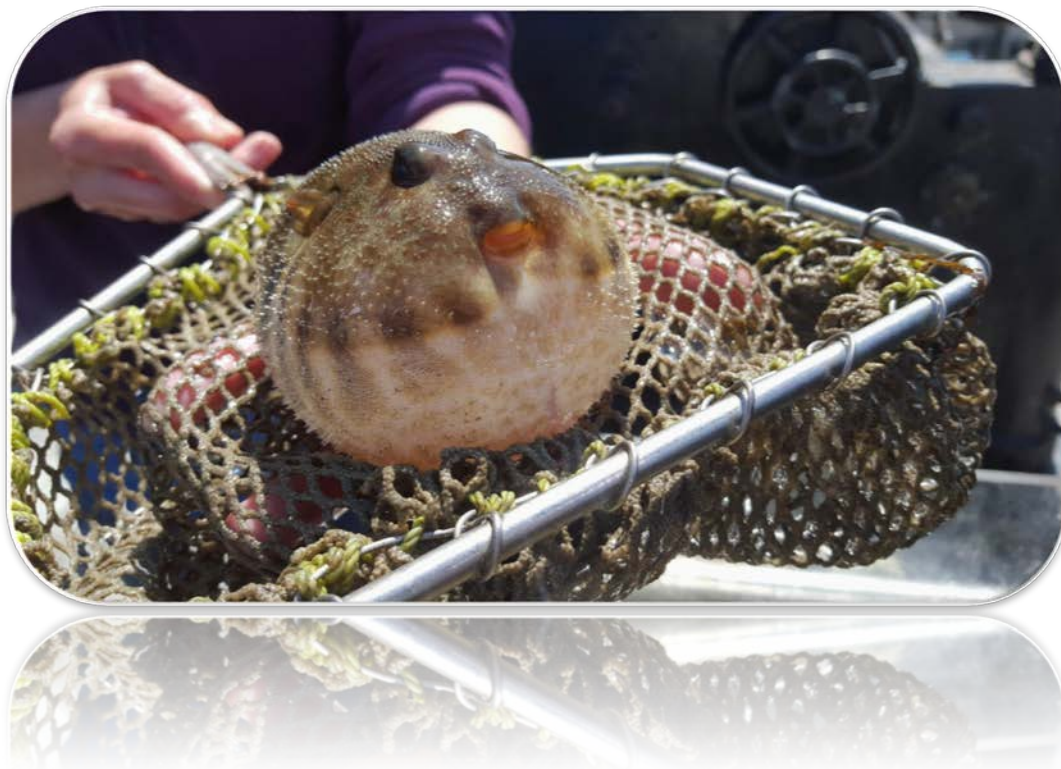


The Southern California Marine Institute



Annual Report 2015-2016

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Mission

The Southern California Marine Institute is an alliance of 22 major universities, colleges, and foundations in Southern California committed to providing marine expertise and hands-on experience to students of all levels, to achieve the highest and most efficacious level of research, to monitor the marine environment, and to increase public awareness.

Who We Are

SCMI is a consortium representing a strategic alliance of 22 major universities, colleges, and foundations in Southern California. This includes nine universities from the California State University system representing the Ocean Studies Institute: Channel Islands, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino, and San Marcos. SCMI also comprises the combined marine resources of the University of Southern California, Wrigley Institute for Environmental Studies, University of California Los Angeles, Occidental College, Los Angeles Community College District, and The Bay Foundation.

The consortium structure of SCMI allows us to engage in specialized marine research that would not otherwise be possible through independent organizations, and to maximize the use of resources as well as collaborate on projects. SCMI is located in the heart of the Port of Los Angeles on Terminal Island. Our facility is a full functioning marine research institute equipped with offices, laboratories, classrooms, a seawater filtration system, machine and wood shops, and a warehouse. There is ample docking space for small boats from various universities and organizations, as well as the research vessel R/V Yellowfin.

