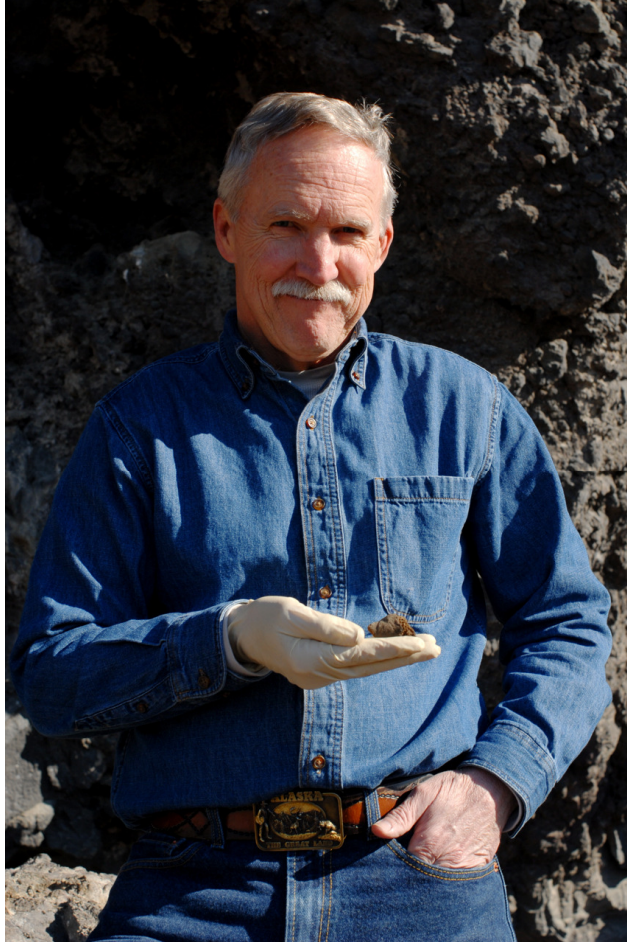


Nature Trails

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Dr. Jenkins, coprolite in gloved hand (what is a coprolite, you ask? Come to the talk and find out.).

Oregon's Earliest Inhabitants: Archaeological Investigations at the Paisley Caves

Dennis L. Jenkins, Ph.D., Senior Research
Archaeologist

Museum of Natural and Cultural History

University of Oregon, Eugene

**Friday, 21 January 2011, 7:30pm, Room 100
Willamette Hall, UO Campus**

Dennis Jenkins co-authored a paper in the journal *Science* in 2008. Entitled “DNA from Pre-Clovis Human Coprolites in Oregon, North America,” it is safe to say that paper has had a profound impact on his professional life. There have been the inevitable criticisms, but he and his group have answered them. Their research is turning back the clock on paleoamerican presence in the new world. It has probably also altered the lives of many of the residents of the small town of Paisley, Oregon, since their exact location is now familiar to archaeologists the world over.

Jenkins was born in Eugene, and for many years has worked in Eugene, but the story of how he comes to be doing what he’s doing is not as short or simple as that. His family moved when he was quite young, when his father’s lumber mill burned down. They went first to San Diego, then to Las Vegas. Since Las Vegas is “where I grew up” it’s not surprising that he went to the University of Nevada – Las Vegas for his undergraduate study.

His interest in anthropology and archaeology developed gradually. Between school years while an undergraduate Jenkins had a summer job with the Environmental Protection Agency that required a lot of in-state travel (he was interviewing dairy farmers). On one long drive he came across a spot that struck him as a place where Indians might well have lived. He had been interested in Indians from an early age, when his mother read him Indian stories and showed him an arrowhead she had found. So he stopped his truck and walked over to the likely spot – and found arrowheads, which he picked up. After that, he found more.

