: <http://swbiodiversity.org/seinet/taxa/index.php?tid=3033>.

Photo: https://calphotos.berkeley.edu/cgi/img_query?enlarge=0000+0000+1211+0166.

Photo: www.plantsystematics.org/imgs/bboyle/na/Rosaceae_Potentilla_albiflora_28291.html.

TOTAL RANGE: Endemic to southeastern Arizona.

RANGE WITHIN ARIZONA: Santa Catalina and Rincon Mountains (Pima County), Pinaleno Mountains (Graham County), and Huachuca Mountains (Cochise County).

Ertter (2007) reports another locality along the Mogollon Rim in Greenlee County: "Arizona: Greenlee County: Cienega Camp on Hwy 666, Blue Range, Apache National Forest, 20 mi SW of Alpine, mesic headwaters of the Blue River in mixed coniferous forest, elevation about 2600 m, 17 July 1964, M. Baad 657 (MICH, WTU)."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herbaceous plant. A tuft-forming perennial herb with prostrate flowering stems, 2 dm long or less, bearing white flowers.

PHENOLOGY: Blooms May to August.

BIOLOGY:

HABITAT: Rocky slopes and in open coniferous forests and pine-oak woodlands; also open meadows and other open areas, along roadsides. One population was found in a canyon bottom along a streambed.

ELEVATION: Actual collections records in Arizona range from 6100 – 10280 feet (1860-3130 m).

EXPOSURE: Based on notes in collection records, seems to be either found in open or northern facing settings. In Saguaro National Park (Rincon Mountains), Dave Beckman noted that it "seems to be quite abundant on the north-facing side of Mica Mountain, particularly in good drainages. I don't think I've seen it anywhere without north aspect."

SUBSTRATE: Not generally specified, but in one collection near Carr Peak in the Huachuca Mountains it was found in areas of bare limestone near the summit, and another collection in the Pinaleno Mountains noted "humus-loam."

PLANT COMMUNITY: Mixed Conifer Forest and Pine – Oak Woodland. Some of the other associated species noted in collections records include: *Robinia neomexicana*, *Holodiscus dumosus*, *Heuchera sanguinea*, *Oxalis alpina*, *Scrophularia parviflora*, *Rubus neomexicanus*, *Thalictrum fendleri*, *Picea engelmannii*, *Pseudotsuga menziesii*, *Pinus strobiformis*, *Abies lasiocarpa*, *Veratrum californicum*, *Mertensia franciscana*, *Agrostis*

scabra, *Deschampsia cespitosa*, *Pinus ponderosa*, *Carex occidentalis*, *Hymenoxys hoopesii*, *Muhlenbergia straminea*, *Senecio wootonii*, and *Festuca sp.*

POPULATION TRENDS: Unknown. There are 13 known occurrences of this Arizona endemic species. Several of these have several source features. NatureServe (2019) considers the species to be imperiled. Although *P. albiflora* does not have a wide distribution (only four of the Sky Island mountain ranges in southeast Arizona, and the more disjunct collection at the headwaters of the Blue River in Greenlee County), the majority of collection records note that the species is locally common. One collection record in the Pinaleno Mountains (the type locality) has been observed and/or collected for 60 years, which seems to suggest that the population trend might be stable.

SPECIES PROTECTION AND CONSERVATION

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

MANAGEMENT FACTORS: A draft environmental impact assessment by the Coronado National Forest (1988) noted that threats that may affect the species include recreational activities, forest management, fire, and grazing. These were considered to be low threats. Some of the *Potentilla albiflora* habitat in the Pinaleno Mountains was within an area where grazing was allowed.

PROTECTIVE MEASURES TAKEN: *P. albiflora* is listed as a Sensitive species by the USDA Forest Service. This requires that the species receive consideration in forest management plans, which offers some level of protection. Eleven of the 12 occurrences are on Forest Service land holdings. The twelve is within Saguaro National Park.

SUGGESTED PROJECTS: Period monitoring of selected known locations is recommended; surveys for other populations in the Sky Island mountain ranges is also recommended.

LAND MANAGEMENT/OWNERSHIP: USDA Coronado and Apache-Sitgreaves National Forests, and USDI Saguaro National Park (Rincon Mountains).

SOURCES OF FURTHER INFORMATION

LITERATURE CITATIONS:

- Ertter, Barbara. 2007. Lectotypifications and new taxa in *Potentilla* Sect. *Subviscosae* (Rosaceae) in Arizona. Jour. Bot. Res. Inst. Texas 1(1): 47-57.
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- Lehr, J.H. 1978. A catalogue of the Flora of Arizona. Desert Botanical Gardens, Phoenix, Arizona. p.68-69.
- NatureServe. 2019. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: September 6, 2019).
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- USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
- USDA, Forest Service Region 3. 2013. Regional Forester's Sensitive Species List.
- U.S. Forest Service. 2008. Draft Environmental Impact Statement for New Special-Use Permits for Recreation Residences on the Safford Ranger District, Coronado National Forest, Graham County, Arizona.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

Barbara Ertter, University and Jepson Herbaria, Berkeley, California.

ADDITIONAL INFORMATION: “The petals were described by Williams as white, but they are pale yellow when fresh” (Kearney et al 1960). Some species within *Potentilla* are grazed by sheep (Kearney et al. 1960).

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