



Channel Islands National Marine Sanctuary Sanctuary Superintendent's Report



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A report for the Sanctuary Advisory Council

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ABOUT THIS REPORT

The Sanctuary Superintendent's Report highlights recent accomplishments and activities from program areas at the Channel Islands National Marine Sanctuary (CINMS). Provided to the Sanctuary Advisory Council in March, July, and November, the report is also available to the public online at channelislands.noaa.gov.

EDUCATION, OUTREACH, AND VOLUNTEERS

Channel Islands Sanctuary Superintendent Panelist at Oil Spill Forum in Santa Barbara

Chris Mobley participated in a public forum hosted by Santa Barbara's Citizens Planning Association and Environmental Defense Center on Thursday, October 7th. Speakers also included Congresswoman Lois Capps, Santa Barbara Mayor Helene Schneider, US Coast Guard Captain Roger LaFerriere, commercial fisherman Steve Dunn, and a representative from California's Office of Oil Spill Prevention and Response. Superintendent Mobley highlighted the sanctuary resources that would be affected by a spill, and the role sanctuaries and NOAA play in planning and preparedness, emergency response, and post-spill damage assessment. He also highlighted the problem of frequent small vessel groundings at the Channel Islands and encouraged boaters to take boater safety classes, to maintain their vessels in compliance with US Coast Guard standards, and to carefully consider marine weather and other factors when planning a trip to the Channel Islands. Earlier in the day, Chris Mobley also participated in an interagency meeting at the Santa Barbara Emergency Operations Center with federal, state, and local emergency response personnel and elected officials to discuss lessons learned from the Deepwater Horizon oil disaster. Capt. Roger LaFerriere, who was the incident commander for Louisiana during the event, emphasized the need for a unified, coordinated approach to the response that includes local government agencies and elected officials in addition to federal and state agencies. He noted that Santa Barbara County and California are perhaps the most prepared of any area in the United States. An article on the forum was published on October 8th by the Santa Barbara Daily Sound:

<http://www.thedailysound.com/100810SANTA-BARBARA-OIL-FORUM>

ABOUT THE SANCTUARY

Designated in 1980, the Channel Islands National Marine Sanctuary (CINMS or sanctuary) consists of an area off the coast of California of approximately 1,470 square miles adjacent to the following islands and offshore rocks: San Miguel Island, Santa Cruz Island, Santa Rosa Anacapa Island, Island, Santa Barbara Island, Richardson Rock, and Castle Rock, extending seaward to a distance of approximately six nautical miles. The islands vary in distance from 12 to 40 nautical miles offshore from Santa Barbara and Ventura counties in southern California. A fertile combination of warm and cool currents in this area results in a great variety of plants and animals including kelp forests, fish, invertebrates, marine mammals and sea birds. The sanctuary also contains a wealth of maritime heritage resources including Chumash Native American artifacts and over 100 historic shipwrecks. Human uses in the area include commercial and recreational fishing, marine wildlife viewing, boating, diving, kayaking, maritime shipping, nearby offshore oil and gas development, research and monitoring, and numerous educational activities. Sanctuary staff coordinate research, monitoring, education, outreach, emergency response, and community involvement programs, as well as the enforcement of regulations, to promote long term resource protection and compatible human use within the CINMS.

5th Annual CINMS MERITO Academy Educators Workshop: 30 Educators Trained to Teach Earth and Ocean Science to 950 Underrepresented Students

On September 17 and 18, thirty educators were trained during the 5th annual MERITO (Multicultural Education for Resource Issues Threatening Oceans) Academy Educators Workshop. The training was provided by MERITO Academy and CINMS staff, in partnership with the Channel Islands Marine Resource Institute. On September 17 teachers were provided with information on CINMS biogeography and history and trained on how to use the MERITO Academy Curriculum. On September 18th the teachers were on board NOAA's R/V *Shearwater* at Santa Cruz Islands where they learned about the collection and identification of plankton, water quality tests, and the use of a Remotely Operated Vehicle.