Later in his undergraduate career he took an archaeology class. In one lecture the Prof went over why it is illegal to collect artifacts. After class Jenkins confessed his crime and asked the Prof to take his arrowheads. The Prof agreed to take those for which Jenkins could remember the original locations – after Jenkins filled out the paperwork – but he told Jenkins to put the rest in a box and to let them be his conscience. Thus was one of his self-described rough edges rounded off.

Jenkins stayed at UNLV for his Masters degree, for which he worked under two well-known

archaeologists, Claude Warren and Margaret Lyneis.

After UNLV Jenkins took a position as field director of the Fort Irwin Archaeological Project at the U.S. Army’s Desert Warfare Center near Barstow, California. The Center is huge, encompassing about 600 square miles along the western edge of the Mohave Desert. It is rich in paleoamerican sites, but the Army’s hard use of the land (imagine tanks churning at top speed through fragile desert soil) was putting many of these sites in danger of obliteration.

He stayed in that position for four years, and then Jenkins decided to go on for his Ph.D. He chose the Anthropology Department at the University of Oregon because he wanted to be advised by Melvin Aikens – a name with which we are all familiar, he having been the director of the Museum of Natural and Cultural History for many years, as well as a

renowned archaeologist. Jenkins’s doctoral thesis dealt with the work he had done at Ft. Irwin on the late Pleistocene and early Holocene archaeology of the Mohave Desert. His thesis research was on the Virgin Branch of the Anasazi and Lake Mohave-Pinto sites in the Mohave Desert.

Jenkins began working for the U of O’s Museum of Natural and Cultural History in 1987, while a graduate student. His involvement with MNCH’s Northern Great Basin Archeological Field School also began while he was a graduate student, 22 years ago. Jenkins is now Senior Staff Archaeologist at the MNCH. He has been the Director of the Field School for many years, and has educated over 500 students in methods and theory of archaeological fieldwork.

I asked him if he had had any close calls in all his fieldwork. He told me about being caught in a rainstorm in the Mohave Desert. It only gets about 6-10 cm per year, but that can come in an hour, which was the case in this instance. He was supervising a large group and they had just finished and gotten into their vehicles when the rain began. He was driving a van with 11 passengers, and they had to cross a wash on their way back. They ended up sitting in the van on a little hill that had been made by tanks while the rain streamed down and the water rose around them, with boulders crashing against each other as they tumbled downstream. He



said he was sure at the time that one of the other vehicles had been washed away with all hands lost, but when it was over he saw it sitting on another little hummock. All were safe, but it definitely was a close call.

Although Jenkins has directed fieldwork at many sites in the Northern Great Basin it is the Paisley Caves research that now occupies center stage in his and his students' efforts. You may have seen him in an OPB Oregon Field Guide segment entitled Paisley Cave Dig. Or on the History Channel in a segment entitled Ice Age Geology. His talk to the ENHS will focus on the Paisley Caves research, dealing with both the processes they use and the

results they've obtained. It will contain some exciting new, unpublished findings. The big deal here is the dating: their evidence from carefully controlled DNA work and carbon dating forms a strong case for the presence of humans in this region 14,000 years ago. That's pre-Clovis, folks.

Please come and hear Dr. Dennis Jenkins present "Oregon's Earliest Inhabitants: Archaeological Investigations at the Paisley Caves" on Friday, 21 January 2011, in room 100, Willamette Hall on the U of O campus. Be warned: there are only so many seats so get there early or be ready to stand.

John Carter

President's Corner

Inclement Weather

By Tom Titus

I love big weather. Maybe this is because the Willamette Valley is so meteorologically placid. In December and January we soldier through unending days of drizzle simply wondering when, even if, the sun will appear again. Then comes that one special day or week when the stuff really flies, floods, or freezes. Weather doesn't give a rip about human wants or needs; 100-year floods don't care about that lovely house over the river, cold fronts descend out of the Arctic whether or not pipes are insulated, cyclones wheel onshore with no deference whatsoever to the condition of one's roof. Humans have a difficult time with this utter lack of compassion, so we try to make the weather attentive to our presence in the universe with emotional headlines: KILLER WINDS and FEROCIOUS FLOODS and BITTER COLD. Truth be told, the uncaring nature of big weather makes us feel small; no longer are we the self-designated masters of our universe. We become instead just another animal struggling to get through.

