



Shoreline Education for Awareness, Inc.
P.O. Box 957
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SEAscope

Friends of the Southern Oregon Coastal
National Wildlife Refuges

Spring 2016

Geology & Culture



Photo by
Mary Garrett

Seminar Kicks Off 2016 Season

An estimated 30 people attended the February 13 “Geology Meets Culture”

seminar at the Bandon Community Center. We are grateful to Paleontologist and Geologist, Dr. Ron Metzger, and Archaeologist, Dr. Nicole Norris, for presenting this educational session again this year! Dr. Metzger's presentation was very informative and provided an up-to-date status of off-shore geologic movement and its impact on, not only the coastal region, but the entire state of Oregon. Dr. Norris' presentation of cultural anthropology spoke to the folklore of Native American communities and how their stories tied into geological events. A field trip concluded the day's educational synopsis.



Photo by Harv Schubothe

This seminar was the first of SEA's 2016 seminar line-up. All seminars will take place at the Bandon Community Center and the Oregon Institute of Marine Biology in Charleston. The Community Center is located at 1200 11th Street SW. The OIMB office is located at 63466 Boat Basin Road. Walk another 200 yards north past the SEA sign past the Coast Guard residences to the Boathouse Auditorium.

Upcoming Seminars

Doors open at 8:30 a.m. for registration. Seminars begin at 9 a.m. unless otherwise noted. Seminars are free for Shoreline Education for Awareness members! A \$5 donation for non-members is appreciated. Snacks and coffee/tea will be available. Feel free to bring your own brown bag lunch if you desire. More information is available by calling SEA at [541-260-7770](tel:541-260-7770).

MARCH 12 – “Whales and Marine Mammals”-- Dr. Jan Hodder, Associate Professor, OIMB; 9 a.m., Bandon Community Center. Field Trip included.

APRIL 16 - “Black Oyster Catchers”-- Diane & Dave Bilderback, 9 a.m. Bandon Youth Center. Field trip included.

MAY (TBA) – “Snowy Plovers”-- Dave Lauten and Kathy Castelein; 9 a.m., Bandon Community Center. Field Trip included.

Puffin Party – April 30!!! Our annual Puffin Celebration is scheduled. Watch our website for more information and come join the fun!



Did someone
say Party?

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From Our Partners



Planting Forests for the Future at Bandon Marsh

By Peter Pearsall, USFWS Intern

In keeping with the U.S. Fish and Wildlife Service's 2010 pledge to reduce its carbon footprint by five to ten percent per year, the Service's Pacific Region has implemented a number of strategies to cut emissions: smarter energy use at USFWS facilities, a sharp reduction in employee travel expenditures, and overall improvement in waste diversion/recycling practices, among others. Every bit helps to pare down the Region's footprint, which in 2012 was estimated at 17,814 tons of carbon dioxide, or CO₂. At Bandon Marsh National Wildlife Refuge, a new carbon-sequestration project aims to reduce that figure and create native forest habitat in one fell swoop.

A 13.7-acre segment of former pasture land at the refuge is being transformed into Oregon coastal forest, one the Region's most productive (and thus CO₂-reducing) ecosystems. By planting a mix of native trees and shrubs onto land historically kept clear for cattle, the area's potential to offset carbon emissions is much increased: As these plants photosynthesize, CO₂ is removed from the atmosphere and sequestered as carbon in their woody, long-lived tissues.

For as long as the plants grow, they'll act as carbon "sinks", pulling the pollutant out of the air and keeping it in the ground. In 120 years, this future forest—a total of 6,005 saplings, including spruce, cedar, hemlock, salal, madrone, huckleberry and others—will have sequestered approximately 4,800 tons of carbon emissions.

It's a modest contribution, these just-planted 13.7 acres. Refuge biologist Bill Bridgeland estimates that in order to sequester enough carbon to offset the Region's annual footprint of 17,814 tons, it would likely require thousands of acres of reforestation. Of course, offsetting emissions isn't the only benefit to planting trees on a National Wildlife Refuge.

As the forest matures, it will provide ideal nesting habitat, forage, and shelter to a variety of wildlife species. The carbon-sequestration project in Bandon is a prime example of how of the Region-wide effort to mitigate CO₂ emissions is enabling refuges to save (not kill) two birds with one stone: sequester carbon and restore native habitat.

Scientists think Coast of Alaska Seabird Die-off is Biggest Ever Recorded

The mass of dead seabirds that have washed up on Alaska beaches in past months is unprecedented in size, scope and duration, a federal biologist said at an Anchorage science conference. The staggering die-off of common murre, the iconic Pacific seabirds sometimes likened to flying penguins, is a signal that something is awry in the Gulf of Alaska, said Heather Renner, supervisory wildlife biologist at the Alaska Maritime National Wildlife Refuge. "We are in the midst of perhaps the largest murre die-off ever recorded," Renner told the Alaska Marine Science Symposium on Thursday. While there have been big die-offs of murre and other seabirds in the past, recorded since the 1800s, this one dwarfs most of them, Renner said. "This event is almost certainly larger than the murre killed in the Exxon Valdez oil spill," she said.

