

OLYMPIC COAST NATIONAL MARINE SANCTUARY

A REPORT FOR SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: MAY 16, 2014 – JULY 24, 2014

ABOUT THE SANCTUARY

Olympic Coast National Marine Sanctuary spans 3,189 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 rich marine mammal and seabird faunas, 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 Makah, Quileute, and Hoh Indian Tribes, and Quinault Nation.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

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

TREATY TRUST RESPONSIBILITY

The Intergovernmental Policy Council will meet July 30 in Neah Bay to discuss development of a collaborative habitat framework for the outer coast of Washington.

ACHIEVE EFFECTIVE AND COORDINATED MANAGEMENT

Sanctuary Staff Participates in CoastSavers Annual Strategic Planning Meeting

Washington CoastSavers, the alliance that organizes shoreline debris cleanup on Washington's outer coast, held an all-day strategy meeting to discuss future opportunities, finance, and organizational structure.

Representing Olympic Coast National Marine Sanctuary were Liam Antrim, a founding member of the alliance, and Jacqueline Laverdure, who supports event planning and outreach. Washington CoastSavers program is steered by an informal committee of representatives from the Clallam Bay-Seki Lions Club, Discover Your Northwest, Grass Roots Garbage Gang, Olympic Coast National Marine Sanctuary, Olympic National Park, and the Washington State Parks and Recreation Commission.

ONMS and SWFSC Staff Collaborate with San Francisco State University Scientist to Identify Crucial Research Projects for Vessel Traffic Monitoring in the West Coast Region

Monitoring shipping traffic through the National Marine Sanctuaries is a growing concern for resource protection, healthy oceans, marine noise, and social and economic development. Olympic Coast National Marine Sanctuary GIS Analyst Nancy Wright joined Southwest Fisheries Science Center staff Jessica Redfern, T.J. Moore and Professor Ellen Hines, the Director of the Marine & Coastal Conservation and Spatial Planning Lab at San Francisco State University to design a suite of research questions for graduate students using terrestrial and satellite vessel tracking data to address critical marine resource management questions. The partnership includes a strong emphasis on quality research projects for advanced education; protection of endangered marine species; the development of tested protocols around manipulation of vessel traffic data; and publication of industry standards for vessel traffic monitoring that will support ONMS initiatives.

Developing New Partnerships for Washington's Outer Coast

Sanctuary Superintendent Carol Bernthal presented at the annual meeting of the The Nature Conservancy (TNC), Washington Chapter to educate board trustee members and staff on Olympic Coast National Marine Sanctuary. TNC is currently working on their five year strategic plan and is interested in evaluating options for expanding their marine focused work in Washington State. Afterwards, TNC board members and staff ventured on the sanctuary's 38 foot vessel, *RV Tatoosh*, for a personal and up-close view of the sanctuary, with more discussions onboard with trustees about potential areas of collaboration with the sanctuary.

Vessel Traffic Management Briefing to North Pacific Coast Marine Resources Committee

Olympic Coast National Marine Sanctuary (OCNMS) briefed the North Pacific Coast Marine Resources Committee on vessels management along Washington's outer coast, including the sanctuary's Area to be Avoided (ATBA) Monitoring and Outreach program. This joint effort between the U.S. and Canadian Coast Guards and the sanctuary monitors compliance to international vessel routing measures. The briefing also included a discussion on emerging changes to how oil is being routed through Washington State and potential implications to maritime safety. Washington State's marine resources committees are local, science-based groups in communities along the WA coast that promote marine resources stewardship and restoration.

Vessel Burns and Sinks in Olympic Coast National Marine Sanctuary Waters

In the afternoon of July 4th, sanctuary staff received an emergency notification of a burning vessel about six miles offshore and two miles south of Destruction Island, which has significant seabird breeding colonies and is an aggregation area for hundreds of sea otters. The fire likely started in the engine room and spread to engulf the 67 foot, fiberglass hulled pleasure craft, La Pietra, en route from Los Angeles to Canada. With the fire beyond control, the owner and his wife were evacuated safely by the US Coast Guard. The emergency response tug stationed in Neah Bay was activated but both the tug and Coast Guard cutter on scene lacked adequate firefighting equipment. The vessel burned to the waterline before sinking. On advice from sanctuary staff, the Coast Guard cutter remained on scene to document the occurrence of and potential impacts to wildlife, and to mark the position of the vessel upon sinking. A small sheen was noted after the vessel sank, indicating that nearly all of the reported 600 gallons of fuel on board were consumed by the fire. Prevailing winds carried the smoke from the fire away from the concentration of wildlife around Destruction Island. Sanctuary staff conducted a sonar survey and verified the location of the vessel remains on the seafloor to support potential enforcement and salvage operations.

Washington Marine Spatial Plan Efforts of Interest to Sanctuary

Sanctuary staff observed a recent meeting of the Washington Coast Marine Advisory Council (WCMAC), which advises the state on the development of a Marine Spatial Plan. There were several important issues discussed that are of particular interest to Olympic Coast National Marine Sanctuary (OCNMS). OCNMS was specifically mentioned in a briefing on a marine energy sector analysis. One important finding was the Bureau of Ocean Energy Management's (BOEM) inability to issue alternative ocean energy leases in National Marine Sanctuaries. Discussions also addressed the joint habitat mapping project between WA, Oregon State University and OCNMS. OCNMS data and our Area to be Avoided (ATBA) provisions were discussed in the report on the maritime industry sector analysis.

