The Pinniped Press

A Newsletter by and for Noyo Center for Marine Science Volunteers
October, 2023 Vol. 2, Number 10

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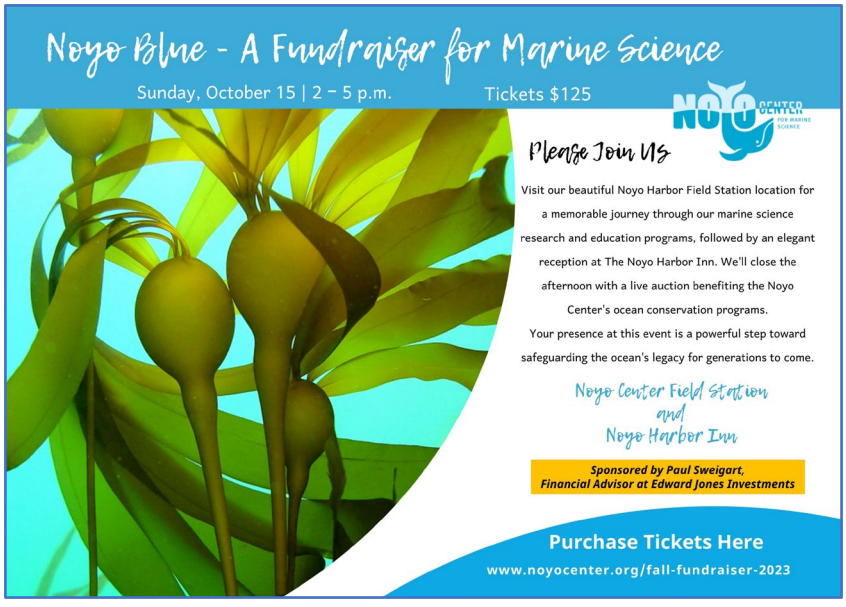
Fall Fundraiser – October 15

Visit the beautiful Noyo Harbor Marine Field Station location for a memorable journey through our marine science research and education programs, followed by an elegant reception with small bites and drinks at The Noyo Harbor Inn.

We'll close the evening with a live auction benefiting the Noyo Center's ocean conservation programs.

BUY TICKETS



Volunteer Opportunities

As we continue the conversion of the Carine's Landing building from a café to a field station, there are a variety of building improvement projects underway. If you are interested in working on the building please let us know.

We are looking for volunteers to help with various tasks at our big fall fundraiser on October 15th.

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

From Café to Field Station

By Wendi Felson

The Slack Tide Café in the north harbor was a fun idea – run a coffee shop and raise money for our research projects. And it was fun and a beautiful, well-beloved spot for seal watching while having your coffee or listening to music. But it wasn't to be. The café became too much for the Noyo Center to run for several reasons. The main reason was that we were unable to make it profitable, and we decided to direct our staff to concentrate on what we do best – marine-centered ocean science and conservation. The Slack Tide Café closed on August 27th, a year after it opened, and, in its stead, the Noyo Center Marine Field Station was created.

The Field Station (FS) will have many uses. It will be a working office space for staff, a meeting place for the board, volunteers, donors, and staff, and the home to a number of upcoming research projects. We will continue education programs at the FS, such as the after-school program in partnership with Kudos. We will host occasional public events such as urchin tastings, open houses, science talks, and more. The FS will be available for groups to rent for meetings or to hold celebrations, and there may be opportunities to lease the kitchen area to caterers or restaurants.

Our immediate goal is to launch three main research activities. The first project is a red abalone broodstock program. Northern California's red abalone population has declined by 70% since 2014. In 2018, the Fish and Game Commission prohibited abalone fishing in all of California for the first time. The Union for Conservation of Nature has listed this species of abalone as "critically endangered." Abalone are broadcast spawners, and the population decline has taken the abalone densities to below critical thresholds for successful reproduction. The few abalone left are starving and are therefore not reproductive. We will collect adult abalone in the wild and place them into tanks at the FS and at the Bodega Marine Lab. We will feed them until they are reproductive again, which can take up to two years.

