

# Nature Trails

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Fruit bats, genus Pteropus. Photo by Merlin Tuttle

## Bats

### Stuart Perlmeter

Retired Educator, Eugene, Oregon

Friday, 20 September 2019, 7:30 p.m.,  
Room 115 Lawrence Hall, UO Campus

Our September speaker admits to having been a poor high-school student. In his home environs of Washington, D.C., the young Stuart Perlmeter had a go-to place where he spent much of the free time he created by skipping classes: the National Zoo. This pirated experiential education had a lasting effect. After barely graduating from high school and then working for four years he enrolled at the University of Maryland, where he studied animal behavior.

When he visited his sister here in Eugene Perlmeter found Oregon very much to his liking, to the extent that he decided to transfer to the University of Oregon. He wrote to two University of Oregon professors, Paul Simon and Russ Fernald, and both invited him to work with them, so he did, while finishing his undergraduate degree. To support himself he got a job driving school bus for the 4J School District.

Shortly after finishing his B.S. at the U of O Perlmeter got a telephone call. It was Dian Fossey, calling from Africa. She asked him if he would be interested in the position of Acting Director of the Karisoke Research Center. I did not ask him how long he deliberated, but I'm guessing it didn't take much time. So at 28 years of age he went to Rwanda to be part of that storied project. After ten months of working with mountain gorillas his job there was done. He returned to the U of O and enrolled in the teaching program, having decided his calling was to be a teacher. The 4J School District gave him his job back. Now, school-bus driver is not a position to which one normally aspires, but for Perlmeter, returning to his bus turned out to be one of the most important moves of his life. Driving a bus loaded with special-needs kids to their class, he met their teacher. And married her. He said, "She fell in love with a *short* (his emphasis) bus driver."

Perlmeter got his teaching license in special education and taught in that field for five years. Then he got a biology endorsement and ended up teaching science, first in middle school, and then high school, for the rest of his career. An indication of his abilities is the award he got in 1990: Oregon Teacher of the Year.

At some point along the way he read Richard Dawkins' *The Blind Watchmaker*. In Chapter 2, titled "Good Design," Dawkins says in the first paragraph, "Natural selection is the blind watchmaker, blind because it does not see ahead, does not plan consequences, has no purpose in view. Yet the living results of natural selection overwhelmingly impress

us with the appearance of design as if by a master watchmaker, impress us with the illusion of design and planning. The purpose of this book is to resolve this paradox to the satisfaction of the reader, and the purpose of this chapter is further to impress the reader with the power of the illusion of design. We shall look at a particular example . . ." The example was bats. After finishing the book Perlmeter found that he was quite interested in bats.

To follow up on this interest he moved to Toronto, Ontario, Canada, and enrolled in York University to work with Brock Fenton, a noted expert in bat behavior. Perlmeter's graduate studies involved trips back and forth between Ontario and Oregon because most of his fieldwork was done at the H.J. Andrews Experimental Forest (which many of us have visited; it's up the McKenzie River, close to the town of Blue River). His research topic was night-roosting patterns in bats; we'll hear about this research in his talk.

Perlmeter finished his M.S., in Behavior Ecology, at York University in 1995.

He got the idea to incorporate two of his passions, bats and teaching, into a new program. He put together a team of high school students to help with the surveys that were a critical part of his research. He started training a cadre of students to spend their summers doing this field research—a unique program. It ran for 12 years—well past his graduate study. Many of the students came back for several summers, even after their graduation. A few returned all 12 years. The work expanded to sites all over the state. The concept worked so well that in some summers there were multiple teams working at once.

In 1998 Perlmeter submitted a grant proposal to the Springfield Utility Board (SUB) to fund a similar program, this time focusing on water quality. The program, Water and Energy Learning Lab (WELL), has been funded by SUB to the tune of \$3 million, and other funding sources include EPA, USFS, BLM, and MWC (McKenzie Watershed Council). WELL is ongoing, and many students first become team members while still in middle school. Teams assess habitat for fish and test water wells for the public. The level of funding enables the purchase of quality instrumentation, so the data collected have real credibility.

Perlmeter's dedication to this non-traditional method of teaching science has changed lives, insofar as many of his students come away with a much deeper understanding of how science is done. Quite a few have gone on to careers in science. In 2015, in recognition of the effectiveness of the methods he had developed and for his own excellence as a



teacher, Perlmeter was selected as Oregon's Math/Science Teacher of the Year.