Sanctuary Staff Conducts Site Visit to Copalis State Airport

OCNMS Deputy Superintendent George Galasso met with Washington State Department of Transportation (WSDOT) Airport Manager Paul Wolf and Washington State Parks (WSP) North Beach Area Manager James Schmidt to discuss management issues in the Southern Sanctuary Area. Both WSP and WSDOT have jurisdiction and management responsibilities on the beach adjacent to the southern boundary of the sanctuary. Issues discussed included the operation of the airport adjacent to the sanctuary overflight restrictions, user conflicts, pilot outreach, and the movement of the Copalis Airport (sanctuary and airport Southern boundary) to the north. Information on the Copalis State Airport can be found at: www.wsdot.wa.gov/aviation/AllStateAirports/CopalisBeach_CopalisState.htm

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

OCNMS Oceanographic Monitoring Program Kicks off the Season

Ten oceanographic monitoring moorings were successfully deployed from *RV Tatoosh* at different locations within Olympic Coast National Marine Sanctuary, kicking off the 2014 field season. Instruments deployed measure water temperature, conductivity, dissolved oxygen, chlorophyll, and currents and help inform oceanographic modeling efforts underway at the University of Washington. Subsequent cruises aboard the *RV Tatoosh* will service all of the oceanographic moorings on a monthly basis. Sanctuary staff also assisted NOAA's Cooperative Observer Program (COOP) with the deployment of an Acoustic Doppler current profiler (ADCP) instrument off Cape Elizabeth, and the University of Oregon in inspecting their Integrated Ocean Observing buoy.

Annual Washington Sea Otter Census

Olympic Coast National Marine Sanctuary Research Coordinator Ed Bowlby participated in the annual sea otter survey week along the Olympic coast. This multi-agency effort used both shore-based observers and aerial counters to obtain a state-wide census. It involved personnel from U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Olympic Coast National Marine Sanctuary, The Seattle Aquarium, Point Defiance Zoo and Aquarium, and the Quinault Nation.

Long-term Rocky Intertidal Monitoring

Olympic Coast National Marine Sanctuary, with assistance from Hollings Scholar Jessica Lindner and Melissa Miner, the regional lead for Multi-Agency Rocky Intertidal Network (MARINE), completed two days of rocky intertidal monitoring at a long-term site on the Makah Reservation adjacent to sanctuary waters. Intertidal monitoring uses fixed plots and transects in accordance with MARINE monitoring methods, and focuses on a few, easily-tracked target organisms such as surfgrass, barnacles, mussels, and sea stars. The field crew also completed a timed search to assess presence of sea star wasting disease and established a plot for future biodiversity surveys of Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) and MARINE vertical distribution transects, which will be used to document zone shifts in intertidal communities.



OCNMS and OSU Collaborate on Deep-Sea Coral Habitat Report

Olympic Coast National Marine Sanctuary (OCNMS) Geographer Nancy Wright and Oregon State University (OSU) Senior Faculty Research Assistant Chris Romsos conducted an acoustic seabed mapping survey in 2011 followed by two years of ground-truthing, data analysis, and report generation to produce the *Multibeam Mapping of Potential Deep-Sea Coral Habitats Near Olympic 2 EFH, Final Report, 2014*. The survey was funded by NOAA's Coral Reef Conservation Program (CRCP) to fill gaps in knowledge about potential hard substrates available for populations of protected coral and sponge communities. A draft 2011 report was returned to CRCP while the full report was in development. OSU is currently building a Seafloor Atlas using OCNMS historic data. The report will be posted on the OCNMS science web page.

Sanctuary Partnerships Explore Potential Uses of Unmanned Aircraft System

In tests to evaluate data quality, costs and noise impacts to marine wildlife, NOAA deployed an unmanned aircraft system (UAS) to monitor seabird nesting colonies on remote beaches, offshore rocks and islets within the sanctuary. Four days of testing and evaluation in Olympic Coast National Marine Sanctuary (OCNMS) and Washington Islands National Wildlife Refuge were successfully concluded on June 19. The primary mission was to refine UAS methodologies for monitoring seabird nesting colonies and to compare results with data from similar surveys that are conducted annually by the U.S. Fish & Wildlife Service via helicopter. Secondary to that was further evaluation of noise impacts on the nesting birds from a UAS survey. This mission built upon the week-long UAS testing/evaluation that occurred in June of 2013. The amphibious Puma UAS was launched and recovered from OCNMS' *RV Tatoosh* and recorded high definition video as well as digital still photos, which will be post-processed to assess behaviors and identification of seabirds. Project partners included the U.S. Fish and Wildlife Service and the NOAA UAS Program. The project generated media attention, and on the last day of the project the UAS team met with media representatives from TVW, a Washington State cable-only network, for interviews and a demonstration of *RV Tatoosh*-based Puma operations. Footage is expected to air this fall.

OCNMS Presents at Meeting on Hypoxia and Ocean Acidification

Olympic Coast National Marine Sanctuary (OCNMS) Research Coordinator Ed Bowlby presented on OCNMS's long-term effort to monitor nearshore oceanographic conditions off the Washington coast, with input from Oceanographer Rick Fletcher and Resource Protection Specialist Liam Antrim. The presentation on May 28 focused on how OCNMS monitors for low oxygen events (hypoxia) and ocean acidification proxies since it was presented for OCNMS by the conveners of the Hypoxia/Ocean Acidification Pre-season Meeting of Investigators in Oregon and Washington.

NOAA Programs Pursue Funding Opportunities for Deep Sea Coral Data-Mining

Olympic Coast National Marine Sanctuary (OCNMS) Research Coordinator Ed Bowlby coordinated discussions concerning a potential funding collaboration with other NOAA offices to deal with data-mining videos from deep-sea corals and seamount surveys in Alaska from 1999-2004. This included discussions with the following NOAA offices: 1) NOAA's Deep Sea Coral Research Technology Program, 2) NMFS's Alaska Fishery Science Center, 3) NOS's National Centers for Coastal Ocean Science and 4) NOAA's Office of Exploration and Research. Peter Etnoyer at NCCOS, one of the principal investigators on the seamount cruises, will likely be program lead and administer a contract to OCNMS for video analysis. There is also potential for additional funds in FY15 to continue this larger NOAA collaboration, which could include upgrading the Mac video computer and VARS software (which would also assist with the 2015 video analysis of Puma UAS video data).

