

*Membership Meeting  
Avian Images on SW Rocks  
October 8th, 1:30- 3pm  
Hoquiam Library  
Downstairs Meeting Room*

September October 2017



# The Sandpiper



*One of two successfully rehabilitated juvenile Snowy Plovers released on Grayland Beach September 8th. More about their amazing story coming soon! Photo by Judy Rowe Taylor.*

## **A Second Chance at Life for Two Endangered Western Snowy Plovers** *by Oregon Coast Aquarium*

On Friday, September 8, two federally threatened, juvenile Western snowy plovers that had been rehabilitated at the Oregon Coast Aquarium were released on Midway Beach in Washington.

The plovers came to the Aquarium as newly hatched chicks, covered in down but active and alert. Both were abandoned by their parents in two separate instances, 11 days apart, on beaches along the southwest coast of Washington. In each case, staff from the Washington Department of Fish and Wildlife (WDFW) brought the abandoned chicks—

their bodies no bigger than balls of cotton—to the Aquarium for care.

Cyndie Sundstrom, a WDFW Wildlife Biologist, found both chicks and transported them to the Aquarium, the nearest facility authorized by the U.S. Fish and Wildlife Service (USFWS) to administer care to threatened species such as the Western snowy plover. This shorebird lives year-round on sandy beaches along the Pacific coast. It lays its eggs directly on the ground, in exposed dry-sand areas high up on the beach.

One chick had been abandoned by its parent and two siblings after a predator approached their nest. The other chick was discovered while still in its egg, after its nest was abandoned and covered with windblown sand. At this site, the disturbance had come from humans: Campers trespassed into a restricted nesting area and scared away a pair of incubating adults, leaving their nest exposed to the elements. High winds covered the nest with sand, smothering the eggs.

Sundstrom, who monitors snowy plovers on southwest Washington beaches, found the buried nest on July 25 just in time. Wondering if the eggs had already hatched, Sundstrom located where the nest should have been and began digging. Her fingers grazed the eggs nearly six inches below the drifted sand, breaking open their delicate shells. She brought a total of three eggs to the surface, and to her surprise, two of them contained peeping chicks (one of these chicks suffered from a birth deformity and did not survive). The plover parents were nowhere to be seen.

“I knew that this was an extremely unusual situation, and my immediate thought was to get these chicks to a stable environment and I started making calls to find out where they could be taken,” Sundstrom said. When she found herself with the second orphaned chick 11 days later on August 6, she knew the Aquarium offered the best chance at saving it.

The two surviving plover chicks, each from a different brood, posed an interesting rehabilitation case for Aquarium staff.

continued on page 4

## The President's Perch



*By Arnie Martin*

Earlier this month the proponent of the Potash shipping facility, proposed for the Port of Grays Harbor's Terminal 3, held an information meeting at the Hoquiam High School for the Grays Harbor County populace. It was a typical poster session, followed by a raffle give away, and an informative narrated PowerPoint session. There was a question and answer session following, with several questions and answers before the meeting ended.

The poster session gave the highlights about the purpose of the project: mining potassium chloride for shipment to Asian markets, providing their depleted soils with the potassium needed for growth of the plants which provide the food for the Asian countries. The PowerPoint showed the location of the Potash mine: about 1000 meters below the surface of the ground southeast of Saskatoon, Saskatchewan, Canada. This area has the largest concentration of subterranean potash mines in the world, but it is more than 1,000 miles away from Hoquiam.

The Company proposing the building of the Potash receiving and shipping terminal is BHP Billiton, of Melbourne, Australia. They are miners and shippers of petroleum, potash, iron ore, copper ore, and coal from wells and mines on three continents (Australia, and North and South America). The products they ship and mine are high volume - low cost ones, primarily to domestic markets near the production/mining sites and to Asia.

BHP has been very forthcoming with their efforts to involve local officials, conservation groups, and federal agencies early in the decision process of where to locate a receiving/ship-loading facility. They, as a Canadian miner of potash (potassium chloride) have been investigating building a receiving/shipping facility in British Columbia as well as here in Hoquiam. In terms of locating the facility in Canada or the US, they seem not to have yet finalized the choice, or at least they haven't ruled either location out.

