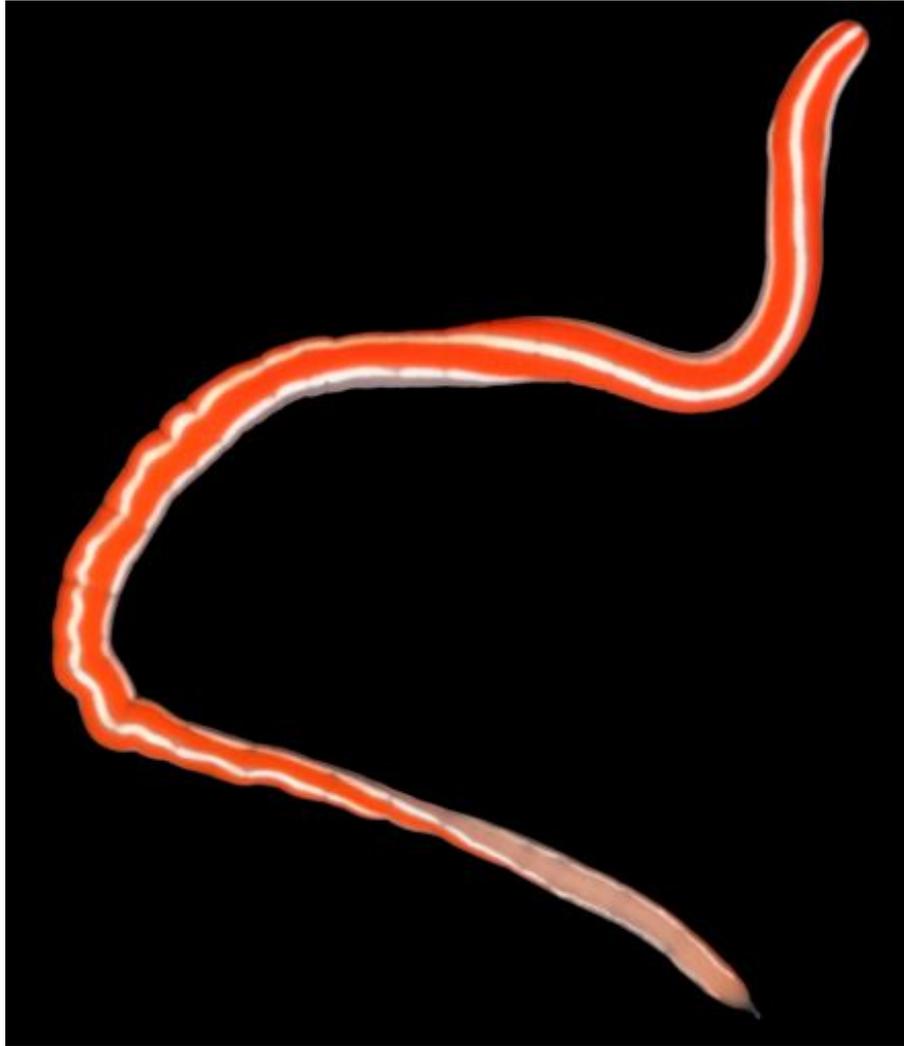


# Nature Trails

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Nemertean worm.  
Photo by S. Maslakova

## **Pythons of the Sea: Natural History of the Nemertean Worm**

**Svetlana Maslakova**

**Associate Professor of Biology**

**Oregon Institute of Marine Biology, University of Oregon**

**Friday, 21 April 2017, 7:30pm,  
Room 100 Willamette Hall, UO Campus**

Svetlana Maslakova grew up in Moscow, Russia, and was interested in animals from an early age. In high school she was fortunate to be taught for two years by Dr. Tatiana Litinskaya, a plant physiologist and a university professor, and to meet a group of like-minded students interested in biology. Litinskaya organized a weekly biology interest group at her home for these students and encouraged them to participate in research in her lab and compete in the National Biological Olympiad at the Moscow State University (MSU). The first level of the Olympiad involves a series of written questions—essentially an examination. Students from all over the country are eligible to participate. Those who achieve a certain level can go to the second stage. They come to the MSU for a day, where entire rooms are set up with collections of specimens and exam questions in different fields of biology (e.g. invertebrate zoology, embryology, cell biology, evolution, ecology, biology of amphibians and reptiles, botany, etc.). The students get to choose which rooms they enter, but they have to enter six rooms (two botany-related, two zoology-related, and two on some aspect of general biology). In the rooms they are questioned by the organizers, a mix of MSU faculty and students. The questions can be practical or theoretical, dealing with any aspect of the material contained in that room. The top dozen students in each class (6-11th grade) go on to the third stage, an oral examination administered by a panel of five or six biologists—again a mix of faculty and students. Here, the sky is the limit; questions can be about any aspect of biology. There are prizes given for the top three performances in each class. Maslakova won second prize when she went through this stage in 10th grade. It is a competition, to be sure, but also a wonderful learning experience. For Maslakova, entering the Embryology room (chiefly because she had no idea what it was all about) initiated a life-long interest and fascination with animal development.

