



# Channel Islands National Marine Sanctuary Sanctuary Superintendent's Report



Volume 9, Number 1

A report for the Sanctuary Advisory Council

March 2011

## ABOUT THIS REPORT

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

## EDUCATION, OUTREACH, AND VOLUNTEERS

### Sanctuary Educator Presents Career and Sanctuary Resources Information to Anacapa School

On January 13th, Sanctuary education coordinator Laura Francis presented an overview of the sanctuary, educational resources and careers to 60 students and teachers at Anacapa School in Santa Barbara, California. Anacapa School is an independent, college preparatory school for junior high and high school students in grades 7-12. The school is focusing on marine biology and the environment as their over-arching theme this year.

### Underwater Parks Day Celebration at Aquarium of the Pacific features Marine Protected Areas Presentation by CINMS

Julie Bursek, CINMS Team Leader for Education and Outreach, was the featured speaker at the Aquarium of the Pacific's "Underwater Parks Day Celebration" on January 15, 2011. The Underwater Parks Day is an annual event hosted by southern California marine science centers and aquariums, including the Aquarium of the Pacific in Long Beach, Cabrillo Marine Aquarium, Santa Monica Pier Aquarium, Ocean Institute in Dana Point, Sea Life Carlsbad Aquarium, and Birch Aquarium/Museum at Scripps in La Jolla. Over 80 aquarium visitors participated in two free lectures provided by Bursek. Her lectures provided an overview of the importance of marine protected areas, including CINMS, in protecting southern California marine resources.

### 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.*

## **Santa Barbara International Film Festival to screen CINMS documentary: *Beneath the Rainbow Bridge***

*Beneath the Rainbow Bridge: A Journey Through the Channel Islands National Marine Sanctuary* was screened twice at the Santa Barbara International Film Festival, January 27 through February 6, 2011. The recently completed 29-minute, high-definition documentary was written and directed by John Brooks from NOAA's Ocean Media Center, and produced in collaboration with the sanctuary. The film delivers a message of conservation and protection of both the cultural and natural resources. The film was part of the Santa Barbara Short Documentary program, and was shown on February 4th and 5th.

## **CINMS Participates in Multi-Agency Research Intertidal Network (MARINE) Annual Workshop**

The Multi-Agency Research Intertidal Network (MARINE) hosted a two-day workshop at University of California, Santa Barbara on January 28-29, 2011. MARINE is a partnership of agencies (including CINMS), universities and private groups committed to determining the health of the rocky intertidal habitat and providing this information to the public. The goals of the two-day MARINE workshop were to increase awareness of current issues threatening rocky intertidal resources and to address the effectiveness of MARINE monitoring protocols for measuring impacts from oil spills, climate change and ocean acidification. Researchers from NOAA's Office of Response and Restoration and NOAA's National Marine Fisheries Service were featured speakers at the workshop. Dani Lipski, Laura Francis and Julie Bursek participated in the workshop on behalf of CINMS.

## **CINMS MERITO Academy Kicks Off 2011 Student Field Trip Season**

From January 24-28, five field experiences were provided to 120 4th-5th grade level students enrolled in the CINMS Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy Program. The trips were led by CINMS MERITO program staff Rocío Lozano-Knowlton, Maripaula Valdes-Berriz and Charles Ellis, along with partner staff from The Nature Conservancy, City of Santa Barbara Creeks Division, City of Oxnard Wastewater treatment plant and Ormond Point Restoration Nursery. The field experiences focused on "Watershed Connections to Oceans" and took place at Ormond Beach wetlands in Ventura County and Sycamore creek in Santa Barbara County. Students visited the Wastewater Treatment Plant, tested creek water quality, identified birds, and participated in native plant restoration projects sponsored by either City of Oxnard or Santa Barbara City Creeks Division. Schools included Sunkist Elementary, Adelante Charter School, Rio del Norte Elementary, and Franklin Elementary, all of which are Title 1 Schools (>40% of students enrolled in free lunch program). The majority of students are minorities (85%), and 25% are English Language Learners. The MERITO Academy is a marine science and conservation program for Science, Technology, Engineering, and Mathematics (STEM) underrepresented and economically unprivileged students. MERITO is currently funded by a NOAA B-WET program grant and through support from the Amgen Foundation. The program's goals are to build stewardship for the ocean and inspire students to pursue marine or environmental science careers.