Our program's goal is to create a broodstock of red abalone to be released back in restoration zones off our coast. We will work with the Bodega Marine Lab, California Department of Fish and Wildlife, and the Kashia Tribe to create a methodology to produce juvenile red abalone for release. It will take an additional 2-3 years for larval abalone to grow into juveniles large enough to survive in the wild. A suitable habitat for the outplanting of these juveniles will require bull kelp recovery, so we are collaborating with other partners on conservation efforts to remove purple urchin and restore enough kelp for a successful reintroduction of abalone.

Our second project is purple urchin ranching, which seems to make no sense since purple urchin are 60 to 100X more abundant than they were before the kelp collapse. But efforts to manually remove urchins are expensive and take a lot of time, and as a result we have not seen a significant rebound in bull kelp. Since urchin are eating themselves out of house and home, they too are starving but are very resilient and can survive with very little food for many years. Since they are

From Café to Field Station - continued

limited in food, they are essentially empty when brought in from the wild. Land-based urchin ranching will feed these empty, worthless urchin to provide a new restorative seafood product for local and international markets, keep urchin divers employed and allow conservation dollars to go to other ecosystem crises. Our project will provide research data needed to determine the feasibility of large-scale, commercial urchin production along with hands-on research and STEM education opportunities.

We will install an urchin aquaculture system within a 40-foot container in our side yard. The purple urchins will be fed a dense seaweed pellet and these empty urchins will grow marketable uni within 8 – 10 weeks. This project could provide an essential tool for restoring our kelp forest by eliminating urchin barrens, creating a valued, restorative seafood product, and creating a new regional aquaculture industry.

A few of the issues this Purple Urchin Ranching program will address:

- Reduce grazing pressure of purple urchins on bull kelp to help restore balance.
- Showcase a new restorative seafood product to local restaurants and consumers.
- Test various food products for urchins evaluating flavor in growing uni.
- Integrate community scientists, interns, and school classes into the process.

And our third project is to establish seaweed tumble-tanks. By growing our own seaweed, we will not be negatively impacting dwindling seaweed populations, and we will be growing food for the abalone to eat. A tumble-tank provides a steady flow of air from the bottom of an open-air container, which will keep the free floating seaweeds "tumbling." We plan to grow a red seaweed called dulce, *Palmaria palmata*, which abalone thrive on. Other seaweeds we might try are sea lettuce, *Ulva rigida* or even bull kelp, *Nereocyctis luetkeana*. With these tumble-tanks, we plan to integrate seaweed and aquaculture together as nutrients from urchin ranching, and the abalone can help fertilize the seaweed, which also cleans the water. The seaweed can be harvested to feed the animals and people. Two or three tubs will be placed in the side yard and integrated into the larger river/seawater system.

While we say a fond farewell to Slack Tide we are looking forward to an exciting next few years of innovative research and conservation projects at the Noyo Center Marine Field Station. We hope to have many opportunities for students, interns, and volunteers to be part of various community science projects And, although we have been successful in getting some grant money for these projects, we are still in need of critical operating costs and other expenses. Please consider becoming a sustaining member and a part of our exciting future in ocean conservation and marine science. https://www.noyocenter.org/sustaining-membership

Energy from the Ocean

By Dobie Dolphin

Wouldn't it be nice if the electricity we use came from the power of the ocean? Solar panels depend on the sun, wind generators on the wind, but the ocean is constantly moving and this movement can be harnessed to create electricity. The world's first operational wave-power generator is located off the coast of Aguçadoura, Portugal, producing as much as 2.25 megawatts from three huge, jointed tubes that float on the surface of the Atlantic Ocean. Research and development of wave energy converters (WECs) is going on all over the world, with some exciting projects right here in the Pacific Northwest.

Waves are created when the wind blows over the surface of the ocean, and this movement can be captured by WECs. These devices need to be tested in realistic conditions, in the open ocean, and they also need access to a land-based facility to receive the electricity, which implies permit challenges and costly infrastructure.

The good news is that starting in 2016, The Department of Energy (DOE) teamed up with Oregon State University (OSU), the state of Oregon, and several international partners to plan PacWave South, a state-of-the-art site for the testing of

Energy from the Ocean – continued

WECs. This will be the first open-water wave-energy test facility that will be grid-connected, so electricity from the test site will power local homes and businesses. Selected through a public outreach process, the location of PacWave South, near Newport, Oregon, has wide community support.