IMPROVE OCEAN LITERACY

Olympic Coast Welcomes Two Hollings Scholar Interns

Olympic Coast National Marine Sanctuary (OCNMS) welcomes two new Hollings Scholars, Jessica Lindner and Emma Rice. The NOAA Hollings Scholarship is designed to support undergraduate studies in oceanic and atmospheric science, research, technology, and education, to increase public understanding and support for stewardship of the ocean and atmosphere and improve environmental literacy as well as recruit and prepare students for public service careers with NOAA. Jessica Lindner is a rising senior at Ohio University majoring in Environmental and Plant Biology. This summer at OCNMS she is assisting with data collection, organization, and analysis associated with long term intertidal monitoring projects along the outer coast of Washington. Jessica will be studying the movement of sandy shorelines over time, distributions of sea star wasting syndrome, and marine debris patterns. Her goal is to gain insight into current issues and methods in marine ecology while providing assistance and a fresh perspective to OCNMS. Emma Rice is going into her final year studying Biology at Salisbury University. Emma's project at OCNMS is coordinating the Junior Oceanographer and Junior Explorers ROV (Remotely Operated Vehicle) summer camps in a partnership with Feiro Marine Life Center. Camp ages range from seven to sixteen years. These summer programs promote Ocean Literacy with a variety of hands-on activities in the hope of fostering lifelong ocean stewards. OCNMS is in a unique position to show leadership in the region in promoting career-building opportunities in marine sciences.



North Olympic Watershed Program Reaches 575 Students

Olympic Coast National Marine Sanctuary, in partnership with Feiro Marine Life Center and Olympic National Park (ONP), conducted North Olympic Watershed (NOW) Science programs to fifth grade classes. Participating schools included Sequim, Port Angeles, and Crescent school districts, along with Five Acres School and Quileute Tribal School. Students worked with sanctuary educators to learn about our global interconnectedness through ocean currents and dissected and examined Albatross boluses. Students also learned about the Peabody Creek watershed and collected water quality data collection and observation and discussed ways we can eliminate the debris from our own communities and watersheds. A total of 575 students, 27 teachers, and 49 adult chaperones were reached in this program. NOW Science is a B-WET (NOAA) funded education program that promotes experiential learning and connects students to conservation issues in their local watersheds.

Five Hundred Olympic Coast Students Participate in Ocean Science Activities



Olympic Coast National Marine Sanctuary, in partnership with Feiro Marine Life Center and Seattle Aquarium, completed the eighth year of Ocean Science programming for Washington's outer coast communities. Approximately 500 third, fourth, fifth and sixth grade students participated in classroom activities, field trips to Feiro Marine Life Center and Seattle Aquarium, and beach field investigations. Twenty-five teachers and 65 parents also participated in 2013-2014 Ocean Science trainings and activities. Schools include Ocosta, Simpson, Ocean Shores, Pacific Beach, Taholah, Queets-Clearwater, Quileute, Neah Bay and Clallam Bay. Ocean Science is designed to integrate NOAA ocean literacy concepts and principles into western Washington formal and informal educational programs. Ocean Science is a collaborative effort between Seattle Aquarium, Feiro Marine Life Center and Olympic Coast National Marine Sanctuary, supported by North Pacific Coast and Grays Harbor marine resource committees, as well as NOAA B-WET.

NatureBridge Educational Careers Talk and Regional K-12 Teacher Training Workshop

On June 24 Olympic Coast National Marine Sanctuary (OCNMS) Education and Outreach Specialist Nicole Harris provided an evening presentation at NatureBridge Olympic, as part of a week-long field science environmental education for 15 junior and senior high school students and three educators from Shoreline High School, WA. Students represented Shoreline High School's International Baccalaureate (IB) curriculum and participated in an overview of OCNMS and a challenging careers game conducted in teams. On June 28 Nicole also offered an evening program on Ocean Acidification to K-12 teachers from California, Oregon and Washington during a week-long NOAA-funded teacher workshop. Nineteen teachers and the program coordinator participated in the sanctuary overview and Ocean acidification presentation and demonstration. Teachers were able to engage in hands-on activities that can be brought into the classroom while providing a presentation that will engage and encourage problem solving by students for ocean health.

Olympic Coast Discovery Center Docents Complete Training

Seven new docents completed their series of six training sessions in order to begin volunteering in Olympic Coast Discovery Center (OCDC) for the 2014 season. The training sessions consisted of various presentations, many given by Olympic Coast National Marine Sanctuary (OCNMS) staff, representing each of OCDC's exhibits and current sanctuary and marine issues. The 2014 spring OCDC volunteer training included a field trip to Neah Bay to incorporate tribal culture from the Makah Cultural and Research Center. New volunteer trainees also hiked the Cape Flattery trail and visited Sooes Beach to witness the northernmost boundary of OCNMS and observe some of the sanctuary's natural resources. Trainees also participated in a field trip to Salt Creek reserve for hands-on experience and understanding of intertidal species and habitats. Olympic Coast Discovery Center opened for the 2014 season on May 24 (Memorial Day weekend) and will remain open daily from 10am-5pm through Sept 1 (Labor Day). OCDC is the sanctuary's visitor center and face to the public, providing interpretive information and experiences to educate visitors and locals about the cultural and natural resources with OCNMS. After Labor Day, OCDC will remain open on weekends through mid-October OCDC or by appointment only.

OCNMS Leads Junior Oceanographer and ROV Summer Camps



Olympic Coast National Marine Sanctuary (OCNMS) Hollings Scholar Emma Rice developed and led Junior Oceanographer summer camp programs for children ages seven to nine, in partnership with Feiro Marine Life Center. The campers learned about marine life on the Strait of Juan de Fuca and in the ocean through explorative and hands-on activities. Throughout the week students transformed themselves into Ocean Protectors and reflected on one thing they could do to reduce our impact on the ocean each day. The camp culminated in a final skit performed for their parents. Junior Oceanography campers in the ten to twelve year old age group explored habitats along the Strait of Juan de Fuca and in the ocean through exploratory and hands-on activities. Over the course of the week they

became more knowledgeable about the organisms that live in different habitats and why each organism is special to our complete marine system. A final art show presentation was given for the parents and included a classroom kelp forest, fish print t-shirts, and J and K pod orca whale display.

