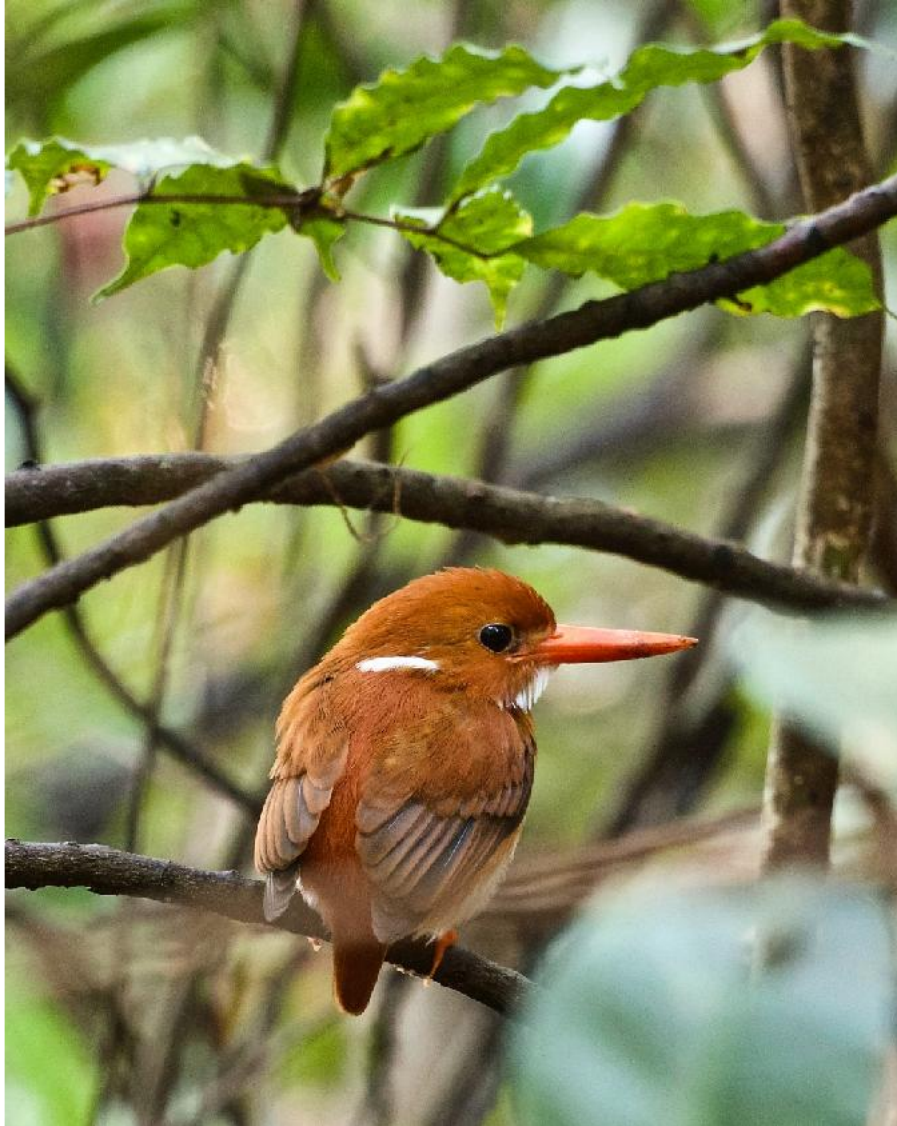


Nature Trails

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Pigmy Kingfisher. Photo by M. Wherley Wherley

Madagascar's Incredible Island Biogeography and Endangered Ecology

Bitty Roy

**Center for Ecology and Evolutionary Biology
University of Oregon**

Friday, 16 October 2020, 7:30 p.m.

Here is how to join the audience for the October presentation. The Zoom meeting will open at 7:00 but our meeting will begin at 7:30. This is to make sure everyone has enough time to get properly connected. Thank you for joining us, and we'll keep our fingers crossed that we can come together again in spring.

August Jackson is inviting you to a scheduled Zoom meeting.

Topic: October ENHS Meeting

Time: 16 Oct. 2020 07:00 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://zoom.us/j/98294246568?pwd=RmZkb09yblp2NS9NeEh6T0U2aFRkQT09>

Meeting ID: 935 5807 6359

On its face the phrase “biodiversity hotspot” simply suggests a region with an exceptionally rich flora and fauna. But the originator of this term, biologist Norman Myers, meant a region that contains many species that are endemic (occur nowhere else) and are suffering severe habitat loss. Our speaker this month, Bitty Roy, will tell us about one such area, Madagascar: how unique it is and how its preservation is important to the planet.

