

COAST 2014/2015

ANNUAL REPORT



Covering Activities from July 1, 2013 to June 30, 2014
and July 1, 2014 to June 30, 2015

www.calstate.edu/coast

THE CSU COUNCIL ON OCEAN AFFAIRS, SCIENCE & TECHNOLOGY (COAST)

COAST is the umbrella organization for marine, coastal and coastal watershed related activities within the CSU. COAST promotes research and education to advance our knowledge of marine and coastal resources and the processes that affect them. The scope of COAST includes:

- The open and coastal ocean
- Coastal zones (bays, estuaries, beaches)
- Coastal watersheds to the extent that the organism, material or process ultimately articulates with the coast (e.g., anadromous fish, surface and groundwater flow and water quality, land use, etc.)

COAST's long-term goals are to:

- Advance our knowledge of coastal and marine resources and the processes that affect them
- Develop innovative solutions to the economic, sociological, ecological and technological challenges that our coastal zone faces
- Promote environmental literacy to foster stewardship and sustainable use of our coast

To achieve these goals, COAST has several strategic objectives:

- Support research related to marine, coastal and coastal watershed regions
- Support students and contribute to increased student success
- Secure external funding to augment the internal funding provided by the CSU
- Increase the research capacity of the CSU
- Serve as a primary resource for informed decision making

Visit us online at www.calstate.edu/coast to learn more and to become a part of COAST!



OUR MISSION

To provide vision, leadership, and support throughout the CSU system for education, policy and research related to California's marine, estuarine, and coastal regions, and to promote the public dissemination of knowledge gained to foster stewardship and sustainable use of California's coast.

OUR VISION

COAST will be a leader in coastal and marine-related research and education throughout California, and will promote environmental literacy leading to a significant increase in public awareness and stewardship of our coastal and marine resources.



2013-14 & 2014-15 SNAPSHOT

In AY 2013-14 and AY 2014-15, COAST continued to invest in CSU faculty members and students with the goals of supporting research and enhancing education. COAST achieved a number of successes over the two-year period:

- Provided \$293,877 directly to faculty members and students in AY 2013-14 and \$428,212 in AY 2014-15
- Supported 65 faculty members and 269 students at 22 campuses
- Faculty members secured over \$2.9M in extramural funding as a result of prior COAST support
- Launched four new faculty and student funding programs in AY 2014-15
- Added seven new hosts to the Summer Internship Program

REVENUE AY 2013-14 AND AY 2014-15

REVENUE	AY 2013-14	AY 2014-15
Chancellor's Office Contribution	\$ 500,000	\$ 550,000
Campus Contributions	\$ 163,000	\$ 212,500
Balance Forward from Previous Year	\$ 12,500	\$ 37,935
External Funding	\$ 20,000	-
TOTAL	\$ 695,500	\$ 800,435
Leveraged Funding	\$ 67,500	-

EXPENDITURES AY 2013-14 AND AY 2014-15

EXPENDITURES	AY 2013-14		AY 2014-15	
	Amount	% of Total	Amount	% of Total
Student Support	\$ 169,794	27.7%	\$ 220,367	29.3%
Faculty Research Incentives	\$ 124,083	20.3%	\$ 207,845	27.6%
Program and Strategic Development	\$ 15,275	2.5%	\$ 8,426	1.1%
Outreach and Communications	\$ 36,493	6.0%	\$ 41,015	5.5%
Personnel	\$ 210,381	34.4%	\$ 206,863	27.5%
Program Operations	\$ 17,069	2.8%	\$ 14,978	2.0%
IDC	\$ 39,367	6.4%	\$ 52,470	7.0%
TOTAL	\$ 612,462	100%	\$751,964	100%

FACULTY AWARDS

COAST has developed a suite of programs to support CSU faculty members' research, pursuit of extramural funding, and professional development. Over the years, we have refined these programs and created new ones in order to best serve the faculty and advance the CSU at both state and national levels. The collective goals of these programs are to increase: 1) the total amount of extramural funding for marine, coastal and coastal watershed related research and education in the CSU, 2) the number of externally funded CSU marine and coastal related principal investigators, and 3) the overall research capacity of the CSU. Since its inception, COAST has made 70 awards totaling over \$780,000 to CSU faculty members and research scientists. The return on investment from these awards has been over \$8.6M dollars in extramural funding awarded to the CSU, an 11.1:1 ratio¹.

The following table provides a summary of all COAST awards made to CSU faculty members in AY 2013-14 and AY 2014-15.

FACULTY AWARD PROGRAM	Number of Awards		Number of Faculty Members Supported		Number of Participating Campuses		Funding Amount	
	2013-2014	2014-2015	2013-2014	2014-2015	2013-2014	2014-2015	2013-2014	2014-2015
Faculty Research Incentive Program*	2	-	5	-	4	-	\$ 22,543	-
Grant Development Program	7	9	8	13	7	6	\$ 97,885	\$ 115,060
Rapid Response Funding Program	1	3	1	7	1	3	\$ 3,655	\$ 22,400
Seminar Speaker Series Program†	-	11	-	23	-	13	-	\$ 5,562
Strategic Investment Program†	-	2	-	8	-	6	-	\$ 64,823
TOTAL	10	25	14	51			\$124,083	\$207,845

* Discontinued after 2013-14

† Initiated in 2014-15

¹ As of 10/28/2015

FACULTY RESEARCH INCENTIVE PROGRAM

The Faculty Research Incentive Program (FRIP) was established in 2009 and provided assigned time funding to CSU tenured/tenure-track faculty members to develop and submit full proposals to external funding agencies and organizations for marine and coastal research and educational projects. In AY 2013-14, COAST provided \$22,543 in support to faculty members through FRIP. The following year, FRIP was subsumed by the Grant Development Program, which is now the main, annual funding opportunity for faculty members.



FACULTY RESEARCH INCENTIVE PROGRAM AY 2013-14

AWARD RECIPIENTS	PROJECT TITLE
<p>Dr. Andrea Achilli Environmental Resources Engineering Humboldt State University</p> <p>Dr. Cheryl Logan Science and Environmental Policy CSU Monterey Bay</p> <p>Dr. Tyler Evans Biological Sciences CSU East Bay</p> <p>Dr. Margaret Lang Environmental Resources Engineering Humboldt State University</p>	<p>Minimizing ecological and carbon footprints of desalination plants in coastal California through alternative desalination technologies</p>
<p>Dr. Jin-Lee Kim Civil Engineering and Construction Engineering Management CSU Long Beach</p>	<p>Developing multi-objective hybrid quay crane scheduling tool in California port container terminals</p>

GRANT DEVELOPMENT PROGRAM

The Grant Development Program (GDP), initiated in 2013, is designed to stimulate CSU faculty members and research associates to develop and submit full proposals to external funding agencies and organizations for marine and coastal research and educational projects. Awards can be used to fund assigned time and activities deemed necessary to maximize subsequent success in obtaining external funding such as data collection, sample analysis, and data analysis and can include student support. Awards range from \$5,000 to \$15,000.

COAST provided \$97,873 in support to faculty members through GDP in AY 2013-14 and \$115,060 in AY 2014-15.



GRANT DEVELOPMENT PROGRAM AY 2013-14

AWARD RECIPIENTS	PROJECT TITLE
<p>Dr. Carl Carrano Chemistry and Biochemistry, San Diego State University</p>	<p>Boron in a changing ocean: not so “boring” anymore?</p>
<p>Dr. William P. Cochlan Biology, San Francisco State University</p>	<p>The effects of ocean acidity on the toxicity of <i>Heterosigma akashiwo</i> in California waters</p>
<p>Dr. Sergei Fomin Mathematics and Statistics, CSU Chico</p>	<p>Mathematical modeling of subsurface reservoir contamination in a coastal zone</p>
<p>Dr. Kristy Forsgren Biological Science, CSU Fullerton</p>	<p>A proteomics approach to understanding the regulation of early ovarian development in fish</p>
<p>Drs. Brian Hentschel and Todd Anderson Biology, San Diego State University</p>	<p>Hydrodynamic mediation of predator-prey interactions in estuarine sediments</p>
<p>Dr. Cheryl Logan Science and Environmental Policy, CSU Monterey Bay</p>	<p>Ocean acidification and hypoxia in the California current: physiological effects on nearshore fishes</p>
<p>Dr. Mark Steele Biology, CSU Northridge</p> <p>Dr. Scott Hamilton Moss Landing Marine Labs, San José State University</p>	<p>A mechanistic understanding of the demographic consequences of harvest selection for temperate sex-changing fishes</p>

GRANT DEVELOPMENT PROGRAM AY 2014-15

AWARD RECIPIENTS	PROJECT TITLE
<p>Dr. Andrea Achilli Environmental Resources Engineering Humboldt State University</p>	<p>Osmotically driven membrane processes for sustainable seawater desalination</p>
<p>Dr. Bengt Allen Biological Sciences, CSU Long Beach</p>	<p>Environmental variability and investment in thermal defenses: the importance of recent history</p>
<p>Dr. Paul Choboter Mathematics, Cal Poly San Luis Obispo</p>	<p>Nesting of non-hydrostatic and hydrostatic numerical ocean models</p>
<p>Dr. Matt Edwards Biology, San Diego State University</p>	<p>Assessing the success of green abalone out planting in San Diego: a possible avenue for population recovery?</p>
<p>Dr. Ellen Hines Geography and Environment, San Francisco State University</p>	<p>Identifying critical coastal habitat under a changing climate along the California Central Coast</p>
<p>Dr. Rebecca Lewison Biology, San Diego State University</p> <p>Dr. Eunha Hoh Public Health, San Diego State University</p>	<p>A novel approach to in situ marine contaminant assessment: linking exposure to effects</p>
<p>Dr. Brian Livingston Biological Sciences, CSU Long Beach</p>	<p>Sea star wasting disease: the microbiome involved and proteomic response in <i>Patiria miniata</i></p>
<p>Dr. Cheryl Logan Science and Environmental Policy, CSU Monterey Bay</p>	<p>Physiological mechanisms of rockfish tolerance to ocean acidification</p>
<p>Dr. Josh Mackie Biological Sciences, San José State University</p> <p>Dr. Roy Okuda Chemistry, San José State University</p> <p>Dr. Taro Amagata Chemistry, San Francisco State University</p>	<p>Pharmaceutical and evolutionary perspective on bioactive compounds in marine invertebrates—a focus on invasive species</p>
<p>Drs. Christine Whitcraft and Jesse Dillon Biological Sciences, CSU Long Beach</p>	<p>Wetland ecosystem community change in the face of sea level rise</p>

RAPID RESPONSE FUNDING PROGRAM

The Rapid Response Funding Program, initiated in 2014, provides funding for projects that require a quick response outside of annual COAST funding opportunities. Projects may include investigation of unexpected or sudden events, those that have a short opportunity to access data, facilities or specialized equipment, or incidents that require immediate attention. Awards range from \$2,500 to \$7,500.

