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# **Monterey Bay National Marine Sanctuary**

# **Sanctuary Office Report**



Volume 20, Number 4

#### ABOUT THE SANCTUARY

Designated in 1992, Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, MBNMS encompasses a shoreline of 276 miles and 6,094 square statute miles of ocean.

Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment. MBNMS was established for the purpose of resource protection, research, education and public use of this national treasure.

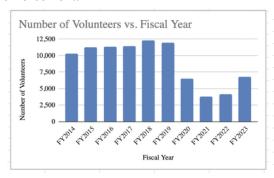
A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS REPORTING PERIOD: AUGUST 11 - OCTOBER 27, 2023

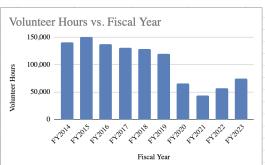
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS

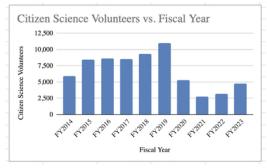
# National Marine Sanctuaries Volunteer and Citizen Scientist Numbers Continue to Rise

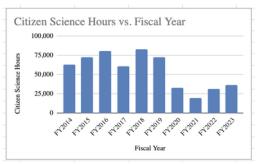
During FY23, the NOAA Office of National Marine Sanctuaries had 6,806 volunteers around the United States helping to protect and conserve America's underwater treasures to safeguard them now and for future generations. These volunteers provided 74,366 hours of service, which is the equivalent of \$2.4 million dollars of in-kind support or the value and time of approximately 41 full time employees. The number of volunteers and hours is an uptick as compared to last year, yet the National Marine Sanctuary System has been feeling the impact of a limited number of opportunities due to the pandemic. Of these volunteers, 4,753 supported citizen science efforts, such as Beach Watch, Ocean Count, and Stellwagen Sanctuary Seabird Stewards, with 36,020 hours. National marine sanctuaries are living laboratories where

volunteers can get involved to ensure these underwater treasures are protected now and for future generations. National marine sanctuary volunteers get the opportunity to learn directly from world-renowned scientists, gain experience communicating the importance of our natural world to visitors, and join a community of people with science interests. These volunteers work in close collaboration with many other groups in their local communities including boat operators, academic institutions, federal agencies, tribal agencies, NGOs, and researchers in the areas of education, outreach, research, monitoring and enforcement.









#### MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

#### **Sanctuary Advisory Council Chairs Annual Meeting**

During the last week of September, ONMS hosted an Advisory Council Chairs Summit along the shoreline of the proposed Lake Ontario National Marine Sanctuary. Advisory council representatives and advisory council coordinators from all designated and proposed sanctuaries, along with NOS and National Marine Sanctuary Foundation leadership, met to discuss and present relevant topics that impact our protected areas through council actions, membership, and community interaction

and engagement. Haven Parker and Pamela Neeb Wade represented Monterey Bay National Marine Sanctuary's Advisory Council and connected with the other chairs and coordinators from west coast national marine sanctuaries. Attendees were able to collaborate and discuss council successes and challenges while also learning about offshore wind, tribal and indigenous engagement, and sanctuary designation expansion. National marine sanctuary advisory councils are community-based advisory groups established to provide advice and recommendations to sanctuary superintendents on issues including management, science, service, and stewardship. There are more than 440 members, including alternates, representing a broad cross-section of the communities that lie adjacent to national marine sanctuaries, and the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve (Papahānaumokuākea Marine National Monument).



MBNMS AC Chair Pamela Neeb Wade (far left) and MBNMS AC Coordinator Haven Parker (second from left) met with chairs and coordinators from the four other West Coast National Marine Sanctuaries.

