

# Nature Trails

Published by the Eugene Natural History Society

Volume Fifty-five, Number Seven, October 2021

## **Enemies with Benefits: A New Paradigm in Carnivore Community Ecology**



Laura Prugh with tagged fawn, about to be released.

**Laura Prugh**  
**School of Environmental and Forest Sciences**  
**University of Washington**  
**Friday, 15 October 2021, 7:30 p.m.**

The Eugene Natural History Society invites you to their October Zoom meeting. The Zoom meeting will open at 7:00 but our meeting will begin at 7:30. This allows everyone time to get connected and join in informal conversation. Time: 15 October 2021, 07:00 p.m. Pacific Time (US and Canada). Join Zoom Meeting:  
<https://zoom.us/j/97499095971?pwd=eE9sdG9hSHMvOHhIUeJuU2lwT20rdz09>

We had hoped to return to 100 Willamette this fall, but given the current state of the pandemic, the Eugene Natural History Society will continue to hold meetings via Zoom until it is safe to meet in person. We will use the same link for each meeting unless otherwise noted. The current link can always be found at [eugenenaturalhistorysociety.org](http://eugenenaturalhistorysociety.org). Thank you for your continued support! August Jackson, President, ENHS

Our October speaker, Laura Prugh, is an Associate Professor in the School of Environmental and Forest Sciences at the University of Washington. Prugh is a wildlife ecologist. Her interests lie in the interactions among wild species, how one animal species can impact others in both negative and positive ways. Her lab is pursuing several interesting projects. In both northern Washington and Denali National Park in Alaska, she and her group have been examining the ways wolves impact mesopredators such as coyotes, foxes, bobcats, lynx, wolverines, and fishers.

Prugh grew up in Maryland, close to Washington, D.C. Although her family was not at all outdoorsy, she was always interested in animals. This interest came from television. She loved nature shows such as “Wild America” and “Jaques Cousteau.” Her interest in biology began when she was about ten years old, and it never wavered, despite some mediocre teachers. She said her first camping-out experience didn’t happen until she was an undergraduate.

After high school Prugh wanted to move away from home but not too far away. She looked for a small school, one with interesting programs. She chose Earlham College, a small private school in Indiana with a good field biology program. While at Earlham she went on its Kenya Program, which had been in operation for over twenty years. She was one of a group of twenty students. They studied both culture and wildlife, moving around the country. Her favorite animal, the one she did her personal study on, was the warthog. She still loves them. They’re very skittish, she said, so to study them in the wild took extra caution. She would bail out of her vehicle when she was shielded by a bush and then sneak around to a vantage point. She graduated from Earlham with a BA in Biology, granted with Honors.

From there she took a couple of temporary positions in the process of figuring out what she really wanted to do. First, she spent a year as an intern at the Smithsonian Environmental Research Center. She arranged crab battles between native blue crabs and invasive green crabs. She found out that working with invertebrates wasn’t fun for her because she didn’t like killing her subjects. Then she volunteered for a graduate student in a wildlife study at the University of Montana. For three months she lived on the border of Montana and Canada, in a primitive cabin with no running water or electricity.

She cut a lot of firewood to get through that winter. Learning about how animals go about their lives in the wild, in severe conditions—this was closer to what she wanted.

From Montana she went to Minnesota, where she worked for a year in Peter Reich’s lab. Reich is a world-renowned forest scientist. One of the many things Prugh learned there was that, for her, studying plants was “not very interesting.”

Now it was time for graduate school, and Prugh chose the University of British Columbia. She was advised by Charles Krebs, who had studied population cycles of hares for several decades. She got an NSF fellowship, which supported her graduate studies. Her thesis research dealt with how the hare cycle affected coyote predation on other species in the Alaska range.

After finishing her PhD and a one-year postdoc at UBC, Prugh moved on to a postdoctoral position at the University of California, Berkeley, focusing on the giant kangaroo rat and impacts on other animals and plants in an endangered ecosystem.

Prugh’s first faculty position was at the University of Alaska, Fairbanks. After three years there, in 2015 she came to her current post at the University of Washington.

Funding for Prugh’s research has come from ten different organizations, including NSF, NASA, USDA, and NPS.

In 2019 Prugh received a Presidential Early Career Award for Scientists and Engineers. A description of the award states that “this is the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers.”

