



The Pinniped Press

A Newsletter by and for Noyo Center for Marine Science Volunteers
September, 2023 Vol. 2, Number 9

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Volunteer Opportunities

The Beach Survey Program has openings for new surveyors.

Join us at the Paul Bunyan Day parade to march along with our float. To find out when and where to meet on Sept 4th, contact Alix Phillips at: alix_phillips@yahoo.com.

If interested in any of these opportunities contact Wendi Felson, Volunteer Coordinator at wendi@noyocenter.org.

CALIFORNIA COASTAL CLEANUP DAY

Saturday, September 23

More than 65,000 volunteers will be involved in California Coastal Cleanup Day, including people from 21 organizations in Mendocino County, who will be working to clean up beaches, rivers, headlands, and forests.

The largest beach cleanup ever took place on Versova beach, in Mumbai, India. Over a three-year period, a team of volunteers managed to remove nearly 10 million kilograms (over 22 million pounds) of waste from the beach.

We'll be at Noyo Harbor Beach from 10 AM - 12 PM. Come lend a hand.



Is Relocating Sea Otters a Good Idea?

By Dobie Dolphin

On June 26, 2023, U.S. Fish and Wildlife Service held an open house at the Discovery Center to gather input on the potential reintroduction of sea otters to their historical range. The open house provided locals with an opportunity to ask questions, share perspectives and speak with Service staff about sea otters and next steps in the reintroduction process, should a proposal move forward. Cards were provided for those who wanted to provide written comments.

Issues raised by the public included economic impact on commercial and recreational fisheries, how otters would aid in the return of kelp beds, the effect on purple sea urchin barrens, the success of past sea otter relocations, the greatest dangers to otter recovery, the timeline for possible otter relocation, and more.

Historically, sea otters were said to have ranged from Baja California, up the coast, and along the Aleutian Islands to

Japan. During the maritime fur trade, starting in the 1700's, they were hunted to near extinction until only a few small remnant colonies remained. The population of southern sea otters in California has grown from a population of fewer than fifty animals to around 3000 in recent years, although only 13% of historical ranges have been recolonized.

The southern sea otter is listed as "threatened" under the Endangered Species Act. As directed by Congress, in 2022, the Fish and Wildlife Service assessed reintroduction feasibility, which is the first step in any potential reintroduction effort, but it is not the same as a reintroduction proposal.

Input from the public and ocean users will be a basic component in establishing next steps, including whether or not a potential reintroduction is proposed, as well as ensuring that proposals are crafted in a way that benefits stakeholders and local communities.

Restoration of sea otters to areas where they have long been absent has been observed to result in the return of kelp forests and seagrass beds (in estuaries) with benefits including but not limited to:

- Increased nursery habitats for finfish, crabs, and other invertebrates
- Overall increases in biodiversity and biomass in nearshore marine ecosystems
- Increased capacity for carbon sequestration
- Local reductions in ocean acidification
- Protection from coastal erosion through reductions in wave energy
- Greater ecosystem resiliency to climate change
- Satisfaction in knowing sea otters have been restored to their native ecosystems within their historical range.
- Economic gains from increased ecotourism

Despite the positive benefits, the effects of sea otters on commercial, recreational, and subsistence shellfish fisheries due to competition for prey have been among the most highly visible and politically charged issues relating to the relocation of sea otters. The development of commercial and recreational shellfish fisheries was fueled by the high abundance of invertebrates that developed during the absence of their natural predator, the sea otter.



Photo: Marshal Hedin, Creative Commons License



Is Relocating Sea Otters a Good Idea? (continued)

Shellfish harvests adapted to these new levels of abundance, and this came to be viewed as normal and natural. Evidence indicates that commercial shellfish fisheries are unlikely to survive in an area once sea otters have recolonized it. Sea urchins and abalone are depleted quickly because they are accessible and relatively immobile. The crab fishery could also be adversely impacted by otter relocation.

Presently, oil spills are one of the biggest dangers to sea otter recovery, as well as entanglement with fishing gear, other pollutants, and climate change.

Reintroducing otters can be tricky. In the 1960s and '70s, wildlife officials tried to relocate them to the Pacific Northwest, but 90% of the otters either died or left the area. New methods of reintroduction using juvenile sea otters who were stranded as pups and were raised by surrogate sea otter mothers show better outcomes. In a 2013 study, otters were reintroduced in British Columbia and, within one year, most of the urchins were gone and kelp was beginning to regrow.