Director's Message

It turns out that having a fully functioning marine lab on the water in the city of Los Angeles is not only unique but also increasingly important to the region. SCMI is exploding with activity. Our research diving program is expanding due to the contribution of a new full-time Dive Safety Officer, Darrell Montague, funded by the CSUs Ocean Studies Institute (OSI). Under OSI's leadership, we are putting the finishing touches on a fully functional dive locker that will now support rebreathers and nitrox. Darrell is also charged with establishing a new boating safety program, which we will be laying out this year. In parallel with this effort, we have a full-time staff member, Joel Ingram, whose primary job is the maintenance of the ever expanding small boat fleet. We provide turnkey service for all research vessels and trailers a critical component of vessel safety. SCMI will be the leader in marine research safety in the region. Our membership has increased dramatically as we welcome our longtime partner, the Los Angeles Community College District (LACCD). The 9 campuses of the LACCD are the second largest community college district in the country and are extremely active in teaching, research and workforce development. The Bay Foundation directed by Tom Ford, the executive director of the Santa Monica Bay Restoration Commission, also joined our consortium. I have personally been working with Tom and his team for many years evaluating their kelp bed restoration efforts at Malibu and Palos Verdes. Their strikingly positive results have highlighted our region both within the state and nationally as a key example of how we can provide quality nearshore marine resources at the doorstep of the largest coastal population center on the west coast of the United States. Since joining SCMI, we have collaborated with the Bay Foundation to establish an abalone grow out facility to help restore this lost fishery to southern California. SCMI is expanding its role in the region to becoming a leader in innovative marine research while staying true to its roots of supporting our partner's teaching and research activities. I promise more good news for 2017.

I also wanted to make an announcement about the previous director and my long-time collaborator Larry Allen. Larry just received the Wheeler North Award from the Southern California Academy of Sciences at their annual meeting in May. This is the most prestigious award of the Academy. Larry was the keynote speaker at the Academy's 125th anniversary meeting at his alma mater, the University of Southern California.

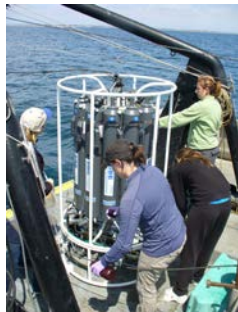


We all know Larry is one of the top and most recognizable marine scientists in Southern California. As an example, he was lead editor and mastermind of his book 'The Ecology of Marine Fishes: California and Adjacent Waters' and most recently coauthored 'A Field Guide to Coastal Fishes from Alaska to California'. Not only did he write the books on marine fishes in California, the Academy also gave this award to Larry due to his unwavering commitment to building the community of marine scientists in Southern California, a critical aspect of the mission of the Academy. Unbeknownst to Larry, his students from all over the country flew in for his award ceremony and reception.



Introduction

The Southern California Marine Institute (SCMI) is excited to announce many improvements and additions this year. The consortium grew to 22 members with the acceptance of the Los Angeles Community College District (LACCD) and The Bay Foundation (TBF). TBF becomes the first member to join the consortium that is not affiliated with a college/university, and LACCD becomes the first community college district to join! More institutions have expressed interest in joining SCMI and we are excited about the opportunity to collaborate and expand in the near future. Our outreach efforts this year focused on offering internships to students and attending local events to promote community awareness. We also collaborated with Mountain and Sea Educational Adventures, offering marine science demonstrations on our docks for K-12 students. The AltaSea project has gained momentum with Gensler releasing proposed designs and construction scheduled to start very soon. SCMI staff has continued their work to improve the facility by expanding our seawater filtration system, installing a new compressor in the dive locker and developing a small boat operations course. A new abalone aquaculture facility has been built to encompass multiple collaborative studies with Cal Poly Pomona, TBF, NOAA and SCMI. Per usual, R/V Yellowfin demonstration cruises introduced many new classes, colleges and universities to hands-on experience with the Southern California marine world. After quite the busy year of expansions, 2015-2016 has made for especially unique experiences for both the staff and students!



What's New?

