

2014 Accomplishments



Brittany Cooper/MBNMS

Volunteer of the Year

For six years, John Menke has tirelessly donated more than 1,000 hours sharing his passion and expertise

with the Coastal Discovery Center in San Simeon. A retired marine ecology professor, John is constantly suggesting new events, activities, lesson plans and projects to improve the center. A strong leader, John educates school groups, organizes and runs outreach events, conducts and leads citizen science monitoring programs, maintains partnerships with local marine organizations and helps train other docents. John inspires everyone he comes into contact with — visitors, staff, partners and other volunteers, and his fluency in Spanish allows him to connect with people of diverse backgrounds. John's unwavering loyalty to the center and sanctuary are why we are recognizing him as our Volunteer of the Year.

Sanctuary Staff Win Awards

We are proud of two staff who were recognized last year for their outstanding work. The National Ocean Service awarded Education Specialist Chelsea Prindle "Team Member of the Year" for her exceptional efforts coordinating programs for volunteers, teachers, students and the public. Chelsea also received an award from the National Association of Black SCUBA divers in recognition and appreciation of her support and contributions to their 2014 Youth Education Summit. Scientist Dr. Steve Lonhart was honored as "Naturalist of the Year" by the Western Society of Naturalists for his work in mentoring students and inspiring them to appreciate and protect environment. Congratulations Chelsea and Steve!

Studying a Lost Shipping Container

Scientists from the sanctuary and Monterey Bay Aquarium Research Institute returned to study the effects of a lost shipping container resting on the seafloor at 4,200 feet.

Scientists first documented the container using a remotely operated vehicle in March 2011, finding it had altered sea life in an area 20 times its footprint. Scientists further studied the container's impacts to marine life, toxicity of its paint, and are also testing the effectiveness of new environmentally friendly paint. Influenced by these studies, the U.S. Coast Guard is enacting a law to standardize the lashing down of containers.

First Exploration of Undersea Ridge

Offshore from Big Sur, the summit of Sur Ridge towers 1,300 feet above its base at 4,400 feet. The top of the rocky outcropping lies 2,600 feet below the surface. At eight miles long and two wide, it's roughly the size of Manhattan. Because of its unique geology, scientists from the sanctuary and Monterey Bay Aquarium Research Institute suspected it would be biologically special too — confirming this when they explored the ridge for the first time using a remotely operated vehicle. Expecting to see spectacular corals at the ridge's top, the team was surprised to find them at its base too. Sponges were abundant, and they also discovered a chemosynthetic community of clams. The



View a *Your Sanctuary* video about Sur Ridge at <https://www.youtube.com/watch?v=wrM95bt-IHk>.

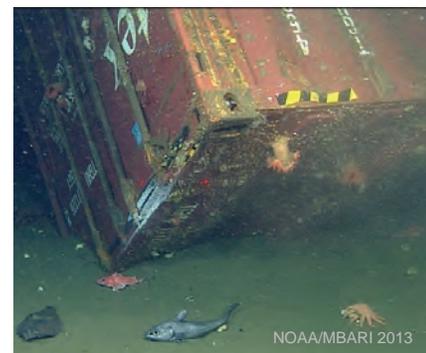
ridge has been declared a Sanctuary Ecologically Significant Area and will be the focus of future studies.

New Science Reports

Sanctuary scientists published four technical reports last year. Two reports discuss the phenomena and ecological effects of lost shipping containers. Another profiles the hook and line fishery for California Halibut in Monterey Bay and discusses what we have learned from fishermen through collaborative research efforts. The final publication reviews management strategies to help protect seamounts. The reports can be found at <http://montereybay.noaa.gov/research/techreports/techreps.html>

Sea Stars Wasting Away

In 2013, sea stars along the Pacific coast began dying in great numbers from a mysterious wasting syndrome, possibly caused by a pathogen such as a virus. Similar die-offs have occurred before, but never at this magnitude and range. The disease continues to affect a variety of species, rapidly killing stars within days and devastating their populations. Sanctuary scientists are assisting U.C. Santa Cruz scientists who are documenting the disease and will continue to monitor sea star populations and the biological community impacted by the loss of stars.



View a *Your Sanctuary* video about the container at <https://www.youtube.com/watch?v=wrM95bt-IHk>.

