

Nature Trails

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Burning a prairie Photo by David Harrelson

Kalapuya Perspectives on Place

David Harrelson

**Tribal Historic Preservation Officer and
Program Manager of the Confederated Tribes
of the Grande Ronde**

**Friday, 18 September 2015, 7:30pm, Room 100
Willamette Hall, University of Oregon Campus**

David Harrelson, our September speaker, is a Grand Ronde tribal member of Kalapuya ancestry. Working for the Grand Ronde Tribal Historic Preservation Department, Harrelson's own personal areas of interest include cultural plants, contact-era history of the Pacific Northwest, and traditional land management's role in maintaining ecological systems. In his present positions as Tribal Historic Preservation Officer and Program Manager of the Confederated Tribes of the Grande Ronde (CTGR) Harrelson gets involved in what might seem unrelated projects around our state. If ground is going to be disturbed he wants to be involved because there could be impacts to archaeological and other cultural resources. A bit of history is in order here. The CTGR contains over 27 tribes and bands coming from lands stretching from southwest Washington to northern California, from the crest of the Cascades to the Pacific Ocean. Those peoples ceded fourteen *million* acres to the Federal Government in the 1850's. Now, tribal land consists of approximately thirteen *thousand* acres located mostly near the town of Grande Ronde, Oregon – less than one one-thousandth of the original area. The CTGR recognizes the lands of their ancestors as ancestral homelands, however, and they engage with private citizens, corporations, and government agencies on the management of these lands. Large construction projects around the state, such as the Newberg-Dundee Bypass Project, thus can come under the tribe's scrutiny because of the possibility that a tribal encampment could have existed in that area at some time in the past.

When Harrelson was born, his dad was a student at the U of O here in Eugene, so he became a Duck by birth, and he has street cred because he had to watch a lot of Duck football before they were good. But his mom's roots are with the Mary's River band of Kalapuya. Recall that Mary's River runs into the Willamette at Corvallis. So Harrelson's connection to



the Oregon State University area predates the Beavers. And yet he's a Duck. Smart man. Although a native Oregonian, Harrelson spent his formative years in Washington. After high school in Tacoma he entered Lewis and Clark College, in Portland, Oregon, getting his Bachelor of Arts degree in history in 2007. His interest in archaeology led him to take courses from South Puget Sound Community College in Olympia, Washington, from which he obtained a Cultural Resources Specialist certificate in 2012. He furthered his education and experience in archaeology by participating in the University of Oregon's Paleoethnobotany Field School at Rimrock Draw, led by Dr. Margaret Helzer, in 2012, and excavations at Southern Oregon University's Jump Off Joe Archaeological Site in 2011.

Harrelson took full advantage of the offerings at his undergraduate alma mater: through Lewis & Clark College's East Africa Curriculum he was able to spend four months in Tanzania, where he completed three field studies. As part of this marvelous experience he stayed in homes in Masai and Hadzabe villages. He said this was a life-changing experience. He found himself amidst intelligent, hard-working people whose poverty he felt could have been ameliorated by an infusion of capital. He sees analogous situations on Native American reservations in the U.S.

A small entry in his resume illustrates his well-roundedness. Harrelson was on the Lewis and Clark College rowing team for all four years of his tenure there, occupying the bow seat in the shells in which he rowed. He commented that crew is unique as a racing sport in that besides intense individual effort it involves a high degree of team coordination: just



turning one's head to the side can be enough to upset the entire boat. Imagine an eight-person rowing machine on top of a balance beam. Far different than the track and cross-country teams of which he was a part in high school. His crew experience is reflected in the way he has combined

hard individual work with genuine group cooperation in his firefighting career and in his present tribal roles.

In the summer of 2004 while an undergraduate at Lewis and Clark Harrelson became a wildlands firefighter, an activity he continued for several summers, gaining experience in the use of many modern tools of the trade. This work dovetailed neatly with his heritage, since his ancestors had managed the Valley landscape with fire for millennia. His experiences as a firefighter led him to choose Native American use of fire in the Willamette Valley as an undergraduate research project.

