

Nature Trails

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Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants

Dr. Robin Kimmerer, Professor of Environmental Biology, State University of New York, College of Environmental Science and Forestry, Syracuse

Friday, 18 October 2013, 7:30pm, Room 180 PLC, UO Campus

Why Braided Sweetgrass? For the title of your latest book, and for the title of your talk? Robin Kimmerer's response was gentle, no hint of rebuke in that musical voice.

This is roughly what she said: Sweetgrass is considered by our Nation and other indigenous peoples to be the hair of Mother earth. When you love someone, one of the ways to show it is to braid her hair. We show our love for our Mother by braiding her hair: Sweetgrass. Now, there are three strands in a braid. In the braid I made, my book, the first strand is indigenous knowledge, the second, scientific knowledge, and the third, the knowledge the plants themselves have. I tried to weave them together so all could see how together they are one.

I'm glad I asked this question toward the end of our interview because her answer touched me such that there was little else I could say.

Robin Kimmerer is an enrolled member of the Potawatomi Nation. She is also a Professor of Environmental Biology in the State University of New York College of Environmental Science and Forestry, in Syracuse, New York. With one foot firmly in the traditional way of understanding nature and the other just as firmly planted on the other bank, the scientific approach to the same understanding, Kimmerer is in a unique position. She is adept at maintaining her balance, however, as her accomplishments clearly show.

The Center for Native Peoples and the Environment, which Kimmerer cofounded, is concrete evidence of the success of this dual approach. Now in its fifth year, the Center, part of the College of Environmental Science and Forestry, has an advisory board whose members represent Native Nations in the area, such as Potawatomi and Onondaga. The Center is creating programs that make use of the wisdom of indigenous people as well as scientific knowledge to enable us to reach the shared goal of sustainability. Kimmerer's course 'Plants and Culture' is co-taught by an herbalist who is a member of the Onondaga Nation. Development of the Center is just a part of Kimmerer's efforts to give Native peoples better access to the study of environmental science. Another example is the "Learning from the Land" grant that she got from the USDA's Higher Education Multicultural Scholar Program. This grant is joint with the College of Menomonee Nation, in Wisconsin. The Menomonee are well known for far-sighted management of their forest, which they harvest so skillfully that they should attain their goal of leaving a healthy forest for their seventh generation. Students under this program get to travel back and forth, comparing practices in

the Menomonee forest with those of SUNY-ESF's forest, which is managed for scientific research.

Kimmerer remains close to her roots. She was born in Schenectady, New York, only a couple of hours' drive from her present location in Syracuse. As a youngster her parents encouraged her desire to play outdoors, so she came early to a love of nature. She went to SUNY-ESU as an undergraduate, getting her bachelor's in botany. Following a two-year stint as a microbiologist at Bausch and Lomb she moved to Wisconsin and did her graduate work at the University of Wisconsin in Madison, obtaining a Master's in botany in 1979 and her Ph.D. in plant ecology in 1983.

From Wisconsin Kimmerer moved to Kentucky, taking first a temporary teaching position at Transylvania College, and then a permanent post at Centre College in Danville. She was there for nine years, after which she returned to her alma mater, SUNY-ESF, this time on the other side of the lectern.

A list of courses Kimmerer teaches is doubly revealing. The list: Land and Culture, Traditional Ecological Knowledge, Ethnobotany, Field Ethnobotany, Indigenous Issues and the Environment, Plants and Culture, Disturbance Ecology, General Botany, and Ecology of Mosses. To master this body of material at a level sufficient to lead university students to an understanding of them one must be a plant scientist and an ecologist, but also have a store of and connection to traditional ecological knowledge. The list says, "I am a botanist." It says, "There is more than one way to study plants, ecology, and the environment." It says, Traditional Ecological Knowledge is as legitimate as science."