The Federal Energy Regulatory Commission (FERC) granted the license for this project in 2021. It's 107 pages long and contains strict environmental regulations for both the construction and operational phases. These include protection for wetlands, rocky reef habitats, and marine species including mammals, sea turtles, fish, birds, and aquatic resources.

OSU has worked closely with the Bureau of Ocean Energy Management, Oregon Dept. of Fish and Wildlife, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service, the US Coast Guard, and other government agencies. They must comply with the Coastal Zone Management Act, the Magnuson-Stevens Act, the Endangered Species Act, the Marine Mammal Protection Act, and more. Acquiring all the permits and working out mitigation measures took many years.

OSU has measures in place for vessels, WECs, and mooring systems to avoid sound above NMFS harassment threshold, which could injure marine mammals or alter their behavior. Vessels traveling to and from the project site will minimize close contact with marine mammals and sea turtles by posting observers and following NMFS "Be Whale Wise" guidelines.

To reduce the risk of marine species (mammals, turtles and seabirds) and fishing gear becoming entangled with project components, OSU proposes to ensure that WEC cables and moorings are designed and maintained to decrease the potential for entanglement, and to implement rescue protocols for marine mammal or sea turtle stranding, injuries, and mortalities. There are plans to monitor behavioral changes in fish and invertebrates (especially Dungeness crab) and to mitigate any unanticipated adverse effects on marine aquatic resources. The project structures will be designed to minimize pinniped haul-out. OSU will manage all activities and gather information about environmental, economic, and socioeconomic impacts.

Construction of the underground components of PacWave South was completed in May 2022. Construction of the medium-voltage Utility Connection and Monitoring Facility (UCMF) started in February 2023 and should be completed in 2024.

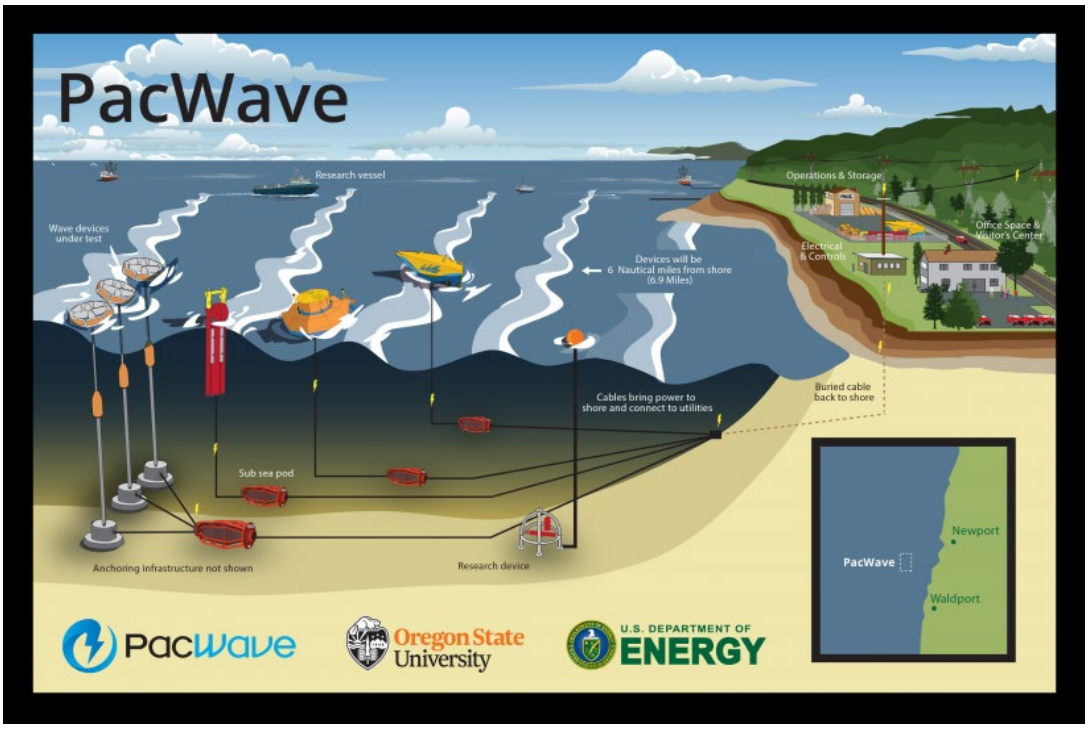


Illustration of the PacWave South wave-energy test facility (courtesy of OSU)

Energy from the Ocean – continued

Who gets to test their WECs at PacWave South?