A Busy Year for Sanctuary Divers

Not only did our dive team monitor sea star wasting disease, they documented the spread and ecological impact of an introduced species of bryozoan that has invaded Monterey Harbor. Divers also helped UCSC scientists with underwater surveys to understand the effectiveness of state marine protected areas. The dive team continued to monitor a subtidal area at and adjacent to a landslide at Alder Creek, which closed Highway in Big Sur for four months in 2011. Sanctuary divers also searched and were able to locate a downed seaplane that crashed off the Big Sur coast last year.

Unmanned Aircraft System Tested

Staff tested the capabilities of using a small unmanned aircraft system (UAS) for surveying marine life in Monterey Bay. Although primary targets of leatherback turtles and jellies were not found, the UAS made successful flights and detected humpback whales, seabirds and several ocean sunfish. Operations were conducted outside of overflight-restricted zones and since the UAS is completely silent, there was no evidence of disturbance to animals. The UAS could be a useful way to survey marine life, characterize sporadic events like harmful algal blooms, or find injured or entangled marine mammals.

Whale Trail Sites Added to Sanctuary

We helped expand The Whale Trail to California by adding new locations. The trail started in Washington and is a network of shore-based sites where the public can view and learn about whales and other marine mammals. We identified new sites in Santa Cruz and at Point Lobos State Reserve and produced interpretive signs for them.



Recently San Simeon and Cambria were added to the trail and signs will be installed there too. We also held events in Monterey and Santa Cruz to educate the public about coastal whale watching and orcas in particular. Visit whaletrail.org for more information.

Events Galore!

The year was chock full of amazing events designed to promote sanctuary awareness and stewardship. Annual events included the Sanctuary Currents Symposium at C.S.U. Monterey Bay featuring the theme of marine debris, Beneath the Waves Film Festival held at the Sanctuary Exploration Center, as well as a free ocean film series at Hearst Castle Theater. Other annual activities included a lecture series held in Cambria, our popular water quality events including Snapshot Day and First Flush as well as Sanctuary Classic — a recreational fishing photo contest. Special events included a water quality symposium, sanctuary celebration on the Santa Cruz Wharf and Monterey Beach Sportsfest, celebrating a healthy ocean and healthy people.

National Association of Black SCUBA Divers Attend Education Summit

Education staff developed, coordinated and led a weeklong youth education summit for 25 students from around the country who are members of the National Association of Black SCUBA divers. Working with other local marine organizations, students were immersed in hands-on ocean science, technology and conservation activities along the sanctuary's shores with a special focus on environmental monitoring and citizen science, including tide pool, sandy beach, water quality and plankton monitoring.



Liz Love/NOAA/MBNMS

Highlights from the Coastal Discovery Center

Our Coastal Discovery Center in San Simeon Bay served over 1,000 students this year with help from 25 dedicated volunteers. New efforts included offering educational programs to public libraries in Cambria, Cayucos and Paso Robles. We also partnered with San Luis Obispo's Stewardship Traveler Program to broadcast a public service announcement on best wildlife viewing practices. To top off the year, some of our dedicated volunteers participated in an exchange, visiting the Olympic Coast National Marine Sanctuary and their volunteers will visit our sanctuary this year. These trips promote the exchange of ideas, raise awareness of the sanctuary system and inspire ocean stewardship.

Sanctuary Exploration Center Continues to Draw Visitors

In 2014, 66,617 visitors came through the doors of the Sanctuary Exploration Center in Santa Cruz with 1,132 engaging in tours and 1,349 participating in events. Families come time and again to drive a remotely operated vehicle, play a virtual sea turtle game, or walk through a life-size replica kelp forest. We are incredibly grateful for the amazing support of volunteers who have donated endless hours of their time to enhance our visitors' experience. Twenty-five trained docents and gift shop volunteers joined our cadre last year. Collectively 80 volunteers committed 7,145 hours of their time (worth \$160,668) in 2014. Volunteers also participated in two new citizen science programs, monitoring marine debris and intertidal biodiversity.

