

Nature Trails

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Arts and Science Meet in Old Growth Forests and Volcanic Blast Zones



**Fred
Swanson**
U.S. Forest Service
Geologist, Retired;
Oregon State
University Courtesy
Appointment;
Senior Fellow, Spring
Creek Project for
Ideas, Nature, and the
Written Word

Co-sponsored by McKenzie River Trust

**Friday, 20 April 2018, 7:30pm,
Room 100 Willamette Hall, UO Campus**

Fred Swanson is a retired geologist and ecosystem scientist with the US Forest Service Pacific Northwest Research Station. He holds a courtesy faculty appointment in the Department of Forest Ecosystems & Society at Oregon State University (OSU). Swanson's affiliation with the USFS began in the 1970s, while he was working as a postdoctoral fellow first at the University of Oregon and then at OSU. His interdisciplinary bent goes back over 50 years ago to a summer course at Bermuda Biological Station after his freshman college year. There he was exposed to the intersection of seawater chemistry, near-shore marine biology, and geology, and he began to see how focusing multiple disciplines on a problem can lead to a deeper understanding than might be possible with just one. Swanson's early life was in the eastern part of the country. He went to Pennsylvania State University for his undergraduate studies, finishing with a B.S. in geology. Another seminal experience during his time at Penn State came after his junior year, when he was one of a group of students who got to spend five weeks at the Princeton Field Camp, on the northern edge of the Absaroka Mountains in Montana, doing hands-on geology.

Why did he come all the way out west to the University of Oregon to do his graduate work? As a cross-country runner and miler in high school and at Penn State, Swanson tracked the success of Bowerman and his stable of milers. Between undergrad and grad school he got the chance to work on a U.S. Geological Survey project out here. The field area was in southern Oregon, from Coos Bay to Brookings, and two U of O professors were part of the project. In that way he became familiar with the U of O's Geology Department, and so came here for his Ph.D. While a graduate student he was part of a group that wrote a successful NSF proposal to do botanical and geological research in the Galapagos Islands. His contribution was on the geology side, but the entire experience further convinced him that deep understanding of ecosystems takes collaboration and interdisciplinary effort. Swanson completed his graduate study in 1972, receiving his Ph.D. in geology from the University of Oregon.

Swanson studies disturbance agents in forest ecosystems, such as fire, flood, landslides, volcanic

eruptions, and forestry operations, mainly at the H.J. Andrews Experimental Forest and Mount St. Helens. He began working at the Andrews Forest in 1972. The International Biological Program had just started there, and Swanson found himself doing what became known as forest geomorphology—the study of land-forming processes in forest landscapes and how landforms are the stage on which forest and stream ecosystems do their thing. The H. J. Andrews Experimental Forest is one of the original sites of the National Science Foundation's Long-Term Ecological Research Program beginning in 1980. Swanson has been there since the beginning and served as Principal Investigator of the Andrews LTER for ten years. He and several dozen other scientists comprised the Forest Ecosystem Management Assessment Team, commissioned in 1993 by President Clinton to lay the foundation for the Northwest Forest Plan, a landmark conservation strategy for our region. Swanson has made major contributions to his scientific fields, having authored and co-authored over 160 papers, chapters and books.

Although having been retired for a few years now, Swanson continues his scientific activities at the Andrews Forest and Mount St. Helens. Besides his effort here in the Pacific Northwest, since 2009 he has traveled to Chile ten times to observe and work on the effects of eruptions of the volcanoes Chaitén, Cordon-Caulle and Calbuco. He is the principal author of a 32-page paper entitled "Effects of volcanic and hydrologic processes on forest vegetation: Chaitén Volcano, Chile," published in *Andean Geology* in 2013.

More recently Swanson has teamed with societal disturbance agents—poets and artists. He is a Senior Fellow with the Spring Creek Project for Ideas, Nature, and the Written Word based in the School of History, Philosophy, and Religion at OSU. The

Long-Term Ecological *Reflections* program, of which he is a co-founder, brings creative writers, visual artists, and music composers to the Andrews Forest and the blast zone of Mount St. Helens to do creative inquiry at the interface of the arts and sciences. This collaboration between ecosystem science groups and the privately endowed Spring Creek Project has resulted in a large body of work, including

the books *In the Blast Zone* (2008 OSU Press) and *Forest Under Story* (2016 U. Washington Press).



