The California State University
COUNCIL ON OCEAN AFFAIRS, SCIENCE & TECHNOLOGY

COAST

2016 ANNUAL REPORT

Covering activities from July 1, 2015 - June 30, 2016

www.calstate.edu/coast

Chancellor Emeritus Charles B. Reed 1941–2016

This Annual Report is dedicated to Dr. Charles B. Reed, Chancellor Emeritus, California State University. Dr. Reed was instrumental in establishing COAST in 2008 and provided annual funding that allowed the organization to grow and serve faculty members and students at each of the 23 CSU campuses. We thank him for his vision, leadership and commitment.

THE CSU COUNCIL ON OCEAN AFFAIRS, SCIENCE & TECHNOLOGY (COAST) is the umbrella organization for marine, coastal and coastal watershed-related activities within the CSU. COAST integrates systemwide expertise and resources to promote marine and coastal research and education throughout the CSU and the state of California. The scope of COAST includes:

- The open and coastal ocean;
- Coastal zones (bays, estuaries and beaches) and
- 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 priorities:

- Provide funding and opportunities to advance coastal, marine and coastal watershed research and education.
- Serve as a primary resource for informed decision making in government, industry and local communities.
- Train students to successfully join a highly skilled, technologically sophisticated workforce and ensure the success of students from all backgrounds.
- Communicate the activities, successes and impacts of COAST members to stakeholders and the public.

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

OUR MISSION

COAST's mission is to help the state of California maintain a healthy ocean and sustainable use of coastal resources. COAST coordinates and promotes research and education across the 23 campuses of the CSU to advance our knowledge of marine resources and provide solutions to local, state and national issues. COAST promotes workforce development in STEM and other marine-related disciplines and communicates with California's governments, industries and communities to support informed decision making and responsible policy development.

OUR VISION

COAST envisions a California that actively and sustainably manages its coast and ocean through the application of scientific knowledge by a well-educated, diverse and environmentally literate workforce and citizenry.

2015-16 SNAPSHOT

In AY 2015-16 COAST made significant investments in faculty and student research in order to support scientific research and enhance CSU student education. COAST:

- Provided $426,137 directly to CSU faculty members and students.
  - Support for students and faculty members totaled over half of COAST's expenditures for 2015-16.
- Supported 48 faculty members and 182 students across the entire system.
  - Students at each of the 23 campuses were supported.
- Added four new hosts and doubled the size of the Summer Internship Program.
- Faculty members secured $427,594 in extramural funding as a result of prior COAST support.

REVENUE AY 2015-16

REVENUE	AMOUNT	PERCENT OF TOTAL
Campus Contributions	$ 212,500	24.2 %
Chancellor's Office Contribution	$ 566,500	64.4 %
Balance Forward from Previous Year	$ 82,656	9.4 %
Leveraged Funding	$ 18,000	2.0 %
TOTAL	**$ 879,656**	**100.00 %**

EXPENDITURES AY 2015-16

EXPENDITURES	AMOUNT	PERCENT OF TOTAL
Student Support	$ 276,644	35.0 %
Faculty Research Incentives	$ 149,493	18.9 %
Program and Strategic Development	$ 13,856	1.8 %
Outreach and Communications	$ 31,869	4.0 %
Personnel	$ 245,206	31.1 %
Program Operations	$ 21,044	2.7 %
Administrative Fees	$ 51,019	6.6 %
TOTAL	**$ 789,131**	**100.00 %**

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 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.

The following table provides a summary of COAST awards made to CSU faculty members in AY 2015-16.

FACULTY AWARD SUMMARY AY 2015-16

FACULTY AWARD PROGRAM	NUMBER OF AWARDS	NUMBER OF FACULTY MEMBERS SUPPORTED	NUMBER OF PARTICIPATING CAMPUSES	FUNDING AMOUNT
Grant Development Program	7	14	8	$ 86,076
Rapid Response Funding Program	8	12	5	$ 56,800
Seminar Speaker Series Program	11	22	11	$ 6,617
TOTAL	**26**	**48**		**$ 149,493**

GRANT DEVELOPMENT PROGRAM

The Grant Development Program (GDP) is designed to stimulate CSU faculty members and research associates to develop and submit full proposals to external funding agencies and organizations for marine, coastal and coastal watershed-related 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 $20,000.

COAST provided $86,076 to support faculty members through the GDP in AY 2015-16. For 2016-17, COAST will provide $132,256 in GDP funding.