Shortly after this second statewide award he retired. He now makes custom furniture in his shop at his home outside of Eugene.

Perlmeter points out that despite bats accounting for 25% of all mammal species on earth, the roles *Chiroptera* play in ecosystems has been overlooked until recently. In his talk to us, Perlmeter will delve into his 15 years of bat research to help us understand these fascinating animals. He will cover a range of topics including diversity, basic bat biology, echolocation, roosting patterns, reproductive

strategies, their importance to ecosystems worldwide, and some of the current threats to their populations. If conditions permit, he will bring live bats for attendees to observe up close. Please join us, and if you have youngsters bring them with you. Together we will learn about bats from Stuart Perlmeter, an educator and bat researcher who knows them like few among us, and is gifted at telling their stories. Join us at 7:30 p.m. on Friday, 20 September, in room 115 Lawrence Hall (**not 100 Willamette Hall!**) on the UO campus. Save room for a cookie. John Carter

**This month we meet in 115 Lawrence Hall, NOT in 100 Willamette Hall. Next month we will be back in 100 Willamette Hall.**

## **Charred** by Reida Kimmel

I dread late summer because of fire danger. It did not seem to be a concern fifty years ago. The woods were green. Rains fell occasionally, during most summers. It seemed that fires were infrequent, and usually small. Then there was Yellowstone in 1988 where 1.4 million acres burned inside and out of the Park. The loss was hideous, crushing. But the very next year, Yellowstone blossomed. Grasses, forbs, flowers, seedling lodgepole pines—life returned. It had never left. The post-fire emergence was of species liberated from the old forest's shade, not a different ecology but another phase in the ancient pattern of a forest's life cycle. As a national park, Yellowstone was not salvage logged. We could see how well a forest regenerated without any help from humankind. A significant portion of the ecologically minded community fell in love with fire.

The effects of megafires have been the focus of much research and many publications. University of Montana emeritus professor Richard Hutto was one of the first to detail the rebirth of Yellowstone after the 1988 fires. Hutto has been studying and writing about other burns ever since. Recently he noted that 90% of the wood logged annually in the United States is cut on private land. Of the wood logged on public land, only 11% represents salvage logging. Proportionally, that is a really small amount. A forest changed by a mega burn is precious and unique, worth far more to the planet than to the nation's GNP. Whether fire ecologists are academics, Forest Service scientists like Victoria Saab, or even Michael Dombeck, former head of the Forest Service, all agree that if salvage logging causes long-term damage to soils and watersheds, as is usually the case, it is not worth doing. Still, the debate continues between on the one hand the good science that proves that salvage logging is bad for soils, watersheds, and

the plant and animal life flourishing after big burns, and on the other, industry's demands that burned trees be cut fast before those damnable beetles ruin the wood.

The West's climate has become warmer and dryer. Very large fires occur more frequently. Then, there was the absolute horror, Paradise. Once again, fire was, first and foremost, the enemy. The focus switched to preventing megafires through management, clearing vegetation around homes, prescribed burning, clearing the urban-forest interface. The pressures to salvage-log public lands intensified.

As if designed to lift my spirits, beset with worries for the fate of my own verdant patch of woods and despairing over modern society's destruction of forests, the Summer 2019 issue of Cornell Laboratory of Ornithology's *Living Bird Magazine* devoted twelve pages to a lavishly illustrated article about big crown fires and the new life brought about by this natural process. The setting is the Rice Ridge Fire burn area in Western Montana's Swan Mountain range, where 160,000 acres of forest burned in 2017. The U.S. Forest Service spent \$49 million to fight the fires. The article, "Old Flames: The Tangled History of Forest Fires, Wildlife, and People," with text by Hugh Powell, who trained as a fire ecologist with Dr. Hutto, and photography by Jeremy Roberts, details life histories of some of the big burn's inhabitants. It does far more than just listing and showing birds, beetles, flowers, fungi, toads and myriad other life forms that seek out this newly available habitat. It describes how they have evolved to flourish in this special place. For feeding and nesting, Black-backed Woodpeckers, Three-toed Woodpeckers and other woodpecker species are early arrivals. Burns are preferred habitat for Tree Swallows and Western Bluebirds. Riverine-dwelling Western Wood-Pewees

will flock to burns, as will thrushes, finches and flycatchers. Wood-eating beetles devour the scorched wood and the birds devour the beetles. Long-dormant seeds sprout. Fireweed, spirea, and bear grass plants provide glorious spring and summer displays. Fungi, like fire-loving morels, send up fruiting bodies. Toads and other amphibians thrive in vernal pools. The glorious feast and wildflower display can go on for as long as ten years until the new forest becomes dense and shady.

