



OLYMPIC COAST NATIONAL MARINE SANCTUARY

A Report for Sanctuary Advisory Council Members Reporting Period: MARCH 8, 2018 – MAY 4, 2018

ABOUT THE SANCTUARY

Olympic Coast National Marine Sanctuary spans 3,188 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons.

The sanctuary protects a productive upwelling zone home to numerous marine mammal and seabird species, diverse populations of kelp and intertidal algae, and thriving invertebrate communities. The sanctuary is also rich in cultural resources, with over 150 documented historical shipwrecks and the vibrant contemporary cultures of the Makah, Quileute, and Hoh Indian Tribes and the Quinault Nation.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY

NEWS AND PROGRAM UPDATES

Organized by Olympic Coast National Marine Sanctuary (OCNMS) management plan priority areas.

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TREATY TRUST RESPONSIBILITIES

Annual Intergovernmental Policy Council meeting

Representatives of the Intergovernmental Policy Council (IPC), including the Quinault Indian Nation, Hoh Tribe, Quileute Tribe, Makah Tribe, and state of Washington, met with John Armor, Office of National Marine Sanctuary Director, Carol Bernthal, Olympic Coast National Marine Sanctuary (OCNMS) Superintendent, and OCNMS staff, at La Push, Washington. The meeting focused on support for the IPC, research priorities, and the sanctuary management plan.

ONMS director meets with the Makah Tribe

Office of National Marine Sanctuary (ONMS) Director John Armor, Olympic Coast National Marine Sanctuary (OCNMS) Superintendent Carol Bernthal and OCNMS staff met with members of the Makah Tribal Council and Makah staff to discuss a number of issues related to consultation and collaboration. Makah staff provided a detailed overview of their fisheries. The OCNMS-Makah Permit Consultation Protocol, negotiated in 2015, was discussed. Tribal engagement in consultations that take place between ONMS and other federal agencies under Section 304 of the National Marine Sanctuary Act was also discussed. Sanctuary staff provided updates on a number of issues including progress on developing an Ocean Acidification Sentinel Site and the status of ocean dumping in the Makah fishing grounds

Quileute Nation celebrates 11th annual “Welcoming the Whales”



Friday March 30, 2018 was the Quileute Nation’s 11th annual “Welcoming the Whales” ceremony. In celebration of their cultural connection to the ocean, youth attending Quileute Tribal School (QTS) provided an offering to the whales as the whales migrate past these tribal lands. QTS students participated in traditional songs, dancing, and drumming led by tribal elders and council members. Quileute Tribal Nation is one of the four coastal Treaty Tribes adjacent to Olympic Coast National Marine Sanctuary and co-managers of the ocean resources.

IMPROVE OCEAN LITERACY

Big Mama makes a splash at the 31st Annual Beachcomber’s Fun Fair

Olympic Coast National Marine Sanctuary (OCNMS) education team hosted an exhibit at the 31st Annual Beachcombers Fun Fair held in Ocean Shores, Washington on March 3 and 4. The booth featured “Big Mama,” a life-size, walk-inside, inflatable humpback whale modeled after the living and swimming whale that spends her summers feeding off Olympic Coast. Over 900 people attended the weekend event and were able to tour Big Mama and learn about both the external and internal anatomy of whales. Sanctuary staff also provided an educational booth with fun activities, a dolphin skull, baleen, and information about Olympic Coast National Marine Sanctuary. The annual Fun Fair also features competitive beachcombing exhibits, seminars, informational booths, and vendors.



Big Mama completes her 2017/18 tour of Port Angeles school district

Olympic Coast National Marine Sanctuary (OCNMS) education team AmeriCorps implemented a new STEM (Science Technology Education and Math) curriculum for fifth grade students this school year, Sanctuary Splash. Focusing on humpback whales in Washington waters, Sanctuary Splash includes lessons introducing cetaceans, as well as how whales vocalize and the science of sound. This three-day



program also allows students to explore the anatomy of an inflatable life-sized, walk-inside replica of a local humpback whale, Big Mama. Students also became “Whale Scientists” testing their skills with fluke identification. Every fifth grade class, over 250 fifth grade students, in the Port Angeles school district participated in this program. Some schools included younger grades, allowing kindergarteners and first graders the opportunity to see just how big a humpback whale really is in comparison to kids.