AltaSea Update



Plans for the AltaSea project, a 35 acre marine research campus at the Port of Los Angeles, have gained momentum since it's unveiling on June 16, 2013. Gensler has recently unveiled proposed plans and designs along with the projected dates of phase completions. Phase 1 includes renovating 180,000 square feet of warehouse for research and business labs and is scheduled to open early 2017. Phase 2, deemed the "science hub," has a scheduled opening in 2020 (SCMI will be the first tenant of phase 2). The final product will be completed in 2020 as the hub for outreach and public use. In other exciting news, Altasea recently received a letter of strong support from the mayor of Los Angeles, Eric Garcetti. He stressed economic, environmental, and technologic advancement. SCMI is especially excited for what Altasea will provide for the Port of LA and surrounding communities.



The Bay Foundation

The Bay Foundation (TBF) joined SCMI as its first non-academic member in late 2015. With proposed goals to develop a unique partnership, TBF has already made great strides in actively conserving and restoring the diverse ecosystems of the Santa Monica Bay. Joining the SCMI team has given TBF convenient access to the local rocky reefs where they can manage and monitor their kelp forest restoration project. The project has successfully removed urchin barrens at 4 coves and restored over 34 acres of kelp to date. TBF has also started working on bringing back the depleted abalone populations on Palos Verdes through captive and wild spawning techniques. March 2016 highlighted the opening of the brand new TBF/SCMI abalone aquaculture facility at the SCMI headquarters. The abalone lab is providing researchers with state of the art facilities to refine captive spawning and aquaculture techniques with the future hopes of outplanting to wild populations. We are very excited for what the future holds for The Bay Foundation and SCMI collaborations.



Los Angeles Community College District

The Los Angeles Community College District also joined SCMI in late 2015. LACCD marks the first community college district to join SCMI! LACCD is excited to give students the opportunity to conduct field research for their science-based academic programs. SCMI will provide demonstrations that offer career/professional level expectations to students, as well as supply volunteer opportunities, jobs and internships. SCMI will also enable students from LACCD to collaborate and experience student research being done by other consortium members. This will strengthen and help build LACCD's transfer program. Many colleges from LACCD have already taken advantage of the demonstration cruises offered, and SCMI is expecting increased usage in the coming year. Also, a recent LACCD grant is proposed to increase involvement and participation in the coming years as the consortium continues to expand.

Outreach Programs

Outreach and Public Education Events

SCMI is always looking to contribute to outreach and public education events. This year, we again attended Cabrillo Aquarium's annual Earth Day events with touch tanks, posters, specimens, and plenty of information to share. This event presented a great opportunity to work with the younger generation interested in marine sciences.

In Spring 2016, CSULB students from the class "History 482: Recent American Environmental History" participated in our volunteer program. Students logged nearly 100 hours of service, assisting SCMI staff with R/V Yellowfin demonstration cruises, water quality projects, and general aquaristry.

SCMI continues our volunteer/internship program for high school and college students. We encourage students to apply for our program online to get the experience of working at a marine institute, while they benefit by gaining essential skills of the field and community service credit when fitting. SCMI is currently expanding this program by developing new projects for students to help with various research projects and daily tasks.



Educational Activities

CSU Marine Biology Semester on Catalina Island

The Fall 2015 was another successful semester for the CSU Marine Biology Semester on Catalina. The semester is a unique opportunity for CSU students to experience hands-on marine biology and guide them to a career in marine science. The Fall 2015 Marine Biology Semester was a great success with a total of 10 students from four different CSU's attending. The semester was taught by professors: Dr. Christopher Lowe, Dr. Darren Johnson, Dr. Bengt Allen, Dr. Christine Whitcraft all from CSULB and, Dr. Kathy Anne Miller from UC Berkely. We have received positive feedback from the participating students and are excited to see the program grow to more CSU campuses. Students conducted research projects on a large range of topics from elasmobranch habitat selection to photosynthetic rates of marine macroalgae.