#### RESEARCH AND MONITORING

#### Octopus Garden Mystery Solved in Monterey Bay National Marine Sanctuary

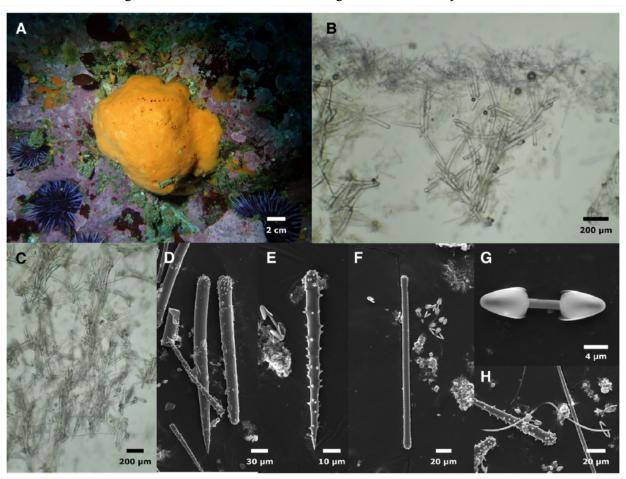
In 2018 during an expedition in Monterey Bay National Marine Sanctuary aboard the E/V *Nautilus*, sanctuary researchers discovered the Octopus Garden, the largest known aggregation of octopus on the planet. More than 6,000 octopus have been counted in a portion of the site and scientists expect there may be 20,000 or more at this location. Over the course of 14 dives with Monterey Bay Aquarium's Research Institute's remotely operated vehicle *Doc Ricketts*, the research team learned why such large numbers of pearl octopus are attracted to this location. At this nursery, warmth from deep-sea thermal springs accelerates the development of octopus eggs, which increases a hatchling octopus' odds for survival. This exciting discovery was recently published in Science Advances, and multiple news outlets have amplified the story. The Octopus Garden falls under protection within Monterey Bay National Marine Sanctuary, and this discovery suggests there may be many more of these nurseries at other seamounts around the world that may need protection.

#### **MBNMS Research Activity Panel Holds Hybrid Meeting**

On September 8th, Monterey Bay National Marine Sanctuary (MBNMS) Research Activity Panel (RAP) held a hybrid meeting; the first in-person meeting since January 2020. Agenda items and presentations included: MBARI research and institutional update; summary of May and August Advisory Council meetings; research community newsletter discussion; climate vulnerability assessment update; and Ricketts Award criteria revision. The MBNMS Research Activity Panel (RAP) is a working group of the MBNMS Advisory Council (AC). The RAP meets four times per year, and advises AC and sanctuary staff on basic and conservation science issues.

#### Newly described sponge named after Monterey Bay NMS

Introducing *Megaciella sanctuarium*, a newly described sponge named after Monterey Bay NMS! Dr. Steve Lonhart co-authored a paper with Dr. Tom Turner, a professor at UC Santa Barbara, published in the science journal Zootaxa on 19 July 2023. In 2021 while SCUBA diving off the RV *Tegula* in Carmel Bay with Lonhart, Dr. Turner collected 29 different sponge samples from multiple sites, and in this paper he formally describes 12 new species, including the orange sponge named after the sanctuary. The 12 new species are now in the World Register of Marine Species, the authoritative source for the most current names of marine species. *Megaciella sanctuarium* Turner & Lohart, 2023 can be viewed at WoRMS at this link and is the first species named after a US "sanctuary" in the database. This discovery highlights the ongoing need to further explore and characterize the biota within the sanctuary, and is indicative of the as yet fully described diversity of sponges within the sanctuary. Collaborations with academic partners yield benefits to both, and in this case, to describing resources that were right under our noses but had been neglected scientifically.



**FIGURE 12.** Megaciella sanctuarium. A: field photo. B—C: cross sections showing choanosomal skeleton, with ectosomal skeleton visible in B. D: Large acanthostyle and acanthostrongyle. E. small acanthostyle. F: ectosomal strongyle. G: chela. H: Toxa. All images of holotype.

#### Scientists solve mystery of why thousands of octopus migrate to deep-sea thermal springs

Three Monterey Bay National Marine Sanctuary staff are co-authors in a new study published on August 23 in <u>Science Advances</u>. This work confirms that deep-sea octopus migrate to the Octopus Garden to mate and nest. The Octopus Garden, located near Davidson Seamount about 80 miles from Monterey, CA, is one of a handful of known deep-sea octopus nurseries. At this nursery, warmth from deep-sea thermal springs accelerates the development of octopus eggs. Scientists believe the shorter brooding period increases a hatchling octopus' odds for survival. The Octopus Garden was discovered in 2018 during a MBNMS-led expedition aboard the E/V *Nautilus*, and is the largest known aggregation of octopus on the

