

# *Nature Trails*

Published by the Eugene Natural History Society

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## **Toward a Natural Forest**

**Jim Furnish**

Deputy Chief, U.S. Forest Service (retired)  
Washington D.C.

**Friday, 9 September 2016, 7:30pm,  
Room 100 Willamette Hall, UO Campus**

**PLEASE NOTE: DATE IS SECOND FRIDAY**

Before he became an Iowa kid, as he called himself in our interview, our September speaker spent time in Texas, where he was born, Venezuela, and Saudi Arabia. Thinking about what these three parts of the world have in common will give you a hint as to what the young Furnish's father was doing for a living. But his father, a geologist, tired of the oil industry and took a faculty position at the University of Iowa in time for son James to enter third grade.

Furnish got to go on field trips with his father's geology classes. It was from summers in the Black Hills of South Dakota and the Big Horn Mountains of Wyoming that Furnish's love of the American West was born. Of his father's influence Furnish says in the forward of his memoir, *Toward a Natural Forest*, "From about the age of eight, and over the course of several succeeding summers, I pretty much did whatever he did. He strived to teach me what he knew about hunting, fishing, canoeing, birding, trees, geology, and many other things. Some of it stuck, and all of it affected my heart and my attitude toward our Earth."

After his formal education netted him a degree in forestry from Iowa State University, Furnish joined the U. S. Forest Service in 1965, first as a timber surveyor in Maine, then a brief stint in the Black Hills followed by his first position as a ranger, in the Tensleep area of the Big Horn National Forest in Wyoming. In the 1960s the Forest Service was still championing aggressive harvests in national forests, following industry's practices, including clear-cutting. Along with several new members of the agency with training in such disciplines as ecology, hydrology and wildlife management, Furnish shared a growing awareness that such practices can cause long-term, sometimes permanent harm to these public lands.

From the Big Horn, Furnish accepted a forest planner assignment in the San Juan National Forest in Colorado, necessitating a move to Durango. His tenure on the San Juan spanned the years 1984-1989 and while there his philosophy continued to evolve. He writes, in *Toward a Natural Forest*, "I found myself drifting toward increasing doubt about the merits of our logging policy and practice on national forests. What did the Forest Service owe the timber industry? The general public? The agency seemed to bow and scrape to a largely ungrateful commercial interest even as the timber industry's power and influence diminished sharply. Furthermore, strong similarities existed in the agency's relationship with a

ranching industry whose livestock grazed vast areas of public lands in the West." And, "I began to understand the distinction between dollars and values. The Forest Service might not be generating revenue from the vast suite of environmental services these lands provided, as we did from logging and grazing, but environmental services flowing from forested, mountainous landscapes will always far exceed the value of logging and grazing. In fact, they are priceless. And nature provides these gifts to us humans free of charge. Stewarding public lands must respond to this essential truth or it will fail." This personal evolution mirrored in microcosm what was and had been happening nationwide. In Furnish's words, again: "By the late 1960s the Forest Service was engaged in a battle for the soul of public lands, and a decades-long, slow-motion collision with a robust and rising environmental movement."

Congress was a major player in this larger movement, passing the Wilderness Act (1964), the National Environmental Policy Act (1970), the Endangered Species Act (1973), and the National Forest Management Act (1976). Many of us remember raucous public meetings on forest plans, demonstrations against logging sales and operations, and the endless legal battles over spotted owls, marbled murrelets and salmon. Some of us may have intense memories because of personal involvement.

Furnish had visions of rising to a level from which he could effect changes, moving at least segments of the agency toward a focus on management of ecosystems and away from collusion with private interests. To that end he accepted an assignment as a forest planner in the agency's Washington, D.C. central office. In the two years he spent there, from 1989 to 1991,

support within the agency grew for redefining how national forests should be managed. During that time Furnish says, "A growing conviction welled within me. I strongly believed the Forest Service needed to manage lands with greater concern for the environment. I yearned to put into practice my growing conviction that we could do better at aligning our practices with public values. This was my turning point. Leading a national forest to pursue exemplary land stewardship now seemed desirable, attainable, and I hungered for it."