In January 2022, the DOE announced $25 million in funding to support eight projects, which will make up the first round of open water testing at PacWave South. The largest award ($7,500,000) was given to CalWave Power Technologies, Inc. of Oakland, Calif. In September 2021, their device was deployed a half mile off the coast of San Diego with the goal of demonstrating CalWave's patented xWave™ technology as a cost-effective, sustainable solution for energy generation. The goal was to test the WEC for six months, but it was so successful it ran for ten months of continuous operation. It was fully submerged, which protected it from storms, and allowed movement, therefore water would flow in all directions. The Coast Guard deployed a buoy for safe navigation.

The primary environmental considerations for systems like the xWave™ are underwater noise outputs, electromagnetic fields from cables that transport electricity back to shore, and disturbance to local species through collision, entanglement with moorings, or displacement. Biological evaluations before and during deployment have concluded that based on the technology type, location, and duration of deployment, this project would have no adverse effect on local fish or invertebrate species and is not likely to adversely affect species of marine mammals, turtles, and seabirds that could potentially visit the project area. In addition, the habitat team conducted studies on the system to observe possible artificial reef effects, or creation of habitat, on the device's anchors and moorings, which could have a positive ecosystem effect.

Resources:

https://pacwaveenergy.org/

https://calwave.energy/calwave-successfully-concludes-historic-wave-energy-pilot-in-california/

https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/renewable-energy/FERC%20LICENSE%2020210301-3044_P-14616-001%20PacWave%20South%20License%20Order.pdf

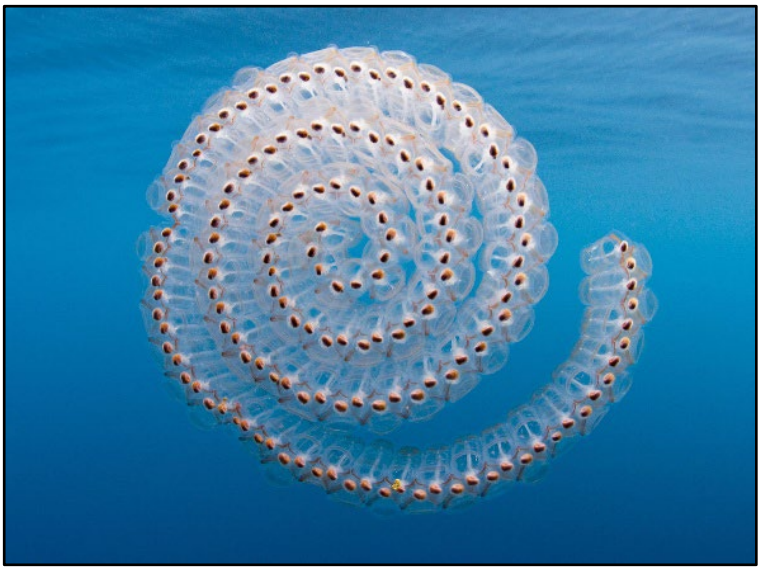
More than Meets the Eye

By Peggy Martin

It's not unusual to find jellyfish or bits and pieces of jellies washed up on shore. But sometimes things just don't seem right. On a recent walk I spotted bits and pieces, but looking closely I noticed a dark spot on each individual gelatinous blob. Turns out these were not bits, but whole creatures called Salps. Although sometimes called "jellyfish eggs" for their superficial resemblance, they are not jellyfish. The only things salps and jellyfish have in common are that they are both gelatinous (no hard parts) and both floats around in the ocean. In fact, salps are taxonomically closer to humans than to jellyfish, classified in the Phylum chordata: related to all the animals with backbones. Larval salps have a notochord (made of cartilage) running down their back which protects the central nerve cord and provides an attachment point for muscles. Adults lose their notochord as they grow. Salps are our closest living invertebrate relative. They have complex nervous, circulatory, and digestive systems, as well as the brain, heart, and intestines.