COAST provided \$3,655 in Rapid Response Funding in AY 2013-14 and \$22,400 in AY 2014-15. The first project funded through this new initiative was Kelp Watch 2014, a study led by Dr. Steven Manley at CSU Long Beach and designed to detect radionuclide contamination in West Coast ecosystems resulting from the 2011 earthquake, tsunami, and release of radioactive material from the Fukushima I Nuclear Power Plant in Japan (<http://kelpwatch.berkeley.edu>). Subsequent awards supported investigations of sea star wasting and El Niño-related impacts on marine communities.



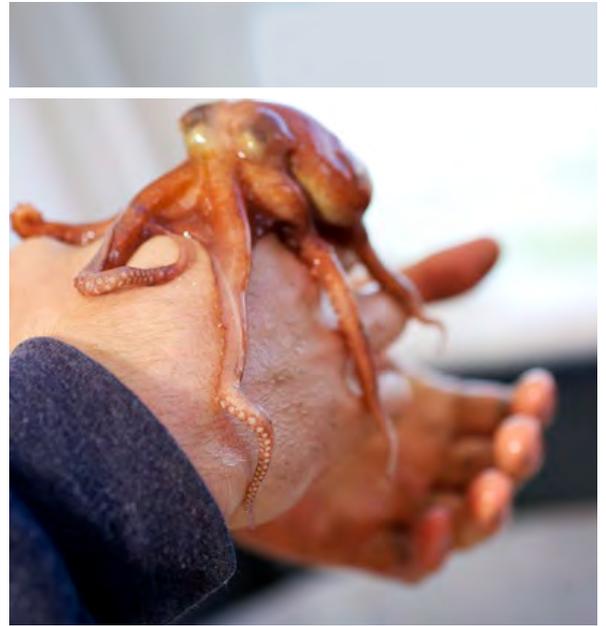
RAPID RESPONSE FUNDING PROGRAM

AY 2013-14 AWARD RECIPIENTS	PROJECT TITLE
<p>Dr. Steven Manley Biological Sciences, CSU Long Beach</p>	<p>Detecting the arrival of Fukushima radioisotopes to the California Coastline</p>
AY 2014-15 AWARD RECIPIENTS	PROJECT TITLE
<p>Drs. Crow White and Benjamin Ruttenberg Biological Sciences, Cal Poly San Luis Obispo</p> <p>Dr. Danielle Zacherl Biological Sciences, CSU Fullerton</p>	<p>Opportunistic assessment of El Niño effects on connectivity and recruitment</p>
<p>Dr. Jennifer O'Leary Biological Sciences, Cal Poly San Luis Obispo</p>	<p>Evaluating the effects of sea star loss on central California intertidal communities in the presence and absence of human influence</p>
<p>Dr. Andres Aguilar Biological Sciences, Cal State L.A.</p> <p>Dr. Michael Horn Biological Sciences, CSU Fullerton</p>	<p>Fine-scale genetic structure of Elegant Tern populations during El Niño and non-El Niño years</p>

SEMINAR SPEAKER SERIES PROGRAM

The Seminar Speaker Series Program, initiated in 2014, provides funding to departments to host seminar speakers from other CSU campuses that they would not otherwise be able to invite. This program is intended to increase the exchange of ideas among campuses and ultimately lead to increased collaboration across campuses. Awards are for actual expenses up to \$700 (or up to \$1,000 for travel to or from Humboldt State University).

In AY 2014-15, the Seminar Speaker Series Program provided awards ranging from \$225-\$1,000 to help 11 departments at 10 different campuses host speakers from other CSU campuses.



SEMINAR SPEAKER SERIES PROGRAM AY 2014-15

SPEAKER	HOST	SEMINAR TITLE
Dr. Petra Dekens Geosciences, San Francisco State University	Dr. Rachel Teasdale Geological and Environmental Sciences, CSU Chico	The early Pliocene: climate patterns of sustained global warmth
Dr. Bruno Pernet Biological Sciences, CSU Long Beach	Drs. Tyler Evans and James Murray Biological Sciences, CSU East Bay	Effects of evolutionary and experimental changes in egg energy content on form and function of soiralian larvae
Dr. Jayson Smith Biological Sciences, Cal Poly Pomona	Dr. Arlene Haffa Science and Environmental Policy, CSU Monterey Bay	Microbial bioremediation in a constructed coastal treatment wetland
Dr. Jonathon Stillman Biology, San Francisco State University	Dr. Joseph A. Ross Biology, Fresno State University	The physiological impacts of climate change on marine invertebrates
Dr. Kerry Nickols Science and Environmental Policy, CSU Monterey Bay	Dr. Crow White Biological Sciences, Cal Poly San Luis Obispo	From observations to predictions: mechanistic approaches to marine ecology and management
Dr. Matthew Cover Biological Sciences, CSU Stanislaus	Dr. Alison O'Dowd Environmental Science and Management, Humboldt State University	Floodplain habitat for coho salmon in the lower Lagunitas Creek watershed, coastal Marin County, CA

SEMINAR SPEAKER SERIES PROGRAM AY 2014-15 (cont.)

SPEAKER	HOST	SEMINAR TITLE
Dr. Lars Tomanek Biological Sciences, Cal Poly San Luis Obispo	Dr. Andres Aguilar Biological Sciences, Cal State L.A.	Proteomes in changing environments: global warming and ocean acidification
Dr. Rene Vellanoweth Anthropology, Cal State L.A.	Dr. Todd Braje Anthropology, San Diego State University	Cal State LA's coastal and inland archeology program: examples from the Channel Islands, Santa Monica Mountains and Baja California, Mexico
Dr. James Lindholm Science and Environmental Policy, CSU Monterey Bay	Dr. Ritin Bhaduri Biological Sciences, CSU Stanislaus	Documenting distribution of fishes and invertebrates using ROVs
Dr. Rikk Kvitek Science and Environmental Policy, CSU Monterey Bay	Dr. Ellen Hines Geography and Environment, San Francisco State University	Completion of and lessons from the 6000 km ² California Seafloor Mapping Project: why it was done, how it was done, what we learned, and how the data are being used
Dr. Paul Bourdeau Biological Sciences, Humboldt State University	Dr. Jeremy Long Biology, San Diego State University	Non-consumptive effects of predators in pelagic food webs



STRATEGIC INVESTMENT PROGRAM

The Strategic Investment Program was initiated in 2014 to provide funding to teams of CSU faculty members and research associates seeking external support for significant, large-scale marine and coastal initiatives that further COAST's programmatic goals and objectives and increase the research capacity of the CSU overall.

This program has made COAST's largest awards to date: in AY 2014-15, awards ranged from \$20,000-\$45,000. The team from MLML-SJSU, CSU East Bay and SDSU is working to establish a Center for Aquaculture in the CSU that will focus on education and workforce development, research and partnerships with industry, and informed decision-making and policy development. The team from Cal Poly San Luis Obispo, SFSU and Fresno State University is developing a large, collaborative research network to translate cellular level responses to environmental stress into functional consequences at multiple levels of biological organization in marine ecosystems.



STRATEGIC INVESTMENT PROGRAM AY 2014-15

AWARD RECIPIENTS	PROJECT TITLE
<p>Drs. Michael Graham and Scott Hamilton Moss Landing Marine Labs, San José State University</p> <p>Dr. Michael Lee Anthropology, Geography and Environmental Studies, CSU East Bay</p> <p>Dr. Matt Edwards Biology, San Diego State University</p>	<p>CSU Center for Aquaculture: research, education and policy</p>
<p>Drs. Lars Tomanek and Sean Lema Biological Sciences, Cal Poly San Luis Obispo</p> <p>Dr. Jonathon Stillman Romberg Tiburon Center, San Francisco State University</p> <p>Dr. Brian Tsukimura Biology, Fresno State University</p>	<p>Marine organismal integromics: improving predictions of how a changing ocean will affect organisms by integrating multiple levels of biological organization</p>

EXTRAMURAL FUNDING

In AY 2013-14 and AY 2014-15, faculty members secured over \$2.9M in extramural funding as a result of prior COAST support. The success in these two years accounts for over 33 percent of the \$8.6M secured to date.

CAMPUS	PRINCIPAL INVESTIGATOR(S)	AMOUNT	PRIOR COAST SUPPORT
Fresno	Dr. Brian Tsukimura	\$ 215,068	FRIP AY 2012-13
Humboldt	Drs. Jeffrey Abell, Eric Bjorkstedt and Brian Tissot	\$ 272,952	GDP AY 2013-14 <i>(award to Dr. Cheryl Logan, CSUMB)</i>
Long Beach	Dr. Chris Lowe	\$ 157,214	FRIP AY 2010-11
Los Angeles	Dr. Patrick Krug	\$ 345,532	FRIP AY 2011-12
Monterey Bay	Dr. Cheryl Logan	\$ 294,731	GDP AY 2013-14
Northridge	Dr. Mark Steele	\$ 310,220	GDP AY 2013-14
Pomona	Dr. Angel Valdes	\$ 181,915	FRIP AY 2011-12
San Francisco	Dr. Jonathon Stillman	\$ 606,971	FRIP AY 2012-13
San José (MLML)	Dr. Scott Hamilton	\$ 537,593	GDP AY 2013-14
TOTAL			\$2,922,196