Harrelson has given over twenty presentations in the past four years, has led numerous traineeships, and has established several partnerships. One of those partnerships deserves mention here since it relates to what he will be talking to us about: *Integrating Tribal Knowledge with Land Management* is an ongoing collaboration between him and Braden Elliott, a Ph.D. candidate at Dartmouth College. In his presentation to us Harrelson will touch on the Indian way of doing things, on alternative approaches to restoration. He summarized what he will talk about

roughly as follows. Assuming that we want to manage our unique Valley in sustainable ways we must be smart planners. We need to manage for abundance, which is counter to our extractive concepts. Realizing we don't have the same inputs or desired outcomes as did Harrelson's ancestors, we need to focus on the principles and ideas behind what we want to maintain and restore. The landscape can't look like it once did, given the extra millions of humans here, our massive infrastructure, our exotic plants and animals, our very lifestyles, so we cannot reset the clock. He suggested we give a thought to Himalayan blackberry. Yes, it's an exotic, but if it were native don't you think the Kalapuya would have liked it? And wouldn't they have kept it in check rather than letting it run rampant? We have to be real about how to move forward, but we would benefit greatly by using the lessons of those who spent thousands of years developing their deep connections with and understanding of this magnificent place. Please join us at 7:30pm on 18 September in room 100, Willamette Hall (an appropriate setting), to hear David Harrelson's talk Kalapuya Perspectives on Place. John Carter

Reflection on Walden Pond By Tom A. Titus

Early this summer Kim and I honored Henry David Thoreau by sauntering around Walden Pond. Writing one thousand words on this pilgrimage to Walden smacks a little of sacrilege. I don't care much for pigeonholing, but if you ask I will likely tell you that among many other things I'm an environmental writer who believes in the life-giving qualities that spring from a spiritual attachment to Place. Much about Thoreau's life speaks deeply to me—his profound connection to Concord, his antislavery activism, his minimalist philosophy, his views on the position of humans in nature. So a short reflection based on a three-hour visit to the place that was Thoreau's place above all others seems a little, well, shallow. Nevertheless, who knows when the opportunity will come around again, so I'll wade in, if only up to my ankles.

Walden Pond was carved into granite by a receding glacier and is about 100 feet deep and a half-mile across on its long axis. The water is as clear and blue as were Thoreau's eyes. Trout slurp insects in the shallows just beyond a narrow sandy beach. My mother-in-law grew up in nearby Belmont and always knew this place as Lake Walden. This now makes sense to me; Walden Pond qualifies as a lake by most standards.

We walked counterclockwise around the pond. A chattering Baltimore Oriole leapt into a lakeside

alder, his black hood and orange flanks flashing in late morning sun. Near Thoreau's Cove we turned away from the water to visit the site of his cabin at Walden. Henry David built his house on a rise, perhaps 50 meters back from the north shore. The pond was visible through the trees. His single-room cabin was about 150 square feet, with a wood stove at the back and a cot along the long side opposite a little kitchen area. Today his place would qualify as a "tiny house," the new minimalist abodes now becoming increasingly popular. The original cabin was torn down long ago and salvaged for lumber. Henry David would have approved of this frugality.

Mixed pine and hardwoods have been growing since the forest was leveled by a hurricane in 1938. The present woodland might look much as Thoreau had known it. He was attracted to the forest around Walden Pond because the surrounding land had been cleared for agriculture, and here the trees remained because soils were too poor for growing food. This year a record-setting winter snowfall had given way to an unusually dry spring. Sun filtered through the canopy, throwing spotted bobcat light onto brittle brown leaf litter. Wyman Meadow, a little wetland near the cabin site, was completely dry. Kim and I carried our Oregon aversion to heat and humidity with us to New England. We felt as though all of the moisture that had left the ground now hung thickly in the air.



Back on the trail, there were black-and-white signs hanging from a two-stranded twisted wire fence: **STAY ON TRAILS: Restoration Zone.** I found the signs ironic because in my imagination Henry David was a free spirit, sauntering through the woods unencumbered by authority. In 1845 he might have greeted these signs with disdain. But inferences without historical context are speculative at best, and I suspect that were Thoreau an old man today, the current popularity of his once quiet refuge would make him sad. I think he would feel this way because I have felt this way; many of my favorite getaways are no longer places to get away. Yet I can imagine Henry David advising today's Massachusetts Department of Conservation and Recreation and can see him shrug in resignation about the fences and signs, recognizing that sometimes the land needs help.