He was offered the position of deputy forest supervisor on the Siuslaw National Forest, in western Oregon, the same year Judge Dwyer's ruling stopped harvests in forests inhabited by the northern spotted



owl, in 1991. Ten months later Furnish became acting supervisor, and eighteen months later, supervisor. During his tenure on the Siuslaw, from 1991 to 1999, he oversaw a fundamental switch in priorities, from an agency that embraced clear-cutting vast swaths of public forests, including old-growth stands, to one whose primary focus was restoring the health of the entire ecosystem. This monumental effort involved the decommissioning of many miles of roads, restoring salmon habitat, and changing logging methods so as to regenerate something approaching a natural forest. It required a new openness, with many public meetings in which alternative views were actually listened to.

The magnitude and importance of this change are hard to overestimate. The effort, the rationale, the methodology – all are riveting to read about in *Toward a Natural Forest*. As you can tell from the

quotes I've included in this introduction, I've read the book. I recommend it. We will be treated to more readings from it by the author himself, as well as to segments of a documentary entitled "[Seeing the Forest.](#)": *how a national forest evolved from seeing trees as its primary resource to seeing the forest whole*. You will have the chance to buy a copy of the book after the talk, and get him to sign it. Given the current foment concerning the Northwest Forest Plan, and the Siuslaw's prominent place in that discussion, this presentation could hardly be more timely. The evening of Friday, 9 September 2016, should be spent with the Eugene Natural History Society listening to Jim Furnish's presentation, "Toward a Natural Forest." We start at 7:30pm, in room 100 Willamette Hall, on the University of Oregon campus. Please come. John Carter

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## HOW DOUGLAS-FIR GOT ITS HYPHEN By Whitey Lueck

Like all conifers, Douglas-fir bears *two* kinds of cones: tiny pollen cones—which are shed soon after releasing their pollen in early spring—and seed cones which remain on the tree and mature over the course of the summer. The seed cone of Douglas-fir is peculiar. Like many other conifer cones, it hangs down from the twig on which it is carried. But *unlike* other conifers with pendent seed cones, little three-pronged *bracts* protrude from among the woody seed-cone scales.

A few other conifers have seed cones with protruding bracts, but those conifers all bear their cones *upright* on the branch. That's right: the large, barrel-shaped seed cones of noble fir and Shasta red fir, for example, point up, and when the cones are mature, their seeds are released only as the cone scales start falling off—starting at the top of the upright cone. That's why you rarely find whole seed cones under these fir trees, but only the individual cone *scales* that have fallen to the ground.

Did you notice that noble fir and Shasta red fir do not have *hyphens* in their names, but just *single spaces* between the words? That's because they are what we call *true firs*. All true firs belong to the genus *Abies*—the first part of a two-part scientific name, like *Homo* in *Homo sapiens*, which is the scientific name for human beings. There are many kinds of firs throughout the world's temperate zones, but the one thing they have in common is that their seed cones are borne upright on the branches and break apart when mature to release their seeds.

But Douglas-fir is different. When it was first discovered and named by European-Americans in the 1800s, some botanists thought that it was a kind of

spruce (genus *Picea*). Others thought it was some sort of large-coned hemlock (genus *Tsuga*). But eventually, botanical taxonomists agreed that these beautiful trees that grow all over the Northwest were so different from other conifers that they deserved their own genus name. The new genus was named *Pseudotsuga*, which actually means false hemlock—from the Greek *pseudo* (psoo-doh) for "false" and the Japanese word *tsuga* (TSOO-gah) for "hemlock."