After that spill -- at the time, the nation's largest -- about 22,000 dead murre were recovered by crews conducting extensive beach searches in the four months after the tanker grounding, according to the Exxon Valdez Trustee Council, the federal-state panel that administers funds paid to settle spill-related claims for natural-resource damages. Now, hundreds and thousands of dead murre are turning up on a wide variety of Alaska beaches, including nearly 8,000 discovered this month on a mile-long stretch in Whittier, she said. A preliminary survey in Prince William Sound has already turned up more than 22,000 dead murre there, she said. Starving, dying and dead murre are showing up far from their marine habitat, in inland places as distant as Fairbanks, hundreds of miles from the Gulf of Alaska coast, making the die-off exceptionally large in geographic scale. Even if she weren't an expert, the bird die-off would be obvious to Renner. She lives in Homer, where the beaches are "littered" with murre carcasses, she said. "You can't walk more than a few feet without finding murre," she said. Since only a small portion of those killed ever show up as carcasses on the shore-- past studies put that proportion at 15 percent -- the actual death toll is likely much higher, Renner said. The murre die-off began last spring, making it an especially long-



lasting event. It coincides with widespread deaths of other marine animals, from whales in the Gulf of Alaska to sea lions in California. The die-off is overwhelmingly affecting common murrelets rather than thick-billed murrelets, which are closely related but tend to use slightly more western and northwestern waters from the Aleutians to the Chukchi Sea.

The immediate cause of the bird deaths is starvation. “They just simply aren’t able to find the food that they need to survive,” Renner said. Necropsies conducted by the National Wildlife Health Center in Wisconsin found the dead murrelets were emaciated, with no food in their gastrointestinal systems and no fat on their bodies.

But what’s behind the starvation? Renner said biologists are focusing on three potential culprits that may be working independently or in concert with one another. And a common thread is heat, likely related to the “Blob” of warm water that persisted in 2014 and 2015 in the North Pacific and pushed temperatures as much as 3 degrees Celsius (5.4 degrees Fahrenheit) above normal. “Warm water is implicated,” she said.

Warmer waters might have affected murre food supplies or altered the birds’ food needs by changing their metabolism, she said. Many past die-offs have been associated with warm waters, supporting the argument that the Blob is to blame, she said. The investigation is complicated because biologists have unanswered questions about the winter diet of murrelets, birds famous for their deep dives to forage for fish in summer. “We know a lot more about what they eat in the summer than what they eat in the winter,” Renner said.

Another suspect is a series of strong storms that might have scattered already stressed birds this winter, she said. A third suspect is harmful algal blooms, which proliferate in warm waters and have been connected to some other marine animals’ deaths. So far, toxins associated with such algal blooms have not been found in dead murrelets examined by the National Wildlife Health Center. But it is possible that the signs of the toxins would have vanished long before the tests, even if they killed the birds, because the toxins don’t linger in body tissue and instead are generally found in food in animals’ digestive systems -- something missing from these murrelets’ carcasses.

Renner said she is not yet worried about the die-off threatening Alaska’s overall common murre population, roughly estimated at 2.8 million. Still, troubling signs warrant monitoring in the future.

A breeding colony in the Barren Islands that is usually teeming in late summer with adult murrelets tending their young was deserted this year, she said. The site, at East Amatuli Island, usually has nesting birds crowded into

the cracks of the rock face, but this year, “nobody was home,” Renner said. “In more than three decades of monitoring murrelets in the Barrens, we’ve never had complete reproduction failure before.” Similar failures occurred at some other nesting colonies, though not at all, she said.

Common murrelets and whales -- which are the subject of a National Oceanic and Atmospheric Administration investigation after several were found dead this summer -- are not the only Gulf of Alaska marine animals to fall victim to ailments believed to be related to warm waters in 2014 and 2015. Tammy Hoem Neher, a NOAA scientist working with the multiagency program Gulf Watch Alaska, listed a wide range of changes in the marine systems observed during the period of unusual warmth. Kachemak Bay saw an eight-fold increase in sea otter deaths, with carcasses showing signs of toxins produced by harmful algal blooms, Neher said at the symposium. Sea stars in Kachemak Bay in 2015 were found stricken with a wasting disease similar to that which has killed large numbers of the animals elsewhere on the U.S. West Coast, she said. One hypothesis is that the unusually warm waters exacerbated other stresses on the sea stars, she said. But at least one Gulf of Alaska marine population thrived in the new conditions, Neher said. Fish-eating resident killer whales have feasted on big runs of salmon, fattening up without having to swim very far, she said. They kind of lazed around day to day,” she said.

Article courtesy of Mary Garrett and reprinted from the Alaska Dispatch News.

Welcome RV Volunteers!

SEA is blessed to have two families joining us this summer as volunteer interpreters at our two primary sites at Simpson Reef and Coquille Point. Both will be living with us in RV locations close to their assigned areas volunteering 20 hours per week beginning in May. TJ and Lisa McCarthy expressed an interest in marine mammals and whales, and will be located at Sunset Bay. They currently are volunteering with the Army Corps of Engineers at Lake Kaweah Terminus Dam in California. John and Cindy Dillard have traveled the US since retiring in 2014 and love to observe and photograph wildlife. Their site will be at Coquille RV park. Welcome to the McCarthys and Dillards to SEA’s interpreter family and look forward to their volunteer service this summer!



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CONTRIBUTE TO THE WORK OF SHORELINE EDUCATION FOR AWARENESS

Your tax-deductible contribution to [Shoreline Education for Awareness](#) directly supports [SEA's](#) coastal wildlife interpretation program as it continues its crucial role in the education of local residents and the growing number of visitors to our coast from around the world. You can also contribute by becoming a volunteer. Please use the form below to become a member, make an additional contribution to the program, or to indicate your interest in volunteering.

-
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