The top students from the second and third stages are invited to spend a month at a Summer Ecological School organized by a group of biology education enthusiasts—mostly faculty, students and graduates of the MSU biology faculty. For Maslakova these were life-changing experiences. She went to four of them—two as a student, and two as a volunteer. The camps are in a different place every year. One she attended was on a remote island in the White Sea a bit south of the Arctic Circle.



After high school Maslakova enrolled in the Biological Faculty of the MSU. As part of her training there she spent the first summer at the MSU's Biological Stations—and this experience figured directly into her future. One month was on the shores of the White Sea, in an area that has a relatively low level of marine biological diversity. Pretty much whatever living thing a student found could be readily identified by one or another of the faculty or graduate students. But Maslakova happened upon a nemertean worm and to her surprise and frustration nobody could tell her what species it was. She had first learned about these creatures, more commonly known as ribbon worms, in the invertebrate zoology class she had taken earlier that year and now her curiosity was really piqued. She thought these fascinating worms had been unfairly neglected, and that somebody should know more about them. So she decided to make nemertean worms the subject of her undergraduate thesis. And her Master's thesis, also done at the MSU. Despite being mentored by a world-class expert on comparative embryology and anatomy of invertebrates she had little guidance, as the only practicing nemertean systematist in the entire nation was in Vladivostok, almost 10,000 kilometers away.

So she struck up a long-distance correspondence with Dr. Jon Norenburg, a Curator of Invertebrate Zoology at the Smithsonian Institution's National Museum of Natural History in Washington, D.C. and a leading expert on ribbon worms. Norenburg had just received an NSF PEET (Partnerships for Enhancing Expertise in Taxonomy) grant and invited Maslakova to come to the USA for graduate study. She said it was such a relief to know she could finally do the work she loved and not worry about support that the decision was easy: she came to the U.S. in 1999 and studied nemertean systematics under Norenburg. She obtained her Ph.D. from George Washington University in Biology in 2005 and then took up an independent post-doctoral position at the Friday Harbor Laboratory—a University of Washington facility in Puget Sound. She worked on the embryology and larval biology of local ribbon worms that she collected at various locations on San Juan Island. She was there from 2006 to 2008, and then accepted the faculty position at the Oregon Institute of Marine Biology in Charleston, where she has been ever since.

The following is from her U of O bio: "The focus of [our] research 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. About 1500 species are described, and we routinely encounter species new to science." The larvae are so different from the adult worms that develop from them that knowing what came from what has traditionally been really hard. In only a handful of cases have larval stages developed into adults in a lab setting. Maslakova's lab has applied molecular techniques that allow this connection to be made routinely. Matching larvae to adults using DNA sequence data has implications for biodiversity studies in general, because in many cases larval stages are easier to find than adults. She has wonderful photos of both larval and adult stages of ribbon worms.

Here is a short paragraph she gave me describing what she will be talking to us about. "Conservation and sustainable use of biodiversity are some of the global challenges humanity faces in the rapidly changing world. However, the task of establishing biological baselines, quantifying biodiversity changes over time, and understanding consequences of ecological community shifts is complicated by the

fact that the majority of species on Earth remain undescribed. This is in part due to the slow rate of species discovery and description, as well as vanishing taxonomic expertise: few people are trained to identify and describe species. Maslakova is one of the few experts on ribbon worms (nemerteans) in the world. She will talk about the biology of this fascinating but understudied phylum of marine invertebrates, including their predatory habits, larval development, and diversity. Her work on DNA-barcoding of nemertean larvae and adults in the NE Pacific and Caribbean highlights both the magnitude of undocumented biodiversity and the promise of molecular techniques to facilitate species discovery, description and identification."