So why the hyphen in Douglas-fir? Again, it's not a "true fir" of the genus *Abies*. And by convention, most of the life sciences, when writing the common names of organisms, use a hyphen—and sometimes a compound word—to indicate that an organism is not truly what its common name suggests. For example, entomologists (who study insects) spell house fly with a space between the two words because the insect is a "true fly" of the genus *Musca*. But dragonfly and butterfly—neither of which is even remotely related to true flies—are written as, in this case, compound words.

Although we often see the common name for honey bee and bumble bee spelled as compound words—honeybee and bumblebee—they are both "true bees" and their common names should really reflect that and be written with a space between the two words. But languages change over time, and editors sometimes think they know more than the scientists who write the articles that the editors edit, and it appears that the spellings "honeybee" and "bumblebee" already prevail, despite what most entomologists say. So it goes.

Even the name Douglas-fir appears to be undergoing a change. Although it's been misspelled for decades by editors, horticulturists, the hoi polloi, and others—simply because they don't know any

better—its name these days is sometimes written in compound form as Douglasfir. That may look odd to you, but we've done the same thing for many decades with tree names such as western *redcedar* and European *horsechestnut*. (The redcedar of the genus *Thuja* is not a true cedar of the genus *Cedrus*, nor is the inedible horsechestnut of the genus *Aesculus* a true edible chestnut of the genus *Castanea*.) So maybe it's finally time for the hyphenated form Douglas-fir to become the compound form Douglasfir?

Ah, the curse of common names. If you thought things were confusing enough with Douglas-fir, you wouldn't believe the mess that *Umbellularia californica* finds itself in, with two completely different common names in the two states in which it's native. In California, it's called California bay laurel—although it's not a “true laurel” of the genus *Laurus*. And as soon as one crosses the 42<sup>nd</sup> parallel into Oregon, the tree is known as Oregon myrtle, even though it's not at all related to “true myrtles” of

the genus *Myrtus*. And both common names should properly be hyphenated, yet seldom are.

But that's another story.

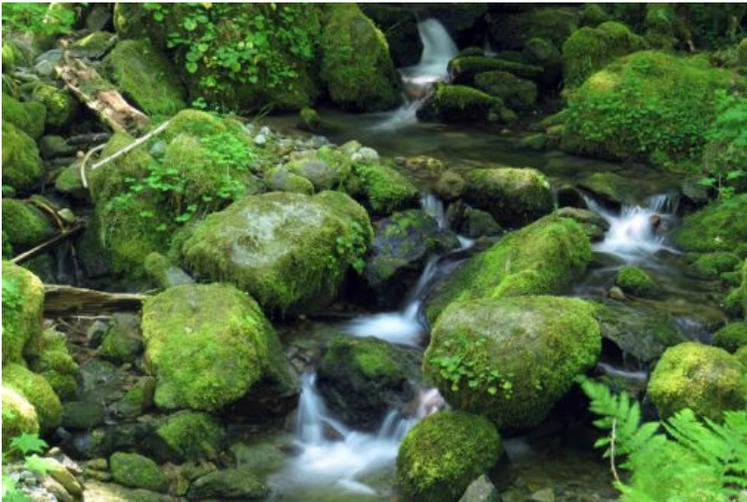
#### NOTE

For some reason, most people who study and work with plants are unaware of the use of hyphens to denote “falseness.” *Botanists*, particularly plant taxonomists, are real sticklers for using the correct botanical or scientific names for plants; but they are for some reason rather lax when it comes to the spelling of common names. The same goes for *horticulturists*—who are experts in the science of cultivating plants, but sometimes less than careful in how they spell plants' common names. However, *dendrologists* and *foresters*—dendrologists study primarily the taxonomy of woody plants, including trees; foresters are skilled in planting, managing, or caring for trees—generally respect the rules outlined in the above essay and use both hyphens and compound words to denote plants whose common names do not accurately reflect their relationship to other plants with the same common name.