Dr. Roy is Professor of Biology in the Center for Ecology and Evolutionary Biology at the University of Oregon. She retired from teaching in 2019 but is still active in research and conservation. Bitty, as everyone calls her, has wide-ranging interests. Two of the issues she and her collaborators are seeking to address:

1. How is global warming affecting plants, mycorrhizae and saprotrophs?

One current NSF project on this theme concerns how hurricanes influence how both pathogens and mycorrhizae interact with tree species. This work is a collaborative project with Krista McGuire, another UO faculty member, and is taking place in Puerto Rico. A second NSF project involves use of a combination of climate change experiments and demographic data on natural populations to examine how climate change is affecting the distributions of plants and fungi. This work is in collaboration with UO faculty members Scott Bridgham, Laurel Pfeifer-Meister, and Bart Johnson.

2. Distributions of mushrooms: quantifying ecosystem and climate drivers of fungal reproduction

Roy is submitting a grant to NSF in November for this project and spends many enjoyable hours with people in the local mushroom club, the Cascade Mycological Society, figuring out which mushrooms occur in Lane County.

Roy's path to her present position, while not tortuous, has had many twists, turns, and forks. First, though, why the name Bitty? It was a compromise.

There was a parental disagreement: her dad put Barbara on the birth certificate to her mom's surprise, since she was under the impression they had agreed on Elizabeth. Meanwhile, her older siblings began calling her Bitty, short for “little bitty baby.” Being acceptable to all, Bitty she became.

Her interest in the natural world began while Roy was a toddler. Before she was three years old she brought flowers to her mom and asked their names. Her mom, a serious plant person, took her daughter on mountain hikes near their home in Aspen, Colorado, where it could snow any day of the year and there was snow on the ground for nine long months. Together they identified native plants: flowers, mosses, and whatever else they came across.

Roy stayed in Colorado through high school, then came to the West Coast after a brief time in New England. She was an undergraduate at Evergreen College, in Olympia, Washington, finishing with a BS degree in biology. From there she went to Southern Illinois University for her M.S. degree. Her thesis work was in paleobotany. She wanted to test the idea of combining botany and geology in a career but found there was too much indoor work involved to suit her. From SIU she came back to the West Coast, to Claremont Graduate School, for her Ph.D degree. She did her dissertation research at two lovely sites: Rancho Santa Ana Botanical Garden (the botany arm of the Claremont Graduate School) and the Rocky Mountain Biology Laboratory (an independent research facility in Colorado). Among the persons she got to know at RMBL are John Holden (President Obama's Scientific Advisor), John Harte, and Paul Erlich. After her PhD work Roy spent four years in postdoc positions, dividing her time between the University of California, Davis (Stanton lab) in plant ecology and UC Berkeley (Bruns Lal) in mycology. She then took an Assistant Professorship at the Swiss Federal Institute of Technology in Zürich, where she stayed for five years. Shortly after being awarded tenure there, she resigned and came to Oregon in 2001.

The steady supply of external funding that she has maintained for her research together with her long list of refereed publications in distinguished journals speak to the quality of Roy's work. Her productivity is the more impressive for her determination to do her own fieldwork. Her students have their projects; she has projects of her own.

Many of the photos Roy will share with us were taken by her partner Michael Wherley, who has a degree in geology from Stanford and a life-long interest in plants, photography, and travel. His photography has been shown in Eugene, published in magazines (*Communities* and *Skipping Stones*), and included in materials for local events, such as a Native Plant Society Native Garden show poster and the brochure for the BRING Home and Garden Tour. He maintains a website with his photography at: <https://dancingphotons.zenfolio.com/>.

This is what Roy will talk about, in her own words. "Madagascar is an ancient island that is very big (20% bigger than California). It was once connected to Gondwanaland, losing first its connection to Africa, 135 mya, and later, around 90 mya, its connection to India. There are some cool examples of long-distance dispersal including humans from Borneo and a cactus from Central America, but a lot of the biogeographic story is the



Lizard Chameleon (*Furcifer verrucosus*)
and Verreaux's sifaka (*Propithecus verreauxi*)
Photos by M. Wherley

fact that things survived in Madagascar that died off elsewhere, like lemurs. I'll illustrate stories about lemurs, lizards, birds and plants and will end by showing the value of documenting your travels with iNaturalist."