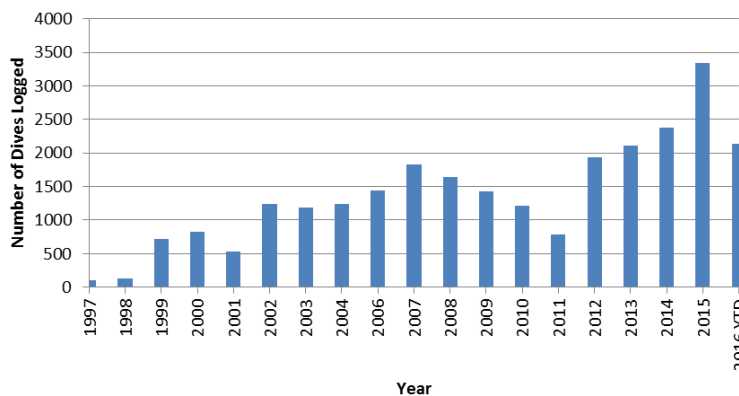
CSU Marine Biology Semester on Catalina Fall 2015			
University	# Students	Professors	Courses
CSULB	5	Dr. Christopher Lowe	OSI 419/519 - Marine Ichthyology (4 units)
CSUCI	2	Dr. Darren Johnson	OSI 455/555 - Ecology of Marine Communities (4 units)
CSUDH	2	Dr. Bengt Allen	OSI 425/525 - Phycology (4 units)
CSUF	1	Dr. Christine Whitcraft	OSI 496/697 - Directed Undergraduate Research (3 units)
		Dr. Kathy Anne Miller	
Total # Students	10		
Total # Schools	4		

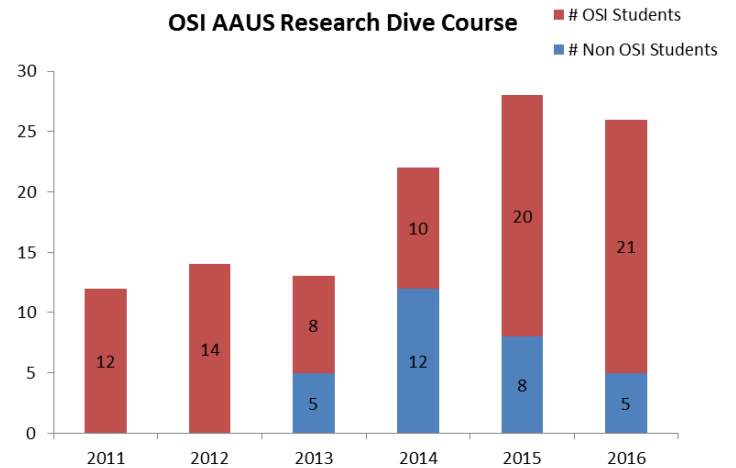
OSI AAUS Research Dive/Boating Program

Dive Operations: We are anticipating the renovation and expansion of the dive locker to be completed by the end of September 2016. New paint and floor treatment along with additional wall storage, rolling gear racks, rinse bins and lighting will be part of the renovation. We'll be adding an additional two hundred square feet to the existing space to accommodate our new compressor, Nitrox maker, gas banks and full-containment fill station. Additional plans for this year include installation of a full gear test bench and purchase of an initial inventory of rental gear. New course offerings will include the addition of Nitrox training when the new fill station is up and running. Our Diving Control Board recently gave the green light to test the Hollis Explorer Rebreather unit for potential use for research diving. We're conducting field trials to determine suitability and developing policies and procedures for its use in the program.

Boat Operations: We will be rolling out our first MOTC (Motorboat Operator Training Course) for SCMI staff this fall. Developed by SBSA (the Scientific Boating Safety Association) in conjunction with the Department of Fish and Wildlife Service, this comprehensive four-day course is intended to provide basic instruction on small boat operations to those with little, or no experience. It covers operating systems, boat handling, rules-of-the-road, aids to navigation, communications, risk management, survival and rescue skills. We'll start offering the course as part of our curriculum immediately following the AAUS Research Diver Course during Winter break. Going forward, we anticipate offering the MOTC following each RD course, and once again during the late summer or early fall.

