

2019 Washington Botanical Symposium

Wednesday, March 6, 2018, 9am-4pm

Reception to follow, 4-6pm

NHS Hall, Center for Urban Horticulture, 3501 NE 41st St., Seattle, WA USA 98105

Co-hosted by University of Washington Botanic Gardens and
the University of Washington Herbarium at the Burke Museum

FULL AGENDA

Opening Session

9:00 Welcome and Introductory Remarks

Wendy Gibble, Associate Director, University of Washington Botanic Gardens

9:15 **Taxonomic insights from a comprehensive review of *Antennaria* in British Columbia**

Dr. Jamie D. Fenneman, Botany Department, University of British Columbia

Dr. Fenneman reviewed over 1700 herbarium specimens of *Antennaria* from British Columbia and elsewhere in the Pacific Northwest to assess the applicability of existing taxonomic systems to the genus in British Columbia. In comparison to the most widely adopted taxonomic scheme for this genus, as represented by the Flora of North America treatment, a number of changes to the circumscription and diagnosis of species in the province are proposed, including the recognition of two new aggregate species (*A. pulvinata*, *A. pallida*) and the removal of three taxa (*A. alpina*, *A. densifolia*, *A. corymbosa*) from the flora of the province. Additional insights include clarification of the concepts of *A. media*, *A. rosea*, *A. microphylla*, *A. neglecta*, and *A. parvifolia*, and substantially refined species distributions stemming from reidentifications of herbarium specimens. This study suggests that such comprehensive and geographically focused revisions can significantly clarify the taxonomy of challenging groups and contribute to the understanding of these taxa well beyond the study region.

9:45 **The Moss Flora of Washington**

Dr. Judith Harpel, Curator of Bryophytes, University of British Columbia

Washington represents a wide variety of habitats, from the Hoh Rain Forest to the sagebrush steppe on the eastern side of the Cascades. This provides for a unique and broad distribution of substrates for bryophytes to colonize. This talk will cover some of the more interesting moss species that occur in Washington.

10:15 BREAK

Mid-morning Session

10:45 **Aquatic plants in Washington Lakes; adaptations to life in the water and their influence on lake ecology**

Jenifer Parsons, Washington Department of Ecology, Natural Resource Scientist

Aquatic plants face unique challenges to survive and thrive, especially those that spend their entire life cycle submerged. The result is some fascinating adaptations to grow and reproduce in their watery world. This also means they both influence and are influenced by the habitat and water quality conditions in their environment. Highlights of these adaptations and influences will be given using both native and invasive plant species as examples.

11:15 **Recreational use effects in key Pasayten Wilderness ecosystems**

Therese Ohlson, Retired Botanist, Methow Valley Ranger District, Okanogan Wenatchee National Forest

This presentation will touch on the grazing history in the Pasayten Wilderness over the last 100 years and will take a look into the effects of various user groups on ecosystems in the Pasayten. Given this context, we will look at the resiliency of various plant communities to disturbance and touch on the future health of these ecosystems in the area.

11:45 **Novel plant communities and partnerships: using creative strategies for habitat conservation and restoration in western Washington prairies**

Sarah Hamman, Ph.D., Restoration Ecologist, Center for Natural Lands Management

Traditional approaches to prairie and oak woodland conservation and restoration have typically focused funding and efforts on protected preserves that are managed exclusively for rare species habitat. While this can be extremely beneficial for rare species, it often excludes important partners and land management approaches. New partnerships with ranchers and Native American Tribes in western Washington provide opportunities for enhanced reciprocal benefits for both nature and people. We have been working collaboratively with local ranchers to implement sustainable grazing practices that support a mix of both native and forage species on private working lands. This approach increases the value of working lands in landscape-scale prairie conservation, while also supporting the economic needs of the ranching community. Additionally, we have initiated transdisciplinary partnerships between Tribes, federal agencies, universities and non-profits to share and honor Indigenous knowledge and practices for ecological and cultural conservation of camas prairies. We are working to increase access to camas harvesting using Indigenous harvesting methods and evaluating effects of this practice on the prairie ecological community. By expanding the conservation portfolio and sharing knowledge across real and perceived barriers, we can increase opportunities for restoration of both ecological and cultural communities in PNW prairies.

