

ESC America's Top 10

General Information	Please Use this Column to Provide the Requested Information
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Report Questions	
Do you have photos that can be used in the report?	Yes
Will you want printed reports?	Yes
If your species is selected, will you use the opportunity to organize around the species and/or publicize its plight?	Yes
The Species & Its Status Questions	
Common name, genus & species	Robbins' cinquefoil
Conservation Status	G1
Current population size	Potentilla robbinsiana exists at two sites in three populations. The largest population contains over 14,000 plants, with 1,500-2,000 flowering individuals. A second population contained less than 30 plants and is not considered viable in the long term. A new population of plants was reintroduced and currently has over 300 plants and appears to be naturally expanding.
Has the species been delisted? If yes, when? Was the recovery on time? (Skip questions 17+18.)	Yes, Aug. 28, 2002
If no, does the species have a recovery plan?	N/A
If it does have a recovery plan, what is the projected downlisting and/or delisting date?	N/A
Background Questions (for the report profile)	
Geographic range	Potentilla robbinsiana inhabits the exposed alpine zone (1,400-1,600 meters in elevation) of the White Mountains in New Hampshire. Known from only two sites: one near Lakes of the Clouds, Mount Washington and the other 30 km west in Franconia, New Hampshire. Another population may exist at an undisclosed location in Vermont.
Habitat	Potentilla robbinsiana inhabits the exposed alpine zone (1,400-1,600 meters in elevation)

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Primary diet (if applicable)

N/A

Public Engagement Questions (Please explain why the species is interesting, why it matters, why decision-makers + the public should care.)

Interesting facts about the species

In 1819, Crawford Path, one of the oldest and most popular recreation hiking trails in the nation, was built through Monroe Flats, home to more than 95 percent of the world's Robbins' cinquefoil (*Potentilla robbinsiana*), concentrated on just one acre of land. Over the next one hundred fifty years, more than 850 specimens of this attractive rare plant were collected, some sold to collectors and herbaria. Foot traffic on the Appalachian Trail damaged Robbins' cinquefoil plants. As backpacking popularity boomed and hiker use of Crawford Path increased dramatically, Robbins' cinquefoil teetered on the brink of extinction. In response, the United States Fish and Wildlife Service (USFWS) placed Robbins' cinquefoil on the endangered species list, and issued a recovery plan.

Additional background information to complete the species profile in the report.

Potentilla robbinsiana is a long-lived, dwarf, alpine perennial. The species is endemic to the White Mountains of New Hampshire, and the main population of several thousand individuals clings to one of the most rugged areas of Mount Washington. Although each tiny plant only covers an area 2-6 cm in diameter (a 25 year-old plant is often the size of a quarter), the species has attracted a great deal of attention from botanical collectors and ecologists fascinated by their sometimes frustrating taxonomy, their unusual reproductive biology, and their extreme rarity. Though it was once precipitously close to extinction, the species appears to be bouncing back in the last two decades since it was protected from trampling by hikers and over-collection and since populations have been augmented in the field.

What are the most important messages that should be communicated about this success story?

As stated in the original listing documentation by the U. S. Fish and Wildlife Service (1996), "Robbins' cinquefoil is symbolic of the fragile alpine ecosystem that is now threatened by excessive public use. The species has aesthetic value for many people, as well as scientific and educational value in promoting our understanding of the ecosystem."

Outline and describe the **existing threats** that might impede its recovery, e.g., new threats to its habitat, etc. Include any potential political threats, e.g., a Congressional delisting before its time. Cite any substantiating scientific studies.

Over-collecting: Historically, collection by enthusiastic botanists may have reduced the p

Criteria-Specific Questions

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Detail the ecological and scientific importance of the species. Note if it is a keystone species. Describe its role in the biodiversity of its environment. Cite any substantiating scientific studies.

The populations of *Potentilla robbinsiana* in the high alpine zone are relicts of an unusual

Provide information on any additional benefits the species provides, such as economic, medicinal, or ecosystem services.

Judge's score for importance of species.

What recovery actions have been taken for the species?

To discourage damage to the plants from trampling, a scree wall surrounding the main Mount Washington population was constructed and posted with "closed to entry" signs. Two hiking trails were simultaneously relocated away from the population. Hikers were surveyed for multiple years, and educational programs developed (Taylor 1982, Weathers 1983). Plants have since been successfully transplanted back into the habitat where trails had destroyed plants, especially at the highest elevations (USFWS 2001). Staff from the White Mountain National Forest and Appalachian Mountain Club continue to provide stewardship, enforcement, and educational resources on site, and signs steering the public away from the main population of plants are updated and replaced when needed. To establish four additional self-maintaining transplant populations as called for in the 1980 U. S. Fish and Wildlife Service Recovery Plan, population monitoring protocols were developed and instituted at both populations. Features of microhabitats where the plants preferentially occurred were identified and used to locate unoccupied, potentially suitable habitat. Finally, effective propagation and transplant techniques were developed.

Two-year-old plants germinated from seed were transplanted with the soil media intact in mid-June to early July. Also, each year, a portion of the seed collected for use in transplants is placed in cold storage at the New England Wild Flower Society (Framingham, Massachusetts) to establish a seed bank for the species.

Why were those recovery actions successful?

If there are or have been multi-agency and/or public/private collaboration to protect the species, please describe.

The plant's recovery was aided by the conservation efforts of a partnership among the Fish and Wildlife Service, the U.S. Forest Service, the Appalachian Mountain Club, the White Mountain National Forest and the New England Wild Flower Society. Work by the New England Wild Flower Society was partially funded by CPC donors.

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The largest population contains over 14,000 plants (U. S. Fish and Wildlife Service 2001) with 1,500-2,000 flowering individuals (NatureServe 2001), up from a census total of approximately 9,000 plants in 1992 (Izard-Crowley 1993). This population has been successfully augmented through the efforts of the New England Wild Flower Society (NEWFS). In response to management techniques between 1973 and the present, Robbins' cinquefoil rebounded dramatically from 1,801 to 4,831 flowering plants in 2006, meeting recovery goals. The species was removed from the endangered species list in 2002. Follow up monitoring conducted in 2005 and 2006 indicates that Robbins' cinquefoil numbers and condition remain stable.

Please detail the species' recovery. What increases have there been in the size of the population and in the number of populations?

A new population of plants was reintroduced to Franconia Notch by NEWFS and currently has over 300 plants; it appears to be naturally expanding.

If there is political support for the conservation of the species, please explain.	
Are there actions that need to be taken by government officials and/or NGOs to continue the recovery?	
Are there additional actions that individuals can take to continue the species' recovery?	
Judge's score for recovery.	
Final Judge's Score	0