Kim and I found a sanctioned opening in the fence and made our way down a short stairway of native granite slabs, stepping out onto the well-packed sandy shore. A Chipping Sparrow belted out a drawn-out chatter from atop a pine at water's edge. We sauntered along the shore. Is there a difference between a saunter and an amble? Since we were in Thoreau's place, I'm certain we were sauntering.

From his essay "Walking": "... *the Saunterer, in the good sense, is no more vagrant than the*

meandering river, which is all the while sedulously seeking the shortest course to the sea." I hope someday to become an accomplished Saunterer and to use the word "sedulous" in a sentence of my own. There was a small amount of trash along the way—plastic water bottles, wrapper bits, and a red-and-white Marlboro cigarette box. We picked up the junk and stuffed it in an outside pocket of Kim's backpack. Eventually the garbage provided its own receptacle—a cast-off ziplock bag. An abandoned bait container still had a worm in it, barely alive, and I chucked the worm into the water for the trout in what I hoped was a mercy killing. This act was an introduced species feeding another introduced species to yet another introduced species that he would have happily eaten himself, a short food chain of invasive animals. So be it.

The midday warmth and humidity had a soporific effect that drew us around the north shore, back toward the parking lot. Passing a monofilament line recycling station, I decided to leave a wad of line we had removed from a stick. A small nest with a few clinging hornets dangled from the top of the tube-like receptacle. I wondered how many people would deposit their used line as long as the nest was there, then took my chances and quickly stuffed in the tangled mess. That's just how I'm wired.

We finished up in the small gift shop full of books covering all things Thoreauvian. I continued sauntering in my mind and concocted a phony multiple-choice question. What would Henry David think of all this? Would he be a) horrified at the excess, b) stupefied at some interpretations of his life, c) gratified that his ideas have persisted and found such a wide audience, or d) all of the above? I choose "d" because despite his pursuit of external simplicity Thoreau was a deeply introspective, complex, and at times conflicted person. I think he would have understood, perhaps with some sadness, that this is the reality of our world.

Sea Foam and Rock Snot by Reida Kimmel

Chuck and I were at the coast for seven of the lowest tides of summer this year. We were searching for larval sculpins as part of a skull bone growth study he is conducting. Thanks to last year's work, we believed we knew what species would be available at what tide pool locations. But we were surprised to find that even in early June, the summer sand build-up had already occurred. There were fewer pools to shelter the small sculpins. We speculated that the lack of significant winter storms had caused much of last summer's sand to remain on the beaches. But that was hardly the weirdest thing about the beaches this summer. By late June many of

the pools at Seal Rock were cloudy. They looked polluted, and sure enough in early August, just after our last collecting trip, the beach was found to have human fecal contamination. People were urged to stay away from the water. We had been disappointed that the young sculpins had dispersed from even the lowest of the subtidal pools that we could access, but at least we were lucky and didn't get sick.

That type of pollution is an unfortunate but preventable event that can happen to any beach in a populous area, but what about the thick brown foam that we noticed on top of the waves, not just where they broke on rocky shores and into the tide pools, but also along the long beaches that stretch for miles

north of Heceta Head, and from Yachats to Waldport? When it washed ashore, the foam sank into the sand leaving an ominous green-brown stain with the iridescence of an oil slick. That was not all. Riding to shore in the waves, less buoyant than the brown foam, was a violet-colored slime, which retained its color and iridescence when the waves brought it to shore. Everywhere, so numerous that no one could avoid stepping and slipping on them, were the bodies and parts of a single kind of jelly. Not the Velella or moonjellies that are common on our beaches, but some sort of Hydrozoan, beautifully clear, with rib-like rings. These jellies were even in the tidepools where the water was crystal clean.

