

# Channel Islands National Marine Sanctuary

## Sanctuary Superintendent's Report

September 2015

*A report for the Sanctuary Advisory Council*

### 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 will also be available online at [channelislands.noaa.gov](http://channelislands.noaa.gov).

### Mike Murray Returns to CINMS from NPS Detail Assignment

On July 27, CINMS Deputy Superintendent for Programs Mike Murray returned to sanctuary duties after serving for 3 months on a detail assignment with the National Park Service (NPS). As part of his participation in NOAA's Leadership Competencies Development Program, Mike served as an assistant to the Superintendent of the Channel Islands National Park. In this capacity, Mike joined the park's Management Team and took on a variety of projects designed to challenge him in new areas, such as safety reviews of corrective actions, staffing coverage at islands, reviews for proposed new construction projects (island pier), assisting the NPS with response to a local oil spill, special park access requests, spatial planning for campground areas, and more. A variety of other issues arose throughout the three month period that Mike became involved with through his daily shadowing of Park Superintendent Russell Galipeau. The experience has been mutually beneficial to the Park/Sanctuary partnership.

### EDUCATION, OUTREACH, AND VOLUNTEERS

#### Maroon 5 and REVERB visit Channel Islands National Marine Sanctuary to Promote Whale Conservation and Citizen Science

On August 19, 2015, two members of the pop-rock band Maroon 5 and representatives from the non-profit organization REVERB visited Channel Islands National Marine Sanctuary to learn about and promote the sanctuary's whale conservation and citizen science programs. They joined sanctuary staff on a whale watching tour aboard the *Condor Express*, and saw a group of 12 feeding humpback whales and hundreds of dolphins. Shauna Bingham, volunteer and outreach coordinator, and Laura Francis, education coordinator, taught the group about the importance of local marine mammals and the threats they face, such as ship

### ABOUT THE SANCTUARY

*Designated in 1980, the Channel Islands National Marine 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 Rosa Island, Santa Cruz Island, Anacapa 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, Chumash maritime and cultural practices, 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 sanctuary.*

strikes and entanglements. They also educated Maroon 5 and REVERB on the programs that the sanctuary has in place to protect and monitor whales, such as Whale Alert. Whale Alert is a free mobile application that the public can use to report whale sightings as part of a citizen science data collection program. The band used Whale Alert to record sightings and urged their fans to do the same in a short video clip that will be available online in 1-2 weeks. Maroon 5 and REVERB will also post about their experience in the sanctuary on their social media channels. Maroon 5 currently has over 38 million likes on Facebook.

### **Channel Islands National Marine Sanctuary (CINMS) and Research Experience & Education Facility (The REEF) at University of California Santa Barbara present Deep Sea Exploration to Tech Trek Students**

On July 23rd and July 30th 2105, CINMS Education Coordinator Laura Francis and UCSB REEF Education Program Manager Scott Simon presented a Deep Sea Exploration program to 86 Tech Trek students (172 total students for both days). The program consisted of a live interaction with Dr. Robert Ballard's Exploration Vessel (E/V) *Nautilus* as well as a video exploration of deep sea communities in the Channel Islands National Marine Sanctuary and a discussion of marine related careers. Through a live video feed, students watched scientists aboard the *Nautilus* examine life underwater with ROVs. Researchers fielded questions from the audience throughout the interaction. Following the live program, students examined a remotely operated vehicle video transect from Piggy Bank Reef in CINMS and used a field guide to identify deep sea animals. This Deep Sea Exploration program was developed to inspire young women to learn more about ocean conservation and stewardship and consider ocean related careers. Tech Trek is a summer science and math camp for girls sponsored by the American Association of University Women and designed to develop interest, excitement and self confidence in young women who will enter eighth grade in the fall. It features hands-on activities in math, science and related fields.

### **Sea Center Volunteers visit Channel Islands National Marine Sanctuary for a day of learning and exploration**

On August 18, 2015, volunteers from the Santa Barbara Museum of Natural History Sea Center visited and learn about Channel Islands National Marine Sanctuary. The Sea Center is an interactive marine education facility located in Santa Barbara that receives thousands of visitors each year, and its volunteers serve as interpreters, educating the public about the local marine environment. The trip served as an opportunity for volunteers to gain a better sense of place and learn more about sanctuary waters. The volunteers conducted a plankton tow and analyzed plankton under a microscope; learned about ocean acidification and current research going on in the sanctuary; received a presentation on the sanctuary's whale conservation efforts and citizen science programs; and hiked and snorkeled on and around Santa Cruz Island. Volunteers also observed humpback whales, dolphins, and sea lions in the Santa Barbara Channel, and practiced recording marine mammal observations with the Whale Alert app. This group of volunteers will now be able to share their new knowledge about the sanctuary with visitors to the Sea Center, spreading awareness of the sanctuary and its mission.

