

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

**Plant Abstract**

**ElementCode:** PDROS1B212

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Potentilla sanguinea* Rydberg

**COMMON NAME:** Flagstaff cinquefoil, scarlet cinquefoil, Thurber's cinquefoil

**SYNONYMS:** *Potentilla thurberi* var. *sanguinea*

**FAMILY:** Rosaceae

**AUTHOR, PLACE OF PUBLICATION:** Rydberg, North American Flora 22(4): 324, 1908.  
*Potentilla thurberi* var. *sanguinea* (Rydb) Kearney and Peebles, Arizona Flora, 1951.

**TYPE LOCALITY:** USA. Arizona. Coconino County. Walnut Canyon.

**TYPE SPECIMEN:** NY Specimen ID: 436437. D.T. McDougal (331), 1898

**TAXONOMIC UNIQUENESS:** There are 22 genera in the *Rosaceae* family and 24 species of *Potentilla* found in Arizona.

**DESCRIPTION:** Perennial, with a thick woody tap-root and a very short caudex; stems 50-60 cm high, light-green, appressed-pubescent, branched above, branches erect; basal leaves pinnately 7-foliolate with closely approximate leaflets; petioles 1-1.5 dm long, with more spreading pubescence; leaflets 2-5 cm long, 1-1.5 cm wide, oblong or oblong-ob lanceolate, serrate, light-green, puberulent on both sides and slightly silky on the veins beneath; lower stem-leaves similar, but more inclined to be digitate, and with shorter petioles; uppermost ones tenate or simple; stipules large, lanceolate, 1-2 cm long; hypanthium silky and puberulent; bractlets linear-lanceolate, about 5 mm long, acute; sepals narrowly lanceolate, acuminate, about 7 mm long; petals red-orange, exceeding the sepals, obovate; stamens about 25.

**AIDS TO IDENTIFICATION:** Distinguished from other varieties of *P. thurberi* in that the lower pair of leaflets is often offset by a millimeter or two from the other leaflets. Petals are red-orange distally, darker toward center. Leaflets are green and only sparsely hairy on both sides, with the teeth often confined to the upper half of the leaflet, but some are toothed from the apex to the base. Many leaflets of *P. sanguinea* are toothed only in the distal half of the leaf, while *P. thurberi* is always toothed proximally as well. Some *P. thurberi* specimens appear to be more hirsute on the ventral side with hairs primarily on the veins, but others are similar to *P. sanguinea* specimens.

**ILLUSTRATIONS:** Color photo of holotype and isotype (NY 436437 in NYBG at <http://sweetgum.nybg.org/common/imagedisplay.php?irn=33045>)  
Color photo of isotype (Smithsonian NMNH Barcode 00095580)  
Color photo Mark Daniels, Northern Arizona University, Ecological Restoration Institute

**TOTAL RANGE:** Coconino County, Arizona.

**RANGE WITHIN ARIZONA:** Lake Mary Rd. area in southern Flagstaff east to Walnut Canyon, south to Bar M drainage and west to Oak Creek Canyon.

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

**GROWTH FORM:** Herbaceous perennial

**PHENOLOGY:** Flowers from July – September, possibly as early as June and as late as October.

**BIOLOGY:** Very little is currently known about the biology of this species.

**HABITAT:** Natural habitat has not been determined. One population was found in sandy, non-rocky soils in a sunny area of open ponderosa pine forest. Another population was documented in full sun along an interstate highway south of Flagstaff.

**ELEVATION:** Currently known from approx. 6800-7600 ft, although it may be found at lower elevations south and east of Flagstaff.

**EXPOSURE:** Not yet known, has been found on a northern exposure at two locations.

**SUBSTRATE:** Not known. The Flagstaff population is found on cindery road fill. The population near Sandy's Canyon is on fine-textured, sandy soil.

**PLANT COMMUNITY:** Ponderosa pine forests. Associated species include: *Senecio actinella* (Flagstaff ragwort), *Festuca arizonica* (Arizona fescue), *Koeleria macrantha* (junegrass), *Muhlenbergia montana* (mountain muhly), *Vicia americana* (American vetch), *Achillea millifolium* (common yarrow), *Eriogonum racemosum* (redroot buckwheat), *Antennaria parvifolia* (smalleaf pussytoes), *Potentilla crinita* (bearded cinquefoil), *Astragalus humistratus* (groundcover milkvetch).

**POPULATION TRENDS:** Imperiled. Two populations have been recently documented (2007). One is on City of Flagstaff or Coconino County land and the other is believed to be on the Coconino National Forest.

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None  
**STATE STATUS:** Not ranked  
**OTHER STATUS:** None

**MANAGEMENT FACTORS:** Natural habitat currently unknown. Existing documented populations are subject to roadbuilding and road salting activities, social trails, automobile traffic and overcollecting. Effects of fire and grazing on this species are unknown, but plant may be susceptible to intense wildfire, fire suppression or overgrazing in its natural habitat. Seed production may be poor; thus lack of pollinators may be a factor.

### **CONSERVATION MEASURES TAKEN:**

**SUGGESTED PROJECTS:** Additional surveys should be conducted, particularly in Walnut Canyon National Monument and canyons to the east and south of Flagstaff. Plant should also be given ranking status.

**LAND MANAGEMENT/OWNERSHIP:** City of Flagstaff or Coconino County; USFS - Coconino National Forest. Possibly also NPS - Walnut Canyon National Monument. This plant appears to have entered the horticultural trade as well. Plants have been found for sale at the local native plant nursery and have been found growing in private backyards as well as at the gardens of the Flagstaff Arboretum.

## **SOURCES OF FURTHER INFORMATION**

### **REFERENCES:**

- Kearney, T.H., R.H. Peebles with collaborators. 1951. Arizona flora. Second edition with supplement by J.T. Howell, E. McClintock and collaborators. 1960. University of California Press. Berkeley, California. 774 pages.
- Rydberg, A. 1908. North American Flora: Rosaceae (pars). Volume 22, Part 4. New York Botanical Garden.
- Southwest Environmental Information Network. 2007. Phoenix, AZ. Available at: <http://seinet.asu.edu/seinet/index.jsp>. Accessed January 14, 2008.

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**ADDITIONAL INFORMATION:**

**Revised:** 2008-03-19 (CAS)

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