There are logical and financial considerations in relocation of otters including habitat assessment, capture, transportation, and monitoring by land, sea, and air. In one potential relocation scenario, five surrogate-raised pups from Monterey Bay would be transported to San Francisco Bay and released with intense monitoring for two weeks to ensure acclimation. Estimated cost for the surrogate-reared otters, transportation and intense monitoring is roughly \$1.65 million dollars for one year.

Considering sea otter reintroduction, the Fish & Wildlife Service's assessment recommends stakeholder engagement in the identification of potential reintroduction sites and small-scale experimental reintroductions as next steps. If there is a move to formally propose the reintroduction of sea otters, the Wildlife Service would initiate a public review process under the National Environmental Policy Act.

The assessment concluded that reintroduction was biologically feasible and may have significant benefits for a variety of species in the marine ecosystem. Ultimate success, however, would require focused effort and creative solutions to overcome challenges, particularly in the socioeconomic sector. Consequently, there is no active proposal to reintroduce sea otters at this time.

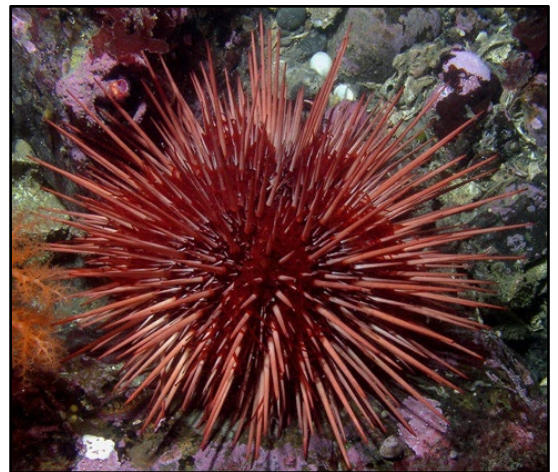
Resources:

Feasibility Assessment: Sea Otter Reintroduction to the Pacific Coast, U.S. Fish and Wildlife Service, 2022

"Future Directions in Sea Otter Research and Management," *Frontiers in Marine Science*, 21 January 2019

Fun Facts About Sea Urchins

- Sea urchins have no bones. They have spines, pincers, and tube feet covering the body.
- The top spines are brittle and sharp, used to spear food and for defense.
- Bottom spines are softer, paddle-shaped, and used to help move food to mouth and for locomotion.
- Tube feet protrude out of spines, which are housed in ball-and-socket joints.
- Pincers help capture food and move it to the mouth.
- Tube feet to help capture food and for locomotion.
- Tube feet are also used for breathing, along with gills.
- Urchins are 2-4 inches across, with some growing to 1 ½ feet in diameter.
- Urchins move 1-2 inches per minute.



Red Sea Urchin

Photo: Kirt L. Onthank, Creative Commons License

Fun Facts About Sea Urchins (continued)

- The average purple urchin life span is 20 years, many live to 70, some reds up to 200 years.
- They live in intertidal and subtidal zones and as deep as 525 feet.
- Predators are sea otters and sunflower sea stars. Otters were killed off by fur trappers, sunflowers by wasting disease likely linked to climate change.
- The purple urchin population has increased by 10,000% in the last few years!
- Purple urchins eat kelp, chewing through the base of the kelp, killing off entire kelp forests; with few urchin predators left, kelp forests are turning into urchin barrens.
- Occasionally, urchins snack on each other.
- When a sea otter eats purple urchins, its lips and teeth turn purple.
- When a sunflower star eats purple urchins, it eats the whole thing at once.
- Young purple urchins have green spines that turn purple as they grow.
- The “shell” under the spines is called a test. There are 5 sharp pointed teeth (known as [Aristotle’s Lantern](#)) in a circle on the underside that can abrade hollows in rock so they can hide. Their teeth can also drill through steel pilings by flaking away the rust.
- Teeth continue growing and sharpening through life.
- Purple urchins decorate themselves with shells, rocks, and seaweed for protection from the sun and predators like seagulls.
- Both red and purple urchins are being used more frequently for Uni for sushi, which is rich, creamy, and slightly salty.