Kimmerer has a lengthy list of scientific publications to her credit. Here's a typical title, which incidentally reveals another connection she has with Oregon: "Influence of overstory removal on growth of epiphytic mosses and lichens in western Oregon." *Ecological Applications* Vol. 16 (3): 1207-1221, 2006. But most of us know her more for her literary accomplishments than her science. Her first book, *Gathering Moss: A Natural and Cultural History of Mosses*, published in 2005, won that year's John Borroughs Medal for Nature Writing. As of 2012 she had published fourteen essays in such journals as *Whole Terrain*, *Adirondack Life*, and *Orion*, and in several anthologies. A typical title: "Restoration and Reciprocity: The Contributions of Traditional Ecological Knowledge to the Philosophy and Practice of Ecological Restoration." in *Human Dimensions of Ecological Restoration*, edited by David Egan, Island Press, 2011.

And now she has a second book coming out: *Braiding Sweetgrass: Renewing Reciprocity with the Good Green Earth*, and by a sweet coincidence the expected publication date is October 2013. That would be now. We are fortunate to have Dr. Robin Kimmerer, member of the Potawatomi Nation and Professor at SUNY-ESF, for our October lecture. In her talk on Friday the 18th, "Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants," Kimmerer will touch on these two alternative but ultimately connected ways of knowing about the world: Traditional Ecological Knowledge and Science. We can expect her to read from her new book. Besides ENHS, her visit is being co-sponsored by two units of the University of Oregon: the Environmental Studies Program, and the Oregon Humanities Center. I don't know about you, but if I can get hold of a copy I will have *Braiding Sweetgrass* in my hand at the end of her talk, waiting for her to sign it. You really do not want to miss this. See you in room 180 PLC, on the UO campus, at 7:30 pm, Friday, 18 October. John Carter

Once again, Goodbye to the Trees

by Reida Kimmel

This morning we had eight tenths of an inch of rain, the first storm of the season. I trudged out between showers an hour ago to find the woods on the trail above the house transformed. The poison oak, brilliant in shades of coral and burgundy only a few days ago, was leafless. Liverworts on the hardwood logs, grey and brittle then, were plump, green and dripping moisture. For the first time in months, I spotted newts and banana slugs on the path. Perhaps this is the moment in the year I love most. My eyes open to the incredible beauty and richness of our native woodlands as they awaken from their summer dormancy. This Saturday we'll ride the horses up through the edge of these woods to the ridge that runs parallel to Lorane Highway from Fox Hollow Road to Lorane. We love our trail along the ridge because the first part goes through a beautiful forest, over sixty years old, whose understory is a mix of hazel, ferns, mosses, and, in season, wildflowers or interesting mushrooms. For the last half dozen years, it has been home to a small and sociable flock of gray jays. This half-mile stretch of cool shaded beauty is the last large intact piece of wooded land left to us. Once all our trails were wooded. Now we are about to lose this precious place. All summer we have watched the ribbons go up, "Timber Harvest" "Timber Sale" "Cut Boundary". The trees will go. We just do not know exactly when.

Perhaps watching all the nearby woods we love being felled makes me more sensitive to the evolving plans to greatly increase logging on the public O&C Lands in order to provide needed revenues for the timber-dependent counties. Living near industrial timberlands and knowing just exactly what happens to forestland when it is managed according to standard commercial logging practices makes me regard with horror Representatives DeFazio, Walden and Schrader's bill. The bill, which has now cleared Committee, would turn over management of 1.67 million acres of the 2.8 million acres of public O&C lands to private timber interests that do not have to comply with the federal environmental laws giving protection to riparian and watershed areas. The proposed change in public land management is not just a proposal to devastate some of our most biologically diverse and healthy forestlands, it is also a foolish attempt to put a band-aid on a very real and troubling economic problem.