Maslakova's presentation promises to be educational and fascinating. I've watched some videos of ribbon worms attacking prey; the attacks are terrifyingly fast and lethal. They are excellent predators in their own niche. Wouldn't you love to see a worm that's 100 feet long? Please join us at 7:30pm on Friday, 21 April, in room 100 Willamette Hall on the UO campus to hear Professor Svetlana Maslakova's talk, "Pythons of the Sea: Natural History of the Nemertean Worm." Save room for a cookie or two. John Carter

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### **The Ancient Ones** by Reida Kimmel

It has been forty-one years, but the memory is indelible. After a rough ride in a tiny plane to Tortuguero, "region of the turtles", on Costa Rica's Atlantic coast, we came down over a beach all scarred, apparently by the tracks of heavy vehicles. Oh dear, I thought. How can baby turtles survive amidst such devastation? That evening we learned the truth about those tracks. Turtles made them. From February through October, hawksbill, loggerhead, green, and leatherback turtles lay their eggs on these sandy beaches. Nowadays Tortuguero is a huge national park where nesting turtles are protected from poaching, largely by the locals who have learned that tourist dollars from fifty thousand visitors a year are worth more than the meat and eggs of these magnificent relics of the Mesozoic. In 1986 turtles had not yet become a tourist attraction, but, as is still the case, our small group was ordered to remain silent, and to stand in the dark by the nesting green turtle. Only after she had dug her nest and was laying, did our guide turn on his flashlight to show us the glistening eggs as they slipped into the nest. As she laid the eggs she sighed. Then, task completed, those huge flippers moved sand back to cover the eggs. They would develop, warmed by the sun, until ready to hatch all at once. The hatchlings would scurry to the sea, to feed on other sea creatures until

they matured and moved to shallow water, switching to a vegetarian diet of sea grasses. But few would survive to maturity, and those that did might not be so fortunate as to have their nests protected. Green turtles, *Chelonia mydas*, grow to five feet long and can weigh over four hundred pounds. They are critically endangered, though protected by CITES (Convention on International Trade in Endangered Species) and IUCN (International Union for Conservation of Nature) treaties. Fishing nets, harvest for food, pollution, and real estate development all pose lethal threats, as they do for all the other turtles in our planet's oceans.

Until recently I had thought of all the sea turtle species as rather alike, though distinguished by differences in size, times and places of nesting, and abilities to forage outside of the warm waters of the subtropics. But two books, *Gulf Stream Chronicles*, David Lee, University of North Carolina Press, 2015, and *The California Current*, Stan Ulanski, University of North Carolina Press, 2016, made me realize how different and incredible another species that breeds at Tortuguero, the leatherback turtle, is. *Dermochelys coriacea*, the only remaining species of its genus, is the largest sea turtle, indeed, the biggest living reptile, six or seven feet long, nine feet wide from flipper tip to flipper tip, weighing 550 to 1900 pounds. They eat only soft slippery foods such as

salps, jellyfish, and Portuguese Men of War—all watery, with negligible food value—which makes me wonder how they get so big. Leatherbacks are almost always in motion, foraging. Their throat and much of their digestive tract are lined with spines. Soft prey caught on the spines is digested, while water is expelled. Of course these spines are now many turtles' downfall because they catch plastic debris mistaken for food. The turtle cannot expel this non-food. Instead it chokes or starves.

Leatherbacks range throughout the Atlantic, Pacific and Indian Oceans, and though they do not breed in cool regions, they follow drifting schools of jellyfish into cold latitudes and have been seen in Labrador, Iceland, Norway, Alaska, Japan, Chile, and the Cape of Good Hope. And they range throughout the water column. Leatherbacks feed from depths of 3900 feet to the surface. Instead of bony shells encasing their bodies, *Dermochelys* have thin plates of bone encased in leathery skin supported by seven flexible ridges down the back. The skin and bones of leatherbacks are profoundly infused with oil. Carcasses drip for days, even years. The oils protect the turtle from the cold of the abyssal seas in which they dive, as does blubber and heat-producing brown fat similar to mammals' fat.

