



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 or sanctuary). This report is provided to the Sanctuary Advisory Council (SAC) in March, July, and November, and is also available to the public online at channelislands.noaa.gov.

Eight Local Governments Recognize CINMS for World Oceans Day

In recognition of World Oceans Day and in support of the Channel Islands National Marine Sanctuary, resolutions and proclamations were recently adopted by eight local government bodies between May 31st and June 14th. These actions were taken by all of the local governments bordering the sanctuary: the Santa Barbara County Board of Supervisors, Ventura County Board of Supervisors, Santa Barbara City Council, Goleta City Council, Carpinteria City Council, Ventura City Council, Oxnard City Council, and Port Hueneme City Council. The resolutions were tailored by each entity, but generally recognized that the sanctuary develops critical partnerships and collaborations across agencies, institutions, and stakeholder groups throughout the region to further protection, research, monitoring, education, and outreach for precious marine resources, and provides education and outreach opportunities to citizens and students throughout the region. Sanctuary Superintendent Chris Mobley and other staff were present to receive the resolutions, express thanks for the recognition, and underscore the importance of working together with local communities.

EDUCATION, OUTREACH, AND VOLUNTEERS

Take Pride in America Program Honors Channel Islands Naturalist Corps

The Channel Islands Naturalist Corps volunteer program will be named the Take Pride in America Outstanding Federal Volunteer Program during an award ceremony in Washington DC this July. Take Pride in America, a nationwide partnership program authorized by Congress to promote the appreciation and stewardship of our nation's public lands, hosts the event which honors excellence in volunteerism. The Channel Islands Naturalist Corps was recognized for its

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.

impact in the Channel Island region. Jointly coordinated by the Channel Islands National Marine Sanctuary and the Channel Islands National Park, the program engages over 140 volunteers who are specially trained to educate passengers on whale watch tours and island hikes. Volunteers also attend community events where they engage with over 300,000 people annually and take part in citizen science such as collecting marine mammal sighting data. For more information about the Take Pride in America Awards please visit <http://www.takepride.gov/aboutus.html>.

900 Minority Students and 29 Educators End Year of Marine Science and Conservation Experiences with MERITO Academy at Channel Islands National Marine Sanctuary

On June 17, The CINMS Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy Program completed activities for the 2010-2011 academic year. This ongoing Earth, ocean science and conservation education program for 4th-8th grade students began on September 17, 2010 and ran through June 17, 2011 under the coordination of MERITO Academy Program Manager Rocio Lozano-Knowlton, with assistance from Maripaula Valdes-Berriz and Charlie Ellis. Throughout the school-year, the team trained and provided support to 29 minority-serving educators and provided field instruction to 900 STEM (Science, Technology, Engineering and Mathematics) underrepresented students. This completed the successful program's seventh year of operations.

Throughout the school year the MERITO Academy Program again provided significant and valuable levels of service to local communities. Educators were provided with three days of training on the use and implementation of MERITO Academy curriculum, and given access to supporting materials and supplies. Participating students received bilingual in-class presentations at 30 classrooms, transportation sponsorship for their field trips, and two core field experiences for each class instructed by MERITO, CINMS and Channel Islands Naturalist Corps volunteers. A total of 55 MERITO Academy field trips took place during the school year along the Santa Barbara Channel region at local beaches, wetlands, creeks, and culminating at the Channel Islands National Marine Sanctuary and Channel Islands National Park.

Program participation levels and demographics have been closely tracked for the year. Participating students reside in five cities along the Santa Barbara Channel area (Oxnard, Ventura, Thousand Oaks, Port Hueneme and Santa Barbara). 70 percent of participating educators are certified teachers working in public or charter schools and 30 percent lead after-school programs at the Boys and Girls Clubs of Oxnard and Port Hueneme. All 900 students attend Title 1, Head Start, or Magnet schools. Of these, 80% are of Hispanic background, 15% Caucasian, 2% Native American (mainly Mixtecos), 2% Asian and 1% African American.

All educators and students completed pre-program and post-program tests to evaluate program effectiveness. This summer the program evaluation data will be analyzed by an external evaluator, made possible with grant funding from NOAA's B-WET Program.

Throughout the year the MERITO Academy Program was assisted by sanctuary volunteers (Channel Islands Naturalist Corps volunteers Mary Flam and Judy Willens) and staff (Claire Fackler, Laura Francis, Sean Hastings and Kristen Hislop). The MERITO Academy for 2010-2011 was funded by grants from NOAA's B-WET program and the AMGEN Foundation, as well as support from CINMS and the National Marine Sanctuary Foundation.

The MERITO Program has continued to leverage support from NOAA's BWET Program and other outside entities to successfully advance NOAA's Education Mission, specifically with respect to promoting environmental literacy and a diverse workforce in ocean, coastal, Great Lakes, weather, and climate sciences, and by encouraging stewardship and increasing informed decision making for the Nation. An ongoing challenge is the continued primary dependence on soft-money funding of the program.

