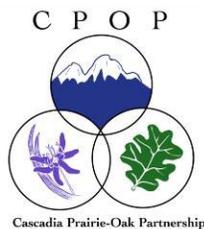
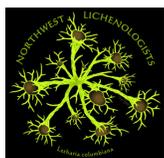


Registration Open



A joint event hosted by:
Northwest Scientific Association
82nd Annual Meeting,
Cascadia Prairie-Oak Partnership
Ecoregional Conference,
and **Northwest Lichenologists**



24-27 March 2010

[Centralia College Campus](#), WA State

Meeting Theme:

*from Mount St. Helens to Oak-Prairie Lowlands
Disturbances, Biological Legacies, and Conservation*

Join researchers, students, practitioners, and science-interested colleagues to present your latest findings and exchange ideas.

Special Symposia:

- * 30 years of research at Mount St. Helens: lessons learned, and their application around the world
- * Combining techniques for success: lessons in prairie management and restoration
- * The biological, landscape, and disturbance legacies of railroad logging: 50 to 130 years post disturbance
- * Floristic Quality Assessment: opportunities for application in the Pacific Northwest

Session topics include: tectonics and magmatism, geology, geomorphology and geologic hazards, paleontology, lichenology and bryology, prairie-oak wildlife, prescribed fire, native plant materials production, invasive species control, rare species reintroductions, climate change, ecology and management of northwest forests, and ecology and the human dimension.

A special opportunity for prairie-oak submissions: The Cascadia Prairie-Oak Partnership (CPOP) will be coordinating with NWSA to produce a special issue of the peer-reviewed journal, Northwest Science. The publication will reflect the state-of-knowledge for Willamette Valley-Puget Trough-Georgia Basin prairie and oak woodland ecology, management, and conservation. Indicate your interest in submitting your paper for publication with your abstract submission.

Conference Snapshot – *Registration form attached and see last page for detailed overview schedule*

- 24 March: Pre-meeting field trip: Regional strategies for restoring invaded prairies
Registration opens
Evening social McMenamins Olympic Club – appetizers provided
- 25 March: Plenary session – speakers: Fred Swanson & Gerould Wilhelm
Concurrent symposia and technical sessions
Evening social, poster session and banquet – speaker: Gregory John Retallack
- 26 March: Concurrent symposia and technical sessions
NWSA & CPOP business meeting lunches
- 27 March: Field trips: Lichens in the Mima Mounds; Garry oak restoration in the south Puget sound;
Comparing Washington's Willamette and Puget prairies

For more information contact: Pat Pringle, NWSA, ppringle@centralia.edu, 360-736-9391x550; Hannah Anderson, CPOP, handerson@tnc.org, 360-701-8803; Google NWSci, go to NWSci Home and click the 2010 meeting link; Visit www.southsoundprairies.org

Plenary Speakers:

Fred Swanson is a Research Geologist and ecosystem scientist with the USDA Forest Service, Pacific Northwest Research Station. For many years he has studied the interactions of physical processes, such as fire, flood, landslides, volcanic eruptions, and forestry operations, including roads, with forest and stream ecosystems. Much of this work has taken place at the H.J. Andrews Experimental Forest in the Oregon Cascades, Mount St. Helens, and elsewhere in the Pacific Northwest.

Mount St. Helens: 30 years of learning about geology, ecology, and human dimensions

The eruption of Mount St. Helens on May 18, 1980, was a globally-transformative event for volcanology, ecosystem science, and human engagement with volcanoes. Public interest in the volcano, its ever-changing landscape, and the broader societal context tell us that, even after 30 years, this is a vibrant place for learning and teaching. The 1980 and subsequent geophysical events have taught us a great deal about many poorly-known processes and deposits—the keys to understanding a volcano’s past eruptions and behavior. This set the stage for a new phase of growth in basic volcanology and its application at sites of volcanic unrest throughout the world, most notable through the US Geological Survey’s Volcano Disaster Assistance Program. Technological advances made it possible obtain a near-real-time record of earthquakes, ground deformation, and gas emissions before, during, and after eruptions. Ecological responses to the physical processes have been stunning in their diversity, richness, and vigor across a range of meadow, forest, lake, and river environments. In the human dimension, Mount St. Helens displaced, impoverished, and killed many people; but she has also inspired many – from grade school children to seasoned mountain scientists, poets, and philosophers. Continuing geological, ecological, and humanities inquiry at Mount St. Helens constantly adds to the rich legacy of knowledge from this place. Those of us who have had the good fortune to work at Mount St. Helens wish to encourage new work and new workers in this volcanic landscape; we have so much more to learn from this compelling teacher.

