

5-YEAR REVIEW

Yreka phlox (*Phlox hirsuta*)

GENERAL INFORMATION:

Species: Yreka phlox, *Phlox hirsuta*

Date listed: 2/3/00

FR citation: 65 FR 5268

Classification: endangered

BACKGROUND:

Most recent status review:

Yreka phlox (*Phlox hirsuta*) 5-year review; 6/14/2019

FR Notice citation announcing this status review:

88 FR 56042-56044; Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of 47 Species in California, Nevada, and Oregon; 8/17/2023

ASSESSMENT:

Information acquired since the last status review:

This 5-Year Review was conducted by the U.S. Fish and Wildlife Service's (USFWS) Yreka Fish and Wildlife Office. Data for this review were solicited from interested parties through a Federal Register notice announcing this review on August 17, 2023. We did not receive any comments from this solicitation. We also conducted a literature search and a review of information in our files.

New information available:

Protection of Populations and Land Management

In February 2023, through a Cooperative Endangered Species Conservation Fund, Recovery Land Acquisition grant, the California Wildlife Conservation Board conveyed 25.4 ha (62.7 ac) of occupied suitable habitat in the China Hill Occurrence and 226.36 ha (559.35 ac) of occupied suitable habitat in the Soap Creek Ridge Occurrence, to the Siskiyou Land Trust for protection of Yreka phlox in perpetuity. With these new acquisitions, just under 70 percent of the Yreka phlox's known range has been acquired for its protection and recovery.

On August 7, 2019, the Yreka Fish and Wildlife Office entered into an agreement with the Siskiyou Gardens, Parks, and Greenways Association (SGPGA) to develop and implement a management plan for the China Hill Occurrence. As part of this agreement, the City of Yreka and SGPGA installed a gate in June 2020, at the entrance of this occurrence, to discourage off-road vehicle use in Yreka phlox habitat. In December 2022, SGPGA completed the cooperative

agreement and submitted the August 31, 2022, Management Plan for the Juniper Drive Natural Area, which encompasses all of China Hill.

In August 2020, the Yreka Fish and Wildlife Office entered into an agreement with the Siskiyou Land Trust to explore options with landowners for conserving Yreka phlox habitat at the Greenhorn Creek occurrence. This work is ongoing.

Research

In 2023, Cohen and Griffen published an article in *Conservation Genetics* (2023) 24:137–152, entitled "Conservation genetics of *Phlox hirsuta*, a serpentine endemic," based on research funded by a 2015 Cooperative Endangered Species Conservation Fund (CESCF) grant. The article contributes essential information to future efforts to accession seeds and future reintroduction considerations, if they are ever needed.

As part of the 2015 CESCF grant research, Service staff collected leaves from putative hybrid *P. hirsuta* x *P. speciosa* and *P. speciosa* plants. Results of this research were presented at the 2019 Botanical Society of America Conference: Cohen *et al.* (2019), "Population structure and migration of *Phlox hirsuta* (Polemoniaceae), a threatened serpentine species." At the same conference, Horner *et al.* (2019), presented a poster entitled: "Population dynamics of *Phlox hirsuta*, a rare serpentine endemic," which included research results on seedling germination and survival. The final report for this grant was submitted to CDFW on January 22, 2020.

Seed Storage Plan

On May 23, 2019, Rae Selling Berry Seed Bank and Conservation Program was awarded a Recovery Challenge grant to develop a plan for seed storage. On March 16, 2021, the seed storage plan entitled "Seed Collections Guidelines for Yreka Phlox (*Phlox hirsuta*)" was completed.

Non-native Invasive Weed Treatment

Yreka Fish and Wildlife Office has been funding cooperative agreements with the Siskiyou County Department of Agriculture (County) to remove non-native invasive weeds around four of the five Yreka phlox occurrences since 2003. To facilitate this work, Service staff manually remove weeds from within the populations and around populations, so that the County can apply herbicides outside of a buffer area, without affecting Yreka phlox plants.

Summary

Since the 2019, 5-Year Review was completed, significant progress has been made to understand, recover, and conserve Yreka phlox. However, because the recovery criteria for both downlisting and delisting are not yet met and habitat destruction or alteration and invasive non-native invasive weeds remain a current and ongoing threat, the listing status is unchanged and Yreka phlox remains an endangered species. With our partners, we continue to pursue protections for Yreka phlox and ameliorate threats (see RECOMMENDATIONS FOR FUTURE

ACTIONS below). We expect, with continued effort, delisting of Yreka phlox is possible in the near future.

Conclusion:

After reviewing the best available scientific information, we conclude that Yreka phlox remains an endangered species. The evaluation of threats affecting the species under the factors in 4(a)(1) of the Act and analysis of the status of the species in our 2019 5-Year Review remains an accurate reflection of the species current status.

RECOMMENDATIONS FOR FUTURE ACTIONS:

Future actions will focus on securing and permanently protecting four (up to six) Yreka phlox occurrences and ameliorating ongoing threats of invasive weeds. Work has been initiated on each of the actions listed below.

- Funding is needed to purchase, or establish conservation easements on, Cracker Gulch, the northern portion of Soap Creek Ridge, and Greenhorn Creek Occurrence properties from willing sellers who have indicated their strong interest in conserving Yreka phlox habitat in perpetuity.
- Complete the cooperative agreement with the Siskiyou Land Trust to approach Greenhorn Creek property owners who might wish to establish conservation agreements or easements on several additional scattered properties where Yreka phlox occurs.
- Continue to cooperate with the City of Yreka and the County to protect populations from off-road vehicle trespass and invasive non-native weed infestation.
- Collect and accession seeds from each Yreka phlox occurrence at the Rae Selling Berry Seed Bank and California Botanic Garden.
- Consult, through section 7 of the Endangered Species Act, with the Klamath National Forest on the effects to Yreka phlox of the 2022 McKinney Fire suppression actions, especially with respect to the introduction of non-native invasive weeds on contingency fire lines.

Completion of these future actions will allow the Fish and Wildlife Service to propose that Yreka phlox can be delisted (see “Summary” above).

Lead Field Supervisor, Fish and Wildlife Service

Approve _____ Date _____

Literature cited:

Cohen, J. I., J. Anderson, D. Williams, R. Gillian, and L. Ruane. 2019. Population structure and migration of *Phlox hirsuta* (Polemoniaceae), a threatened serpentine species. Botanical Society of America 2019 Conference, Tucson, Arizona.

Cohen, J. I., and L. R. Griffen. 2023. Conservation genetics of *Phlox hirsuta*, a serpentine endemic. *Conservation Genetics* 24: 137-152.

Horner, K., M. Cribari, J. I. Cohen, and L.G. Ruane. (2019). Population dynamics of *Phlox hirsuta*, a rare serpentine endemic. Botanical Society of America, Botany 2019 Conference, Tucson, Arizona.