Ocean For Life Field Studies Program Coming to CINMS

Staff members at the CINMS are preparing to host 30 high school students from July 14-26 as part of the Ocean For Life program, including 18 students from Middle Eastern countries and 12 students from North America. The mission of the Ocean For Life program is to provide high-quality, immersive ocean field

studies and follow-on education programs to facilitate cross-cultural learning, appreciation and lasting experiences between multi-national students. The program is designed around three main themes: a sense of place, interconnectedness, and ocean conservation and stewardship. At CINMS, these themes will be highlighted through a variety of activities focusing on ocean science, cultural exchanges, and youth media projects. Students will document their experiences by creating personal “youth media projects”. Through video or still photography, they will engage in daily “media camp” sessions, mentored by staff from the National Geographic Society and graduate students from American University's Center for Environmental Filmmaking. Sanctuary staff members are excited to take the students out to the Channel Islands for several days, engage them in hands-on educational projects along the Santa Barbara coast, spend time with them at the Chumash Discovery Village in Malibu, and teach them about shipping operations alongside the busy ports of Los Angeles and Long Beach at the Marine Exchange of Southern California.

Sanctuary Co-sponsors “Your Changing Ocean” Event at UCSB Focusing on Ocean Acidification

On May 4th, CINMS, University of California Santa Barbara Marine Science Institute, Santa Barbara Museum of Natural History Ty Warner Sea Center and the Sanctuary Education Team hosted a hands-on lab tour and open house focusing on ocean acidification. Eighty participants from Long Beach, Oxnard, Ventura and Santa Barbara came to the evening event. Participants included families, volunteers, school teachers, students and interested public. The evening began with an introduction to the workshop, an overview of the future Outreach Center for Teaching Ocean Science (OCTOS), and an introduction to the science behind ocean acidification. The participants were then split up into 5 groups and rotated through learning stations, including outreach activities demonstrating ocean acidification developed by the Center for Ocean Science Education Excellence, touch tanks with examples of local organisms potentially impacted by ocean acidification, a demonstration of global ocean currents, depictions of sea surface temperature and ocean change on a Magic Planet spherical display, and a tour of Dr. Gretchen Hofmann's research lab. This pilot event was put together to increase awareness of local ocean issues and to demonstrate the types of programming and teaching strategies that will take place at OCTOS. OCTOS is a marine science education center currently under construction by the Marine Science Institute and Channel Islands National Marine Sanctuary. Funding is in place for the shell of the OCTOS building, and the university is working develop community partnerships to raise funds to complete the exhibits.

Channel Islands Argonaut Students Present Poster Projects to CINMS Advisory Council

On March 18th, four 5th grade Channel Islands Argonaut students from Ramona Elementary School in Oxnard, California, presented their science poster projects at a public meeting of the SAC. These students are also enrolled in the CINMS Multicultural Education for Resource Issues Threatening Oceans (MERITO) Academy program. Students Alisa Gonzalez, Alex Gutierrez, Yuri Cruz and Janette Santos presented poster projects related to the Chumash people, leopard sharks, blue whales, and the Pacific octopus, respectively. Although this the 3rd year that this Title 1 school has participated in the MERITO Academy program, it is the first year students applied to be Channel Islands Argonauts. The Channel Islands Argonauts program is a partnership between the Ventura County Office of Education, Channel Islands National Park, and CINMS and is supported by NOAA’s BWET program.

Channel Islands Argonauts end Year-long Experience Exploring Anacapa Island

On June 2nd, twenty-three 4th-7th grade Channel Islands Argonaut students hiked the trails of eastern Anacapa Island and participated in a Channel Island “Live Dive” show, culminating their year-long experiences as ocean stewards of the Channel Islands National Park (CINP) and CINMS. The Argonaut students had previously participated in a number of environmental services throughout the year including community events, beach clean ups, research and presentation of poster projects. The trip to Anacapa Island allowed them to experience in real life the nesting and hatching of thousands of western gulls along the Anacapa Island trails, and to interact with the scientific divers during the Park’s SCUBA dive at Landing

cove. The students asked the divers questions, who showed them the diverse fauna and habitats of the dive site. The Channel Islands Argonaut project is part of NOAA's B-WET program, sponsored by Channel Islands Live!, which is a partnership program of Channel Islands National Park, Ventura County Office of Education and the CINMS.

