

Nature Trails

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Wolves on Isle Royale Photo credit: Rolf Peterson

The Wolves and Moose of Isle Royale: Where Environmental Science meets Environmental Ethics

Michael Paul Nelson

**Ruth H. Spaniol Endowed Chair of Renewable Resources,
Department of Forest Ecosystems and Society, Oregon State University**

**Friday, 19 October 2018, 7:30pm,
Room100 Willamette Hall, UO Campus**



In her book *Great Tide Rising*, Kathleen Dean Moore says of Michael Paul Nelson, “Michael is different from most philosophers. He’s funny and irreverent and worried about the world, and especially about wolves.” Nelson,

our October speaker, has a remarkably varied biography. Among his many publications is the book *Moral Ground: Ethical Action for a Planet in Peril*, co-edited with Moore, in which these two committed environmentalists asked “one hundred of the world’s truth-tellers” to contribute an essay in response to this question: *Do we have a moral obligation to the future to leave a world as rich in possibilities as our own?* Nelson and Moore’s organization of the essays (every person they asked submitted one!) fit into what they call “thirteen good reasons to save the world.”

Here are those thirteen reasons. *We must act for the sake of human life and thriving. We must act for the sake of the children. We must act for the mutual flourishing of all life. We must act for the sake of the Earth. We must honor our duties as stewards of divine creation. We must honor our duties to protect human rights. We must honor our duties to act justly. We must honor our duties toward future generations. We must honor our duties of gratitude and reciprocity. We must act because we are compassionate. We must act because we love the world. We must act because we feel the beauty of the world. We must act because we are people of integrity.* If ever there were thirteen sentences worthy of committing to memory, these are.

Nelson wears many hats: writer, environmental scholar, teacher, speaker, consultant, and professor of environmental ethics and philosophy. He holds the Ruth H. Spaniol Endowed Chair of Renewable Resources in the Department of Forest Ecosystems and Society at Oregon State University. As the Lead Principal Investigator for the [HJ Andrews Experimental Forest Long-Term Ecological Research](#) program at OSU, Nelson is the only philosopher ever to lead one of NSF’s 27 LTER sites. Nelson also serves as a senior fellow for OSU’s [Spring Creek Project for Ideas, Nature, and the Written Word](#). Nelson and John A. Vucetich, from Michigan Technological University, are the co-founders and co-directors of the Conservation Ethics Group, an award-winning environmental ethics consultancy group fusing ethics with social and ecological science.

Nelson hails from Janesville, Wisconsin. Initially a biology major at the University of Wisconsin, Stevens Point, Nelson found himself more interested

in his philosophy classes, to the point that his B.A. is in philosophy/religious studies. He went to Michigan State University for his Master’s, also in philosophy, and his Ph.D. in philosophy is from Lancaster University, England. From 1993 to 2004 Nelson held a joint professorship in philosophy and natural resources at the University of Wisconsin, Stevens Point. From 2005 to 2007 he was a professor of philosophy at the University of Idaho. From 2007 to 2012 he held a triple-joint appointment in the Lyman Briggs College, the Department of Fisheries and Wildlife, and the Department of Philosophy at Michigan State University. In 2012 he took up his present post at Oregon State University. His research and teaching interests are broad; they include hunting ethics, theories of environmental education, wildlife ecology, conservation biology, questions about science and advocacy, and the teachings of Aldo Leopold.

Of those hats Nelson wears, the one most directly relevant to his talk to us is this one: he is philosopher in residence of The Isle Royale Wolf-Moose Project in Lake Superior, the longest continuous study of a predator-prey system in the world. The project team includes geneticists, social scientists, filmmakers, and—as Nelson puts it—one bewildered philosopher. While Nelson was at Michigan State, John Vucetich, co-director of the Project, invited him to visit this unique study site. This was in 2005 and he has been attached to the Project ever since. On his visits to Isle Royale, Nelson gets down and dirty, kneeling in the middle of a moose carcass, rubber gloves on, dealing with large, hungry mosquitoes and the stench of a long-dead animal. He says, “What I really like about my work, is that it exists at the edges of disciplines.” Yes. Several come to mind: physiology, anatomy,



Photo credit: J. Vucetich

ecology, and mortuary science. One that does not spring to the fore, at least for me, is philosophy. But as Nelson points out, this project has had important implications for and direct impact upon our policies about wolves, and offers an example of efforts to understand something about the human relationship with nature that lies at the edges or fusions of our academic disciplines. As the population of wolves on the Island waxes and wanes, one central question—a question that arises more and more often as we humans continue to encroach on wilderness—is whether to intervene. If there are no wolves left, isn't the Project over? Should wolves be ferried to the Island from somewhere else or should the study go dormant unless and until wolves get there by themselves?

