



Monterey Bay National Marine Sanctuary Advisory Council **Diver** Newsletter August 2021

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Hello Larry Ankuda,

We have been very blessed during the pandemic as many divers were still able to get away from it all, strap on their tanks and go diving. Dive centers, classes, and travel have been hampered for sure. Though we are not out of the woods completely with COVID-19 most of us can get outside and enjoy some leisure time underwater. We sadly found out that there will not be a Monterey Shootout Photo competition this year.

Keith has been working hard on the urchin culling project at Tanker's Reef with great results very visible at the surface. Diver training classes are available at Aquarius Dive Shop, Bamboo Reef, Diver Dan's and Aquatutus with more instructors coming online soon. So far divers have culled 124k urchins on the underwater cable grid which is monitored by California Department of Fish and Wildlife, Reef Check California and a science team led by Dr. Steve Lonhart from NOAA. Results are looking promising with lots of urchins culled, a steady stream of diver culling data, and a growing kelp forest occupied by sea otters. Divers that want to participate can go to g2kr.com to find out how to join in the fun.

Our Sanctuary Superintendent Paul Michel of many years moved up to the regional office and the hunt is on for our next Monterey Bay National Marine Superintendent. Stay tuned!

The information and opinions of this article are that of Brian Nelson and Keith Rootsart of the Sanctuary Advisory Council and do not reflect the views of Monterey Bay National Marine Sanctuary

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Safe Diving,
Brian and Keith

Monterey Bay National Marine Sanctuary Foundation

Monterey Bay National Marine Sanctuary Foundation is the local non-profit partner for NOAA's Monterey Bay National Marine Sanctuary and its chief advocate. Ginaia Kelly is the executive director and along with the Board is the much of the inspiration and energy that makes this foundation highly effective. Before joining Monterey Bay National Marine Sanctuary Foundation, Kelly served as the Board Chairperson for Save Our Shores, as well as the Interim Executive Director of Save Our Shores and Save the Waves Foundation. She led the Santa Cruz County Chapter of the American Red Cross and was the Director of Workforce Development Services, Santa Cruz County, as well as served as a consultant to several marine conservation nonprofit start-ups. Kelly holds a law degree and worked as an attorney in Santa Cruz for many years before making the jump to full-time non-profit management.



Please Join Us on September 19th

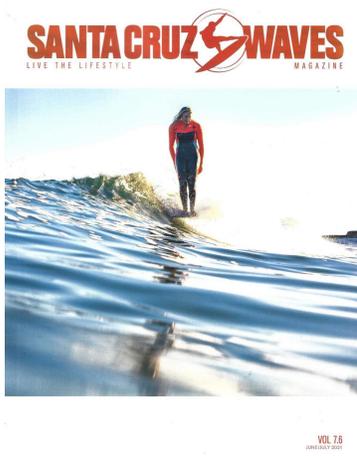
Join Monterey Bay National Marine Sanctuary Foundation as we celebrate our *2021 Sanctuary Sea Stars* on Sunday, September 19th at 10:00 am. This year, the foundation will host the *Sanctuary Sea Stars Brunch*, in person, overlooking the beautiful sanctuary at the Monterey Plaza Hotel on Cannery Row. This exciting and engaging event will feature a delicious brunch, mimosas, live music, award presentations, informative program and live auction. Our esteemed foundation board members will present awards to people and organizations who have contributed significantly to the sanctuary through education, conservation, research, and business, culminating with Foundation Co-Chairperson Secretary Leon Panetta presenting the "Panetta Sea Star" award.



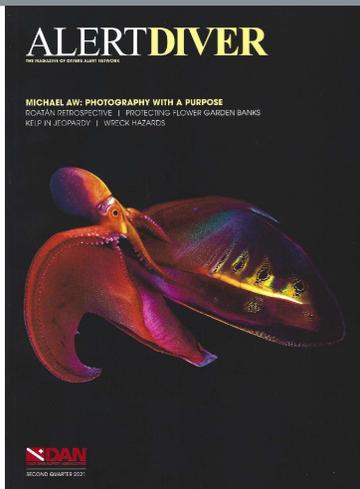
Hammers Out

Aquarius Dive Shop instructors Brian Bennett and Will Mariano train students to safely cull urchins at Tanker's Reef. About 60 divers are certified and are reporting data to marine resource managers to determine if divers culling urchins with hammers is an effective tool to combat kelp deforestation.