Cabrillo High School Aquarium Tourism Classes Focus on Kelp Forest Communities of CINMS

Julie Bursek, CINMS Team Leader for Education and Outreach, was the featured speaker at Cabrillo High School Aquarium in Lompoc, California on March 11, 2011 to discuss the importance of kelp forests as critical sanctuary habitat for fish and invertebrates. Bursek presented to over 100 students enrolled in the high school's tourism classes, which helps them learn how to promote the school's aquarium and featured exhibits to local community visitors. The sanctuary installed a kiosk exhibit at the aquarium in 2010 to provide visitors with information about the Channel Islands and Santa Barbara Channel. Bursek also provided examples that link information about kelp forest communities with the kiosk exhibit. For information about the Cabrillo High School Aquarium visit <http://www.cabrilloaquarium.org/index.html>

\$648,450 Awarded for Channel Islands Boating Center in Southern California

On April 14, the County of Ventura received official notification from the California Department of Parks and Recreation's Nature Education Facilities Program (NEF) that they were awarded \$648,450 in construction funds for the Channel Islands Boating Center (CIBC). Funding for this \$93 million grant program was made available through the Parks and Nature Education Facilities chapter of Proposition 84 (a California voter initiative), with funds appropriated in the 2009/10 Budget Act. More than 300 applications were received by NEF with almost \$1 billion in requests. The funds awarded to the County of Ventura will be used for the build-out of the CIBC first floor lobby exhibit area, and an educational exhibit that features 3D bathymetry of the Channel Islands region including the CINMS. To date, the County of Ventura has raised 80% of funds necessary to complete construction of CIBC. NOAA's Office of National Marine Sanctuaries is funding the design of exhibits for the new boating center and the Channel Islands National Marine Sanctuary will have a significant presence in the new facility. The CIBC will provide boater education for youth and lifelong learners in Ventura County, California. In addition to the sanctuary, CIBC is supported by partnerships with California State University Channel Islands, Ventura County Harbor Department, and the Channel Islands Harbor Foundation. Construction is scheduled to begin in Fall 2011.

CINMS and National Park Partnership Reach over 30,000 People at 2011 Earth Day Events

A partnership between the CINMS and Channel Islands National Park enabled both agencies to provide comprehensive outreach to over 30,000 people from Los Angeles to Santa Barbara in celebration of Earth Day 2011. The success of this partnership is made possible with support from volunteers in the Channel Islands Naturalist Corps program. This program is administered jointly by the sanctuary and park to train and manage over 140 volunteers to represent both agencies on local whale watch tours, island hikes, and at community events. The sanctuary and park staff and volunteers participated in several Earth Day events: Aquarium of the Pacific's Earth Day celebration; Ventura's Earth Day Eco Festival; Leo Carillo State Park's 15th Annual Earth Day Festival; and Community Environmental Council South Coast Earth Day Festival.

CINMS Participates in National Safe Boating Week Event

On Saturday, May 14, 2011, CINMS participated in the 6th Annual Safe Boating Expo at the U.S. Coast Guard Channel Islands Station in Oxnard, California. The Expo is part of National Safe Boating Week, which aims to educate and inform the boating public about boating safety, specifically life jackets. The event included search and rescue demonstrations using vessels and helicopters from the U.S. Coast Guard, Ventura County Fire Department, Ventura County Sheriff, Oxnard City Fire Department, and Channel Islands Harbor Patrol. The National Weather Service, Coast Guard Auxiliary, Power Squadron, Navy Sea Cadets, American Red Cross, and Cal State University Channel Islands also participated in the event. Over

500 local boaters and families attended the Expo. Information about sanctuary regulations, Channel Islands Marine Protected Areas, and access to the islands was distributed to event participants.

CINMS MERITO Academy Awarded \$5,000 Grant by U.S. Fish and Wildlife Service for Student Phenology Field Studies

On May 6 CINMS MERITO Academy was awarded a \$5,000 grant from the U.S. Fish and Wildlife Service. During the 2011-2012 school year the grant will support the transportation of 500 Ventura County students to Ormond Beach Wetlands and the Santa Monica mountains, where they will engage in bird and plant phenology studies. These field activities, which were developed for the MERITO Academy curriculum module on ocean threats in 2009, will be led by MERITO Academy and USFWS staff. The activities focus on climate change effects on coastal plants and shore birds. The grant funding will allow CINMS and USFWS to continue their partnership, furthering their shared goals of connecting people with nature while building stewardship for the sanctuary, the ocean and local environments.

MERITO Academy Program brings 300 Minority and STEM Under-Represented Students Meaningful Ocean and Island Experiences at and near Channel Islands National Marine Sanctuary

Between April 1 and May 27, 2011, 298 minority students enrolled in the CINSMERITO Academy enjoyed first hand island, wetland and coastal monitoring experiences at various sites. The trips were coordinated and instructed by MERITO Academy staff and Channel Islands Naturalist Corps volunteer Judy Willens. All of the students are enrolled in Title 1 or Head Start schools (schools in low income areas) in Ventura and Santa Barbara counties. The field experiences are an important part of the MERITO Academy school year programming, which also includes educator training and professional development, sponsorship of field trip transportation, coordination of field trips, and program content development. Field experiences took place between April 1 and June 10, and included activities related to restoration, water quality, bird identification, among others.