Please invite your friends and join us via Zoom on 16 October at 7:30 p.m. to listen to Professor Bitty Roy's presentation, **Madagascar's Incredible Island Biogeography and Endangered Ecology**.

John Carter

Slow Watching by Reida Kimmel

Even before our world shut down, spring, with chorus frogs and all the early wildflowers, was here. A male red-winged blackbird had spent the late winter with us, an unusually early appearance. He sang beautifully from his lonely perch at the pond. Finally, to our great relief, a female joined him on March 12. Blackbirds love our feeders, visiting often and lingeringly. It soon became apparent that the first male red-winged to arrive was the big boss. His epaulettes were huge and almost iridescently bright as he sailed in for yet another snack. We called him Big Red. There were at least two, probably three, females, and it was impossible to tell one from another. Four males came by on my birthday but didn't linger except for Little Red. His coloring was sufficiently cryptic that I toyed with the idea that he might be a tricolored blackbird, but having spent an afternoon in close contact with the little guy, I discovered him to be a young male red-winged. How do you spend the afternoon with a blackbird in April? Why, just lie on the ground under his perch. I was digging up the carpet of creeping buttercup (*Ranunculus repens*) befouling my ornamental

garden. As I dug, I oozed closer and closer to the little Japanese maple where he sat. I even pruned the shrub. Little Red was totally unperturbed. By this time, I was very close. I could see his plumage perfectly. The rusty, almost starling-like feathers on his back told the tale, an immature red-winged.

As spring moved on to summer, Little Red got more colorful, and he found a mate. One special July afternoon we watched him feeding a chick that, though fledged, was not trying to master the art of getting seeds from the sunflower feeder. It was so much easier to cling to the feeder and beg Dad to bring the seeds, which he did over and over. A female came to the feeders, too. She ignored the tender scene, ate, and departed. There were other males now, "No Reds" we called them, rather inaccurately. Whether they were first-year males not breeding or this year's chicks, we did not discern. By August, all the blackbirds, and incidentally our cherries, were gone.

I try to mark every event on my calendar, but sometimes I forget, even important stuff. This year it was the rufous hummingbirds, but I believe that as I had recorded flowering currant blooming in late February, when I noted "Hummingbird on the

Daphne” a week later, I must have been referring to a rufous, because Anna’s hummingbirds are here all year nowadays. Finches are something else. It’s hard not to note them. They are so overpowering. A tiny remark, “House Finch” on April 11 was followed by a “flock of house finches” on the 13th. Then black-headed grosbeaks on the 24th, a pair of evening grosbeaks the next day, and goldfinches, my favorite and not so numerous this year, on the 26th. We have four feeders which must be filled daily for the multitudes. On June 21 I wrote “overwhelmed with finches.”

But the heart and soul and music of summer for us are the barn swallows. By April 9, a flock moved into the barn, working diligently to build nests, bringing mud from the pond’s shore and down and feathers contributed by our chickens. Many nests are hidden in the eaves, under beams, on light fixtures, and in other sheds, but the ones under the barn roof are very visible. Some constructions are quite odd and not necessarily an improvement over the standard pattern, which is a fairly wide and roomy mud nest lined with soft material. A nest like this usually produces two sets of four healthy chicks over the summer. But above the alley of our barn, one swallow pair got extremely inventive and built a mansion. First there was the nest itself, but to one



side and connected was a “play room,” another nest that was fully formed but had lower sides. On the other side of the natal nest, also connected, was a third area with very low sides. We called this the “playground.” The chicks did use all the space as they were taking their first tentative explorations close to their home environment. Their parents raised two clutches of four big strong chicks. But there were also tragic nests or as we called them the “modern houses.” These two nests were very pretty, adorned with long, colorful chicken feathers dangling in the wind, with more feathers within, but the mud cups were small and narrow. We don’t think that those nests produced any viable chicks on the first nesting, and the second of these nests was not reoccupied. During five days of very hot weather in late July, baby swallows from the occupied “modern” nest

started dying or jumping to the ground. One fell right at my feet when I walked by, so I knew where the babies came from. Chuck grabbed a ladder and carefully placed the three living chicks back into the correct nest, but within the hour, all had jumped again, and one was dead. The other two were replaced but subsequently died. Now here’s the amazing thing. The barn swallows had always been completely at ease with both of us being at the barn. Now the mere sight of Chuck the Ladder Man sent them into a frenzy of swooping and calling. Not just the pair that had lost chicks, but every swallow in the vicinity was on the attack. I was not considered an enemy. The swallows were unforgiving. Chuck’s presence continued to cause disturbance for weeks. Are the swallows going to be like John Marzluff’s crows? Will they remember and hate him next year? Should he disguise himself by donning a Donald Trump mask whenever he goes to the barn? Time will tell.