The project has made [headlines](#) in local and international publications:



Big wave rider Tyler Fox tells a personal perspective story about kelp loss and culling urchins.



International quarterly magazine tells the story of Kelp Restoration in Monterey and Tasmania.



Our third story in the local Monterey County Weekly, now in little red boxes everywhere.

NOAA Designates New National Marine Sanctuary in Wisconsin's Lake Michigan

NOAA recently announced the designation of a 962-square-mile area of Wisconsin's Lake Michigan as a national marine sanctuary. The new sanctuary will safeguard shipwrecks that played a critical role in the nation's early history. Sanctuaries are protected waters that include important habitats, species and, in cases like this one, archeological sites.

"Preserving this region furthers the Biden-Harris Administration's vision of locally-led, collaborative conservation," said Secretary of Commerce Gina M. Raimondo. "This designation is also an exciting opportunity for the public to celebrate and help protect this piece of our nation's rich maritime history."



The Wisconsin Shipwreck Coast National Marine Sanctuary will protect 36 historically significant shipwrecks and related maritime heritage resources, 21 of which are listed on the National Register of Historic Places. Well-preserved by Lake Michigan's cold freshwater, several of the known shipwrecks are essentially intact and look much like they did when they sank. The area also includes Wisconsin's two oldest known shipwrecks, and archival research suggests there may be dozens more yet to be discovered.

[Read the Entire Article](#)



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Monterey County Health Department Beach Report
Know before you go...Diving
[BEACH WATER QUALITY REPORT](#)

MBNMS Microplastics Paper Published

MBNMS Research Ecologist Chad King is a co-author for the paper entitled, "Microplastics and microfibers in surface waters of Monterey Bay National Marine Sanctuary, California" to be published in the April 2021 issue of "Marine Pollution Bulletin."

Both Chad and Andrew DeVogelaere (MBNMS Research Coordinator) conducted all of the field research in 2018 and 2019 by skimming the ocean surface with a large manta trawl at four locations in Monterey Bay, Sur Ridge and Davidson Seamount. Analysis of samples were performed by the main author and other co-authors. This was the first extensive sampling of MBNMS surface water for microplastics and microfibers.

Results showed that nearshore Santa Cruz had highest concentrations (3.21 particles/m³), while offshore Davidson Seamount had lowest (0.26 particles/m³), and there was a higher proportion of microfibers at offshore sites compared to nearshore sites. Polypropylene and polyethylene were the most common polymers identified. Overall, concentrations (1.32 particles/m³) were similar to other studies of surface seawater both regionally and globally.

You can view the article directly at [RESEARCH PAPER](#) This was the first extensive sampling of MBNMS surface water for microplastics and microfibers. It is crucial to determine the distribution and

density of microplastics and microfibers in our local sanctuary waters and understand the impact to the environment and human health.