October 12, 1962. Columbus and his bumbling, disease-ridden crew finally got the tribute they deserved, but this should have been called Freida's Day in honor of the western Pacific cyclone that spawned record-setting winds. They came roaring in on an autumn afternoon when I was 5 years old, too young for fear but fully capable of awe. I stood at the back doorway watching every loose thing careen across the backyard in 100 mph gusts. The electricity blinked off immediately. But the image that remains most vividly isn't really an image. It's a sound. From inside the house I listened to trees on

the hillside above giving way under the gale, meeting the ground with a muffled *ka-whump*, one after another. The collective magnitude of their individual deaths was of no concern to my 5-year-old consciousness, though conservative estimates are that the storm took down 11,000,000,000 (yes, that's billion) board feet of timber in the Pacific Northwest. Somehow the large, unprotected Douglas firs below our house remained standing. My paternal grandparents were less fortunate. The back half of their house on Spencer Creek Road southwest of Eugene was splintered by a large big-leaf maple. The folks came to stay with us, and for 2 weeks Mom cooked our meals in the living room fireplace.

December 18, 1964-January 7, 1965. We understand rain around here, and people who don't simply leave. But the storms that began in mid-December of my seventh year were special, even by western Oregon standards. Cold rain had fallen on the valley floor in the weeks before, and several feet of snow lay piled in the mountains. Then a mass of warm, wet air moved northeast across the central Pacific Ocean into the region of the Hawaiian Archipelago. The east-flowing jet stream bent south around high pressure in the Arctic and began dragging a narrowing band of soaking wet air toward the Pacific Northwest, the meteorological equivalent of green beans on a high-speed cannery conveyer. This Pineapple Express delivered big time, with warm, slashing rain that wouldn't stop. I pulled on green rubber boots and my long yellow rain jacket, the kind with buckles on the front. A small stream was overflowing into the east side of our pasture, turning most of the field into a sheet of

milky gray water running gently downhill toward the house. Splashing up to “The Creek,” as we called it, I waded in, watched the normally gentle flow pile up against the back of my boots, and admired the child-caused eddy extending from my legs several feet downstream. I probably went over my boot tops, because that's what kids do. In my 7-year-old world I didn't understand that the warm rain was rapidly stripping the mountains of snow, melting it into huge volumes of water no streambed could contain. I looked north onto what should have been green pastures on the McKenzie Valley floor and saw instead a vast muddy lake inundating the grass and cottonwood bottom that would eventually contribute to nearly 153,000 flooded acres in the Willamette Valley.

January 25, 1969. Our front yard was already white and squeaky. A few inches of snow had fallen, followed by temperatures well into the teens and highs that didn't clear the twenties for two days. We were happy kids: snow had closed school on Thursday, and frigid temperatures kept the white stuff around, extending our vacation into the weekend. My brothers and I coated the runners of a paintless, gray hand-me-down sled with paraffin, then stamped out a trail on the steep incline at the back of the pasture. The cold, packed snow was fast, and we could generate enough momentum from the back fence at the top of the hill to fly across the pasture flat, past the rickety old barn on the left, picking up a little speed on the gentle downhill into our backyard, and then accelerate down the driveway, finally bringing the sled to a

halt at our mailbox on Highway 126. We were not overprotected. On Saturday snow began falling again, every flake sticking to the frozen ground, the new storm building in intensity into the night. At first my brothers and I made frequent trips outside to check an upright stick we had placed to measure the “progress,” but by Saturday evening we had given in to the magnitude of the snowstorm. It finally stopped sometime Sunday night, and by Monday morning 3 feet covered the ground in a glorious, pillowy blanket that shut the Willamette Valley down for days. School reopened 2 weeks later, just before my twelfth birthday. We ended that January with a monthly total of over 47 inches of snow on the Willamette Valley floor.