CINMS MERITO Program featured in Thank You Ocean Campaign Podcast on World Oceans Day

On June 8th, World Oceans Day, the sanctuary's MERITO program was featured during a Thank You Ocean Campaign podcast, reaching thousands of members and subscribers including participants at the National Marine Sanctuary Foundation's Capitol Hill Ocean Week. This year's World Oceans Day theme is "Youth: The Next Wave for Change." In the podcast, the MERITO program was introduced as a marine conservation outreach effort comprising approximately twenty-five regional groups that participate in ocean and watershed education programs serving multicultural audiences, primarily focusing on students underrepresented in STEM (Science Technology, Engineering and Mathematics) residing near the Channel Islands and Monterey Bay national marine sanctuaries. The Thank Your Ocean Campaign is a nonprofit partnership supported by the State of California, NOAA's Office of National Marine Sanctuaries, and the Ocean Communicators Alliance. The campaign's mission is to raise awareness of the benefits the ocean provides to us and to identify ways each of us can help protect the ocean in our everyday lives. To see or listen the video podcast visit thankyouocean.org/news/podcasts. Additional information about the Thank Your Ocean Campaign is online at www.thankyouocean.org.

Tidepool Application (App) for iPhone being developed by CINMS Educator, University of California Santa Barbara (UCSB) and Citrix Online

On June 27, CINMS education coordinator Laura Francis worked with researchers and educators at UCSB and a team of six volunteers from Citrix Online (including designers, software engineers, editors, and project managers) to begin the process of creating a an "Exploring California Tidepools" application for the iPhone. The project is part of several volunteer days of global impact where teams from Citrix Online donate time to community stewardship projects. The App will incorporate photos and species descriptions from the Office of National Marine Sanctuaries' Long term Monitoring and Experiential Training Program for Students

(LiMPETS) web site. It will also include frequently asked questions, tide information, and tidepool etiquette. It is expected that the App will be completed by the end of August 2011.

MARITIME HERITAGE

New Shipwreck Brochure released for CINMS

From prehistory to modern times, maritime cultures have traversed the waters surrounding the Channel Islands. More than 150 historic ship and aircraft have been reported lost within the waters of the sanctuary and Channel Islands National Park. Today, sanctuary and park archaeologists and partners study shipwrecks to learn more about these relics of history, shedding new light on the remarkable stories of our maritime heritage. A new CINMS shipwreck brochure has just been released, and is highly illustrated with images of historic aircraft and ships lost at the Channel Islands dating back to the California Gold Rush. Also featured in the brochure are recent underwater photographs of shipwreck sites, as well as an underwater site map of the shipwreck *Cuba*, representing ongoing archaeological monitoring and surveys being conducted in the sanctuary and explaining how maritime archaeologists map submerged wrecks. A section on where you can “visit shipwrecks without getting wet” showcases recently completed shipwreck exhibits at the Santa Barbara Maritime Museum. Also provided is important information on regulated activities relevant to the sport diving community and how divers can share new shipwreck discoveries with the sanctuary. In an effort to reach a broader audience and reduce government printing costs, an electronic version of the shipwreck brochure will also be made available to the public through the sanctuary’s website. The new outreach product was designed in accordance with updated ONMS best practices, and will serve as a product template throughout the sanctuary system.

CINMS Shipwreck *Winfield Scott* History Shared with Public

The opening of the new CINMS exhibit featuring the shipwreck *Winfield Scott* at the Santa Barbara Maritime Museum, created a good deal of community and media interest. Maritime Heritage Coordinator Robert Schwemmer was interviewed by national public radio affiliate KCLU, airing on May 3rd (see http://www.kclu.org/news/local/story.php?story_id=933), and corresponding with his public lecture “*Winfield Scott*, Life and Death of California Gold Rush Steamship” at the maritime museum’s Munger theater. The new exhibit opened to the public on April 21st and the CINMS exhibit on underwater archaeology featuring new underwater HD video footage of the shipwreck site of the *Winfield Scott* reopened at the same time. The Pacific Mail Steamship Company’s side-wheel passenger steamship *Winfield Scott* stranded on Anacapa Island in 1853. The exhibit features historic artifacts, documents and first-person accounts from four passengers sharing compelling stories of survival of the more than 500 passengers marooned on the small island for 8 days. NOAA’s partnership with the museum has spanned 13 years, and this is the third CINMS permanent shipwreck exhibit on display at the museum. As a commitment to the collaborative partnership between CINMS and the museum, Schwemmer has served on the museum’s board of trustees for 7 years as well as exhibits committee. In addition, a new CINMS shipwreck brochure that includes an overview of some of the more than 150 historic shipwrecks lost in the sanctuary will be available to the public by the end of May. It is the first such shipwreck brochure designed under the Office of National Marine Sanctuaries new best practices guidelines for communications.