planet. Researchers have counted more than 6,000 octopus in a portion of the site and expect there may be 20,000 or more at this nursery. Over the course of 14 dives with MBARI's remotely operated vehicle (ROV) *Doc Ricketts*, the research team learned why such large numbers of pearl octopus are attracted to this location. The presence of adult male and female octopus, developing eggs, and octopus hatchlings indicated that the site is used exclusively for reproduction. These octopus gather at this site solely to mate and nest. Research partners include MBARI, Moss Landing Marine Laboratories, the University of Alaska Fairbanks, the University of New Hampshire, and the Field Museum. This amazing discovery has generated incredible amounts of press since 2018, including being featured in a "BBC Live" broadcast in 2019 when the submersible Alvin dove to the site. There have also been dozens of news articles, podcasts, and video stories about the Octopus Garden. Science Advances is a major scientific journal and a significant achievement. News of this release has appeared in the New York Times, CNN, Washington Post, and many other news outlets. The Octopus Garden is now confirmed to be a special reproduction site, and already falls under protection within Monterey Bay National Marine Sanctuary, but two distinct sites at Davidson Seamount suggest there may be many more of these nurseries at other seamounts around the world that may need protection from deep-sea commercial activities.





#### Twenty-two years of monitoring bank erosion at Elkhorn Slough National Estuarine Research Reserve

This fall marks 22 years since Elkhorn Slough National Estuarine Research Reserve (ESNERR) and Monterey Bay National Marine Sanctuary (MBNMS) scientists have been monitoring bank erosion at Elkhorn Slough. The purpose of this bank erosion monitoring program is to track erosion rates of banks along the main channel and at various sites on the Reserve, as a component of overall habitat change analysis shedding light on tidal scour. Bank erosion and vegetation retreat continue to occur throughout Slough, at a rate of around 30 cm/year. Erosion rates can be correlated to other measured variables, such as cliff height or crab hole density. In addition, biological monitoring detects new invasions, potentially early enough to attempt eradication, and to track changes in distribution and abundance of a set of conspicuous existing invaders. Monitoring is performed on foot and by boat during the fall season on a bi-annual schedule. Future bank erosion monitoring activities may be replaced by remote sensing. This long-term monitoring program was formalized in fall 2001 to be carried out in partnership between ESNERR and MBNMS staff; based on research initiated by graduate students in the 1990s. This data set is used to assess bank loss and provides information to ESNERR staff relative to their Tidal Wetland Restoration Program. These long-term monitoring data have been used to detect crises and stimulate management intervention, to identify local vs. regional patterns, to serve as baselines for restoration projects, and to correlate trends to weather patterns or human actions.

#### The Kelp Forest Challenge is published

A new <u>paper</u> just published in the *Journal of Applied Phycology* outlines a collaborative global movement to protect and restore 4 million hectares of kelp forests. Kelp forests are essential for healthy oceans, coastal communities, fisheries,

economies, and marine biodiversity. Kelp forests and their benefits are connected to over 740 million people who live near a kelp forest, and their economic potential is valued at least \$500 billion

Annually. Unfortunately, kelp forest conservation has lagged behind conservation efforts in other environments. *The Kelp Forest Challenge* aims to address this disparity and accelerate investment and action for kelp forest ecosystems by promoting the restoration and protection of 4 million hectares of kelp forests, globally, by 2040. Co-authored by 80 international scientists, including Dr. Steve Lonhart, this paper is the result of several meetings held over a year ago to generate an initiative akin to the 30 by 30 movement, and wes led by Dr. Aaron Eger of the Kelp Forest Alliance. *The Kelp Forest Challenge* roadmap is a detailed strategy for how businesses, governments, communities, universities, content creators, and anyone else with an interest can help address kelp conservation and restoration.

#### RESOURCE PROTECTION

#### Two MBNMS vessel incidents in one week

On the evening of 08/25/2023 a 32ft fishing vessel grounded at Zmudowski state beach, just south of the Pajaro river. The vessel contained 50 gallons of diesel fuel as well as engine oil. On board were long lines, rope and other potentially harmful marine debris. Sanctuary staff responded on 08/26/2023. The owner took responsibility and hired Tow Boat U.S to tow the vessel off the beach. After several hours of tow effort, the vessel was turned around and pulled back into the ocean. However, due to a substantial amount of water in the fish holds and the engine compartment the vessel eventually flipped. Tow boat U.S was able to tow the vessel upside down into Moss Landing harbor where it was eventually hoisted out of the water. Miraculously, very little debris escaped the vessel and the few floating pieces that escaped were recovered by the