The ROV Explorers Summer Camp for youth ages twelve to thirteen campers worked in teams to build remotely operated vehicles (ROVs). In doing so, they learned about basic engineering and the importance of neutral buoyancy. Teams were able to explore off the city pier and rocks neighboring Feiro to practice flying and check out some marine life using ROVs. The ROV Explorers camp finished with a competition at the city pool where each team demonstrated their skills by completing a mission in which they maneuvered through an obstacle course.



Olympic Coast National Marine Sanctuary Trained Olympic National Park Rangers

Olympic Coast National Marine Sanctuary (OCNMS) staff provided a sanctuary overview to twenty-five Olympic National Park (ONP) seasonal interpretive rangers at Olympic Coast Discovery Center. The training is part of their annual training program and includes information about marine ecosystems, coastal resources, sanctuary regulations and other related topics. A large sanctuary display was set up at training headquarters for all new hires to observe. Additionally, ten coastal interpretive rangers received a guided tour of the sanctuary aboard OCNMS RV *Tatoosh* on June 14.

Sanctuary Hosts Family Fun Tidepool Walk for National Get Outdoors Day

Olympic Coast National Marine Sanctuary hosted a Family Fun Tidepool Walk at Kalaloch Beach 4 on June 14 for National Get Outdoors Day (GO Day). Sanctuary Education Specialist Nicole Harris introduced beach etiquette and safety with the visitors before leading an interpretive tidepool walk to explore the intertidal habitat and identify organisms. The event was promoted in partnership with Kalaloch Lodge in Olympic National Park.



Our Oceans in a Changing Climate

Olympic Climate Action (OCA) hosted a two-day event in Port Angeles, WA, entitled "Our Oceans in a Changing Climate" on June 6-7. OCNMS staff Liam Antrim delivered a presentation on ocean acidification and impacts on marine life in the Pacific Northwest. Olympic Coast Discovery Center Manager Karlyn Langjahr presented an interactive overview of ocean acidification with games and activities for youth and adults.

OCNMS Celebrates 20th Anniversary With Concert on the Pier Event in Port Angeles



Olympic Coast National Marine Sanctuary (OCNMS) celebrated its 20th anniversary on Wednesday, July 16, as the stage sponsor for the City of Port Angeles’s Concert on the Pier. Superintendent Carol Bernthal spoke of OCNMS’s mission and programs and presented the award for the sanctuary’s 2013 Volunteer of the Year to Karsten Turrey. OCNMS displayed sanctuary banners and an information booth with orca fan-making activity for participants. “Sanctuary Sam” the sea lion mascot greeted and danced with guests, and youth participants of ROV Explorers summer camp demonstrated their ROV creation and skills. Two marine debris sculptures and a life-sized inflatable orca (“Mike J26”) were

also on display as educational tools. Four OCNMS partners participated in the event with educational booths and hands-on activities, including CoastSavers, Feiro Marine Life Center, Olympic National Park and US Fish and Wildlife Service. The bluegrass band “Luck of the Draw” was the featured band and sanctuary birthday cake was offered to attendees. The Concert on the Pier series is a free, weekly public event held each Wednesday in the summer to bring families and community together.



Neah Bay Summer School Program Hosts OCNMS Staff For Tidepool Exploration and Marine Debris Education

Olympic Coast National Marine Sanctuary (OCNMS) Education and Outreach Staff supported the Makah Tribe’s summer school for 3rd to 5th graders with a tidepool exploration and marine debris education. Tidepooling took place on Strawberry Rock, a traditional gathering location for the Makah Tribe. The tidepooling included organism identification by sanctuary staff, along with traditional gathering of intertidal organisms by tribal members. The students were provided with OCNMS field guides and explored the Strawberry Rock intertidal with two groups. Sanctuary staff then led a marine debris education presentation, enhanced with Albatross bolus dissection and discussions on marine debris sources as well as positive actions for debris reduction in our ocean. A total of 36 students and 12 adults were present and engaged in the summer school activities.

Olympic Coast Hosts Monterey Bay National Marine Sanctuary Volunteers

Olympic Coast National Marine Sanctuary (OCNMS) staff and Olympic Coast Discovery Center (OCDC) docents hosted eight volunteers and one staff from Monterey Bay National Marine Sanctuary (MBNMS) from July 13-19 on the Olympic Peninsula. The week-long volunteer exchange facilitated a better understanding and connectedness to the national marine sanctuary system as a whole, while focusing on natural and cultural resources of OCNMS. Volunteers from MBNMS explored the diversity of Olympic Peninsula through: tidepooling on the outer coast (Second Beach) and Strait of Juan de Fuca (Salt Creek Reserve); visiting and learning about the Elwha River dam removal and restoration efforts and progress; visiting partners at Feiro Marine Life Center; visiting Olympic National Park at Hurricane Ridge, Sol Duc Falls, Lake Crescent and Marymere Falls; visiting two (Makah and Quileute) of our Coastal Treaty Tribes (Neah Bay’s Makah Museum and Cape Flattery Trail and La Push); and boating through sanctuary waters on *RV Tatoosh*. Additionally, as part of the exchange they received training to serve as docents in the sanctuary’s visitor center, Olympic Coast Discovery Center, and volunteered at OCNMS’s 20th anniversary celebration event at Concert on the Pier. Facilitated discussions on volunteering took place to provide feedback to sanctuary staff and fellow docents. MBNMS and OCNMS volunteers gained a deeper appreciation for ONMS mission and objectives and become more effective volunteers after the exchange. OCNMS volunteers plan to partake in an exchange to MBNMS in winter 2015.



Highlighting 20 Years of Marine Conservation

Sanctuary Superintendent Carol Bernthal gave a presentation on Olympic Coast National Marine Sanctuary programs and accomplishments for the past 20 years as a part of a Science Cafe speaker series hosted by the Jefferson County Regional Library. She highlighted why the sanctuary was designated, some of the rich and diverse natural resources found there, what the sanctuary is doing to protect the area, and how people can become more involved.