### **MERITO Foundation Launches EECCOA (Energy Efficiency to mitigate Climate Change and Ocean Acidification) Program**

On August 14, 2015 the Multicultural Education for Resource Issues Threatening Ocean (MERITO) Foundation was awarded a NOAA B-WET grant to launch and pilot a new education and conservation program called "EECCOA", for 'Energy Efficiency to Mitigate Climate Change and Ocean Acidification'. The goal of the EECCOA program is to provide high quality resources and training on energy, climate and ocean literacy to upper middle school and high school teachers of Ventura and Santa Barbara counties. Engaging with participating teachers, students will actively mitigate climate change and ocean acidification by innovating, designing and presenting energy efficiency projects to their school peers and administrators, and/or by developing ocean acidification outreach campaigns. A secondary goal of the program is to inspire

students to protect the environment while incorporating scientific principles and engineering practices through project-based education. The MERITO Foundation, in collaboration with Channel Islands National Marine Sanctuary (CINMS), and with sustainability and ocean acidification researchers and experts, will produce a collection of twenty audience-appropriate energy, climate and ocean literacy lesson plans and supporting online resources (the EECCOA Activity Guide) adapted to Santa Barbara Channel watershed environments including the CINMS during fall 2015. Eight teachers will be selected to participate in the EECCOA teacher trainings and will receive year round support by facilitating meaningful field experiences, webinars and students' projects. The students will be encouraged to participate in the EECCOA challenge by developing energy efficiency models for their schools, or ocean acidification monitoring or awareness campaigns. At the discretion of school districts, teams with best projects will receive prizes ranging from stipends to travel to Climate Youth Summits, SCUBA certification courses, or others of up to \$2500 per team. The EECCOA program is also supported by the North America Association of Environmental Educators (NAAEE) and the US Environmental Protection Agency (EPA).

### **Sharing Ocean Acidification Resources for Communicators and Educators (SOARCE) Webinar highlights Channel Islands National Marine Sanctuary and National Park**

On September 2nd, 2015, Sarah Raskin and Doug DuBois from Oxnard School District kicked off the fall "Sharing Ocean Acidification Resources for Communicators and Educators" (SOARCE) webinar series by providing an overview their eight lesson "Channel Islands National Park and Channel Islands National Marine Sanctuary Ocean Acidification Curriculum" for middle school students. In the first lesson, students learn what makes the Channel Islands and surrounding waters a unique habitat. In the following lessons, students learn about ocean acidification, what it is, and potential impacts to marine ecosystems. Students also learn how to interpret ocean acidification data sets using real pH data from scientists at University of California Santa Barbara. In the final lesson, students learn what they can do to help reduce their carbon footprint and impact on the ocean. The curriculum project was supported by Channel Islands National Park Teacher Ranger Teacher (TRT) Program, Channel Islands National Marine Sanctuary, National Marine Sanctuary Foundation and the University of California Santa Barbara. More than 170 people from across the country and internationally registered for the webinar. The SOARCE webinar series was launched in March 2014 by NOAA Office of National Marine Sanctuaries and Ocean Acidification Program. This series provides ocean acidification communication tools to formal and informal educators and stakeholders across the country. The next SOARCE webinar is scheduled for October 22nd 2015 at 3pm PDT and will feature Rietta Hohman from Greater Farallones National Marine Sanctuary and the debut of a new high school curriculum, "Exploring deep sea coral communities of West Coast National Marine Sanctuaries and understanding threats such as ocean acidification". Archived webinar presentations and announcements of future webinars are available from the SOARCE web site. This series was developed jointly by NOAA National Marine Sanctuaries and NOAA Ocean Acidification Program, working with Washington State Sea Grant, the Institute for Systems Biology and others. The series is an outcome of the follow-up networking working group created after the 2012 [Effective Practices for Communicating Ocean Acidification Workshop](#) held in Monterey, California in conjunction with the International Ocean in a High CO<sub>2</sub> World Symposium.