Shaped like a small barrel and transparent, except for their guts, salps are well adapted to offshore environments where phytoplankton concentration is moderate.

More than Meets the Eye – continued



During the night they swim up to the surface of the ocean to feed, but when the sun comes up, they swim downward into the darkness to hide from predators. They move up and down through the ocean eating and excreting, spreading nutrients downward to other ocean communities. As adults, they drift through the world's oceans like tiny transparent whales, travelling with the currents and thriving on plankton blooms, filtering microscopic plants afloat in the water. Their appearance on beaches usually corresponds to a phytoplankton bloom.

Near the bottom of the marine food web, salps feed on phytoplankton, such as single-celled algae – which grow in the presence of sunlight and carbon dioxide. At the front of their barrel, they have a mesh filter that is used to catch prey. Most have a very fine mesh that allows them to feed efficiently on some of the smallest plankton in the ocean. According to scientists (e.g., Sarah Spaulding, Diatoms.org), as the average temperature on Earth warms up, the larger plankton (like diatoms) in the ocean are being replaced by smaller plankton (called picoplankton). Salps are very good at eating the smaller plankton and play an essential role in the ocean's biological pump.

Salp poop is extremely rich in carbon and is larger and faster-sinking than that produced by most other species of zooplankton. When the fecal pellets (and dead salps) fall to the seafloor the carbon remains at the bottom of the ocean for years, if not centuries, effectively removing a lot of carbon from the carbon cycle.

The individual salp is only one part of an unusual life cycle which includes male, female, and an asexual phase, as well as colonial chain and solitary lifestyles. Known as alternation of generations, briefly, when an adult solitary salp is ready to reproduce it buds off clones of itself in long chains. Each individual in the chain (colony) is female and each produce eggs that become fertilized by males of an older chain. Each female will have a single egg develop internally (attached inside and nourished by the mother). When large enough, the babies are "born" and swim off to grow and develop into asexual (solitary) adults. And the process repeats. But wait! There's more. As the whole chain of female salps matures, it will switch to become male and release sperm which fertilize the females of a younger chain.

Thetys vagina. One of the largest salp in the Pacific Ocean.
Learn more **HERE**

More than Meets the Eye – continued

"In some species, a solitary individual can release a chain only a little more than a day after it is born and can release additional chains every four to five hours. Individuals within the chains can produce more solitary organisms roughly a day later. This leads to rapid growth of the species and allows salps to bloom rapidly when conditions are favorable." (FSU Plankton and Biochemistry Lab)

Fun Facts:

- Salps are 95% water and live for only a few weeks.
- Salps are harmless to humans.
- Swimming and feeding occur at the same time as muscle bands around the salp (patterns and number of which can be used to differentiate species) contract to move the animal around and pump sea water through its feeding filter providing food, oxygen, and propulsion as the water (metabolic waste and sperm) exits at the tail end.
- Salps come in various shapes and sizes depending on the species. They range in size from approximately 1 to 30 centimeters.
- Chains of salps can look like a costume jewelry necklace made from linked glass beads.
- Salps are tunicates (subphylum Tunicata). There are about 50 species of salp.
- Salp reproduce to match their food source. Their numbers increase until the food source is gone.
- Salp predators include sea turtles, marine birds, and fishes.

Sources:
RNZ (Radio New Zealand) *Salps_ A Surprising Jelly-like Relative* 2018 **LINK**
National Geographic *Mysterious Balls of Goo Are Rolling Onto American Beaches* 2015 **LINK**
National Geographic *Huge Swarms of Gelatinous Sea Creatures Imaged in 3-D* 2012 **LINK**
William & Mary News *Study Reveals Salps Play Outsize Role in Damping Global Warming* **LINK**
Australian Museum *Salps: Sea Squirts* 2019 **LINK**
Woods Hole Oceanographic Institution Ocean Twilight Zone *Creature Feature: Salp* **LINK**
FSU Plankton Ecology and Biochemistry Lab *Salps* **LINK**
Southern Living: *The Tiny Clear Blobs Washing Up on Beaches Is Even Weirder Than You Think* 2023 **LINK**
Diatoms.org *Does Climate Affect Diatoms* 2016 **LINK**

Ocean Wheelies and Donuts

By Donna Worster

I am sharing this edition of Poop Deck News from September 21 in the Pinniped Press for October because I'm still on cloud nine after my recent ocean adventure with the U.S. Coast Guard.

