

Climate change threatens 771 endangered plant and lichen species

July 26 2023



The endangered species Willamette daisy (*Erigeron decumbens* var. *decumbens*). Credit: Christine Williams, Mackenzie Cowan, Sandra Miles, Sally Villegas, and West Eugene Wetlands staff.

All plants and lichens listed as endangered under the Endangered Species Act are sensitive to climate change but there are few plans in place to address this threat directly, according to a new study by Amy Casandra Wroblewski of Pennsylvania State University and colleagues, published July 26, 2023 in the open-access journal *PLOS Climate*.

Climate change is expected to have a major impact on species around the world, especially [endangered species](#), which are already rare. A majority of the organisms listed under the Endangered Species Act are plants and lichen, and yet the risk that climate change poses to [endangered plants](#) has not been systematically evaluated in over a decade.

To address this gap, Wroblewski's team adapted existing assessment tools used to examine the threat of climate change for wild animals and applied them to 771 listed [plant species](#). Specifically, they evaluated how sensitive the listed plants and lichens were to climate change, if climate change was recognized as a threat for each species and if actions were underway to address the threat.

The researchers discovered that all listed plant and lichen species are at least slightly threatened by climate change. While a majority of the documentation for these species recognized climate change as a threat, there were few actions being taken to protect the listed species.

While acknowledging the threat that climate change poses to [rare plants](#) is an important first step, direct action must be taken to ensure the

recovery of many of these species, the team concludes. As conditions continue to shift over the next century, clear and focused objectives will become even more vital for successful species recovery.

They urge that their findings be used to aid in conservation planning for endangered plants and lichens, and to inform future recommendations for listing species and planning their recovery.

The authors add, "We evaluated the conservation plans for all endangered plant and lichen species listed in the Endangered Species Act and found that while climate change is recognized as a threat to the species, few conservation plans include actions to address [climate change](#) directly. Climate change will not only impact the lives of people, but also rare and endangered species and the ecosystems we interact with every day."

More information: Wroblewski A, Ernst S, Weber T, Delach A, The impact of climate change on endangered plants and lichen, *PLOS Climate* (2023). [DOI: 10.1371/journal.pclm.0000225](https://doi.org/10.1371/journal.pclm.0000225)

Provided by Public Library of Science

Citation: Climate change threatens 771 endangered plant and lichen species (2023, July 26) retrieved 28 April 2024 from <https://phys.org/news/2023-07-climate-threatens-endangered-lichen-species.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.