## **RESEARCH, MONITORING AND VESSEL OPERATIONS**

### **Boeing Tests Unmanned Aircraft System over Channel Islands National Marine Sanctuary**

The Center of Excellence for Unmanned Technologies attended a demonstration of the Boeing Insitu Integrator UAS at Naval Station Ventura County. NOAA Corps Officer LTJG Casey Marwine arranged for COE personnel to coordinate with a training mission taking place high over CINMS. COE and CINMS personnel were able to see the UAS launch and recovery system and direct the camera payload to survey parts of the sanctuary. A live video feed was relayed back to the base from the platform at 2,500 feet over 30

miles offshore. The COE is evaluating the potential of the Integrator and a partnership with the Navy to supplement visitor and vessel use surveys at CINMS.

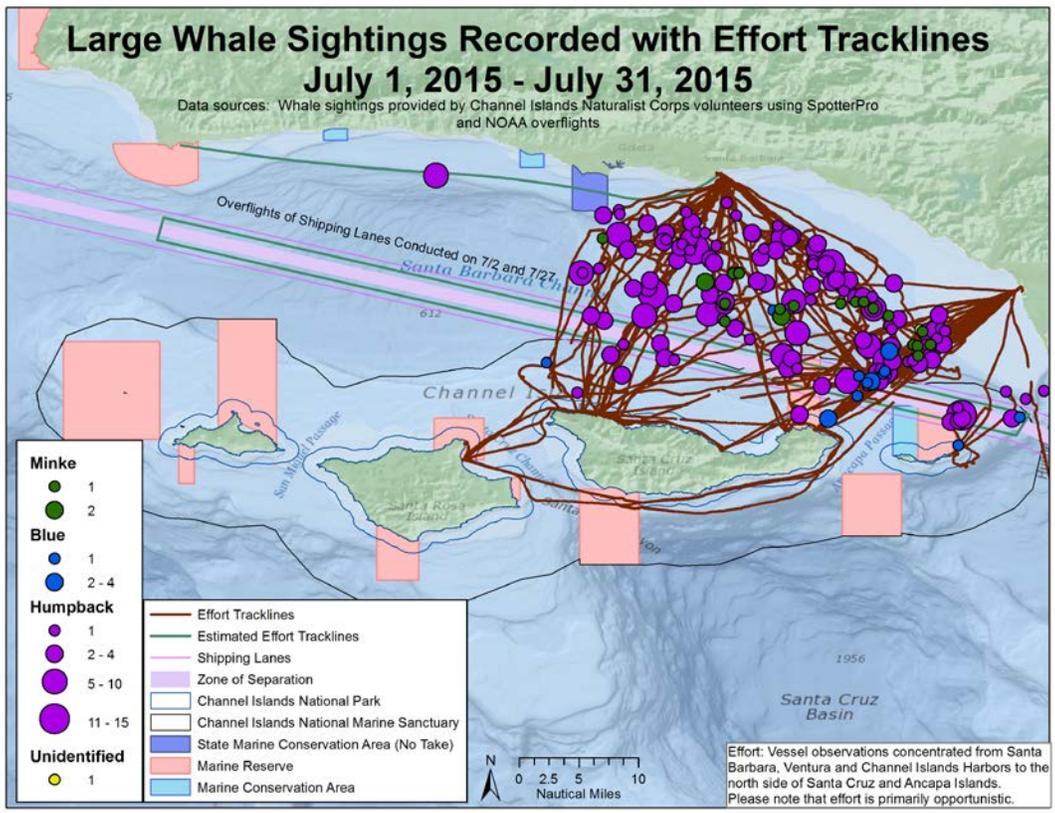
### **Deep Water Benthic Habitats and Corals Surveyed at Channel Islands National Marine Sanctuary**