The 2017 fires in Montana and the Eagle Creek Fire along the Columbia River have a special place in our memories. Chuck and I were to take the Amtrak from Eugene to Minneapolis with a three-day break in Whitefish to enjoy Glacier National Park. Then there were fires. Whitefish and the Park were choked with smoke. Trails and parts of the town were off limits. We cancelled our visit to Glacier, but we did take the train. Though the worst was over, there was a lot of smoke in the Columbia River Valley. We glimpsed the extent and also the spotty nature of the fire, a mosaic of burned and unburned areas typical of Western wild fires. The scene was both devastating and fascinating. Glacier and its environs were less smoky. We wished we had stopped—and so we did, in a separate trip the next year. Sadly, the trails and places we would have loved to see were still closed to visitors. We did have a long lake-boat trip giving good views of the fires' effects east of the

Park entrance. We were entertained with lots of stories about the fire—near escapes, disasters averted—but nothing about megafires being a natural part of a forest's normal life processes.

But people, especially in the West, are going to have to learn that big fires are natural. They are influenced more by wind, temperature and humidity than by any amount of forest management. Forces of Nature, they require Nature's cool air, rain and snow to put them out, not chemicals and water bombs. How can Americans learn to let the wild forests live their natural cycle of fire, death, rebirth, growth and maturity? Hutto invites the public to visit the big burn sites for some of the best birding and wildflower displays they will ever see. Not too many newcomers to fire and its natural history will happen to read the summer 2019 issue of *Wild Bird Magazine*, but thousands of AAA members are being exposed to positive megafire stories in its September-October issue of *Via Magazine*. The article "Return to The Gorge, After the Fire Rebirth and Revival" invites travelers to see what the Eagle Creek fire did, and how the land is repairing itself. "Land of Fire and Ice," another article in the same issue, invites travelers to explore past fires in Glacier National Park—'Montana's crown jewel where wildfires are an essential element of the ecosystem.' Big fires happen and can be okay. So Hot, yes, but so very, very Cool.

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## Close Encounter?

by John Carter

The only animals that had preceded me down the snow-covered old skid road that morning were not, much as my fantasy urged them to be, elk. The tracks were fatter, slightly less elongate and more predictable than elk would have left—no, fantasy aside, these were cattle, the property of one of the ranches in the canyon.

I was taking a brief respite from the struggle of staying upright and quiet on the steep, snowy slopes in this rugged country just south of the Strawberry Mountains in northeastern Oregon, where, although I had rarely seen one, elk were reputed to reside. Granted, the chance of coming across an elk walking on a road, even a very old road like this one, are vanishingly small. But the odds of seeing one before it sees, hears or smells you when you are tottering through snow on a trackless hillside may be even more vanishingly small, so why not take it easy for a few minutes. Such was my rationalization as I moved along in the cattle tracks.

The road had been cut by a good catskinner all those years ago. It followed a small creek and was carved into the steep hillside on the creek's east side,

about thirty feet up from the bottom. Its grade was that of the creek: gentle, and in my direction, downhill. At the start of a fairly long straight section I looked as far ahead as I could and saw a large discoloration in the fresh snow.

It was red. Bright red. Only one thing could turn that much heretofore white snow so red. Blood. A lot of blood. A large mammal's entire supply of blood. My first thought was that a hunter had been in the right place at the right time. But the wind was wrong, I had heard no shot—it didn't add up.