This school year through the MERITO Academy, 950 minority students from six cities along the Santa Barbara Channel region will receive science programming integrated into 4th to 8th grade level in public education and extended learning programs. MERITO Academy staff will provide in-class presentations to each participating class, field instruction, and partial sponsorship of field experiences to the participating educators and their students. The students are at public schools or extended learning programs certified for low income families and the majority is of Hispanic descent. The MERITO Academy is a marine education and conservation program currently funded by NOAA's B-WET program, CINMS, the Boys and Girls Clubs of Oxnard and Port Hueneme, and in-kind contributions by several organizations including the City of Oxnard, City of Santa Barbara, and The Nature Conservancy.

Sanctuary Education Team Hosts “Understanding Ocean Acidification” Workshops

The Sanctuary Education Team, a working group of the CINMS Advisory Council, along with the sanctuary, Channel Islands National Park, UC Santa Barbara Marine Science Institute, The Santa Barbara Museum of Natural History Ty Warner Sea Center, COSEE-West, hosted two "*Understanding Ocean Acidification*" workshops for 115 volunteers who interact with the public on whale watch boats, at outreach events or in an aquarium setting. Ocean Acidification is an emerging issue that could have far-reaching impacts on the health of our marine environment, and on the long-term sustainability of ecosystems that support human populations. The workshops provided volunteers with scientific background and current research on ocean acidification, case studies about successful aquarium ocean acidification education and outreach efforts, hands-on interactive activities demonstrating physical properties of ocean acidification, and an opportunity to interact with people and organizations that are making a difference in their communities by reducing energy use and developing environmentally sustainable practices. The first workshop was held on October 7, 2010 at Channel Islands National Park Headquarters in Ventura for 40 volunteers and the second workshop was held at the University of California Santa Barbara on October 23rd for 75 volunteers. A team of eight employees from Citrix Online, in collaboration with workshop partners, volunteered a day of their time to develop an "*Understanding Ocean Acidification*" web site (<http://cisanctuary.org/acidocean>) as part of their Global Volunteer Day of Impact. The web site has videos and PDFs of the workshop presentations, hands on activities, a place where visitors can make a pledge to help the ocean, and recommended resources on ocean acidification. The CINMS education team developed eight ocean acidification outreach kits (one for each volunteer group that participated in the workshops and one for each national marine sanctuary along the west coast).

CINMS and Channel Islands National Park Recognize Volunteers at Annual Event

CINMS and Channel Islands National Park recognized the accomplishments of hundreds of volunteers that collectively donated over 75,000 hours of service in Fiscal Year 2010. The Channel Islands Naturalist Corps program, a program administered by both agencies, trains and schedules 135 volunteers to provide interpretation of sanctuary and park resources on board whale watch trips, island hikes, and at community events. Over 20,000 volunteer hours are donated annually through the Channel Islands Naturalist Corps program. The volunteer of the year for the Channel Islands Naturalist Corps program, Joel Justin, was recognized for donating over 1,000 hours of his time and supporting many facets of the program, including

support for volunteer citizen science projects such as photo-identification research on blue and humpback whales. Volunteers from the Outdoor Santa Barbara Visitor Center were also recognized for representing the sanctuary and park at a public visitor center located at the Santa Barbara Maritime Museum overlooking the Santa Barbara Harbor. Volunteer members of the Channel Islands National Marine Sanctuary's Advisory Council were thanked for contributing about 1,200 hours of their time and expertise to advise the sanctuary on complex issues such as aquaculture, noise, water quality, ocean acidification, and whale ship strikes. Coastal Marine Archaeology Resources, an avocational group dedicated to discovering, recording, interpreting, monitoring, and protecting the unique maritime heritage of park and sanctuary waters, was thanked for supporting the mission of the park and sanctuary. National Marine Sanctuary Volunteer Years of Service pins for 5, 10, and 15 years were awarded at the event. The event, with over 220 volunteers and staff in attendance, was made possible with support from the Monterey Bay Sanctuary Foundation and the Western National Parks Association.

