

Nature Trails

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“Using Wolves and Other Predators to Restore Western Ecosystems”

Dr. Bill Ripple, Department of Forest Ecosystems and Society

Oregon State University, Corvallis, Oregon

**Friday, 19 November 2010, 7:30pm, Room 100
Willamette Hall, UO Campus**

In 1997 Bill Ripple and his graduate student, Eric Larsen, were in Yellowstone National Park, pursuing an answer to why aspens in the Park were declining. Toward the end of their trip they went down to the Grand Tetons National Park. While in the Visitors Center, Ripple noticed a poster on the wall: a wolf, in a guard-dog pose, in a stand of aspens. He wondered aloud “do you think wolves could protect aspens?” That was the beginning.

Of course, it wouldn't have been the beginning had Ripple's past not prepared him for that aha moment. So, a brief summary.

Bill Ripple was born in South Dakota and grew up in the southeast corner of the state. As a youngster, Ripple had ample opportunity to experience nature on his own. Since his hometown was small – a population of about 200 – it took only a short walk for him to get out into the countryside. He went to South Dakota State University for his undergraduate work, graduating with a B.S. in Geography. In the summers between his years there, and the one summer after he graduated, he worked as a ranger in Custer State Park. During these summer sojourns his ecological perspective began to mature, and he developed an interest in photography. Some of his photographs were used in the Visitors Center of the Park. He went to the University of Idaho for his Master's degree, then to Oregon State University for his Doctorate.

Ripple joined the faculty in OSU's College of Forestry in 1989. Back then his interests were computer mapping, landscape ecology, spatial analysis, the use of geographic information systems for resource management, and historical ecology. But that first trip to Yellowstone National Park profoundly influenced his future research direction.

It was from Dr. Robert Beschta, also in the College of Forestry at OSU, that Ripple learned about the disappearance of Quaking Aspen in Yellowstone National Park. That conversation, in 1996, was the impetus for the 1997 trip. The two remain close collaborators.

The core samples Ripple and Larsen collected on that trip in 1997 revealed that the decline of aspens began in the 1930's, which they knew was also just after the last wolves in the Park were killed. They hypothesized that elk served as the go-between. With fewer predators to deal with, elk browsing on not only aspen but also willow and cottonwood could reduce the number of young plants and thereby change the distribution and nature of vegetation in the Park. They recognized that with

wolves now back in the Park they might be able to test their hypothesis. From that point on, Ripple's research program has focused on such complex interactions.

On one of his many trips to the Lamar Valley in the Northeastern corner of the Park, Ripple spent a lot of time sitting on a bluff close to the confluence of Soda Butte Creek and the Lamar River. Gradually he became aware of a difference in the height of willows at different points along the streams. Where there was an abrupt bank there were taller willows than where there was little or no barrier to movement. It was then that the concept of an 'ecology of fear' came to him. The rapid recovery of aspens, willows, and cottonwoods as the wolf packs grew seemed to be greater in magnitude than could be accounted for just by wolves killing elk. Ripple realized that the mere presence of the wolves was changing elk behavior. The elk shied away from zones along a stream where their getaway would be tough because of a steep bank, or deep water, and in those zones the plants' recovery was most rapid.

The work in Yellowstone National Park was only the start. They have found a similar trophic cascade in Zion National Park, but with cougars as the apex predator rather than wolves. In a river valley with lots of cougars the deer numbers are low, riparian vegetation is lush, the streams are narrow, and there are deep pools, with larger fish. In another valley, also in the Park, cougars are scarce, deer numerous, streams have fewer plants on their banks and are wider, warmer, siltier, and have fewer large fish.

Ripple has been in contact with folks in the Scottish Highlands, talking about controlling the red deer herd there with wolves. One wonders what the lairds will say about that.

Related to that question is what ranchers in Idaho and Oregon are saying about the beginnings of wolf packs in these states. Another consequence of removing large predators from an ecosystem is an increase in the populations of smaller predators. Ripple pointed out that wolves do a number on coyotes. They don't like them and will kill them when they can. Since coyotes take many sheep and young calves each season, maybe ranchers should reconsider their objection to wolves.