Finishing my cautious approach and arriving at the scene, the confusion gradually resolved into a distinct story, thanks to the tracks so visible in the snow, not one of which belonged to another human. No shot had been fired because the killer's own armament had been more than up to the task. The unsuspecting deer—its tracks and bits of its hair left no doubt that the victim *had* been a deer—had been ambushed as it made its way down the hillside. Just a few feet above the road it had been waylaid by an adult cougar. The cat's hiding place had been beneath the low branches of a fir sapling on the stream-side of the road. The snow was packed down there and paw prints covered the entire area beneath the young tree (A cougar's

paw is surprisingly large; once you've seen a fresh print the memory does not fade, and I had seen several others in my wilderness wanderings. These *were* cougar tracks.). From up the hill it would have been invisible as it crouched beneath those low branches, as it almost surely knew. Whether it had lain there until its prey was almost upon it, or whether it had crept uphill before the deer approached, so as to gain the height advantage, I did not bother trying to ascertain. The arena, with its signs of the struggle and the outcome, was plainly marked out in the red-stained snow, occupying about half the width of the road and extending an equal distance up the beginning of the hillside.

I had just about satisfied myself as to what had transpired there on that deserted forest road when I saw the sunken track where the cat had dragged its kill over the bank, down toward the creek bottom. Decidedly uneasy by this time, I peered ever so briefly over that bank. I saw nothing, and almost instantly put aside the idea of following that fresh skid trail down into the close cover along the stream, perhaps to puzzle out another chapter in this red saga. What entered my mind then was that at that moment and in that place I was no longer at the top of the food chain. Hunting for an elk had in this short time become much less important to me than not being hunted by the cougar. Yes, it had a deer to eat, but I had heard and read stories, how they sometimes chase and kill things for the fun of it, like a house cat kills a mouse or a bird even though it just finished a bowlful of catfood ...

My rifle now felt too long, too unwieldy. If the cougar leapt on me, how could I bring it into play? I wished I had my dad's old pistol. As I continued down the road, still following the cows, I could not resist turning around every few steps to make sure I was not now the hunted. About half a mile of this anxiety-filled slog, this confused hunter/hunted state, was all I could take. I reckoned there was safety in human numbers, and I knew Bill, my brother, was on the other side of the ridge, up the hillside to my right, so I left that road and headed up. At first I tried to be quiet, to continue the charade of hunting, but soon I was crashing through brush, oblivious to the breaking branches, even exulting in my noise, realizing it advertised my progress to whatever critters might still be close by. Before cresting out my chest was heaving with the effort of charging up a thirty-degree snow-covered slope, and sweat was pouring off my face and down my back.

Up on top the sun had melted most of the snow. The country opened to wider vistas, to the comfort of space, and there was Bill. My few moments of near panic were behind me, but I was more than willing to own up to them as I recounted my tale.

In my memory there will ever remain that feeling of being in the presence of a creature that easily could kill me. I feel blessed to have had that experience, to live in an area where we have not extirpated all the apex predators. I have known the feeling of dread, the intensity, the timeless present, the hair on the back of my neck standing up as I searched my surroundings for my potential killer. And I am the more human for it.

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## Events of Interest in the Community

### McKenzie River Trust

Go to <https://www.mckenzie-river.org/events/#event-listings> for a listing of MRT events and tours.

### Lane County Audubon Society

**Tuesday, 24 September, 7:30 p.m. Climate. With Tyler Hallman.** Hallman is an ornithologist from Oregon State University. His research focuses on how to map the distributions and abundances of birds, how these distributions and abundances have changed through time, and how to use citizen science data to address these questions. He has designed and taught classes about birds since his senior year at Pitzer College, including Systematics of Birds at Oregon State University, from which he received his Ph.D. in 2018. Eugene Garden Club, 1645 High St.

**Mt. Pisgah Arboretum** (all these MPA events will occur rain or shine; meet at the Arboretum Visitor Center and don't forget your parking pass.)

**Saturday, 14 September, 10 a.m. – noon. Late Summer Wildflowers Walk.** 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. \$5, members free.