## **75 Students from Montalvo Elementary Connect Watersheds to Oceans in the Field through MERITO Program at CINMS**

On February 17, 75 4th grade students from Montalvo Elementary School participated in restoration activities at Ormond Beach wetlands, tested water quality at Ormond creek, identified and counted sea and pond birds and visited the local wastewater treatment plant. These students are participating in the Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy program at the CINMS, and their field experiences are part of planned "Watershed Connection to Oceans" activities that are first learned in the classroom. The trip was coordinated and instructed by the MERITO Academy program in partnership with Channel Islands Marine Resource Institute, The Nature Conservancy and City of Oxnard Water Works.

### **Sanctuary Educator Serves as a Panelist for League of Women Voters Ocean Forum**

On February 16th, Sanctuary Educator Laura Francis presented on the topic of ocean acidification as part of a "Protecting the Ocean Environment" Community Forum sponsored by the League of Women Voters. Laura discussed the issue of ocean acidification and research and educational efforts that are underway in the local area and she also provided an overview of the "Understanding Ocean Acidification" workshops for volunteers that took place last October. The other panelists included Greg Helms, Program Manager for the Ocean Conservancy who discussed marine spatial planning in the Southern California Bight and Kristi Birney, Marine Conservation Analyst with the Environmental Defense Center, who talked about issues related to whales and ship strikes. More than 40 participants gathered for the two hour community forum.

## **MARITIME HERITAGE**

### **Picture This, Channel Islands**

Maritime Heritage Coordinator Robert Schwemmer completed the post processing of 1,300 still images he has shot over the years of the CINMS and Channel Islands National Park. The images include aerials, surface and below the water shots as well as photos on the islands for the company *DezignSkape*. The design company is involved in exhibit development for the new Channel Islands Boating Center. Schwemmer is also providing still imagery, historic and modern, and writing label text for the new *Winfield Scott* shipwreck exhibit to be featured at the Santa Barbara Maritime Museum that will focus on selected first person accounts of the survivors shipwrecked on Anacapa Island in 1853. Schwemmer also provided images for ONMS for *Sanctuary Watch* and to the Maritime Museum of San Diego that will feature a cover shot for their Pacific maritime history journal *Mains' L Haul, Prehistory- Pacific Seafarers and Maritime Cultures*.

## **RESEARCH AND MONITORING**

### **Plumes and Blooms sampling closes out 2010 Channel Islands field season**

On December 16, 2010, the Plumes and Blooms project completed its 14<sup>th</sup> year of sampling in the Santa Barbara Channel, and NOAA's Research Vessels *Shearwater* and *Shark Cat* completed their field season for 2010. Plumes and Blooms is a joint collaboration among UCSB researchers at the Institute of Computational Earth System Science (ICESS), NOAA researchers at the Coastal Services Center (Charleston, SC), and the CINMS to combine field measurements of oceanographic data with satellite imagery of ocean color. This final day of field sampling ended an eventful field season for CINMS research vessels. Operational highlights from the field season included AUV (Autonomous Underwater Vehicle) mapping operations with NMFS, blue whale monitoring cruises, and seabird and oceanographic surveys around Santa Barbara Island. In addition CINMS vessels supported a host of ongoing monitoring and education/outreach projects. Over the winter of 2010-2011, R/V *Shearwater* underwent a midlife maintenance and repair period, replacing 15% of the hull as well as completing repairs to critical systems to keep the vessel safely operating until the next scheduled haul out in 2012. CINMS also acquired R/V *Sharkcat* in exchange for the R/V *R4107*, greatly reducing the costs of conducting quick response missions and light diving. The R/V *Xantu* was sold on GSA Auction, fetching 90% of its appraised value. The funds were invested in repairs to *Shearwater*. In total, 112 days at sea were conducted, 81 on R/V *Shearwater*, 11 on *R4107* and 20 on R/V *Sharkcat*.