GRANT DEVELOPMENT PROGRAM AY 2015-16

AWARD RECIPIENTS	PROJECT TITLE
Dr. Katharyn Boyer Biology, San Francisco State Dr. Jennifer O'Leary Biological Sciences, Cal Poly San Luis Obispo Dr. Jennifer Yost Biological Sciences, Cal Poly San Luis Obispo	Conservation connections: links between eelgrass (*Zostera marina*) and an extremely rare high marsh plant (*Suaeda californica*) in two California estuaries
Dr. Christine Cass Oceanography, Humboldt State Dr. Eric Bjorkstedt Fisheries Biology, Humboldt State Dr. Frank Shaughnessy Biological Sciences, Humboldt State	The influence of oceanic conditions and phytoplankton lipid content on lipid accumulation patterns of northern California Current zooplankton
Dr. Joseph Carlin Geological Sciences, CSU Fullerton Dr. Amy Jo Wagner Geology, Sacramento State	Investigating Holocene primary productivity and environmental variability in the California Current Ecosystem and implications for future climate change
Dr. Jose Castillo Computational Science Research Center, San Diego State Dr. Mary Thomas Computer Science, San Diego State	A hybrid UCOAM coastal ocean model: interfacing with the SCCOOS California state-wide ROMS system
Dr. Petra Dekens Earth & Climate Sciences, San Francisco State	The potential of foraminifera based paleoceanography in the Bay of Bengal
Dr. Fritz Hertel Biology, CSU Northridge	Ecomorphology and biogeography of Pacific coast storm-petrels
Dr. Zoë Wood Biological Sciences, Cal Poly San Luis Obispo Dr. Christopher Lowe Biological Sciences, CSU Long Beach	Visualization of coastal water environments and periodic migratory populations from sensor data

GRANT DEVELOPMENT PROGRAM AY 2016-17

AWARD RECIPIENTS	PROJECT TITLE
Dr. Paul Bourdeau Biological Sciences, Humboldt State Dr. Bengt Allen Biological Sciences, CSU Long Beach	A field test of the interactive effects of ocean acidification and thermal stress on predator-prey dynamics in the rocky intertidal zone
Dr. Carl Carrano Chemistry and Biochemistry, San Diego State	The marine biogeochemistry of iodine: the role of marine algae
Dr. C. Sarah Cohen Biology, San Francisco State	Immunity in the face of wasting disease: sea star candidate gene variation among clades and populations of *Leptasterias* spp.
Dr. Robyn Crook and Dr. Jonathon Stillman Biology, San Francisco State	Behavioral and neurophysiological responses of marine invertebrates exposed to synergistically-acting chronic and acute stress
Dr. Amy Gusick Anthropology, CSU San Bernardino Dr. Jennifer Perry Anthropology, CSU Channel Islands	The Eel Point project: re-evaluating a trans-Holocene record of human-coastal interactions
Dr. Kristin Hardy Biological Sciences, Cal Poly San Luis Obispo Dr. Mackenzie Zippay Biology, Sonoma State	Gradients in metabolic performance across the intertidal zone: a comparative analysis of mussels and barnacles
Dr. Walter Oechel and Dr. Jordan Goodrich Biology, San Diego State	Are San Diego's coastal and shelf seas carbon sources or sinks? Measuring direct air-sea CO_2 exchange through time and space

RAPID RESPONSE FUNDING PROGRAM

The Rapid Response Funding Program provides funding for projects that require a quick response outside of the existing annual COAST funding opportunities. Projects may include investigation of unexpected or sudden events, those that have a short window of opportunity or incidents that require immediate attention. Awards range from $2,500 to $7,500.

In AY 2015-16 COAST made eight Rapid Response Awards totaling $56,800. COAST faculty members were able to investigate the impacts of significant, unpredictable events because of this source of funding: the Refugio oil spill on May 19, 2015, in Santa Barbara County; mass marine mammal strandings along the California coast; the 2015-16 El Niño; and sea star wasting disease along the west coast of North America.