owner. Multiple beach surveys in the days following, by both sanctuary staff and the owner, did not turn up any more debris. No fuel release occurred. The ER team is also working on an incident where USCG removed 2 people from a 53' yacht off the Big Sur coast due to severe weather. Three overflights found no sign of the vessel or any pollution/debris field. Approximately 14 vessel Incidents occur annually in MBNMS, and we are lucky to have good local response partners such as Tow Boat US to help with quick responses such as this surf tow rescue. The response prevented the vessel from wrecking on the beach and discharging pollution and marine debris along the sanctuary coastline.



#### Net Retrieved from Hopkins Marine Station next to Pacific harbor seal colony

A large, blue net was spotted by Bay Net docents along the recreational trail and next to the Hopkin's harbor seal colony. MBNMS coordinated entry into the marine station to collect the net, as it posed an entanglement threat to wildlife. Since the net was draped over a rocky outcropping, we elicited the help of two CA State Parks lifeguards to help safely retrieve the heavy plastic net. Lifeguards Nate and Quinn were happy to assist, and everyone was thankful to have the plastic netting removed from the sanctuary. Plastic debris such as netting can cause life threatening entanglements to wildlife such as seals, sea lions, birds and turtles. Good partnerships, such as this example with Bay Net docents, the local marine station and State Parks, help to reduce marine debris threats in the national marine sanctuary.

#### Major Milestone Achieved in ONMS Deep-sea Coral Research and Restoration

On September 11, 2023, the Pacific Fisheries Management Council (Council) voted to move forward with scoping protections, i.e. fishing regulations, in three deep sea coral research and restoration areas in Monterey Bay National Marine Sanctuary, which include Sur Ridge, Año Nuevo, and Ascension Canyon. The vote was supported by the Groundfish

Advisory Panel and other advisory bodies. The protections are needed to enable ONMS and other organizations to conduct deep-sea coral research and restoration in areas that would be protected from intentional impacts to the seafloor from bottom-contact fishing gear. The decision by the Council to move forward was a successful outcome for the ONMS, WCR. NMFS and Council staff worked closely with ONMS staff to provide meeting materials, including a scoping document, a pre-briefing, and a presentation for the Council. In addition, Greater Farallones NMS staff developed a publicly accessible GIS decision support tool that can be used in future stakeholder meetings. NMFS will prepare a full analysis for the March 2024 meeting, when the Council will adopt a range of alternatives and a preliminary preferred alternative regarding the establishment of protections in the three selected deep sea coral research and restoration areas. A final decision from the Council should be made in June 2024, and new fishing regulations should be in place by 2025. The establishment of protections that would allow for deep-sea coral research and restoration without intentional impacts from bottom-contact fishing gear will enable the ONMS to respond to injuries to sanctuary resources as mandated in the National Marine Sanctuaries Act, such as those that occurred from the sinking of the YFD-70 Dry Dock, and to enhance our understanding of deep-sea coral, their ecosystem functions, and their contributions to a healthy ocean.

#### **Pesticide Removal in Sediment Basins**

The California Department of Pesticide Management is supporting the development of a model that will assist growers with determining what Best Management Practices (BMPs) to employ on their farms to remove pesticides from agricultural runoff. Monterey Bay National Marine Sanctuary is assisting with monitoring two BMPs that will be included in the model, sediment basins and vegetated ditches. On 9/14/23, MBNMS and CA DPR visited and monitored one of the sediment basins that is being used in this trial. Pesticides are present at levels exceeding toxicity limits in many MBNMS rivers and streams. Growers wanting to remove these pesticides prior to runoff leaving the farm will have a tool that can help them decide what management practices to employ. This could reduce pesticide concentrations and toxicity in streams that enter MBNMS.

#### **MBNMS** participated in the Missions Day Event

On September 17, MBNMS staff Keegan, Bridget, and Karen participated in the Missions Day event sponsored by the USCG at the San Carlos beach parking lot. MBNMS brought out the *Tegula* and set up a booth to display the Seabotix ROV, educate the public about MBNMS and responsible wildlife viewing, and advertise volunteer opportunities. We interacted with over 90 participants who got to interact with the Tegula and ROV and learn about what the sanctuary is here for and what we do. Search and rescue agencies including the Navy, CALFIRE, USCG, and the Monterey County Sheriff dive team were present. The public could tour their assets which included a Navy helicopter and the USCG cutter *Hawksbill*. This was a good opportunity to educate the public and interact with our partners in emergency response.