RESEARCH AND MONITORING

Partnership between US Navy and CINMS Yielding Information on Cetacean Distributions and Shipping Traffic within Sensitive Region

The 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. The aerial surveys ideally occur bi-weekly, with a total of eight surveys

completed since November 2010. 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 instead of designated traffic lanes within the Santa Barbara Channel. Preliminary data indicate that a variety of species utilize the test range region, including gray whales, humpback whales, fin whales, as well as a variety of small cetaceans. The latest survey was conducted on Tuesday 22MAR aboard a contract aircraft. Gray whales, Risso's dolphins, as well as other small cetaceans were observed. The area was also busy with inbound and outbound cargo ships and tankers transiting the region to and from the Ports of Los Angeles and Long Beach. Sanctuary staff are using newly revised Sanctuary Aerial Monitoring and Spatial Analysis Program (SAMSAP) software that was developed in partnership with Southwest Fisheries Science Center (SWFSC) researchers and programmer. One of the key features of the revised software is the ability to easily change and edit the selection menus for living marine resources and vessel types. This helps create a more robust product can be deployed in a variety of regions and ecosystems. The revised software also has the ability to provide output reports for emergency response scenarios, such as vessel groundings and marine mammal entanglements. The revised software is available to other sanctuary sites and partners.

CINMS Conducts Field Operations for West Coast Observatory Environmental Monitoring and Acoustic Animal Movement Monitoring Programs

In mid-June, CINMS research department staff conducted 6 dives over two days from the R/V *Shearwater* and R/V *Sharkcat* with partners from the Partnership for Interdisciplinary Study of Coastal Ecosystems (PISCO) to service environmental monitoring equipment around the Channel Islands. At 11 sites around the islands there are a series of moorings for monitoring equipment that includes strings of temperature loggers, Acoustic Doppler Current Profilers (ADCP's), and acoustic hydrophone/data loggers to monitor the movement of individually tagged fish. Dives this week serviced acoustic data loggers on Santa Cruz and Anacapa Islands that have been continuously in place for a year. They also represent the first effort to conduct this operation from the R/V *Sharkcat*, which will greatly extend the resources for this project. The funding to extend CINMS research department capacity was made available by a reprogramming of West Coast Observation funding from the ONMS West Coast Regional Office.

Surveys for Invasive Algae and Endangered Abalone

An invasive brown algae, *Sargassum horneri*, appears to have died back slightly during strong winter storms at Anacapa Island, and black abalone are uncommon but consistently found in low numbers at sites searched at Anacapa and Santa Cruz Island, as observed on a research cruise this week. Researchers from Channel Islands National Park and Channel Islands National Marine Sanctuary were on R/V *Shearwater* for two days (March 30-31, 2011) for subtidal and intertidal surveys at Anacapa and Santa Cruz Islands. In subtidal surveys, *Sargassum horneri* was found on the north side of Anacapa Island where it has been sited previously, but only small plants were found in small patches. The invasive alga was not found in areas searched on the south side of Anacapa Island or to the west at Orizaba Cove on Santa Cruz Island. The researchers did intensive searches in three intertidal areas for black abalone, a recently listed endangered species, and recorded size and nearest neighbor distances. Although black abalone numbers are still very low, they are more common in recent years at some sites with a wide range of size classes represented. The remote Channel Islands could be crucial to the species recovery. This trip contributed to an intertidal monitoring program that Channel Islands National Park has maintained for nearly 30 years.

NOAA Ship *Okeanos Explorer* performs deep water mapping and ROV exploration of CINMS

From April 19th to April 28th, the NOAA ship *Okeanos Explorer* performed a cruise in and around the CINMS. The *Okeanos Explorer* is a 224-foot NOAA ship operated jointly by NOAA's Office of Ocean Exploration and Research (OER) and Office of Marine Aviation and Operations. The vessel is equipped to

perform state of the art acoustic mapping, direct remotely operated vehicle (ROV) operations, and transmit its activities from anywhere in the world back to science centers in real time. This cruise is the second of two engineering cruises on the West Coast to shakedown new ROVs on the ship. During these operations the *Okeanos Explorer* mapped 4,747 km of ship track, and performed 7 ROV dives from 360 meters deep to over 4,000 meters deep. These ROV dives provided many hours of high-definition video and hundreds of still images that are still being organized and evaluated. CINMS Research Coordinator, Steve Katz, was on-board for this cruise to provide input on sanctuary objectives and needs, and collect data on the deep water ecology when possible. Dr. Katz also participated in a real-time, interactive tele-presence education program at the University of Rhode Island via the state of the art satellite communications facilities aboard the *Okeanos Explorer*. The cruise can be tracked at the *Okeanos Explorer* atlas web page (http://www.ncddc.noaa.gov/website/google_maps/OkeanosExplorer/mapsOkeanos.htm).