Weather is larger than ever now. But we aren't awestruck children with wind on our faces in yellow rain jackets or snow boots. Rather, we are adults wringing our hands in worry, arguing about ultimate causes, our actions finally subsiding into an intellectually untenable but emotionally comfortable *status quo*. We hear about Arctic settlements falling into the sea, Pacific Islander villages inundated by rising oceans, state-sized pieces of ice breaking off Antarctica. Maybe the weather is now too large for us, too much of an abstraction despite all the government reports, newscasts, documentaries, and internet comments. We seem unable to respond to meteorological challenges unless they are literally in our faces, whipping up our adrenal glands, sending us into animal action. And of course the deep irony is that the weather may simply be responding ... to us.

Water

By Reida Kimmel

The ice and snow that has persisted all week here in the hills is thawing at last. The air is still. The profound quiet tells me that the easterly airflow has weakened. When the wind is in the east, we hear the hum of the distant freeway and the pleasanter sounds of train whistles. Perhaps it will rain in a day or two. I'll miss the pretty patterns of thin ice stretched across puddles, the ice sculptures and tiny castles rising out of the mud, and the glistening frosty mushrooms that I know will dissolve into black slime once they thaw. But rain will be welcome. Even though the soil is saturated and the creeks and rivers are running full, our land wants more. West of the Cascades the Pacific Northwest is a water world. Its trees and all the green things in

the forest want lots of water for as many months as possible. The summer is almost a dormant season. In the Valley, those sodden lawns and squishy paths are telling you: “We are wetlands. Once we were swamps and the river swallowed us many winters. We want to touch the water before it flows to the sea.”

The sea. In all my life I have never lived farther from the sea than I do now. I crave it: to be near it, to wade and swim in it, to smell the brine and scents of life, to stare at the endlessly changing wave patterns and colors. It is the source of such incredible life. It seems eternal, a comfort, though not comfortable. Home to the first life, teeming with countless plankton, photosynthesizing plants and their predators, producing oxygen, storing carbon. What a perfect balance. It is inconceivable

that we could ruin the ocean, that anything could fundamentally change it.

Of course we know that we are changing the ocean. The water that flows from the land is filled with chemicals and toxic minerals, which we produce and which are to be found in the tissues of creatures in the remotest seas. Rivers that once flowed to the sea like the Colorado flow no more, and the Sea of Cortez is more saline and stagnant because of the dams and irrigation projects that rob a river dry. Closer to home, imagine the huge delta that passes San Francisco as it enters the sea. Imagine it without dikes, salt evaporation ponds, elaborate patchwork quilts of housing and farming projects. Imagine it clean, teeming with birds and fish, its waters edged with beautiful grasses and trees. Imagine it the color of real water. We know what we have done. We know that human-induced global warming is causing sea levels to rise and coastal estuaries to flood. We know that the huge increase in atmospheric carbon dioxide in this century is acidifying the ocean waters to such an extent that mollusks grow thin and fragile shells. Species like cod that once fed the world are now close to extinction. But what most of us do not know is far worse.

We assume that the oceans of the earth have always been as they are now, oxygenated from surface to bottom, suitable for life as we know it, dependent on oxygen, if of the animal kingdom, or if of the plant kingdom, using carbon and sunlight to photosynthesize, producing oxygen as the byproduct of this metabolism. The Black Sea is not quite like this. Its deep waters are anoxic. Like the dead zones we have created off our Gulf Coast, no species dependent on oxygen can live at its depths. There, species of bacteria metabolizing sulfur and producing hydrogen sulfide thrive. Imagine what would happen if the Black Sea became entirely anoxic. The sulfur dependent bacteria would multiply faster in the surface sun and warmth. They would send out clouds of hydrogen sulfide gas, poisonous to sea and land creatures alike. Imagine if the depths of all the oceans became anoxic. Or if all of all the oceans became anoxic. It could happen. It has happened, according to many paleontologists.