Potash is a heavy material, similar in size, density and consistency to the rock salt that is used on highways for ice removal. It is shipped in a granular form, and will be processed at the mine site in Saskatchewan prior to loading it into top-covered bottom-dump hopper rail cars. As the material dissolves in water, the railcars are fully covered,

and unloaded, stored, and loaded onto ships while protected from our heavy wintertime rainfall.

The railcars are custom designed to carry this dense material, but as there are maximum weights per rail car due to federal regulations, they are shorter in length than most bulk cars which are used here for shipping soybeans and much shorter than the railcars used for shipping automobiles. The potash trains weigh 1.36 times as much per foot of length as the heaviest soybean train, so the Puget Sound and Pacific (PSAP) Railroad bridges and roadbed will be loaded 1.36 times more from potash trains than the current maximum loads. The PSAP railroad managers were present at the September 14th forum, and, when asked how the increased loads would affect the longest bridges along the rail line, replied only "they are inspected every year by a federally licensed inspector". So far no bridges have collapsed, but there were several low-speed derailments along poorly supported and deteriorated stretches of roadbed during 2014. There was also a derailment on the poorly maintained approach trestle to the Wishkah River Bridge in May 2014.

So far, there have not been any major faults in the BHP planning for the receiving/shipping facility, other than there is little known about the effects of spilled potash (likely due to rail accidents/failures) into the Chehalis river, the Chehalis flood plain, or the Chehalis estuary (Grays Harbor). They seem to be continuing their progress in permitting the over-water ship loading facility just west of the current Port of Grays Harbor T-3 pier. They also are working on Shorelines permits for the railcar unloading, potash storing, and ship-loading conveyors which are on land next to the Grays Harbor NWR, and which will use portions of the easternmost Hoquiam Sewage Lagoon for rail loop tracks.

They have plans for using portions of the T-3 site and the sewage lagoon as mitigation sites for encroachments on the existing wetlands in the northern part of the T-3 site. Unfortunately, the wetlands at the Northern end of the T-3 site are the streams which pass under Paulson Rd, and feed the wetlands on the eastern part of the Grays Harbor NWR.

As you can tell from the length of this writing, we are trying to keep a keen eye on the planning for this project, as are the US Fish and Wildlife personnel who may not be as welcoming to this facility as is the Port of Grays Harbor.



*Sea Nettle (Chrysaora fuscescens). Many of this species of jellyfish were sighted during our August field trip, particularly around Float 21 at the Westport Marina. Sea Nettles migrate daily from the lightless depths up to sunlit surface water to feed on zooplankton, their travel guided by light sensitive organs called ocelli. C. fuscescens, which is found primarily along the US Pacific Coast from Alaska to Baja, is itself food for sea turtles, tuna, and sunfish, among other jellyfish-eating sea critters. In recent years, reduction of predator populations has resulted in rapidly increasing numbers of jellies. Reference: National Aquarium (www.aqua.org) and Monterey Bay Aquarium (www.montereybayaquarium.org); Photo by Judy Rowe Taylor.*



## **Field trip diary**

*by Judy Rowe Taylor*

Field Trip Diary, August - September 2017

August 22nd, the day after the solar eclipse, participants enjoyed a very relaxed birding experience at Bottle Beach. We sat on logs and watched the shorebirds - Black-bellied Plovers, Short-billed Dowitchers, and peeps - slowly forage their way across the mudflats and onto the sandy beach to rest during high tide. Most unusual was a large number of jellyfish being washed ashore (+/- 50 of various sizes scattered along the length of the Bottle Beach proper and a ways further east). At Float 21 we were so enthralled by the presence of these large, colorful jellies - some 80 to 100 pulsing all around the boat bays - we almost forgot to check-out the birds! There were good numbers of Brown Pelicans, Heermann's Gulls (along with Western and Western-Glaucous-winged hy-

brids), cormorants (Double-crested, Pelagic, and Brant's), though not yet a great variety of species around the marina.