### **CINMS research coordinator delivers research seminar at Scripps Institution of Oceanography in La Jolla, California**

On January 19<sup>th</sup> CINMS Research Coordinator Steve Katz presented a departmental research seminar at the Scripps Institution of Oceanography (SIO) in La Jolla, California. Dr. Katz's talk was entitled: *Habitat restoration for Endangered Species recovery - informatics in the gap between science and management*. The seminar highlighted work appearing in recent articles in the Journals: Fisheries and Restoration Ecology. This research has been key to understanding, for example, the process that leads to, and mitigations for the Government Accounting Office observation that, \$360M/year are spent on management actions in the Pacific Northwest with no ability to demonstrate any ecosystem outcomes. The seminar series is sponsored by the Biological Oceanography and Marine Biology curricular groups at Scripps. In addition to delivering the seminar, Dr. Katz conducted a series of meetings with SIO and Southwest Fisheries Science Center staff. Presentations like this one are increasingly important in demonstrating the presence of research activity and programs within the Office of National Marine Sanctuaries.

### **CINMS research department participates in Southern California Marine Mammal Workshop at Pacific Life Foundation in Newport Beach California**

On January 21<sup>st</sup> & 22<sup>nd</sup> the Pacific Life Foundation hosted a workshop to share research findings on whales in the Southern California region. The workshop consisted of poster sessions, plenary presentations and four symposia composed of oral presentations and panel discussions. The four symposia covered: research collaboration and data sharing, new technologies in marine mammal research, environmental and human impacts on marine mammals, and vessel strike reduction in southern California. CINMS Research Coordinator Steve Katz was a participant in the panel on vessel strike reduction and presented information on CINMS's current research into ship traffic patterns and ship behavior. Also at the panel were representatives from the National Marine Fisheries Service, United States Coast Guard, shipping industry, as well as researchers from the academic (Scripps Institution of Oceanography) and NGO (Cascadia Research) communities. Highlights included the presentation of a risk assessment model developed by NMFS to estimate the risk associated with co-occurrence of whales and ships, and research investigations that suggest the ship strike issue may not be as significant a resource protection issue as has been suggested in recent years.

### **Research conducted by CINMS staff on Global Climate Change published in Journal PLoS-ONE**

CINMS research coordinator, Steve Katz, was a co-author on a multi-national authorship group on a paper documenting climate variability in Lake Baikal, Siberia. Dr. Katz analyzed a 60-year record of water temperature for Lake Baikal – the World's oldest, deepest (at over a mile to the bottom) and most biologically diverse freshwater lake – collected by three generations of Russian scientists. The research group discovered that many climate variability signals can be found in the data simultaneously. For example, changes in Lake Baikal water temperature correlate with monthly variability in El Nino indexes that reflect sea surface temperatures over the Pacific Ocean tens of thousands of kilometers away. At the same time, Lake Baikal's temperatures are influenced by strong interactions with Pacific Ocean pressure fields described by the Pacific Decadal Oscillation. Lake Baikal's seasonality also tracked decadal-scale variations in the Earth's rotational velocity. Teasing these multiple signals apart in this study illuminated both the methods by which we can detect these overlapping sources of climate variability and the role of jet stream variability in affecting the local ecosystem.

### **Cetacean Aerial Surveys Providing Sanctuary and US Navy with Whale Distribution and Shipping Traffic Data within Sensitive Region**

CINMS is continuing a year-long partnership with the US Navy's Naval Air Systems Command (NAVAIR) to examine populations and distributions of cetaceans, as well as shipping traffic, within the Navy's Pacific Missile Test Range. Surveys are occurring approximately bi-weekly. The project 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. In addition, 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. Preliminary data indicate that a variety of species use the region, including humpback whales, gray whales, and several unidentified medium and large-sized cetaceans. The staff is using a newly revised Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP) software program to collect survey data and record sightings information. On a recent survey, aerial observers noted a ship adrift, apparently stalled while attempting to switch from bunker fuel to California required clean diesel fuel. The ship was perpendicular to the traffic pattern with ships transiting in both directions on either side of it. There has been an ongoing discussion with the US Coast Guard and the Marine Exchange of Southern California regarding the potential dangers of ships adrift while switching fuels in this unregulated traffic area.