We are now in the Field Station (FS) era, saying goodbye to Slack Tide Café for the moment, although there will still be coffee, expresso, cookies, sweet rolls, and coffee cakes on special occasions, so watch for announcements coming from noyocenter.org. Now, on to the adventure—

On Saturday, 9/16, we opened the Field Station to the public, along with a "pop-up" Café for the inaugural Noyo Harbor Festival. Sarah Grimes was in the tidepools at dawn collecting purple urchins to set up uni tasting on the lawn outside of the building. A friend told me that it was delicious. We're planning to do this again at the BIG Fall Fundraiser on October 15, along with other exhibits highlighting the work of our education team. After visiting the FS guests attending the event will move to the neighboring Noyo Harbor Inn for more festivities. Visit Noyo Center's website for more information and to buy tickets.

Ocean Wheelies and Donuts - continued

At the beginning of the hour on Harbor Festival Day, I was at my post greeting visitors, talking about the Noyo Center, and answering questions. The Coast Guard boat moved from their berth across the Noyo River over to the FS dock, and off came a crew with a table, pens, coloring books, lanyards, and the cutest Coast Guardsman (I believe that is the right title) to tell the story of the Coast Guard. I went up to him and found out that the boat would open for visitor tours in ten minutes, and I should go aboard. I was the first one on and what a thrill. I met Captain Horning who invited me to take a cruise with him at three! Clear the deck, the ole lady is coming on! My trepidation vanished when I put on the life preserver and prepared to share the ride in the company of Richard and Sarah and Danylea (the wife of the Guardsman at the table).

The last time I went out of the harbor it was in my own boat, rough, and foggy and I never wanted to do it again, but this time the ocean was calm and who could possibly be afraid in the hands of a capable crew trained on boat that seals up in a rough sea. One after another the albacore boats were coming in. Everyone was in a happy mood. Fishing was good, the sun was shining, the sea was calm, and all was right with my world. We traveled quite a while with only the ripples off the incoming boats making a slight side movement. Then came the call, “You want to pilot the boat?” I jumped down, hopped up into the captain’s chair, and waited for instructions. Standing behind, encircling me, the crew showed me how to hold and maneuver the red-capped controls. “Now put them here, feel the controls?; Okay now push them forward one notch, feel that?; Now all the way forward” and I was doing a wheely on the ocean. So, back to neutral and push the one on the left (port side) one notch down and the one on the starboard side, one notch forward—bingo—a donut!—several donuts all from two stories high. That was the most fun because I could see the sea churning and felt so safe playing in the ocean. I had to let the others have a chance, so I reluctantly moved out and Sarah took over. More donuts and wheelies! It was the most exciting time I’ve had since I raced my ’59 Buick around the racetrack in Ukiah!

Volunteer Highlight: Dobie Dolphin

By Linda Francis

Dobie’s story starts with her name. In 1965 she found herself at Buffalo State University. Of the 12 women in the dorm suite, six of them, including Dobie were named Susan. Dobie was the nickname given to her to help keep all the Susans straight.

Dobie headed to California in 1967. She applied and was accepted into UC Berkeley but later chose not to attend. She stayed in the Bay Area making her way with temp jobs, selling the Berkley Barb, and renting a typewriter to type up a master thesis. She hitchhiked up and down the coast and into the mountains. She enjoyed the iconic music venues of the era and the music greats of the day.

During this time Dobie changed her last name to Dolphin. As a part of a protest of the Diablo Canyon Nuclear Power Plant she along with a cohort of protestors arrived by sea to reach the plant where upon arrival they all got arrested. Their lawyer advised them to give any name they wanted. Dobie picked Dolphin.

Dobie’s protests continued, including those at the Lawrence Livermore Lab where she was arrested twice, once with 800 other women. Taking a break from the demonstrations, a $99 flight from Oakland to Belgium caught her eye, and she was off to Europe and exploring the Canary Islands.