Purple Sea Urchin
Photo: Kirt L. Onthank
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Albion Cove Research Buoy



Photo: Bennett Bugbee

Partnering with the Noyo Center for Marine Science, scientists with [The Nature Conservancy](#) (TNC) recently deployed a Sofar Spotter Smart Buoy in Albion Cove on the Mendocino Coast. With the support of Aqualink and [Sofar Oceans](#) technology, this buoy monitors the geographic position, sea temperature at 1m (surface), sea temperature at 15m (bottom), wind/speed direction, significant wave height, and wave period/direction. Of importance, all of these data are transmitted live through cellular signals and can be viewed or downloaded by users 24/7 on the [Aqualink website](#).

This equipment provides valuable data for many purposes, including TNC’s work testing kelp enhancement techniques at Albion alongside partners at [Sonoma State University](#), [Moss Landing Marine Labs](#), [Reef Check](#), [California Department of Fish and Wildlife](#), Commercial Urchin Divers and community, in this broader effort to protect and restore kelp refugia locations.

Noyo Center for Marine Science is displaying the real-time data for public view on our website, at our Discovery Center Science Museum in Fort Bragg as well as our Field Station in Noyo Harbor to help bring these data and insight from local restoration efforts to the community.

Docents and staff can direct visitors to our website and the [“LIVE FEEDS”](#) tab at the top of the home page to observe the buoy data and our live webcams at the Crow’s Nest and the Marine Field Station in Noyo Harbor.

Oh Whales!

By Mary Rose Kaczorowski

Oh Whales! oh so magnificent,
gentle creatures of the Sea!

We plea,
the whales of the Sea just let them be.
We plea,
let them be free!

Of our hurtful human entanglements and greed,
Oh great Whales you have no need.

Our species, entrapped
We are not free.
Oh Whales of the Sea, you dive and sky hop, you roll and breach,
with tail slapping, and with great breath you sing!

Oh, Whales of the sea, with your songs and melodies,
sing for us!
For thousands of years, you have sauntered the world's waters,
now please sing for us, for the Earth and for the Sea.

Oh Whales! Oh, Whales sing for us! Sing For me?

Oh dear Whales I plead,
Awaken us from our follies.
Despoiling Mother Earth is our greatest misdeed.

Oh precious Whales
Sing that we can heal all that we leave in our own wake!
Sing that we have the courage for a new world to remake!
Sing out for our compassion and
a return to peaceful ways,
Sing as you nurse your babies for the end
of all suffering and malaise.

I am sorry
our kind has harmed you, oh titans of the Sea,

Can your enormous heart forgive us?
and thus,
can you swallow whole the pain of our world
and, Yes ... with all our ignorance unfurled?

As we are humbled and amazed when you drift by,
can you show us that we can transform gently
and our compassion can multiply!

Here! Here!
Oh great creatures of the Sea!
Do you see me here?
I wave to you;
I too want to be free!