In his talk to us Swanson will sprinkle comments on contemporary science at Andrews Forest and volcano ecology at Mount St. Helens and sites of eruptions of the past decade in Chile. His main emphasis, though, will be on the collaborations that have developed between the ecological science communities at Andrews Forest and Mount St. Helens, on the one hand, and creative writers, artists and composers on the other, which began in 2000. This perhaps surprising marriage has been nothing if not fecund, producing a rich body of works—books, public performances, art exhibits—that are providing fresh perspectives of these charismatic landscapes:

ancient forests, volcanoes, fast cold rivers. The collaborations have also proved to be contagious; art-science confluences are emerging with infectious enthusiasm at many other sites of long-term ecological inquiry around the US.

This will be a fine way to spend a spring evening, listening to Fred Swanson's talk, "Arts and Science Meet in Old Growth Forests and Volcanic Blast Zones," so join us at 7:30pm on Friday, 20 April, in room 100 Willamette Hall on the UO campus. Last but not least, our reputation as a source of quality cookies and other dessert things is justly deserved.

John Carter

Dances with Osoberries by August Jackson
In our temperate climate, the delineation between spring and winter is vague. The equinox is no good guide, and unstable weather patterns in the new year have a way of commingling the rapture of spring and the doldrums of winter in the space of a week. But whatever the name for the February condition, whether late-winter or early-spring, it is in most years the month that signals an abrupt change in the ecology of the valley bottom. With pendant chandeliers of white flowers and wafting marzipan scent, the eruptive osoberry blossom and the simultaneous reemergence of insect pollinators heralds the renewal of a relationship that first saw light some 160 million years ago.

The osoberry is an oddity. Generally the earliest insect-pollinated plant to bloom in our region, it is the single member of its genus, a dioecious outlier among the Rose family, and an outlier too among dioecious plants with its mid-latitude range (dioecy is commonest in the tropics). The dioecious separation of reproductive roles into male and female plants allows for a greater resource investment in each, to impressive results—a vigorous male osoberry plant can produce between five to ten thousand flowers. Female plants produce large quantities of fleshy fruits when effectively pollinated, but also suffer a much higher rate of mortality, indicating that fruit-bearing is the more resource-intensive role. In this context, the seeming overproduction of male flowers is a tacit acceptance of inefficient pollination and pollen wasting. Inherent in the risk of being the first to bloom is an unpredictability regarding the composition of the pollinating fauna. The osoberry takes what it can get.

The osoberry's precocious blooming anchors it as a keystone in the vernal invertebrate community. On a warm day during peak bloom, a veritable who's-who of flying insects can be found among the osoberries: flies from several lineages, bees of three families, wasps, moths, and predators and parasites of all,

many of which are performing pollination duties themselves. Able to fly in cooler temperatures, it is the flies that play an outsize role in pollination, with bees generally not appearing until the tail end of its bloom period. These flies range from specialist flower-visitors like hoverflies, to skilled generalists like members of the house fly family, and opportunistic nectar-indulging predators.

Into the latter category falls a large dance fly in the



genus *Empis*, which emerges when the osoberry bloom intersects with the first

hatch of large, soft-bodied aquatic insects. This cosmopolitan group of flies derives its name from the tendency of some species to gather in large aerial mating swarms that appear like a starling murmuration in miniature. With raptorial hind legs equipped for catching prey in flight, their long, curved proboscis is equally suitable for piercing insect integuments and probing flowers for nectar. It is common to find males of the species covered in light yellow osoberry pollen, perched with a prey item folded hamburger-style between their hind legs.

Despite pulling double-duty, these large-bodied Empid flies are good pollen vectors with extensive facial hairs that collect and hold pollen, and large flight ranges that increase gene flow. Unable to hunt, females of the species may be found on flowers even more frequently. The development of eggs requires a protein source. In the parasitic mosquitoes and horse flies, it is strictly the females that feed on blood, while in both instances the males are typically found on flowers. The curious role-reversal in many of the Empids makes males the selective sex, and

copulation is preceded by the presentation of a nuptial gift of the prey item needed for egg production. The aforementioned dancing swarms often consist of males showcasing their prey, but this species seems to engage in a more personal presentation, with pairs meeting and alighting on osoberry stems and leaves.