#### MPWC buoy ROV survey mission

On 10/12/2023 MBNMS resource protection staff conducted a mission to survey the mooring assemblies of the Monterey motorized personal watercraft (MPWC) buoys. Unfortunately, due to the sea state the ROV inspection of the moorings was aborted to not risk the ROV. Despite this, the *Tegula* crew performed a visual inspection of the surface components of a subset of the Monterey buoys. Additionally, they conducted training, including a man overboard drill. MBNMS maintains the MPWC boundary buoys which mark the zones where MPWC are allowed to operate within the sanctuary. These moorings require consistent maintenance and inspection.

#### Deceased Juvenile Gray Whale at Rio Del Mar Beach

On October 2, a 15ft juvenile gray whale, which was seen alive a few days prior, died and floated into the surf zone at a busy CA State Parks beach in Aptos. The NMFS WCR stranding network coordinator had discussions with US Coast Guard on towing it out and away from the beach, yet the whale was too far inshore to get a line on it. NOAA and ONMS also have interests in understanding the possible cause of death and health of the whale. The local stranding network partners at Long Marine Lab are waiting until the whale is high and dry and they can safely collect level A data on it. As of Friday the 6<sup>th</sup>, the whale has moved to a Santa Cruz County beach, is still rolling in the surf zone, and the team has not been



able to take data. As a follow up, MBNMS plans to have a special session at their upcoming Law Enforcement Technical Advisory Committee (LETAC) in December with all agency partners including the WCR stranding network to develop a whale stranding response two pager with information on who to contact for assistance and response. NMFS declared a gray whale unusual mortality event from 2019 to 2023, and 342 strandings have occurred during this four year time period along the US West Coast. The approximately one-year old juvenile gray whale was alone and migrating out of season which raises questions about its overall health. Whale conservation is a priority for MBNMS and the ONMS West Coast Region.

# MBNMS Staff and Area Contingency Plan 3 Meeting for Vessel Grounding debrief

MBNMS Emergency Response staff met in person with Area Contingency Plan Region 3 participants from the United States Coast Guard (USCG) Incident Management Division at Sector, California Office of Oil Spill Prevention and Response (OSPR) and NOAA OLE Law Enforcement. The key topic focused on a recent vessel incident and its associated pollution threat to Monterey Bay National Marine Sanctuary. Communication issues between response agencies during this response were discussed and recommendations for improvements were made between all participants. This meeting will enable more effective and efficient multi-agency emergency responses which commonly occur for vessel sinkings and groundings. Vessel incident response is a sanctuary priority, and clear communication between emergency responders is a consistent operational challenge. By participating in meetings between major emergency response organizations, effective communication strategies can be developed and adhered too, improving response outcomes.

# Microplastic and legacy pesticides measured during full tide cycle at Moss Landing Harbor discharge to Monterey Bay

On October 18th the R/V Fulmar got underway with MBNMS WQ staff and personnel from Applied Marine Sciences to collect 9 hours of water samples that will be analyzed for PCBs and legacy pesticides, as well as samples for nutrients and microplastics to enable estimates of the flux of these contaminants between Elkhorn Slough/Moss Landing Harbor and Monterey Bay during both falling and rising tides in a single day. The purpose of the monitoring is to determine if these agriculturally dominated watersheds are the source of persistent pollutants known to exist in Monterey Bay waters, sediment and marine organisms. This will be repeated three more times in wet and dry seasons. This drainage is one of the most polluted flowing to Monterey Bay and has never been monitored for this suite of pollutants. The four monitoring events will be compared to a 20 year data set of Monterey Bay samples as well as samples from the other three large rivers draining to the Bay.



#### Marine Debris on the Shoreline of the Monterey Bay National Marine Sanctuary Report

This <u>report</u> assessing marine debris on the shoreline of MBNMS over a five year period was released on Tuesday, October 24th. The report analyzed five sets of citizen science data, harmonizing the differences to use all sets together to assess the activities contributing to marine debris, the most prevalent types of trash on the shoreline, geographic hotspots, and statistics on source and transport variables. Findings will help MBNMS strategize next steps in our fight against marine debris and our efforts to engage with partners in order to contain sources of debris before they get into the ocean.