Peter Ward specializes in extinctions. He has published on the Permian extinction with Greg Retallack, and has done much to refute the notion that asteroid impacts can explain all mass extinctions. Under A Green Sky, Smithsonian

Books, 2007, is a splendid but chilling analysis of our planet's slide towards another mass extinction. Ward recalls that though the world's oceans were thoroughly anoxic in the earliest days of life on earth, fossil sedimentary rocks contain chemical markers indicating the dominance of sulfur metabolizing life forms in later times. Oceans experienced periods of anoxia during the Permian extinction and the Jurassic-Triassic boundary extinction. Other lesser periods of extinction such as that ending the Paleocene epoch also show indications of ocean anoxia. Should the surface waters of the oceans cease to be oxygenated, the results are mass extinctions. Clouds of hydrogen sulfide gas rising from the sea destroy the earth's ozone layer, and the sun's un-filtered rays kill the photosynthesizing plankton and land plants alike. On land and sea, animals starve or succumb to the difficulties of living in a very low oxygen atmosphere.

How could this happen to us? We take for granted our wonderfully oxygenated oceans but this is perhaps their less common state over the history of the planet. Today's ocean currents carry cooler fresher water down from the icy north, mixing it with equatorial currents bringing warm water to the surface. But what if there were no cold icy waters, if all the glaciers were gone? Then warm oxygen-poor saline water would settle to the bottom. The currents would slow, the winds would die. And sulfur-loving bacteria would become dominant. But what could cause the glaciers to melt? We can all answer that question; rapid increases of greenhouse gasses like carbon dioxide and methane. Volcanoes spew forth gasses. So do the activities of six, seven, ten billion humans. We cannot explain away the possible near future mass extinction phenomena on eruptions of lava over thousands of square miles, such as formed the Siberian Traps at the end of the Permian. But rapid though the changes to our planet may be, we will not live to see the end of life as we know it. And we can do a lot to slow the rise of greenhouse gasses, to mitigate our destructive practices on land and sea, to help others get closer to nature and to feel as passionate as we do about saving species. And when it all just feels too depressing, go to the beach. Take deep breaths and check out the pelicans. They used to be so rare. Now they are everywhere. See we can do good things sometimes.

Out and About

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



Arch Rock

Got the January blues? Head south to Oregon's Banana Belt on the southern Oregon Coast. We usually get a warm spell towards the end of January through early February. Spend some time taking in the amazing offshore rock formations of the Oregon Islands National Wildlife Refuge. Sea ducks and other waterfowl abound, even in winter.

Prefer snow in the winter? Check out the bald eagles in the Klamath Basin during the Winter Wings Festival on President's Day Weekend. www.winterwingsfest.org

Want more information about this location? Contact Dave Stone at 541 683 6127.

2010 Eugene Christmas Bird Count

Eugene's 69th annual Christmas Bird Count took place on Sunday, 2 January. 149 bird watchers in 27 teams took to the field to observe all the birds they could see in 24 hours. 27 teams each led by an experienced birder searched their assigned area within the traditional 15-mile diameter circle. Several teams started before sunup to try to locate owls. The 27 field teams spent 198.5 hours on foot and walked 125.5 miles looking for birds. They also drove 627.3 miles and 60 hours in their search. Augmenting those in the field were 99 feeder watchers – another record. 82,347 individual birds were seen and the total number of species seen during the day was 130. Four species were seen during count week, but missed on count day: American Bittern, Barred Owl, Northern Mockingbird and Hermit Warbler. The Northern Mockingbird is unusual for this area and winter reports of Hermit Warbler are rare north of Central Mexico – an outstanding find. Eighteen species were found in record high numbers, including such notables as: 52 Turkey Vultures (wintering vultures are scarce in most of Oregon), 76 Bald Eagles, 8 Peregrine Falcons, and 10 Black Phoebes, a species that seems to be continuing to spread across western Oregon.