Of course, we know Ripple is a star; after all, he's on the speaker list for ENHS. But there are other signs. He is sought after locally – the day before he speaks to us he is the speaker for the Corvallis Audubon group – and his speaking schedule

nationally is also demanding. In January 2011 he will present aspects of his research to the Department of Ecology and Evolutionary Biology at UCLA. He has published many articles on the role of apex predators in healthy ecosystems. Ripple and his collaborator Beschta are now film stars: they are extensively featured in the film *Lords of Nature: Life in a Land of Great Predators*. On Friday, 19 November 2010, Professor Bill Ripple

will tell us about his work in Yellowstone, Zion, and other places. This is important stuff. The fairy tales have it wrong; large predators are our friends. To be healthy our world needs them. Please join us at 7:30 p.m. in Room 100 Willamette Hall on the U of O campus to hear Dr. Ripple's talk "Using Wolves and Other Predators to Restore Western Ecosystems."
John Carter

Black and Yellow, Scary Fellow

By Reida Kimmel

One of late summer's most unhappy moments comes when either my horse or my dog steps on a ground hornet's nest on the trail and we all get stung. My horse used to react by standing still and stamping, only making matters far worse. She is more sophisticated now, even if she sometimes runs into a tree in her haste to get away. Still it was a shock this summer when we ran into a nest in July, way earlier than normal. Even odder, when I went to check out the exact location of the nest the next day in order to plan an avoidance strategy, I discovered that the hornets on the trail were a different species or sub species from the common Western yellowjacket, *Vespula pensylvanica*, with which we are all so unhappily familiar. The new hornets were smaller and darker. The colony was small too. Very soon thereafter another nest of mystery hornets appeared right under our east living room window. This nest had to be destroyed. The nest in the hills was short-lived too. Some hungry predator cleaned it out and we saw no more small dark hornets all summer.

My encounter with those nests made me want to learn more about wasps and hornets. Most people know little or nothing about them except that they sting, even calling them 'bees' which they most definitely are not, although bees, hornets and wasps, as well as ants, are members of the same order, *Hymenoptera*. I have rather ambivalent attitudes towards these insects because with a horse barn a mere hundred feet from our house, and sheep pastured just on the other side of the lawn, flies happen...in great profusion. The ground-nesting Western yellowjackets prey on flies and therefore are welcome in spite of their quick tempers, so long as they do not nest in the garden or near the house. But unfortunately for the yellowjackets and for us, their habit of choosing abandoned mouse nests and

tunnels in which to construct their chewed-wood and plant-fiber nests makes it likely that they do often nest close to the house or barn.

If the sting of a yellowjacket is painful, that of the black and white bald-faced hornet *Dolichovespula maculata* is far, far, worse, though these hornets only sting if provoked. Every summer scores of bald-faced hornets can be found buzzing about in the high rafters and under the skylights of the barn and under the porch roof, competing with the spiders for juicy flies. Bald-faced hornets also relish yellowjackets. It's fun to watch them hunting yellowjackets in the garden, carrying off prey almost as big as themselves. Bald-faced hornets build big beautiful paper nests in trees, housing two or three hundred workers. Like the nests of other wasps and hornets, these nests are only used for a year. The workers die before winter and only the queen survives until spring. We usually have a nest in one of the big willows near the pond. Because these hornets are so beneficial, do as we do. If you find a nest, do not destroy it. Just rope off the area near the nest and keep away.

The third common wasp on our farm is *Polistes dominulus*, a paper wasp that builds very attractive, small, roundish, open-faced nests attached to horizontal surfaces. It is a dainty looking species with lovely markings on its thoracic and abdominal segments. *Polistes* is said to devour caterpillars and other insects. For several years, ever since I started noticing it, I have called it the 'gentle wasp'. How gentle? Very gentle. I have tires in my arena, which I arrange and pile for horse jumps. The *Polistes* nest inside these tires. Though they fuss a bit when I set up the tires, they never sting. Nor do they sting when Poppy or Angie knocks the jump down. I don't remember when I first encountered these wasps, but it was not so very long ago. The species is a native of Eurasia and was only discovered in

Massachusetts in 1980. It has expanded its range very quickly indeed.