There can be no doubt that the questions Prugh asks and then addresses are fascinating not only to her fellow scientists but also to the public at large. Here are a few examples. Research in the Prugh lab revealed that enhancing the cougar population in an area can save human lives. Cougars kill and eat deer, and the more cougars in an area, the fewer deer-vehicle crashes. This study was covered by *The New York Times*, *The Washington Post*, the *Chicago Tribune*, and several other media outlets. Their paper on the effect on a wolf pack of losing a single breeding member has gained widespread attention. Their examination of how moonlight affects the behavior of predators and their prey got written up in

such magazines as the *Harvard Review*. Because of this popularity, Prugh is regularly called upon to speak or be interviewed. She has been on NPR and has given many invited lectures in the US and internationally.

Prugh also has been an active emissary for women in science and has mentored high-school-age girls interested in STEM careers. In the Girls in Science program at UW she designed and led a half-day workshop for about 30 girls in grades six through eight. She introduced them to the study of predator-prey relationships by showing them how to examine coyote scat to determine what animals the coyotes had eaten. While at the University of Minnesota she was active in a program called Women in Natural Resources Monitoring and mentored inner-city Native American girls.

I asked her what she does for fun. Dogs came up. Prugh loved dogs when she was little and still does,



so walking Stella is high on the list. She is a skier, both downhill and back country, a hiker, and a biker—the sort of activities you’d expect given the kind of work she does. She still likes television and loves to watch a

good Netflix film. And she likes listening to music and going to live music concerts.

Prugh gave me a brief summary of what she will be talking to us about. “Large carnivores are increasingly viewed as integral components of ecosystems due to their strong cascading effects on other species, including mesopredators. Interactions among carnivores have been examined largely within the context of intraguild predation, whereby large carnivores kill mesopredators. However, large carnivores also provide substantial food subsidies to mesopredators in the form of carrion. In my talk, I will provide an overview of my research that seeks to understand how these opposing forces play out within carnivore communities. In doing so, I’ll take you on a journey from Alaska to Washington, explaining how observations in Alaska caused me to rethink completely the role that carrion plays in carnivore community dynamics. These insights led me to develop a new paradigm that I am currently evaluating in northern Washington.”

This talk promises to be fascinating. Please join us to hear Laura Prugh’s presentation “Enemies with Benefits: A New Paradigm in Carnivore Community Ecology.” Invite anyone you think would be interested. Because it has to be a virtual meeting, persons from far away will have easy access. The zoom link is on the cover page. Alas, the only cookies available will be the ones you make yourself.

John Carter

---

## Must Love Wasps August Jackson

For the first time, this past June’s mid-month bloom of Missouri goldenrod (*Solidago missouriensis*) brought to our yard a horde of self-occupied and purpose-driven beewolves in the genus *Philanthus*. Goldenrods are a favorite of these attractive and amiable solitary wasps, and our ever-expanding, almost weedy menagerie of native goldenrods had become enough to draw these wasps in from God-only-knows where. Beewolves are vegetarian and voracious nectarivores in the adult stage—a biology that belies their skills as specialized predators. As with all wasps, a protein source is necessary for larval development, and in this case the larvae are obligate feeders upon native solitary bees, which, before being fed upon, are injected with a paralytic and entombed alive in a subterranean nest cell. Brutal as this may be for a handful of unlucky bees, this behavior of mass provisioning young with ready-to-eat meals is a pillar of wasp biology and one that gave rise to the bees themselves.

Precisely where the bees fit in amongst the rest of the wasps has been a subject of inquiry for decades. For many years it was believed that bees were related to but evolutionarily distinct from a subset of hunting wasps including the family Crabronidae. A subsequent phylogenetic review argued for the bees to be nested within the Crabronidae as the sister group to the aforementioned beewolves. However, a recent, robust revision has further elucidated the placement of bees simply as highly derived Crabronid wasps in the subfamily Pemphredoninae, specifically the sister group to a small clade of thrips-hunting wasps. This hypothesis tells a compelling story about bee evolution that is breathtakingly beautiful. Thrips are small insects that often feed on and in flowers and frequently become coated in pollen. The larvae of proto-bees may have slowly developed a taste for the pollen that was coating their thrips meals, initiating a transition to reliance on pollen as the sole protein source. The ensuing impact on the evolution of flowering plants would prove to be more tsunami than ripple effect.

