

Hundreds of Washington state plants, animals at risk of extinction

February 27 2023, by Vonnai Phair, The Seattle Times



Credit: Pixabay/CC0 Public Domain

Over a third of species and ecosystems in the United States are at risk of disappearing, including hundreds of plants and animals in Washington.

In a newly released report, conservation research group NatureServe analyzed data from its network of more than 1,000 scientists across the United States and Canada. The group said the report is its most comprehensive yet, synthesizing more than 50 years of biodiversity information and highlighting the urgency of biodiversity conservation.

In Washington, the study identified 201 at-risk plants, or at least 7.9% of the state's 2,556 [plant species](#). The study also found 228 out of 1,729 Washington animals, or at least 13%, are at risk.

Researchers classified at-risk species in the study into two categories: imperiled, species with a high risk of extinction; and vulnerable, species at the risk of becoming imperiled without intervention.

The analysis found four vulnerable ecosystems in Washington:

- East Cascades Moist-Mesic Grand Fir—Douglas-fir Forest, a forest in the eastern Cascades of Washington and Oregon;
- Intermountain Semi-Desert Grassland, a widespread grassland in the intermountain Western U.S. and Columbia Basin;
- North-Central Pacific Western Hemlock—Sitka Spruce Rainforest, tall evergreen conifer forests on and near the Pacific Coast and from central British Columbia to Northern California;
- Southern Vancouverian Dry Douglas-Fir—Madrone Woodland, dry, mixed broadleaf-conifer forests in lowland areas of the Puget Sound and as far south as Northern California.

Jerry Franklin, professor emeritus in the School of Environmental and Forest Sciences at the University of Washington, said the semi-desert grassland is especially at risk because so much has been converted to irrigation agriculture.

What is left of Washington's semi-desert grassland ecosystems, Franklin

said, "has been subject to so much burning. In terms of really having a lot of intact, larger blocks of that kind of habitat, we're running low."

Across the country, the study found everything from iconic American species like the red wolf and Venus flytrap to vital pollinators and [old-growth forests](#) in decline: 40% of animals and 34% of plants in the U.S. are at risk of extinction.

"There's a tendency for people to think that biodiversity is like frosting on the cake," Franklin said, with "pretty birds and butterflies and pretty plants with nice flowers."

But in reality, the diversity of these organisms is what takes "the physical attributes of the environment—the water, the sunlight, the nutrients—and create the ecosystems that we live in and depend upon," he said.

Researchers found 41% of U.S. ecosystems are at risk of no longer sustaining life.

"Biodiversity is what provides us with a living environment and particularly green plants, which are the entire source of the energetic basis for all of life," Franklin said, "so people need to stop thinking about diversity as something that is not fundamental. Diversity is necessary in order to make an ecosystem work."

There are many threats against plants, animals and ecosystems, including habitat degradation and land conversion, invasive species, damming and polluting of rivers and climate change.

The highest percentages of plants, animals and ecosystems at risk are in California, Texas and the Southeastern United States, according to the study, but species throughout the country face varying types and levels

of threats.

Across the country, the study found 10,914 animal species at risk of extinction, with [freshwater species](#) like amphibians, snails, mussels, crayfish and many aquatic insects facing the highest risk of extinction.

A number of amphibians and mussels in the Pacific Northwest "unnoticed by most" are at a particular risk to extinction, said Julian Olden, a professor in the College of the Environment at the UW, "but are critically important to the health and culture of Pacific Northwest rivers."

"The Western ridged mussel is one such species, battling for existence in rivers subject to pollution, warming climates and [invasive species](#)," Olden said.

Warming climates have also caused diminishing winter snow and drying habitats for the Cascades frog, found mainly in remote wetland ponds of the Cascade Range and Olympic Mountains.

"The prospects of changing climate and infectious disease are so dire that some experts question whether this species will see the next century," Olden said.

But it's not just freshwater animals at risk.

The study found more than 770 species of birds are at risk nationwide, as well as nearly 900 types of fish. Insects like butterflies, bees and dragonflies are also highly imperiled, with 37% of U.S. bee species facing extinction. Some 440 mammals are also at risk of going extinct.

In Washington, the northern spotted owl is particularly at risk, noted Franklin, who is one of the world's premier authorities on old-growth

forest ecosystems.

"Without some kind of active management to reduce the barred owl populations in at least a part of the range of the northern spotted owl, that subspecies is definitely going to go extinct. I don't think there's any question about it," Franklin said.

Among plants, 16,671 species across the country are at risk of extinction, the study found.

Nearly half of all cacti species are at risk of extinction, making them the most-jeopardized plant group. Around 30% of orchids and ferns are at risk, as well as over 1,000 types of trees. Almost 20% of the grass species that form the country's great prairies and marshes are at risk of vanishing forever, the study found.

As for ecosystems, the report found 41% across the country at risk of extinction, with America's expansive grasslands among the most threatened.

Temperate forests, boreal forests and woodlands have also experienced multiple pressures, leading to an at-risk status for 40% of the 107 types of native U.S. forests.

Tropical ecosystems are all also under substantial threat, the report found. Tropical ecosystems are fewer in number and account for a smaller portion of U.S. ecosystems.

The report did not analyze freshwater lakes and streams, caves or coastal marine ecosystems.

Most at-risk species and [ecosystems](#) are found outside of [conservation areas](#), so they are insufficiently protected to prevent further decline, the

study concluded.

The conservation of biodiversity must be incorporated "into the vast majority of the landscape we occupy," not just reserves, Franklin said.

"People think you can conserve biodiversity with just some reserves, but then the implication is you don't have to worry about it in our farmlands, in our rangelands, in our forests otherwise, and that's absolutely not the case," he said.

In 2018, only 12% of the country was protected as a wildlife refuge, wilderness area, national park or other conservation management area, according to the United States Geological Survey's Protected Areas Database of the United States. A significant portion of unprotected land area—42% in the contiguous United States—has already been converted to non-native landscapes through development and other land conversion.

But despite the grim outlook on at-risk biodiversity, Olden said, "there remains flicker hope for staving off extinction for many species, and there have been many bright spots of conservation success in the past."

Forest management in Washington, for example, has embraced ecology-based approaches that help sustain biological diversity, Franklin said.

"We see, for example, Washington DNR (Department of Natural Resources) doing things very differently than they did 25 years ago, leaving trees, reserving older forests," he said.

Federal agencies have also altered their approaches, moving away from clear-cutting and plantations of Douglas fir "because it's better ecologically, but also because it's going to give us forests that are more resistant and resilient to [climate change](#) and to fire," Franklin added.

Forest management in Eastern Washington and eastern Oregon is trying to restore "functionality and sustainable conditions to dry forests that historically are subject to frequent fire," Franklin said.

These plants, animals and "the complex relationships among them are absolutely critical to the functioning of life on this planet, to our existence," he said.

2023 The Seattle Times

Distributed by Tribune Content Agency, LLC.

Citation: Hundreds of Washington state plants, animals at risk of extinction (2023, February 27) retrieved 23 June 2024 from <https://phys.org/news/2023-02-hundreds-washington-state-animals-extinction.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.