Marine debris challenges and solutions explored at local elementary school



Education staff represented Olympic Coast National Marine Sanctuary (OCNMS) at the annual Franklin Elementary Science Night. Over 100 students and family members were able to increase their awareness of marine debris and its impacts on our beaches and marine animals, while inspiring the potential solutions available to youth, adults, and communities. Attendees were provided the opportunity to conduct a mini-beach cleanup, as well as investigate the health of the amazing albatross birds through bolus dissection. In the following week, 11 sixth graders from Port Angeles' Queen of Angels School joined OCNMS education team for a lesson exploring marine debris and its impact on seabirds such as albatross. The students were introduced to the species of albatross that are often seen in and around sanctuary waters, and then got

hands-on experience dissecting boluses and brainstorming potential stewardship activities to support a cleaner ocean habitat.

Port Angeles High School students explore ocean acidification

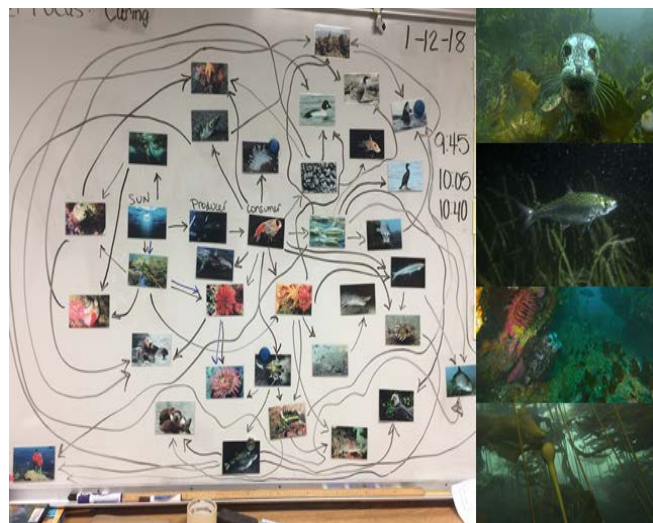
Olympic Coast National Marine Sanctuary (OCNMS) education staff supported the Environmental Science class "State of the Ocean" unit with a lesson on ocean acidification and the importance of our nation's marine protected areas. Seventeen high school juniors and seniors currently learning all about our one big ocean expanded their knowledge on ocean acidification through hands-on experiments and curriculum. As solutions to mitigate the many challenges to a healthy ocean, students learned about the Office of National Marine Sanctuaries and their local sanctuary along Olympic Coast.

Franklin Elementary kindergarten students study marine mammal species

Sixty kindergarten students from Franklin Elementary joined the Olympic Coast National Marine Sanctuary education team for a lesson about marine mammals found in Olympic Coast waters. The lesson allowed the students to discover differences between organisms that are often confused or mistaken for each other including sea otters and river otters, baleen and toothed whales, and seals and sea lions. Students also had hands-on experience exploring skulls of marine mammals.

Port Angeles students dive into Olympic Coast with new education program

The Olympic Coast National Marine Sanctuary education team AmeriCorps conducted the final Discover the Olympic Coast program in Port Angeles school district this week. Discover the Olympic Coast utilizes an underwater film by videographer Florian Graner that takes students on an exploration of our sanctuary through the eyes of a young harbor seal. The film is followed by the creation of a food web model by students, along with a lesson on energy flow through the food web and the importance of balance within that food web. All Port Angeles and Crescent elementary schools participated this year with over 260 third grade students and 22 fourth grade students.



Forks Investigators Club re-imagines plastic from trash to treasure



Olympic Coast National Marine Sanctuary AmeriCorps supported the Clallam County Waste Reduction Coordinator in hosting a workshop for STEM (Science, Technology, Engineering and Math) focused students in Forks, Washington on March 28. The workshop was a part of an existing STEM club held at the Forks Library, called the Investigator's Club. For the club, a small group of students from the Forks Intermediate School learned how plastic pollution is affecting marine wildlife by exploring albatross boluses. The students were then encouraged to turn waste, such as plastic lined milk cartons or plastic yogurt containers, into something useful and long-lasting. This workshop will tie into a re-imagination contest that will be showcased at the Forks Rain Festival, a complementary event held on April 21, following the annual coast-wide Washington Coast Cleanup (WCC). This workshop also generated enthusiasm for the first annual Port Angeles REthink! Festival held on May 12, which will focus on ways that people can reduce, reuse, refuse, redesign, recycle, and ultimately rethink their use of plastics.