Despite the success of the bees, with over 20,000 species worldwide, the bee lifestyle (a sole reliance on floral resources as larval food) is known to have evolved only two other times in wasps. Pollen wasps in the subfamily Masarinae are sleek, aposematically colored wasps, often bearing a resemblance to their yellowjacket relatives. One of the primary bee innovations was the development of highly plumose hairs, which aid in gathering and transporting pollen. The Masarines do not hide their waspiness under a genteel coating of hairs, relying instead on an internal crop for transporting pollen and nectar to the nest (this is also a derived trait in some more recent bee lineages). Like bees, however, the pollen wasps reach their highest diversity in deserts and arid Mediterranean climatic regions such as South Africa, the Chilean deserts, and western North America. We have several pollen wasp species in the North American genus *Pseudomasaris* in Oregon, all of which will feed their young only on pollen from the genus *Phacelia* or, in one case, *Penstemon*. The *Penstemon* specialist, *Pseudomasaris vespoides*, looks remarkably like a stretched-out yellowjacket, with a body elongated to access the deep, tubular flowers. Alluding to its appearance, the specific epithet *vespoides* means “in the form of a hornet,” but the similarities end with looks. Despite handling them on numerous occasions, I have yet to convince one to sting me.

It's worth noting that a number of solitary hunting wasps do pack an incredibly potent sting, but this venom is specialized for the immobilization of large prey items and rarely used for defense—particularly against humans. The only wasps in our area that present a real threat of stinging are a handful of social yellowjacket and paper wasp species. In fact, the majority of wasp species do not possess the capacity to sting, instead bearing a modified ovipositor that in each instance is specialized for a very particular egg-laying biology. The most striking examples are the Ichneumonid wasps in the genus *Megarhyssa*, which have exposed ovipositors much longer than their bodies, lending the appearance of a stinger long enough to penetrate the human chest cavity. The exposed portion of the ovipositor is merely a sheath concealing a flexible organ that is built for penetrating deep into wood and depositing an egg on the woodboring larva of a horntail wasp

(which is an ancestral Hymenopteran but not a true wasp). The *Megarhyssa* locate their hosts by sniffing out the specific fungus the horntails utilize to help digest the wood.

It is parasitic wasps such as these that make up the bulk of wasp diversity and elevate wasps as contenders for the most speciose animals on the planet, perhaps even surpassing the beetles. Just about every lineage of insects is attacked by its own specially adapted group of parasitoid wasps, and



*Pseudomasaris vespoides*

Photo by A. Jackson

many of these are endoparasitoids, slowly consuming their host from the inside out as it remains alive. Charles Darwin famously remarked that he was incapable of believing such wasps could have been created by a “beneficent and omnipotent God.” Alternatively, this God could have a particular affinity for wasps. How could they not?

Wasp forms are beautiful and complex, reflecting lifestyles and behaviors that are similarly remarkable. Over hundreds of millions of years, wasps have diversified to exploit a volume of niches, and their universal biology of providing for their young has garnered them an outsized role in invertebrate communities. The hunting wasps frequently act as keystone predators while the superabundant parasitic species enact a regulatory mechanism on invertebrate populations worldwide. Wasps are a linchpin of healthy ecosystems, and their moderating effect on plant populations via predation on phytophagous insects and pollination of angiosperms is foundational to the existence of human society. Perhaps, on this planet, wasps *are* “the beneficent and omnipotent God.”

Thanks to all who have renewed their membership and to those who have made donations.

## Cool, Clear Water      Reida Kimmel

Grim old timers used say about one of their friends; “Well, she made it through the winter.” Happy, not grim, I’ll announce for myself that I made it through this summer. The heat, the drought, the smoke, the fear of wildfires ... when you live in the woods, every sunny hazy dawn signals the unrelenting beginning of another Bad Day.

Our life-line, our tie to hope and sanity, is our wonderful well, whose clear sweet water makes life on the “farm” possible. It’s a shallow well. We must ration its gifts. Besides ourselves and the household dogs and cats, we have our horse, her companion sheep, and a flock of chickens to keep watered. Keeping all our plants alive is always a challenge, never more so than during this torrid summer. We never water the fruit trees or the “lawn,” but there are shrubs and native plants, some quite young, to nurture. We switched to summer water mode in May, collecting gray water, even soapy water, in jugs and buckets to give to needy plants on every side of our house. We monitored the at-risk plants and treated them to infrequent but deep hand-watering. The greediest water hog is our deer-proofed vegetable and flower garden. After a dry winter and spring, the soil in my well-mulched garden was already hard at planting time. Poles for beans and tomato supports refused to sink deeply into the soil. Digging and cultivating was real work.