Gerould Wilhelm is a foremost botanist, research taxonomist, and educator. He co-authored, through years of collaboration with Floyd Swink, at the Morton Arboretum in Lisle, Illinois, the definitive flora “Plants of the Chicago Region.” Jerry is also noted for his development of the Floristic Quality Assessment (FQA) methodology, which has become widely adapted for use in 20 states and provinces. Currently, he is developing an expanded, illustrated, innovative “Flora of the Chicago Region,” to include insects and other animals that have direct relationships with the 2800 local plant species. His recent research effort on Timber Hill Savanna increases our understanding and awareness of the critical cultural relationships involved in the evolution of North American landscapes and ecosystems. He is an owner of Conservation Design Forum, the pioneer company in changing the water doctrine in the United States.

Consilience and Concinnity

Consilience means “jumping together” and is typified when all the elements of an ecosystem are working in harmony. The health of an ecosystem is directly related to consilience. If one acknowledges that plants and animals grow in habitats to which they are adapted, then one must accept the corollary: Change the habitat and the inhabitants change. All elements in an ecosystem must be in consilience if the system is to remain stable enough to endure changes at the rates at which mountains rise and fall. As an ecosystem’s elements dropout, the ability for all other elements to jump together is accordingly and progressively diminished. Consilience includes, crucially, the Holocene-aged relationship that the system has had with any sustainable human cultures that depended on the system for critical, life-sustaining resources.

Most of the World’s ecosystems have had such a relationship with human cultures. The implications for ecosystem collapse when this is abrogated are evident everywhere around us. The challenge for contemporary restoration ecologists is to discover the aboriginal relationships and help our people re-engage appropriately. Concinnity is the beautiful harmony between people and place as humans understand their role in “jumping together.”

Dr. Gerould Wilhelm will be using native prairie, woodland, and riverbank landscapes to illustrate consilience and concinnity.

For more information contact: Pat Pringle, NWSA, ppringle@centralia.edu, 360-736-9391x550; Hannah Anderson, CPOP, handerson@tnc.org, 360-701-8803; Google NWSci, go to NWSci Home and click the 2010 meeting link; Visit www.southsoundprairies.org

Join us for the Banquet at the historic Aerie Ballroom – Thursday Evening 3/25



Banquet Speaker:

Gregory Retallack is a Professor of Geological Sciences at the University of Oregon, where he has taught since 1981. His undergraduate studies at Macquarie University were followed by a PhD awarded from the University of New England, also in Australia, in 1978, and then postdoctoral studies at Indiana University from 1978 to 1981. His early career as a paleobotanist was derailed by discovery that fossil soils could reveal much about past vegetation. Most of his research has been devoted to development of the new field of paleopedology, including two textbooks "Soils of the past (1990, 2001)" and "A colour guide to paleosols (1997)". His research is dedicated to the proposition that soils have a fossil record, like other living things. Past studies have considered the role of soils in ape and human evolution in Kenya, grassland evolution in North America, dinosaur extinction in Montana, angiosperm evolution in Kansas and the Late Permian extinction in Antarctica. Current and future studies concern Devonian evolution of trees, Cambrian explosion on land, Precambrian atmospheres, and origin of life, with fieldwork in Pennsylvania, New York, Newfoundland, and Australia.

The World's Greatest Midlife Crisis in Antarctica: The Permian-Triassic Extinctions

The Permian-Triassic mass extinction is the largest known discontinuity in the history of life. New studies of superbly exposed sequences in Antarctica now demonstrate two separate but geologically abrupt mass extinctions on land. One mass extinction during the Middle Permian (260 Ma) extinguished as many species as the one that destroyed the dinosaurs at 65 Ma, and was followed by an even a bigger mass extinction during the Late Permian (253 Ma). Both Middle and Late Permian extinctions have long been apparent among marine invertebrates, and were also times of warm-wet greenhouse climatic transients, marked soil erosion, switch from high to low sinuosity and braided streams, soil stagnation in wetlands, and profound negative carbon isotope anomalies. Both mass extinctions may have resulted from catastrophic methane outbursts to the atmosphere from coal intruded by feeder dikes to flood basalts, such as the Middle Permian Emeishan Basalt and Late Permian Siberian Traps. These fatal greenhouse crises of the past are worst-case scenarios for greenhouse crises of the future.