12:15 LUNCH

Afternoon Session

1:15 **Palouse Prairie: Classification and conservation of a disappearing ecosystem**

Tynan Ramm-Granberg, Vegetation Ecologist, Washington Dept. of Natural Resources, Natural Heritage Program

Palouse prairie was once an extensive grassland ecosystem blanketing the loess hills of southeastern Washington, northeastern Oregon, and northwestern Idaho. Mechanized agriculture has replaced the dense native bunchgrass and forb cover of this system with dryland crops that thrive in the rich, deep soils (soil depths exceed 100 feet in many areas). Without the need for large-scale irrigation projects, most conversion occurred by as early as 1890. Palouse prairie is now considered one of the most endangered ecosystems in the United States. Modern vegetation classification of the Palouse has been based on historical monographs and data from the small patches of prairie that remain — mostly on isolated, steep, and/or rocky sites. These fragments represent exceedingly rare plant associations and provide habitat for endangered, threatened, and otherwise rare species. However, conservation of the remaining “postage stamps” is challenging, with diverse threats ranging from exotic plant invasion to herbicide drift to a lack of connectivity.

1:45 **Plants and animals – tools and tricks of the pollination trade**

John Fleckenstein, Washington Natural Heritage Program, Retired

Plant pollination is accomplished by a wide range of processes, including many animal species. Among the plants that are animal pollinated, some are extremely specialized, relying on very few or even a single animal species. Others are generalists, pollinated by a wide range of animals. Equally, some animal species are generalists while others are highly specific. Geographically, pollinator communities can be extremely rich. Approximately 1000 species of bees (Apoidea) are known from the Columbia Basin. While bees are the major insect group responsible for pollination, flies (Diptera), beetles (Coleoptera) and others are important in various habitats and with various plant species. These complexities can make study of pollinator communities slow and difficult. Tools ranging from high tech to simple are useful and in many cases, any information gathered is an improvement over what was previously known. I will give a general report on pollination mechanisms and report more specifically on a survey of pollinators of Federally listed plant species in Washington.

2:15 BREAK

Closing Session

2:45 **Extending the table: Assessing and restoring Women's Foods**

Cheryl Shippentower, Plant Ecologist, Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources

The Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Department of Natural Resources has organized its functions and responsibilities through a focus on traditionally gathered resources identified by the Tribal community as "First Foods." CTUIR has adopted a mission based on First Foods ritualistically served at tribal meals. This framework for natural resource management seeks to reflect the unique tribal values of CTUIR. The physical and temporal organization of First Foods manifested in the serving order is also observed in the active physical and ecological processes occurring on the landscapes. CTUIR will present an example of implementing First Foods mission, specifically the assessment and restoration of culturally important plant resources, "Women's Foods."

3:15 **Molecular systematics: a panacea? What molecular tools can and can't tell us about plant diversity**

Richard G. Olmstead, Professor of Biology, University of Washington; Herbarium Curator, Burke Museum

Molecular data have transformed the way we think about evolutionary relationships in the last 30 years. While this has resulted in tremendous advances in our understanding of plant systematics, there are still fundamental questions that prove difficult even with molecular data. Among them are "What is a species?" Where do we draw the lines between groups for the purposes of classification? What do we do if there is conflict among different sources of data?

3:45 **Updates to the Flora of Washington**

David Giblin, Collections Manager, University of Washington Herbarium, Burke Museum

Each year new information is generated that impacts our understanding of Washington's flora. Sources of this information include botanists reporting new native and non-native taxa for the state, the publication of taxonomic studies, and ongoing updates to nomenclature. In this presentation, Dr. Giblin will highlight some of the notable changes over the past year and summarize various quantitative elements of Washington's flora

4:00 – 6:00 Reception in Merrill Commons