#### EDUCATION, VOLUNTEER AND OUTREACH PROGRAMS

## **MBNMS** New Southern Boundary Sign Installed

As part of the coastal signage plan revision, new Monterey Bay National Marine Sanctuary signs were installed on the Fiscalini Ranch, part of the <u>California Coastal Trail</u>, by Cambria Community Services District. The graphic panel pictured here identifies the southern boundary of MBNMS. These signs were part of the Phase 3 design and fabrication led by Amity Wood, MBNMS Education Coordinator. Graphic panels and signage serve an essential role in public outreach and education for residents and visitors. The newly revised panels provide current information on MBNMS, marine protected areas, and stewardship.



#### Monterey Bay National Marine Sanctuary successfully reignited and conducted a season of Team OCEAN.

Team OCEAN (on-the-water kayak) staff and volunteers in the field interpret the sanctuary ecosystem to the public and document, prevent and report wildlife disturbances, as well as instill an appreciation for the sanctuary ecosystem to stakeholders recreating in our waters. All data collected by these citizen scientists are entered into a Google Form database and compiled. Team OCEAN interacted with boaters and collected wildlife disturbance data at two locations, Elkhorn Slough, Moss Landing and Cannery Row, Monterey, CA from Memorial Day to Labor Day. Sixteen Team OCEAN staff and volunteers were deployed on-the-water in kayaks, making contact with boaters, kayakers, SCUBA divers, SUP'ers and hydrofoil bikes. **Some Stats:** Total Shift Hours: 448; Total # public contacts: 4092; Talked about MPAs or sanctuary: 373; # of MPA Violations prevented or observed: 45. A volunteer training in April and May preceded the summer season and included a variety of topics: Sanctuary 101,



sanctuary regulations, Seasons in the Sanctuary, Fishing and fishing communities, Otters, Seals and Sea lion and bird natural history, how to handle wildlife disturbances and most importantly interpretation training and how to interact with the public. Once new volunteers were mentored by veteran volunteers, they were 'fledged' and deployed to the different sites in Monterey sanctuary. In some cases. Team OCEAN volunteers were able to prevent disturbances with their interactions with recreational users. Monterey Bay National Marine Sanctuary's volunteer programs like Team OCEAN are foundational and critical to sanctuaries carrying out their resource protection mission. Citizen science programs like Team OCEAN not only educate those recreating in our sanctuaries, but they document wildlife disturbances real time.

#### Monterey Bay National Marine Sanctuary Staff Host a Webinar on Kelp

On October 5th, Lisa Wooninck (Superintendent), Karen Grimmer (Resource Protection), Chad King (Research) and Lisa Uttal (Education) hosted an all MBNMS volunteer webinar to inform volunteers from both visitor centers, Bay Net, Team OCEAN and water quality programs about iconic kelp. The webinar included an overview of the current status of kelp in MBNMS, Tanker Reef urchin culling project and an introduction to the web tool KelpWatch.org, which plots kelp coverage both spatially and temporally. The focus of this webinar was to provide the science to the MBNMS Volunteers, so they themselves can be better informed about the status of kelp in MBNMS and are able to communicate to the public about one of our top priorities. We presented to the volunteers a science based view of kelp, its current status and most importantly, we emphasized that kelp forests are patchily distributed over space and time in the sanctuary. We reviewed some of the



pressures (marine heatwaves, urchin barrens and seastar wasting disease) that have led to a general decline of kelp forests, particularly off the Sonoma and Mendocino counties and the Monterey Peninsula. Other stands of kelp in the sanctuary- dominant species *Macrocystis* (giant kelp) and *Nereocystis* (bull kelp), are showing signs of natural recovery and have had relatively good growth year over year. This variation in natural recovery offers research opportunities to better understand where human intervention (restoration efforts) are warranted. One of the key priorities for Monterey Bay National Marine Sanctuary in the next few years is iconic kelp and we are approaching this topic through science based ecosystem protection across our research, education and resource protection teams.