COASST Citizen Science Trainings Offered in Sekiu and Neah Bay



Coastal Observation and Seabird Survey Team (COASST) hosted a volunteer training to around 25 people on June 7 at the Sekiu Community Center. COASST is a citizen science project dedicated to involving volunteers in the collection of high quality data on the status of coastal beaches, and trends of seabirds. COASST volunteers systematically count and identify bird carcasses that wash ashore along ocean beaches from northern California to Alaska. Olympic Coast National Marine Sanctuary (OCNMS) Citizen Science Coordinator Heidi Pedersen led a six-hour Coastal Observation and Seabird Survey Team (COASST) classroom and field training in Neah Bay to Makah interns and community members on July

11. She introduced citizen science and the importance of collecting baseline data to Makah Tribal Interns working with tribal Marine Mammal Biologist, Jon Scordino.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

OCNMS Supports Response to Potential Japanese Marine Debris

In June, a 20-foot skiff covered with live marine organisms was found on the shore of the Quinault Indian Nation lands adjacent to Olympic Coast National Marine Sanctuary. It is similar to other boats originating from the Japan tsunami of March 2011, several of which have landed on Washington and Oregon shores in recent weeks after three years adrift. Living organisms, or biofouling, on large Japan tsunami debris items have included non-native species, some with potential to establish as invasive species or containing parasites not found in local organisms. To mitigate the risk of species and parasite introductions, Washington Department of Fish and Wildlife Aquatic Invasive Species experts mobilized a team to scrape and treat the biofouling from the vessel and remove the vessel from the intertidal area. Sanctuary staff, Justin Ellis and Hollings Scholar Jessica Lindner joined state and Quinault Indian Nation representatives to assist in this effort.

Federal Bike to Work Challenge Wraps Up

OCNMS's cycling team, the Coastal Cranks, participated in the month-long Federal Bike to Work Challenge in May. The team consisted of six active riders who completed 51.5 trips for a total distance of 675 miles. Overall the Coastal Cranks saved 661 pounds of carbon dioxide from entering the atmosphere, burning 33,079 calories in the process. The annual Bike to Work Challenge promotes federal employee's efforts to stay healthy, fight stress and reduce our carbon footprint.

UNDERSTANDING THE SANCTUARY'S CULTURAL, HISTORICAL AND SOCIOECONOMIC SIGNIFICANCE

Olympic Coast National Marine Sanctuary Updates Maritime Heritage Database

West Coast Regional Maritime Heritage Coordinator Robert Schwemmer completed updating the Olympic Coast National Marine Sanctuary's Maritime Heritage Resources Database. Schwemmer provided OCNMS staff with 842 database records for 197 heritage resources that include ship and aircraft losses. Under the National Historic Preservation Act and the National Marine Sanctuaries Act, NOAA has stewardship responsibilities for historic properties within sanctuary boundaries. When evaluating sanctuary activities and permits, OCNMS staff must consider potential effects on historic properties. OCNMS will share the data with the Washington State Department of Archaeology and Historic Preservation in compliance with their Section 106 Review under the National Historic Preservation Act.

NOAA Awards Contract For Olympic Coast Socioeconomic Study

NOAA National Center for Coastal Ocean Science (NCCOS) is funding a study to estimate the non-market economic value of non-consumptive recreation on Washington's coast. The project is managed by Office of National Marine Sanctuaries (ONMS) Chief Economist Bob Leeworthy. The study hopes to identify resource attributes that non-consumptive recreational users care about and how changes to those attributes affect their economic values. Estimates of economic values will be calculated for per person, per day for those who access the Olympic Coast. While the study is primarily focused on

non-consumptive activities, it will include clamming. This will make the study compatible with the recreation study being funded by Washington State.

SANCTUARY PERMITTING

Issued Permits and Approvals

OCNMS-2014-005 – Joe Schumacker, Quinault Indian Nation

Project Title: Understanding Potential Impacts of Seasonal Hypoxia along the Quinault Reservation Coast.

Permitted Activity: deployment on the seafloor of up to nine instrument platforms constructed from commercial crab pots

Project Location: In approximately 60 feet (10 fathoms) or less depth adjacent to the Quinault Indian Nation reservation coast. The furthest south will be north of and adjacent to the Moclips River mouth (approx. 47 15'N latitude), and the furthest north will be south of the Queets River mouth (approx. 47 30'N latitude)

Permit Duration: 1.5 years

Comment: This research uses modified, conventional Dungeness crab pots with instrumentation to record water quality conditions, including dissolved oxygen. All gear will be retrieved, and no equipment abandonment is planned. Equipment will be deployed in a Quinault-only crab fishing area.

Pending Permit Requests

OCNMS-2014-003 – Joe Evenson, Washington Department of Fish and Wildlife

Project Title: WDFW/PSEMP Annual Winter Aerial Winter Survey of Marine Birds and Mammals

Permitted Activity: low altitude overflight within the overflight restriction zone of Olympic Coast National Marine Sanctuary

Project Location: over waters of the Olympic Coast National Marine Sanctuary between Koitlah Point and Cape Flattery

Permit Duration: to be determined; probably a 5-year permit.

Comment: This permit has not been processed because there are ongoing discussions about additional winter seabird survey work, and flights in Strait that this permit request covers are not planned until 2015.

LEARN ABOUT YOUR SANCTUARY / NATURAL HISTORY

New information about resources in the sanctuary is always emerging. This section of the office report is reserved for sharing brief descriptions of recent studies, observations, findings, reports, and forecasts related to the sanctuary.