17th Annual Student Congress looks at Chehalis watershed health

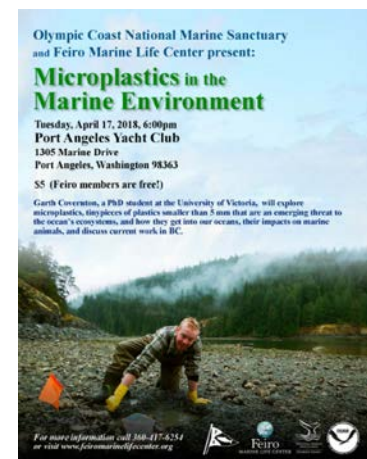
Two hundred fourth through eighth grade students that live along the Chehalis River watershed met to share and analyze water quality data, participate in hands-on workshops, and help develop plans to improve the health of their watershed. Students spent the morning listening to a keynote speaker and participating in the "State of the Chehalis River" water quality data inquiry. The afternoon had students attending specialized hands-on workshops. Olympic Coast National Marine Sanctuary education staff presented two hands-on workshops to 50 students exploring ocean acidification and potential impacts to the salmon lifecycle. The Student Congress culminated with the students sharing ways to improve water quality and recognizing the Watershed Stewards of 2017.

Next Generation Science Standards focus of informal educator workshop

Olympic Coast National Marine Sanctuary education staff participated in an informal educator workshop hosted by Washington State's Office of Superintendent of Public Instruction (OSPI) and Education Service Districts (ESD). Focusing on the Next Generation Science Standards (NGSS) and STEM (Science Technology Engineering and Math), participants walked through engineering activities, a history of STEM education in Washington state, and tools to assess and implement organizations STEM programming for K-12 education.

Microplastics in the Environment

Microplastics in the Environment was the topic for a speaker series hosted by Olympic Coast National Marine Sanctuary, in partnership with Feiro Marine Life Center and Port Angeles Yacht Club. Garth Covernton, a Ph.D. student at the University of Victoria, spoke about tiny pieces of plastics smaller than five millimeters that are an emerging threat to ocean ecosystems, with ingestion now known to occur in animals ranging from small zooplankton to large baleen whales. The specific effects of microplastics on animals in the wild is still uncertain, however scientists have shown negative impacts on animals which ingest high concentrations. The presentation explored how microplastics get into our ocean, their impacts to marine animals, and his current research.



Olympic National Park and Olympic Coast National Marine Sanctuary education teams work to increase public reach

Education and outreach staff from Olympic National Park and Olympic Coast National Marine Sanctuary held an annual meeting to discuss topics of mutual interest including programs and initiatives, media and outreach, and upcoming special events, such as Get Into Your Sanctuary Day. The main purpose of the meeting was to find opportunities to amplify each other's work and collaborate on publicity in order to reach greater audiences.

Big Mama makes a splash at the Quileute Carnival of Science

Olympic Coast National Marine Sanctuary (OCNMS) education team participated in the second annual Carnival of Science coordinated by Quileute Tribal School (QTS) science teachers and run by students of all ages. The carnival was held at the Akalat community center in La Push on April 25, 2018. QTS students hosted dozens of different interactive science booths, including ROVs (remotely operated vehicles) and a booth in which students could explore viscosity and states of matter by playing with Oobleck! OCNMS education team hosted a booth focused on cetaceans in the sanctuary, which featured Big Mama, our life-size, inflatable, walk-inside humpback whale. Earlier that day, education staff went into the fifth grade class and did a lesson introducing the biology of cetaceans as well as the acoustics of humpback



whales. Those fifth grade whale experts were then encouraged to come visit Big Mama that evening at the carnival. Approximately 100 students and their families attended the event.

CONDUCT COLLABORATIVE RESEARCH, ASSESSMENTS, AND MONITORING TO INFORM ECOSYSTEM-BASED MANAGEMENT

NOAA and Washington state convene second Seafloor Mapping Prioritization Workshop

On March 6, Olympic Coast National Marine Sanctuary staff collaborated with partners from Washington State Department of Ecology, Washington State Department of Natural Resources, the National Centers for Coastal Ocean Science (NCCOS), and NOAA's Integrated Ocean and Coastal Mapping program to convene a workshop of regional partners with an interest in seafloor mapping. This workshop, which was modeled after a spatial prioritization process led by NCCOS in May of 2015, was organized to: share the 2,500+ km² of new seafloor data that has been collected in offshore priority areas in the past three years; review the results of a NCCOS re-analysis of the 2015 workshop inputs aimed at generating a draft of "next tier" offshore priorities; and refine the nearshore priority areas to be more discrete and targeted, in the hopes of attracting additional nearshore mapping effort. Nearly forty individuals representing state, federal and tribal agencies and academia participated either in person or remotely and contributed their perspectives on upcoming mapping opportunities and initiatives. Results will be summarized into a workshop report, and the resulting spatial priorities for the state's Pacific coast will be entered into SeaSketch in an effort to increase awareness of these priorities among NOAA programs and partners that may be able to help address our state's shared goals for seafloor mapping.