# Michele Roest receives John Laird Lifetime Achievement Award for Environmental Stewardship from Central Coast State Parks Association

"It is my great honor to present this year's John Laird Lifetime Achievement Award to Michele Roest," stated State Senator John Laird. "Michele has been a beloved and long-standing community leader in environmental and education issues. Her service to the community and the natural world has been demonstrated in so many arenas, from teaching at Cal Poly and Cuesta College, to working for the National Oceanic and Atmospheric Administration and Monterey Bay National Marine Sanctuary as well as undertaking scientific research and chairing the internationally acclaimed Morro Bay Winter Bird Festival." Recognition of ONMS staff as community leaders strengthens partnerships and expands public awareness to new audiences.



#### Monterey Bay Area Sanctuary Volunteer Enrichment at Elkhorn Slough Reserve, October 22nd

Volunteers and staff from Bay Net, Team Ocean, Water Quality Monitoring, and the Sanctuary Exploration Center gathered for an end-of-season celebration at the mid-point of the Monterey Bay, Elkhorn Slough. Approximately 40 participants



explored the trails with CDFW staff to learn about ecology and restoration in the Elkhorn Slough habitats, and then shared highlights from respective volunteer programs from this past year. Volunteers within these programs play a vital role in expanding our presence in the sanctuary, spreading awareness of conservation, reducing marine mammal disturbances, and monitoring the health of our waterways. Enriching their knowledge of local ecosystems and celebrating achievements helps build volunteer retention.

#### Coastal Discovery Center Report: August 11 through October 27, 2023

Total Visitors: 2,607 In Person Field Trips: 5 Virtual Field Trips: 5

The Coastal Discovery Center now has 15 docents and 7 docents-in-training. On Saturday September 24th, 11 docents embarked on a 3 hour whale watching trip out of Morro Bay to see migrating humpbacks as a fall enrichment activity. The Coastal Discovery Center's goals are to: encourage protection of the Sanctuary's resources through education and outreach, to increase public awareness and appreciation of our coastal environment, to allow visitors to learn about and understand the unique characteristics of the Monterey Bay National Marine Sanctuary, to create a sense of personal stewardship for California's coastal ecosystems, and to contribute knowledge and information shared among regional marine education research and resource protection.



# Sanctuary Exploration Center Report: August 11 through October 27, 2023

Total Visitors: 8,325 In Person Field Trips: 8 Facilities Rentals: 7

The Sanctuary Exploration Center (SEC) focused on preparing for the school program to begin. The team fixed issues with the front door locking mechanisms, booked window washing and new carpet tiles, and ordered parts for fixing the cameras on the ROV in our deep sea exhibit. The SEC hosted a farewell gathering for Ariana Acosta, the School Programs Specialist, and welcomed a new Education Specialist, Delanie Lavacude-Klenck to our team. The First Friday art reception featured local block printing artist Tina Fuller Somers. The SEC joined the "Avenues to Action" climate change event hosted by the Santa Cruz Climate Action Coalition, and spoke to approximately 45 local volunteers about opportunities to support conservation within MBNMS. The SEC co-hosted the Coastal Cleanup Day event at Main Beach, which saw 80 volunteers remove 36 pounds of trash from the beach and welcomed a new Education Specialist, Emely Cortez to the team! The Sanctuary Exploration Center's goals are: to educate visitors about the sanctuary's unique and fascinating coastal and marine environment, to foster a more personal connection with the sanctuary and the ocean's relevance in people's daily lives and to encourage stewardship of the sanctuary and a better understanding of how to responsibly enjoy and protect the ocean.

#### News Coverage

#### Monterey Bay National Marine Sanctuary: News related to conservation, new discoveries ...

**NewsBreak Original-**Off the coast of central California lies a marine protected area known as the Monterey Bay National Marine Sanctuary (MBNMS).

#### Close-up video of dolphins may be evidence of a federal violation, NOAA says - KSBW

**KSBW...** was violated, according to the Monterey Bay National Marine Sanctuary, a subdivision of the National Ocean Atmospheric Administration.

#### New SLO County mural shows Chumash tribal history — and proposed marine sanctuary

**San Luis Obispo Tribune**-A dramatic new mural depicting Chumash tribal history and the proposed Chumash Heritage National Marine Sanctuary is brightening up a corner of ...

## Finding sanctuary | What's up with kelp forests in Monterey National Marine ... - Santa Cruz Sentinel

**Santa Cruz Sentinel**-Indeed, kelp forests are truly iconic to Monterey Bay National Marine Sanctuary and are prominently featured at the Monterey Bay Aquarium's Giant ...