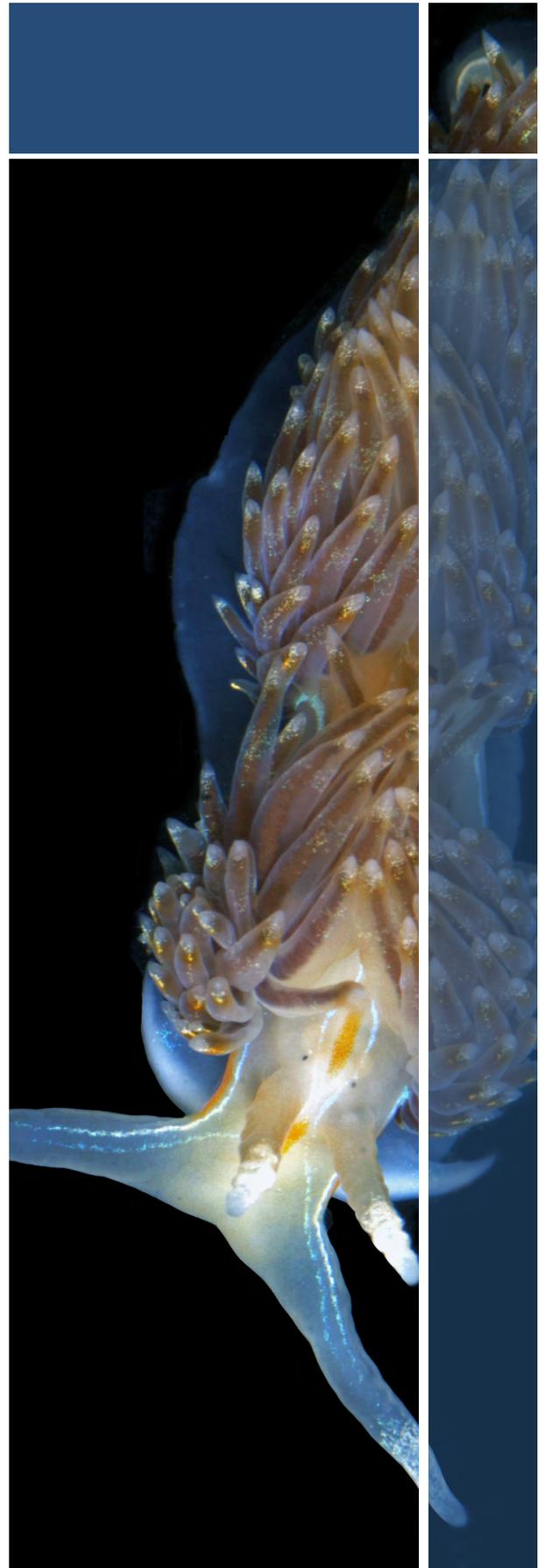
SPOTLIGHT ON FACULTY RESEARCH

In January 2014, Dr. Patrick Krug (Biological Sciences, Cal State L.A.) and Dr. Angel Valdes (Biology, Cal Poly Pomona) were awarded \$527,477 from the National Science Foundation Division of Environmental Biology Systematics and Biodiversity Science program. COAST provided support to Drs. Krug and Valdes through the Faculty Research Incentive Program in AY 2011-12 to develop their proposal, *Collaborative Research: RUI: ARTS: Revisionary systematics of herbivorous sea slugs: identifying traits that promote diversification and morphological novelty*, that will support their research through the end of 2016.

The sacoglossan sea slugs that Krug and Valdes are investigating exhibit an array of unusual traits that may confer an evolutionary advantage. These 'solar-powered' animals have the unusual ability to photosynthesize like a plant. They absorb chloroplasts from the algae they eat and incorporate the chloroplasts into their bodies, a process that is completely unique among animals. This kleptoplastic ability, along with other traits, may account for their high diversification rate and species richness.

Sacoglossans offer several possible benefits to society. Anti-cancer compounds have been isolated from some sacoglossans, and others have served as biological control agents for invasive algae. However, taxonomic uncertainty has limited the potential for their use in these roles as well as hampered conservation issues. In this project, the researchers will combine genetic, anatomic, ecological and developmental studies to describe over 100 new species of sea slugs. Modeling will then identify factors that determine how species are distributed, and what makes some sacoglossans more ecologically and evolutionary diverse than others.

As part of the NSF-funded project, Krug and Valdes led an international, two-week, sea slug taxonomy and systematics workshop at the Smithsonian Tropical Research Institute in Panama. The workshop trained students in collection and ecological survey techniques, taxonomy and genetic sequencing and explored how these diverse species can aid in the study of brain activity and the fight against cancer. The workshop was attended by five CSU students and young scientists from India, Brazil, Colombia, El Salvador, Costa Rica and Mexico. Over the two-week period, the students collected more than 70 species of tropical sea slugs that are currently being described by Krug and Valdes' labs.



SUPPORTING STUDENT RESEARCH

COAST supports CSU undergraduate and graduate students engaged in marine, coastal, and coastal watershed related research with CSU faculty members through research awards, travel grants, and internships. COAST support often allows students to devote themselves more fully to their academic work and research projects than they would be able to otherwise. This helps them to remain enrolled, persist in STEM majors and programs, and attain their degrees more quickly. Because each student works with a CSU faculty mentor, support for students ultimately benefits faculty members as well. Over the last two years, there have been changes and refinements in these programs in order to better meet the needs of the students.

The following table provides a summary of all COAST awards made to CSU undergraduate and graduate students in 2013-14 and 2014-15.

STUDENT AWARD PROGRAM	Number of Students Supported		Number of Participating Campuses		Funding Amount	
	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15
Federal Work-Study Pilot Program*	21	-	4	-	\$ 17,500	-
Graduate Student Research Awards	26	35	10	12	\$ 78,000	\$ 105,000
Undergraduate Student Research Awards*	7	-	7	-	\$ 10,500	-
Undergraduate Student Research Support Program†	-	75	-	20	-	\$ 50,264
Student Travel Awards	42	44	13	13	\$ 27,794	\$ 29,103
Summer Internships	10	9	6	6	\$ 36,000	\$ 36,000
TOTAL	106	163			\$ 169,794	\$ 220,367

* Discontinued after 2013-14

† Initiated in 2014-15

FEDERAL WORK-STUDY PILOT PROGRAM

The Federal Work-Study Pilot Program continued during AY 2013-14 at CSU East Bay, CSU Fullerton, Humboldt State University, and Cal State L.A. The goal of the program was to increase the number of federally funded work-study students participating in marine, coastal, and coastal watershed research. COAST provided support to each campus to serve as the required 25 percent institutional match for federal work-study funds.

COAST contributed \$17,500 and was able to leverage \$67,500 in federal funding to provide a total of \$85,000 to support student research. This program supported 21 students at four campuses during AY 2013-14, including seven graduate students and 14 undergraduate students (Appendix). The program was ended after AY 2013-14 due to logistical challenges.

STUDENT RESEARCH AWARDS PROGRAM

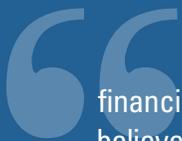
The goals of the Student Research Awards Program are to: 1) stimulate student interest in marine-related careers, 2) increase student participation in faculty-mentored research, and 3) provide students with the opportunity to obtain the skills necessary to join a highly skilled, technologically advanced workforce. In AY 2013-14, COAST provided \$114,000 to a total of 33 students at 12 campuses through this program (Appendix). Seven undergraduate students each received \$1,500 and 26 graduate students each received \$3,000. The following year the program split into the two programs detailed below.

UNDERGRADUATE RESEARCH SUPPORT PROGRAM

In AY 2014-15, a new, significantly larger program to support undergraduate research was launched in response to a realization that a greater investment in this area was needed, one that is consistent with the overall size of the CSU and its makeup of predominantly undergraduate institutions. The Undergraduate Research Support Program provides \$2,500 to each campus to support undergraduate students involved in marine, coastal, and coastal watershed research. Campus Representatives are responsible for implementing this program and awarding the funds on their respective campuses. In the first year of this new program, 20 campuses successfully allocated their funding and a total of 74 students were supported (Appendix). Several campuses provided matching funding that helped augment projects and support additional students.

GRADUATE STUDENT RESEARCH AWARD PROGRAM

In AY 2014-15, 35 graduate students were supported through the Graduate Student Research Award Program (Appendix), which provides greater flexibility in use of the awards than previously. Applicants can now request that the \$3,000 award be provided directly to them through their campus financial aid office for their personal use (e.g., living expenses, tuition and fees, childcare), be made available to them through their department for the purchase of materials and supplies, services or travel in support of their research, or any combination of the two. Applicants construct their own budgets and obtain departmental approval as part of the application process. This change should enable students to conduct their work and complete their theses more efficiently and effectively.



Without COAST'S financial support, I do not believe I would be able to collect all the samples necessary to complete my thesis.

-- Heather Kramp
Moss Landing
Marine Laboratories



STUDENT TRAVEL AWARD PROGRAM

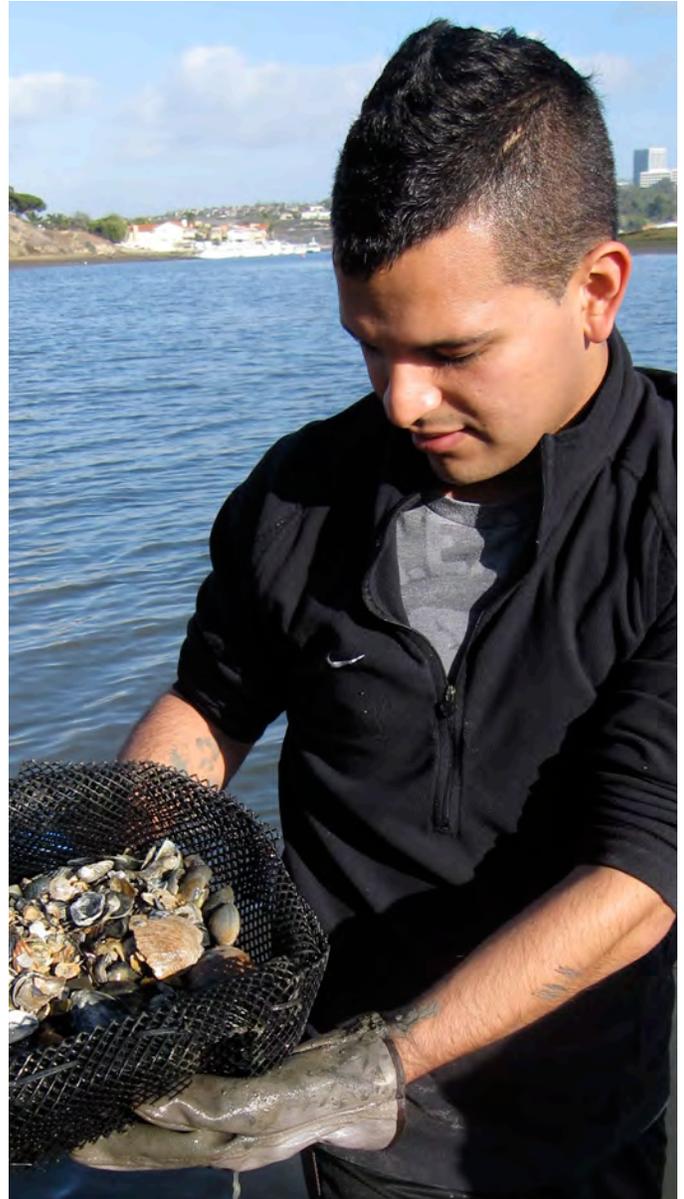
The Student Travel Award Program supports continuing CSU undergraduate and graduate students to attend and present the results of original marine, coastal, and coastal watershed research at scientific meetings and conferences. The goals of the program are to enable students to participate in what is often a transformative experience and to highlight CSU research at a national level. COAST provided \$27,018 in travel support to 11 undergraduate and 31 graduate students from ten different campuses in AY 2013-14 and \$29,103 to 12 undergraduate and 32 graduate students from 13 different campuses in AY 2014-15 (Appendix).