Both species, the osoberry and the Empid fly, are hyper-generalists, exhibiting a degree of plasticity

necessary in the early season. The osoberry is a cornucopia flower, attracting and benefitting from the visitation of every flower-loving insect that can muster the energy to fly. Similarly, our Empid fly is a consummate flexitarian, and can reliably be found on the next cornucopia species—tall Oregon grape—as soon as the osoberry bloom has ended. But, for a few weeks the two are inseparable; an odd couple in the purgatory between winter and spring.

Finley National Wildlife Refuge

A Photo Essay by David Stone

Named for pioneer wildlife photographer, William Finley, this refuge lies just up the road (~35 miles) from Eugene and is a special sanctuary for birds, other wildlife and people. At 5,700 acres, it was established to keep Canada geese out of surrounding grass seed fields and to provide sanctuary for the uncommon Dusky Canada goose. It has done that job very well and also supports many other forms of wildlife – raptors, ducks, songbirds, and elk, to name just a few.

For more information, go to: https://www.fws.gov/refuge/William_L_Finley/



Roosevelt Elk feed in a meadow along a refuge road.



This normally secretive American Bittern was seen fishing in the open beside a well-traveled refuge road.



Acorn Woodpeckers like the oak trees around refuge headquarters.



Follow the 1/2 mile Homer Campbell Boardwalk along Muddy Creek to the Cabell Marsh Viewing Shelter.



Killdeer are common at Finley. Watch out for their eggs, often laid on a gravel scrape in the parking areas



Bald Eagle looks for a fat goose from its perch above MacFadden Marsh.

Field Trip to HJ Andrews Experimental Forest on 21 April. We will get there at 10am. Those who want to carpool will meet at the SEHS parking lot at 8am, figure out who rides with whom, and leave at 8:30am. Those who need to drive alone should allow 90 minutes for the trip. Attendees should dress for the weather, bring a lunch and a water bottle, and perhaps binoculars and cameras. Once we have assembled, Fred Swanson and Julia Jones will talk to us briefly and then lead us on a tour.

Field Trip to Lake Abert. We have reached our maximum number of 25 so this trip is closed. Do to this outing's surprising popularity we intend to go there again soon.

Events of Interest in the Community

McKenzie River Trust

Saturday, 5 May, 10am-6pm. Wild Birds Unlimited Fundraiser for McKenzie River Trust. Do you need bird seed, quality feeders, binoculars, field guides, or maybe a birdbath? [Wild Birds Unlimited](#) (2510 Willamette St. in Eugene) is donating 50% of sales on Saturday, 5 May to McKenzie River Trust! Wild Birds Unlimited owners Dan and Barbara Gleason see the McKenzie River Trust as providing an integral piece to the puzzle that is the effort to conserve bird diversity and numbers. By protecting and restoring important habitats in this area, the Trust and its insightful partners allow for birds to find food, obtain fresh water, build nests, raise young, outwit predators (sometimes!) and thrive into the next generation."

Saturday, 12 May, 10am-4pm. McKenzie River Trust Special Land Stewards Volunteer Training. One of the McKenzie River Trust's key tools to protect land is to buy property with outstanding conservation values. With 16 owned properties—more than 2,250 acres—there is much to care for. During the training, volunteers meet in the classroom and in the field to learn how to prepare for a safe site visit, read and interpret baseline reports and property management plans, utilize technology to map observations and collect data, identify key habitat characteristics, keep records and report findings, and learn about ecosystem management from experts in the field. **Registration is required** for this training. Folks can register here: <http://www.mckenzie-river.org/events/list/special-lands-steward-volunteer-training-saturday-may-12th/> or contact Elizabeth Goward (elizabeth@mckenzie-river.org, 541-345-2799 x109). The training will be held at 120 Shelton McMurfhey Blvd, Eugene.