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## Out and About

*“Out & about” is a periodical encouragement to Eugene Natural History Society members to get out and experience our magnificent Oregon. Photos and descriptions provided by David Stone.*



This is one of numerous waterfalls along the pristine Quartzville Creek in the proposed Douglas-fir National Monument, east of Sweet Home.

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### Vignettes of Summer

by Tom Titus

Welcome to the 2016-17 Eugene Natural History Society season. I trust this beautiful summer has brought you everything you could ask. Thank you for your ongoing support of the ENHS. You are the engine that drives our Society, the reason for our vibrant presence in the Eugene community.

Following are two writings, originally birthed as reflections from very different trips with my summer herpetology class, one to the dry country of southeastern Oregon, the other to a damp old growth canyon in H. J. Andrews Experimental Forest.

***Sunrise at Mickey Basin:*** I'm already awake when the first daylight slides into my tent. *Please, more sleep.* But this will not happen. Besides, I need time alone before beginning another day herding twenty-two herpetology students across southeastern Oregon. So I pull on dusty clothes and climb a small rise above our camp at Mickey Hot Springs. Once on top, I crunch backward into a sagebrush, facing east, my butt planted in sandy dirt.

Before me a flamingo dawn rises through uncertain clouds, layers of pink above brown bands of Columbia River flood basalts exposed on distant ridges. The blonde dinner plate of Alvord Playa stretches behind me, empty. Mickey Butte looms to my left, an austere pyramid with more flood basalts, more layers of time thrust upward into the face of my tiny life. The bare rock and dry soil make me grateful for the caress of cool air, grateful I wasn't here 15 million years ago when the entire sweep of land rolling out around me was bathed repeatedly in fiery liquid. This morning only cold rock and a sizzling sunrise remain.

Spasmodic breezes course across the basin floor, massaging the right side of my head. The sagebrush backrest sends out an aromatic probe, smooth and slender, plying the upper reaches of my nasal cavities, lighting up sensory cells just below my eyes. The smell plays off the erratic wind, dancing in and out of my nose, in and out of consciousness.

Now sunlight is leaking through a ragged hole in the clouds, a cluster of beams radiating downward onto the desert floor. Finally the sun breaks free from the veil, and I shift in my gritty seat, sit straighter against the sagebrush, stretch toward the warmth. In the new light the hummocking hills become quantum waves, shimmering between taupe and tan, beige and brown. Sagebrush and saltbush splatter across the basin like fat gray-green raindrops plopping on dusty ground. Shadows fill the draws like dark water. A lone coyote woofs from the basin floor to my right. Then a distant pack lights it up from behind me, erratic sirens announcing some crisis only a coyote could appreciate. Probably they just discovered our little splash of colorful tents.

Voices reach upward from camp. The early risers are awake. Soon the work begins: hot water for coffee, packing gear, marshaling people into vans to search the desert floor and rocky hillsides for dry country lizards. The sun remains undecided. The lizards will follow its lead. I hold my breath, wondering what morning will gather into her chapped hands.

***Along Mack Creek:*** My ears are pummeled by the sound of water, a white curtain roaring over a down cedar snag, roiling the clear pool below. The current dashes downhill, forking around an oblong boulder riddled with holes, childhood scars left when heated air burbled from fiery young liquid, gasses that barely escaped near eternity trapped in a cell of cold stone.

Below the pocked boulder, the stream rejoins itself in mindless continuity, a herd of water molecules tethered by hydrogen bonds and strung together into a creek on a forced march at the hands of gravity, thousands of years of watery footprints carving this canyon, this trail to the sea. Water clear as Buddha Mind flows beneath standing dead cedars, their roots drowned when the creek revolted and changed course. The transparent rush chatters past a small gravel bar, a collection of basalt cobbles broken and polished by endless tumbling water.