SUMMER INTERNSHIP PROGRAM

Through the Summer Internship Program, CSU students work side-by-side with professional scientists in the field and laboratory on current research projects. As interns, they gain valuable work experience and learn technical skills that augment their education and provide professional development opportunities. Additionally, they are better able to make informed decisions about STEM-related employment or advanced degrees they may wish to pursue. Since the program began in 2011, 50 interns have been placed with scientists at host organizations.

A number of new hosts have joined the program in recent years. The National Marine Sanctuaries Program joined as a new host in 2014 (NMS; <http://sanctuaries.noaa.gov/>) and hosted students at the Channel Islands National Marine Sanctuary office in Santa Barbara and at the West Coast Region office in Monterey. In 2015, the Cordell Bank National Marine Sanctuary at Point Reyes Station and the Monterey Bay National Marine Sanctuary in Monterey hosted interns as well. Additional new partners are the NOAA National Marine Fisheries Service Protected Resource Division in Long Beach, SeaTrec, Inc., in Pasadena and CA State Lands Commission Marine Invasive Species Project in the Bay Area.

Ten students from six different campuses participated in Summer 2014 and nine students from seven campuses participated in 2015 (Appendix). They worked on projects involving fisheries management, marine engineering, invasive species, public outreach, and more. Prior to Summer 2015, 25% of interns who completed the program have been hired on by their host organization following their internship.



“The COAST Student Travel Award was essential in exposing me to a broad range of scientific professionals. The experience of attending and presenting at a large and influential conference has been an important step in my graduate education.

-- Bonnie Ahr
CSU Long Beach

COAST OUTREACH AND PARTNERSHIP BUILDING

COAST staff continually engage in outreach to administrators and faculty members throughout the CSU. In AY 2013-14 and 2014-15, the COAST Director, Dr. Krista Kamer, visited 14 campuses and met with Presidents, Provosts and faculty members. This activity is critical to keeping administrators informed of COAST's accomplishments and priorities, particularly if there has been a change in leadership at a campus. The visits are also used to meet individually with faculty members to learn about their research in detail and answer their questions about faculty and student funding opportunities.

COAST co-hosted two poster receptions with WRPI at the Chancellor's Office. In both 2014 and 2015, faculty members and students from each campus presented their water related research to CSU Chancellor's Office staff, Presidents, Trustees and invited guests. This annual event allows CSU leaders to speak directly with faculty members and students to hear about their research and experiences first hand. The 2016 COAST-WRPI Student Research Poster Reception will be held on Tuesday, March 8 - save the date!

COMMUNICATING SCIENCE WORKSHOP

The COAST Policy Network, led by Dr. James Lindholm (CSU Monterey Bay) and Dr. Dean Wendt (Cal Poly San Luis Obispo) held its first workshop at the Cal Poly San Luis Obispo campus on October 4, 2013. The workshop, Connecting Science to Sacramento: The Role of Your Science in Policymaking, focused on helping

COAST faculty members understand how to effectively communicate the results of their research to diverse audiences, including policy-makers, managers, and the wider public. Participants learned directly from legislators, legislative committee staff, Executive Branch agency staff, and reporters from multiple media platforms how science informs policy development and how to successfully package their message for maximum impact.

Ms. Christine Robertson, Associate Director of the Institute for Advanced Technology and Public Policy (IATPP) at Cal Poly San Luis Obispo, assisted in the planning of this workshop. She has eight years' experience working in Sacramento for the Honorable Sam Blakeslee and has drawn on that experience to engage members of the California State Legislature, Chief Consultants of relevant committees, high-level agency staff, and members of the media in the workshop.

CALIFORNIA OCEAN DAY, SACRAMENTO

COAST has hosted the California Ocean Day luncheon in Sacramento annually since 2012. Ocean Day focuses on ocean health and marine conservation and the luncheon provides a forum in which CSU scientists working on critical issues can communicate directly with an interested and activated audience comprising the ocean advocacy community and legislative members and staff. In 2014, the luncheon briefing focused on the effects of multiple sources of stress on marine organisms. Dr. Anne Todgham (San

“After this internship, I was sure that I wanted to continue in this field. I am confident that this internship will help me get into graduate school due to the many skills and knowledge I learned.

-- Michelle Chow
Cal Poly San Luis Obispo



Francisco State University²), Dr. Karina Nielsen (Sonoma State University³) and Ms. Cat Kuhlman (Executive Director, Ocean Protection Council) spoke to an audience of over 100 people including State Representatives, agency staff, and non-profit leaders. In 2015, Dr. Nick Welschmeyer (Moss Landing Marine Laboratories) and Mr. Christopher Scianni (Senior Environmental Scientist, Marine Invasive Species Program, California State Lands Commission), a former Moss Landing Marine Laboratories student, spoke on invasive species, the maritime industry and risk management. Both years, COAST invited CSU undergraduate and graduate students to participate in Ocean Day and learn about the interaction between policy and science.

AMERICORPS VISTA

COAST hosted an Americorps Volunteer in Service to America (VISTA) in AY 2014-15 through the CSU STEM VISTA program run by the Center for Community Engagement at the Chancellor's Office. Ms. Jessica Taatjes, a recent graduate of Humboldt State University, was selected to help COAST with its efforts to engage students from all backgrounds in marine science and to increase CSU student success. This included increasing undergraduate student participation in an existing internship program as well as developing new programs to create a pipeline of students interested in marine science as a degree option and career field. Success in these areas will further COAST's goal of creating a diverse pool of graduates with the skills needed to succeed in the workforce and serve critical marine, coastal, and coastal watershed related needs of California and the nation.

During her twelve months with COAST, Jessica visited 13 campuses and hosted luncheons for graduate and undergraduate students at which she presented information on all of COAST's funding opportunities for students (Graduate Student Research Awards, Summer Internships, Travel Awards, and Undergraduate Student Support). She also met with faculty members at each campus to gather input on potential development of a new COAST early experience research opportunity program for first year, second year, and community college students. Jessica's foundational work will allow COAST staff to build upon her results in the coming year.

² Now at UC Davis

³ Now at San Francisco State University

SACNAS 2014

COAST participated in the 2014 SACNAS National Conference held at the Los Angeles Convention Center as part of a larger, system-wide effort to increase minority participation in STEM undergraduate and graduate programs and promote the attainment of advanced graduate degrees and leadership positions in science by Hispanics/Chicanos, Native Americans, and women. COAST shared a "CSU STEM" booth with the CSU Agricultural Research Institute (ARI) and the Water Resources and Policy Initiatives (WRPI) as part of a coordinated effort to highlight research and funding opportunities available to students throughout the CSU system. COAST was also instrumental in coordinating participation from a majority of campuses (at least 14) at the event and providing for them to be co-located to illustrate the size and strength of the CSU. At the meeting, staff from COAST, ARI, and WRPI were able to engage hundreds of students directly to encourage them to consider the CSU for their degrees.



LOOKING AHEAD

Over the next 12 months COAST will:

- Seek significant external funding to augment the internal funding provided by the CSU and increase the research capacity of the system.
- Speak at meetings and public events convened by stakeholders to address CSU COAST's role in scientific research, workforce development and public policy formation.
- Host the 2016 California Ocean Day luncheon in Sacramento on March 15, 2016.
- Continue to raise awareness of CSU COAST scientists as a primary resource for the best scientific information available to guide decision-making and inform policy development.
- Support faculty members pursuing extramural funding for individual research projects and larger, collaborative projects aligned with COAST's strategic goals.
- Provide professional development and learning opportunities for faculty members.
- Provide support to undergraduate and graduate students engaged in marine, coastal and coastal watershed research.
- Enhance educational opportunities for students and promote the success of students from all backgrounds.
- Visit campuses to meet with administrators and faculty members and host luncheons for students to increase student participation in COAST.
- Continue to expand the Summer Student Internship Program by adding new and engaging host organizations.





APPENDIX

STUDENT AWARDS AND SUPPORT

FEDERAL WORK-STUDY PILOT PROGRAM PARTICIPANTS AY 2013-14

CAMPUS	STUDENT, MAJOR	FACULTY MENTOR	GRADUATE/ UNDERGRADUATE
EAST BAY	Devin Schaefferkoetter, Biology	Dr. Tyler Evans	Graduate
	Kelsey Wallace, Biology	Dr. James Murray	Graduate
FULLERTON	Sara Briley, Biology	Dr. Danielle Zacherl	Graduate
	Lilian Bui, Biology	Dr. Jennifer Burnaford	Undergraduate
	Michael Espinoza, Biology	Dr. Danielle Zacherl	Undergraduate
	Cristina Fuentes, Biology	Dr. Danielle Zacherl	Undergraduate
	Andrea Moreno, Biology	Dr. Danielle Zacherl	Undergraduate
HUMBOLDT	Ian Erickson, Environmental Management and Protection	Dr. Laurie Richmond	Undergraduate
	Kenny Gossow-Smith, Chemistry	Dr. Matt Hurst	Undergraduate
	Jason Lopiccolo, Marine Biology	Dr. Sean Craig	Undergraduate
	William Markey, Environmental Management and Protection	Dr. Laurie Richmond	Undergraduate
	Marke Sinclair, Marine Biology/Zoology	Dr. Sean Craig	Undergraduate
LOS ANGELES	Sarah Abdallah, Biology	Dr. Andres Aguilar	Undergraduate
	Sonya Diaz, Biochemistry	Dr. Mohammad Rezaie-Boroom	Graduate
	Michael Evans, Anthropology	Dr. Rene Vellanoweth	Graduate
	Darius Jones, Chemistry-Biochemistry	Dr. Krishna Foster	Graduate
	Jessica Morales, Anthropology	Dr. Rene Vellanoweth	Undergraduate
	Ryan Moritz, Anthropology	Dr. Rene Vellanoweth	Graduate
	Dennis Palacios, Environmental Geosciences	Dr. Andre Ellis	Undergraduate
	Cristian Santos, Biology	Dr. Craig Barrett	Undergraduate
	Ariel Sherman, Biology	Dr. Pat Krug	Undergraduate