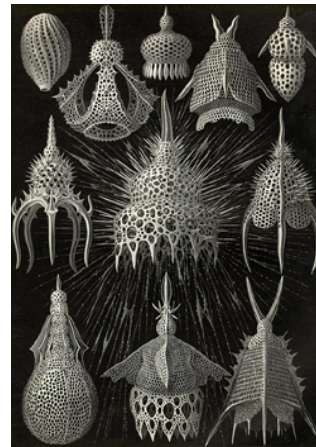
What had happened to the beaches we know so well? Were there any clues to the mystery of the foams and all the dead jellies? The answers can be found in the warm ocean conditions that have prevailed since last fall. The warm water and the long days of spring and summer stimulated huge algal blooms. The blooms fed the plankton that jellies eat, and they reproduced exponentially. But what is an algae bloom? Is it just that foam?

Dr. Michelle Wood, marine biologist at the University of Oregon, told me that sea foam is caused by diatoms, brown, microscopic, single-celled organisms that are possibly the most abundant algal life in the ocean. Each diatom is a thing of incredible beauty. Two silica shells, often highly decorated, fit together to enclose the diatoms' cellular contents. Diatoms take up so much silica that they are the prime factors in the regulation of silica in the oceans. Not motile, they move with the motions of the waves. In spring, with warmer temperatures, diatoms bloom in such abundance that they color the seas green. This key component of the plant plankton community is responsible for up to forty–five percent of the oceans' primary production. Plankton are at the bottom of the oceanic food chain, providing a nourishing feast for untold numbers of species. As summer progresses, and perhaps because all the available silica has been taken up, the diatoms die or sink to the bottom. Their earthly remains, the lipids, proteins and lignins, constitute the matter that we see as foam on the waves. The stuff of death and decay sticks together, acting as surfactants, or foaming agents. The turbulent conditions of waves create the bubbles and cause them to stick together through surface tension. Thus the brown foam was not mysterious, but rather the end process of an extraordinary algal bloom probably brought on by the exceptionally warm waters of 2014-15. Death was returning carbon, hydrocarbons and minerals to the sea and land.

But there's more to the story. In June there was a toxic algal bloom that closed razor clam digging,

mussel harvesting and crab fisheries on much of the Oregon and Washington Coast. The culprit, one of the many species of the genus *Pseudo-nitzschia*, is a diatom. This villain is rod shaped and is capable of forming long chains. It produces domoic acid, which concentrates in the bodies of animals that eat this particular bit of plant plankton. The acid accumulates in the flesh of those who ingest it. The farther up the food chain you look, the greater the concentration of this poison. Amnesic shellfish poisoning causes top predators like humans to suffer vomiting, diarrhea, neuronal and brain damage, coma, and even death.

We humans have grouped the diatoms into two hundred genera and at least 100,000 extant species. They are indeed a huge part of the plant world, not



Drawings of diatoms by Ernst Haeckel

just in the oceans, but also in fresh water and even on land. It is not surprising that the group should have a bad actor or two. The freshwater diatom *Didymosphenia geminata* is found all over the world. It forms slime on rocks in streams. In recent decades its colonies have formed hairlike stalks that form large underwater manes. This bloom makes wading a

misery for fishermen, but far worse, it imperils aquatic insect life. Mayflies and other larger invertebrates that are trout food do not do well in the choked streams. Worms carrying whirling disease, fatal to trout, thrive in waters infested with "rock snot". At first fishermen's felt waders were blamed for the spread of this new "mutant" version of a common diatom. Managers demanded a change to rubber-soled waders. Now with further study, it seems that the appearance of the mucilaginous mats coincides with warm springs when the snows melt fast and early. *Didymosphenia geminata* forms its choking mats in conditions where phosphorous is low in the water. Fast snowmelt washes phosphorous from the streams.

This summer's incredible algal blooms provided a bonanza of food for ocean dwellers, but given the threat of noxious and toxic blooms, they are really a mixed blessing. I am very fearful that we will see more disturbing changes in the waters we depend on as the world relentlessly warms. I never could find out the nature of the violet oily slime in the waves. I hope I never see it again, but I am not too optimistic.