Largest meteor to fall in the U.S. in decades splashed down in OCNMS this week

On Wednesday night, March 7, a large meteorite fall occurred just off the Washington coast in an area of Olympic Coast National Marine Sanctuary, triggering a sonic boom and bright flashes of light that alarmed local residents. According to NASA expert Dr. Marc Fries, the large meteor or “bolide” that streaked across the sky and fell into the ocean was estimated to be the size of a minivan and may be the largest meteorite to fall in the U.S. in more than two decades. OCNMS staff hope to collaborate with Dr. Fries in an attempt to recover pieces of the meteorite from the seafloor to support further “astromaterials” research.

OCNMS Research Coordinator attends annual meeting of the Olympic Region Harmful Algal Bloom partnership

On Monday, March 26 Olympic Coast National Marine Sanctuary's (OCNMS) research coordinator participated in the annual meeting of the Olympic Region Harmful Algal Bloom (ORHAB) partnership, along with representatives from state and tribal governments, non-governmental organizations, and academic organizations. Participants shared updates from the past year on harmful algal bloom events affecting the Olympic Coast and surrounding areas and discussed reporting efforts via ORHAB and Monitoring and Event Response Harmful Algal Bloom (MERHAB) bulletins that help inform management efforts, particularly related to razor clam and Dungeness crab fisheries management. Other presentations of note featured new underwater robot technology that could help detect HABs from Ocean Aero and an overview of a database maintained by the Sound Toxins project, a complementary program that documents the presence and abundance of algal blooms at 35 sites within Puget Sound. Collaborators also discussed the future of the program and how to transition the project to an operational forecast in an effort to maintain momentum and support for the successful regional effort to address HABs along Washington's Pacific coast.

Olympic Coast National Marine Sanctuary Personnel Participate in Small Boat Operator Training



Olympic Coast National Marine Sanctuary (OCNMS) personnel attended a small boat operator training class hosted by the Alaska Fisheries Science Center's National Marine Mammal Laboratory in Seattle, Washington. Although focused on small vessel operations and survival in Alaskan waters and wilderness, and taught by Dug Jensen of the Educational Training Company from Sitka, Alaska, all of the subjects covered apply to working in the sanctuary off of Washington's rough, and unpredictable, outer coast. Subjects included hypothermia; cold water and wilderness survival skills;

navigation rules; float plan development; evaluation of weather forecast, tidal, and current conditions needed for operational planning; fire and extinguisher types; and safety equipment such as Emergency Position Indicating Radio Beacons (EPIRBs) and multiple types of flares. Field activities included inspection, safety, and operation of two different types of small boats with outboard motors; docking and undocking; obstruction avoidance techniques; man overboard and recovery methods; and terrestrial survival techniques such as creating shelters and starting fires for warmth.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

Washington Coast Cleanup Earth Day event successfully removes more than 15 tons of debris from Olympic Coast

Sunny skies welcomed over 1400 volunteers to the beach in an effort to remove marine debris from Washington's coast! Volunteers were able to remove more than 15 tons of marine debris (with final numbers still being tallied) off of 65 beaches from the Strait of Juan de Fuca and down Washington coast. All volunteers returned safely, avoiding injury through physical work, hauling hundreds of bags of garbage, boat parts, floats, rope, and plastic off our shorelines. Olympic Coast National Marine Sanctuary staff organized volunteers at their regular registration station on the Makah Tribe's Hobuck Beach, in Neah Bay. The sanctuary is a founding member of Washington CoastSavers, and contributes significantly to the organization's long range planning, funding, and event coordination.