Within this reckless physicality, I park myself on a piece of mountain worn round by the creek, dampness sending cool leftover night creeping into my aging bones. Behind my head, a cluster of half-grown nettles smells like green tea mixed with bobcat urine. At my feet, moss struggles to claim space on the stones. I struggle to claim space in this place, space in my mind, space for mindfulness.

Uncertainty seeps into every pore. Shall I drop my pen and breathe in the effortless endless flow of water? Or should my brain engage with fingers, eyes, ears, skin? I'm wondering, because ...

Who am I to act as conscious interface with this utterly unconscious place, pungent sun dancing through a blue gap, casting light and shadow on ancient conifers? Who am I to force human meaning onto acrid nettles, spittlebug spit on fireweed, flat green palms of cow parsnip and thimbleberry, baby hemlocks springing from a log long dead but still feeding baby hemlocks? Who am I to love the look and feel of Coastal Giant Salamanders, stalking quiet pools for crayfish and cutthroat trout, wide brown heads with feathery blood-filled gills seeking water-borne oxygen?

Who am I to ask anyone to love?

Who am I to serve witness?

Yet I must serve. Because I am drawn to old mountains and trees dying with grace and tranquility, worn down by relentless water and the spreading years. Because now you are dying with grace and tranquility, worn down by spreading cells gone feral, cells no longer following the cooperative dance laid down by evolution.

When you told us you were leaving, I promised I would not be down. I'm sad, because grieving and gratitude are conjoined, light and shadow of our lives. Yet I will not be paralyzed. You have taught me that our time is uncertain, consciousness is uncertain. So I will toss this bright pebble of your life into a clear pool, watch the ripples spreading outward, see them meet the sweeping current.

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## Announcements

1. A good place to park for our meetings is the Physical Plant lot: turn north (left) from Franklin onto Onyx, go about a block and you will be in the lot. After 6 pm it's open to the public.
2. The October meeting location will be in **177 Lawrence Hall**, on the UO campus.
3. We will need help with the ENHS booth at the Mt. Pisgah Arboretum mushroom festival on Sunday, 30 October. Please think about volunteering! Thank you, all who volunteered during the wildflower festival.

## Events of Interest in the Community

### Friends of Douglas-fir National Monument

**Saturday, 1 October, 8am-5pm.** Join us for an all-day tour of the proposed Douglas-fir National Monument, east of Sweet Home. This auto tour will take you into the heart of the area on the Quartzville National Backcountry Byway along the Quartzville Creek Wild and Scenic River. Bring your camera, a lunch and good walking shoes. Meet at 8am at South Eugene High School parking lot, 19th & Patterson. Free. FMI, contact Dave Stone (President, Friends of Douglas-fir National Monument) at 541-729-8787 or [dns@efn.org](mailto:dns@efn.org) Note: our September speaker, Jim Furnish, is on the Advisory Board of Friends of Douglas-fir National Monument.

### Lane County Audubon Society

**Saturday, 17 September, 8am-noon. Third Saturday Bird Walk.** Site and leader will be determined by interesting bird sightings posted to OBOL and other pertinent information available before the day of the walk. Details will be posted on the LCAS Facebook page ([facebook.com/pages/Lane-County-Audubon-Society/330177413824?ref=hl](https://facebook.com/pages/Lane-County-Audubon-Society/330177413824?ref=hl)) and on the LCAS website ([laneaudubon.org](http://laneaudubon.org)). All ages and skill levels are welcome. We have a couple of pairs of binoculars to loan if needed. To carpool, meet at 8am at the SEHS parking lot (corner of 19th and Patterson). Remember that it's not a good idea to leave valuables or your vehicle registration in your car if you leave it at the lot. A \$3 donation is appreciated to help support Lane County Audubon's activities. For more information, contact Jim Maloney at 541-968-9249 or [jimgmal@comcast.net](mailto:jimgmal@comcast.net).