Local Staff and Students Participate in Aquarius Mission in Florida Keys

“If Reefs Could Talk”, a science and education mission took place in the Florida Keys National Marine Sanctuary (FKNMS) at Aquarius the world’s only underwater laboratory in the world October 12 – 21, 2010. The science mission was conducted by scientists from University of Connecticut and California State University Monterey Bay who focused on studies of biodiversity, climate change, and technology. For the education and outreach component, CINMS staff member Rocio Lozano-Knowlton, CINMS MERITO Coordinator provided daily bilingual content, coordination with school audiences and media outlets. Julie Bursek, Team leader for Education and Outreach, provided logistic and dive support. Lozano-Knowlton and Bursek connected this tropical expedition to local school audiences through live interactive broadcasts. On October 15th, thirty 4th graders from Adelante Charter School in Santa Barbara participated in a live interactive broadcast from Aquarius at the UCSB Gevirtz Graduate School of Education. Lozano-Knowlton led a discussion about coral reefs and diving technology in Spanish. Students prepared for the broadcast by learning about where coral reefs are found around the world on a Magic Planet globe, and were able to touch and learn about different types of coral. The event was filmed by Univision. Rachael Kondor from U.S. Congresswomen Lois Capps’ office attended the event and interacted with students.

Then on October 18, 2010 150 Montalvo Elementary 4th-5th grade students enrolled in the CINMS MERITO Academy program also participated in a live interactive broadcast. Because the five teachers had prepared their students well for the event they had thoughtful questions about the FKNMS coral reefs, and how the reefs might be affected by ocean acidification. Their inquiries were well informed by in-class activities that their teachers had previously conducted, and which are part of the MERITO curriculum. Lozano-Knowlton, and Mark Hullsbec, Aquarius Reef Base Operations Manager, answered student questions from inside the habitat Aquarius, while a Remotely Operated Vehicle displayed real time scenes of Conch Reef and the habitat to the students.

Media coverage of the Aquarius Mission was extensive and included local and international coverage, such as a Ventura County Star article and an interview Lozano-Knowlton did on a Spanish-language Puerto Rican science radio show.

Aquarius (<http://aquarius.uncw.edu>)

If Reefs Could Talk (<http://isc.gso.uri.edu/oceanslive>)

Media (<http://www.vcstar.com/news/2010/oct/18/ventura-students-chat-with-distant-scientists/>)
(<http://waloradio.com/web>)

MARITIME HERITAGE

Maritime Heritage Expedition Completed at Channel Islands National Marine Sanctuary

A 3-day expedition on board the NOAA R/V *Shearwater* to record submerged maritime heritage resources was completed in CINMS. Site surveys included searching for the F/V *Dante Alighieri II*, lost in 1938 at

Santa Barbara Island, as well as submerged sites below the original lighthouse structure at the northern end of the island. The science team then relocated to Valley Anchorage, Santa Cruz Island to search for submerged remnants related to the Cold War era shore facility at the anchorage. Although the team of divers did not locate a dive chamber used to splice wiring from the shore facility to offshore hydrophone monitoring stations that tracked enemy submarines and communicated with submerged U.S. Navy submarines, the dive team did locate two mooring buoys used at the site by General Motors' Delco-Remy scientists. The large submerged buoys now provide habitat for a diversified marine life community including giant sea bass. The shipwreck reconnaissance program, in collaboration with the Channel Islands National Marine Sanctuary, Channel Islands National Park, the Coastal Maritime Archaeology Resources volunteer organization, and the State of California, dates back to the 1980s.

RESEARCH AND MONITORING

Channel Islands National Marine Sanctuary divers complete NOAA Working Diver Training

Channel Island National Marine Sanctuary (CINMS) divers Julie Bursek, Team Leader for Education and Outreach, and Dani Lipski, Research Specialist, successfully completed NOAA working diver training in Seattle, Washington September 13-October 1 2010. The divers reviewed safety skills and learned about ship husbandry surveys, line tending, full face masks, emergency response, chamber dives, and dry suit diving. In addition, the divers got lots of experience working in cold, low visibility conditions and using underwater search techniques, tools, and lift bags. During the third week, the working diver class integrated with the dive master class and worked on in-water emergency response and rescue scenarios. Adding two divers to the working diver roster will help CINMS complete missions for research, education, and operational support.

Channel Island National Marine Sanctuary completes cruises to evaluate potentially excessive nutrient inputs to Santa Barbara Island MPA.