John C. Fentress (4 February 1939 to 22 August 2015)

We are sad to announce the passing of Dr. John Fentress, who was an ENHS Board member for many years. He was a very influential researcher in the field of animal behavior, concentrating on wolves and coyotes and holding various positions in Canada and at the University of Oregon. His expertise and depth of knowledge will be missed. His last book, *Lupey Journals: Lessons from the Heart of a Wolf*, has just been published (<http://lupeywolf.com/about-john/>).

Events of Interest in the Community

Saturday, 12 September, 3pm, in the Springfield Public Library Meeting Room. *Fishing & Foraging My Way Back to the Home Ground*, an author talk with Tom Titus.

Tom Titus is the author of *Blackberries in July: A Forager's Field Guide to Inner Peace*. The book describes his return to Oregon, a year-long chronology of the hunting and gathering of his spirit that became a reunion with the Pacific Northwest and intergenerational tradition. At this reading, he will share autumn-centered pieces from this lyrical collection of essays. Tom is a research biologist and instructor at the University of Oregon. He is currently the president of the Eugene Natural History Society and writes a monthly column for their publication, *Nature Trails*.

Lane County Audubon Society

Tuesday, 22 September, 7:30pm. Great Grey Owls. Harry Fuller, author of *Freeway Birding: San Francisco to Seattle* and, with coauthor Peter Thiemann, *Great Gray Owl in California, Oregon and Washington*, will summarize what we know and don't know about the southernmost great grays on earth, the relict populations in Oregon and California. There are breeding Great Gray Owls in the southern Cascades and as near to Eugene as the McKenzie River Valley. He will discuss the habitat and prey needs of this elusive species, where and how to find one, and their prospects for survival as the climate changes. 1645 High St.

Mt. Pisgah Arboretum

Saturday, 12 September, 10am-1pm. Trailside Prune and Groom. Join us for a trailside prune and groom work party to remove overgrown and unwanted trailside vegetation. Meet at the Arboretum Visitor Center. Tools, gloves, and a parking pass will be provided to volunteers (we suggest you bring along a water bottle). Please RSVP w/site@mountpisgaharboretum.org if you plan to attend.

Saturday, 19 September, 1:30-4pm. Sumi Ink Surface Designs. Glenda Goodrich will lead the workshop. All skill levels are welcome. \$20 Members, \$25 Non-members. Pre-registration required. Call (541) 747-3817 to register.

Sunday, 20 September, 8-10:30am. Early Fall Bird Walk. Chris Roth and Julia Siporin will lead the monthly bird walk, intended for people with all levels of birding experience. Come discover the Arboretum's avian diversity. Please bring binoculars. Option to continue the walk until noon for those who are interested. Rain or shine. Meet at the Arboretum Visitor Center. \$5, Members free.

Saturday, 26 September, 10am-1pm. Trail Surfacing Work Party. Help us prepare the hiking trails for the winter season as we begin resurfacing our trails with wood chips. Meet at the Arboretum Visitor Center. Tools, gloves, and a parking pass will be provided to volunteers (we suggest you bring along a water bottle). Please RSVP w/site@mountpisgaharboretum.org if you plan to attend.

Thursday, 1 October, 1-3pm. Fall Fruits. Fall fruits are a joy to explore because they occur in such variety and beauty. We'll define a true fruit, botanically speaking, observe their diversity and learn about how their colors, textures, sizes, ripening times and chemistry influence how their cargos, the seeds, are dispersed. Join Botanist Gail Baker on this walk for all knowledge levels. Meet at the Arboretum Visitor Center. \$5, Members free.

Sunday, 4 October, 1-4pm. Color Field Sketching Without a Bucket of Water. Join Natural Science Illustrator Kris Kirkeby for this workshop. Watercolor pencils are economical and easy to use and carry in a minimalist sketching kit. When hiking or on trips when you want to limit the amount you have to pack, these are a great solution. Plus they get you the effect of watercolors without the need for bigger quantities of water. Kris will start with a very basic drawing technique to set up your sketch. Then we'll apply color using several approaches hopefully introducing you to a style you'll like. Bring a photo you would like to work with or we can do field sketching from the Arboretum. Members: \$25, Non-members: \$30. Pre-registration required. Call (541) 747-3817 to register.