**Tuesday, 27 September, 7:30pm. How Woodpeckers Can Save the World (or at Least Your Local Woodland!).** Steve Shunk will describe woodpecker anatomy and translate anatomical adaptation into the fascinating behaviors birders love to watch. Shunk has studied the woodpeckers of North America for many years. He recently spent three seasons as a field biologist for the Institute for Bird Populations studying the Black-backed Woodpeckers of California's Sierra Nevada and Cascade Mountains. He now lectures and leads birding tours across North America and beyond, and is the associate editor for the online Nature Travel Network. Shunk's long-awaited Peterson Reference Guide to Woodpeckers of North America was released in May 2016, and he will have books available for signing. The meeting is at The Eugene Garden Club, 1645 High St.

### Mt. Pisgah Arboretum

**Saturday, 10 September, 10am-12pm. Late Summer Wildflower Walk.** Wildflowers in September?! Join Arboretum Interpretation Coordinator August Jackson for a tour of the amazing diversity of wildflowers that wait to bloom until the end of summer. We'll take a walk along a wet prairie and down to the river to see emergent vegetation in bloom. We will also look at which insects pollinate these late-season flowers. Meet at the Visitor Center. Don't forget your parking pass. \$5, members free.

**Sunday, 18 September, 8am-11am. Bird Walk.** Join Julia Siporin and Joni Dawning 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 summer 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.

**Saturday, 24 September, 10am-12pm. Family Walk.** Join Arboretum Nature Guide Rick Chase on a walk for families to explore seasonal changes at the Arboretum. See what we can find as we search for signs of animals preparing for winter! Rain or shine. Meet at the Arboretum Visitor Center. \$8 per family, members free.

**Saturday, 1 October, 1-3pm. Field-sketching Trees Workshop.** We see trees a lot, but do we really look at trees? Natural Science Illustrator Kris Kirkeby will offer field-sketching tips for drawing trees emphasizing shape, texture, and simple ways to show light on form. Typical Pacific Northwest trees can be quickly captured in a sketch using her techniques so we'll spend the majority of our time drawing. Bring a sketchbook, 2H and HB pencils, kneaded and white vinyl erasers, sketching stool or bucket, water bottle, and warm clothing as needed. Meet at the Visitor Center. Members \$25, non-members \$30. Pre-registration required. To register call 541-747-3817 or go to: <http://www.mountpisgaharboretum.com/workshop-registration>

**Friends of Buford Park and Mt. Pisgah**

**Monday Morning Regulars. 9am-noon.** Contact [volunteer@bufordpark.org](mailto:volunteer@bufordpark.org) for more information.

**Tuesdays and Thursdays, 9am-noon. 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.

**Walama Restoration Project**

Email [krystal@walamarestoration.org](mailto:krystal@walamarestoration.org) or call 541-484-3939 for more information.

**WREN (Willamette Resources and Educational Network)**

For current WREN events go to <http://www.wild.blogspot.com/>

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

**Exhibit Hours: Tuesday through Sunday, 11am-5pm**

**Cascade Mycological Society**

For current happenings go to <http://cascademyco.org/category/events/>

**Native Plant Society of Oregon, Emerald Chapter**

**Thursday, 15 September, 7pm. The Exquisite Orchids of Oregon.** Charlene Simpson’s program about orchids native to Oregon includes a discussion of orchids world-wide: their economic importance, diverse forms, and reproductive strategies. She explores the high cost of pollinator specialization and obligate fungal associations. Charlene illustrates her program with stunning images drawn from her 40-year archive of native plant photos. New meeting location: The Stellaria Building, 150 Shelton-McMurphy Boulevard, Suite 104 in Eugene.

**North American Butterfly Association, Eugene-Springfield Chapter**

No event in September.

**Nearby Nature**

Tuesday, 13 September, 6:30-8 p.m. **New Volunteer Orientation.** Love nature? Enjoy kids? Learn about volunteer opportunities at Nearby Nature, such as leading school nature walks in Alton Baker Park, gardening, restoration work, special events, and school classroom assisting. No experience needed. Training is provided. Meet at Eugene Public Library, Tykeson Room. Go to <http://www.nearbynature.org/events> for more info and details of other upcoming events.