For other MRT events—of which there are many—go to <http://www.mckenzie-river.org/events/>

Lane County Audubon Society

Tuesday, 24 April, 7:30pm. “The work of poetry is to direct our attention, with words, to the place without them, so understanding can occur.” This month we focus on words instead of images, but what image-words! Alan Contreras, Ce Rosenow, and Anita Sullivan will read from their own work and the work of their favorite poets and talk about different forms of poetry and how they and other poets have tried to convey particular images or themes through their poems. **Contreras** has studied the birds of Lane County for more than 30 years. He is past president of the Oregon Field Ornithologists, and has written and edited several books on Oregon birds, including “Northwest Birds in Winter,” and “Birds of Lane County.” He co-edited “Birds of Oregon,” a hefty and comprehensive (752-page!) reference to the approximately five hundred bird species known to occur in the state. He has also published widely on higher education issues, and his third poetry collection, “In the Time of the Queen,” is just out. **Rosenow**, a specialist in haiku and other Asian forms, coordinated Lane Community College's

honors program for several years. Previous to that, she taught literature and writing at LCC, and she has now returned to the writing and literacy classrooms full time. Her recent collections include “North Lake,” (Mountain Gate Press), “Pacific,” (Mountain Gate Press), and “A Year Longer,” (Longhouse Publishers). **Sullivan** has an MFA in poetry, helped found Airlie Press, was an occasional commentator on National Public Radio, and has traveled widely in Greece. She has published two poetry chapbooks and a full-length collection. The most recent chapbook is “And If The Dead Do Dream,” (Uttered Chaos Press, Eugene, 2016). Later this year Shanti Arts Press in Brunswick, Maine, will publish a chapbook of her essays, “The Bird That Swallowed the Music Box.” The title essay is based on her reaction to the song of the Swainson’s Thrush. Eugene Garden Club 1645 High St., Eugene.

Saturday, 21 April. Third Saturday Bird Walk. Go to <http://www.laneaudubon.org/> for location and times.

Mt. Pisgah Arboretum

Saturday AND Sunday, 14, 15 April, 10am-3pm both days. Botany Workshop. In this two-day, thorough workshop, botanist Tobias Policha will help participants improve their identification skills and knowledge of our local flora. Topics include plant anatomy, family characteristics, and using a botanical key to aid in identification, with the focus on flowering plants. This is a hands-on class, so be prepared to go outside. Recommended text for class: Gilkey and Dennis’ Handbook of Northwestern Plants (2001 edition). Members \$50, non-members \$60. \$7 materials fee (paid to instructor). All materials included. Please bring a hand lens if you have one. To register call 541-747-3817 or go to: <http://www.mountpisgaharboretum.com/workshop-registration>

Sunday, 15 April, 8am-11am. Bird Walk. Join Joni Dawning and August Jackson for another monthly bird walk intended for people with all levels of birding experience. We’ll use vocalizations, habitat, and behavior clues for identification of our spring migrants and year-round residents. Come discover the Arboretum’s avian diversity. Please bring binoculars. Option to continue the walk until noon for those who are interested. Rain or shine. Meet at the Arboretum Visitor Center. \$5, members free.

Sunday, 22 April, 10am-12pm. Birds, Bees, and Blooms Walk. Join local ecologists Peg Boulay and Bruce Newhouse in enjoying the vibrant spring life at the Arboretum. Peg and Bruce will identify and talk about flowers and trees, birds and bees, and anything else you please! Rain or shine. Meet at the Arboretum Visitor Center. \$5, members free.

Saturday, 28 April, 10am-3pm. Native Bee ID Workshop. Oregon is home to several hundred species of native bees, including a few dozen that can be found within the Eugene-Springfield city limits. Join Arboretum Interpretation Coordinator August Jackson for an introduction to simple ways to identify some of the more common genera in our region—all without the need for a microscope! We’ll start inside with an overview of bee biology and a look at some of the more common species found in our urban areas. In the afternoon, we’ll venture outside with nets to practice catching and identifying bees in the field. All supplies provided. Meet at the Visitor Center. Members \$40, non-members \$50. Pre-registration required. To register call 541-747-3817 or go to: <http://www.mountpisgaharboretum.com/workshop-registration>

Saturday, 5 May. 10am-12pm. Ethnobotany Walk. How did indigenous residents of the Willamette Valley view the flora? What four plants at Mount Pisgah make the “top ten” for the greatest number of uses by American indigenous peoples with over a hundred uses each? What plant saved the lives of miners? Join us as we answer such questions in an easy walk exploring the lure and lore of plants at Mount Pisgah. Led by anthropologist Madronna Holden. Rain or shine. Meet at the Arboretum Visitor Center. \$5, members free.