In trying to learn about the different species of predators, all members of the family *Vespidae*, on our farm, I discovered that the quickest way to key out the individuals was to observe the markings on the segments – easy to do on living *Polistes* lazing in the sun, harder to do unless you have squashed it carefully, for one of the scarier species. Now I have a new mystery. Wasps looking much like Western yellowjackets are coming in and dying, a few a day, on the floor of the office. What are they? Could they be the new invasive, German yellowjackets, said to nest in walls and to have “pest potential”? There’s always something new to wonder and worry about around here.

President's Corner

Autumn at Malheur

By Tom Titus

Malheur Marsh is the heart and soul of southeastern Oregon. In spring, green cattails and rushes throb with quacks, chuckles, chatters, gurgles, buzzes, hoots, and growls of bird life utilizing the rich, wet bottoms for nesting and migratory stopovers. People migrate here also, from far-flung corners of the continent, to witness the highly concentrated life attracted by water in arid land. If you like solitude, by all means avoid Malheur Marsh in spring.

But things change. From the hill above Refuge Headquarters, the October landscape is a layer cake of browns and grays. A relentless wind feathers gray clouds into a flat film that in places has been stretched too thinly and breaks, allowing an intrusion of blue. Clouds give way to mesas capped with dark Columbia River flood basalt. The marsh bottom is a marbled collage of buff cattails, bronze rushes, and dark chocolate sedges; browns nuanced beyond adjectives.

At Refuge Headquarters mine is the only vehicle in the parking lot. The only thing to observe on the Observation Pond is a single coot. The nasal burbling of White-crowned Sparrows rises from the sagebrush between the parking lot and the pond. Why do they sing in October? Perhaps because the fall photoperiod so closely matches that of spring. Whatever the reason, their misplaced song is the only thing standing between my ears and the wind. A few swallows, too high and distant to identify, dart across the gray sky. The elms and cottonwoods

surrounding Headquarters are beginning to yellow and are full of migrating Yellow-rumped Warblers with their insistent *chip*. Ruby-crowned Kinglets are everywhere, and occasionally I hear their ascending two-syllable *jabit*. One male has the audacity to show off his ruby crown. An Evening Grosbeak perches in a pine, his elegant plumage of spring and summer mottled by molt.

Other birds are here, but I am no longer a “lister.” That peak experience was 30 years ago when 200 miles of marathon birding across south-central Oregon yielded 106 species in a single day. I'm glad to have done it, but never again. This morning I'm happy with what I know, with what is easy. I'm trying to *feel* the land in fall and am not even carrying a field guide. There are no people; no necks craning and straining to see the Great Horned Owls, no one asking “did you see the thus and such?” no conversations to eavesdrop, no help sorting vireos and warblers. This morning time would stop were it not hurried along by the breeze in the spinning leaves.

After a long conversation with a workman replacing windows in the Headquarters offices, I drive south on the Central Patrol Road. A Black-billed Magpie spooks from the carcass of a road-killed jackrabbit, and I realize that I've never seen a road-killed magpie. History has likely been riddled with more road-killed humans than magpies. A Wandering Garter Snake basks in the gravel, soaking up weak sunlight strained through high clouds. Low willows along the road are fully yellow, having finally given themselves over to the bright Yellow Warblers that sang and nested here last season.

Wright's Pond has the look of a coastal mudflat at low tide rather than water landlocked by hundreds of miles. It has shrunk to one third of its size in spring, when snow melt from the gentle west flank of Steens Mountain fills the Blitzen River with turbid runoff, pouring into the south end of the huge marsh. The waterfowl are severely backlit, but I can make out the Mallards close in. Three Killdeer cry and ply the muddy shore. Silhouettes of Ruddy Ducks squat low in the lapping gray water beyond.

Further on, a pair of Prairie Falcons lift off a dry field with a chattering cry, angular wings pulsing like rapidly beating hearts. One of them lowers its legs seductively, as though it were spring and time to woo a mate. Maybe the falcon is photoperiodically challenged or perhaps guilty of wishful thinking. Or could this be sheer exuberance,

a pair of empty nesters finally divested of their parental responsibilities, out for a little romance before the harsh reality of winter envelops their world? In a ditch to my right, a group of teenage coots swims away, adult in size but still sporting the telltale gray plumage of childhood. Northern Shovelers and Mallards keep their distance, iridescent green on the heads of the drakes just beginning to appear from eclipse plumage, muted in the wan sunlight. The cattails, sedges, and rushes are in transition also, their stems still green below, and their brown dry tops rattling in the wind.