The section in Nelson's C.V. titled Invited Presentations, Seminars, Conference Papers, and Posters contains over 200 entries, the subject of many of which is closely related to what he'll be talking to us about. The invitations have come from many parts of this country, as well as from other parts of the world. Clearly, lots of persons and organizations other than ENHS know that Nelson knows what he's talking about and that he can say it well. We are in for an inspiring evening. Join us at 7:30pm on Friday, 19 October in room 100 Willamette Hall on the UO campus to hear Michael Paul Nelson's presentation *The Wolves and Moose of Isle Royale: Where Environmental Science meets Environmental Ethics*. Save room for cookies. John Carter

Resilience

by Reida Kimmel

I look back on summer and remember heat and smoke. A strange season. Douglas-firs continued to die, victims of ordinary root and insect diseases that they should have survived were it not for the added stress of drought. Our new hotter, dryer climate has brought with it a plague of weeds. The most hateful is the shiny geranium (*Geranium lucidum*) in our fields, even where no one walks and no livestock graze. Seeds must have been brought by deer or the wind. We will try to control it close to the house with hand weeding and Chuck's propane torch, but the fields are hopeless. *Ranunculus repens* is a horror amongst my perennials. Endless weeding is the only control, but it just keeps coming back wherever there is moisture. Tarweed, which I eliminated decades ago, has returned, but native and easily restrained. Pennyroyal, lover of winter wet and summer dry, is now a problem. More hand weeding. It covers many fields in southern Oregon, and now I see it spreading in Lane County. It is pretty and smells good, but it is toxic to pets, not even safe to use as an herbal flea killer.

It is less than two weeks since the last Barn Swallows left us, a record for late departures. During the miserably hot weather in July, a number of occupied mud nests fell off of the torrid west-facing underside of the roof. The babies were too young to survive the fall. A bald-faced hornet colony built a paper nest up in the hidden part of the rafters. Baby Swallows found dead on the barn floor had a sucked-dry look, and wounds on their stomachs. We blamed hornets. Then, luckily, the paper nest also fell down. That night Chuck (mostly) and I got it into a bucket of water weighted down with a stone-filled bucket, and drowned all the wasps. Barn Swallows regularly try to raise two clutches, and the second nests did

well, though some of the latest broods did not fledge until after Labor Day, delaying the swallows' usual departure. But by September eighth, all the swallows were gone except for one nest with three fledglings. They stayed and stayed, flying off in the morning and returning to the nest at night. Every evening I told



Photo credit: Cameron Rognan, Cornell Lab of Ornithology

them goodbye, godspeed, but they kept returning to the nest. Finally, on September sixteenth, they came home for the last time, and now the barn is quiet. I miss them very much.

A flock of more than ten Goldfinches is still here, devouring sunflower seeds. I can recognize a member of this flock by a small white mark on its head. The winter bird flocks are with us too. Juncos "click" and "chip" as they pick up seeds at the barn. They forage under the feeders too. Don't let anyone tell you that Juncos are obligate ground feeders. They use the hanging feeders very competently. Our Spotted Towhees also refute this slur on their athletic abilities. Though not graceful about it, they can and do hold onto the feeder perches. Black-capped and Chestnut-backed Chickadees, Nuthatches and a

Golden-crowned Kinglet are here too. The Mourning Dove flock now numbers ten. That is a bird that just cannot use the feeders, though not for lack of trying, a sadly comical sight.

Larger vertebrates may be in trouble. Accelerated logging, fires, and several years of drought combined with rural population growth are pushing both herbivores and predators into the human-dominated sphere. Bobcats, coyotes, raccoons and foxes can adapt to living with people, but people have trouble learning to live with them, and are even less flexible when confronted with sharing space with black bears and cougars. Recently we were treated to the sight of a big bear watching the traffic on Fox Hollow Road, draped over a guardrail like a customer belly up to the bar in a tavern. Friends have had bears in their orchards. We rejoice that, finally, there are foxes on Fox Hollow Road, a mom (or dad) and four kits. They are on the road too much. One was killed, possibly by a car, on Le Bleu. We find little foxy poops in the driveway, and lost a fat, feeble old hen to some predator. We hope a fox.