The swallows left on September 4, over a week earlier than usual. The four chicks from the “conventional” nest had barely mastered flight. The finches had left already. Just after the swallows departed, the winds came and then the fires. Twelve days of choking smoke, the sky dark, the earth and all the plants gray with the ash. No birds, no insects, no frogs peeping from the damp places. A dead gray world. How did the birds know that they should leave? Do they have senses we cannot comprehend? I think of them often, their alien wonderful intelligence, their long migrations. Did they have to take different routes south? Are they well? Are they alive? How and where can they thrive in a world suddenly grown so hostile? With both hope and fear, I wait for spring.

Considering Ecosystems

by Evelyn Searle Hess

I’ve been searching through the hours and days of this long, odd year we’re experiencing, looking for whatever lessons we can glean—particularly any relating to natural history. And as it turns out, lessons abound. As we have so often seen and been told, everything is connected to everything else.

My first memorable image from early in the pandemic was the Black Friday-type shopping frenzy and hoarding. We battled our neighbor for the last cans of tuna, soup, vegetables, and fruits and that last roll of toilet paper. I shook my head, made sick jokes, checked my toilet paper supply, and began to wonder if I could find a solution in a healthy ecosystem. Most of the needs of an ecosystem’s diverse organisms are supplied at home. A few additions are flown in by avian carriers or blown in on a breeze, but by and

large, little is added and little leaves. Couldn't we, community by community, provide most of our own needs? Couldn't we localize the supply, especially of our food, so that we needn't fear being without in an emergency? Diversified farms and gardens could provide for everyone even in panic times, and we could regenerate our soil ecosystems at the same time.

Soon after that first wave of frantic shopping came COVID-19 isolation, and we became viscerally aware that *H. sapiens* is indeed a social species. Like so many other animals, we need frequently to touch bases with others of our kin to work together, play together, argue together over the latest assault on our lives. Touch bases. Touch lives. We shake hands and fist-bump. Like most—perhaps all—mammals, we crave touch. Untouched babies die. Or survive but are stunted in both body and mind.

The skin is an organ, registering temperature change, a breeze, a caress. Touch means connection. We kiss cheeks and hug. We hug in joy; we hug in grief. Touch shows we are not alone. Connection profits families, friends, business associates. It even increases the competitiveness of sports teams. NBA teams with the greatest on-court touching early in the season—high fives, chest bumps, back slaps—had the best end-of-season success. Touch is a team-building exercise. The American notion of rugged individualism is bovine excrement. Throughout species, the disconnected individual is eaten by predators, beaten by its brothers, or devoured from within its own forlorn heart. We need each other.

During this isolation we frequently hear, "We're all in this together." But are we? Were we? As I was safely at home feeling only a little lonely, others had to leave their homes to provide the services the rest of us require. Bearing the brunt of the virus were people of color, Native Americans, low-income communities. "The virus doesn't discriminate," we hear. But our system does.

Cases exploded in Native American reservations, where access to clean running water is often minimal, where extended families frequently share dwellings. There is cruel irony in prescriptions for regular hand washing and social distancing on the Rez.

Essential workers are disproportionately people of color. Only 13 percent of the population, African Americans comprise 30 percent of COVID-19 victims. Because of zoning laws, redlining, and other forms of housing discrimination along with reduced access to healthcare, African Americans have an outsized likelihood of being food insecure and of having diabetes, respiratory problems, or other underlying health conditions, all increasing the potential severity of COVID-19. Most agricultural

workers are Latinx, many of whom are undocumented. The work they do is essential for the rest of us to eat, so they keep working while I watch birds and Zoom lectures at home. Ag workers often must work closely beside each other, rarely have protective gear, usually are underpaid, and when undocumented do not qualify for healthcare or other social services.

Workers at the meatpacking plant in Sioux Falls where more than 640 contracted the novel coronavirus were mostly immigrants, coming from Africa, East Asia, and Latin America. The work is demanding and exhausting and in close quarters, with minimal if any protective gear. Other meatpacking plants have similar stories.