Friends of Buford Park and Mt. Pisgah

Monday Morning Regulars. 9am-noon. Contact volunteer@bufordpark.org for more information.

Tuesdays and Thursdays, 9am-noon. Nursery Work. Meet and work at the Native Plant Nursery at Buford Park. Enter Buford Park from Seavey Loop Road. Turn LEFT after crossing the bridge and drive 1/4 mile to the nursery.

WREN (Willamette Resources and Educational Network)

Thursday, 17 September, 6-7:30pm, Volunteer Meet & Greet. Volunteer as a Wetlands Guide, help behind the scenes as an Operations Volunteer, or, if you're a college or university student, take advantage of WREN's unpaid internship program. RSVP by 15 September to Susanna Hamilton, Volunteer & Staff Coordinator Environmental Educator. 541.338.7046 or susanna@wewetlands.org

Wednesday, 30 September, 5-8pm. An Evening with WREN. Join us at Oakshire Public House to learn about our programs and projects, and the work we do in the West Eugene Wetlands. Oakshire Public House, 207 Madison St. Oakshire will donate a dollar to WREN for every pint sold.

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

Exhibit Hours: Tuesday through Sunday, 11am-5pm

Current Exhibits

- Explore Oregon: 300 million years of Northwest natural history.
- Road Trip! The Roadside Geology of Oregon.
- Site Seeing: Snapshots of Historical Archaeology in Oregon.
- Oregon - Where Past is Present. 15,000 years of Northwest cultural history and 200 million years of geology.
- Highlights of the Jensen Arctic Collection.
- Tradition Keepers – Shayleen Macy. Artist Shayleen Macy is a Wasco/Yakima/Warm Springs member of the Confederated Tribes of Warm Springs and a graduate of the University of Oregon's BFA program.
- Geophotography.
- Scientific at the Core.

Ideas on Tap. First Wednesday of the Month, 7-9pm, now at Sprout! Marketplace, 418 A St., Springfield. Quench your thirst - for beer and for knowledge – at **Ideas on Tap.** Enjoy local craft beers and thought-provoking discussions about science, ecology, history, and more. **7 October, Fungi and the Forest.** Botanist Molly Widmer and wildlife biologist Chris Melotti. Admission is free, food and drink available for purchase.

Native Plant Society of Oregon, Emerald Chapter

Thursday, 17 September, 7pm. Marvelous Milkweeds. Kevin Weitemier gives us an overview of the beautiful and unusual plant genus *Asclepias*, the milkweeds. Come to learn about the bizarre flowers of these plants and their close association with monarch butterflies. Included in the native milkweeds of Oregon is a recent discovery. Conference Room at Lane County Mental Health, 2411 Martin Luther King Blvd. For more information call 541-349-9999.

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:	Contributing	20.00
	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.
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Make checks payable to:

The Eugene Natural History Society
P.O. Box 5494, Eugene OR 97405

Thank you, all who volunteered in the ENHS booth at the Mt. Pisgah Arboretum Spring Wildflower Festival!
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DUES ARE DUE! And don't forget, at our May business meeting members approved a raise to \$15 for individuals and \$25 for families.

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ENHS Schedule of Speakers and Topics for 2015-2016

18 Sept. 2015	– David Harrelson	– Kalapuya Perspectives on Place
16 Oct. 2015	– Suzanne Simard	– Mycorrhizal Communication in Forests
20 Nov. 2015	– Nora Terwilliger	– Galapagos Islands
11 Dec. 2015	– Paul Bannick	– Journey With Owls
15 Jan. 2016	– Madonna Moss	– Anthropology of Pacific Herring
19 Feb. 2016	– Greta Binford	– Spiders
18 Mar. 2016	– August Jackson	– Pollination Biology
15 Apr. 2016	– Rebecca Vega-Thurber	– Coral Reef Decline
20 May 2016	– Mark Blaine	– Copper River Salmon
Alternate	– Dean Walton	– History of Oregon Naturalists