Field Trips:

Wed 3/24: Regional Strategies for Restoring Invaded Prairies

Can degraded prairies be restored to native dominance? Which methods work best? Upland prairie restoration faces many challenges including invasive species control, limited reproduction from native species, and diverse conditions at different sites. The Nature Conservancy has partnered with the Institute for Applied Ecology to compare a variety of restoration methods such as burning, mowing, herbicide application and seeding. We will lead a field trip to three South Puget Sound sites to show trip participants first-hand the results of this 5-year regional experiment that has field sites in BC, Washington, and Oregon. (For more details of the study see our website www.appliedeco.org/conservation-research/prairie-restoration-research).

Leader: Amanda Stanley, Institute for Applied Ecology. Contact amanda@appliedeco.org for more information.

Cost: \$12 for box lunch, travel subsidized by Institute for Applied Ecology and The Nature Conservancy

Sat 3/27: Comparing Washington's Willamette and Puget Prairies

Prairies in western Washington are dominated Roemer's fescue (*Festuca idahoensis* var. *roemeri*), red fescue (*Festuca rubra*), or California oatgrass (*Danthonia californica*) with variety of forbs common to lowland grasslands in western Oregon and Washington that sometimes co-dominate or occasionally have greater total cover than the grasses. The Willamette and Puget prairies differ in a group of endemic, usually rare species more confined to northern, glacially-influenced landscapes and another species group with affinities to more southern environments. This field trip will visit remnant sites that display the transition from southern floristically aligned prairies west of Centralia to northern prairies near Olympia.

Leaders: Rex Crawford and Joe Arnett, Washington Natural Heritage ecologist and botanist, DNR. Contact Rex Crawford rex.crawford@dnr.wa.gov or Joe Arnett joseph.arnett@dnr.wa.gov for more information.

Cost: \$30 for transportation and box lunch

Sat 3/27: Garry oak restoration in the South Puget Sound

Garry oak (*Quercus garryana*) communities historically covered over 40% of the lowland South Puget Sound region and were a significant habitat throughout much of the Puget Trough lowlands. A variety of plant and animal species are dependent on, or associated with, these communities, including a number that are considered rare or endangered at the state or Pacific Northwest regional scale. Only a small fraction of the original oak habitat in western Washington remains today, and much of this is threatened by conifer encroachment and the resulting suppression of oak trees and oak regeneration. This field trip will visit several sites near Olympia where different restoration methods, including mechanized conifer removal, hand removal, and prescribed fire, have recently been applied to help restore oak woodlands.

Leaders: David Wilderman (DNR *Natural Areas Program*), Dave Hays (WDFW *Wildlife Diversity Division*), and Mason McKinley (TNC *Prairie/Oak Program Manager*).

Contact David Wilderman david.wilderman@dnr.wa.gov for more information

Cost: \$30 for transportation and box lunch

Sat 3/27: Lichens in the Mima Mounds

The Mima Mounds Natural Area Preserve consists of an open grassland with low, evenly spaced mounds, lying on the outwash plain at the terminus of the Vashon Glacier. The mounds are dominated by grasses, *Cladonia* lichens and mosses, surrounded by coniferous forest. We will be looking at the lichens of the area and explore their distribution patterns and orientation on each mound. We will consider how the geology and soil affects the cryptograms found there. Forest encroachment and invasive weeds appear to be changing the vegetation patterns rapidly. We will address the problem of what effects different management strategies could have on different groups of organisms.

Leaders: Daphne Stone, Jeanne Ponzetti, Katherine Glew. Contact Katie Glew kglew@u.washington.edu for more information. **Cost:** reimburse driver for gas. No lunch included.