From Wednesday September 29th to Friday, October 1st the R/V Shearwater conducted a cruise to monitor nutrient flux in the kelp forest food web around Santa Barbara Island. Santa Barbara Island is a seasonal home for large aggregations of California Sea Lions – particularly in the southeast lee of the island in the Santa Barbara Island MPA. In the last three years subtidal observations have suggested a shift from ecotypes dominated by kelp to ones dominated by filamentous green algae and cyanobacterial mats. These shifts are distinct from common urchin barren habitat and are potentially indicative of a condition of excessive nutrient inputs called eutrophication. The island is far from the mainland nutrient inputs, nominating sea lions as the likely source of excessive nutrient. Divers collected water samples and algal and invertebrate grazer and predator tissue samples inside and outside of the sea lion rookery on Santa Barbara Island to identify the source of nutrient subsidies in the food web and assess the relative magnitude of the sea lions as a nutrient source. This year, distinct from years past, was both a significant la Nina – characterized by particularly low sea surface temperatures and anomalous upwelling patterns – and one of the densest kelp canopies in the area of concern. This is consistent with an a priori hypothesis that recent climate variability signals acted in synergy with long present nutrient inputs to drive the system to a eutrophied state in recent years. This project is a collaboration between the Channel Islands National Marine Sanctuary research department, the Santa Barbara Coastal LTER and the Department of Fisheries and Oceans Canada.

Staff Increase Aerial Survey Capacity through Partnerships

West Coast sanctuary resource protection and operations staff participated in a U.S. Coast Guard (USCG)-led training session focused on the capabilities of their C-130 aircraft. The training was held in Monterey on October 19 and included USCG Air Station Sacramento personnel. The USCG has been supporting national marine sanctuary resource protection priorities on the west coast by providing aerial assets, including both the C-130 and H-65 helicopters, to patrol and collect information on human uses and living marine resources distributions within sanctuary waters. This training focused on improving flight logistics and working with

the C-130 Airborne Sensor with Palletized Electronic Reconnaissance (CASPER) camera system, which includes GPS, video, and radar capabilities that can play an important role in enforcement of sanctuary regulations and collection of living marine resources data. Logistical issues hampered a planned flight aboard the C-130, however USCG personnel provided a presentation via a conference call that allowed sanctuary staff to learn more about the CASPER capabilities and discuss ways in which sanctuaries can obtain and utilize data collected by CASPER.

In addition, Sanctuary Staff are working with NMFS programmer Robert Holland to complete a rewrite of the aerial survey software for the Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP). The software rewrite will greatly expand the capabilities of the SAMSAP software, to include making it portable between various aircraft platforms and adaptable for use throughout the sanctuary system. The rewrite will include user customizable menus to allow easily customized surveys for living marine resources, vessels, visitor use, and marine debris. It will also include a separate customizable section for emergency response surveys. The NMFS Southwest Fisheries Science Center is contributing Mr. Holland's time to this important update of the 13 year old SAMSAP data collection program, one of the longest running long-term datasets in the sanctuary program.

CINMS and US Navy partner on Survey Flight in and around CINMS

On November 4, CINMS aerial operations personnel Natalie Senyk and Ben Waltenberger conducted the first in a year-long series of aerial survey missions to examine populations and densities of whales, and shipping traffic, within the Navy's Pacific Missile Test Range. US Navy's Naval Air Systems Command (NAVAIR) is providing funding for flights, and CINMS is providing expert personnel to fly surveys and process and analyze collected data. The partnership addresses the shared needs of NOAA and the US Navy to better understand whale distributions within the Pacific Missile Test Range, which overlaps with the sanctuary. The Navy will use collected data to enhance predictive models that can identify best areas to conduct defense tests to minimize environmental impacts. CINMS will be using the collected data to better understand whale distributions in the vicinity of the sanctuary, and as part of continued monitoring of whales and ship strikes. Due to new California Air Resources Board regulations affecting ship fuels, the majority of large vessel traffic in the vicinity of the CINMS region is currently transiting through the Pacific Missile Test Range in lieu of designated traffic lanes within the Santa Barbara Channel. The November 4th flight was conducted onboard an offshore equipped Bell Jet Ranger Helicopter using the SAMSAP software, and covered transect lengths totaling 470 nautical miles. In addition to marine mammal surveys, personnel recorded and photographed commercial fishing vessels and marine debris (mostly balloons). Future flights are scheduled at approximately two week intervals through 2011.