RAPID RESPONSE FUNDING PROGRAM AY 2015-16

AWARD RECIPIENTS	PROJECT TITLE
Dr. Ivano Aiello Moss Landing Marine Labs, San José State	Understanding the future of California's beaches: geomorphologic baseline of the Salinas sub-cell at the onset of the 2015-16 El Niño
Dr. Todd Anderson Biology, San Diego State	Evaluating potential cascading impacts of sea star wasting disease on top-down grazer regulation in kelp forests
Dr. C. Sarah Cohen Biology, San Francisco State	Differential population genetic responses to severe disease in brooding seastars of the species complex *Leptasterias* spp
Dr. Alicia M. Kinoshita Civil, Construction, and Environmental Engineering, San Diego State	Is San Diego an El Niño ready city?
Dr. Anjte Lauer Biology, CSU Bakersfield **Dr. Heather Liwanag** Biological Sciences, Cal Poly San Luis Obispo **Dr. Birgitte McDonald** Moss Landing Marine Labs, San José State	Coccidioidomycosis in rescued marine mammals along California's coast
Dr. Rebecca Lewison Biology, San Diego State	Understanding the effects of the Refugio Oil Spill on resident marine mammals: a molecular approach
Dr. Jeremy Long Biology, San Diego State	Using El Niño to examine the impact of extreme climate on salt marshes
Dr. Natalie Mladenov Civil, Construction, and Environmental Engineering, San Diego State	Persistence of oil-derived hydrocarbons in the coastal environment after the Refugio Oil Spill

SEMINAR SPEAKER SERIES PROGRAM

The Seminar Speaker Series Program 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 2015-16, the Seminar Speaker Series Program provided awards ranging from $300 to $1,000 to help 11 departments at 10 different campuses host speakers from other CSU campuses. This program benefitted campuses away from the coast, such as Chico, Pomona and Stanislaus.

SEMINAR SPEAKER SERIES PROGRAM AY 2015-16

HOST	SPEAKER	SEMINAR TITLE
Dr. Ritin Bhaduri Biological Sciences, Stanislaus State	**Dr. Scott Hamilton** Moss Landing Marine Labs, San José State	Consequences of ocean acidification
Dr. Jose Castillo Computational Sciences Research Center, San Diego State	**Dr. Ryan Walter** Physics, Cal Poly San Luis Obispo	Nonlinear internal waves in the nearshore coastal environment
Dr. Petra Dekens Earth & Climate Sciences, San Francisco State	**Dr. Mathieu Richaud** Earth and Environmental Sciences, Fresno State	What can benthic foraminifera tell us about past sea level change? A high resolution analysis during a Late Quaternary transgressive-regressive sequence off the Southern Island of New Zealand
Dr. Jesse Dillon Biological Sciences, CSU Long Beach	**Dr. José de la Torre** Biology, San Francisco State	Physiology, ecology, and evolution of archaeal nitrifiers
Dr. Matthew Edwards/Dr. Ivano Aiello Moss Landing Marine Labs, San José State	**Dr. Rafael Uribe** Fisheries Biology, Humboldt State	*Ex-situ* conservation through cryopreservation
Dr. Patricia D. Goley Biological Sciences, Humboldt State	**Dr. Ellen Hines** Geography and Environment, San Francisco State	Line transect estimates of Irrawaddy dolphin abundance along the Eastern Gulf Coast of Thailand
Dr. Todd Greene Geological and Environmental Sciences, CSU Chico	**Dr. Richard Behl** Geological Sciences, CSU Long Beach	Paleoceanography of the California Margin: high-resolution climate records from the Santa Barbara Basin, CA

HOST	SPEAKER	SEMINAR TITLE
Dr. Brian Hentschel Biology, San Diego State	**Dr. Kerry Nickols** Science and Environmental Policy, CSU Monterey Bay	Using population models to predict ecosystem responses in newly established MPAs
Dr. Alexander Parker Science and Mathematics, Cal Maritime	**Dr. Ed Carpenter** Biology, San Francisco State	Plastics pollution in the marine environment
Dr. Ángel Valdés Biological Sciences, Cal Poly Pomona	**Dr. Terrence Gosliner** Biology, San Francisco State	Exploring coral reefs in the Center of Marine Biodiversity
Dr. Shanju Zhang Chemistry, Cal Poly San Luis Obispo	**Dr. Andrea Achilli** Environmental Resources Engineering, Humboldt State	Water and energy recovery with engineered osmosis and hybrid membrane processes