### **Channel Islands Research Activities Panel Discussed 2011 Research Activities**

The CINMS Research Activities Panel (RAP), a working group of the Sanctuary Advisory Council, met on February 11, 2011 to discuss upcoming field activities. Many participants reported on declining field activities as a result of budget cuts to their program and the unavailability of CINMS' R/V Shearwater. The group also discussed the status of black, red, green, and pink abalone recovery at the islands, the status of invasive brown algae, and projects currently underway that could address marine reserve effectiveness in anticipation of a 10-year review of the state marine reserves at the Channel Islands. CINMS research staff provided a presentation on prioritization of research activities and distributed the Science Needs Assessments to the RAP. About fifteen researchers and four members of the public attended the meeting at University of California, Santa Barbara.

## **RESOURCE PROTECTION**

### **Sea Grant Fellow Assigned to Channel Islands National Marine Sanctuary**

Kristen Hislop, a California Sea Grant fellow, has been placed at the CINMS for a one year fellowship assignment. Sanctuary staff are fortunate to have Kristen helping out in the Resource Protection department where she is assisting Sean Hastings and others with enforcement work, marine protected areas, whale ship strikes, sanctuary advisory council support, and other tasks. Kristen comes to CINMS highly recommended, with a strong academic background from UCSB's Bren School of Environmental Science and Management (MS degree in June 2010, specializing in coastal marine resources management), and important experience working with the Environmental Defense Center, a local non-profit organization. The funding for her fellowship was made possible through external financing, which is essential at this time of tight budgets. Funding will come primarily from California Sea Grant, with a modest match from the Monterey Bay Marine Sanctuary Foundation and grant funds from the Resources Legacy Fund Foundation.

### **Cooperative Enforcement Training**

CINMS resource protection coordinator, Sean Hastings, and California Sea Grant fellow, Kristen Hislop, were guest speakers for a United States Coast Guard training at Channel Islands Harbor Station on Tuesday, February 15, 2011. The Sanctuary's role in the training was to brief the group on sanctuary regulations, enforcement issues, and an overview of Sanctuary boundaries, operations, user groups, and cooperating agencies. Hislop presented on enforcement challenges facing the Sanctuary, such as multi-agency jurisdiction over marine protected areas and vessel groundings. Hastings briefed the group on important regulations in the Sanctuary and emphasized the importance of working cooperatively with the Coast Guard, as well as the National Park Service and the Department of Fish and Game, to ensure enforcement goals are reached. Additionally, Hastings discussed the management challenge of multiple user groups in the Sanctuary by highlighting the issue of ship strikes on whales in the Santa Barbara Channel.

### **CINMS Staff Address Whale Ship Strike Issue at Shipping Industry “Environmental Intelligence” Conference**

CINMS resource protection coordinator, Sean Hastings, presented at a seminar series event hosted by the North American Marine Environment Protection Association (NAMEPA) aboard the Queen Mary in Long Beach, California on February 23, 2011. The seminar, entitled “*Environmental Intelligence in Shipping: The Winds of Change on the West Coast*,” focused on marine mammal protection, vessel waste streams, vessel emissions, and oil spill response in the shipping industry. Hastings was invited to speak about marine mammal protection in regards to ship strikes on endangered whales, a focal issue for sanctuaries in California following a number of strikes near CINMS and along the central coast. West coast sanctuaries, coordinating with NMFS, have been reaching out to the shipping industry to explore possible solutions to the ship strike issue. Hastings was joined on a panel by Chris Yates from the NMFS southwest regional office, and Captain Richard McKenna from the Marine Exchange of Southern California. The NAMEPA seminar provided a valuable opportunity to engage industry in discussions about CINMS-specific and regional sanctuary interests, particularly whale ship strikes and how the shipping industry might help, among a variety of maritime industry members, United States Coast Guard leadership, and representatives from various other state and federal government agencies. During his presentation, Hastings emphasized the importance of collaboration between west coast sanctuaries and shippers. He also encouraged the audience to engage in discussion of possible solutions to the ship strike issue. Details about NAMEPA are online at [namepa.net](http://namepa.net).