Olympic Coast plays a prominent role in Deep Sea Coral and Sponge initiative workshop

Olympic Coast National Marine Sanctuary (OCNMS) Research Coordinator, Jenny Waddell, participated in a three-day workshop and steering committee meeting held April 16-18 in Santa Barbara, California. The workshop kicked off a three-year initiative sponsored by NOAA Fisheries to study deep sea coral and sponge ecosystems along the U.S. West Coast. As the Office of National Marine Sanctuaries (ONMS) West Coast regional coordinator for research, Jenny worked with research and resource protection staff from all five national marine sanctuaries on the West Coast and the regional office to prepare and present a summary of ONMS interests and objectives for the multi-year campaign. Through coordination with regional staff and ongoing support for initiative co-lead Chris Caldwell (CINMS), Olympic Coast interests in mapping, modeling, visual surveys, and other projects related to deep sea coral and sponge ecosystems were well represented and complemented similar interests expressed by other sanctuaries in the region, helping to ensure strong representation for the five sites on the West Coast that together protect over 15,300 mi² of West Coast seafloor habitats.

UNDERSTANDING THE SANCTUARY’S CULTURAL, HISTORICAL, AND SOCIOECONOMIC SIGNIFICANCE

Happy AmeriCorps Week

The Port Angeles City Mayor declared March 12 through March 16, 2018 AmeriCorps week, recognizing and celebrating the contributions made to the local and regional communities through the efforts of AmeriCorps Service Corps members. Olympic Coast National Marine Sanctuary (OCNMS) hosts two AmeriCorps members whose efforts support K-12 marine science education as well as environmental stewardship projects. Through hands-on inquiry based education programs that focus on the marine life, habitats, and ocean processes along Olympic Coast, to volunteer recruitment and coordination support for organized beach cleanups through Washington CoastSavers, OCNMS AmeriCorps are invaluable education and outreach team members.



Olympic Peninsula Tourism Commission celebrates volunteers at recognition event

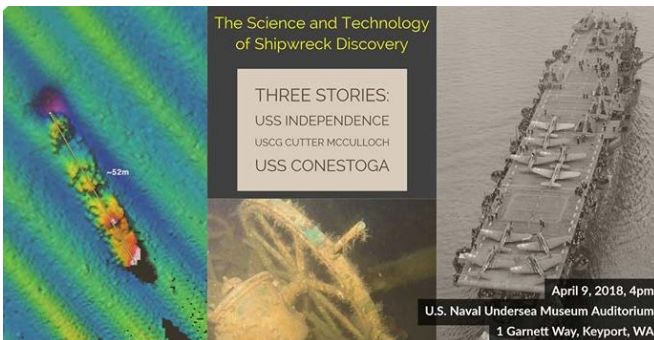


The Olympic Peninsula Tourism Commission held a luncheon to recognize the important contributions volunteers make to member organizations. Twenty organizations were able to formally thank over 30 volunteers for their efforts in supporting tourism on the Olympic Peninsula. Olympic Coast National Marine Sanctuary presented a certificate of appreciation to Leslee Crate, 2017 Olympic Coast Discovery Center Docent of the Year.



Volunteer of the Year, Claire Bishop was unable to attend, but will be presented with a commemorative plaque in the near future

Shipwreck discoveries presentation at U.S. Naval Undersea Museum in Washington state



Olympic Coast National Marine Sanctuary sponsored a presentation by Robert Schwemmer, West Coast Regional Maritime Heritage Coordinator. The presentation titled “The Science and Technology of Shipwreck Discovery” was held at the U.S. Naval Undersea Museum in Keyport, Washington on April 9. The presentation showcased three prominent shipwreck discoveries conducted by NOAA’s Maritime Heritage Program, West Coast Regional Office, in collaboration with

federal and state agencies and the private sector.

SANCTUARY PERMITTING

Issued Permits and Authorizations

OCNMS-2017-001-A1 – Chris Rutherford, Director, Ocean Observing Programs
Project Title: Ocean Observatories Initiative - Endurance Array 25m Inshore Mooring and Glider Operations

Permitted Activity: The deployment of one surface buoy and one vertical profiling mooring, each with scientific instrumentation and multi-function node/anchors on the seafloor.

Project Location: Mooring at 47.134° N, 124.272° W, glider will run two east-west lines along 48.0° N and 47.0° N from 20-m isobath out beyond the western offshore boundary of OCNMS. Deployment, operation, and retrieval of two autonomous underwater vehicle gliders.

Permit Duration: 3/15/2017 through 12/31/2018

Comment: The permit was amended to change the permittee.

OCNMS-2017-006-A2 – Stephen Keith, International Pacific Halibut Commission

Project Title: IPHC Fishery-Independent Setline Survey

Permitted Activity: Alteration of the seafloor within OCNMS for the purpose of IPHC fishery-independent setline survey as described in the permit application.