With origins in the Cretaceous, *Dermochelys coriacea* probably is derived from the same lineages that resulted in today's other sea turtle species, but it diverged so long ago, and evolved such amazing strategies for maintaining a constant body temperature of eighty degrees Fahrenheit, that it seems sometimes to belong to a different world. The solutions that the leatherback has found to maintain a warm-blooded body and to cope with maintaining metabolic energy and warm extremities, are, though independently evolved, not unlike metabolic strategies of tuna and mammals. Like deep-diving whales, leatherbacks store oxygen in muscle tissue. The hemoglobin content in their blood, the highest of any reptile, helps them carry more dissolved oxygen

during their nearly constant diving. They do not need rest between dives, nor do they accumulate lactic acid or suffer from "the bends." The muscular activity of constant swimming helps to generate bodily heat. Dangerous cooling in leatherbacks' long limbs is prevented by a nifty vascular design, not unlike a tuna's vascular system—or a beaver's or a duck's for that matter. Cooled blood returning from the flipper-shaped limbs runs alongside arteries carrying warm oxygenated blood to the body and limbs. The veins and arteries are bundled in insulating fibrous cables. By the time the venous blood returns to the heart it is once again at eighty degrees. In addition, lipids in the flippers serve as antifreeze.

But this miracle of evolution is critically endangered. Since the 1980s the number of breeding females has declined, in some populations by two thirds. Nets, boat propellers, ingesting plastic, illegal hunting for subsistence and the exotic restaurant trade all take their toll. But there is hope. The leatherback is a species that can be saved. It produces large egg clutches, and though a female does not breed every year, in the years that she is breeding, she will lay multiple clutches. Adventurous, she will seek and find new nesting beaches—including, most recently, protected beaches in Florida and the Carolinas. Young turtles grow incredibly fast. Their cartilages and bones are highly vascularized and the growing tips of bones are unlike those of any other vertebrate. A one-ounce hatchling will increase its weight 8,000 fold by sexual maturity, which may occur in only five to fifteen years. Because of their need to be in constant motion, young leatherbacks cannot be raised in captivity. Protecting nesting beaches and restricting their development, and making the use of turtle exclusion devices on fishing nets mandatory, can, however, help the species recover rapidly because of its high reproductive and growth rates. And let us never forget, plastic kills. Help the turtles and all sorts of other wild creatures by cleaning up roadsides, waterways and beaches.

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### **Outside Becoming Inside** by Tom Titus

Spring is here. You can tell because the rain is warmer. Recently I told my mom that this wet, cold, protracted winter reminded me of the old days growing up in the 1960s and 70s. She says when spring break came, my brothers and I spent whole days traipsing around the pasture and surrounding forest, invariably coming back to the house covered with mud. Mom told me of this as I sat at the dining room table in the house where I grew up; I am now 60 years old and still covered with mud. Dad and I had just finished herding my cousin's cows down the pasture into a stock trailer. Their large hooves sank

deep into sucking gray goop and sent it flying onto their oppressors. I looked down at my splattered shirt. "Nothing much has changed."

This spring I'm grateful to have grown up with free run of a muddy pasture and hillside. I wonder how many ENHS speakers I've introduced over the years whose biography included growing up in close proximity to small wild accessible spaces. This is not an accident. For these people, their outside got inside and then bled back out again, so that the boundary separating the two isn't a boundary at all. This lifelong engagement with the outside world is a natural outcome of uniting our internal and external

selves, our innards and outtards, into one-and-the-same thing. This is part of developing a sense of Place. Place isn't something external to us. It isn't geographically restricted. Our Place is where our outsides and insides become one.

Knowing what is out there is a first step. The mission of the Eugene Natural History Society is to promote environmental education. We do an excellent job of providing opportunities for learning about the natural world with wonderful monthly lectures. Yet to make the outside part of our inside, we must hang our knowledge on experiences. Mom taught me to identify spring wildflowers on walks in the woods, using books to reinforce the point. My grown children are not afraid of snakes because of family trips to the Alvord Desert. This April I'll strike a blow against Nature Deficit Disorder by spreading the good news about newts to kids and adults. In June the ENHS will offer a four-day trip to Malheur National Wildlife Refuge (see invitation in this *NT* issue) and Steens Mountain. Sure, we'll have our field guides in hand. But identification of wildflowers, birds, and lizards will be woven together with sage smell, sun squint, brown bag lunches, a cacophony of song rising from the marsh, and laughing over stories with glasses of wine. At the end of the day, these experiences wriggle into our pores, permeating our insides, making us yearn for more. These are the formative encounters that create a sense of Place.