## **SANCTUARY ADVISORY COUNCIL**

### **2011 Priorities Set for CINMS Advisory Council**

On January 21 the CINMS Advisory Council developed a work plan for 2011. Setting priorities for the year, the Advisory Council remains in touch with important issues emerging within or adjacent to the Sanctuary. At the top of the list are several topics that will receive the Council's primary focus in 2011:

- Developing recommendations for enhancing external support (grants, partnerships, etc.);
- Tracking and commenting on a Coast Guard Port Access Route Study in the Sanctuary region;
- Learning from an oil spill drill planned by the Coast Guard based on a ship collision scenario near the Sanctuary;
- Learning about and discussing the Sanctuary's science needs assessment;
- Ecological and socioeconomic monitoring of Channel Islands marine protected areas;
- Implications of additional MPAs recently designated along the southern California coast;
- Ocean acidification (further developing strategies for education and outreach, and following-up on previous Council recommendations, learning about Oxygen minimum levels);

- Energy-related projects (development of a recommendations report by the Council's Conservation Working Group; and
- Learning more about acoustics science.

Full work plan details will be posted on line at: [channelislands.noaa.gov/sac/report\\_doc.html](http://channelislands.noaa.gov/sac/report_doc.html).

### **New and Returning Members Welcomed to CINMS Advisory Council**

Staff at CINMS are excited to begin working with eleven dedicated, civic-minded community members who were appointed in March to the Sanctuary Advisory Council:

- Phyllis Grifman, Public-At-Large member (reappointed). Associate Director of USC Sea Grant.
- Greg Helms, Conservation seat alternate (reappointed). Channel Islands Program Manager, The Ocean Conservancy.
- Debra Herring, Non-consumptive Recreation member (reappointed). Channel Islands Naturalist Corps.
- Eric Kett, Public-At-Large member (reappointed). SeaZen Marine Consulting and Guiding.
- Linda Krop, Conservation member (reappointed). Chief Council of Environmental Defense Center.
- Richard McKenna, Business member (reappointed). Executive Director of Marine Exchange of Southern California.
- Stephanie Mutz, Commercial Fishing seat alternate (new). Commercial fisher; Research Coordinator, Commercial Fishermen of Santa Barbara.
- Nicole Peters, Non-consumptive Recreation seat alternate (new). Director of Operations at Deckers Outdoor Corporation; sailor.
- Bruce Steele, Commercial Fishing member (reappointed). Commercial Diver/Fisher.
- Dr. Mark Steele, Research seat alternate (reappointed). Associate Professor at California State University Northridge.
- Dr. Robert Warner, Research member (reappointed). Professor of Ecology, Evolution and Marine Biology at University of California, Santa Barbara.

The new members will bring a diversity of sanctuary experience and community leadership skills to help the Advisory Council develop sound management advice. Returning members will provide expertise and important continuity for the group. The appointed Council members will serve two-year terms beginning at the March 18th Advisory Council meeting.

## 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. Stephen 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*  
Kristen Hislop – *California Sea Grant State Fellow, 2011*

### 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

Carol Bernthal – *Acting 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>

## - CONTACT INFORMATION -

### Channel Islands National Marine Sanctuary

Santa Barbara Office  
Santa Barbara Harbor  
113 Harbor Way, Suite 150  
Santa Barbara, California  
93109  
Phone: (805) 966-7107  
Fax: (805) 568-1582

Oxnard Office  
Channel Islands Harbor  
3600 S. Harbor Blvd., Suite 2-202  
Oxnard, California  
93035  
Phone: (805) 382-6149  
Fax: (805) 382-9791