For more information contact: Pat Pringle, NWSA, ppringle@centralia.edu, 360-736-9391x550; Hannah Anderson, CPOP, handerson@tnc.org, 360-701-8803; Google NWSci, go to NWSci Home and click the 2010 meeting link; Visit www.southsoundprairies.org

Meeting Location:

The meeting will be held on the Centralia College campus in the brand new science facility, just opened spring 2009, complete with state of the art "smart" classrooms.



Centralia is located in southwest Washington State halfway between Seattle, WA and Portland, OR.



Where to Stay:

There are several options for overnight accommodations near to Centralia College. The options range from the new family geared resort just a few miles north of Centralia, the Great Wolf Lodge, to the new Holiday Inn Express just a few miles south of Centralia. Or stay right in Centralia at the restored historic McMenamins Olympic Club or the local King Oscar Motel.

Holiday Inn Express

730 NW Liberty Place
Chehalis WA 98532
360-740-1800

<http://www.hiexpress.com/h/d/ex/1/en/hotel/SEACH?&sitrackingid=98622400&dp=true&siclid=1962&creative=%7Bcreative%7D>

Brand new hotel just 5 miles south on I-5: Standard Rooms \$90

Great Wolf Lodge

20500 Old Hwy 99, SW
Centralia WA 98531

<http://www.greatwolf.com/grandmound/waterpark>

Brand new, theme and water park, family oriented, could be busy as the meeting occurs during spring break. – Rooms are family suites \$189 and up.

King Oscar Motel

1049 Eckerson Rd
Centralia WA 98531

<http://www.koscar.net/motels/#centralia>

360-736-1661

Just off I-5 in Centralia:

Special rate for conference attendees: \$50 single, \$55 double

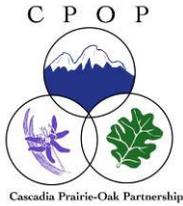
McMenamins Olympic Club

112 N Tower Ave
Centralia WA 98531
360-736-5164

<http://www.mcmenamins.com/index.php?loc=58>

Historic Inn in downtown Centralia, just 4 blocks from the College.
European-style rooms with bathroom down the hall
Standard Rooms \$50 - \$80

For more information contact: Pat Pringle, NWSA, ppringle@centralia.edu, 360-736-9391x550; Hannah Anderson, CPOP, handerson@tnc.org, 360-701-8803; Google NWSci, go to NWSci Home and click the 2010 meeting link; Visit www.southsoundprairies.org



Registration

NORTHWEST SCIENTIFIC ASSOCIATION • 2010 Annual Meeting
Joint meeting with CASCADIA PRAIRIE-OAK PARTNERSHIP
and NORTHWEST LICHENOLOGISTS

March 24-27, 2010 Centralia College – Centralia, Washington



NAME	
AFFILIATION	
MAILING ADDRESS	
CITY STATE ZIP	
PHONE	
FAX	
MOBILE	
EMAIL	

FEES

Activity	Fee On or Before 3/14/10	Fee After 3/14/10	Amount Enclosed
Meeting • Professional Rate (includes Plenary Session)	\$120	\$145	
Meeting • Student Rate ¹ (includes Plenary Session)	\$50	\$50	
Please check all that you will attend (<i>lunches included in meeting fee</i>) <input type="checkbox"/> Wednesday, March 24 th Evening Social (<i>appetizers included</i>) <input type="checkbox"/> Friday, March 26 th NWSA Business Lunch; or <input type="checkbox"/> Friday, March 26 th CPOP Business Lunch	\$0	\$0	
Banquet (<i>not included in meeting fee</i>) Vegetarian <input type="checkbox"/> Other dietary sensitivities _ _ Number of People _____	\$40 per person	\$40 per person	
FIELD TRIPS (Box lunch included in all but lichen trip; Select only one Sat trip) <input type="checkbox"/> Regional Strategies for Restoring Invaded Prairies – Wed 3/24 <input type="checkbox"/> Garry Oak Restoration in the South Puget Sound – Sat 3/27 <input type="checkbox"/> Comparing WA's Willamette and Puget Prairies - Sat 3/27 <input type="checkbox"/> Lichens in the Mima Mounds – Sat 3/27 (no lunch provided for lichen trip, add \$12 if you would like box lunch)	\$12 \$30 \$30 No Fee	\$12 \$30 \$30 No Fee	
TOTAL AMOUNT ENCLOSED			
METHODS OF PAYMENT <input type="checkbox"/> Check or Money Order payable to: <i>Northwest Scientific Association</i> <input type="checkbox"/> Or Credit card (check which): <input type="checkbox"/> VISA or <input type="checkbox"/> MASTERCARD ONLY NUMBER _____ _EXPIRATION (m/yr) _ _/_ _ PRINT YOUR NAME AS IT APPEARS ON CARD _____			