Shoreline Stranding of *Verella* or By-the-Wind Sailors in mid-July 2014

Thousands of live and dead *Verella verella*, commonly known as sea rafts or by-the-wind-sailors, were found on outer Washington coast beaches, in some places forming wrack lines several inches thick. *Verella* are a free-floating colonial hydrozoan—related to jelly fish and corals—that live on the surface of the open ocean. With an upright, cartilaginous, sail-like projection, *Verella* can be pushed toward beaches by on-shore winds. This mass stranding event indicates a bloom of this species is occurring offshore at the same time as prevailing winds move the animals toward the shore. *Verella* have distinctive, deep blue coloration, are carnivorous and catch small prey organisms in tentacles that hang down in the water.



Olive Snail Die-Off in Olympic Coast

Olympic Coast National Marine Sanctuary (OCNMS) received a report of an unusual die-off of olive snails (*Olivella biplicata*) along beaches of Makah Bay and immediately alerted marine resource partners. Messages were relayed to colleagues dealing with harmful algal blooms (HABs) at National Marine Fisheries Service Marine Biotoxin Program, Olympic Region Harmful Algal Bloom, Olympic National Park and tribes. In this case the die off appears related to a harmful algal bloom event. Earlier in the week, OCNMS had serviced its nearshore oceanographic moorings, which included water and plankton samples and dissolved oxygen measurements, in case this also might be related to a low oxygen event. That info was forwarded to the resource agencies as well. Follow-up investigations are in progress.

Annual Volunteer Appreciation Cruises on RV Tatoosh

In mid-July Olympic Coast National Marine Sanctuary (OCNMS) provided volunteer appreciation cruises aboard *RV Tatoosh* to COASST, NOAA marine-debris monitoring and Olympic Coast Discovery Center volunteers. Bob Boekelheide and Charlie Wright served as naturalists for three days, venturing out from La Push north to Carroll Island and Jagged Island via Cake Rock and Sea Lion Rock. Volunteers then visited the scenic Quillayute Needles off First and Second Beaches. The islands are substantial nesting colonies for several seabird species and haul-out sites for marine mammals.



Manx Shearwater

The cruises took place during mid-nesting and volunteers witnessed very active feeding flocks of gulls, alcids, cormorants, shearwaters, pelicans, and occasional harbor porpoises, suggesting forage fish are doing well this year. Nesting species of birds were likely sitting on eggs this time of the season and nesting colonies were very active. Several hundreds of Steller's sea lions along with few California sea lions hauled out at Sea Lion Rock and other islands, as well as harbor seals. Cruisers also spotted harbor porpoises, a sea otter and gray whale, depending on the date of their cruise.



Ancient Murrelet

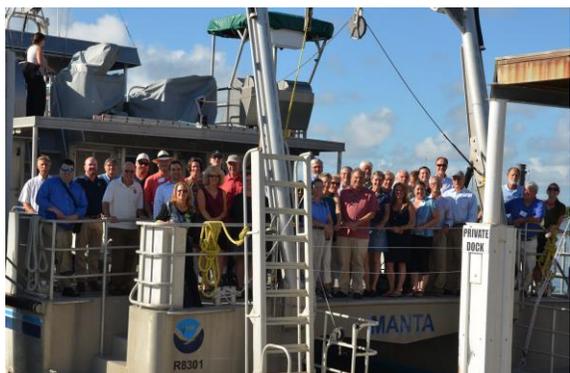
A total of 29 species of marine birds were noted, including the following: White-winged scoter, Surf scoter, Sooty shearwater, Manx shearwater, Brandt's cormorant, Double-crested cormorant, Pelagic cormorant, Brown pelican, Bald eagle, Greater yellowlegs, Black turnstone, Heermann's gull, Western gull, California gull, Glaucous-winged gull, Common murre, Pigeon guillemot, Rhinoceros auklet, Marbled murrelet, Cassin's auklet, Ancient murrelet, Tufted puffin, Caspian tern, Belted kingfisher, Western sandpiper, Least sandpiper, Semi-palmated plover, Black oystercatcher, and Peale's peregrine falcon.

REGIONAL / NATIONAL ONMS NEWS

Sanctuary Nomination Process Goes Live

Office of National Marine Sanctuaries (ONMS) published the final rule re-establishing the Sanctuary Nomination Process (SNP) on June 13. This process, developed with input from more than 18,000 public comments, allows for the American public to nominate nationally significant marine and Great Lakes areas as potential new national marine sanctuaries. More information is available on the Sanctuary Nomination Process webpage at www.nominate.noaa.gov. The publication was announced during Capitol Hill Ocean Week (CHOW) by John Podesta, Counselor to the President. The National Marine Sanctuaries Act of 1972 gave NOAA a mandate to identify, designate and protect marine areas of special national significance. The public's involvement in shaping the mechanisms used to nominate new sanctuaries will help NOAA in this mission and support the administration's goals of ensuring healthy coastal communities and economies. The nomination process will result in an inventory of areas NOAA will consider for national marine sanctuary designation, taking into account input and support from various local, regional and national interests and organizations. Consideration will also be based on a proposed area's national significance and the feasibility of managing it. NOAA may designate new sanctuaries and implement their associated regulations only after a nominated site has gone through a separate, highly public process that typically takes several years to complete.

National Marine Sanctuary Advisory Council Summit Held in Galveston



The 2014 National Marine Sanctuary Advisory Council Summit was hosted by Flower Garden Banks National Marine Sanctuary in Galveston, TX from June 2-4. The summit was structured to build upon previous discussions and outcomes from the 2012 National Marine Sanctuary Advisory Council Summit related to fostering support for marine protected areas through recreation, travel and tourism. Fifteen advisory council members, representing all 14 site-specific councils, participated in the meeting, including a day of overlap with the Marine Protected Areas Federal Advisory Committee (MPA FAC) Meeting. During this joint session, the MPA FAC and advisory council chairs and representatives developed a "Call to Action" on marine protected areas, recreation and stewardship that reflects their commitment to fostering and proactively managing

recreation in marine protected areas in order to invite people to play in marine protected areas; embrace the human dimension of ocean places; sustain ecosystem values; and engage recreational users as stewards. The MPA FAC formally adopted the "Call to Action" on June 4 and the chairs of the 13 national marine sanctuary advisory councils and Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council have been asked to take it back to their respective councils for consideration during summer 2014. Additional topics of discussion included sessions and open forums related to: defining the relevance of marine protected areas; leveraging connections, partnerships and investments; soliciting corporate sponsorship; refining the boundaries of the National Marine Sanctuary System; and setting our course for the near-term.