Because we rely solely on a well, we must be very cautious about watering. But even drought-tolerant natives need water. It is sad to see our mock orange wilting. We save all the grey water from the kitchen sink and bucket our pet plants, keeping the ferns and Coast huckleberries looking lush. Our young vine maples have held up well in spite of almost no water, and so have our little Japanese maples. The flowering currants are definitely suffering, and our “wet garden” plants are alive but very scruffy. I am so happy that I have flowers, vegetables and herbs

mixed in the fenced garden. The crops share soaker hoses, a sprayer, and Chuck’s faithful hand watering, and the whole space is very productive. Having tall plants—grape vines, delphiniums, beans, peas, and winter squash—planted along the fence provides a visual barrier that has always deterred deer, even though the fence is only six feet high.

Now it’s fall, still dry, still strange. Poison oak has finished its usual peach and crimson display. Maples and dogwoods are gloriously gold and red. Trees and bushes produced fruit in super abundance this year. Along the roadsides, neglected apple trees bow under the weight of their fruit. Fat, saucy Douglas squirrels are ripping cones from the healthy firs. Cone scales pile up below where they extract the seeds. The currant, hawthorn, and Madrona berries are gone, but Nootka roses, red-twig dogwood, and rowan trees are covered with fruit. This bounty won’t last long. Once the berries are perfectly ripe, or over-ripe, the birds will harvest every one within a few days. Rose hips, snowberries, and cotoneasters are winter fare, perhaps just not as tasty.

Except for the odious eight turkeys devouring lettuce and excavating the corral, it might feel like perfection attained, but I always worry. How much longer will we have water? Will we be the next fire victims? Resilience is a word I often hear these days. It’s the big question of our times. Which organisms will prove to possess the resilience to adapt and thrive in spite of climate change? I think I am the one not resilient, always longing for summer rainstorms and the earthy smells of wet, cool falls. Can I adapt, or must I mourn forever?

Bees in Her Bonnet

by August Jackson

The historical contributions of women in science often go unrecognized, and this is especially true in the basements and back hallways of scientific endeavor where those who might stand to recognize the contributions number in the low thousands. In her short life of 44 years, Grace Sandhouse unraveled much of the complicated taxonomy of about 150 species of North American mason bees in the genus *Osmia*. Bees in the Eastern United States have been well inventoried, and melittologists working there have newer improved keys, while out West the innumerable faults and folds in our diverse geography hide perhaps dozens of species of unnamed *Osmia*. Despite an antiquated anatomical phraseology, Sandhouse’s 1939 key to species hasn’t been revised and is still the start and often end-point for species determinations west of the Continental Divide.

Brilliantly metallic-green like a number of species in the mason bee subgenus *Melanosmia*, *Hoplitis louisae* and two sister species were originally placed among the *Osmia*, including in some of Sandhouse’s earlier works. One of my favorite bees, I am only able reliably and easily to find *H. louisae* among the alpine tundra within several hundred feet of the summit of Steens Mountain in the southeast corner of Oregon. Though only just over a centimeter in length, males of the species are recognizable from yards away based on the heavily modified antennae that recall the longhorn steers that range some of the mountain’s lower slopes. Winds gust ceaselessly at this elevation, shredding the cellophane wings of bees to a degree at which flight begins to seem improbable, and one starts to entertain the idea that they suffer these conditions solely for the view. Without apparent floral host specificity, it is unclear why this species isn’t more widespread. This is one



of many questions surrounding the biogeography of the thousands of North American bee species that could use answering if we are concerned about the fate of bees not just vis-à-vis their role in preserving ecosystem function, but in conserving diversity for its own sake. Most funding is directed toward addressing the former issue, but spend some time with our native bees and the importance of the latter becomes apparent.

With likely over 300 species of bees at home on Steens Mountain, the region is one of a number of hotspots for bee diversity across the state. Bees in the family Megachilidae, which includes the well-known masons, leaf-cutters and wool-carders, are especially diverse and abundant. In popular imagination, if imagined at all, this group of bees is generally conceived of as nesting in wood cavities, taking advantage of appropriate-diameter beetle holes in dead wood. Though largely accurate, there is plasticity within species (I've found one of our valley mason bees nesting in the barrel of a propane torch); some tend to nest in snail shells, and many others are obligate ground-nesters. With so many species within this family found above tree line on Steens Mountain, the nesting habits become particularly intriguing.