Hard times demanded some experimentation. Instead of planting the whole garden and irrigating it with soaker hoses, I planted and watered only the eastern two-thirds of the garden. The rest, neither planted nor watered, was left to be wild or dead. Chipmunks buried clusters of seeds that grew to be a dense thicket of sunflowers vying for space with towering volunteer hollyhocks. Dill plants by the hundreds danced in the wind. A great clump of volunteer potatoes flourished, and a pumpkin plant insinuated itself everywhere, climbing up the sunflowers and the fence. Not to be left out, the lonely hops plant beside the pasture gate overtopped its support and arched over into the dry garden. Watered only by the stingy runoff from the vegetables’ soaker hoses, the west side of the garden had never been so lush. The pampered eastern side of the garden was also marvelously productive. We ate wonderful produce all summer, and our shelves, cupboards, and freezer are full of goodies for the months to come. Tough love worked! As usual, I watered both the east part of the fenced garden and our pretty plants around the house with soaker hoses. However, I ran those hoses considerably less frequently this summer. Chuck hand-watered “special

needs” plants. Nothing died! The roses bloomed a bit less. But the annuals and herbs were happy. *Clarkia elegans* and *Sidalcea* were special stars, blooming much of the summer.

I treasure our water and all the good things it makes possible. Many people in this country and the world are not so lucky. Can I, in a comfortable home in Western Oregon, really feel the misery of people lacking fresh water? Almost certainly not, but living through summer, constantly concerned about water or the lack of it, makes me much more sensitive to others’ suffering. Just seeing prolonged drought becoming the norm hurts so much.

The Euro-American-Asian civilization of which we are a part treats water with contempt. Civilizations have been thoughtlessly befouling water for millennia, but there are so many more of us now that we can destroy fresh water on a continental scale. From Kyoto to Glasgow to Oregon, we choke our rivers with plastic and send it out to sea where it kills marine life from the bottom to the top of the food chain. History tells us that the Roman Empire’s civilization was destroyed in part by the toxic effects of its lead-lined water pipes. Too wise to make that mistake again? Well, just look at Flint, Michigan’s on-going tragedy. The Thames, England’s grandest river, was transformed from merely a polluted waterway to a stinking sewer in the 1880s, as the growing metropolis poured all its waste, industrial and fecal, into the river. Cleanup of sewage consisted of piping the foul stuff some miles downstream and discharging it in the lower Thames. By the 1950s a 50-mile stretch of the river at London was devoid of life. Tom Fort tells us in *The Book of Eels* that though the Thames is now clean enough to support life, Europe’s biggest garbage dump sits at its water’s edge. Fort saw the river as “dismal, desolate, and bleak.” We have nothing to crow about. New York and other American coastal cities have barged their waste out to sea for decades.

Do we never learn? There is great trout fishing in the Platte River in Colorado, but the fish, their tissues packed with pesticides and nitrates, are unsafe to eat. In wonderful wild Montana, Crow Nation people lack clean water. The Little Bighorn River’s water, loaded with agricultural chemicals from farms with water rights upstream of the Reservation, is unsafe to drink. Well water from the shrinking aquifer contains high loads of coliform bacteria and, even worse, high levels of lead, arsenic, and uranium. And what have we done to the Los Angeles River? The Columbia?

All across Oregon, people build beside streams and rivers. Where does the trash and septic tank effluent go? Our Fox Hollow Creek is many residents’ backyard dump. Former homes along the

beautiful McKenzie River, so visible since the 2020 fire, wreaked havoc on the environment. State parks and waysides, like the Falls of the Siuslaw or the tributaries and outlet streams around Triangle Lake, sport trash and worse. The Falls of the Siuslaw are polluted and uninviting to waders and swimmers, but there are baby Coho that deserve better in the pools above the falls.

Much of humanity is aware that we have an ongoing water crisis. Most coming years will be drier, some catastrophically so. Clean water is a right for all earth's creatures. We must conserve and enhance supplies of water, especially in drier regions such as America's Great Basin and High Plains. In our own Pacific Northwest, state, tribal, and volunteer groups are restoring vegetation along water courses, fencing out livestock, and raising water tables by introducing beavers, nature's best hydro-engineers. Removing human-made dams would have

a powerful impact in this time of climate change. Restoring rivers' natural flows will add sediment to their mouths and enhance their braided channels and broad deltas. These changes to riverine ecosystems will mitigate the destructive force of the huge and frequent storm surges that have become so frequent. The rapid, positive response of the Elwah River ecosystem following the removal of the Elwah and Glines Canyon dams should leave no doubt as to our future course. The Klamath River dams, the four dams on the lower Snake River, and the four hydroelectric dams on the Skagit River that provide some of Seattle's electricity, including, importantly, the Gorge Dam, also have to go. We can't totally turn back the clock, but we can significantly increase the supply of available clean water. That is a wonderful and achievable goal.