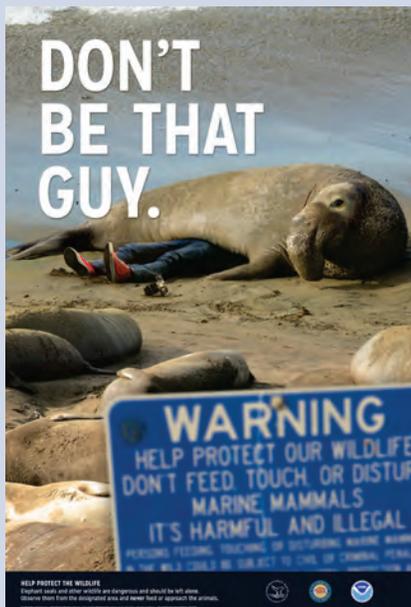


Chad King/NOAA/MBNMS



Wildlife Disturbance a Continuing Problem

Staff responded to a large number of reports of marine mammal harassment. During the summer humpback whales fed right near the shore, and boaters, kayakers and paddle boarders were getting too close to them. After numerous complaints and investigations by our enforcement officer, Sanctuary Superintendent Paul Michel issued a media statement asking the public to refrain from approaching whales too closely. We also received an increased number of reports about UAS (drones) disturbing wildlife, especially resting harbor seals. Another media advisory was released to inform the public about overflight restrictions that protect sensitive wildlife from disturbance. In addition, new signs and posters were created and installed to encourage people to keep their distance from harbor seals and elephant seals. Our favorite, created with Cal Poly San Luis Obispo students, is the wildly popular “Don’t Be That Guy.”

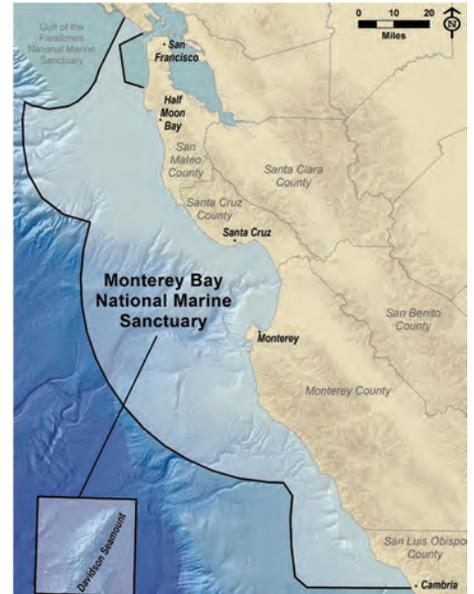


Volunteers Play Critical Role in Protecting Wildlife & So Can You!

Can you imagine being famous and constantly hounded by paparazzi? What if you didn't have a place to escape or rest in peace? That's what it's like for harbor seals, sea otters and elephant seals. Well-meaning visitors who want a close look and great photo pursue these popular animals every day. They approach them on beaches or by kayak, not realizing they are disturbing the animals, disrupting their ability to rest, care for young, groom or feed. Sanctuary volunteers to the rescue! Whether on shore or in kayaks, our volunteers teach visitors about wildlife and how to responsibly view animals without disturbing them. Realizing the importance of these programs (Bay Net and Team OCEAN), the non-profit California Marine Sanctuary Foundation created a campaign to support their funding. If you want to give wildlife a break, allow animals to be wild and not stressed, consider supporting the campaign at <http://www.californiamsf.org/pages/donate-teamoceanbaynet.html>.

New Partnerships with Recreation & Tourism Businesses

We further strengthened partnerships with recreation and tourism businesses by establishing a new Recreation and Tourism Sub-Committee, under the direction of the Sanctuary Advisory Council. The group is helping to improve sanctuary awareness, explore outreach opportunities to connect businesses to the sanctuary, and share and cross-promote activities and information. We also hosted two events for businesses in Monterey and Santa Cruz highlighting the many ways the sanctuary enhances visitor experiences in our region.



Understanding and protecting the natural and cultural resources of the Monterey Bay National Marine Sanctuary.