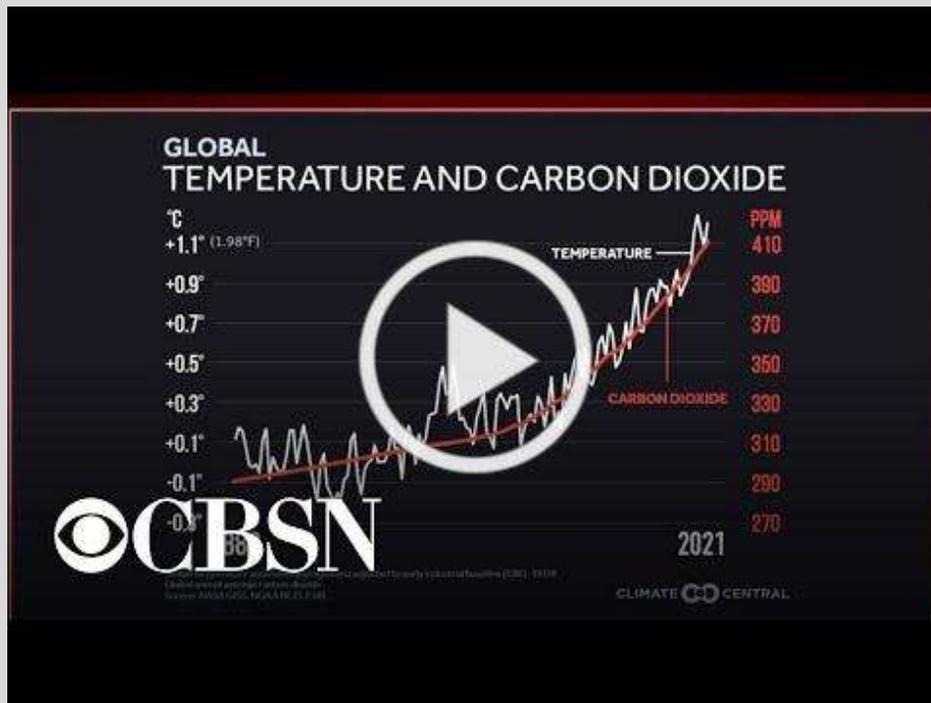


Despite Pandemic Shutdowns, Carbon Dioxide and Methane Surged in 2020

Levels of the two most important anthropogenic greenhouse gases, carbon dioxide and methane, continued their unrelenting rise in 2020 despite the economic slowdown caused by the coronavirus pandemic response, NOAA announced today. These graphs depict the mean global atmospheric burden of carbon dioxide as analyzed from measurements collected by NOAA's Global Greenhouse Gas Reference Network. Credit: NOAA Global Monitoring Laboratory.

The global surface average for carbon dioxide (CO₂), calculated from measurements collected at NOAA's remote sampling locations, was 412.5 parts per million (ppm) in 2020, rising by 2.6 ppm during the year. The global rate of increase was the fifth-highest in NOAA's 63-year record, following 1987, 1998, 2015 and 2016. The annual mean at NOAA's Mauna Loa Observatory in Hawaii was 414.4 ppm during 2020.

[For Information](#)



Sanctuary Initiates Program to Protect Historic Shipwrecks and Fishing Vessels

Stellwagen Bank NMS Deputy Superintendent Ben Haskell and colleagues from NMFS Greater Atlantic Regional Fisheries Office published a fishery bulletin requesting that commercial fishing vessels, particularly scallopers and bottom trawlers, avoid 11 historic and modern wrecks located on the northwest corner and southeast corner of Stellwagen Bank. The vessels are requested to stay 400 feet away from these wreck sites for their own safety and to protect the integrity of the shipwrecks.

This notice is part of the sanctuary's innovative pilot Shipwreck Avoidance Program dedicated to encouraging commercial and recreational fishing vessels to voluntarily avoid the disclosed locations of select shipwreck sites at high risk of damage from fishing. Most of the documented historic shipwrecks in the sanctuary are impacted to varying degrees by various types of fishing gear. For example, the sanctuary's most iconic historic shipwreck, the steamship Portland which sank in 1898, has two large trawl nets draped on its starboard and port bow (see image). The bulletin was subsequently reported on by two news outlets, the Gloucester Times and Saving Seafood, that are read widely by commercial fishing interests.

This collaboration with NMFS helps achieve NOAA's mandate to protect historic shipwrecks and other maritime heritage resources as required by the National Marine Sanctuaries Act and the National Historic Preservation Act.



Dive Clean-up Highlights Impact of Goal: Clean Seas Florida Keys

Fabien Cousteau, grandson of environmental icon Jacques-Yves Cousteau, was part of a team that removed almost 700 pounds of derelict traps, rope and other debris from the sea floor off Key Largo as part of Florida Keys National Marine Sanctuary's Goal: Clean Seas Florida Keys. The dive took place in an area known as Turtle Reef and was organized by Blue Star Operator, "The Dive Shop at The Reef." Goal: Clean Seas Florida Keys program was established in 2018 in the wake of Hurricane Irma to remove debris scattered across the sea floor.

The National Marine Sanctuary Foundation provides grants to Blue Star Dive Operators who have been properly trained and permitted in sea floor clean up. More than 50,000 pounds of debris have been removed to date. The dive was also helped by members of Ocean Rebels, a group of powerful women championing environmental change through films, advocacy, and expeditions.



"Discover Wonder: The Octopus Garden" Wins Best Short Film at the International Ocean Film Festival

The National Marine Sanctuary Foundation's film, "Discover Wonder: The Octopus Garden," was honored with the Shorts Award as the best short film at the 18th Annual International Ocean Film Festival. The 9-minute film follows a team of scientists to the depths of NOAA's Monterey Bay National Marine Sanctuary to view one of the rarest and deepest octopus brooding colonies on the planet, which was discovered by MBNMS researchers on the Ocean Exploration Trust's E/V Nautilus in 2018. The film, along with the rest of the winners and entrants, can be viewed as part of the International Ocean Film Festival from April 15 to May 2.