STUDENT RESEARCH AWARDS AY 2013-14

CAMPUS	STUDENT	ADVISOR	PROJECT TITLE
FRESNO	Kumsu Hwang*	Dr. Larry Riley	Investigate the effects of glucose injection on glucose metabolism in tilapia (<i>Oreochromis mossambicus</i>)
FULLERTON	Sara Briley	Dr. Danielle Zacherl	Impact of an Olympia oyster (<i>Ostrea lurida</i>) restoration project on a nearby eelgrass (<i>Zostera marina</i>) bed
	Robert Leeper	Dr. Brady Rhodes	Does evidence of earthquake-induced subsidence and tsunami exist in the Anaheim Bay estuary?
	JoAnne Linnenbrink	Dr. Danielle Zacherl	Genetic population structure of the Olympia oyster, <i>Ostrea lurida</i> , in southern California
HUMBOLDT	Sean Cochran	Dr. Darren Ward	Marine survival of Coho salmon (<i>Oncorhynchus kisutch</i>) from small coastal watersheds in northern California
	Lydia Evers	Dr. Frank Shaughnessy	Modeling the productivity connection between nearshore and bay ecosystems: the Humboldt Bay example
	Kaitlyn Manishin*	Dr. Dave Hankin	Role of Trinity River hatchery practices in apparent reduction in prevalence of half-pounder steelhead life history type in the Trinity River
	Conrad Newell	Dr. Andrew Kinziger	Captive spawning and early life stage development of the endangered Tidewater goby (<i>Eucyclogobius newberryi</i>)
LONG BEACH	Nathan McLain	Dr. Jesse Dillon	The effects of increased inundation due to sea level rise on the decomposing communities of a recently restored southern California coastal salt marsh
LOS ANGELES	Edith Martinez	Dr. Andres Aguilar	Population genomics and signatures of selection in grass rockfish (<i>Sebastes rastrelliger</i>) along its geographic distribution
MARITIME ACADEMY	Lydia Nelson*	Dr. Alex Parker	Fresh water generator: improving middle school learning about ocean conservation through lessons from engineering
MONTEREY BAY	Heather Kramp	Dr. Scott Hamilton (MLML)	Assessing patterns of fish productivity on nearshore rocky reefs along the California coast
	Lauren Tobosa*	Dr. Cheryl Logan	Ocean acidification effects on gene expression in juvenile rockfish
POMONA	Benjamin Lucas	Dr. Jayson Smith	An evaluation of management strategies to protect rocky intertidal species from the impacts of human activities: a look into the past, the present, and the future
SACRAMENTO	Sylvanna Krawczyk*	Dr. David Zeigler	Multiresolution surface reconstruction of the sea floor along the California coast

* Denotes undergraduate student

STUDENT RESEARCH AWARDS AY 2013-14 (cont.)

CAMPUS	STUDENT	ADVISOR	PROJECT TITLE
SAN DIEGO	Breana Campbell	Dr. Todd Braje	Five thousand years of human impacts on California mussels (<i>Mytilus californianus</i>): historical ecological management implications from the northern Channel Islands
	Nicholas Hayman	Dr. Brian Hentschel	Combined effects of flow speed and sub-lethal organophosphate insecticide exposure on the predator-prey interactions between an estuarine fish and a spionid polychaete
	Garrett Lemons	Dr. Rebecca Lewison	Developing of a novel tool to investigate sea turtle spatial and trophic ecology
	Alexander Neu*	Dr. Scott Hamilton	Effects of ocean acidification on <i>Pododesmus macrochisma</i> and <i>Balanus crenatus</i> on settlement tiles in Monterey Bay, CA.
	Katherine Sievers	Dr. Todd Anderson	Multiple habitat structural components and the distribution, abundance, and size of rocky reef fishes at large spatial scales
	Erin Voigt	Dr. Kevin Hovel	The effects of structural complexity and biodiversity on the function of a temperate seagrass ecosystem
SAN FRANCISCO	Anastasia Ennis	Dr. C. Sarah Cohen	Characterizing genetic variation at major histocompatibility complex loci in an endangered San Francisco Bay marsh endemic (<i>Reithrodontomys raviventris</i>)
	Erin Flynn	Dr. Anne Todgham	Sensitivity of early life stages of cold-adapted fishes to future ocean conditions
	Gabriela Geyer	Dr. Jason Gurdak	Vulnerability of recently recharged groundwater in the California coastal basins to nitrate contamination
	Elize Papineau	Dr. Jonathon Stillman	Transcriptomic analysis of <i>Daphnia pulex</i> response to multi-stressors
	Ashley Wheeler	Dr. Ivano Aiello (MLML)	Drivers of salt marsh erosion and their geomorphological expressions in a California estuary
	Charles Wingert	Dr. William Cochlan	The effects of ocean acidification on diatoms of the California upwelling system
SAN JOSÉ	Anne Cassell	Dr. Scott Shaffer	Comparison of urban influences on Western gull diets from Año Nuevo and the Farallon Islands
	Maria Suzanne Christensen	Dr. Michael Graham (MLML)	Interspecific competition between <i>Undaria pinnatifida</i> and native kelps: is competitive success linked to phylogenetic relatedness?
	Corey Clatterbuck	Dr. Scott Shaffer	Use of electronic egg loggers to describe avian egg-turning behavior
	Emily Donham	Dr. Scott Hamilton (MLML)	Effects of ocean acidification on benthic communities inhabiting California's temperate rocky reefs
SAN LUIS OBISPO	Mallika Beach-Merota*	Dr. Nikki Adams	Covering response of purple sea urchins - what's light or predation got to do with it?
SONOMA	Athena Maguire	Dr. Karine Nielsen	A blood sucking parasitic snail, <i>Evalea tenuisculpta</i> , infects red abalone (<i>Haliotis refucens</i>) in northern California

* Denotes undergraduate student

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
CHANNEL ISLANDS	Jonathan Fausto	ESRM	Dr. Sean Anderson	Best Management Practices (BMP) installation	\$ 950
	Reily Pratt	ESRM	Dr. Simone Aloisio	Exploring the utilization of <i>Macrocystis pyrifera</i> as a biosentinal of environmental mercury	\$ 550
	Katherine Soto	Biology	Dr. Ruben Alarcon	Characterizing the native insect pollinators of Santa Rosa Island	\$1,000
CHICO	Charles Brooke	Microbiology	Dr. Emily Fleming Nuester	Connecting mercury methylation and the iron cycle in a California estuarine system	\$ 1,250
	Ravi Shankar	Applied Mathematics	Dr. Sergei Fomin	Tsunami wave propagation over an underwater shelf	\$ 1,250
DOMINGUEZ HILLS	Jaime Lopez	Biology	Dr. Jacqueline Padilla-Gamino	Exploring the intertidal: how calcareous algae can recover from a bleaching event in California- the effect of zonation (low vs. high intertidal)	\$ 346
	Araceli Meyn	Biology	Dr. Jacqueline Padilla-Gamino	Exploring the intertidal: how calcareous algae can recover from a bleaching event in California- the effect of site and temperature	\$ 346
	Ashley Potter	Biology	Dr. Jacqueline Padilla-Gamino	Bleaching and its affects on the cnidocyte production of <i>Anthopleura elegantissima</i>	\$ 1,245
	Maria Salazar	Biology	Dr. Jacqueline Padilla-Gamino	Effects of temperature on barnacle development	\$ 281
	Jacqueline Silva	Biology	Dr. Jacqueline Padilla-Gamino	Effects of temperature on juvenile barnacles: a study using reciprocal transplants	\$ 281
EAST BAY	Chelsea Henderson*	Biology	Dr. James Murray	Effects of geomagnetic field on navigation in the sea slug <i>Tritonia tetraquetra</i>	\$ 1,000
	Katrina-Mari Mayol*	Biology	Dr. James Murray	Determining water flow direction during short distance navigation of the sea slug <i>Tritonia tetraquetra</i>	\$ 1,000
	Daniel Nguyen*	Biology	Dr. Tyler Evans	Common and stressor-specific responses to temperature, hypoxia and salinity in the estuarine fish <i>Gillichthys mirabilis</i>	\$ 500

* Received additional match funding from their campus.

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
FRESNO	Robert Loyd	Mechanical Engineering	Dr. Ulrike Muller	Hydrophone for studying plankton predator-prey interaction	\$ 1,250
	Jason Thomas	Biology	Dr. Mamta Rawat	Analysis of gene expression in <i>Synechococcus elongatus</i> and mutants disrupted in glutathione metabolism	\$ 1,250
FULLERTON	Lilian Bui*	Biological Science	Dr. Jennifer Burnaford	Evaluating the consequences of feather boa limpet (<i>Lottia insessa</i>) infection on the feather boa kelp (<i>Egregia menziesii</i>)	\$ 250
	Brittany Garces*	Biological Science	Dr. Jennifer Burnaford	The effect of low tide exposure on the susceptibility of kelp to herbivory	\$ 1,125
	Prarthana Shankar*	Biological Science	Dr. Kristy Forsgren	An assessment of the reproductive physiology of the California mussel (<i>Mytilus californianus</i>) in southern California	\$ 1,125
HUMBOLDT	William Fairchild*	Oceanography	Dr. Jeffrey Abell	Marine boundary layers are distinct atmospheric phenomena observed at the boundary of land-sea and mediate local temperature, humidity, and cloudiness	\$ 500
	Samantha Gonzalez-Gold*	Biology	Dr. Tim Mulligan	The effect of temperature on the development and growth of dwarf cuttlefish (<i>Sepia bandensis</i>)	\$ 250
	Angela Jones*	Biology	Dr. Paul Bourdeau	Wasting effects on different life stages of <i>Leptasterias hexactis</i>	\$ 500
	Eloy Lopez*	Biology	Dr. Tim Mulligan	The effect of temperature on the development and growth of dwarf cuttlefish (<i>Sepia bandensis</i>)	\$ 250
	Johnny Roche*	Biology	Dr. Paul Bourdeau	Cancrid crab prey selection: a question of size or species identity (Decapoda: Brachyura: Cancridae)?	\$ 500
	Marke Sinclair*	Biology	Dr. Sean Craig	Larval settlement patterns of a new species of invasive bryozoan, <i>Watersipora</i> spp.	\$ 500
LONG BEACH	Andrea Danihel	Marine Biology	Dr. Bruno Pernet	Do marine larvae feed better in simple or complex feeding environments?	\$ 625
	Priscilla Figueroa	Biology	Dr. Doug Pace	Assessing biochemical growth efficiency in <i>Dendraster excentricus</i> larvae grown at different nutrient conditions	\$ 625

* Received additional match funding from their campus.