Friends of Buford Park and Mt. Pisgah

Monday Morning Regulars. 9am-12pm. Contact volunteer@bufordpark.org for more information.

Tuesdays and Thursdays, 9am-12pm. Nursery Work. Meet and work at the Native Plant Nursery at Buford Park. Enter Buford Park from Seavey Loop Road. Turn LEFT after crossing the bridge and drive 1/4 mile to the nursery.

WREN (Willamette Resources and Educational Network)

Go to <http://wewild.blogspot.com/> for information on WREN upcoming events.

The University of Oregon’s Museum of Natural and Cultural History

New Exhibit. NAVIGATING KNOWLEDGE. From monkeys and maps to fossils and folklore, MNCH collections help University of Oregon scholars solve mysteries about our planet and our collective human experience. Glimpse into the vaults with UO faculty and student researchers and join their ongoing investigations: you’ll traverse land and sea to uncover life’s origins, voyage across the Pacific in search of the First Americans, discover how fossils can predict earthquakes, explore arts in Africa and the Americas, and more. Other exhibits: OREGON – WHERE PAST IS PRESENT; EXPLORE OREGON; and H2O TODAY. Exhibit hours: Tuesdays – Sundays 11am-5pm.

Native Plant Society of Oregon, Emerald Chapter

Saturday, 14 April. Ed Alverson of Lane County Parks leads a tour of the Lake Hills Homeowners Association Forest northwest of Veneta. This 117 acre forest has a diversity of forest habitats. Meet at 9 am at South Eugene High School.

Nearby Nature

Our summer daycamps are OPEN for registration! Go to <http://www.nearbynature.org/programs/daycamps> for all the details! Registration is online, so once you create an account, all of your child's information will be saved for future programs.

Saturday, 21 April, 9am-noon. Alton Baker Park Cleanup. This Earth Day weekend, join volunteers with SOLVE and Nearby Nature for a cleanup of Alton Baker Park and the Whilamut Natural Area. Come prepared for the weather, bring a

water bottle, and wear sturdy shoes and something you don't mind getting a little dirty. Gloves and tools provided. We will gather outside the Park Host Residence on the Waterwise Garden lawn, near the community garden and the dog park. For more information, contact Shaun at parkhost@nearbynature.org or call 541-687-9699.

Saturday, 21 April, 10am-noon. Amazon Adventure! With NPSO. Explore Amazon Park with Nearby Nature and the Emerald Chapter of the Native Plant Society of Oregon on this family-friendly wildflower wander. Play games, use magnifiers, and go on a spring scavenger hunt. Meet at the playground.

Saturday, 28 April, 10am-noon. Nature Quest: Wow Newts! Enjoy a new quest in Tugman Park! Learn about these cool critters from naturalist Tom Titus as we explore the wild side of this south Eugene park for the third year in a row. Meet at the Tugman Park picnic shelter (3666 Hilyard St., Eugene). Members free, non-members \$5/family. Pre-register: 541-687-9699 or go to <http://www.nearbynature.org/events/april-2-no-school-day-adventure-growing-up-green> and click on the dragonfly.

Saturday, 12 May, 9am-1pm. Birds Without Borders—World Bird Migration Day Celebration. Celebrate International Migratory Bird Day with bird walks plus family activities at the Learnscape. Co-sponsored by the Lane County Audubon Society. Park in the main Alton Baker Park parking lot or at the Boat Ramp and follow signs to Learnscape. \$5 suggested donation.

North American Butterfly Association, Oregon (Eugene/Springfield) Chapter

Go to <http://www.naba.org/chapters/nabaes/> for information about NABA's next event.