When not traveling or protesting, Dobie continued to live in the Bay Area. One day, while scootering on a Honda 90 during the People’s Park days she got tear gassed and decided it was time to move elsewhere. Serendipitously she got a letter from a friend who lived in Albion, suggesting she visit.

Volunteer Highlight: Dobie Dolphin – continued

Arriving in Mendocino County, she realized she was a country girl at heart and fell in love with the area. She moved into a small one room cabin with two others. She cobbled together work, from building homes to fishing for salmon in her own small boat. It was here her love of the ocean was born. Dobie spent over 25 years diving for abalone, fish and sea urchins, first with her mentor Alan Graham (aka Captain Fathom) and then in her skiff or kayak in the undersea gardens between Albion and Salmon Creek. Giant sea stars of every color, glistening kelp, and seals swimming up to her informed her life and work.

Dobie was active in the Ocean Protection Coalition working to protect the coast from offshore oil drilling. She was co-founder of BOND (Ban Ocean Nuclear Dumping), formed when the Navy proposed scuttling nuclear submarines off the Mendocino Coast.

In the mid-1970s the Baja Mexico Road opened. Dobie drove to the tip of Baja, ferried to Puerto Vallarta, then south where the winds of fate landed her at the end of the dirt road leading to Tenacatita, which had a beautiful beach along a sea filled with fish, scallops, clams, and a weekly truck delivering ice and beer.

During this time, Greg Grantham, of College of the Redwoods, encouraged her to become a fishery observer for National Marine Fisheries Service in the Aleutian Islands. After a three-week training, she was assigned to a factory fish vessel. Hard work, but three months gave her enough money to live in Mexico the rest of the year. After three years of working on assorted vessels, she bought land in Tenacatita in 1999, living there until a blood disease required her to move back to the States in 2019. While the condition is manageable, it requires a monthly treatment, keeping her away from her home in Mexico. With the support from her friends, she marshaled on and recently discovered the Noyo Center, where she is a monthly contributor to the Pinniped Press. This last year Dobie returned to her home in Mexico several times and is hoping to be able to spend more time there this winter. But she assures me regardless of where she is, she hopes to continue to write for PP and be a part of the Noyo Center community.

What Washed In

by Nancy Lloyd

A dramatic increase in leptospirosis bacteria on the Mendocino Coast and beyond has made marine mammal stranding and rescue teams remarkably busy. During a six-week period since the beginning of August, at least 16 CA sea lions have been confirmed deceased in our area. Most have been sub-adult sea lions and although not all are confirmed to be suffering from leptospirosis, many are presenting with apparent symptoms. Experts are warning Bay Area residents to not to approach sea lions as a potentially deadly bacterial infection wracks the local population.

For more information about the current assault of leptospirosis, see this summer's local news **REPORTS** on leptospirosis.

Sea lions that seem tired or that tuck their flippers into their sides might be suffering from leptospirosis — a bacterial infection that can cause irreversible kidney damage in California sea lions, as well as humans and dogs, according to the Marine Mammal Center and the Centers for Disease Control. For more information, read **THIS ARTICLE** from the Marine Mammal Center, where they have a high volume of mammals currently in their care:

If you visit beaches with your dog, they should be on a leash. Keep them away from diseased or dead animals which may infect them. If you fear your dog may have exposure to coastal animals, consult your veterinarian. Available vaccines effectively prevent leptospirosis and protect dogs for at least 12 months. Annual vaccination is recommended for at-risk dogs. Reducing your dog's exposure to possible sources of the Leptospira bacteria can reduce its chances of infection.

On a more hopeful note, one large California sea lion male that was bitten by a shark has been resting several days on one of the Noyo Harbor docks, apparently healing from his wounds. We wish him a healthy recovery!

To report a dead marine mammal call Sarah Grimes at **707-813-7925**. To report a live marine mammal in distress, call The Marine Mammal Center at (415) 289-7325.

Noyo Center Float entry takes Second Place in Paul Bunyan Day Parade

Noyo Center volunteers participated in the Paul Bunyan Day parade with a float of orcas, sharks, and some very cute kids. Our theme was “Into the Kelp Garden.” We received a second-place award in the medium size float category. It was a fun way to promote the Noyo Center’s Help the Kelp program.