From July 30 through August 4, Marine Applied Research & Exploration (MARE) teamed up with Dr. Peter Etnoyer's Deep Coral Ecology Program from NOAA's Coastal Center for Environmental Health and Biomolecular Research in order to conduct remote operated vehicle (ROV) dives aboard the R/V *Shearwater* in and around Channel Islands National Marine Sanctuary. The purpose of these dives was to conduct benthic habitat characterization, coral health monitoring and sample collection, temperature logger recovery and re-deployment, deep-sea exploration, and testing of a new survey tool from MARE called "the BATFish." While conducting shallow ROV dives between 20-60m on the north side of Anacapa Island, a dramatic die-off of sea fans was observed. Compared with surveys conducted 5 years prior, the density and condition of *Leptogorgia* and *Eugorgia* sea fans has declined dramatically and warrants further monitoring. During an exploratory dive at 450m on the south side of Anacapa, many large black corals were encountered, the majority dead and standing in place, however other invertebrates and rockfish were found healthy and abundant. Further west around Santa Rosa Island, benthic habitat characterization was completed and the coral colonies appear to be significantly healthier and more abundant than in the eastern portion of the sanctuary. Due to recent temperature anomalies, it is suspected that the shallow eastern coral die-off may be temperature related; however, further research and monitoring is required to definitively determine the cause. In addition to the ROV work, MARE was able to conduct two 'BATFish dives' to test a new piece of equipment custom-designed by MARE for rapid, towed-camera habitat characterization which may aid in future benthic monitoring. Finally, NOAA and MARE successfully recovered and re-deployed temperature loggers and collected live samples of the deep-sea coral *Lophelia pertusa* for transport to NOAA's Hollings Marine Laboratory in Charleston, South Carolina where they will be maintained for future research.

## **RESOURCE PROTECTION**

### **Technology Improves Quality of Citizen Science Whale Sightings Data**

Since 1999, specially trained Channel Islands Naturalist Corps (CINC) volunteers have collected opportunistic marine mammal sightings data while on board participating whale watch and marine excursion vessels operating in the Santa Barbara Channel. This dataset informs dynamic management (e.g., condition-based noticing of whale collision risks to the maritime industry) as well as multiple research initiatives. Channel Islands National Marine Sanctuary (CINMS) staff recently partnered with the International Fund for Animal Welfare, Office of National Marine Sanctuaries, Point Blue Conservation Science and Conserve.IO to develop and fund Spotter Pro, a mobile application that naturalists can use for data collection. Not only does Spotter Pro streamline the data collection process, it also records a GPS trackline of the vessel's trip. This now provides CINMS staff with important effort data that improves the quality and utility of observation data for both science and management. With Spotter Pro, CINMS staff can now tell where whales were, where whales were not, and where there was no reported effort to look for whales.



Map of whale sightings recorded by the Channel Islands Naturalist Corps with the mobile application Spotter Pro. Vessel tracklines provide CINMS staff with valuable effort data to accompany whale sightings.

## Sanctuary Staff

Chris Mobley – *Superintendent*  
Jessie Altstatt – *LiMPETS Program Coordinator*  
Shauna Bingham – *Volunteer Program & Outreach Coordinator*  
Jackie Buhl – *Technical Science Writer & Researcher*  
Julie Bursek – *Team Leader for Education and Outreach*  
Chris Caldwell – *Research Coordinator*  
Laura Francis – *Education Coordinator*  
Ryan Freedman – *Research Operations Specialist*  
Sean Hastings – *Resource Protection Coordinator*  
Todd Jacobs – *Deputy Superintendent for Administration and Operations*  
Charles Lara – *Vessel Captain*  
Rocío Lozano de Knowlton – *MERITO Program Coordinator*  
LTJg Elizabeth Mackie – *Vessel Operations Coordinator*  
Michael Murray – *Deputy Superintendent for Programs*  
Robert Schwemmer – *Regional Maritime Heritage Coordinator*  
Terrence Shinn – *Vessel Captain*  
Morgan Visalli – *California Sea Grant Fellow*  
Rebecca Young – *Program Support Specialist*

## 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

Amy Cale-Huebner – *Exhibit Designer & Kiosk Developer*  
Claire Fackler – *West Coast Education Liaison*  
Sarah Marquis – *West Coast Media Coordinator*  
Matt Pickett – *M4 Consulting, Inc; Operations Director, ONMS Center of Excellence for Unmanned Technologies*

## Learn More About Your Sanctuary

This report is produced 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/welcome.html>.

Follow CINMS on Facebook (<https://www.facebook.com/ChannelIslandsNMS>) and Twitter ([https://twitter.com/noaa\\_cinms](https://twitter.com/noaa_cinms))

## Office of National Marine Sanctuaries (ONMS)

The National Marine Sanctuary System consists of 14 marine protected areas that encompass more than 170,000 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/>.

### Get involved and stay informed!

Follow us on Twitter at [www.twitter.com/NOAA\\_CINMS](http://www.twitter.com/NOAA_CINMS) and like us on Facebook at [www.facebook.com/channelislandsnms](http://www.facebook.com/channelislandsnms)

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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