We need to do so much, but we have made a start.

## Events of Interest in the Community

**McKenzie River Trust** <https://mckenzieriver.org/events/#event-listings> (541) 345-2799

**Second Saturday of the month, September through December. Living River Exploration Days at Green Island.**

Take a walk near where the Willamette and the McKenzie Rivers meet. Observe fifteen years of tree-planting work on Green Island, a habitat for beaver, river otter, and over 150 species of birds.

Because this property is a privately owned space in active conservation, there are a few things to know before you visit. No pets, please. There will be a port-a-potty available but no other facilities. Bring water with you. Bikes are great. The trails are a mix of loose gravel and dirt farm roads, so big tires are better. Please drive under 5 MPH past the houses on Green Island Rd. Gates will be closed at 3 p.m. Please practice COVID-19 safety during your visit. Mask up and maintain a safe physical distance from other visitors outside your group. This event is free and does not require registration.

**Wednesdays, 13, 20, 27 October, 9 to 11:30 a.m. Watershed Wednesdays.** Join the fun at Green Island and help protect and care for this special area. Projects vary throughout the season but are always suitable for youth ages 13 and older. Youth under the age of 16 should be accompanied by an adult to participate. For a map go to <https://mckenzieriver.org/event/watershed-wednesdays-at-green-island-2/2021-10-13/>

**Lane County Audubon Society** [lanecountyaudubon.org](http://lanecountyaudubon.org) or 541-485-BIRD

**Tuesday, 26 October, 7 p.m. Zoom only.** In 1982, the Mount St. Helens National Volcanic Monument was designated to protect the land closest to the volcano as a place for research, recreation, and education. Today, as home to more than 80 species of nesting birds, the Monument offers unique birding opportunities. Join Gina Roberti as she guides us on a tour through the diverse mosaic of habitats created by the 1980 eruption, and learn where to see some of Mount St. Helens's signature birds. This interactive presentation will prepare you for in-person birdwatching in the Mount St. Helens National Volcanic Monument. Roberti currently works with the Mount St. Helens Institute. Check the LCAS website and LCAS Facebook page for how to access this Zoom meeting.

**Klamath Basin Audubon Society (KBAS)**

**Tuesday, 12 October, 7 p.m. Dispersal & Survival of Juvenile Black-backed Woodpeckers in Burned & Unburned Klamath Basin Forests.** Presentation by Mark Kerstens. This is a free Zoom meeting. Pre-registration is required by Monday, 11 October. To register go to Klamath Basin Audubon Society <https://www.klamathaudubon.org> or call 877 541 2473.

**Mt. Pisgah Arboretum**

For MPA activities go to <https://mountpisgaharboretum.com/festivals-events/> or call 541-747-3817

**Sunday, 31 October. Mount Pisgah Arboretum Mushroom Show.** In partnership with the Cascade Mycological Society and Lane Community College, Mount Pisgah Arboretum is excited to present the return of the Mushroom Festival as a smaller live event that we're calling the Mushroom Show. Attendance limited to 1200 tickets. Advance tickets only. COVID-19 restrictions enforced including masks and proof of vaccination or a negative test. For more information and ticket purchases, visit [mountpisgaharboretum.com/festivals-events/mushroom-festival/](https://mountpisgaharboretum.com/festivals-events/mushroom-festival/)

**University of Oregon's Museum of Natural and Cultural History** <https://mnch.uoregon.edu/museum-home>

**Monday, 11 October. This is Kalapuya Land.** MNCH will be open with FREE admission in honor of Indigenous Peoples' Day. Come celebrate 14,000 years of Native culture in Oregon—from the First Americans at Paisley Caves to the dynamic cultures of today's Tribes.

MNCH has several other events in October. Go to <https://mnch.uoregon.edu/events> or call 541-346-3024 for information.