The film was written, directed and edited by John Dutton; produced by the National Marine Sanctuary Foundation; narrated by MBNMS Research Ecologist Chad King, and funded by the Tides Foundation. The film was also supported by NOAA's Office of National Marine Sanctuaries. This international award is a significant recognition of the quality and importance of this short film and will increase awareness of the film and the "Octopus Garden" discovery.

[Octopus Garden Link](#)



Take A Deep Dive in Monterey Bay National Marine Sanctuary

On May 5, Monterey Bay and Greater Farallones national marine sanctuaries education and research staff joined Exploring by the Seat of Your Pants (EBTSOYP) for a live virtual presentation on the 2020 E/V Nautilus expedition to students and classrooms around North America. Participants from around the globe joined via the YouTube streaming platform and six camera classrooms joined us on Stream Yard as we explored Pioneer Canyon's deep-sea corals, sponges, and fish life before taking a trip to revisit the octopus garden and the whale fall discovered near Davidson Seamount.

Students were actively engaged with polls, chat questions, and through underwater videos and images. Presenters also provided viewers with possible career opportunities for those interested in ocean conservation, science, technology, and art. This presentation was the final of three presentations with EBTSOYP that focused on 2020 E/V Nautilus expeditions in national marine sanctuaries of the West Coast, with Olympic Coast highlighted on April 21 and Channel Islands/Santa Lucia Bank on April 28th.

With the ocean being largely unexplored, opportunities to explore and share the rarely seen deep-sea habitats help to enhance Ocean Literacy, promote awareness of the sanctuary, and foster a sense of ocean conservation through outreach, education, and interpretation efforts.



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2021 DEMA is back in Las Vegas
Mark you Calendars and Make your reservations

MBNMS Coordinates with US Coast Guard on Large Vessels Waiting Offshore for Anchorage

During the past few weeks, there has been a lack of immediate anchorage in the Port of San Francisco (SF) for large container vessels and some laden oil tankers to offload in Oakland and other SF harbors causing vessels to wait for days along the coastline for an anchorage to open up, and they are stationing very close to shore and areas of sensitive habitat. This is due to longshoremen labor shortages, COVID, and other complicating factors, and is also occurring in other west coast ports.

On a given day, there are 8-12 vessels waiting offshore along the MBNMS shoreline. We have recently coordinated with USCG on three occasions, including an oil tanker waiting just offshore of Año Nuevo Island which is home to an elephant seal rookery, and two cargo vessels moving close in along the Santa Cruz and Monterey Peninsula coastlines. Each time, USCG has worked with us to communicate with the vessel skippers to request they move further offshore, west of the IMO Recommended Tracks and safely away from sensitive habitats, and each vessel has swiftly complied.

We are now working with the US Coast Guard on a Marine Safety Information Bulletin to be sent to all mariners on approach to the Port of SF for their information and awareness about safely transiting and

stationing in a national marine sanctuary and the IMO recommended tracks. The IMO recommended tracks in MBNMS were put in place to reduce the risk of a spill or collision in a national marine sanctuary, and there was an agreement for tankers to stay 50 miles offshore and use the western TSS when entering or leaving SF. There are exceptions including weather and mechanical issues, yet without extenuating circumstances USCG and MBNMS expect tankers to comply with the IMO recommended tracks.



New Day-Boat *Tegula* Arrives in Monterey

The long-awaited 22' Radon day boat *Tegula* was delivered to Monterey on 4/28, with her first sea trials in Monterey early 4/29. Outfitted with twin Honda outboard BF150s, she has great power but is amazingly quiet. With a cruising speed of 25 knots and a flat-water cruising speed of 30 knots and a range of 70 nm., she will be a tremendous asset to MBNMS and other west coast sanctuaries in CA.



The *Tegula* will serve primarily as a dive platform, but will be used for emergency response, regulatory inspections, resource protection missions and educational cruises. In addition, she will be utilized for select collaborations with California State University, Monterey Bay student research. She is outfitted with a small swim platform, extended dive ladder, side entry/exit, and a pot hauler.