Women hold the majority of jobs now deemed essential—grocery store checkers, fast-food workers—but particularly work in healthcare. Of the nearly six million healthcare jobs paying less than \$30,000 a year, 83 percent are held by women. Half of the workers are non-white. Seventy-three percent of healthcare workers who have been infected by the novel coronavirus are women. Are we really all in this together? A healthy, productive, and resilient ecosystem honors diversity. Each member plays an important role. How did our social system become so much less efficient?

Introducing ecosystem basics when I did nature guiding for elementary students, we would ask our young visitors to take a deep breath.

"That's oxygen," we would say. "Now let it out."

Whoosh!

"That's carbon dioxide."

We would point out the trees and other plants and tell the kids, "The green plants make the oxygen we breathe in, and we feed *them* when we breathe out." One little girl, her face glowing, whispered, "Thank you, trees!" This reciprocity our kindergarten to fifth graders understood.

But what if we are redlined from housing of our choice and must instead live in a space barren of green, our each breath inhaled not from the respiration of trees but through smoke of industries? In a healthy ecosystem, each organism is able to find its required nutrition. But what if we lived in a food desert? No farms, no farmers' markets, no mom & pop groceries, no supermarkets? The neighborhood convenience store provides enough beer, soda, pastries, and peanuts to maintain calories, perhaps even more calories than necessary. Air that breeds asthma, foods that birth diabetes. No healthcare access. Lead in the water systems. Low-paying "essential" jobs requiring the worker in the meatpacking plant, farm field or hospital to work

long hours, frequently unprotected, within virus-sharing spaces. Do we blame the struggling organisms in an unbalanced ecosystem?

Already wrenched from our routines and expectations by the coronavirus, we then watched with horror the video of George Floyd's murder. Multitudes of us exploded onto the streets. *Enough. Enough. This cannot stand.* And the shout rang out, "Defund the police!" But sick ecosystems can't be fixed by fiddling with a single organism. Just reforming the police won't do it. Just removing the white house occupant won't do it. Air, water, food,

and shelter are the common essentials, we used to tell the school children on the nature tours. And ecosystems thrive on diversity. Our social system needs a total makeover. Clean air, water, food, shelter, and healthcare for all. Is that too much to ask?

Are enough of us awake now to make that happen? To settle for no less than a healthy social ecosystem? If we save ourselves, if we save our brothers and sisters, we could quite possibly also save our planet. Everything is connected to everything else.

Events of Interest in the Community

McKenzie River Trust <https://mckenzieriver.org/events/#event-listings>

Saturday, 10 October, 11 a.m. to 3 p.m. Green Island Exploration Days. Take a walk near the place 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. If you're looking for a special place to connect to nature this year, Green Island will be open for self-guided tours on 10 October, 14 November, and 27 November from 11 to 3. To learn about the requirements and see a map, look at the website before you go.

Lane County Audubon Society lanecountyaudubon.org

Tuesday, 27 October 7 p.m. All Tied Up in Knots: Seven Years with *Calidris canutus*. In a slide show of her original paintings, Janet Essley explores the fascinating life cycles of these long-distance migrants, the amazing physiology, and the conservation challenges they face. The Red Knot (*Calidris canutus*), a medium-sized sandpiper, is a regular guest along the Oregon Coast during its spring and fall migrations. Extremists among sandpipers, Red Knots migrate longer distances, breed farther north, display faster beach-probing feeding maneuvers, and ingest harder shelled mollusks than do other sandpipers. Check the LCAS webpage for instructions on how to access the meeting.

Mt. Pisgah Arboretum

Sunday, 25 October, 10 a.m. to 5 p.m. Virtual Mushroom Festival! In partnership with the [Cascade Mycological Society](#) and Lane Community College, we'll be bringing all of the fun of our annual Mushroom Festival into your home! We'll be live-streaming music, mushroom forays, Zoom ID sessions, and presentations featuring:

-Noah Siegel, author of *Mushrooms of the Redwood Coast*

-Peter McCoy, founder of Mycologos, and author of *Radical Mycology: A Treatise on Seeing and Working with Fungi*

-Chad Hyatt, author of *The Mushroom Hunter's Kitchen*

-Kristen and Trent Blizzard of Modern Forager

...And many more!