Descending into the treeless Wildhorse Canyon every July, there is a favorite mud-gathering spot for female mason bees where a small spring just soaks the upper edge of the trail. Due to the consistency of the material or possibly the presence of anti-microbial elements, favored mud-gathering spots may be used by successive generations of mason bees for years. Depending on species, some may be

building dauber-like nests on the lee-side of the large volcanic boulders dislodged from above. I suspect too that some are nesting in the pores of the same and have my suspicions confirmed when I watch a parasitic cuckoo leaf-cutter bee (*Coelioxys* sp.) determinedly cruising the boulders, looking for nests to break into. Another bee identifiable from a distance, all *Coelioxys* females are equipped with an impossibly tapered abdomen that is used to puncture the layers of clipped vegetation forming the partitions between the nest cells of leaf-cutter bees.

A good portion of bee diversity can be found in these cuckoo species. Spread across dozens of genera in three families in North America, the parasitic habit has evolved separately at least 27 times. Outside of the cuckoo

bumblebees, the lifestyle is essentially the same no matter the lineage: females break into the nests of other bees and deposit their eggs in cells where food has been provisioned. Without the need to gather pollen to feed their young, the cuckoo bees visit flowers only to feed themselves and are therefore substantially less effective pollinators. Naturally at low abundance in the environment, they are often among the first bees to disappear in heavily altered landscapes and are lost in the bees-as-pollen-vectors conservation schema.

As summer rounds into fall I'm beset with a dull depression for a bit, faced with not sharing space with a (live) bee for another five months. The feeling was more acute this year, compounded by an inability to pull myself from the news cycle and a feeling of responsibility not to do so. But now is the time to pin, label, identify, and photograph the bees I've collected over the season, and it's a welcome distraction. Each is a data point in time and space, each a marker of biodiversity, a representative of its species, some of which haven't been collected in a century. As I work with each specimen delicately, or the nearest facsimile of delicateness I can invoke, I am aware too that each is an individual whose life I've shortened by a couple weeks to serve this purpose. Together they provide a snapshot of a community, provide a basis for conservation, and argue compellingly for diversity for diversity's sake. We need diversity in bees, in science, in *scientists*, and by God, in the Senate. I won't pretend to know her feelings on the final point, but I think Grace Sandhouse would agree with at least the first three.

Events of Interest in the Community

Oregon Humanities Center

Wednesday, 17 October, 7:30pm. Plastic Pollution: Art to Action. How can we stem the tide of plastics overwhelming our planet? The Oregon Humanities Center's O'Fallon Lecture in Art and American Culture presents a talk about the pervasive problem of plastic pollution with artist and activist [Dianna Cohen](#). 156 Straub Hall on the UO campus.

McKenzie River Trust

Sunday, 20 October, 9am-12pm. Mammals and More Nature Tour. Join the McKenzie River Trust and David Walp for a tour of the 190-acre [Coyote Spencer Wetlands](#). The extensive, intact wetland habitats of the Coyote Spencer Wetlands are home to an impressive variety of plants and animals. We'll explore life along the edges of emergent and forested wetlands and visit signs of several different mammals present on this site. Bear, beaver, and elk all regularly use the property. Located just 5 miles southwest of Highway 126, upstream of Fern Ridge Reservoir, this protected property is a conservation gem in Eugene's backyard. You will need to bring: waterproof hiking boots, water, and enough snacks to keep your energy up. Bring binoculars or a hand lens if you have access to them. We will send registrants a detailed email with what to bring, directions, and expected conditions one week prior to the tour. To register go to <http://www.mckenzieriver.org/events/list/mammals-and-more-nature-tour-at-the-coyote-spencer-wetlands-4/>. For information on other MRT events happening this month, go to <http://www.mckenzieriver.org/events/-event-listings>

Lane County Audubon Society

Saturday, 20 October. Third Saturday Bird Walk. Go to <http://www.laneaudubon.org/> for location and times.

Tuesday, 23 October, 7:30pm. Upstream, Midstream, and Downstream: Working with Living Rivers in the Upper Willamette Basin. Joe Moll has been Executive Director of McKenzie River Trust since January 2005. The Trust has been active in river land conservation and restoration throughout Lane and neighboring counties since 1989. The Trust has been a core member of the Willamette River Initiative, a collaborative effort among private landowners, state and federal agencies, and non-profit organizations committed to river health throughout the Willamette Basin. Since February 2018, Moll has been an appointed Commissioner for the Oregon Water Resources Department. Eugene Garden Club, 1645 High St.