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
LONG BEACH	Caitlin Sojka	Marine Biology	Dr. Bruno Peret	Effects of feeding on the growth of the larvae of polyclad flatworms	\$ 625
	Vivian Ton	Marine Biology	Dr. Kelly Young	Determining fecundity in the kelp bass, <i>Paralabrax clathratus</i>	\$ 625
LOS ANGELES	Juliana Lawrence	Biology	Dr. Patrick Krug	Do non-dispersive larvae decrease genetic diversity? A test using microsatellites	\$ 938
	Alissa Magaña	Geology	Dr. M. Hassan Rezaie-Boroon	Heavy metals and trace elements in water, sediment, pore water, and biomass of Ballona Creek Wetland, CA	\$ 1,000
	Ariel Sherman	Biochemistry	Dr. Patrick Krug	Is <i>Elysia clarki</i> a distinct species, or an ecotype of <i>E. crispata</i> ? A test using microsatellites	\$ 560
MARITIME	Hannah Foster*	Marine Transportation	Dr. Alexander Parker	Not Available	\$ 1,250
	Austin Gearty*	Marine Transportation	Dr. Alexander Parker	Effects of inorganic nutrients on primary production	\$ 1,250
<i>CMA provided an additional \$2,000 that supported two other awards to Rose Hendrix and William Lindsay.</i>					
MONTEREY BAY	April Makhukov	Biology	Dr. Cheryl Logan	Investigating the effects of ocean acidification on juvenile rockfish (<i>Sebastes spp.</i>) gene expression	\$ 1,500
	Serena Thurston	Marine Science	Dr. Kerry Nickols	Examination of crustacean larval diversity within the zooplankton communities of moving water parcels off the central California coast – a study in population connectivity	\$ 914
NORTHRIDGE	Malek Al-Marayati	Marine Biology	Dr. Steven Dudgeon	Population genetic structure of <i>Mastocarpus spp.</i>	\$ 500
	Corensa Eisenlord	Marine Biology	Dr. Gretchen Boria-Perez	<i>Vibrio cholerae</i> and copepods in coastal waters of southern California	\$ 500
	Alexis Estrada	Biology	Dr. Mark Steele	The effects of an invasive alga, <i>Sargassum horneri</i> , on kelp forest fishes and habitat at Santa Catalina Island, California	\$ 500

* Received additional match funding from their campus.

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
NORTHRIDGE	Jayslen Serrano	Biology	Dr. Robert Carpenter	The effects of increased carbon dioxide levels and temperature on photosynthetic and calcification rates of <i>Montipora aequituberulata</i> and <i>Lithophyllum inspidum</i> in Moorea, French Polynesia	\$ 500
	Cameron Winbush	Biology	Dr. Casey terHorst	Genotypic variation in temperature tolerance of symbiotic algae	\$ 500
POMONA	Eric Breslau	Biology	Dr. Angel Valdes	Newly discovered diversity and cryptic invasion(s) of <i>Melanochlamys</i> sea slugs (Gastropoda, Aglajidae) in the North Pacific	\$ 825
	Adrianna Elihu	Biology	Dr. Angel Valdes	Possible invasive species of <i>Haminoea ovalis</i> on Catalina Island	\$ 825
	Alycia Uyeoka	Biology	Dr. Jayson Smith	Consumption rates and diet selectivity by the kelp snail (<i>Norrisia norrisi</i>) for native and non-native Sargassum seaweeds	\$ 850
SAN BERNARDINO	Lowell Iporac	Biology	Dr. John Skillman	Assessing abiotic factors and algal communities of eelgrass (<i>Zostera marina</i>) beds across California	\$1,681
	Madison Morris	Geology	Dr. Britt Leatham	On the biometric analysis of scaphopods of the Pleistocene Palos Verdes Formation and their indications of environmental change and sediment petrology	\$ 819
SAN DIEGO	Shay Hengen	Biology	Dr. Kevin Hovel	The feeding habits of <i>Alia carinata</i> using feeding assay, behavior analysis, and stable isotope analysis	\$ 378
	Jennifer Joseph	Biology	Dr. Kevin Hovel	The effects of a predator cue on grass shrimp grazing on seagrass	\$ 493
	Chyna Lee	Anthropology	Dr. Todd Braje	Human impacts on California mussels (<i>Mytilus californianus</i>): a 9,500 year old record from San Miguel Island, California	\$ 423
	Jaimie Savoie	Biology	Dr. Brian Hentschel	Effects of tidal current speed of feeding activity and prey selection of California killifish, <i>Fundulus parvipinnis</i>	\$ 643
SAN FRANCISCO	Jaymee Chaides	Ecology	Dr. Karen Crow	Phylogeny based on Hox A11, A13, D11, D12, and D13 of cartilaginous fishes	\$ 500

* Received additional match funding from their campus.

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
SAN FRANCISCO	Alice Dore	Biology	Dr. C. Sarah Cohen	The distribution of <i>Profilicollis altmani</i> – a marine parasite relevant to seabird and otter health	\$ 500
	Bridget Hansen	Microbiology	Dr. Edward Carpenter	The effects of temperature on the domoic acid producing diatom: <i>Pseudo-nitzschia</i>	\$ 500
	Liam O'Malley	Biology	Dr. Karen Crow	Multiple paternity in dwarf surfperch, <i>Micrometrus minimus</i>	\$ 500
	Cristina Provencio	Biology	Dr. Karen Crow	Discovering bay pipefish: an analysis of sexual dimorphism and growth variation	\$ 500
SAN LUIS OBISPO	Yareli Alvarez*	Biological Sciences	Dr. Nikki Adams	Use of Phos-tag™ labeling to identify effects of UV radiation on phosphorylation of Chk1 in the purple sea urchin, <i>Strongylocentrotus purpuratus</i>	\$ 250
	Alice Bourgeon*	Biological Sciences	Dr. Kristin Hardy	The effect of tidal position on skeletal muscle structure and metabolism in the giant acorn barnacle, <i>Balanus nubilus</i>	\$ 250
	Megan Durham*	Biological Sciences	Dr. Elena Keeling	Quantification of telomerase activity in colonial ascidians	\$ 383
	Mary Gamboa*	Biological Sciences	Dr. Elena Keeling	Characterization and quantification of blood cell types in colonial ascidians	\$ 234
	Jennifer Greene*	Biological Sciences	Dr. Lisa Needles	Spawning, settlement, and larval biology of Pismo clams, <i>Tivela stultorum</i>	\$ 250
	Maritza Luquin*	Biological Sciences	Dr. Lars Tomanek	Antioxidant capacity and oxidative damage in two mussel species, <i>Mytilus galloprovincialis</i> and <i>Mytilus trossulus</i> , under natural field conditions in San Francisco Bay	\$ 250
	Daniela Martinez*	Biological Sciences	Dr. Lars Tomanek	Effect of multiple environmental stressors on antioxidant capacity of two mussel congeners <i>Mytilus galloprovincialis</i> and <i>Mytilus trossulus</i>	\$ 250
	Emily Resner*	Biological Sciences	Dr. Kristin Hardy	Establishment of a working protocol for measuring citrate synthase activity in marine invertebrate muscle tissue	\$ 250

* Received additional match funding from their campus.

UNDERGRADUATE STUDENT RESEARCH SUPPORT PROGRAM AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AMOUNT
SAN LUIS OBISPO	Alex Westman	Biological Sciences	Dr. Kristin Hardy	Establishing a working protocol for measuring LDH activity in marine invertebrate muscle tissues	\$ 383
SAN MARCOS	Eduardo Castillo	Biological Sciences	Dr. Robert Sheath	Isolation of messenger RNA from <i>Zygnema irregulare</i>	\$ 824
	Daniel Cuggedge	Biological Sciences	Dr. Betsy Read	Design of experiment: optimizing electroporation parameters for <i>Emiliana huxleyi</i>	\$ 853
	Nicole Salas	Biological Sciences	Dr. Robert Sheath	Isolation of messenger RNA from <i>Zygnema irregulare</i>	\$ 824
SONOMA	Nicholas Barron	Biology	Dr. Daniel Crocker	Impacts of the novel stress hormone aldosterone on electrolyte balance in elephant seals	\$ 625
	Jordan Lankford	Biology	Dr. Sean Place	Do global methylation patterns change with exposure to sewage effluent?	\$ 625
	Orlando Martinez	Biology	Dr. Sean Place	MDR1 expression as a bioindicator of xenobiotic exposure in <i>Mytilus californianus</i>	\$ 625
	Andrea Reategui	Biology	Dr. Daniel Crocker	Impacts of stress on reproduction in elephant seals	\$ 625
STANISLAUS	Mark Hilgers	Biology	Dr. Ritin Bhaduri	A comparative analysis of larval helminths associated with their intermediate host, the sand crab <i>Emerita analoga</i>	\$1,250
	Rajvir Singh	Biology	Dr. Ritin Bhaduri	A comparative analysis of larval helminths associated with their intermediate host, the sand crab <i>Emerita analoga</i>	\$1,250

* Received additional match funding from their campus.