Promoting Sustainable Recreation & Tourism

We promoted sustainable recreation and tourism activities through Your Sanctuary TV, a public access television channel hosting sanctuary and ocean content. We produced *Central Coast Experience*, a two-part episode of *Your Sanctuary* that highlights a trip along the sanctuary's coast from Marin to Cambria, and touches on some of the popular recreation activities available along this stunning shoreline. View *Your Sanctuary: Central Coast Experience Part I* at <https://youtu.be/4qKMzvxrOkA> and *Part II* at <https://youtu.be/WStdPjGheB8>. In addition, three new 5-minute “best practices” videos were produced showing visitors appropriate ways to view wildlife in a manner safe for them and for wildlife. It features the topics of tide pooling, kayaking and general wildlife viewing.



International Summit Addresses Leatherback Sea Turtle Protection

More than 50 participants including a 14-person delegation from Indonesia, NOAA Fisheries scientists, State of California officials and representatives from Oceana and other non-profits met to discuss the protection of critically endangered leatherback turtles. The summit focused on management and conservation issues including reducing threats on nesting beaches as well as the population status of this highly endangered species. Summit outcomes included developing an agreement between the U.S., State of California and Indonesia to provide collaborative opportunities such as shared outreach tools, rapid assessment of fisheries issues, and other strategies for increased cooperation.



Scott Benson/NOAA

A New Coastal Regional Sediment Management Plan to Protect Beaches

In partnership with the U.S. Army Corps of Engineers, we began to develop a Coastal Regional Sediment Management Plan for the Santa Cruz Littoral Cell, working closely with local jurisdictions and stakeholders in the littoral cell region. The region encompasses 75 miles of coastline from Moss Landing to Pillar Point. This consensus-driven guidance and policy document presents ways to restore and maintain coastal beaches and areas deficit in sediment, reduce the proliferation of protective shoreline structures, sustain recreation and tourism and enhance public safety and access. The plan recommends

future regional and site-specific strategies for best managing and responding to sediment issues to protect coastal resources and infrastructure.

Desalination Test Slant Well Approved

To provide more water for the Monterey Peninsula region, California American Water Company (Cal-Am) proposed a regional seawater desalination plant and requested permission to construct and test a slant well and monitoring wells at a local beach. The project requires sanctuary authorization for conducting prohibited activities including discharging untreated groundwater and drilling into submerged lands. After analyzing the project's impacts by completing an Environmental Assessment and a "Finding Of No Significant Impact," we issued a letter of authorization (concurring with the Californian Coastal Commission) to allow test well construction. Cal-Am will conduct a two-year testing program to determine whether a subsurface intake system can provide water for desalination. As federal lead agency under NEPA, we have the responsibility to ensure the project has a minimum amount of impact to sanctuary resources.

Whale Alert West Coast: New Apps Protect Whales From Ship Strikes

Whale Alert is a collaborative effort by Point Blue Conservation Science and west coast sanctuaries to prevent whales from being injured or killed by vessel strikes in busy shipping lanes. The program's free downloadable apps, Whale Alert 2.0 and



Brad Damitz/NOAA/MBNMS

Spotter Pro, make it possible for just about anyone to report whale sightings. Spotter Pro is for researchers, commercial ship operators, charter fishing boat operators, whale watching naturalists and recreational and commercial fishermen, while Whale Alert 2.0 is for the general public. Both apps will be used to document whale sightings and the data will help determine if the U.S. Coast Guard should ask mariners to slow down or change course as they approach areas where whales are present.

Snap Shot Day: Fifteen Years of Water Quality Monitoring

Snapshot Day was first held in 2000 when hundreds of volunteers fanned out to collect water samples from streams flowing into the sanctuary. The goal is to get a "snapshot" of water quality while raising awareness about watershed health. Fifteen years later, the event contributes to a robust set of data that inform managers of coastal water quality conditions in sanctuary watersheds. To date, 243 different sites have been monitored in 127 waterbodies from Marin Headlands to Morro Bay. The annual number of sites range from 122 to 192. Snapshot Day averages 198 volunteers each year. From 2000-2013, Snapshot Day volunteers donated more than 13,000 hours of their time, worth \$243,084. Snapshot Day measures the water temperature, dissolved oxygen, turbidity/transparency, pH, conductivity, nitrate, orthophosphate and fecal indicator bacteria. View the multiyear report at:

<http://montereybay.noaa.gov/resourcepro/>



<http://www.fishbase.org/BRD/>

Comelia Oed