OSI Dives Logged





Demonstration Yellowfin Cruises

Our Yellowfin demonstration cruises have sustained their increased usage from last year. With the help of our favorite engineer, Denis, the on board demonstration techs were able to give classes experience using real-world equipment and techniques such as VanVeen grabs, plankton tows, biological dredges and otter trawls. El Nino conditions made for exciting and unique sea conditions and marine life. Students were able to experience warmer than usual waters, which brought rare species such as seahorses and puffer fish to the Southern Californian waters.

SCMI plans to develop a new system aimed at facilitating data collection and entry from research cruises. This data set will include all the necessary information required to start an SCMI database where professors and students can easily access and manipulate data collected by all cruises. SCMI also plans on having surveys for students and faculty researchers to share how their experiences went to see how we can further improve these educational demonstrations.



Research Activities

SCMI has provided vessel support, equipment, and expertise to researchers from member and non-member campuses, and other organizations. This year SCMI has assisted researchers from University of Southern California, Occidental College, California State Universities Northridge and Long Beach, Claremont Colleges, NOAA, and the Ports of Los Angeles and Long Beach.

Project Updates

SCMI's Assisted Research Projects Include:

- Port of Los Angeles Water Quality Monitoring (POLA)
 - Real-Time Water Quality Monitoring Program
 - Monthly Water Quality Monitoring aboard R/V Yellowfin
- Biological Surveys of Los Angeles and Long Beach Harbors
- Barred Sand Bass Study - Dr. Larry Allen, CSUN
- Rocky Reef Ecology Studies - Vantuna Research Group
- The Bay Foundation Kelp Forest Restoration
- The Bay Foundation Abalone Recovery
- NOAA Ship of Opportunity Program
- San Pedro Ocean Time-Series SPOT
- Salt Pond Project - Dr. Christine Whitcraft, CSULB
- Temperature Influence on Ecology and Distribution of Intertidal Species - Dr. Sarah Gilman, Claremont Colleges

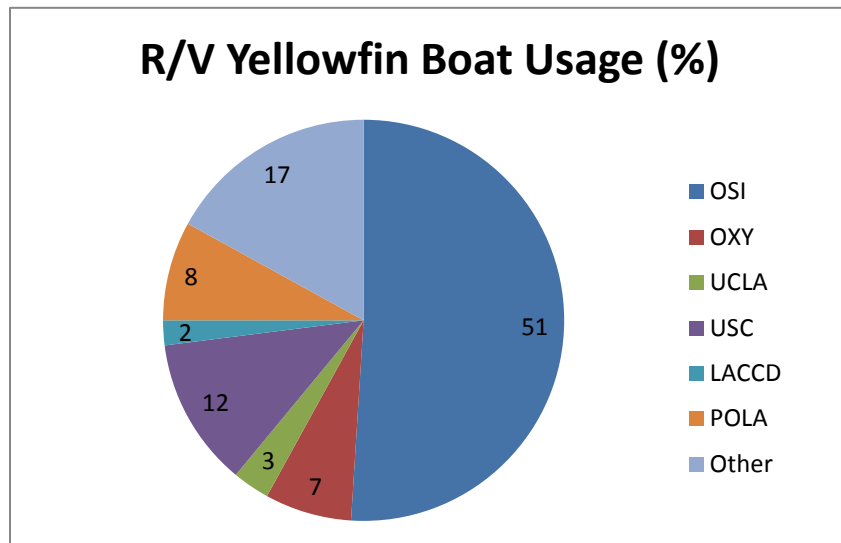


Vessel Use

R/V Yellowfin Usage by Institutions

This year, the R/V Yellowfin logged approximately 1117 hours of vessel use. The trips consisted of a combination of class laboratories, graduate and university research, and contracted research. Although we had significantly more students participate on trips this year, we conducted nearly the same number of hours of vessel use, as well as number of cruises. SCMI's goal is to continue increasing hours of vessel use and the total number of cruises for the 2016 – 2017 fiscal year. This should not be a problem as the newly added consortium members develop a syllabus to include R/V Yellowfin demonstration cruises.