Stay tuned for a full schedule and list of presenters later this month. For other October MPA activities go to

<https://mountpisgaharboretum.com/festivals-events/>

Friends of Buford Park and Mt. Pisgah <https://www.bufordpark.org/>

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

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

MNCH is now open to the public with new limited hours: Wednesday through Sunday 11 a.m. to 12 noon for seniors and COVID-vulnerable visitors. 12 noon to 3 p.m. for everyone. Current exhibits: **Explore Oregon** and **Oregon—Where Past Is Present**. [Learn more](#).

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

Sunday, 18 October, 3 to 5 p.m. Plant Lovers Ramble. Join Emerald Chapter members on our first-ever casual native plant meet-up in a local wild area. Location provided with registration. Contact em_president@npsoregon.org. Attendance will be limited to 10 participants. We ask that everyone wear a mask, social distance along the trail, and attend only if free from COVID-19 symptoms. Virtual program links will be sent to NPSO members and posted on the NPSO Emerald Chapter website close to the date of the program.

Nearby Nature <https://www.nearbynature.org/>

Tuesday, 13 October, 10 to 11:30 a.m. Green Start Play Day: Hide Outside. Enjoy outdoor nature play in our Learnscape plus toddler and preschool activities and stories. Celebrate the fall season this month as we learn about nocturnal animals, play camouflage games, and create colorful autumn leaf art. Kids 5 and under only, with an adult. Rain or shine! Members free, nonmembers \$7/family. Preregister online or call 541-687-9699.

Friday, 23 October, 5:30 to 9 p.m. Virtual Haunted Hike. For details, go to <https://www.nearbynature.org/events/haunted-hike/>

WREN (Willamette Resources and Educational Network)

For WREN's upcoming events go to <http://wewwild.blogspot.com/> or info@wewetlands.org

Tuesday, 13 October, 9 to 11 a.m. Wetland Wander. Golden Gardens. Join WREN and Robin FitzClemen on a guided tour to learn about western pond turtle life history and conservation while walking Golden Gardens in northwest Eugene. Western pond turtles are one of two native turtle species in Oregon and can be found basking on logs or swimming in creeks, rivers, ponds, or wetlands. However, these reptiles are becoming harder to find as their populations dwindle in the Long Tom Watershed, Willamette Valley, and across Oregon. Western pond turtles have been identified in the Oregon Conservation Strategy as a species of concern. Wetland Wanders are casual walks through the West Eugene Wetlands on the second Tuesday of each month. Each month we choose a different wetland site and bring in a local expert. Walks are free and open to the public. Please bring water, binoculars, and closed-toed shoes and dress for the weather.

Review of Herb Wisner's autobiography *My Life ... and Then Some: A Memoir?* by David Wagner

The book I have most enjoyed reading this year is Herb Wisner's autobiography *My Life ... and Then Some: A Memoir?* published this summer. One of our most admired and respected mentors, Herb has been a member of the Eugene Natural History Society since arriving in Eugene in 1966. He began the ENHS newsletter in 1967, which morphed into *Nature Trails* in 1975. All members and friends will simply love this book. It is available only from Amazon, where an excellent review is posted. All that is missing from the review is note of the passing of Ruth Wisner just before the publication. We miss her and hope Herb will be with us for a long time.

Available from Amazon (\$37.95):

https://www.amazon.com/My-Life-Then-Some-Memoir/dp/1734388838/ref=sr_1_2?crid=38OQJF0KSHV3X&dchild=1&keywords=my+life+and+then+some+a+memoir&qid=1601936508&s=books&srefix=My+Life...and+then+some%2Caps%2C536&sr=1-2



Somewhere in Madagascar.
Photo by M. Wherley

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

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The Eugene Natural History Society website has moved to a new host at: <http://eugenenaturalhistorysociety.org/> This is a new site under old management. Changes and improvements to the site will be ongoing. If you have any questions or concerns please let Tim Godsil know at tgodsil@gmail.com

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2020–2021 Speakers and Topics

16 Oct.	Bitty Roy	Madagascar's Incredible Island Biogeography and Endangered Ecology
20 Nov.	Carol Paty	Moons of Saturn
11 Dec.	John Marzluff	Of Ravens, Wolves, and People
15 Jan.	TBD	
19 Feb.	TBD	
19 Mar.	Pepper Trail	Fighting Crime with Feathers: The Casebook of a Forensic Ornithologist
16 Apr.	Daphne Stone	Lichens: How They Tell Us About Their Environment
21 May	Lauren Hallet	The Ultramaric Plant Communities of the Siskiyous