**Saturday and Sunday, 28, 29 September, 10 a.m. – 2 p.m. The Art and Science of Field Sketchbooks.** This workshop is co-organized by Mt. Pisgah Arboretum and Creature Conserve, in support of bringing artists and scientists together to promote conservation. Learn more about Creature Conserve at [www.creatureconserve.com](http://www.creatureconserve.com) In this two-day workshop for artists of all levels, local illustrator and Creature Conserve artist/instructor Emily Poole will teach the basics of field sketching and keeping a sketchbook that reflects your interests, and Mount Pisgah Arboretum Interpretation Coordinator August Jackson will lead the

group on an ecological sketching tour of the Arboretum. You will learn how to draw from nature in both technical and abstract ways, and explore different approaches to sketchbooking to find what works best for you. On Saturday, the group will discuss and practice sketchbooking and field-note techniques in the classroom. On Sunday, the group will walk around the Arboretum, learning and asking questions with August and Emily, and using their sketchbooking techniques to document the flora and fauna. This event consists of two 5-hour workshops with breaks for lunch. You will need a sketchbook, a pencil/pen, and your choice of additional mediums. Please also bring a water bottle, sun hat/sunscreen, and whatever else you may need to work comfortably outside. Be prepared to spend most of the day on Sunday hiking outdoors on mildly steep and/or uneven ground. Meet at the Visitor Center. Members \$60, non-members \$70. 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. 9 a.m. noon.** Contact [volunteer@bufordpark.org](mailto:volunteer@bufordpark.org) for more information.

**Tuesdays and Thursdays Nursery Work. 9 a.m. noon.** 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.

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

**Saturday, 14 September. Second Saturdays at the Museum. Science and Culture Adventures for Families.** Join us on the second Saturday of the month and dig into activities that will spark your child's curiosity about our past, present, and future. September's Second Saturday is all about Peregrine Falcons and other raptors, featuring science activities and bird-focused crafts fun. A drop-in event, Second Saturday is perfect for children ages three and up with an accompanying adult. Included with regular admission; free for museum members and UO ID card holders. Show your Oregon Trail or other EBT card for an admission discount.

**Tuesday, 19 September. Raptors of Oregon: Successes and Concerns in a Changing World.** Join Kit Lacy of the Cascades Raptor Center for an in-depth look at Oregon's modern raptors and the dynamic habitats they occupy. Co-sponsored by the Cascades Raptor Center. Included with regular admission; free for museum members and UO ID card holders. Show your Oregon Trail or other EBT card for an admission discount.

**Friday, 20 September. Little Wonders: Stories and More for Preschoolers.** Now on the third Friday of the month! You and your child are invited to learn and play at the museum during our monthly Little Wonders event. This month's theme is Wild West Wingding, featuring a story, crafts, and activities celebrating cowboys and cowgirls, ranching, and the culture of the Old West. Included with regular admission; free for MNCH members and UO ID card holders. Show your Oregon Trail or other EBT card for an admission discount.

**Thursday, 3 October. People and Plants: Foraging in Oregon's Ancient High Desert.** Well-preserved plant remains recovered from archaeological deposits present a rare opportunity to learn about the ancient resources used by Indigenous People in Oregon's Northern Great Basin. Join Jaime Kennedy, the museum's paleoethnobotanist, for a discussion of these seeds and other remains—and the information they contain about Oregon's earliest communities. The museum's annual Archaeology Talks are part of the statewide celebration of Oregon Archaeology Month. Included with regular admission; free for members and UO ID card holders.

**Exhibits:** Exhibit hours: Tuesdays – Sundays 11 a.m. to 5 p.m. To learn more go to <https://mnch.uoregon.edu/about-museum>  
**Oregon—Where Past is Present.** Delve into Oregon's story, from the archaeology of the First Americans to the dynamic cultures of today's Tribes. **Explore Oregon.** Experience the dynamic forces that shape Oregon's landscapes, climate, and ecosystems. Meet giant salmon, Ice Age sloths, and other amazing animals from across the millennia. **Peregrine Falcon: From Endangered Species to Urban Bird.** Helping raptors survive and thrive. **Native Plant Courtyard.** The Glenn Starlin Native Plant Courtyard is a living research collection of Oregon's native plants.

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

**Monday, 16 September, 7 p.m. Emerald Chapter's 40th Anniversary.** Emerald Chapter celebrates 40 years. We've made a difference! Charlene Simpson & David Wagner will host. Meet founders, hear the stories, see a slide show, enjoy cake and beverages. Amazon Community Center, 2700 Hilyard St.

### **Nearby Nature**

**Saturday, 21 September, Capella Benefit Barbeque and Raffle.** Join us at Capella Market, 2489 Willamette St., for a benefit barbeque for Nearby Nature plus your last chance to buy raffle tickets for a shopping spree at Capella plus a \$100 cooking-themed gift basket from Down to Earth! Raffle tickets will be on sale at the store starting in late August.