MBNMS and WCRO staff are training on operations this week and next, with additional opportunities for additional staff to certify. Total capacity = 6 people (non COVID). Small boats like the *Tegula* provide

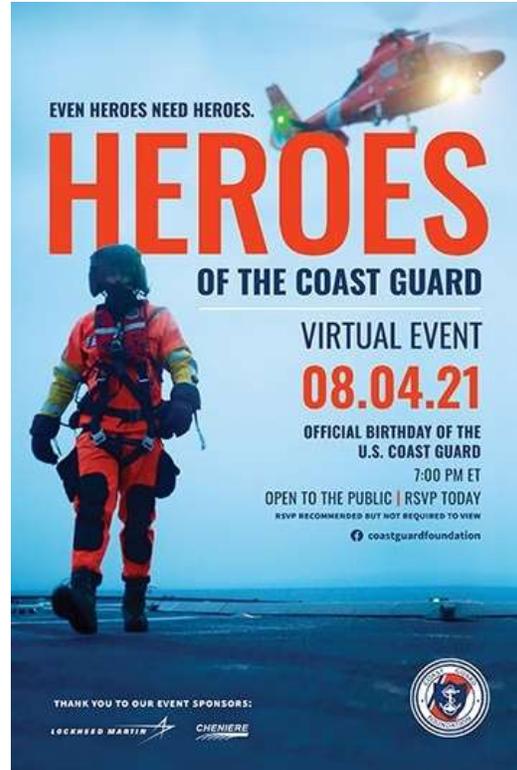
easy, on-the-water operations and will expand the ability of MBNMS staff to respond to emerging and emergency issues, enhance research dive operations and help establish a more regular on-the-water presence with our OLE partners

USCG - Heroes

Join us August 4 @ 7 PM EDT
Watch live: coastguardfoundation.org

This special online event is free and will stream live on Facebook and on the Coast Guard Foundation's website. For more information on the event click the video above. To RSVP, though not required to watch, you can do so by [clicking here](#).

[More Information](#)



The Deep Ocean

We need your help!

The Pacific Grove Hyperbaric Chamber is one of only two hyperbaric chambers in the United States that is operated by volunteers, the other being the USC Catalina Hyperbaric Chamber. It is only with the dedication of our volunteers and the generous financial support of the community that we are able to maintain our 24/7/365 availability. No matter the size, your gifts have significant impacts on the safety for the community. Your tax-

Please consider making a [donation now](#) to the Pacific Grove Hyperbaric Chamber to ensure this much needed, lifesaving resource remains open for the community.

deductible donation to the Pacific Grove Hyperbaric Chamber Fund, through the California Marine Sanctuary Foundation, will go directly towards the facility and its operations.



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Monterey Bay National Marine Sanctuary
Sanctuary Office Report



Volume 18, Number 3

A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: MARCH 24, 2021 – MAY 28, 2021

2021 Sanctuary Advisory Meeting
Schedule and Locations

August 20, 2021 - Virtual
October 15, 2021 - Virtual
December 10, 2021 - Virtual

[Dates and Agendas Link](#)



Monterey Bay
National Marine
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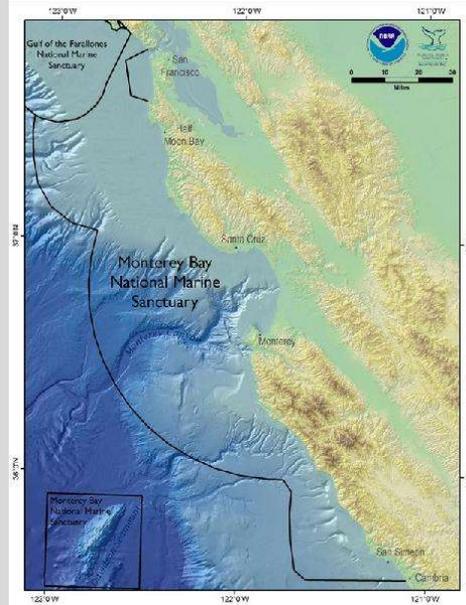
[Advisory Council Web Page](#)

[Marine Mammal Center - Moss Landing](#)

[Council Meeting Agendas](#)

[Council Meeting Minutes](#)

[Advisory Council Members](#)



Monterey Bay National Marine Sanctuary

Monterey Bay National Marine Sanctuary (MBNMS) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, MBNMS encompasses a shoreline length of 276 miles and 6,094 square miles of ocean.

It is home to one of the world's most diverse marine ecosystems, including numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment.

MBNMS was designated in 1992 for the purpose of resource protection, research, education, and public use of this national treasure. MBNMS is part of a system of 14 National Marine Sanctuaries and two marine national monuments, administered by the National Oceanic and Atmospheric Administration

[Official Website](#)

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