Mary Rose Kaczorowski reading
At Poetry on the River

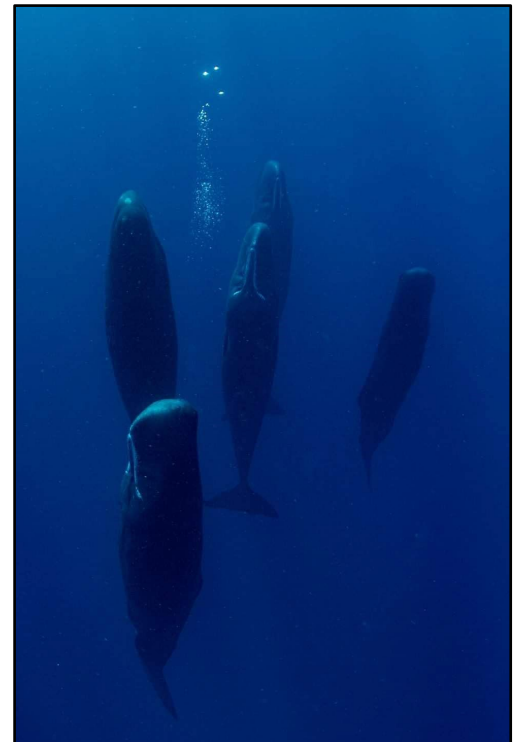


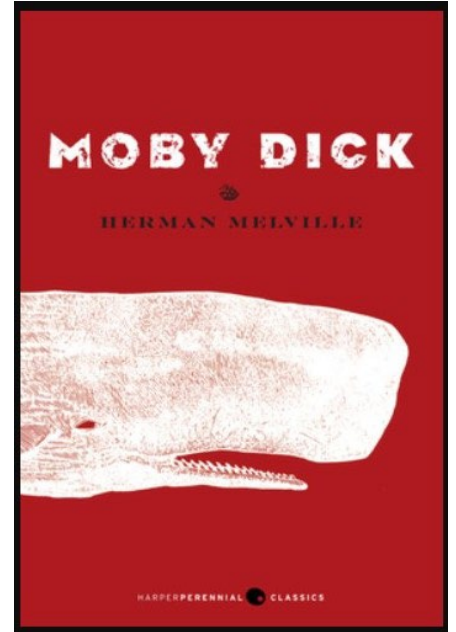
Photo: Amanda Cotton

Moby Dick Musings

by Donna Worster

During the eighteen-hundreds, whaling was a financially lucrative endeavor, primarily due to the value of whale oil. Those who want to read a firsthand account of processing the whale after it is caught would be rewarded by reading Moby Dick. If you want a quick read, I recommend the chapter, "The Monkey-rope." This one tells of attention to safety while processing the whale by two sailors and it visualizes the movements with clarity. As much as I read, I cannot visualize the immensity of a whale against the length of a whaling ship. I use visual likings when I show visitors the blue whale bones and boredom becomes inquiry.

Ishmael gives a good description of the "Crow's Nest" on the ship. From the book, "In shape, the Sleet's crow's nest is something like a large tierce (a cask containing a certain quantity of provisions) or pipe: it is open above; however, it is furnished with a movable side-screen to keep to windward of your head in a hard gale. Being fixed on the summit of the mast, you ascend into it through a little trap-hatch in the bottom. On the other side, or side next to the stern of the ship, is a comfortable seat, with a locker underneath for umbrellas, comforters, and coats. In front is a leather rack, in which to keep your speaking trumpet, pipe, telescope, and other nautical conveniences." There is more on page 161 if you want to read about what the occupant was able to do to keep his attention alert to the job!



Volunteer Highlight: Dania Stoneham

By Linda Francis



Dania was born in Livermore. She was the last girl born into a family of 11 kids, with five sisters and five brothers. Her sisters are much older than her, so her sibling playmates growing up were four of her five brothers. Her Dad, after retiring as a mechanic, started his "hobby" farm of 52 acres where Dania, along with her brothers, helped raise cattle, pigs, chickens, and other animals; a childhood she loved. The whole family still lives in the bay area, as did Dania until her move to Little River in 2022.

Her first job out of high school was with East Bay Regional Parks working as a boat dock attendant. She spent the next 32 years with East Bay Regional Parks, working her way from boating attendant to Park Ranger, to Park Supervisor, and finally Park Manager where she supervised nine parks and a youth crew. During this time her job also included firefighting. One fire she worked on was the Santa Clara Complex fire in the Livermore/Santa Clara Hills. She and the crew were helicoptered in pulling 24 hours shifts for two weeks. Dania said it was scary and fun and she loved the hard work. She retired from the park service in 2021.

During this time, she married, had two daughters, then became a single Mom who was quite happily single until a fateful back-to-school night for her 5th grade daughter. She volunteered in the class so she knew the teacher well who asked if she could give Dania's number to an inquiring, handsome parent. After declining on several occasions, she finally relented and is now happily married to her husband, Rick. When they married, Rick and his son joined Dania and her girls, forming their new family. Her 28 and 30-year-old daughters both recently married, and her 31-year-old stepson remains single. They all live in the Bay Area.

Volunteer Highlight: Dania Stoneham (continued)

Dania and Rick always wanted to live near the ocean. They spent weekends exploring the area where they discovered Fort Bragg and the Noyo Center. Their retirement home-search took them to Little River where in 2017 they bought property in Little River where they spent weekends until able to move permanently in November 2022.

Dania began volunteering for the Noyo Center in December of 2021, starting at the Crow's Nest and at the Discovery Center, then moving to the Slack Tide Café, where she quickly became known for the scrumptious scones and tea breads she bakes. She notes that the trick to get flaky scones is to freeze them before baking to keep the butter cold while baking. In addition to Noyo Center activities she is an avid gardener (who needs to get her deer fencing up). She is also an artist both in photography and mixed media such as collage, fabric, watercolor, acrylic and other mediums.

Dania and her husband just bought a Bronco with a tent to start traveling. Their first trip is in October to Albuquerque for the solar eclipse and Balloon Fest.