Oregon's public lands were the source of billions of board feet of prime timber, such as you do not see marketed today, from the 1950s until the early 1990s by which time all but 5% of the state's old growth timber was gone. This era was the heyday of logging, the 'good old days'. But were they so good? In my experience, living surrounded by timberland, both public and private, for the last 44 years, the loggers I knew were not well off. Seasonally unemployed, they scratched out a living doing some ranching, some logging, and a lot of hunting. None of them got rich. The timber companies, often out-of-state companies, certainly did grow wealthy. And the timber-dependant counties got government payments to help with schools, libraries, and police. Generations of children grew up contented with little education and a job like Dad's in the woods or the mill. The counties did little or nothing to court new industries, or retirement and residential developments, even though, as the examples of Brookings, Bandon and Sisters prove, the demand for development in our lovely rural areas is huge. The counties were content to be timber-welfare junkies and when the timber was gone, to cry for more aid, for more public logging.

Enter the plan to get more timber off the O&C lands. By turning large tracts of public land over to timber companies to manage, the state will be removing federal protections from these acreages. Trees now 80 and more years old will be harvested, and the land will be sprayed, repeatedly, with cocktails of chemicals. The streams and creeks will run brown with silt, for the bill proposes to increase logging in riparian areas. A generation's worth of forest, aquatic and ecological research will be

ignored, and the trees will fall. Plantations of disease- and fire-prone monocultured Douglas firs will replace the forests that now shelter a rich biota, soils with healthy nutrient-rich microorganisms, and streams with clean, cold water where trout and salmon lay their eggs in undisturbed gravel beds.

Will it bring much-needed jobs? Not many, really. Modern logging and milling practices do not require many workers. One skilled man with a large machine can mow down a hundred acres in a few days. With the help of another worker, he can load and haul away the logs to market. The days of the gyppo loggers, whole families working in the woods together, are almost things of the past. As for the mills, they too are streamlined and modernized, and a very great deal of timber cut on private land never gets to the mills because it is exported as raw logs.

Ever since the early 20th century, when public lands were opened to logging, the mantra has been that trees are a renewable resource and that logging will be on a sustainable basis. Our logging practices are not, and have never been, sustainable. Increasing the logging pressure on the O&C lands will do terrible damage to a diverse ecosystem just healing from past decades of exploitation. When the trees are gone, the revenues going to the counties will shrink and disappear again. And then the outcry will start anew.

Open more land for logging! We need the revenue! The timber-dependant counties do not need more logging. They do not need to destroy their best and most precious asset, their rich, intact natural resources. Instead they need investment in diverse industries and development. The residents of those counties need to learn new skills for new jobs instead of remaining hopelessly caught in dead-end jobs or unemployment.

When we ride our favorite trail Saturday we will be saying goodbye, for three months for sure, because we are leaving the next day for Cambridge, England, which though it has its own beauties, is the heart of that nation's most treeless county. We are probably saying goodbye to 'our' trees forever. I only hope I will not also return to the certain deforestation of so much of western Oregon's last remaining mature timber lands, and all the life they support and shelter.

Rarely, if ever, do I use the pages of Nature Trails for political advocacy, but this is an exception. It does not take much effort to raise your voice or pen in support of keeping the public lands public, and protected. Let Congress and the Governor know that Oregonians support finding a better way to help our rural counties than destroying more than a million acres of our greatest treasure. Please help.

Out and About

"Out & about" is a periodical encouragement to Eugene Natural History Society members to get out and experience our magnificent Oregon. Photos and descriptions provided by David Stone.



With all the recent rain the forest is full of fungi. Go out there and begin your search for our long-awaited local mushrooms. If you don't have a favorite secret place, check out Dorris Ranch (where the shaggy parasols pictured here were found), Spencer Butte or even East Alton Baker Park. Unless you have a positive ID of the specimens you find, enjoy them only for their beauty. Remember, "There are old shroomers and there are bold shroomers, but there are no old, bold shroomers." Take some good close-up mushroom photos and bring them to the Mt Pisgah Arboretum's Fall Mushroom Show (Sunday, 27 October, 10 am – 5 pm).