R/V *Shark Cat* makes First Trip to San Miguel Island

After waiting nearly a week for the weather to clear, the 28 foot Research Vessel *Shark Cat* was able to conduct operations for the first time at Hare Rock, off San Miguel Island in the CINMS. The project supported free diving operations in partnership with PISCO (Project for Interdisciplinary Study of Coastal Oceans) to change out Standard Monitoring Unit for the Recruitment of Fishes (SMURF) modules used to determine spatial and temporal patterns of reef fish recruitment. The project includes monthly visits to sites at all four Northern Channel Islands. Given cooperative weather, the project is ideally suited for the speed and efficiency of the R/V *Shark Cat*, which was recently acquired at CINMS from the Monterey Bay National Marine Sanctuary.

Subsurface Sediment Trap Mooring Retrieval and Deployment

Operations from the R/V *Shearwater* at CINMS successfully recovered and redeployed a large subsurface sediment trap mooring. A 340 meter subsurface mooring with two Mark VII automated sediment traps were recovered, serviced and redeployed requiring complicated and tightly choreographed deck operations and vessel maneuvering. The mooring is part of a multi-year collaborative project with Dr. Claudia Benitez-Nelson and Eric Tappa (University of Southern California's Marine Science Program & Department of Earth & Ocean Sciences) and Dr. David Siegel (University of California Santa Barbara's Plumes and Blooms Program). The project focuses on a study of the production and export of domoic acid, a toxin produced by harmful algal blooms, from surface waters to depth in the Santa Barbara Basin. The mooring will enable suspended and sinking *Pseudo-nitzschia* cells as well as domoic acid concentrations to be directly compared with samples collected during monthly CTD profiles and surface sampling collected as part of the Plumes and Blooms Program.

NOAA Twin Otter Aircraft Supports Critical Missions, Despite Foggy Weather Conditions

The NOAA Twin Otter aircraft was in southern California supporting the Channel Islands National Marine Sanctuary between June 16-19. On June 17th, staff successfully conducted a SAMSAP flight, covering sanctuary waters surrounding the four northern Channel Islands: San Miguel, Santa Rosa, Santa Cruz, and Anacapa islands. A large number of whales were observed around the islands, including 11 blue whales, 17 humpback whales and 13 unidentified large cetaceans. In addition, a variety of vessels were out within the Sanctuary, taking advantage of calm sea conditions. Recreational vessels, some engaged in fishing and SCUBA diving, were observed around Santa Cruz and Anacapa islands. Commercial dive boats, commercial passenger fishing vessels, and a variety of commercial fishing vessels were also encountered. SAMSAP has been conducting aerial surveys since 1997, providing a time series of vessel distributions and marine mammal migrations. On June 19th, a shipping lanes survey was conducted to monitor large cetaceans in proximity to the Traffic Separation Scheme within the Santa Barbara Channel. A total of 4 blue whales, 2 humpback blues, and 5 unidentified large cetaceans were observed, mostly within the southbound shipping lane. The survey corroborated reports received over the last several weeks from local whale watch vessels

that significant numbers of large cetaceans are feeding and moving through the same waters that large vessels, such as cargo and container ships, use to transit to and from the Ports of Los Angeles and Long Beach.

RESOURCE PROTECTION

NOAA Whale Data and Modeling Provided for US Coast Guard Port Access Route Study

Staff from the CINMS, NMFS Southwest Regional Office Protected Resources Division, and NMFS Southwest Regional Fisheries Science Center collaborated to provide the U.S. Coast Guard whale-related information and recommendations to be considered in a Port Access Route Study (PARS) for the ports of Los Angeles and Long Beach. CINMS provided a first order characterization of presence-only whale sightings based on data from two projects: Channel Islands Naturalist Corps sightings (1999-2010), and Cascadia Research Collective sightings (1991-2009). Using these data, limited inferences can be made about cetacean distributions within the Santa Barbara Channel, including possible hot spots for blue, fin and humpback whales. Also provided was a white paper prepared by NMFS, Scripps Institution of Oceanography, and Cascadia Research Collective. Using data originally collected from 1991-2009 by NMFS' Southwest Fisheries Science Center (SWFSC) to estimate population abundance for humpback, fin, and blue whales in the eastern Pacific, habitat models were used to predict whale densities and estimate the change in relative risk associated with ships traveling in several possible routes, with particular relevance to areas south of the Channel Islands. In late May, a joint letter signed by Chris Mobley (CINMS Superintendent) and Chris Yates (Assistance Regional Administrator, Protected Resources Division, NMFS Southwest Region) transmitted the whale data products to the Coast Guard. The PARS will be released by the Coast Guard later this year in a Federal Register notice, with a date uncertain at this time.