EXTRAMURAL FUNDING

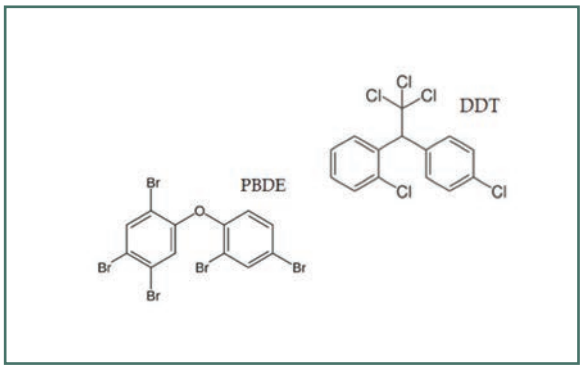
In AY 2015-16, faculty members secured over $425,000 in extramural funding as a result of prior COAST support over the last four years. Since COAST offered its first funding opportunity in 2009, over $1 million has been invested in CSU faculty research. In return, faculty members have secured over $8.6 million in extramural funding.

EXTRAMURAL FUNDING AY 2015-16

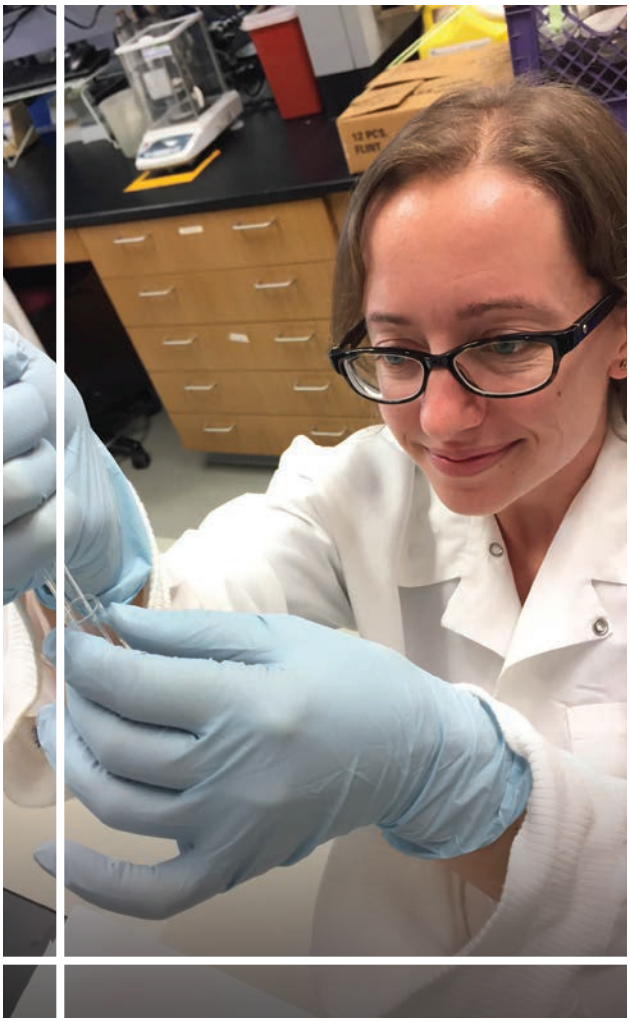
CAMPUS	PRINCIPAL INVESTIGATOR	FUNDING AGENCY	PRIOR COAST SUPPORT	AMOUNT
Northridge	Dr. Fritz Hertel	National Geographic Society Waitt Grant	Grant Development Program Award AY 2015-16	$ 12,320
San Diego	Dr. Matthew Edwards	National Science Foundation	Faculty Research Incentive Program Award AY 2012-13	$ 355,985
San Francisco	Dr. C. Sarah Cohen	National Science Foundation	Rapid Response Award AY 2015-16	$ 25,000
San José	Dr. Michael Graham	California Sea Grant	Strategic Investment Program Award AY 2014-15	$ 10,000
San José	Dr. Joshua Mackie	California State Lands Commission	Grant Development Program Award AY 2014-15	$ 24,289
TOTAL				**$ 427,594**

SPOTLIGHT ON FACULTY RESEARCH

Three San Diego State University researchers, Rebecca Lewison, Ph.D in biology, her doctoral student Marisa Trego (pictured below) and Eunha Hoh, Ph.D. from the Graduate School of Public Health, are collaborating with scientists from NOAA National Marine Fisheries Service and UC Davis to develop new techniques to screen for contaminants, both known and unknown, in the marine environment. These contaminants, which enter the ocean environment from industrial and commercial factories, oil and chemical spills, runoff from roads, parking lots, and storm drains and wastewater treatment plant discharges, are all man-made and have been implicated as a direct threat to marine mammal populations.



Chemical structure of DDT, a legacy chlorinated compound, and PBDE, a brominated compound.