NOTE THAT THE 18 OCTOBER MEETING IS IN ROOM 180 PLC, UO CAMPUS

Our Conflicted Selves by Tom A. Titus

Internal conflict fascinates me, partly because I am rife with it and partly because inner turmoil seems to be nearly universal. Why is this? My own worldview, like everyone else's, is skewed by idiosyncrasy. Because I'm an internally conflicted evolutionary biologist, it occurred to me that some of our psychological disjunction, if not outright dysfunction, might be explained by our evolutionary history, and an examination of our evolutionarily mosaic selves might be a productive line of inquiry, a launching pad for addressing some of the more pressing questions now facing humanity.

For starters, we are one genetically differentiated human family. This fact is indisputable given the disparate and overwhelming genetic evidence from the DNA of our mitochondria, which we inherit from our mothers, and the DNA from our Y chromosome, which those of us of the male persuasion inherit from our fathers. Both lines of genetic evidence point to a single evolutionary origin for humans. But both of these gene trees also show that individual groups of humans have differentiated genetically. This differentiation has occurred because of random processes such as genetic drift (the gradual divergence of gene frequencies among populations that are for some reason not exchanging genes) or because natural selection has favored genes in one population that are not selectively advantageous in another. These two processes can also operate together. Cultural differences also can reinforce this divergence. Thus, we are all biologically human and yet clearly different from one another.

All of us came from somewhere else. Most biogeographical evidence indicates that humans originated in Africa and dispersed globally. Dispersal probably happened more than once, with an ancient lineage that preceded *Homo sapiens* packing their bags and moving into southern Europe over a million years ago followed by at least one other group of modern humans leaving at least 60,000 years ago. This move was only a beginning; since then, our ancestors have gone nearly everywhere on the globe except Antarctica. But dispersal is risky, and there is a huge advantage to staying in a place where sources of food and shelter and social connections are known. We, the descendents of both dispersers and homebodies, are both people.

Our ancestors also did a pretty good job of sharing their genes around. The most dramatic example might also be the most ancient so far supported by evidence. Sequencing of the Neanderthal genome in

2010 revealed that genetic pieces of this ancient lineage of humans persist in many of us today, supporting the idea that in southern Europe some ancient hanky panky occurred between *Homo neanderthalensis* and more recent *Homo sapiens* immigrants. So humans are a mixed bag right down to our chromosomes and the genes that reside on them.

Humanity is easy to criticize these days, and I have cast many stones. One common refrain accuses our species of being selfish and shortsighted. Our current environmental woes suggest that this characterization is correct. One author recently described our notions of self-contained individuality as "ridiculous," but on that score I'm not so sure. Certainly the primate lineage indicates over 50 million years of social evolution, where group selection has favored our interactive participation in tribal bands. Yet preceding the evolution of sociality, there occurred about four *billion* years of natural selection for individual survival and reproduction. There exists no evolutionary rulebook that says we cannot be both social and self-centered, and we cannot assume that these evolutionary forces are mutually exclusive. Both could be influencing our current pattern of decision-making. So while I concur that humans are shortsighted, I'm not certain how "ridiculous" this behavior is. Regardless, this pejorative seems to have failed so far to change our behavior.

I have no idea what contribution our mosaic genetic background makes to our internal struggle. Certainly culture also plays a large role. A day in the modern world might lambast us with an endless variety of alternatives ranging from the vastly important to the ridiculously trivial: career/family, stay/relocate, vegetarian/omnivore, organic/conventional, bike/drive, stocks/bonds, paper/plastic, Mac/PC, Android/iPhone. Give the array of conflicts that must be resolved, it's a wonder we all don't curl into a permanent fetal position under the desk and refuse to come out. Yet we carry on, trying to make the gray fog of continua become black and white.