Legal Petition calls for Ship Speed Regulations at California National Marine Sanctuaries

A coalition of four environmental groups filed a legal petition to the Department of Commerce and NOAA on June 6, 2011 requesting that ship speeds be regulated within the national marine sanctuaries of California: Channel Islands, Monterey Bay, Cordell Bank and Gulf of the Farallones. The 61-page petition calls for a 10-knot ship speed limit within sanctuaries to reduce the risk of lethal ship strikes to whales, reduce noise levels, and reduce air pollution emissions. The groups submitted the petition are the Center for Biological Diversity, the Environmental Defense Center, Friends of the Earth, and Pacific Environment. The press release and petition are accessible here: http://www.biologicaldiversity.org/news/press_releases/2011/ship-strikes-06-06-2011.html. In response to the press release issued by the environmental groups, media coverage was significant. Original articles were published by: AP, LA Times, San Jose Mercury News, Marin Independent Journal, Ventura County Star, Bay Citizen, McClatchy News. As of the morning of June 7th, 108 news stories had run nationwide that duplicated the original articles. Sanctuary staff responded to several media inquiries with Chris Mobley, CINMS Superintendent, serving as spokesperson. Sanctuary staff and partners, both private and public, are also concerned with ship strikes to whales and have been engaged in this issue for some time. The petition is under review by staff and an agency response is forthcoming.

NOAA and U.S. Coast Guard Establish Seasonal Voluntary Whale Advisory Zone in Santa Barbara Channel Shipping Lanes to Reduce Risk of Ship Strikes to Endangered Whales

With the annual return of humpback, blue and fin whales to the Santa Barbara Channel, staff from the CINMS and National Marine Fisheries Service (NMFS) are taking steps to help reduce the risk of ship strikes to these endangered species. On behalf of CINMS and the NMFS the U.S. Coast Guard and the National Weather Service are posting on the internet and broadcasting on the marine band radio a Local Notice to Mariners. The notice alerts mariners to the presence of large whales and recommends vessels 300 gross registered tons or larger transiting the shipping lanes in the Santa Barbara Channel (otherwise referred

to as the traffic separation scheme (TSS)) do so at speeds not in excess of 10 knots to reduce the risk of striking a whale. Also, there is a Marine Safety Information Bulletin from the Port of Los Angeles and Long Beach Harbor Safety Committee, published in concert with the Local Notice to Mariners, concerning the establishment of Voluntary Western Traffic Lanes in the area. The voluntary lanes are located south of CINMS and the TSS, and the bulletin reminds mariners of the presence of whales on the south-side of the sanctuary.

UCSB Master's Thesis Work on Whale Vessel Strikes Presented to Sanctuary Advisory Council

Students from UC Santa Barbara's Bren School of Environmental Science and Management presented the results of their thesis project *Reducing the Risk of Vessel Strikes to Endangered Whales in the Santa Barbara Channel* at the CINMS Advisory Council meeting on Friday, March 18th. Six master's students from the Bren School, with guidance from CINMS and the NMFS Southwest Regional Office, evaluated potential management options for reducing the risk of vessel strikes to whales in the Santa Barbara Channel. They assessed the change in risk of strikes and the cost to the shipping industry of each of the management options considered. They concluded that a seasonal or year-round speed reduction may be the most cost-effective management option of those evaluated, but that further research is needed to fully assess the reduction in risk of strikes resulting from management options. The project provides useful information for CINMS and NMFS' response to vessel strikes to whales in the region and highlights the need for continued data collection and analysis. The group's final report can be viewed at http://fiesta.bren.ucsb.edu/~whales/pdfs/Whales_Report.pdf.

California Air Resources Board Expands Clean Ship Fuel Zone Beyond CINMS

On June 23rd the California Air Resources Board (CARB) voted to adjust an existing clean ship fuel regulatory zone so that it will extend 24 nautical miles seaward from the Channel Islands, rather than from the mainland coast, as it currently stands. This would move the current boundary of this zone from its positioning through the CINMS to about 18 nm south of the sanctuary. The intent of the action is to improve air quality by reducing or eliminating the incentive ships have had thus far, since the zone was created in 2009, to transit outside the clean fuel area where less expensive bunker fuel can be used. Using Automatic Identification System (AIS) data, sanctuary staff will be able to closely monitor ship traffic changes to gauge the new rule's effects on routing. Media coverage by the LA Times is at: latimes.com/news/local/la-me-ships-20110624,0,4368812.story. A detailed report on the CARB action is at: <http://www.arb.ca.gov/regact/2011/ogv11/ogv11.htm>.