Last year the ECBC had the third largest number of participants of the 2,160 official National Audubon Society Christmas Bird Counts in the United States, Canada, Latin America, the Caribbean and Pacific Islands. This year we exceeded that number by a few more participants. Special thanks to Barbara Gleason, Becky Uhler, Dan Gleason, Herb Wisner, and Dick Lamster. Well done, LCAS! (this is an [unmercifully] edited combination of Dan Gleason's and Dick Lamster's reports. To see the complete results and read what they actually wrote, go to our website: <http://biology.uoregon.edu/enhs/>, or you can see the results on the Audubon site: www.christmasbirdcount.org, code OREU, or the Feb. issue of The Quail: <http://www.laneaudubon.org/library-sub/quail>).

Events of Interest in the Community

Lane County Audubon Society

Tuesday, 25 January, 7:30 pm. Willamette River Open Space Vision. By Jeff Krueger 1645 High St., Eugene.

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, 15 January, 10am - 12pm. I'm Likin' All This Lichen Walk. Led by Daphne Stone. □ Fee: \$5. □
Sunday, 23 January, 1 pm - 3 pm. Life Among the Mosses. □ Led by David Wagner. Fee: \$5. □
Saturday, 5 February, 1pm - 4pm □ and Saturday, 12 February, 1pm - 3pm. Nature Photography in a Digital World: □ □ **A Two Day Workshop.** Led by David Stone. Fee: \$25 (MPA members \$20).

WREN

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

Tuesday, 8 February, 9-10 am. Wetland Wander. Meet at Stewart Pond, a 150-acre natural area located east of the intersection of Bertelsen Rd. and Stewart Rd., north of W 11th Ave. Free! Binoculars provided.

Nearby Nature

Call 541-687-9699 or email info@nearbynature.org.

Nearby Nature Receives Grant from REI to Host Restoration Celebrations in Alton Baker Park. The next work party will be on 17 January, 1-4 pm.

North American Butterfly Association, Eugene/Springfield Chapter

Monday, 7 February 2011, 7:00 pm - refreshments; 7:30 – presentation. Wonderful Washington Butterflies and Where to Find Them, by Idie Ulsh. EWEB Training Center at 500 E. 4th Ave., Eugene. Free, all are welcome.

North American Rock Garden Society, Emerald Chapter

Saturday, 12 February, 1 pm. Exploring Wyoming's Bighorn and Beartooth Mountains. By Christine Ebrahimi. Eugene Garden Club, 1645 High St. Free, open to all.

Emerald Chapter, Native Plant Society of Oregon

Monday, 14 February, 7:30 pm. Historic and Current Ethno-botany as practiced by Native and Rural Americans. By Eric Jones. EWEB Training Room at 500 E. 4th Ave., Eugene. Call 541-746-9478.

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 5494, Eugene OR 97405**

Name _____ <http://biology.uoregon.edu/enhs/>
Address _____
E-mail (if you want to receive announcements) _____ Phone _____
City _____ State & Zip _____

ANNUAL DUES:	Contributing	20.00
	Family	15.00
	Individual	10.00
	Life Membership	300.00
	Contribution	_____

Make checks payable to: The Eugene Natural History Society

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: _____

INTERESTS

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

Eugene Natural History Society
P.O. Box 5494
Eugene, Oregon 97405

ENHS Schedule of Speakers and Topics for the rest of 2010-2011

- 21 Jan 2011** – Dennis Jenkins – Oregon’s Earliest Inhabitants: Archaeological Investigations at the Paisley Caves
18 Feb 2011 – Lynne Houck – Salamander Courtship
18 Mar 2011 – Scott Bridgham – Climate Change/Terrestrial Ecosystems
15 Apr 2011 – Al St. John – Great Basin Reptiles
20 May 2011 – John Fischer – El Nino/La Nina Events

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