Mt. Pisgah Arboretum

Sunday, 14 October, 8-11am. 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 fall 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. Don't forget your parking pass. \$5, members free.

Saturday, 20 October, 10am-5pm. Mushroom Foraging Workshop. Join mushroom enthusiast Lehi Shultz on a search for local mushrooms. Meet at the Arboretum for a short walkabout to go over mushroom basics. The group will then carpool to a mushrooming location about 45 minutes away. Using tools of observation, you'll learn how to identify edible, poisonous and medicinal mushrooms. This introductory class will prepare you to find and safely harvest mushrooms on your own. Be prepared for the possibility of some steep, off-trail hiking. Members: \$30, Non-members: \$40. Don't forget your parking pass. Pre-registration required. Call (541) 747-3817 to register or visit <http://www.mountpisgaharboretum.com/workshop-registration/>

Sunday, 28 October, 10am-5pm. Mushroom Festival. Join us for one of the largest fungal celebrations on the West Coast! Co-sponsored by Lane Community College and the Cascade Mycological Society. Hundreds of local mushroom species on display, live local music, hourly nature walks with experts, scarecrow contest, fresh-pressed apple cider, food booths, and local arts, crafts, and plant vendors. Suggested donation \$8, Arboretum members free. For more information, visit <http://www.mountpisgaharboretum.com/festivals-events/mushroom-festival-2018/>

Saturday, 3 November, 10am-12pm. Medicinal Trees Walk. Learn about the healing properties of trees! Join herbalist Sue Sierralupe on a short walk along the riverbank to view Mount Pisgah Arboretum's majestic flora and their medicinal qualities. This will include a short lesson on identifying trees in the cooler seasons. Meet at the Visitor Center. Don't forget your parking pass. \$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

Monday, 15 October, 7pm. Meadow Restoration on the Middle Fork District. In her talk **Molly Juillerat**, District Ranger of the US Forest Service, will focus on maintaining meadow species and plant diversity. Come see how the Middle Fork is restoring meadows to encourage and diversify plant and animal species. Juillerat began her career with the National Park Service. She has worked as a botanist at Crater Lake and in Hawaii. From there she worked for the BLM in Oregon and then for the Willamette National Forest. The meeting is at the Amazon Community Center, 2700 Hilyard St.

Nearby Nature

Saturday, 20 October, 5:30-9pm. Haunted Hike! It's time for the 22nd annual Haunted Hike! At this fun, family-oriented event, Nearby Nature guides lead special night hikes along a festive pumpkin-lit trail through Alton Baker Park. (*Volunteer Pumpkin Carving October 18th!*) On each hike, folks encounter all sorts of furry and feathered creatures of the night in costume, from a gigantic bat to a sneaky spider (Check out photos from prior years [here](#)). Hikes last about an hour and folks are welcome to come early or stay after their scheduled hikes to enjoy additional festivities — games, crafts, treats, and a raffle — in our decorated picnic shelter. The hikes are most appropriate for pre-school through elementary-aged kids, but adults love them too. Haunted Hike is free for Nearby Nature members and \$5 per person for non-members. Groups are welcome. Pre-registration is required! To register go to <http://www.nearbynature.org/events/october-20-haunted-hike-1/?searchterm=None> and click the green Register Now button. Questions or having problems registering? Or want to register a large group? Or want to donate something for our raffle? Call 541-687-9699, ext #2.

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

Go to <https://www.naba.org/chapters/nabaes/> for information on NABA's next meeting.

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



Moose in Isle Royale National Park

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2018-2019 Speakers and Titles

19 Oct.	Michael Nelson	Wolves and Moose on Isle Royale: Where Environmental Science meets Environmental Ethics
16 Nov.	Scott Fisher	Gaining a Cosmic Perspective: An Astronomical Look at our Place in the Universe
14 Dec.	Bruce Newhouse	Pollinator Primer: Your Tiny Neighbors and the Plants They Love
18 Jan.	Laura Tesler	Undersea Photography
15 Feb.	Samantha Hopkins	Evolving Mammals on an Active Landscape: Biogeographic History of Oregon's Mammals Over Deep Time
15 Mar.	Amanda Stamper	Burning for Butterflies, Birds, and Blooms: Prescribed Fire in the Willamette Valley
17 Apr.	Scott Burns	Cataclysms on the Columbia: The Great Missoula Floods
17 May	Vanessa Petro	How Busy are Beavers in Oregon?