**Saturday, 21 September, 10 a.m. to 1 p.m. Alton Baker Park Cleanup.** As part of SOLVE's statewide Beach and Riverside Cleanup, Nearby Nature is once again hosting a cleanup of Alton Baker Park and the Whilamut Natural Area. This event will focus on the extensive waterways and riparian areas found in the park.

**Saturday, 28 September, 1 p.m. to 3 p.m. Citizen Science Saturday: Fall Forest Fungi.** Join us for citizen science investigations, including data collection, observations, photography, and more. This month we will focus on fungi in the fall forests of Alton Baker Park's Eastgate Woodlands. Event open to all but designed especially for adult participants. If you have a smartphone or a camera, please bring one to take pictures. Smartphone users please load the iNaturalist app (<https://www.inaturalist.org/>) onto your phone if possible. Members free, non-members \$5. Pre-register at 541-687-9699 or online. Meet in the parking lot at Eastgate Woodlands in Springfield ([https://www.willamalane.org/eastgate\\_woodlands.php](https://www.willamalane.org/eastgate_woodlands.php)).

**Tuesday, 8 October, 10 a.m. to 11:30 a.m. Green Start Play Day: Creatures of the Night.** Enjoy outdoor nature play in our Learnscape, plus toddler and pre-school activities and stories—this month about creatures of the night. Rain or shine! Kids 5 and under only, with an adult. Members free, non-members \$5/family. Pre-register online or call 541-687-9699, ext 2.

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

For information on upcoming events go to <https://www.naba.org/chapters/nabaes/>

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

**Saturday, 14 September, 10 a.m. to 2 p.m. Family Exploration Day.** Choose your opportunity. Explore the trails with binoculars, field guides, bug nets, hand magnifiers, and bug boxes, or, embark on a nature-inspired scavenger hunt, or, use items from nature and solar paper to create your own natural print, try out a vision-o-meter, or, make a harvesting bag to take home. Drop by anytime between 10 a.m. and 2 p.m. to check out backpacks and make some art. WREN staff and volunteers will be on hand to answer your questions. This event is free and families are encouraged to participate. WEW Project Office, 751 S. Danebo Ave.

**Saturday, 28 September, 9 a.m. to noon. National Public Lands Day.** NPLD is an opportunity to spend time outside with family and friends, connect with neighbors, and enjoy the benefits that come with the satisfaction of giving back—all things that enable us to live happier, healthier lives. Volunteers will pull invasive species, clean-up garden beds, and plant native plants along the Tsanchiifin Trail. All participants will receive a t-shirt, parks pass, snacks, and refreshments! This is a family-friendly, free event. No registration needed. WEW Project Office, 751 S. Danebo Ave.

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**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 Eugene Natural History Society meets on the third Friday of the month September through May except in December when the meeting is on the second Friday. Meeting time is 7:30 pm and our standard meeting location is room 100 Willamette Hall on the University of Oregon Campus. Any temporary changes will be noted in the newsletter for the current meeting and on our website: <https://blogs.uoregon.edu/enhsuoregon/>

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



Genus Tadarida. Photo by Merlin Tuttle

### ENHS. Officers and Board Members 2019-2020

President: Dean Walton <mailto:dpwalton@uoregon.edu> 541-346-2871

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

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

### 2019-2020 Speakers and Topics

20 Sept.	Stuart Perimeter	Bats
18 Oct.	Jesse D'Elia	Reintroducing California Condors to the Pacific Northwest
15 Nov.	Greg Retallack	Astropedology and the Origins of Life
13 Dec.	Scott Pearson	Tufted Puffins in a Dynamic Seascape
17 Jan.	Kathleen Moore	Heartening: Encouragement for Earth's Weary Lovers
21 Feb.	Paul Cziko	Opening a "Window" into Antarctica's Frozen Ocean
20 Mar.	John Helmer	Steens Mountain: A Tale of Beauty and Hard Work
17 Apr	John Bishop	The Weevil Empire: How Insects Rule Plant Succession at Mount St. Helens and Other Stories from the Pumice Plain
15 May	David Wagner	Mosses, Liverworts, and Hornworts