Connecting with the real world of nature is more challenging than it's ever been. Digital media are a mixed bag. There is an abundance of digital natural history resources: pictures, video, audio, and the written word, all available on portable hand-held devices. While digital tools can augment our experience of nature, they seem to carry with them an unprecedented level of attention deficit. Besides, the real deal is far more interesting and complex. Go out to the Willamette River trail in the warm rain of early spring, draw in the outpouring perfume of white hawthorn flowers or sweet balsam of newly erupting cottonwood leaves, swirl those smells with the shoosh of river water breaking over basalt boulders, and add a dash of endorphins stirred up by a morning walk. The totality of the experience becomes a one-time irreplaceable event that can never be replicated

by digital media. Outside gets inside. The experience travels forward into the future only in our minds, and we spread it outward to others with our stories.

Time, or more specifically a perceived lack of time, seems opposed to our engagement with the real world. In his poignant essay "A Prayer Against Time" (Orion, September/October 2015), Joe Wilkins confronts the issue of time on a trip to the beach with his two young children. They linger over a pile of gull bones and become united with that place across time and space. Wilkins concludes that the urgency created by a scarcity of time is anathema to developing our deepest sense of place. Certainly the finite reality of our lives should anoint every day and make it sacred. Yet the sacredness of our days will not be measured by checking entries off our to-do list. Poet William Stafford said that all of us are artists. I wonder if some of this artistry lies in molding that gray layer of malleable clay that lies between idleness and busyness into an exquisitely full existence. There are times to let the to-do list go and simply stare at streaming spring rain and dream our stories.

Meaning-full experiences require attentiveness. Yes, we must know what to look for and when to look. But how shall we look? This might be the details in a moment—those long breast feathers of a Great Blue Heron streaming sideways like a gray beard in the wind of an oncoming storm. The rising smell of cottonwood and willow might trigger something in our internal landscape—a memory of April and the opening day of a trout season long past. Maybe our prayer against time is really an embrace of a deeper level of attention, one that takes us into a state of timelessness.

After all that, sometimes I'm grateful to be inside looking outside. This morning an April lion lies over the gray Pacific, its head pointed landward, roaring a spring storm across the precarious western edge of the continent. Trees weakened by winter ice storms, their roots clinging to saturated soils, shoulder the burden of the wind. In heavier gusts they kneel and bow in deference to larger forces in the world. Education or timeless attentiveness will not change the energy of this storm. We are the ones who must bend.

#### **ENHS FIELD TRIP TO HJ ANDREWS EXPERIMENTAL FOREST Saturday, 6 May**

Led by Fred Swanson, Retired research geologist, USDA Forest Service and co-principal investigator, HJ Andrews Experimental Forest Long Term Ecological Research. Carpooling will be worked out in the SEHS parking lot (19<sup>th</sup> and Patterson) at 8:30am; those not carpooling should plan to be at Andrews Forest by 10am. Bring a lunch, something to drink, waterproof footwear, binoculars, and be dressed for the weather.

## Events of Interest in the Community

### Lane County Audubon Society

**Saturday, 16 April, 8am-noon. Third Saturday Bird Walk.** John Sullivan will lead this walk into the Royal Avenue section of Fern Ridge Wildlife Area. John is a local birder and world traveler. People may meet to carpool to the location at the usual place at South Eugene High School's east side parking lot. We will leave for the Royal Avenue parking area at 8am, arriving about 8:30. You may also join us there. Parking in the gravel lot at the end of Royal Avenue requires an ODFW parking permit. Cars with no permit can park along the end of Royal Avenue. When leaving your vehicle at either SEHS or Royal Avenue, take your valuables with you. It's rain or shine so be prepared. A \$3 donation is appreciated to help support Lane County Audubon's activities. FMI: Jim Maloney at 541.968.9249 or jimgm@comcast.net.

**Tuesday, 25 April, 7:30pm. New Hikes in Southern Oregon & Northern California with William L. Sullivan.** Oregon's hiking guru takes us on a slide show tour of new trails he discovered while researching the latest (fourth) edition of his book, *New Hikes in Southern Oregon & Northern California with William L. Sullivan*. We'll discover hidden lakes in the Trinity Alps, relocated trails at Crater Lake, and wildflower meadows in the Siskiyou. Sullivan is the author of 18 books about Oregon, including 2 books on Oregon history and 5 novels. 1645 High St., Eugene.

### Mt. Pisgah Arboretum

**Sunday, 16 April, 8-11am. Bird Walk.** Join Julia Siporin and Joni Dawning for another monthly bird walk intended for people with all levels of birding experience. Please bring binoculars. Option to continue the walk until noon for those who are interested. Rain or shine. Meet at the Arboretum Visitor Center (AVC). \$5, members free.