ENHS welcomes new members! To join, fill out the form below. Membership payments allow us to give modest honoraria to our speakers, as well as to pay for the publication and mailing of *Nature Trails*. Our web address: <http://biology.uoregon.edu/enhs>

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City _____ State & Zip _____ Phone _____
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I (we) prefer electronic copies of NT rather than paper copies. ___ Yes ___ No
If yes, email address (if different from the one above): _____

ANNUAL DUES:	Family	\$25.00
	Individual	15.00
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	Contribution	_____

<p>Annual dues for renewing members are payable in September. Memberships run from September to September. Generosity is encouraged and appreciated.</p>

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Sea Room, An Island Life in the Hebrides, by Adam Nicolson. North Point Press, 2001. Reviewed by Reid Kimmel.

Acclaimed author Adam Nicolson owns a group of small, precipitous islands given to him on his 21st birthday by his father, who purchased them when he was 21. These, we are told, are young men's islands and in four years it will be time to give them to his son, but now Nicolson wants to set down all he knows about the islands, and to share the knowledge, the beauty, and the guilt at owning a piece of earth that has been precious to so many for at least 5000 years. The Holy Islands, the Shiantis ('Shants'), lie only five miles east of the Outer Hebridean Island of Lewis. Uninhabited for over a century, they are home to one of Europe's greatest sea bird breeding colonies. All but gannets breed here. In summer, sheep graze on the two less-rugged islands, fattening fine lambs as they have for thousands of years. Nicolson sails there in his locally built boat, constructed in the traditional Viking-influenced style. Even if you are no sailor, you will feel and hear the sea as he plies the dangerous waters to reach what is the best place in his life. In sharing his islands with all of us, he remarks; "The Shiantis are rich: in the kind of island beauty ... in soils and natural fertility; in the seas around them thick with plankton, and with the layers of predatory fish and seabirds stacked four or five tiers above that." Add to this the lovely tiny flowers, the seeps of pure water, the geology, the relentless gales and soft sun. And there is history too: a Viking grave, an early Christian monk's chapel, the fighting amongst the clans, and, finally, the bloody and tragic stories of the Clearances—full of injustice and woe, inspiration for Gaelic songs and poems—which saw whole communities driven away with nothing. *Sea Room* is a love story, of the islands and the sea, and natural riches that speak to the soul.

Gulf Stream Chronicles: A Naturalist Explores Life in an Ocean River, David Lee (author) and Leo Schleicher (illustrator). University of North Carolina Press, 2015. Reviewed by Reida Kimmel.

Is it proper to describe a natural history book as delicious? Whether or not delicious is a proper descriptor for a book, that is exactly what this book is. Lee starts by defining the Gulf Stream, a warm river in the Atlantic Ocean running from approximately Florida and Cuba to northern Europe. This river has “banks,” as the edge of the Sargasso Sea that abuts the Gulf Stream is six feet higher than the waters of the Gulf Stream. Lee will tell you why, and also much about the creatures who live and travel north in the Sargassum, “a blotchy brown seaweed that teems with blotchy brown animals,” a refuge for tiny and unique species. Lee tells of the Gulf Stream’s inhabitants and he has tales of the shore as well. The warm blue Gulf Stream waters support a wondrous abundance of marine and avian life, much richer than the waters closer to the mainland. The upwelling and the warmth make it the home of choice for the many types of sea dwellers Lee describes, from flying fish and sunfish to sea turtles, jellies and seabirds of many species and lifestyles. Schleicher’s line drawing illustrations are truly beautiful. Sadly, David Lee is no longer with us, but he has given us one great book, a nourishing treasure, written with love and joy.

A good place to park for our meetings is the Physical Plant lot: turn north from Franklin onto Onyx, go about a block and you will be in the lot. After 6pm it’s open to the public.

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Schedule of Speakers and Topics for 2017-2018

20 April	Fred Swanson	Humanities, Arts, Science Collide at Andrews Forest, Mount St. Helens, and Beyond
18 May	Ron Larson	The Natural History of Lake Abert, Oregon’s Salt Lake