Office of National Marine Sanctuary Classic

On June 8 NOAA's Office of National Marine Sanctuaries (ONMS) kicked-off the Sanctuary Classic, a free, recreational fishing and photography contest in celebration of America's national marine sanctuaries and conservation-based fishing practices. The event, coordinated by The Sportfishing Conservancy, is co-sponsored by the Guy Harvey Ocean Foundation with support from ONMS. Participants are asked to photograph their "fishing fun" in any of the nation's 13 national marine sanctuaries and register online to win weekly prizes at www.sanctuaryclassic.org. At the end of the contest, eight photos will be selected by a panel of judges to win a \$500 Guy Harvey Youth Scholarship based on the representation of some or all of the following themes: Kids Fishing, Kids and Family Values, Kids in the Outdoors, Kids in the Sanctuaries and Kids' Conservation. All participants must follow all federal, state and local regulations, and agree to observe conservation and ethics guidelines provided by The Sportfishing Conservancy. Catch and release is strongly encouraged. The Classic runs all summer from June 8 through September 1, with the last submissions due on Labor Day.



Capitol Hill Ocean Week Covered by OceansLIVE Production Team

NOAA's Office of National Marine Sanctuaries (ONMS) covered all of the panels and announcements from Capitol Hill Ocean Week (CHOW) LIVE at oceanslive.org on June 10-12. For the second year, the OceansLIVE team hosted Capitol Hill Ocean Talk that took place in between the formal panels for CHOW, to provide an informal conversation on topics such as coastal resiliency, ocean health, communicating ocean science, marine education, and special protected places. CHOW has provided marine professionals, government officials, and ocean enthusiasts with unique venues to network with colleagues, advance policy goals, and mingle with ocean champions for more than a decade in Washington, D.C. Some of this year's guests included: Fabien Cousteau from Mission 31 and the Aquarius Habitat, Dr. Sylvia Earle, Dr. Holly Bamford, Dr. Steve White from Mystic Seaport, and Sebastien Troang from Conservation International. All of the CHOW panels and OceansLIVE shows will be archived at oceanslive.org.

NEWS COVERAGE

Groundbreaking For Proposed Port Angeles Marine Science Center Planned For Summer

A proposed 35,000 square-foot marine science center on the Port Angeles waterfront is scheduled for groundbreaking in July. Construction of a three-story structure housing marine science facilities and a conference center are planned once the sale to the developer, Neeser Construction Inc., is finalized. www.peninsuladailynews.com/article/20140528/news/305289979/groundbreaking-for-proposed-port-angeles-marine-science-center

Makah Whalers Commemorate 15th Anniversary of Last Legal Whale Kill

Fifteen years after returning from their tribe's last legal whale kill, some members of the crew of Makah whale hunters who led that hunt set out again into the bay aboard the Hummingbird whaling canoe on May 17. www.peninsuladailynews.com/article/20140518/NEWS/305189969/0/SEARCH

High Levels of Mercury Found in Fish at Olympic National Park's Hoh Lake

High levels of mercury have been found in fish from a lake in Olympic National Park and in remote areas of other Western national parks, proving that even the most isolated lakes and streams in the U.S. aren't immune to mercury pollution. www.peninsuladailynews.com/article/20140528/NEWS/305289976/high-levels-of-mercury-found-in-fish-at-olympic-national-parks-hoh

Kilmer Introduces Ocean Acidification Bill

Representative Derek Kilmer, a Gig Harbor Democrat, introduced a bill that would encourage federal agencies, such as NOAA, to contribute more funding to ocean acidification research. Scientists from universities and private groups would submit research proposals, with winning proposal awarded to carry out research. thedailyworld.com/news/kilmer-introduces-ocean-acidification-bill

Oceanographer, Top Surfer Ricky Grigg Dies at 77

Ricky Grigg, a former top-ranked big-wave surfer and oceanographer whose work confirmed one of Charles Darwin's theories about the origin of tropical islands, died at 77 years of age. www.huffingtonpost.com/2014/05/31/ricky-grigg-surfer-dies_n_5424582.html

Sea Star Disease Growing On Oregon Coast

A mysterious disease that causes sea stars to disintegrate is exploding on the Oregon Coast. Oregon State University marine ecologist Kristen Milligan said Wednesday that Oregon was largely spared last year as the disease known as sea star wasting syndrome spread in California, Washington, British Columbia and Alaska.

koin.com/2014/06/04/sea-star-disease-growing-on-oregon-coast

Rapidly Spreading Sea Star Disease Spurs Talk of ‘Localized Extinction’ In Oregon

A common species of sea star faces possible extinction along parts of the Oregon Coast because of a mysterious wasting syndrome that was scarcely present in the state’s marine waters two months ago.

earthfix.opb.org/flora-and-fauna/article/rapidly-spreading-sea-star-disease-spurs-talk-of-l

Oceans in Changing Climate Topic of Port Angeles Talk Friday

An evening concert of songs by Dana Lyons will kick off a full slate of weekend speakers and activities dealing with potential impacts of climate change on regional marine waters. “Our Oceans in a Changing Climate” event is sponsored by Olympic Climate Action.

www.peninsuladailynews.com/article/20140605/news/306059995/oceans-in-changing-climate-topic-of-port-angeles-talk-friday

Wow Photos: Two Orcas Leaping in the NW and more

Captain Jim Maya of Maya’s Westside Charters shared images of killer whales leaping, lunging, spyhopping and more.

blog.seattlepi.com/bigscience/2014/06/05/wow-photos-two-orcas-leaping-in-the-nw-and-more/#24036101=0&23307103=0&12348105=0&9102107=0&9399109=0