¹ Registration fee may be waived for students that volunteer to work four sequential hours during the meeting. Limited number of registration waivers available. Please contact Pat Pringle ppringle@centralia.edu to volunteer.

Mail or fax completed registration form and payment to: Billing Office, Centralia College, 600 Centralia College Blvd., Centralia WA 98531 (fax 360-330-7501) or email registration form with credit card payment to ppringle@centralia.edu (*put NWSA2010 in subject line*). **NOTE: NO REFUNDS**
For more information contact: Pat Pringle, NWSA, ppringle@centralia.edu, 360-736-9391x550; Hannah Anderson, CPOP, handerson@tnc.org, 360-701-8803; Google NWSci, go to NWSci Home and click the 2010 meeting link; Visit www.southsoundprairies.org

start	end	Wednesday, March 24, 2010			
9:00	4:00	Field Trip: Regional Strategies for Restoring Invaded Prairies <i>**Departs Centralia College at 9am. Alternate participant pick-up at Mima Mounds NAP 9:30am.</i>			
3:00	5:00	Registration Table Open: Centralia College New Science Building			
5:30	9:00	Pre-Meeting Social and Registration Open - The Olympic Club, Downtown Centralia (Complimentary Appetizers)			

start	end	Thursday, March 25, 2010			
8:00	8:20	Welcome and Introduction			
8:20	9:10	Plenary Speaker: Fred Swanson - "Geology, ecology, and human dimensions of Mount St. Helens: 30 years of learning"			
9:10	10:00	Plenary Speaker: Gerould Wilhelm - "Consilience and Concinnity"			
10:00	10:20	Break			
10:20	12:20	Symposium: Prairie Restoration Research - Combining Tools for Success	Climate Change	Management of Pacific Northwest Forests	Symposium: 30 Years of Research at Mount St. Helens - Lessons Learned, and their Applications around the World
12:00	1:30	Lunch on your own			
1:30	4:00	Symposium: Floristic Quality Assesment - Potential for Application in the Pacific Northwest	Garry Oak Ecology and Restoration	Lichenology	Symposium: 30 Years of Research at Mount St. Helens - Lessons Learned, and their Applications around the World
4:00	5:30	Poster Session - Wine and Cheese Social (complimentary beverages and appetizers)			
5:30	6:30	Break			
6:30	9:30	Banquet at The Aerie Ballroom - Speaker: Greg Retallack - "The world's greatest midlife crisis in Antarctica—The Permian-Triassic extinctions"			

start	end	Friday, March 26, 2010			
8:00	10:20	Prairies and Oak Woodlands: History and Inventory	Prairies and Oak Woodlands: Protection and Restoration	Geology / Paleontology	Lichen Workshop
10:20	10:40	Break			
10:40	12:20	Prairies and Oak Woodlands: Vertebrate Wildlife	Prairies and Oak Woodlands: Native Plant Materials Production	Pacific Northwest Ecology	Lichen Workshop
12:20	1:30	CPOP & NWSA Business Lunches - Cafeteria (complimentary lunch)			
1:30	3:50	Prairie and Oak Woodlands: Invertebrate Wildlife	Prairie Restoration: Invasive Control and Prescribed Fire	Symposium (1:30-4:30): Biological, Landscape, and Disturbance Legacies of Railroad Logging	

start	end	Saturday, March 27, 2010			
8:30	4:00	Field Trip: Comparing Washington's Willamette and Puget Prairies *Departs Centralia College, Box Lunch Included			
8:30	4:00	Field Trip: Garry Oak Restoration in the South Puget Sound *Departs Centralia College, Box Lunch Included			
8:30	2:00	Field Trip: Lichens in the Mima Mounds *Departs Centralia College, No Lunch Included			