September 9th, after a summer of mostly dry sunny days, the weather turned atrocious around noon, putting a real damper on all birding for that afternoon's planned field trip! However, on the 20th we were delighted to have a beautiful sunny afternoon of beach walking. Four Snowy Plovers were sighted at Grayland; one was banded (an Oregon bird, as told by the color-combo of its "bracelets"). We also observed a molting Common Murre, which was standing on the beach with its wings spread to the sun, a few Sanderlings and one Western Sandpiper. As of yet there are no large shallow pools of water on the sandy beach areas at Grayland (normal for most winters), which usually attract Least Sandpipers and Dunlin. Another positive event for the afternoon was interaction with two non-birders; they were very appreciative when we identified the various birds and gave them close-up "looks" through our binoculars.

Only a few birds were active at the Midway Beach ponds - no ducks in evidence yet, though they could have been behind the cover of extensive wetlands vegetation. But red-legged frogs were everywhere, leaping for cover as we walked a short ways down the wet and mucky path for a better view of the pond!

By now it was fairly late in the afternoon, so I was the only participant who opted to continue on to Tokeland. Brown Pelicans - 12 or more - were lounging about the old pier and on the rock island; most of the remaining Heermann's Gulls were also perched on the rocks or resting on the water outside the marina; other gulls loafed on the walkways within the boat basin. Twenty-one Willets, two Short-billed Dowitchers, and three Marbled Godwits were resting in a tight group along the marina shoreline; and a small flock of Brewer's Blackbirds walked about on the newly sprouted grass near Nelson's Crab.

October's field trip will be to Grays Harbor National Wildlife Refuge. Date and details will be sent out soon.

***Plover Rehabilitation continued from page 1***

“Because the chicks are born with the instinct to seek live prey, the hardest part about feeding them is keeping the right variety and size of live food in stock,” said CJ McCarty, Curator of Birds at the Aquarium. “We are often buying out the entire supply of tiny crickets and mealworms from our nearest pet stores and going to the beach to collect beach hoppers from the wrack line.”\

The chicks quickly put on weight and molted into the gray and white plumage of immature snowy plovers. By September 8, they were ready for release back in Washington. Just before departing Newport, Oregon Coast Aquarium staff helped Sundstrom attach colored bands to their legs to aid with future identification.

Oregon Coast Aquarium staff check Snowy plover’s feathers.

“It is always an amazing experience working with these tiny yet resilient birds,” McCarty said. “We at the Aquarium especially enjoy knowing that many of the birds we’ve cared for are spotted on beaches in following years.”

We checked in with Laura Todd, Field Supervisor for the USFWS Newport Office, a few days after the plovers’ release to see how our former patients were acclimating. “Thanks to [Sundstrom’s] quick thinking in response to a unique set of circumstances, and the expert care provided by Aquarium staff, these chicks are now back in their natural habitat and have rejoined flocks of other wild snowy plovers on their native beaches,” Todd assured us. “This remarkable rescue would not have been possible without the collaborative efforts of WDFW, USFWS and the Oregon Coast Aquarium.”

Recovery efforts since the 1990’s have dramatically increased the plover population in Oregon, with current levels near recovery goals in Oregon and Washington. Recent counts indicate that about 450 adult birds are in Oregon, a substantial increase from the record-low 28 birds in 1992. In Washington, where the plover is a state-listed endangered species, the current population is around 90 adults.

Snowy plovers need flat, continuous areas of sand with no grass that are relatively undisturbed by humans, pets, vehicles and human-attracted predators. These shorebirds once inhabited Oregon’s beaches up and down the coastline, but development and introduced beach grass have destroyed much of their habitat and allowed predator numbers to rise.

Several Western snowy plovers have been rehabilitated at the Oregon Coast Aquarium in years past. The facility relies on visitor-related reve-

nues, grants, and donations to finance its annual operations, including its wildlife rehabilitation activities. Additional funding for these projects comes directly out of the money budgeted for the care of the Aquarium’s 15,000 marine animals and from limited federal endangered-species-recovery funds when available. To help support the Aquarium’s rehabilitation efforts, please call (541) 867-4931.