Massive Killer Whale Parade Off WA Coast

Two groups of orcas from the J pod and part of the L pod made an appearance together near Lime Kiln Lighthouse on San Juan Island recently. Of the orcas sighted was “Granny”, a female estimated to be around 103 years old.

www.kvue.com/story/news/2014/06/05/massive-killer-whale-parade-wa-coast/10028577

Anchor That Might Have Been Capt. Vancouver's Out of the Water For First Time in 222 Years

After 222 years underwater, a historic anchor believed to have snapped free from the ship that accompanied Capt. George Vancouver's late-18th-century Discovery expedition is out of the water. The anchor is now on display at Northwest Maritime Center in Port Townsend.

www.peninsuladailynews.com/article/20140610/NEWS/306109999/anchor-that-might-have-been-capt-vancouver-s-out-of-the-water-for

National Get Outdoors: Inaugural Expo Part of Nationwide Celebration

As part of National Get Outdoors Day, Olympic Coast National Marine Sanctuary will hosts a guided beach walk at Kalaloch Beach 4 on June 14th.

www.theolympian.com/2014/06/08/3171245/national-get-outdoors-day-inaugural.html?sp=/99/224/&ihp=1

U.S. Invites Public to Submit Nominations for Marine Sanctuaries

The Obama administration hopes to protect more pristine ocean habitat by galvanizing people to nominate areas of U.S. marine waters and the Great Lakes to be considered as new national marine sanctuaries.

news.nationalgeographic.com/news/2014/06/140610-marine-sanctuary-nominations-noaa-ocean-environment

Killer Whale Springer and Calf Spotted in Inside Passage

Whale researchers in Fitz Hugh Sound off British Columbia’s north coast spotted killer whale Springer (A73) in mid-June with her 1½-year-old calf, boosting whale recovery efforts.

www.vancouverun.com/technology/Killer+whale+Springer+calf+spotted+Inside+Passage/9930154/story.html

Are Harbor Porpoises Struggling to Survive?

An uptick in harbor porpoise strandings has local biologists looking for clues and wary that mid-May’s unusually high death toll may signal something other than the natural die-off of a population on the rise.

www.islandsweekly.com/news/262726741.html

Several Nations Announce Massive Marine Reserves in the Pacific

The United States, Palau, the Cook Islands and the Bahamas unveiled plans at Our Ocean conference in June. Kiribati announced that commercial fishing would end in the vast marine reserves in its Pacific Ocean territory by the end of the year.

news.nationalgeographic.com/news/2014/06/140617-pacific-marine-reserves-ocean-environment

Students Learn of Watershed Stewardship

Students from Five Acre School completed the nearly two-mile hike, water quality data analysis, beach exploration and hands-on education activities with Feiro Marine Life Center and Olympic Coast National Marine Sanctuary. They were one of many local classrooms partaking in the North Olympic Watershed (NOW) Science Program.

www.sequimgazette.com/community/263653031.html

22, 253 Comments Made Imperium and Westway EIS Scoping

City of Hoquiam and the state Department of Ecology officials are spending time reviewing thousands of comments related to the crude oil shipping facilities proposed for Grays Harbor by Westway Terminal Co. and Imperium Renewables. The agencies sought comments as part of the scoping process for an Environmental Impact Statement.

thedailyworld.com/news/local/22253-comments-made-imperium-and-westway-eis-scoping

Lower Elwha Klallam Tribe Earns Environmental Award; Presentation Set Later This Month in Seattle

The Lower Elwha Klallam tribe earned the E3 Washington President's Award, a statewide award for its environmental education and sustainability. E3 Washington is a nonprofit environmental organization which integrates education, environment and economy.

www.peninsuladailynews.com/article/20140617/news/306179992/lower-elwha-klallam-tribe-earns-environmental-award-presentation-set

Members of Congress Want Recognition For Washington Maritime History

South Sound members of Congress want a federal designation for the Puget Sound and Washington's coast that might lure tourists interested in maritime history.

www.theolympian.com/2014/06/30/3206957/members-of-congress-want-recognition.html?sp=/99/101/112/123/

Researchers Tag Fish to Track Movements in Elwha

Biologists involved in the restoration in the Elwha River have placed radio tags in more than 50 fish so their movements can be tracked. With Elwha Dam removed and about 30 feet of Glines Canyon Dam remaining, Pacific salmon and other species will soon have access to more than 70 miles of protected habitat within Olympic National Park.

www.thenewstribune.com/2014/07/20/3295583/researchers-tag-fish-to-track.html

Lawmakers Seek Federal Heritage Designation For Coasts to Promote Tourism

Four members of Washington state's congressional delegation are sponsoring legislation that would declare most of the state's marine shoreline a National Maritime Heritage Area.

www.peninsuladailynews.com/article/20140721/NEWS/307219987/lawmakers-seek-federal-heritage-designation-for-coasts-to-promote

Researchers Tag Fish to Track Movements in Elwha

Biologists involved in the restoration of Elwha River have placed radio tags in more than 50 fish in order to track their movements. Researchers will use this information to monitor fish populations and assess fish passage at the former dam sites and in upper canyons of the river.

www.thenewstribune.com/2014/07/20/3295583/researchers-tag-fish-to-track.html

Mystery of Holes in Hollywood Beach in Port Angeles Deepens As Pipe is Found to Have No Connection

Widening holes in the mudflats off Hollywood Beach are a growing mystery.

www.peninsuladailynews.com/article/20140714/news/307149992/mystery-of-holes-in-hollywood-beach-in-port-angeles-deepens-as-pipe

WEB SITE (<http://olympiccoast.noaa.gov/>)

Follow the OCNMS on Facebook!

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

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.

FUN, OCEAN-RELATED WEB SITES

National Oceanic & Atmospheric Administration

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

National Ocean Service

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

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.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's Pacific Marine Environmental Laboratory

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

OLYMPIC COAST NATIONAL MARINE SANCTUARY

Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Olympic Coast National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.olympiccoast.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html

The Office of National Marine Sanctuaries

The Olympic Coast National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 150,000 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 the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.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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