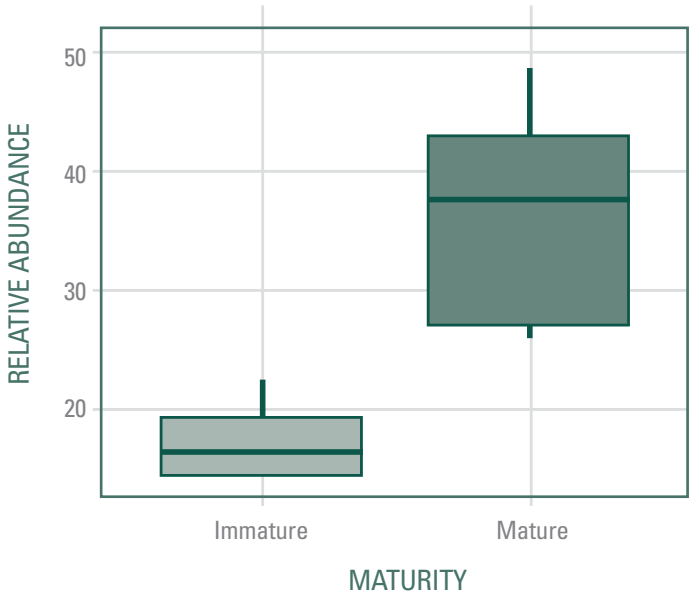
SDSU graduate student Marisa Trego pipetting samples in the lab to test for hormone levels and contaminant loads.

Traditional ecotoxicology approaches target known contaminant compounds to assess abundance and their potential effects in wildlife. While this targeted approach has provided invaluable information and serves as the foundation for the field of ecotoxicology, it has a significant limitation: targeted analyses can only monitor *known* compounds that have been identified or linked to an ecological problem. That means that targeted analyses miss detecting unknown compounds that may pose a threat to marine animals and ecosystems.

Dr. Hoh has pioneered an analytical technique based on the fact that many known persistent organic pollutants (POPs) have similar characteristics: they are often halogenated organic contaminants that are chlorinated or brominated, like DDT, a legacy chlorinated compound, or PBDE, a brominated compound. Halogenation patterns and mass spectral signatures can be used to identify both known and unknown contaminants. To make an already complex problem even harder, there are also naturally occurring halogenated compounds that may interact or act synergistically with the man-made halogenated contaminants.

Dr. Lewison and Trego, a Ph.D. candidate, are linking contaminant exposure hormone levels (e.g., cortisol) and gene expression, which are integrated measurements of molecular function that provide insight into an animal's health and the level of stress it experienced. They have taken tissue samples from short-beaked common dolphins (*Delphinus delphis*) that were taken as fisheries bycatch, and skin samples from wild bottlenose dolphins (*Tursiops truncatus*) in coastal and offshore areas of the Southern California Bight (SCB). Some of these wild dolphins were in the area of the Refugio oil spill in Santa Barbara County in May 2015 and may provide information as to how the spill affected resident individuals.

Preliminary results from short-beaked common dolphin samples suggest that both legacy and currently unmonitored contaminant compounds are widespread in some marine mammal populations in the SCB. Results also indicate the presence of a large number of unknown compounds. Trego was able to identify 70 percent of the compounds they isolated against a list of hundreds of known chemicals, but the unknown ones may be toxic as well and can't be routinely monitored until they are identified. Lastly, older individuals had significantly higher numbers and greater relative abundance of contaminants in their tissues compared to immature animals, suggesting the bioaccumulation of contaminants over time. The team is continuing to investigate the relationships among contaminants, gene expression and endocrine biomarkers, including stress and reproductive hormones, to improve our overall understanding of the impacts of these pollutants on marine mammal physiology and health.



The relative abundance of contaminants detected in *D. delphis* was significantly higher in older animals.

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 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.

In AY 2015-16, COAST provided $273,767 in support to students throughout the system. Every campus benefited from COAST student support programs.

STUDENT AWARD SUMMARY AY 2015-16

STUDENT PROGRAM	NUMBER OF STUDENTS SUPPORTED	NUMBER OF PARTICIPATING CAMPUSES	FUNDING AMOUNT
Graduate Student Research Awards	37	12	$ 111,000
Undergraduate Student Research Support Program	77	22	$ 53,860
Student Travel Awards	50	13	$ 36,907
Summer 2015 Student Internships	18	10	$ 72,000
TOTAL	**182**		**$ 273,767**

STUDENT RESEARCH PROGRAMS

The goals of the COAST student research programs 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.