Dania loves Noyo Center for Marine Science and how the organization is engaged in helping to find solutions for kelp restoration on our coast and conservation aquaculture involving urchins and abalone. Dania spent her whole career trying to take care of the planet so volunteering with the Noyo Center is a natural fit in her mind. With Slack Tide Cafe closing, she plans on stepping back for a moment to find where her skills and interests best fit for ongoing opportunities with the Noyo Center. We can only hope that it somehow includes scones!

What Washed In

by Nancy Lloyd

We have now seen our California sea lions returning from the breeding grounds off Southern California's Channel Islands. Thankfully, the strandings and fatalities have been light. Not so for our neighbors to the south where responders to sick or injured California sea lions have been busy.

If you are interested in learning more about some of the diseases these marine animals deal with, link to our recent science talk by the Marine Mammal Center's lead pathologist Pdraig Duignan:

<https://www.noyocenter.org/calendar/6bsdysokdzhgp31g7npefei4ekbhra-g96pt-tdptz-sykdp-fh8pd-77ld2>

Interestingly, not all animals wash ashore already dead. Some will haul themselves out and then die.

This was true of a large California Sea Lion in Noyo Harbor who died recently on a dock. He was reported to Stranding Coordinator Sarah Grimes just after he died. He was found to have a large amount of fluid in his chest cavity.

Below is the report created for this sea lion. This report is typical of what Sarah would submit to Sue Pemberton at California Academy of Science (CAS). Sue then enters the data into a national database. The skull will be processed at

Noyo Center, then transferred with the other samples to CAS.

11Aug23

CAS-SWG-230

Zalophus californianus Male

SL 215 cm (standard length - tip of snout to tip of tail)

Code 2 (fresh dead)

D-Dock Noyo Harbor

Collected: Skull, baculum, 1 rib, muscle and 16 vibrissae (whiskers)

No external injuries or evidence of human interaction.

Large amounts of pus in chest cavity.

To report a dead marine mammal please contact Sarah G. at 707-813-7925. To report a live marine mammal in distress, contact The Marine Mammal Center at 415-289-7325.



Photo: Sarah Grimes

Volunteer Party

An enjoyable all volunteer party was held on the Slack Tide Café deck on August 20. Everyone had a great time, enjoying potluck dishes and donated wine and beer. Here are a few photos from the event.



Linda Francis, Charlotte Randolph, Sally Swan,
Royce Peterson, Dobie Dolphin



Donna Kimball, Dania Stoneham and Rick Cash



Peggy Martin



Royce Peterson, Jack Nolan
Carin Berolzheimer, Jim Rolfe

Volunteer Party Photos



Becky Stenberg, Adriane Nicolaisen, Sharon Bowers,
Rick Cash, Dania Stoneham, Linda Francis



Donna Worster, Peggy Cullinane

Journal Club News and Notes

Check out this great article on pelicans by Frank Hartzell in the The Mendocino Voice [HERE](#).

For those of you who missed the Whale Alert app training, you can find the zoom recording [HERE](#). Passcode: XV7WY8^P

Perucetus colossus may have been the heaviest animal on earth. Read the full article [HERE](#).

The [Volunteer Page](#) on our website has been updated. We have uploaded blank Beach Survey Program (BSP) data sheets and the BSP protocols. We also added links to the required BSP videos. For docents, we have added the Daily Procedures document and the Training Manual in English and Spanish. If you need info on the password for the Volunteer Page please contact wendi@noyocenter.org.



Toni Rizzo, Sharen Parker

Calendar

Monday, September 4th. Paul Bunyan Day Parade

Tuesday, September 5th, 6 pm. Pinniped Press zoom meeting: <https://us02web.zoom.us/j/85045100225>

Saturday, September 9th, 10 am. New Volunteer Orientation, Noyo Center Field Station (formerly Slack Tide Café)

Wednesday, September 13th, 10 am. Docent's meeting, Crow's Nest

Wednesday, September 20th, 6 pm. Science Talk. Bill Keener: Whales Dolphins and Porpoises.

Saturday, September 23rd, 10 – noon. Coastal Cleanup Day, Noyo Harbor beach.

Saturday, September 30th, noon. Noyo Center's streaming talk, Sea Otter Awareness Week: September 24-30.

The Pinniped Press Team: Dobie Dolphin, Wendi Felson, Linda Francis, Nancy Lloyd, Toni Rizzo, Donna Worster, and Mary Rose Kaczorowski, with Trey Petrey and Sarah Grimes.

If you have photo or writing skills or have a particular idea for an article, want to join a great group, or send a letter to the editor, write to Toni at: editor@noyocenter.org