The weak late morning sun has brought a large female Gopher Snake to bask on the road. Worried that she might be crushed by one of the dump trucks working on road repairs, I stop to shoo her off. She crawls to the side and stops, watching me intently, unblinking, as only a snake can do. I return to the cab and focus my binoculars on her, only 10 feet away. On her back, dark brown patches contrast

with beige, skin shiny from a new molt. I can see every keel through the middle of every scale, her dark mask disguising her lidless eyes. She is well nourished and heavy bodied but likely now has an empty stomach, having not fed in preparation for winter hibernation. I may have interrupted her autumn trip to a community den that she will share with other gopher snakes, rattlesnakes, and racers from around the marsh.

The wind bowing over silence and the transitory nature of plants and animals make me unspeakably restless, beyond my powers of accommodation or adaptation. Stopping short of Buena Vista Pond, I make a three-point turn in the middle of the vacant road. Home is six hours west, where the greens are as varied as these windblown browns. There is wood to stack, cider to press, the last tomatoes to can. Maybe when I get home I'll fly into the sky, try gracefully lowering my legs a time or two. Just to see how it feels.

Out and About

"Out & about" is a periodical encouragement to Eugene Natural History Society members to get out and experience our magnificent Oregon



Klamath Basin

Have you seen that incredible scene of the snow geese taking off at the opening segment of Oregon Field Guide? Go to Klamath Basin in the winter to see those and many other birds live and in person – bald eagles by the hundreds, tundra swans and several species of hawks thrive in this spectacular landscape.

Want more information about this location? Contact Dave Stone at 541 683-0127.

ENHS thanks the volunteers who spent time in our booth at the Mushroom Festival: Reida and Chuck Kimmel, Barbara Butzer, Jonathon Brown, John Carter, Kris Kirkeby, Erik Muller, Rob Castleberry, Tom Titus, Thia Bell, Melody and Jim Clarkson, and Rebecca Hazen. Special thanks to Andrew Sermak for bringing some of his salamanders. Kids were fascinated by them!

Events of Interest in the Community

Lane County Audubon Society

Tuesday, 23 November, 7:30pm. “Birding beyond Borders” by Victor Emmanuel. 1645 High St., Eugene. Emanuel has traveled the world for over 35 years, ranging over every continent multiple times. At November’s program meeting, he will share some of his favorite birding regions and discuss why he likes those areas. He will also discuss why birds have attracted the interest of more people than any other animal category.

Mount Pisgah Arboretum

34901 Frank Parrish Rd., Eugene, 97405. Located off I-5 Exit 189, 15 minutes southeast of Eugene. Call Peg Douthit-Jackson at 541-747-1504 or email mtpisgjp@efn.org for more information or to sign up for any of the following Arboretum activities.

Saturday, 13 and Sunday, 14 November, 10am-4pm each day Mushrooming on the Mountain. Learn about identifying, picking and cooking mushrooms. Marcia Peeters, co-founder of Cascade Mycological Society, will lead this two-day workshop. Both days will include class and field time on Mount Pisgah. Rain or shine. Meet at the EPUD building. Fee: \$75.00 (MPA members/\$70).

☐ **Saturday, 20 November, 10am-3pm. Play in the Rain** ☐ Free family event (even parking is free)! Looking for something fun to do with your family on a rainy, or perhaps even sunny Saturday in November? Then come on out to Mount Pisgah Arboretum for our community’s 3rd annual Play in the Rain Day. Discover how fun, easy, and rewarding it is to spend time outdoors in nature—in ALL kinds of weather. The day’s activities will include hikes, horses, tree climbing, nature crafts, scavenger hunts, seed planting, campfire cookery, and more. Sponsored by the Youth in Nature Partnership, a collaborative of local organizations that work closely with youth in the outdoors.