Ultimately it seems that the fields of physics, biology, psychology, and sociology can show us only the grayness of it all. Recognizing where we are is an important first step, but illuminating our conundrums usually causes us just to scratch our heads and say "Wow, that's a conundrum!" While science has been very good at showing us our predicaments, we need help with a decision-making process that allows us to choose the right behavior when it impacts our most pressing problems. The ongoing and interrelated issues of climate change, pollution, overextraction, desertification, and poverty compel us to move

forward in ways that create a healthy future for ourselves, our descendants, and our communities. Yes, we are genetically programmed organisms. But we are not automatons. If both the natural and unnatural history of humanity is somehow responsible for driving us over a future Malthusian cliff, and if the sciences are providing an onslaught of information but not answers, then we need something more.

Perhaps we should look to art in all its various forms for pathways toward reimagination. In the Tom Robbins novel *Fierce Invalids Home from Hot Climates*, the protagonist Switters sees language evolving from being a brush for painting a picture of our present universe to one we use to outline the future we want to inhabit, which from my perspective would be founded upon environmental stability. Maybe a common collaborative language can be forged between scientific knowledge and artistic connection that could help us discover ways in which tribal humans with a strong tendency

for self-preservation can connect as a global community. That language might also help us find pathways leading simultaneously to holding the strongest sense imaginable of local place while embracing the connectivity of the global ecosystem.

Like Switters, I'm not sure what this new tongue will look or sound like. Because tipping points are being breached, there are some elements of our future narrative that can be avoided. We have little time to muck around with denial, including ignoring or blaming others for our systemic socioenvironmental problems. Time also has run out for anger, regardless of whether it is directed at others or ourselves. Forgiveness might be a first step forward, and I mean forgiveness in the sense of letting go of whatever biological or cultural imperatives brought us to this place. We might also accept that life is complex and let go of our need to pigeonhole our mosaic selves. Regardless of the details, my hope is that our new stories move us decisively toward an ecologically and socially sustainable world.

Events of Interest in the Community

Lane County Audubon Society

You can access the current issue of *The Quail*, LCAS's excellent monthly newsletter, from their website: <http://www.laneaudubon.org/>. A summary of their upcoming monthly meeting can be found there, as well as many other interesting avian tidbits.

Tuesday, 22 October, 7:30 pm. The Birds of Midway Atoll. Paula and Dave Pottinger will show photos that document the natural history of some of the inhabitants of the atoll, and comment on threats to its seabird and marine-life populations. Part of the presentation will describe the life of the folks who work on Midway. Eugene Garden Club, 1655 High Street, Eugene.

Mount Pisgah Arboretum 34901 Frank Parrish Rd., Eugene, 97405.

Sunday, 13 October, 8 -10:30 am. Fall Birds of Mount Pisgah Arboretum. Join Mary Johnson and Chris Roth for a walk intended for people with all levels of birding experience, beginner to advanced.

Friday, 18 October, 10 am-noon. Forest Ecology Walk. Explore the plants and animals of the Arboretum and their place in our native ecosystems with Ecologist and LCC professor Pat Boleyn.

Saturday, 19 October, 1-3 pm. Scarecrow Making & Pumpkin Carving. Create your special scarecrow or carve a creative pumpkin! We provide the inspiration, the know-how, clothes, straw, and pumpkins. You bring the kids, accessories, and knives & spoons for carving pumpkins. Scarecrows made at the workshop may be entered into the Arboretum's Scarecrow Contest, at the Mushroom Festival, for free! \$5 per pumpkin or scarecrow.

Sunday, 27 October, 10 am-5 pm, Mushroom Festival. Enjoy a day of mushrooms, live music, food, arts and crafts, children's activities, hayrides, and nature walks. Proceeds from the sale of mushrooms, plants and arts and crafts support the Arboretum's work in environmental education and habitat restoration. Fee: \$8, members and children under 12 free. Free shuttle from Civic Stadium. For more information, or to volunteer, go to MountPisgahArboretum.org or call (541) 747-3817.