The Winning Float

Linda Francis, Wendi Felson, Teresa Skarr and Donna Worster working on bull kelp and signs.

Alix Phillips organized it all!

Alix Phillips and Donna Kimball hanging signs

Paul Bunyan Parade - continued

Rose Meuschke, Linda Francis and Donna Kimball making waves.

Wendi Felson working on platforms for the orcas.

Peggy Martin preparing the sea bird.

Will Roberts putting on final touches.

Our very own sunflower sea star.

Twin purple urchins.

Movie Review: The Delicacy

By Dobie Dolphin

This documentary explores the world of sea urchins from harvest to plate, told mostly by sea urchin divers and crew members, but also marine biologists and chefs. There's captivatingly beautiful underwater footage. A must see for those interested in the upcoming Noyo Center urchin aquaculture project. It is available for streaming with Amazon Prime or at SommTV, which offers a free 3-day trial **HERE.**

Watch the **TRAILER**

Feathers and Flukes!

The Mendocino Coast Audubon Society and the Noyo Center for Marine Science are hosting an offshore marine life tour on Sunday, October 22 from 1-5 PM aboard the *Kraken.* We'll be looking for the many pelagic birds and whales that come here to feed in one of the world's most productive marine environments. Recent trips have encountered thousands of Shearwaters and dozens of Humpback Whales, as well as Dall's Porpoise and Northern Fur-seals. Many other animals are possible, including Mola-mola (Ocean Sunfish), Blue Shark, and a wide variety of seabirds.

There will be experts on board to help spot and identify the birds and mammals we hope to encounter. Join us for a memorable afternoon cruise to the fantastic offshore world!

The price for the trip is $120 per person. You must reserve your place by contacting the Mendocino Coast Audubon Society via email at mendocinoaudubon@gmail.com.

Did You Know?

By Linda Francis

Traditional Individual Retirement Account (IRA) contributions are made before the income was taxed. Thus, taxation occurs when the money is withdrawn, unlike a Roth IRA where taxes are paid before the contribution is made and thus the withdrawal is tax free.

Why is this important to Pinniped Press readers? Because any IRA withdrawal, (including the required minimum withdrawal starting at age 72 ½,) made directly to a charity of your choice occurs tax free! The donation must be made directly from your IRA to the charity, never passing through your hands.

For example, if you are in a 15% tax bracket and make a $10,000 donation to Noyo Center for Marine Science, the total $10,000 would go to Noyo Center. If you take the $10,000 from your IRA for your own use you would pay $1500 for taxes and only pocket $8500. Thus your $10,000 donation would only "cost" you $8500.

Every brokerage is a bit different. Give your tax or financial person a call and check it out. It's easy to do and benefits both you and Noyo or the charity of your choice!

Calendar

- Saturday, September 30 at Noon. Noyo Center and Sea Otter Savvy Livestream. More information on our **WEBSITE**.
- Monday, October 2, 6 pm. Pinniped Press zoom meeting. https://us02web.zoom.us/j/85045100225
- Saturday, October 7, 10 am. New Volunteer Orientation at the Field Station.
- Wednesday, October 11, 10 am. Docent's meeting at the Crow's Nest.
- Sunday, October 15, 2 – 5 pm. Noyo Blue Fall fundraiser, Noyo Center Marine Field Station and Noyo Harbor Inn.
- Thursday, October 19, 6 pm. Science Talk: Steve Peletz on Shark Tagging for Research and Protection. Register for the program **HERE**.
- Sunday, October 22, 1-5PM. Feathers and Flukes aboard the Kraken. See article on page 12 of PP for information.
- Thursday, October 26, 3:45 pm. Mussel collection. Meet at Enchanted trail head parking lot.
- Sunday, October 29, 3 – 5 pm. All volunteer party/meeting at the FS. Potluck. Halloween costumes are encouraged!

The Pinniped Press team: Dobie Dolphin, Peggy Martin, Wendi Felson, Linda Francis, Nancy Lloyd, Toni Rizzo, and Donna Worster, 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