

**Northwest Scientific Association meeting
March 28, 2018**

Plenary session

Buying Time—Adapting to Climate Change in the Northwest

This session will focus on progress being made to reduce potential negative effects of climate change on natural resources in northwestern North America, and transition ecosystems to a warmer climate with higher disturbance frequency. Significant progress has been made in assessing the effects of climate change, and implementation of climate-informed management and planning is now moving forward. Recent examples of successful on-the-ground adaptation demonstrate that the organizational capacity to respond to climate change is increasing, which provides optimism that we can retain functionality in aquatic and terrestrial ecosystems.

830 (45 min + 15 min Q&A)

Keynote — Function over form: Sustainability and natural resources in a warmer world
Dave Peterson, U.S. Forest Service, Pacific Northwest Research Station

930 (25 min + 5 min Q&A)

Preparing our infrastructure for a new hydrologic cycle
Ronda Strauch, University of Washington, Department of Civil and Environmental Engineering

1000

Break

1030 (25 min + 5 min Q&A)

Restoration and refugia for salmonids in a warmer world
Dan Isaak, U.S. Forest Service, Rocky Mountain Research Station

1100 (25 min + 5 min Q&A)

Keeping water in the mountains: Beavers to the rescue
Michael Pollock, NOAA Northwest Fisheries Science Center

1130 (30 min)

Panel discussion with audience

2018 joint conference of the

NORTHWEST SCIENTIFIC ASSOCIATION & NORTHWEST LICHENOLOGISTS

Coping with Change Through Innovation: New Approaches, Tools, & Collaborations

The Evergreen State College, Olympia, Washington - March 27-30, 2018

(dependent upon submitted & invited abstracts for oral presentations)

Changes in the Top Predators of the Salish Sea

The occurrence and distribution of some marine mammals, especially cetaceans, are recently and dramatically changing in the Salish Sea. Harbor porpoises have returned to a part of their Puget Sound historic range, and are now seen south of Admiralty Inlet in significant numbers. Wiped out by whaling operations in the early 20th century, humpback whales are now increasing with some staying through the winter. Sightings and strandings of other typically more southern species like common dolphins, bottlenose dolphins, and Brydes whales are being documented more frequently. This session presents on recent findings and ends with a discussion on how this all inter-relates.

Organizer: John Calambokidis, calambokidis@cascadiaresearch.org

Climate Change Adaptation in Streams

This session explores examples of climate change adaptation for aquatic habitat and infrastructure management in the Pacific Northwest and beyond. Presentations will highlight recent vulnerability assessments, analyses for management prioritization, and on-the-ground climate change adaptation actions.

Organizer: Jessica Halofsky, jhalo@uw.edu

Ecoregional Land Management in Response to Changing Climate

Landscape Conservation Cooperatives (LCC) are a means to meet the trans-jurisdictional effects of climate change with a trans-jurisdictional response, including ecologically-organized information sharing, planning, and management actions. LCCs are eco-regionally based and emphasize the importance of Tribal resource management issues and the value of traditional ecological knowledge. This session highlights a variety of successful projects undertaken by LCCs within northwestern North America that exemplify all these elements.

Organizer: Andrea Woodward, awoodward@usgs.gov

Native Food Plants of the Northwest: Ecology, Culture, & Management in a Changing World

Huckleberries and other native Pacific Northwest food plants are important components of social history and traditional tribal diets. Many of these plants are important food sources for wildlife and pollinators. This session focuses on the ecological and cultural importance of these plant foods, addresses how some species are responding to climate and land-use changes, and will discuss possible management strategies for the future.

Organizer: Janet Prev y, jprevey@fs.fed.us

Lichenology & Bryology in the Pacific Northwest

The 2018 Northwest Lichenologists' special session includes research talks on lichen and bryophyte ecology, floristic studies, lichen evolution, and systematics. Our special guest speaker, Dr. Toby Spribille, from the University of Alberta, will share his research on new advances in our understanding of the lichen symbiosis. We also welcome beginner and advanced lichenologists to share their research findings at the poster session and oral presentations, and we especially encourage presentations that include innovative tools and ideas for measuring lichens responses to environmental change. Organizer: Lalita Calabria, calabril@evergreen.edu

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New Tools for Science in the 21st Century Northwest

Come see demonstrations of new field science technology, including demonstrations of LiDAR technology, drones, plant science, root cameras, and high-throughput phenotyping technology. A mix of presenters representing vendors, non-government organizations (NGOs), and academic labs will demonstrate their specialized, new cutting-edge technology. This is an interactive session so come prepared to ask questions about these tools and view activities.

Organizer: Dylan Fischer, fisher.nwscience@gmail.com

Applications in R programming for Ecology and Natural Resources

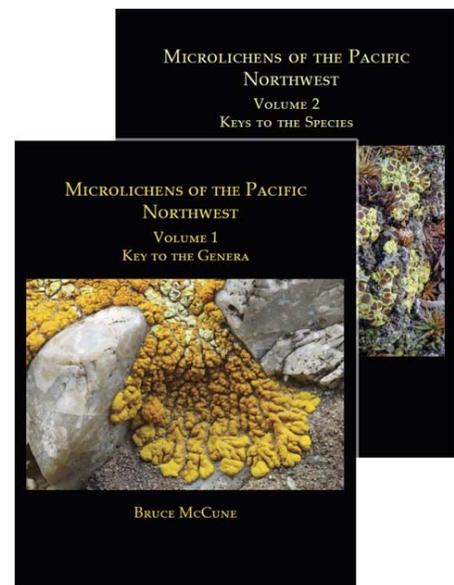
R statistical software is a free tool that is widely-used for research in ecology, natural resources, and other scientific fields. Through guided introductions we'll explore topics in data presentation and tools for research and publication using R. This workshop is for participants that have previously used R for analyses and can import data and install packages, but are looking to expand the use of R in their work.

Organizer: Matt Brousil, mbrousil@gmail.com

**Crustose Lichens on Coniferous Bark in the Pacific Northwest
& mini-foray** *presented by Northwest Lichenologists*

The 2018 NW Lichenologists lichen identification workshop will focus on PNW crust lichens of conifer bark featuring Bruce McCune's recently published keys "*Microlichens of the Pacific Northwest (Volume 1 & 2)*". A limited number of copies will be available for sale during the workshop. Attendees are encouraged to purchase a copy beforehand at:
<https://www.wildblueberrymedia.net/publications>.

Mini-Foray: Participants will have the opportunity to attend a mini-foray exploring lichen diversity of the forests and beaches of Evergreen's 1,000-acre campus on the first day of the conference (check the official schedules or details). Bring your puzzles from conifer bark or collect some on our field trips near Evergreen and bring them to the lichen ID workshop!



See NWSA conference program details for meeting time & place!

<https://www.northwestscience.org>