Booth sitters needed! If you read the MPA events, above, you know about the **Mushroom Festival** on Sunday, 27 Oct. We, ENHS, will have our booth there, as usual. Please consider spending a couple of hours minding our booth. We can tell you from our experience, it's fun. Contact Rebecca Hazen: rebeccahazen2011@comcast.net 541-206-2842

Friends of Buford Park and Mt. Pisgah

Saturday, 19 October, 9 am-noon. Exploring the Back Trails of Mt. Pisgah. Lyn Gilman-Garrick. Location: Buford Park.
Saturday, 19 October, 9 am-noon. Native Plant Nursery Autumn Work Party. Where: Howard Buford County Recreation Area / Friends of Buford Park Native Plant Nursery.

Nearby Nature

Go to <http://www.nearbynature.org/events> to view NN's calendar, or call 541-687-9699.

Friday, 18 October, 5:30-9 pm, Alton Baker Park. Nearby Nature's 17th Annual Haunted Hike! Celebrate night creatures! Enjoy a pumpkin-lit hike in Alton Baker Park and meet an entertaining costumed owl, bat, frog, spider, and more. Enjoy crafts, snacks, games, and a raffle as well! Rain or moonshine. Members free, non-members \$5/person. Pre-registration REQUIRED: 541-687-9699.

Native Plant Society of Oregon, Emerald Chapter

Monday, 21 October, 7:30 pm. Finding David Douglas: Biographical video. The compelling story and scientific adventures of the intrepid 19th century Scots botanist, David Douglas, is told in this multi-national initiative. The Science Factory will co-host this program in their planetarium room at 2300 Leo Harris Parkway, Eugene. For more information call 541-349-9999.

North American Butterfly Association, Eugene-Springfield Chapter

Monday, 14 October, 7 pm – refreshments; 7:30 pm – presentation. Creating a Butterfly Oasis. Carol Buckley and Sue Butkus will describe how a few people in Elkton created a center focused on a Monarch butterfly raise and release program. The Eugene Garden Club at 1645 High Street (Note: NEW LOCATION this year for NABA-E-S). FREE, all are welcome.

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

Exhibit Hours: Tuesday through Sunday, 11:00 am - 5:00 pm

Current Exhibits

- Cruisin' the fossil freeway with artist Ray Troll and paleontologist Kirk Johnson
- Site Seeing: Snapshots of Historical Archaeology in Oregon
- Oregon - Where Past is Present

WREN

Go to <http://www.wewetlands.org/> for news of upcoming events, or call 541 338 7047.

Saturday, 19 October, 10 am-2 pm. Family Exploration Day. This family program is FREE to the public and provides unstructured observation, education and inspiration in our surrounding natural spaces. WREN staff and volunteers will be on hand to check out nature exploration equipment and provide guidance for independent exploration of the wonders in the wetlands. Participants are asked to meet at the parking area located on Greenhill Rd, between W. 11th and Royal Ave. Participants should wear study shoes, bring water and perhaps even a picnic lunch.

ENHS Schedule of Speakers and Topics for 2013

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| 18 Oct. 2013 – Robin Kimmerer | – Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants |
| 15 Nov. 2013 – Ray Rivera | – Native Salmonid Fishes of the McKenzie River. |
| 13 Dec. 2013 – Daniel Robey | – Caspian Tern Predation in the lower Columbia River Basin |
| 17 Jan. 2014 – Kristine Kirkeby | – Conveying Nature in Personal Sketchbooks |
| 21 Feb. 2014 – Bob Doppelt | – The Social Costs of Climate Disruption |
| 21 Mar. 2014 – Robert Fleming | – From the Impenetrable Forest to the Namib Desert: Biodiversity in sub-Saharan Africa |
| 18 Apr. 2014 – Richard Pugh | – Meteorites Rock From The Sky |
| 16 May 2014 – Robin Hartman | – Energy from Waves: A Consideration of the Issues |

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We welcome new members! To join ENHS, 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

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Contribution _____

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Annual dues for renewing members are payable in September. Memberships run from September to September. 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: _____