GRADUATE STUDENT RESEARCH AWARDS AY 2014-15

CAMPUS	STUDENT	ADVISOR	PROJECT TITLE
EAST BAY	Ashley Maynard	Dr. Tyler Evans	Enhancing the restoration of California estuaries by exploring the genetic basis of environmental tolerance in Olympia oysters (<i>Ostrea lurida</i>)
FULLERTON	Amanda Bird	Dr. Danielle Zacherl	Determining population structure, reproductive potential and habitat associations of threaded abalone (<i>Haliotis kamschatkana assimilis</i>) in Southern California
HUMBOLDT	Christopher Teague	Dr. Brian Tissot	Determining habitat associations of demersal fishes in the nearshore, subtidal waters of Northern California using remote sensing
LONG BEACH	Michelle Barton	Dr. Christine Whitcraft	Nest site selection of the Light-footed Clapper rail (<i>Rallus longirostris levipes</i>) in two Southern California salt marshes
	Annie Jean Rendleman	Dr. Doug Pace	Linking feeding efficiency and biochemical growth efficiency in two morphologically different echinoplutei larval forms: <i>Strongylocentrotus purpuratus</i> and <i>Centrostephanus coronatus</i>
	Ryan Stewart	Dr. Nate Onderdonk	Miocene rotation of Santa Catalina Island: implications for the Southern California continental borderland
	Michael Thompson	Dr. Robert Francis	Evolution of the Palos Verdes Fault Zone near Lasuen Knoll, offshore Southern California
	Connor White	Dr. Chris Lowe	Environmental influences on the movements, behaviors and energetics of the Leopard shark
MONTEREY BAY	Michael Esgro	Dr. James Lindholm	Danger zone: role of a military restricted area in protection of demersal fish and invertebrate communities at San Clemente Island, California
	Evan Matthiasen	Dr. Scott Hamilton	Effects of hypoxia on behavior and physiology of economically and recreationally important temperate reef fishes
	Scott Miller	Dr. Scott Hamilton	Dietary niche variation of coral reef fishes from a remote set of Central Pacific atolls
	April Woods	Dr. Jason Smith	Antioxidant enzymatic profiles and stress response in the diatom <i>Pseudo-nitzschia</i> : is domoic acid production associated with oxidative stress in <i>Pseudo nitzschia</i> ?
NORTHRIDGE	Samuel Ginther	Dr. Mark Steele	The effects of an invasive alga, <i>Sargassum horneri</i> , on kelp forest habitat and fishes at Santa Catalina Island, California
	Calvin Won	Dr. Larry Allen	Spawning aggregation dynamics and courtship behavior of the Barred Sand Bass, <i>Paralabrax nebulifer</i>
POMONA	Lauren Briggs	Dr. Jayson Smith	The synergistic effects of ocean warming and acidification on Southern California rocky shore trophic dynamics
	Craig Hoover	Dr. Angel Valdes	Population genetics of <i>Felimare californiensis</i> : recovery of a prominent California nudibranch following regional extinction
	Lindsey Williamson	Dr. Jayson Smith	Effects of human visitation on shorebird abundance and foraging behavior in rocky intertidal habitats of Southern California

GRADUATE STUDENT RESEARCH AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	ADVISOR	PROJECT TITLE
SAN DIEGO	Sarah Chase	Dr. Arielle Levine	Evaluating the use of citizen science for coastal and marine resource management
	Eric Miller	Dr. Carl Carrano	Determination of iron speciation and localization in <i>M. Pyrifera</i> using nuclear resonant scattering and raman microscopy
	Megan Morris	Dr. Liz Dinsdale	Microbial communities associated with giant kelp <i>Macrocystis pyrifera</i>
	Priya Shukla	Dr. Matt Edwards	Does oceanographic climate differentially affect photosynthesis in surface and benthic blades of <i>Macrocystis pyrifera</i> and <i>Egregia menziesii</i> ?
	Mallarie Yeager	Dr. Kevin Hovel	How eelgrass structural complexity and fish body size interactively mediate predation risk and foraging efficiency
SAN FRANCISCO	Tom Robinson	Dr. Jerry Davis	Assessment of alluvial floodplains in California coastal streams
	Serina Sebilian	Dr. Kathy Boyer	The impacts of abiotic stressors on the submerged aquatic vegetation, <i>Stuckenia pectinata</i> , and its associated invertebrate community
	Anna Studwell	Dr. Ellen Hines	Non-central foraging seabird habitat modeling and mapping to inform marine spatial planning in Gulf of the Farallones and Cordell Bank National Marine Sanctuaries
	Crystal Weaver	Dr. Kathy Boyer	The effects of sediments and their associated microbial communities in eelgrass (<i>Zostera marina</i>) restoration
	Devona Yates	Dr. Scott Hamilton	Spatial variation of invertebrate survival in Central California kelp forests
SAN JOSÉ	Keith Hernandez	Dr. Jim Harvey	California sea lion (<i>Zalophus californianus</i>) diet assessment using molecular scatology and hard parts analysis
	Angela Szesciorka	Dr. Jim Harvey	Ship-whale interactions and the effect of ship presence on the dive and foraging behavior of humpback whales in major shipping lanes off San Francisco
	Dorota Szuta	Dr. Ivano Aiello	Community structure and zonation of Antarctic benthic invertebrates: using a remotely operated vehicle under ice to define biological patterns
	Gregory Taylor	Dr. Scott Shaffer	Assessing the relationship between mercury contamination and avian egg-turning behavior
SAN LUIS OBISPO	Cory Elowe	Dr. Lars Tomanek	Circadian and circatidal rhythms of protein expression in the intertidal mussel <i>Mytilus californianus</i>
	Kaitlin Johnson	Dr. Sean Lema	Nonylphenol disruption of osmoregulation in the gill of the estuarine arrow goby <i>Clevelandia ios</i>
SONOMA	Michelle Ferraro	Dr. Dan Crocker	Application of optimal foraging model to a free-roaming marine predator
	Joshua Hancock	Dr. Sean Place	Facing a physiological crossroad: response of intertidal sculpins to a multi-stressor challenge

STUDENT TRAVEL AWARDS AY 2013-14

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
CHICO	Kathi McCarthy	Dr. Russell Shapiro	AGU Fall 2013 Conference	San Francisco, CA	\$ 745
FULLERTON	Sara Briley	Dr. Danielle Zacherl	Western Society of Naturalists 2013 Annual Meeting	Ventura, CA	\$ 400
	Kari Eckdahl	Dr. Danielle Zacherl	Western Society of Naturalists 2013 Annual Meeting	Ventura, CA	\$ 400
	Tuong-Vy Nguyen*	Dr. Jennifer Burnaford	Society for Integrative and Comparative Biology Meeting 2014	Austin, TX	\$ 300
	Chelsea Rankin	Dr. Mike Horn	Waterbird Society 37th Annual Meeting	Wilhelmshaven, Germany	\$ 850
	Nicole Tronske*	Dr. Danielle Zacherl	Western Society of Naturalists 2013 Annual Meeting	Ventura, CA	\$ 400
HUMBOLDT	Wiley Archibald	Dr. Dawn Goley	20th Biennial Conference on the Biology of Marine Mammals	Dunedin, New Zealand	\$ 300
	Dustin Fredricey*	Dr. Andrea Achilli	North American Membrane Society	Houston, TX	\$1,000
	Mary Colleen Hannon*	Dr. Kathryn McDonald	Benthic Ecology Meeting	Jacksonville, FL	\$1,000
	Tancy Moore	Dr. Walter Duffy	American Fisheries Society Western Division Annual Conference	Mazatlan, Mexico	\$ 740
LONG BEACH	Bonnie Ahr	Dr. Chris Lowe	Joint Meeting of Ichthyologists and Herpetologists (American Elasmobranch Society)	Albuquerque, NM	\$ 850
	Nathan McLain	Dr. Jesse Dillon	Joint Aquatic Sciences Meeting	Portland, OR	\$ 795
MARITIME	Michael Aguilar*	Dr. Robert Neumann	2014 International Assembly of Collegiate Business Education Annual Conference and Assembly Meeting	San Diego, CA	\$ 250
	Jason Drouyor*	Dr. Robert Neumann	2014 International Assembly of Collegiate Business Education Annual Conference and Assembly Meeting	San Diego, CA	\$ 250
	Edie Kwok*	Dr. Robert Neumann	2014 International Assembly of Collegiate Business Education Annual Conference and Assembly Meeting	San Diego, CA	\$ 250

* Denotes undergraduate student

STUDENT TRAVEL AWARDS AY 2013-14 (cont.)

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
MARITIME	Kevin Prochnow*	Dr. Robert Neumann	2014 International Assembly of Collegiate Business Education Annual Conference and Assembly Meeting	San Diego, CA	\$ 250
	Jeffrey Musal*	Dr. Robert Neumann	2014 International Assembly of Collegiate Business Education Annual Conference and Assembly Meeting	San Diego, CA	\$ 250
MONTEREY BAY	Jennifer Bigman	Dr. Dave Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists (American Elasmobranch Society)	Albuquerque, NM	\$ 667
	Catherine Drake	Dr. Jonathan Geller (MLML)	National Shellfisheries Association Annual Meeting	Jacksonville, FL	\$ 760
	Mary McCormick	Dr. Corey Garza	22nd Biennial Conference of the Coastal and Estuarine Research Federation	San Diego, CA	\$ 500
	Robert San Miguel	Dr. Michael Graham (MLML)	Joint Aquatic Sciences Meeting	Portland, OR	\$ 500
	Griffin Srednick*	Dr. Corey Garza	Western Society of Naturalists 2013 Annual Meeting	Ventura, CA	\$ 300
	Aimee Teaby	Dr. Fred Watson	CalGIS 2014	Monterey, CA	\$ 125
	Ben Walker	Dr. Corey Garza	Western Society of Naturalists 2013 Annual Meeting	Ventura, CA	\$ 300
	April Woods	Dr. G. Jason Smith (MLML)	Joint Aquatic Sciences Meeting	Portland, OR	\$ 500
SAN DIEGO	Matthew Brown	Dr. Matt Edwards	10th International Phycological Congress: Algae in a Changing World	Orlando, FL	\$ 400
	Mariangel Garcia	Dr. Jose Castillo	Society for Industrial and Applied Mathematics Annual Meeting	San Diego, CA	\$ 750
	Breck McCollum	Dr. Matt Edwards	10th International Phycological Congress: Algae in a Changing World	Orlando, FL	\$ 400
	Megan Morris	Dr. Elizabeth Dinsdale	114th General Meeting of the American Society of Microbiology	Boston, MA	\$1,000
	Tye Nichols	Dr. Todd Anderson	48th Annual Conference of the California-Nevada Chapter of the American Fisheries Society	Sacramento, CA	\$ 400
	Alexandria Warnecke	Dr. Jeremy Long	Benthic Ecology Meeting	Jacksonville, FL	\$1,000
SAN FRANCISCO	Christina Fox	Dr. Tomoko Komada	Goldschmidt 2014	Sacramento, CA	\$ 580
	Huan Lei Li	Dr. Tomoko Komada	Goldschmidt 2014	Sacramento, CA	\$ 580
	Tessa Page	Dr. Jonathon Stillman	3rd Annual Science Meeting of the UK Ocean Acidification Research Programme	St. Andrews, Scotland	\$ 465

* Denotes undergraduate student

STUDENT TRAVEL AWARDS AY 2013-14 (cont.)