**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>**

**MEMBERSHIP FORM**

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I (we) prefer electronic copies of NT rather than paper copies. \_\_\_ Yes \_\_\_ No

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<b>ANNUAL DUES:</b> Family	\$25.00
Individual	15.00
Life Membership	300.00
Contribution	_____

**Annual dues for renewing members are payable in September. Memberships run from September to September. Generosity is encouraged and appreciated.**

Make checks payable to:  
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## ENHS Speakers for 2016-2017

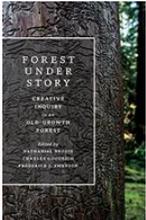
Note that both September and December meetings are on the *second* Friday of the month

9 Sept. 2016 Jim Furnish *Toward a Natural Forest*



Furnish is a consulting forester following a 34-year career with the USDA Forest Service. He served as the agency's Deputy Chief and Siuslaw National Forest Supervisor in Corvallis, Oregon. He was a leader in creating the Roadless Area Conservation Rule (2001), as well as in reforming management of the Siuslaw National Forest from timber production to restoration principles. In his book *Toward a Natural Forest*, which will be the basis of his presentation to us, Furnish talks about our twin drives to live off of and to protect the Earth. He believes we can do both. He uses his experience in and knowledge of the USFS to make the case that the agency has the potential to be a leader in global conservation efforts. His story will interest a broad audience: environmentalists, natural resource professionals, academics, and historians.

21 Oct. Author Readings, Photography, Music *Forest Under Story*



*Forest Under Story: Creative Inquiry in an Old-Growth Forest* is published by University of Washington Press and edited by Nathaniel Brodie, Charles Goodrich, and Frederick J. Swanson. The book is a compilation of writings that arose from creative writers participating in the Long-Term Ecological Reflections program at H. J. Andrews Experimental Forest northeast of Blue River Reservoir. Reflections is a humanities analog to the scientific research in Andrews, a part of NSF's Long-Term Ecological Research Network. Of the book's many contributing authors we have had more than a few as speakers: Goodrich, Kathleen Dean Moore, Robin Wall Kimmerer, Robert Michael Pyle, and Tom Titus. The presentation on 21 October will consist of readings by several of the over 30 authors, photography by Bob Keefer, and live music.

18 Nov. Celeste Mazzacano *More than Monarchs: Migration in Dragonflies & Other Insects*



Mazzacano is a Gopher, with both BS and PhD degrees from the University of Minnesota. She is Principal Scientist / Owner at CASM Environmental, LLC, and Aquatic Conservation Director at the Xerces Society. In her presentation she will tell us about a little-known aspect of dragonfly life: lots of dragonfly species migrate. A prime example is the Wandering Glider (*Pantala flavescens*). Its flights in the vicinity of the Indian Ocean are mind-boggling. One generation island-hops from India to east and southern Africa, and their offspring come back to India following the continental coastline, a round trip of more than 11,000 miles, nearly twice what Monarch butterflies do. Clearly we will be enthralled in November!

9 Dec. Claudio Mello *Of Bird Genes and Bird Brains: What Science Can Teach Us About Avian Singing and Seasonality*



Mello is a neuroscientist at the Oregon Health Sciences University. Besides his medical work he is part of a large group of scientists looking at avian evolution after the extinction event 66 million years ago that wiped out the dinosaurs. Their work is revealing new details about how birds came to have feathers, flight, and song, all in a relatively short time. Mello points out that the group's efforts have resulted in a better understanding of how bird traits arose from changes in the genomes of their dinosaur ancestors.

