

WEBINAR #1: TUESDAY, JUNE 20, 8:00am to NOON

8:00 to 9:45am

RARE WETLAND PLANTS AND VEGETATION TYPES OF THE COLUMBIA RIVER DRAINAGE: DON'T THROW THE BABY OUT WITH THE BATH WATER

Dr. Walter Fertig, PhD

Collections Manager, Marion Ownbey Herbarium, Washington State University, Pullman, WA

Several dozen rare plant species and vegetation types are found along the Columbia River and its tributaries in Washington. Many of these elements have decreased significantly in the past century due to changes in water management (from construction of dams and reservoirs), conversion of habitat for human uses, and competition from invasive plant species. Examples of these species and vegetation types will be discussed, as well as strategies for incorporating their needs into restoration planning. Potentially, habitat restoration offers great promise for improving the habitat quality and prospects for rare species and communities, provided their needs are addressed during project planning and implementation.

9:45 to 10:00am: BREAK

10:00am to Noon

GRASSES AS INVASIVE SPECIES

Clayton Antieau, Ph.C., City of Seattle, WA

Grasses are among the World's worst invasive plant species and annually result in millions of dollars of economic damage and severe ecological impact. What is it about grasses that makes them so potentially noxious? This presentation illustrates grasses' nearly perfect body plan, anatomy, and physiology for achieving success as invasive species. Clay will share information about managing these challenging weeds, including physical, mechanical, chemical, and integrated strategies.



WEBINAR #2: THURSDAY, JUNE 22, 8:00am to NOON

8:00 to 9:45am

SCIENCE-BASED STRATEGIES FOR USING WOOD CHIPS

Clayton Antieau, Ph.C., City of Seattle, WA

Wood chips have been commonly used as a mulch for many years. However, this use is based on misconceptions and a narrow understanding of the function of wood in and on soil. A more strategic use of wood chips in ecosystem restoration and ornamental landscapes in the Northwest has potential to be importantly transformative. This presentation explores how wood chips remediate soil compaction, enhance soil nitrogen cycling and soil nutrient availability, diversify soil foodwebs, and support healthy plant growth. Diverse plant communities with healthy plants resist pests, diseases, and invasion from noxious weeds—resulting in reduced need for application of herbicides and other chemicals. Put wood chips to work!

9:45 to 10:00am: BREAK

10:00am to NOON

THE GAP BETWEEN MYCORRHIZAL SCIENCE AND RESTORATION: WHY IT MATTERS, RESEARCH FROM RIPARIAN AREAS, AND PRACTICAL TIPS

Dr. Lisa Markovchick, WildEarth Guardians and Northern Arizona University, Flagstaff, AZ

Plant material shortages are constraining restoration, while climate change is exacerbating the need for restoration and reduces natural plant recruitment. Concurrently, research reveals that mycorrhizal fungi (symbiotic with plant roots) are affected by many activities and disturbances. Study after study shows that restoring these fungi, if appropriate to plant provenance and site conditions, can significantly accelerate restoration, support crucial ecosystem services, and provide natural climate solutions (sequestering carbon) and nature-based solutions for adapting to climate change. Yet, this practice has had many challenges being translated effectively into application; so, we'll review the science and some tips.



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SPEAKER BIOGRAPHIES

CLAY ANTIEAU, Ph.C.

Clay Antieau is a horticulturist, botanist, wetland science practitioner, and restoration ecologist offering unique abilities and perspectives in restoration, environmental education, and science communication. He's a senior environmental scientist with the City of Seattle's Seattle Public Utilities and a long-time Instructor and Advisor with the University of Washington's Professional and Continuing Education Certificate Program in Wetland Science and Management. He's a Fellow, Past-President, and past Chapter Chair of the Washington Native Plant Society; and Past-President of the Northwest Chapter of the Society for Ecological Restoration.

WALTER FERTIG, Ph.D.

Dr. Fertig was formerly the rare plant botanist for the Washington Natural Heritage Program and the Wyoming Natural Diversity Database. He is presently the collections manager for the Marion Ownbey Herbarium at Washington State University. Throughout his extensive career as a botanist, Walter developed a ranking system for conservation of rare plants and has helped develop management plans for more than 100 rare plants throughout the western and southwestern U.S.

LISA MARKOVCHICK, Ph.D.

Dr. Lisa Markovchick is a post-doctoral researcher at Northern Arizona University (NAU), board member of the Society for Ecological Restoration's Southwestern US chapter, and Ecologist and Conservation Advocate for the non-profit, WildEarth Guardians. In both her research and her non-profit roles, she is developing programs that increase the integration of mycorrhizal fungi into land management and restoration. Dr. Markovchick earned a PhD in biology at NAU, studying interactions between mycorrhizal fungi (symbiotic with plant roots) and plant eco-physiology, and their implications for restoration and land management. Prior to this, Dr. Markovchick managed plant conservation and wildfire hazard reduction programs at the Department of Defense for a decade and received a M.S. from San Diego State University in plant and fire ecology. Dr. Markovchick has created, developed, and led large restoration, land management, and community-powered science projects for over 20 years. She recently led the first community-powered mycorrhizal collection that also integrated mycorrhizal sampling with ongoing monitoring programs at the Balcones Canyonlands Preserve in Austin, TX.