Institute Name	Students	Faculty and Staff	Hours of Vessel Use	# of Cruises
Ocean Studies Institute (OSI)	1742	31	565	89
Occidental College	176	4	81	15
University of California Los Angeles	26	1	31	3
University of Southern California	126	3	137	13
LA Community College District	130	3	24	5
POLA Water Quality Monitoring	0	0	91	12
Other universities, colleges, & cruises	289	9	188	13
Grand Total	2489	51	1117	150



Southern California Marine Institute Members

Southern California Marine Institute Staff 2015-2016

Dr. Daniel Pondella
Director

Adriana Stowell
*Fiscal & Administrative
Coordinator*

Carrie Wolfe
*Research & Education &
Operations Coordinator*

Dennis Dunn
*Captain
R/V Yellowfin*

Brian Tufts
*Facilities Coordinator
Aquarist*

Jim Cvitanovich
OSI Dive Safety Officer

Darrell Montague
OSI Dive/Boat Safety Officer

Denis Mahaffy
Vessel Support Technician

Bob Adams
Demonstration Technician

Joel Ingram
*Relief Captain &
Dockside Coordinator*

Echelle Burns
*Demonstration & Administrative
Assistant*

Erin Crowley
*Facilities &
Administrative Assistant*

Ben Grime
Demonstration Technician

Southern California Marine Institute Board of Directors 2015-2016

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Vice President: Dr. Laura Kingsford
Secretary: Dr. Doug Hammond

<u>USC</u>	<u>OSI</u>	<u>Occidental</u>	<u>UCLA</u>
Dr. Roberta Marinelli	Dr. Jerry Stinner	Dr. Daniel Pondella	Dr. Mark Gold
Dr. Doug Hammond	Dr. Laura Kingsford		
Dr. James Moffett (Alternate)	Dr. Chris Lowe		
	Dr. Steve Murray		

Ocean Studies Institute Board of Governors 2015-2016

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Vice Chairperson: Dr. Kathy Dickson
Member at Large: Dr. Sean Anderson
Director-Coordinator: Dr. Daniel J. Pondella II

<u>CSU Dominguez Hills</u>	<u>CSU Fullerton</u>	<u>CSU Long Beach</u>
<i>Academic:</i> Dr. Jacqueline Padilla-Gamino	<i>Academic:</i> Dr. Kathy Dickson	<i>Academic:</i> Dr. Chris Lowe
<i>Administrative:</i> Dr. Rob Hay	<i>Administrative:</i> Dr. David Bowman	<i>Administrative:</i> Dr. Laura Kingsford
	<i>Chancellor's Office Liason:</i> Dr. Steve Murray	

<u>CSU Los Angeles</u>	<u>CSU Northridge</u>	<u>CSU Pomona</u>
<i>Academic:</i> Dr. Elizabeth Torres	<i>Academic:</i> Dr. Larry Allen	<i>Academic:</i> Dr. Jayson Smith
<i>Administrative:</i> Dr. Scott Bowman	<i>Administrative:</i> Dr. Jerry Stinner	<i>Administrative:</i> Dr. Tina Hartney

<u>CSU San Bernardino</u>	<u>CSU Channel Islands</u>	<u>CSU San Marcos</u>
<i>Academic:</i> Dr. Britt Leatham	<i>Academic:</i> Dr. Sean Anderson	<i>Academic:</i> Dr. Jackie Trischman
	<i>Administrative:</i> Dr. Karen Carey	<i>Administrative:</i> Dr. P. Wesley Schultz

Consortium Members

Ocean Studies Institute
California State Universities



University of Southern California
Wrigley Institute for Environmental Studies



Occidental College
Vantuna Research Group



University of California Los Angeles
Atmospheric and Ocean Science



Los Angeles Community College District



The Bay Foundation