**Sunday, 23 April, 10am-noon. Wildflower Walk.** April is prime wildflower season at the Arboretum. Join Arboretum Site Assistant and botanist Matt Groberg as we enjoy the diverse mix of species in bloom. Learn the identification and natural history of a number of species. Rain or shine. Meet at the AVC. Don't forget your parking pass. \$5, members free.

**Sunday, 30 April, 10am-noon. Birds, Blooms, and Bees 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 AVC. \$5, members free.

**Saturday, 6 May, 10am-noon. Oak Savanna Walk.** Ed Alverson, Natural Areas Coordinator for Lane County Parks and August Jackson, Interpretation Coordinator for Mount Pisgah Arboretum will compare the historical vegetation of the Willamette Valley with present conditions. Discover the importance of prairie and oak savanna habitats, and explore how land use changes have altered these ecosystems. Rain or shine. Meet at the AVC. \$5, members free.

**Saturday, 13 May, 10am-noon. Herbalism Walk.** Join herbalist Sue Sierralupe as we take a short stroll along the Arboretum's river path discussing the medicinal properties of plants. View the Willamette Valley's native beauties in spring as they flower and begin to spread their leaves. This walk is senior friendly: no elevation gain and resting spots included. Rain or shine. Meet at the AVC. \$5, members free.

### 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.

### WREN (Willamette Resources and Educational Network)

**Saturday, 22 April, 9am-1:30pm. Earth Day Wetland Soils Program.** Led by geomorphologist Karin Baitis, the program will cover geologic research methods and tools, what geologic knowledge can do for land conservation, identifying wetland soil features, and will include a field trip into the wetlands. Please come prepared for the weather with boots that can get dirty! We will break midday so please bring a sack lunch. This program is recommended for adults. Location: West Eugene Wetlands Partnership Office (751 S Danebo Ave). This free event has limited space so please contact WREN to reserve your spot: [info@wewetlands.org](mailto:info@wewetlands.org) or 541-338-7047.

**Saturday, 1 April, 10am-2pm. Family Exploration Day.** Join WREN for unstructured, independent exploration of the wetlands! We provide a backpack of binoculars, field guides, bug net, hand magnifier, and bug boxes, you bring your curiosity and sense of adventure! Drop by anytime between 10am and 2pm to check out your backpack. WREN staff and volunteers will be on hand to answer your questions. This event is free and families are encouraged. WHERE: Tsanchiifin Walk. Directions: meet at the parking lot of the West Eugene Wetlands Education Center at 751 S Danebo Ave. (From West 11th, turn north onto Danebo Ave, the lot is the first driveway on your right after the bridge.)

**Tuesday, 11 April, 9-11am. Wetland Wander with WREN and BLM at Oak Hill.** WREN's FIRST Wetland Wander at this location. Learn all about this essential habitat from BLM restoration ecologists and see first-hand restoration in action. WREN staff and volunteers will guide this walk. Participants should bring water and wear muck boots. WREN will provide binoculars. Directions: Head west on Royal Avenue, turn left onto Oak Hill Cemetery Road—follow to end. Park along Oak Hill Cemetery Road and meet at the gate.

### The University of Oregon's Museum of Natural and Cultural History

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

## Native Plant Society of Oregon, Emerald Chapter

**Thursday, 20 April, 7pm. Oregon Flora Project Website Updates.** Thea Jaster tells us how "the Oregon Flora Project is transforming its interface with the world!" Join us for a sneak preview of the new OregonFlora (yes, one word) website. We will guide you through the sleek new design with enhanced mapping and plant identification tools. Tour the newly minted gardening portal, an interface to select native Oregon species for your landscaping projects. Meeting location: upstairs in the Stellaria Building, 150 Shelton-McMurphy Boulevard, Eugene.

## Nearby Nature

**Sunday, 16 April, 1-2pm. Sunday Family Fun: Get Egg-Cited!** Meet Nearby Nature's costumed Duck, check out a cool nest collection, and enjoy egg-citing games and crafts. Meet in the Tykeson Room of the Eugene Public Library.

**Saturday, 22 April, 10am-1pm: SOLVE IT for Earth Day with Nearby Nature.** Join Volunteers with Nearby Nature for an Earth Day themed clean up of Alton Baker Park and the Whilamut Natural Area. Please wear clothing appropriate for the weather, bring your own water bottle, and wear something you don't mind getting dirty! The meeting location for this event will be the main parking lot of Alton Baker Park, on the large grassy field. Please RSVP [here](#) and contact parkhost@nearbynature.org or call 541 687 9699 for more information.