20 Jan. 2017 Kelly Sutherland Sea Jellies



Sutherland is a marine scientist in the Institute of Ecology and Evolution, and a faculty member of the U of O's Clark Honors College. Her students work either in IEE or at the Oregon Institute of Marine Biology in Charleston. Her interests span the disciplines of physics and biology. She got her PhD at MIT and has postdoctoral experience from Cal Tech. Among other things she studies how sea creatures such as jellies move through their environment. Her dual citizenship in physics and biology lead to fascinating concepts. She points out that some of the propulsion systems she documents in her marine critters could generate new ideas for machines humans construct for

moving around in water and on land.

17 Feb. Terry Hunt Easter Island Archaeology



Hunt is Dean of Clark Honors College and Professor of Anthropology at the University of Oregon. He has carried out archaeological research for over 30 years at sites on many Pacific islands, including those in the Hawaiian chain, Fiji, Samoa, Papua New Guinea, and Easter Island (Rapa Nui). This is from his U of O bio: "Dr. Hunt's recent book *The Statues that Walked: Unraveling the mystery of Easter Island*, Free Press, New York, 2011, co-authored with Carl Lipo, revisits the dramatic story of Rapa Nui's prehistory. The book won the Society for American Archaeology's book of the year award, 2011, in the public audience category. Dr. Hunt's research was the focus of

a National Geographic Magazine cover story (July, 2012) and a full-length Nova-National Geographic TV documentary that aired on PBS in November 2012." No more need be said to convince you this will be an interesting talk.

17 Mar. William Cresko Sea Horses and Sea Dragons



Cresko is a Professor in the Institute of Ecology and Evolution and Department of Biology, and he runs a laboratory focused on understanding the genes that are behind the evolution of diverse organismal traits. His lab is asking whether the genes and developmental pathways that are important for threespine stickleback (*Gasterosteus aculeatus*) fish evolution over short time periods are also involved in the longer scale, macroevolutionary changes leading to the diverse traits seen in leafy sea dragons, pipefish

and seahorses. Cresko will tell us about his lab's latest discoveries that come from producing the first complete genome sequence from any member of this incredibly diverse family. These discoveries relate to such novelties as an elongated body similar to a snake, head and jaws that look like a horse, and amazingly true male pregnancy that occurs in brood pouches on some of the species in this family of beautiful fish.

21 Apr. Svetlana Maslakova Pythons of the Sea: Natural History of the Nemertean Worm



Originally from Russia and with a PhD from George Washington University in Washington, D.C., Maslakova is an Assistant Professor at the U of O. Her lab is in the Oregon Institute of Marine Biology in Charleston. In her U of O bio she says: "The focus of research in [my lab] is the evolution of development in marine invertebrates, in particular, the phylum Nemertea, commonly known as ribbon worms. Historically, nemerteans received little attention, despite the

fact that these graceful marine predators occur at all depths in all of the world's oceans." The larvae are so different from the adult worms that develop from them that knowing what came from what has traditionally been really hard. Only in a handful of cases has a larval stage developed into an adult in a lab setting. But Maslakova has devised molecular techniques that allow this hitherto almost impossible connection to be made routinely. Her method has implications for diversity studies in general, since in many cases larval stages are easier to find than adults. She has wonderful photos of both larval and adult stages of ribbon worms. Wouldn't you love to see a worm that's 30 meters long?

19 May Ed Alverson Southern Willamette Valley Natural Areas through the Seasons



Alverson is a Beaver, with a botany degree from Oregon State University. He has done field botany in the Pacific Northwest for over 30 years. He is also a writer and an accomplished photographer. He's a member of the steering committee of the Cascadia Prairie-Oak Partnership and he works with The Nature Conservancy. Some of you may have heard him speak in March 2015 at the Emerald Chapter of the Native Plant Society of Oregon. He visits natural areas several times a year, taking photos of each landscape and then compiling them to show developmental stages at each site. He ends up with a time series for each site and thus a record of seasonal changes at each site

throughout that year. We'll be treated to great pictures of our area as well as thoughtful commentary.