**Native Plant Society of Oregon, Emerald Chapter** <https://emerald.npsoregon.org/>

**Sunday, 10 October, 2 to 4 p.m. The Trees on the University of Oregon Campus.** In this two-hour tour, led by Whitey Lueck, we'll visit some of the most impressive trees in the campus's collection, including trees native to this area, as well as species from every other continent where trees grow. Meet by the Pioneer Mother Statue base (the actual statue has been removed) in the quad between Johnson and Gerlinger Halls on central campus (west of the EMU). We are limiting the trip to nine participants, and we ask that you please wear a mask for this tour to comply with state mandates. Sign up [here](#).

**Nearby Nature** <https://www.nearbynature.org/> or 541-687-9699

**Tuesday, 12 October, 10 a.m. to 12:30 p.m. Green Start Play Day: Fall Frolics.** This month celebrate the colors of autumn with us! Check in with Miss Grace at the start of your family's 45-minute reserved time slot to receive instructions, and then set off to discover toddler and pre-school activities, stories, and games. Rain or shine! Kids 5 and under only, with an adult. Please be sure to [pre-register](#) to reserve your time slot; there will be only three families max in the Learnscape at the same time (with social distancing guidelines in place). Members free, non-members \$7/family.

**Friday, 15 October, 8:30 a.m. to 4:30 p.m. Night Navigators. No School Day.**

**Saturday, 23 October, 5:30 to 9 p.m. Haunted Hike**

**Monday, 25 October, Scoot and Scuttle Nature School Sessions Begin.**

**Tuesday, 9 November, 10 a.m. to 12:30 p.m. Green Start Play Day: Fun with Fungi.**

For information on these NN events, call 541 687-9699 or go to <https://www.nearbynature.org/events/>

**Friends of Buford Park and Mt. Pisgah** <https://www.bufordpark.org/> or 541-344-8450

Because people and nature need each other, the Park is OPEN during the COVID-19 pandemic. Please refer to [Lane County](#) for instructions about the park and updates.

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

**Tuesday, 12 October, 9 to 11 a.m. Wetland Wander.** Ridgeline Trail, Willamette Street Trailhead (Mariposa Woodland). Bruce Newhouse will lead this walk. He is a co-founder of the Cascade Mycological Society and has directed setup for the Mount Pisgah Arboretum Mushroom Show for the past three decades. Meet in the Ridgeline Trail, Willamette Street Trailhead parking lot near 52nd and Willamette. The parking lot is on the east side of Willamette Street.

**ENHS welcomes new members! To join, fill out the form below. Membership payments allow us to give modest honoraria to our speakers and pay for the publication and mailing of *Nature Trails*. Our web address:**

<http://eugenenaturalhistorysociety.org/>

## 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): \_\_\_\_\_

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

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

Make checks payable to:

Eugene Natural History Society

P.O. Box 5494, Eugene, OR 97405



Coyote scavenging a moose kill in Denali National Park.  
Trail camera set up by Kelly Sivy, Laura Prugh's student.

### ENHS Officers and Board Members 2021–2022

President: August Jackson [augustjackson@ecolingual.com](mailto:augustjackson@ecolingual.com)

Vice President: Rebecca Hazen [rebeccahazen2011@comcast.net](mailto:rebeccahazen2011@comcast.net)

Immediate Past President: Dean Walton

Secretary: Monica Farris

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

Board: Ruth BreMiller, John Carter, Tim Godsil, Chuck Kimmel, Reida Kimmel, Kris Kirkeby, Tom Titus, Dave Wagner, and Kim Wollter

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, Reida Kimmel, Chuck Kimmel, Tom Titus, and Kim Wollter

### 2021-2022 Speakers and Topics

|         |                   |  |
|---------|-------------------|--|
| 15 Oct. | Laura Prugh       | Enemies with Benefits: A New Paradigm in Carnivore Community Ecology |
| 19 Nov. | Kellum Tate-Jones | Pinniped Evolution   |
| 10 Dec. | Paul Bannick      | Snowy Owls (cosponsored with Lane County Audubon Society)            |
| 21 Jan. | Dana Lepofsky     | Clam Beds and Traditional Ecological Management in Island Ecosystems |
| 18 Feb. | Michael Nelson    | Fire Ecology and Report Following the 2020 Fires                     |
| 18 Mar. | Pat O'Grady       | Archaeology  |
| 15 Apr. | Lauren Ponisio    | Bees and Wildfire  |
| 20 May  | Lauren Hallett    | Siskiyou Plant Communities   |