**Sunday, 29 April, 10am-noon. Nature Quest: WOW News!** Enjoy a newt quest in Tugman Park! Learn about these cool critters from naturalist Tom Titus as we explore the wild side of this south Eugene park. Event co-sponsored by the Eugene's Southeast Neighbors. Meet at the Tugman Park picnic shelter (3666 Hilyard Street, Eugene). Members free, non-members \$5/family. Pre-register: 541-687-9699.

### ENHS FIELD TRIP TO MALHEUR NATIONAL WILDLIFE REFUGE Thursday–Sunday, 1-4 June

The spring 2017 ENHS field trip will be to the Malheur Field Station, where we will enjoy world-class bird watching on the Refuge, at the field station, and at the Refuge headquarters. Side trips also are possible. Carpools will be arranged.

**Accommodations at the Field Station:** We will stay in recently renovated spaces, some of which have separate bedrooms with two beds. The Field Station will provide three meals per day on Friday and Saturday and two meals on Sunday, with pack-your-own brown bag lunches.

**Costs:** Lodging is \$30 per person per night, the eight meals add to \$87 per person, and there will be a small cleaning fee, for a total of \$177 per person (in 2014, our last trip to Malheur, this figure was \$172).

**Details:** This is not a guided trip. However, people who have been to the area have various favorite places. We will leave Eugene Thursday afternoon. Pack your own dinner or stop for it along the way (a deli in Bend is a popular spot). Friday and Saturday can include the Refuge headquarters, the central patrol road in the Refuge, and a loop around Steens Mountain with stops at Mann Lake, Mickey Hot Springs, Pike Creek, Fields, and other places in the Alvord Desert and Catlow Valley. Sunday will be a shorter day, with a possible stop at Fort Rock.

**To participate:** The trip is capped at 20 participants. Make a check out to the Eugene Natural History Society and give it to Judi Horstmann or Kim Wollter at the monthly meeting or mail it to the Eugene Natural History Society, P.O. Box 5494, Eugene, OR 97405. Be sure to provide participant name(s), phone numbers, snail mail addresses, and e-mail addresses. All payments must be made by **1 May**. Refunds may be made in the case of emergencies. For more information, contact Kim Wollter at 541-484-4477, [kwollter@comcast.net](mailto:kwollter@comcast.net).

**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

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State & Zip \_\_\_\_\_ Phone \_\_\_\_\_

E-mail (if you want to receive announcements) \_\_\_\_\_

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
	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:

Eugene Natural History Society  
P.O. Box 5494, Eugene OR 97405

The May meeting is our annual Business Meeting. Members will be asked to vote on whether to accept the slate of officers and at-large Board members.

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 6pm it's open to the public.



Nemertean worm larva (l) and adult (r). Photos by S. Maslakova.

### ENHS Officers and Board Members 2016-2017

President: Tom Titus [titus@uoregon.edu](mailto:titus@uoregon.edu) 541-510-2500

Vice President: Rebecca Hazen <mailto:rebeccahazen2011@comcast.net>

Immediate Past President: David Wagner [davidwagner@mac.com](mailto:davidwagner@mac.com) 541-344-3327

Secretary: Reida Kimmel [rkimmel@uoneuro.uoregon.edu](mailto:rkimmel@uoneuro.uoregon.edu)

Treasurer: Judi Horstmann, [horstmann529@comcast.net](mailto:horstmann529@comcast.net)

Board: Ruth BreMiller, John Carter, Tim Godsil, Rebecca Hazen, August Jackson, Phil Johnson, Kris Kirkeby, Dean Walton, and Kim Wollter. Herb Wisner, emeritus

Website Webmaster: Tim Godsil, [tgodsil@uoregon.edu](mailto:tgodsil@uoregon.edu)

Nature Trails: Editor: John Carter, [jvernoncarter@comcast.net](mailto:jvernoncarter@comcast.net); Support Staff: Ruth BreMiller and Reida Kimmel.

### Schedule of Speakers and Topics for 2016-2017

21 Apr. – Svetlana Maslakova – Python of the Sea: Natural History of the Nemertean Worm  
19 May – Ed Alverson – Southern Willamette Valley Natural Areas Through the Seasons