Project Location: The 2018 IPHC survey is planned for the 47 specific stations within OCNMS. In subsequent years, the survey is expected to be conducted at only the 20 annual and eight WDFW stations. The permitted activity is only allowed in the locations and years identified in the permit.

Permit Duration: 4/20/2018 through 12/31/2021

Comment: The permit was amended to allow additional 2017 locations to be resurveyed, due to an hypoxic event that occurred during the 2017 IPHC survey.

Pending Permit Requests

OCNMS-2018-001 – Tamara Baumberger, Cooperative Institute for Marine Resources Studies (OSU/PMEL)

Project Title: Cascadia Margin: Interdisciplinary studies of methane vent sites

Permitted Activity: Collection of short (~15-30 cm) 2.5" diameter sediment cores for microbial and pore water studies (about 5 push cores per dive), and small samples of substrata (about 5 samples per dive).

Project Location: Just east of the heads of Quinault and Quileute canyons

Permit Duration: Requested from 6/12/2008 through 7/1/2018

Comment: The main objectives of this expedition are to explore for methane seeps and hydrate sites and to characterize their associated ecosystems along the U.S. Cascadia Margin.

OCNMS-2018-002 – Nicole Raineault, Ocean Exploration Trust

Project Title: Olympic Coast National Marine Sanctuary mapping and meteorite fall investigation

Permitted Activity: Recovery of meteorite samples and deployment of expendable bathythermographs (XBTs)

Project Location: In the vicinity of the Point Grenville weather buoy

Permit Duration: Requested from 6/12/2018 through 8/11/2018.

Comment: NASA has calculated the likely location of meteor fragments from radar images.

MULTI-2018-004 – Sebastien de Halleaux, Saildrone

Project Title: Saildrone USV deployment

Permitted Activity: Deployment of unmanned surface vehicles (USVs) in multiple national marine sanctuaries on the West Coast.

Project Location: 2018 planned missions include a full West Coast Survey beginning in July in which five saildrones will travel from Vancouver Island to San Diego to compliment NOAA assets in order to complete a full ecosystem survey of the West Coast to collect data for fisheries management, marine mammals, bathymetry, and weather.

Permit Duration: Requested from 5/1/2018 through 5/1/2023. We were unable to accommodate the requested start date, but are trying to accommodate planned July deployment.

Comment: MULTI-Sanctuary permit being administered by Channel Islands NMS. The Sairdrone USV combines sail-powered vehicle technology with solar-powered oceanographic sensors for deep ocean data collection.

LEARN ABOUT YOUR SANCTUARY / NATURAL HISTORY

Maritime Heritage Program completes paper for publication

MHP staff finalized edits to the presentation "Waves of History: Maritime Cultural Landscapes in Hawai'i" which is included in the *Proceedings of the Maritime Cultural Landscape Symposium*, a compilation of papers from the October 2015 conference at the University of Wisconsin Madison (hosted by the Center for Preservation Technology and Training National Park Service).

REGIONAL / NATIONAL MARINE SANCTUARY SYSTEM NEWS

Guardians of the sea: Protecting the ocean together

<https://sanctuaries.noaa.gov/news/apr18/noaa-and-coast-guard-protect-ocean-together.html>

Last summer, the hit movie *Guardians of the Galaxy: Volume 2* reminded us of the importance of partnerships in tackling big jobs. In the movie, an earthling, a number of aliens, a mutant raccoon, and, well, whatever Groot is, team up to save the galaxy yet again. Here, in real life, the big job is protecting our ocean. NOAA's Office of National Marine Sanctuaries (and other NOAA offices) and the U.S. Coast Guard have been partners for decades in doing so.

The coral doctor: Foster Scholar Michael Fox gives corals the best chance he can

<https://sanctuaries.noaa.gov/news/mar18/the-coral-doctor-foster-scholar-michael-fox.html>

When faced with a devastating flu season, we humans look to public health specialists. Don't be fooled by a coral's hard exterior — they are actually living, breathing communities. When exposed to changes in their environment, corals can get sick too. When corals are not healthy at Hawaiian Islands Humpback National Marine Sanctuary and Pacific Remote Islands National Marine Monument, Michael Fox is on the case.