The Oregon Coast Aquarium creates unique and engaging experiences that connect you to the ***Plover rehabilitation continued from page 4*** Oregon Coast and inspire ocean conservation. An accredited Association of Zoos & Aquariums institution, this 501(c)3 non-profit organization is ranked as one of the top 10 aquariums in the U.S. Visit us at 2820 S.E. Ferry Slip Rd., Newport, OR. [www.aquarium.org](http://www.aquarium.org), 541-867-3474. Follow us on [Facebook.com/OregonCoastAquarium](https://www.facebook.com/OregonCoastAquarium), or [Twitter.com/OrCoastAquarium](https://twitter.com/OrCoastAquarium) for the latest updates.



*A small flock of shorebirds rested along the shoreline of the boat basin at Tokeland Marina on September 20th. Shown here are Willets, Marbled Godwits, and a Short-billed Dowitcher (snuggled down in the vegetation). Photo: Judy Rowe Taylor*



*This petroglyph, thought to represent a hummingbird, is one of many depictions of birds found in rock art throughout the American Southwest. Photo by Judy Rowe Taylor*

**Membership Meeting October 8th at Hoquiam Library 1:30 - 3:00 pm**

***On Wings of Time: Avian Imagery in Rock Art of the Southwest***

By the rivers and streams they stand, forever watchful. In the mountains and on the high plateaus they whisper the spirit of another time. They are the birds of stone, traveling on wings of time, to tell a story of change. Many are images of “water birds” and the story they tell is not only one of cultural interests, but also of drastic changes to the environment.

During my seven years in Arizona I experienced amazing birding; I also became involved with helping to record, protect, and preserve the archaeological heritage found there. I was particularly fascinated by avian imagery in rock art made by early inhabitants of the southwest, as well as other artful representations of birds recovered from archaeological sites. All provide evidence that birds were an important element in the lives of the prehistoric peoples of the region and inform us about their cultural beliefs, customs and activities. These bird designs are also clues to the avifauna present prehistorically and indicate, with the exception of a few species, the existence of habitat that would have supported them. I look forward to sharing photos and stories about the “birds of stone” at our October meeting. As always, refreshments will be served.



Dear Audubon in Washington –

We are just 3 weeks away from our annual state-wide gathering! Check out the packed ACOW agenda with guest speakers from National Audubon, The Ruckelshaus Center, and our new Commissioner of Public Lands, Hilary Franz.

**What:** Our annual gathering of chapters from across Washington state

**Date:** October 13th, 14th, and 15th

**Location:** Jamestown S’Klallam Tribal Center, 1033 Old Blyn Hwy, Sequim, WA 98382

Register (\$35): Open Now

**Accommodations:** Three nearby hotels to choose from

**Carpools:** Self-organizing online

*Not To Be Missed!*

Friday’s Education Workshop 3-5pm

Friday’s WSACC meeting 5-7pm

Friday evening’s guest speaker Lynda Mapes 7:30pm

Sunday morning’s field trips – so many choices!

Please visit the ACOW event website for details, agendas, and signup pages – let us know what meetings and field trips you are planning to attend; it really helps with planning!

Nominations are still being accepted for the Helen Engle Volunteer of the Year Award, to be given at our ACOW meeting on October 14th. The deadline for nominations is Monday, October 2, 2017.

Looking forward to a great weekend together!

Jen Syrowitz, M.Env.

Chapter Conservation Manager

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## **Dino-Killing Asteroid's Impact on Bird Evolution**

### **Study examines mass extinction effect on the rise of modern birds**

Ithaca, NY—Human activities could change the pace of evolution, similar to what occurred 66 million years ago when a giant asteroid wiped out the dinosaurs, leaving modern birds as their only descendants. That's one conclusion drawn by the authors of a new study published in *Systematic Biology*.