Saturday, 27 November, noon-2pm. ☐Mushroom Walk. Take a walk through the Arboretum’s forested trails with experienced mycologists Molly Widmer and Chris Melotti of the Cascade Mycological Society, and hunt for those fascinating fungi. Discuss identification, habitat, characteristics, natural history and the role of fungi within an ecosystem. Rain or shine. Meet at the Mount Pisgah Arboretum Visitor Center. Fee \$5 (MPA members/donation).

Native Plant Society of Oregon, Emerald Chapter

For more information call 541-746-9478. Contact ngap@emerald.npsoregon.org with questions.

Monday, 15 November, 7:30pm. A Botanist in Southern Iowa. Presented by Ed Alverson of the Nature Conservancy. Iowa is the only state that lies entirely within the tallgrass prairie region, where prairies and oak savannas once covered hundreds of thousands of square miles and numerous bison and elk once grazed. Today, only a small fraction of the original natural landscape remains. Ed will describe his recent visit, which was made to study both the history and botany of this region. He will also share pictures of some of the remaining examples of the now rare native ecosystems in southern Iowa. Location: EWEB Training Room at 500 East 4th Avenue, Eugene.

WREN

For more on these activities call 541-683-6483 or email info@wewetlands.org.

Nearby Nature

Call 541-687-9699, email info@nearbynature.org, or go to <http://www.nearbynature.org/programs/registration-forms>

Saturday, 13 November, 10am-noon. Nearby Nature Quest: Get Squirrely. Find out who’s getting ready for winter on this late fall wander through park meadows and woodlands. Starts outside the Alton Baker Park Host Residence (between the dog run and community gardens). FREE for members, \$2/person or \$5/family for non-members. Pre-registration suggested.

Sunday, 14 November, 1-4pm. Nearby Nature's Lessons in the Learnscape Workshop: Backyard Habitats.

Show up if you are interested in creating a backyard habitat for native birds, bees, and butterflies using native plants. Help our ecosystem, while having a great time and creating interest -- and perhaps you will create something beautiful, too! **Instructor:** Bruce Newhouse. Pre-registration is required and space is limited. \$30 for members, \$35 for non-members, or a work trade at the Nearby Nature Learnscape. To register, see www.nearbynature.org/learnscape/lessons-in-the-learnscape-workshop, call 541-687-9699, ext. 2, or email info@nearbynature.org with *Backyard Habitats* in the subject line

We welcome new members! To join ENHS, fill out the form below. You will receive *Nature Trails* through December of next year. Membership payments allow us to give modest honoraria to our speakers, as well as to pay for the publication and mailing of *Nature Trails*.

MEMBERSHIP FORM

Eugene Natural History Society

P.O. Box 3082, Eugene OR 97403

Name _____ <http://biology.uoregon.edu/enhs/>
Address _____
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ANNUAL DUES: Contributing 20.00
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 Life Membership 300.00
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Make checks payable to: The Eugene Natural History Society

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

The following information is voluntary, but appreciated:

Would you like to: lead field trips teach informal classes work on committees?

What would you like to hear a talk on? _____

Do you have special experience in natural history: _____

INTERESTS

Archaeology Astronomy Bird Study Botany Conservation Geology History of Science
 Herpetology Meteorology Mosses & Lichens Mushrooms Nature Walks Wildflowers Zoology
 Other _____

If your copy of *Nature Trails* has a red circle close to your address, you haven't paid your dues.

Eugene Natural History Society
P.O. Box 3082
Eugene, Oregon 97403

ENHS Schedule of Speakers and Topics 2010-2011

- 19 Nov 2010** – Bill Ripple – Using Wolves and Other Predators to Restore Western Ecosystems
10 Dec 2010 – Doug Robinson – Why have so many birds disappeared from a tropical island in Panama?
21 Jan 2011 – Dennis Jenkins – Paisley Caves
18 Feb 2011 – Lynn Houck – Salamander Courtship
18 Mar 2011 – Scott Bridgham – Climate Change/Terrestrial Ecosystems
15 Apr 2011 – Al St. John – Great Basin Reptiles
20 May 2011 – TBA (Robert Pyle will be unable to speak to us)

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