Pacific Islander/Asian American Heritage Month in national marine sanctuaries

<https://sanctuaries.noaa.gov/news/may18/pacific-islander-asian-american-heritage-month-in-nms.html>

Pacific Islander/Asian American Heritage Month was established to recognize the history, concerns, contributions, and achievements of Pacific Islander/Asian Americans. Like other immigrant groups that arrived in America, Asian Americans experienced systematic racism, harassment, and exclusion. Like other native peoples, Native Hawaiians also saw the loss of their sovereignty. Despite this, Pacific Islander and Asian Americans have made indelible and invaluable contributions to the building, prosperity, and defense of our maritime nation. This month [May], we celebrate the achievements and contributions of Pacific Islander and Asian Americans to our ocean, maritime traditions, and sanctuary communities.

Capitol Hill Ocean Week 2018 kicks off in June

<https://sanctuaries.noaa.gov/news/apr18/capitol-hill-ocean-week-2018.html>

Capitol Hill Ocean Week (CHOW), the premier ocean policy conference in the United States, brings together global stakeholders to discuss ocean and Great Lakes science, conservation, and management issues. Be part of the conversation on June 5-6 at the Ronald Reagan Building and International Trade Center! This year, Capitol Hill Ocean Week will feature engaging conversations with opinion leaders from across the country, and around the world, to examine pressing ocean issues. The conference's

themes this year are: (1) Vision for our Ocean and Great Lakes; (2) Restoration of Marine and Great Lakes Ecosystems; (3) Our Changing Ocean; and (4) Working Together for Sustainable Waters.

Whale hello there: Foster Scholar Angela Szesciorka tracks whale behavior near ships

<https://sanctuaries.noaa.gov/news/apr18/foster-scholar-angela-szesciorka-tracks-whales-near-ships.html>

Between spring and fall, several whale species flock to national marine sanctuaries of the West Coast to feed. As they fill up on food to prepare for the winter mating season, they fill the marine environment with whale calls. But they are not the only ones that make noise. These sanctuaries intersect with prime shipping routes, and noise from ships could interrupt the whales' feeding behavior. Szesciorka wants to connect what whales hear with their behavior to see how ship noise might impact these whales. Tracking ships is the easy part...

Promoting conservation and stewardship to diverse audiences through the National Marine Sanctuary System

<https://sanctuaries.noaa.gov/news/apr18/promoting-conservation-and-stewardship-to-diverse-audiences-through-education.html>

Protecting treasured places in the ocean and Great Lakes like national marine sanctuaries takes a whole network of people working together. When all communities, including underserved and diverse communities, can learn about and access the natural, cultural, historic, and recreational value of national marine sanctuaries, we can help these places thrive together. Ensuring that youth of all backgrounds have the opportunity to experience these special ocean places supports future conservation efforts and careers.

Under a watchful eye, the coral reefs of Flower Garden Banks National Marine Sanctuary show signs of resilience

<https://sanctuaries.noaa.gov/news/feb18/coral-reefs-of-flower-garden-banks-show-signs-of-resilience.html>

Despite global coral reef decline in recent decades, East Flower Garden Bank and West Flower Garden Bank have long been recognized as some of the healthiest coral reef communities in the world. These areas have suffered minimally from hurricanes, coral bleaching, and disease, while supporting a relatively diverse and abundant populations of marine animals.

The USS *Monitor*: A feat of naval ingenuity and the first national marine sanctuary

<https://sanctuaries.noaa.gov/news/dec17/uss-monitor-feat-of-naval-ingenuity-and-national-marine-sanctuary.html>

The story of the USS *Monitor*, one Civil-War-era vessel that rests in the Graveyard of the Atlantic, juxtaposes a great human accomplishment with the unmatched power of nature. *Monitor* was created with such an ingenious design that it ensured John Ericsson's place in history as one of the best naval engineers of the 19th century. But nature, along with a series of unfortunate circumstances, sealed the destiny of *Monitor* – but also led to its place in the National Marine Sanctuary System.

Cataloging the depths of Monterey Bay National Marine Sanctuary

<https://sanctuaries.noaa.gov/news/nov17/cataloguing-the-depths-of-monterey-bay-national-marine-sanctuary.html>

What inhabits the depths of the ocean? Even the most popular sanctuaries like Monterey Bay hold mysteries offshore. Twenty-eight miles beyond the California coast lies Sur Ridge, an underwater feature that is home to a wide variety of marine life. Expeditions of the deep regale tales of an underwater oasis and an ecosystem that is absolutely stunning.

REGIONAL / NATIONAL MARINE SANCTUARY FOUNDATION NEWS

Skilled divers sought for marine debris removal; “Goal: Clean Seas Florida Keys”

<https://floridakeys.noaa.gov/whatsnew/releases/2018/20180409-sanctuary-invites-participation-underwater-marinedebris-remove.html>.