#### **Deep-sea Hot Springs May Be Vital to Nesting Octopus**

American Association for the Advancement of Science (AAAS)

In 2018, researchers from NOAA's Monterey Bay National Marine Sanctuary and Nautilus Live first observed thousands of pearl octopus nesting on the ...

## Rachel Kippen, Our Ocean Backyard | Reducing jet ski disturbance in Monterey Bay ...

**Santa Cruz Sentinel...** disturbance is a key priority for Karen Grimmer, Resource Protection Coordinator for NOAA's Monterey Bay National Marine Sanctuary (MBNMS).

#### Finding sanctuary | New sanctuaries under consideration - Santa Cruz Sentinel

**Santa Cruz Sentinel**-Through the National Marine Sanctuaries Act, NOAA can identify, designate and protect areas of the marine and Great Lakes environment that have ...

## Coastal Commission approves harbor dredging project | News | pacificatribune.com

**Pacifica Tribune...** National Marine Sanctuary. The district has also partnered with San Mateo County to get an encroachment permit from Caltrans to have a staging ...

#### Sportsman's report: Dolphin and whales & sturgeons mill reporting - The Community Voice

**The Community Voice**-Discover a variety of whale species in the Monterey Bay National Marine Sanctuary on this cruise from Monterey. Uncover one of the world's best ...

## Herald Heroes: Senior citizen cleans up her coastal community to secure sanctuary

**Monterey Herald-**Snouty has appeared at Whalefest Monterey, at the Marine Mammal Center, and currently resides at The Marine Sanctuary's Exploration Center in Santa ...

#### Sea otters retain endangered species status - KSBW

**KSBW...** National Marine Sanctuary." Advertisement. He also cites warmer ocean waters as an issue which are causing problems to the sea otters' environment

# MBNMS STAFF

Lisa Wooninck – Superintendent Dawn Hayes – Deputy Superintendent

#### Research

Andrew DeVogelaere – Research Coordinator Jennifer Brown – SIMoN Ecosystem Scientist Erica Burton – Research Ecologist Chad King – Research Ecologist Steve Lonhart – Research Ecologist

#### Education

Amity Wood – Education & Outreach Coordinator
Ariana Acosta – Bilingual Education Specialist
Ariel Hunter – SEC Manager
Lisa Uttal – Education Specialist
Michele Roest – Program Coordinator & Community
Liaison

Rebecca Gustafson – Volunteer Coordinator (SEC) Richard Stanley – Sr. Maintenance Specialist (SEC) Sophia Barwegen – Program Specialist (CDC) Steven Vargas - Maintenance Specialist (SEC) Christina Funck – SEC Gift & Bookstore Manager

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Karen Grimmer – Resource Protection Coordinator Sophie De Beukelaer – GIS Analyst & Permit Coordinator Bridget Hoover – Water Quality Protection Program Coordinator

Jazmine Mejia-Muños – Ag. Water Quality Coord Pamela Krone – Water Quality Monitoring Coordinator Keegan Angerer – Resource Protection Specialist

#### **Program Operations**

Andrew White – Network Manager and Webmaster Haven Parker – Program Support Specialist/ AC Coord

# Get involved and stay informed!

To learn how to get involved in the Sanctuary visit: https://montereybay.noaa.gov/getinvolved/welcome.html

Sign up for the MBNMS listserv to receive email notices about upcoming Sanctuary events, and public meetings of the Sanctuary Advisory Council and Working Groups: <a href="https://montereybav.noaa.gov/intro/elists.html">https://montereybav.noaa.gov/intro/elists.html</a>

Web Site (https://montereybay.noaa.gov)

\* \* Check out these MBNMS Advisory Council webpage links! \* \*

Advisory Council Meeting Agendas & Minutes <a href="https://montereybay.noaa.gov/sac/sacma.html">https://montereybay.noaa.gov/sac/sacma.html</a>

Advisory Council User Group Newsletters (seats and working groups/sub-committees)

https://montereybay.noaa.gov/sac/advisory-nwsltr.html

Please take a few moments to peruse the site. Your feedback is greatly appreciated.

Comments and suggestions can be sent to andrew.white@noaa.gov.

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