RESOURCE PROTECTION

CINMS staff present at California and the World Ocean Conference

Two staff from the Channel Islands National Marine Sanctuary (CINMS) presented talks this week at the 2010 California and the World's Ocean Conference, held in San Francisco. Dr. Steve Katz, CINMS Research Coordinator participated in a special marine protected area (MPA session: "Evolving MPA Monitoring: Aligning Science and Policy", and gave a talk on alternative approaches to monitor the MPA effects. Sean Hastings, CINMS Resource Protection Coordinator gave a talk entitled "Boats, Whales, and the Santa Barbara Channel: Collaborating to Reduce the Risk of Vessel Collisions with Large Whales" in which, on behalf of CINMS and co-authors Monica DeAngelis (National Marine Fisheries Service) and John Calambokidis (Cascadia Research) he explained associated science efforts and policy recommendations being applied to the issue. Occurring every four years, the California and the World Ocean conference is organized by the California Ocean Protection Council, the California Natural Resources Agency, and the California Environmental Protection Agency. Information about the conference is on line at <http://www.cce.csus.edu/conferences/cnra/cwo2010/index.htm>.

Sanctuary Staff

Santa Barbara Offices

Christopher Mobley *Superintendent*
Todd Jacobs *Deputy Superintendent for
Administration and Operations*
Michael Murray *Deputy Superintendent for Programs*

Amy Cale – *Web and Kiosk Developer*
LT Matt Davis – *Operations Officer*
Laura Francis – *Education Coordinator*
Sean Hastings – *Resource Protection Coordinator*
Dr. Steven Katz – *Research Coordinator*
Charles Lara – *Vessel Captain*
Dani Lipski – *Research Specialist*
Robert Schwemmer – *Regional Maritime Heritage Coordinator*
Natalie Senyk – *Physical Scientist*
Terrence Shinn – *Vessel Captain*
Ben Waltenberger – *Physical Scientist*
Rebecca Young – *Program Support Specialist*
Beatriz Ramirez – *Visiting Fellow, Ministry of Environment,
Chile (Nov. 1 through Dec. 15, 2010)*

Ventura County Field Office

Julie Bursek – *Team Leader for Education and Outreach*
Shauna Bingham – *Volunteer Program & Outreach Coordinator*
Tina Johnson – *Administrative Support Coordinator*
Rocío Lozano de Knowlton – *MERITO Program Coordinator*

ONMS West Coast Region Staff

William Douros – *Regional Director*
Lisa Wooninck – *Policy Coordinator*
Nicole Capps – *Management Support Specialist*
Dave Lott – *Operations Coordinator*

Local ONMS Staff

Claire Fackler – *West Coast Education Liaison*
Sarah Marquis – *West Coast Media Coordinator*
Matt Pickett – *ONMS Aviation Coordinator*

Learn More About Your Sanctuary

The Channel Islands National Marine Sanctuary produces the Sanctuary Superintendent's Report in conjunction with every other bi-monthly Sanctuary Advisory Council meeting. To learn more about the sanctuary please visit our web site at: <http://channelislands.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit: <http://channelislands.noaa.gov/sac/main.html>.

Office of National Marine Sanctuaries (ONMS)

The National Marine Sanctuary System consists of 14 marine protected areas that encompass 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. The ONMS, which manages the system, was established under the National Marine Sanctuaries Act of 1972. Visit the ONMS web site at: <http://sanctuaries.noaa.gov/>.

Channel Islands National Park

To learn about Channel Islands National Park visit their web site at: <http://www.nps.gov/chis/homepage.htm>.

GET INVOLVED AND STAY INFORMED!

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

Sign up for the CINMS listserv to receive email notices about upcoming sanctuary events, and public meetings of the Sanctuary Advisory Council and its working groups: <http://channelislands.noaa.gov/focus/list.html>

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