The Florida Keys are still suffering from the catastrophic damage left behind by Hurricane Irma. “Irma” left behind a significant amount of marine debris, presenting challenges to navigation, damaging the Florida Keys National Marine Sanctuary’s (FKNMS) ecosystem, and severely impacting regional tourism and fisheries-based businesses. Roughly 154,000 spiny lobster traps that were deployed during “Irma” became displaced or damaged during the storm, and only approximately 60,000 have been recovered. Lost or abandoned fishing gear and other trash entangles and harms corals, sea fans, sponges, sea turtles, and other marine life. It also degrades the habitats of the Florida Keys. To spur the marine debris removal effort, FKNMS and the National Marine Sanctuary Foundation, NOAA Marine Debris Program and others created “Goal: Clean Seas Florida Keys” to engage and incentivize certified Blue Star dive operators in locating and removing underwater marine debris and aid in restoration efforts in FKNMS.

New partnership to monitor Mallows Bay water quality

<https://marinesanctuary.org/news/dnr-partnership/>

Long-Term Monitoring Site to Benefit Public, Resource Managers, and Scientists Charles County, Maryland – The National Marine Sanctuary Foundation and Maryland Department of Natural Resources announced a five-year partnership to monitor water quality at Mallows Bay on the Potomac River, a site being considered for designation as a national marine sanctuary.

Eleven global shipping companies slowed transits in 2017 program to Protect Blue Whales and Blue Skies

<https://marinesanctuary.org/news/vsr-recap-2017/>

Program cuts more than 80 tons of smog-forming emissions SANTA BARBARA, Calif. — The partners in an initiative to cut air pollution and protect whales today announced results from the 2017 program and publicly recognized the 11 shipping companies who participated, reducing speeds to 12 knots or less in two regions.

Statement in Response to Governor Scott Walker’s Request to Rescind the Nomination of Wisconsin-Lake Michigan National Marine Sanctuary

<https://marinesanctuary.org/news/statement-wilm/>

Wisconsin’s maritime heritage runs deep. Designating a national marine sanctuary would preserve Lake Michigan shipwrecks and cultural artifacts that represent the tenacity and entrepreneurial spirit of generations of Americans. Wisconsin communities along the lakeshore worked together to nominate and support a Wisconsin-Lake Michigan to preserve our Nation’s history, to connect children to Great Lakes history.

OCNMS Online

Visit our website at: <http://olympiccoast.noaa.gov/>.

Follow us on Facebook and Twitter!

<https://www.facebook.com/usolympiccoastgov>

<https://twitter.com/olympiccoast>

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

*Comments and suggestions can be sent to:
jacqueline.laverdure@noaa.gov.*

Ocean-Related Websites

National Oceanic and Atmospheric Administration

<http://www.noaa.gov/>

National Ocean Service

<http://oceanservice.noaa.gov/>

Office of National Marine Sanctuaries

<http://sanctuaries.noaa.gov/>

NOAA Marine Debris Program

<http://marinedebris.noaa.gov/>

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

Encyclopedia of National Marine Sanctuaries

<http://www8.nos.noaa.gov/onms/park/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

Washington's Ocean Resources

<http://www.ecy.wa.gov/programs/sea/ocean/index.html>

CoastWatch – West Coast Regional Node

<http://coastwatch.pfel.noaa.gov/>

Northwest Association of Networked Ocean Observing Systems

<http://www.nanoos.org/>

NOAA Pacific Marine Environmental Laboratory

<http://www.pmel.noaa.gov/>

OLYMPIC COAST NATIONAL MARINE SANCTUARY

OCNMS Staff

Learn More about Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by Olympic Coast National Marine Sanctuary in conjunction with sanctuary advisory council meetings. To learn more about the sanctuary, please visit our website at:

<http://olympiccoast.noaa.gov/>.

To learn more about the sanctuary advisory council, please visit:

http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html.

Office of National Marine Sanctuaries (ONMS)

Olympic Coast National Marine Sanctuary is one of the marine protected areas in the National Marine Sanctuary System encompassing more than 600,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and Papahānaumokuākea and Rose Atoll marine national monuments. Visit the ONMS website at: <http://sanctuaries.noaa.gov/>.

Get Involved!

To learn how to get involved in the sanctuary visit: <http://olympiccoast.noaa.gov/involved/welcome.html>.

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