Comments on NOAA and DOC Draft Aquaculture Policies prepared by Sanctuary Advisory Council

On March 18, the CINMS Advisory Council discussed draft aquaculture policies recently released for public review by the Department of Commerce and NOAA. The Council engaged in a lengthy discussion that was vigorous and robust, examining the promise and environmental implications of offshore aquaculture development in federal waters, and working by consensus to reach agreement on a comment letter. Several members came to the subject with considerable experience given past involvement with the Council's development and adoption of a comprehensive report on open ocean aquaculture in 2007. Through the Council's discussion, a variety of views and issues were raised, including: the importance of emphasizing the Council's 2007 report recommendations to raise a number of potential environmental concerns known to be associated with open ocean aquaculture; not wanting a letter from the Council to be too negative with regard to aquaculture development; the relationship between advocating for plant-based aquaculture feed and perceptions of how forage fisheries are managed in California; recognizing potential adverse impacts from non-native species and how supporting a complete prohibition on the use of such species with offshore aquaculture is at odds with existing use of Japanese oysters in California mariculture; concerns about how, if at all, the proposed federal policies could introduce new barriers to entry for small-scale operators hoping to develop aquaculture in nearshore state waters; and the desire to not lose fishing grounds to offshore

aquaculture sites. In the end, the Council agreed by a vote of 15-0, with six of eight agencies present abstaining, to submit to NOAA and DOC a comment letter that will enclose the Council's 2007 report on open ocean aquaculture, recommending that the report's advice be considered. The Council's letter will also be posted on the sanctuary's web site at channelislands.noaa.gov, and by request it is being shared with other sanctuary advisory councils.

California Lost Fishing Gear Recovery Project Operating at CINMS

Between April 26 and May 6, the California Lost Fishing Gear Recovery Project conducted operations within the CINMS, documenting and removing lost and abandoned recreational and commercial fishing gear at depths of 10 to 100 feet. The SCUBA-based work is supported by local fishermen and based off of the fishing vessels F/V *Janice Anne* (Santa Barbara Harbor) and F/V *Triton* (Channel Islands Harbor). The grant-funded project has operated with the support and permit approval of the Sanctuary for several years, and has proven productive and valuable at using a collaborative approach to remove tons of gear, much of which has been recycled or returned to use within the fishing community. The project has received funding support from the California Ocean Protection Council, State Coastal Conservancy, and NOAA's Marine Debris Program and Office of Response & Restoration. More information is at: www.lostfishinggear.org.

Sanctuary Staff Participating in Planning for a U.S. Coast Guard-led Full-scale Oil Spill Exercise

Sanctuary staff members are participating in a U.S. Coast Guard led oil spill exercise as part of the National Preparedness for Response Exercise Program (NPREP) exercise. NPREP requires that an area contingency plan be exercised every three years in a full-scale type of exercise. Full-scale exercises are required to include deployment of personnel and resources. Sanctuary staff are participating as NPREP exercise planners and evaluators. The latest planning meeting occurred on Wednesday June 15, 2011. Participants include USCG Sector Los Angeles/Long Beach, District 11, federal, state and local agencies, as well as other stakeholders. The exercise will test response management, place of refuge for one of the two stricken vessels, use of dispersant policy and public outreach. CINMS is coordinating with West Coast and headquarters staff as well as with other NOAA line offices. The exercise will occur on September 13-15, 2011. The first day will include a training and outreach event for the public and media. The actual exercise will take place on the latter two days and the scenario will include two ships that collide south of the northern Channel Islands and potentially impact Sanctuary and Channel Islands National Park resources.

Biosphere Reserve Program Recognizes CINMS for Climate Change Research and Education

The CINMS has been recognized by the United National Educational, Scientific and Cultural Organization (UNESCO) biosphere reserve program as a reserve that has demonstrated the program's ability "to test, evaluate and implement comprehensive climate change policies." The sanctuary area was originally designated a Biosphere Reserve in 1986. One of the central objectives of the program is to promote the recognition and use of biosphere reserves in implementing UN-level climate change initiatives. In UNESCO's recent publication, *For life, for the future: Biosphere reserves and climate change. A collection of good practice studies*, CINMS is featured as a site that focuses on research and education on climate change. CINMS is considered a "first generation" biosphere reserve focusing on research and education through its community involvement with management decisions. As the publication highlights, this has been achieved through public participation in workshops and with the Sanctuary Advisory Council. UNESCO recognizes the advisory council's report on ocean acidification as an important document to aid in the understanding of how ocean pH changes impact marine organisms and ecosystems. Additionally, the report commends sanctuary plans (per the recently developed Ocean Acidification Action Plan for west coast national marine sanctuaries) calling for improved energy efficiency and identification of key habitats and species as indicators of climate change and resilience. To view the UNESCO report:

http://www.unesco.de/fileadmin/medien/Dokumente/Wissenschaft/Biosphere_reserves_climate_change_web_9MB.pdf.

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Michael Murray *Deputy Superintendent for Programs*
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Amy Cale – *Web and Kiosk Developer*
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Local ONMS Staff

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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 -

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