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
SAN FRANCISCO	Nicole Travis	Dr. Francis Wilkerson	22nd Biennial Conference of the Coastal and Estuarine Research Federation	San Diego, CA	\$ 750
SAN JOSÉ	Casey Clark	Dr. Jim Harvey (MLML)	20th Biennial Conference on the Biology of Marine Mammals	Dunedin, New Zealand	\$ 400
	Paul Clerkin	Dr. Dave Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists (American Elasmobranch Society)	Albuquerque, NM	\$ 667
	Emily Golson	Dr. Jim Harvey (MLML)	20th Biennial Conference on the Biology of Marine Mammals	Dunedin, New Zealand	\$1,000
	James Knuckey	Dr. Dave Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists (American Elasmobranch Society)	Albuquerque, NM	\$ 667
	Kristin Walovich	Dr. Dave Ebert	Sharks International Durban 2014	Durban, South Africa	\$1,000
	Darren Wostenberg	Dr. Joshua Mackie	2014 Pacific Estuarine Research Society Annual Meeting	Newport, OR	\$ 756
	STANISLAUS	Adam Fleenor	Dr. Matt Cover	5th World Conference on Ecological Restoration	Madison, WI
Adam Fleenor		Dr. Matt Cover	Joint Aquatic Sciences Meeting	Portland, OR	\$1,000

* Denotes undergraduate student



STUDENT TRAVEL AWARDS AY 2014-15

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
CHANNEL ISLANDS	Alexander Greene*	Dr. Sean Anderson	American Association of Geographers	Chicago, IL	\$1,000
DOMINGUEZ HILLS	Nancy Dean*	Dr. Vivian Price	Women on the Water/Pearls of Power	Vallejo, CA	\$ 187
	Shantal Orea*	Dr. Vivian Price	Women on the Water/Pearls of Power	Vallejo, CA	\$ 187
	Jennifer Ovalle*	Dr. Vivian Price	Women on the Water/Pearls of Power	Vallejo, CA	\$ 187
	Ashley Potter*	Dr. Jacqueline Padilla-Gamino	Benthic Ecology Meeting	Quebec, Canada	\$1,000
EAST BAY	Ashley Maynard	Dr. Tyler Evans	Comparative Approaches to Grand Challenges in Physiology	San Diego, CA	\$ 750
FULLERTON	JoAnne Linnenbrink	Dr. Danielle Zacherl	National Shellfisheries Association	Monterey, CA	\$ 750
	Tuong-Vy Nguyen*	Dr. Jennifer Burnaford	Society for Integrative and Comparative Biology Annual Meeting 2015	West Palm Beach, FL	\$ 500
HUMBOLDT	Lori Jones*	Dr. Andrea Achilli	2015 Association of Environmental Engineering & Science Professors Research and Education Conference	New Haven, CT	\$ 667
	Jairo Luque Villanueva*	Dr. Andrea Achilli	2015 Association of Environmental Engineering & Science Professors Research and Education Conference	New Haven, CT	\$ 667
	Joanna Murphy*	Dr. Andrea Achilli	2015 Association of Environmental Engineering & Science Professors Research and Education Conference	New Haven, CT	\$ 667
	Lucia Ordonez	Dr. Laurie Richmond	American Association of Geographers	Chicago, IL	\$ 954
LONG BEACH	Anita Arenas*	Dr. Christine Whitcraft	Society of Wetland Scientists Annual Meeting 2015	Providence, RI	\$ 998
	Daniel Crear	Dr. Chris Lowe	Joint Meeting of Ichthyologists and Herpetologists	Chattanooga, TN	\$1,000
	Emily Meese*	Dr. Chris Lowe	Joint Meeting of Ichthyologists and Herpetologists	Chattanooga, TN	\$ 500
MONTEREY BAY	April Makukhov*	Dr. Cheryl Logan	Comparative Approaches to Grand Challenges in Physiology	San Diego, CA	\$ 426
	Winn McEnery	Dr. Corey Garza	Western Society of Naturalists	Tacoma, WA	\$ 300
	Patrick Mulcahy	Dr. Corey Garza	Western Society of Naturalists	Tacoma, WA	\$ 300

STUDENT TRAVEL AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
MONTEREY BAY	Ashley Quackenbush	Dr. Corey Garza	Western Society of Naturalists	Tacoma, WA	\$ 300
	Kelley Van Hees	Dr. Dave Ebert (MLML)	American Elasmobranch Society	Chattanooga, TN	\$ 999
	Sean Windell	Dr. Corey Garza	Western Society of Naturalists	Tacoma, WA	\$ 299
POMONA	Tabitha Lindsay	Dr. Angel Valdes	Western Society of Naturalists	Tacoma, WA	\$ 396
	Benjamin Lucas	Dr. Jayson Smith	Western Society of Naturalists	Tacoma, WA	\$ 500
	Lindsay Williamson	Dr. Jayson Smith	Western Society of Naturalists	Tacoma, WA	\$ 750
SAN DIEGO	Miranda Brett	Dr. Todd Anderson	Western Society of Naturalists	Tacoma, WA	\$ 500
	Breanna Campbell	Dr. Todd Braje	Society of Ethnobiology	Santa Barbara, CA	\$ 750
	Jennifer Cossaboon	Dr. Eunha Hoh	46th Annual International Association for Aquatic Animal Medicine	Chicago, IL	\$1,000
	Nicholas Hayman	Dr. Brian Hentschel	Western Society of Naturalists	Tacoma, WA	\$ 500
	Priya Shukla	Dr. Matt Edwards	Western Society of Naturalists	Tacoma, WA	\$ 500
SAN FRANCISCO	Daniel Chase	Dr. Anne Todgham	11th International Congress on the Biology of Fish	Edinburgh, Scotland	\$ 750
	Erin Flynn	Dr. Anne Todgham	11th International Congress on the Biology of Fish	Edinburgh, Scotland	\$ 750
	Christina Fox	Dr. Tomoko Komada	2015 ASLO Aquatic Sciences Meeting	Granada, Spain	\$ 500
	Allison Johnson	Dr. Francis Wilkerson	2015 ASLO Aquatic Sciences Meeting	Granada, Spain	\$ 500
	Tricia Lee	Dr. Francis Wilkerson	2015 ASLO Aquatic Sciences Meeting	Granada, Spain	\$1,000
	Shannon Strong	Dr. Alexander Parker	Bay-Delta Science Conference	Sacramento, CA	\$ 532
	Carley Turner	Dr. Jonathon Stillman	Society for Integrative & Comparative Biology Annual Meeting 2015	West Palm Beach, FL	\$ 500
SAN JOSÉ	Cheryl Barnes	Dr. Rick Starr (MLML)	Western Society of Naturalists	Tacoma, WA	\$ 948
	Andrea Launder	Dr. Rick Starr (MLML)	American Elasmobranch Society	Chattanooga, TN	\$1,000

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STUDENT TRAVEL AWARDS AY 2014-15 (cont.)

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
SAN LUIS OBISPO	Morgan Ivens-Duran	Dr. Dean Wendt	International Marine Conservation Congress	Glasgow, Scotland	\$1,000
	Courtney Hart	Dr. Kristen Hardy	Society for Integrative & Comparative Biology Annual Meeting 2015	West Palm Beach, FL	\$1,000
	Kaitlin Johnson	Dr. Sean Lema	2015 Society for Integrative and Comparative Biology Annual Meeting	West Palm Beach, FL	\$1,000
SONOMA	Sarah Chinn	Dr. Daniel Crocker	Sea Otter Conservation Workshop IX	Seattle, WA	\$ 776
	Athena McGuire	Dr. Karina Nielsen	National Shellfisheries Association Annual Meeting 2015	Monterey, CA	\$ 750
	Hannah Peck	Dr. Daniel Crocker	2015 Society for Integrative and Comparative Biology Annual Meeting	West Palm Beach, FL	\$ 563



SUMMER INTERNSHIP PROGRAM SUMMERS 2014 AND 2015

HOST ORGANIZATION	INTERNSHIP, LOCATION (ALL WITHIN CA)	CSU STUDENT, HOME CAMPUS	
		2014	2015
California Department of Fish and Wildlife (CDFW)	Abalone Research <i>Bodega Marine Laboratory, Bodega Bay</i>	Curtis Beaudry <i>Humboldt</i>	
		Jinchen Guo <i>Monterey Bay</i>	
	Coastal Salmonid Habitat <i>Ft. Bragg</i>	Marco DeAnda <i>San Luis Obispo</i>	
	Southern California Sport Fisheries <i>Los Alamitos</i>	Rachel Cushman <i>Long Beach</i>	
Marine Applied Research & Exploration (MARE)	Marine Engineering <i>Richmond</i>	Lukas Kennedy <i>Humboldt</i>	Gabriel Kardener <i>San Luis Obispo</i>
	Marine Biology <i>Eureka</i>	Portia Saucedo <i>Humboldt</i>	
National Marine Sanctuaries (NMS)	Channel Islands National Marine Sanctuary <i>Santa Barbara</i>	Andrew Brinkman <i>Channel Islands</i>	David Minovitz <i>Monterey Bay</i>
	Cordell Bank National Marine Sanctuary <i>Point Reyes Station</i>		James Seward <i>Humboldt</i>
	Monterey Bay National Marine Sanctuary <i>Monterey</i>		Kent Susick <i>San José</i>
	West Coast Regional Office <i>Monterey Bay</i>	Ashley Quackenbush <i>Monterey Bay</i>	Alissa Magaña <i>Los Angeles</i>
NOAA National Marine Fisheries Service	California Whale Citizen Science Program <i>Long Beach</i>		Michelle Ferraro <i>Sonoma</i>
Pacific Coast Environmental Conservancy (PCEC)	Environmental Toxicology <i>Long Beach</i>	Michelle Chow <i>San Luis Obispo</i>	
		Jennifer Nomura <i>San Diego</i>	
Seatrec, Inc.	Ocean Energy Robotics: Hardware Engineering <i>Pasadena</i>		Nathaniel Jones <i>Humboldt</i>
	Ocean Energy Robotics: Software Engineering <i>Pasadena</i>		Jacob Steiner <i>Maritime</i>
State Lands Commission	Vessel Biofouling Management <i>Hercules</i>		Chrissy Edmiston <i>Maritime</i>