Cornell Ph.D. candidate Jacob Berv and University of Bath Prize Fellow Daniel Field suggest that the meteor-induced mass extinction (a.k.a. the K-Pg event) led to an acceleration in the rate of genetic evolution among its avian survivors. These survivors may have been much smaller than their pre-extinction relatives.

"There is good evidence that size reductions after mass extinctions may have occurred in many groups of organisms," says Berv. "All of the new evidence we have reviewed is also consistent with a Lilliput Effect affecting birds across the K-Pg mass extinction." Paleontologists have dubbed this phenomenon the "Lilliput Effect"—a nod to the classic tale *Gulliver's Travels*.

"Smaller birds tend to have faster metabolic rates and shorter generation times," Field explains. "Our hypothesis is that these important biological characters, which affect the rate of DNA evolution, may have been influenced by the K-Pg event."

The researchers jumped into this line of inquiry because of the long-running "rocks and clocks" debate. Different studies often report substantial discrepancies between age estimates for groups of organisms implied by the fossil record and estimates generated by molecular clocks. Molecular clocks use the rate at which DNA sequences change to estimate how long ago new species arose, assuming a relatively steady rate of genetic evolution. But if the K-Pg extinction caused avian molecular clocks to temporarily speed up, Berv and Field say this could explain at least some of the mismatch. "Size reductions across the K-Pg extinction would be predicted to do exactly that," says Berv.

"The bottom line is that, by speeding up avian genetic evolution, the K-Pg mass extinction may have temporarily altered the rate of the avian molecular clock," says Field. "Similar processes may have influenced the evolution of many groups across this extinction event, like plants, *Asteroid continued from page 6* mammals, and other forms of life."

The authors suggest that human activity may even be driving a similar Lilliput-like pattern in the modern world, as more and more large animals go extinct because of hunting, habitat destruction, and climate change.

"Right now, the planet's large animals are being decimated—the big cats, elephants, rhinos, and whales," notes Berv. "We need to start thinking about conservation not just in terms of functional biodiversity loss, but about how our actions will affect the future of evolution itself."

This research was supported by a National Science Foundation Graduate Research Fellowship and Doctoral Dissertation Improvement Grant to Berv (DGE-1650441, DEB-1700786), and a National Sciences and Engineering Council of Canada Graduate Scholarship to Field. Berv was also supported by a Cornell Lab of Ornithology Athena Grant. Field is supported by a 50th Anniversary Prize Fellowship at the University of Bath.

## **Olympic BirdFest 2018**

### ***Sequim, Washington, April 13-15, 2018***

Grab your binoculars and join the 15th annual Olympic BirdFest 2018 celebration at the Dungeness River Audubon Center, April 13-15, 2018.

The stage is set... quiet bays and estuaries, sandy beaches, a five-mile-long sand spit, and a protected island bird sanctuary on the Strait of Juan de Fuca; wetlands, tide pools, rainforests, and lush river valleys. The players are ready ... Marbled Murrelets, Rhinoceros Auklets, Harlequin Ducks, Black Oystercatchers, Peregrine Falcons, Barred and Pygmy Owls will be sporting their finest spring plumage for this celebration. Enjoy guided birding trips, boat tour, and a gala banquet. Our featured speaker this year, Claudio Vidal has been exploring & birding since the age of 12 and currently leads birding/nature tours & photo safaris through Patagonia, Chile & South America.

Check out the offerings by going online ([www.olympicbirdfest.org](http://www.olympicbirdfest.org)). Precede your BirdFest weekend with a three-day, two night birding cruise of the spectacular San Juan Islands on April 10-12, 2018. Visit San Juan and Sucia Islands, and more. Stay at the historic Roche Harbor Resort.

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The mission of the Grays Harbor Audubon Society is to seek a sustainable balance between human activity and the needs of the environment, and to promote enjoyment of birds and the natural world

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## ***Membership Meeting***

### ***On Wings of Time: Avian Imagery in Rock Art of the Southwest***

*October 8, 2017*

*1:30 pm - 3pm*

*at*

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Downsairs Meeting Room***

## **The Sandpiper**

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