GRADUATE STUDENT RESEARCH AWARD PROGRAM

In AY 2015-16, 37 graduate students were supported through the Graduate Student Research Award Program (Appendix). Applicants are able to 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, and 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 enables students to conduct their work and complete their theses efficiently and effectively.

UNDERGRADUATE RESEARCH SUPPORT PROGRAM

The Undergraduate Research Support Program provides $2,500 to each campus to support undergraduate students involved in marine, coastal, and coastal watershed-related research. Campus representatives are responsible for implementing this program and awarding the funds on their respective campuses. In the second year of this program, 22 campuses successfully allocated their funding and supported a total of 77 students (Appendix). Several campuses provided matching funds that helped augment projects and support additional students.

> “Most importantly, this experience made me a more competitive candidate in the job market. Upon graduation, I have received multiple job offers and have accepted a position with the US Bureau of Land Management. Throughout the interview process, potential employers noted that my participation on this research project… set me apart from other candidates.”
>
> *–Kevin Kunkel*
> *Agriculture Undergraduate*
> *Student Research Program Support Recipient*
> *CSU Chico*

GRADUATE STUDENT RESEARCH AWARD RECIPIENTS SAY…

"During my time at MLML, I have often been working 3-4 jobs at a time, as well as taking out student loans, to support myself and my research. Receiving the COAST Graduate Student Award allowed me to pare down my outside work and better focus on my research and career goals."

–Heather Fulton-Bennett
Marine Science
Moss Landing Marine Laboratories

"I now have the confidence that I can attain a job in marine science and make meaningful contributions to the research questions of tomorrow. Thank you COAST for making it possible."

–Ryan Fields
Marine Science
Moss Landing Marine Laboratories

"I am extremely grateful to call myself a COAST awardee, and I look forward to finishing my thesis research and continuing my career in coastal watershed resource management knowing that COAST played a pivotal role along the way."

–Emily Cooper
Environmental and Natural Resource Science
Humboldt State

"Every penny has gone into lab reagents and associated costs, and I truly would not have been able to do this work without it. This award will allow me to complete a thesis that I can be proud of, and I am so grateful!"

–Melissa Patten
Biology
San Francisco State

STUDENT TRAVEL AWARD PROGRAM

The Student Travel Award Program supports continuing CSU undergraduate and graduate students to attend and present the results of their original marine, coastal and coastal watershed-related 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 $36,907 in travel support to 10 undergraduate and 40 graduate students from 13 different campuses (Appendix). Students presented their research throughout the US, as well as in Australia, China and Italy.

SUMMER INTERNSHIP PROGRAM

Through the Summer Internship Program, CSU students work alongside 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.

In 2016, the program grew significantly and was the largest it has been to date: 15 undergraduate students and three graduate students from 10 campuses were placed with 11 different hosts (Appendix) over summer 2016. New hosts included the Greater Farallones National Marine Sanctuary in San Francisco, NOAA National Marine Fisheries Service Sustainable Fisheries Program in Long Beach, Ocean Aero, Inc., in San Diego, and Remote Sensing Solutions, Inc., in Pasadena. Interns worked on a variety of projects including ocean modeling, fisheries stock assessment, invasive species management and marine engineering. Overwhelmingly, the students agree that these internships provide invaluable opportunities to take what they have learned in the classroom and apply their knowledge and training in a real world setting.

Since the program began in 2011, 67 interns have been placed with scientists and resource managers at host organizations. Over 75 percent of interns have been undergraduate students. Many COAST interns have been hired by their hosts following their internship, demonstrating that the program is a valuable pipeline for both employers and CSU students.

> "You really helped me focus on my presentation by easing my financial worries. I truly had a great experience and met wonderful people to help me with my thesis."
>
> *–Brian Pena*
> *Biology Graduate Student*
> *Student Travel Award Recipient*
> *CSU Northridge*

> My COAST internship led directly to my current employment."
>
> *–Ben Walker*
> *Junior Specialist at Bodega Marine Lab*
> *UC Davis*

LOOKING AHEAD

Over the next 12 months COAST will:

- Provide funding and opportunities to CSU faculty members and students to advance marine, coastal and coastal watershed-related research and education.
- Serve as a primary resource for informed decision making in government, industry and local communities.
- Train students to successfully join a highly skilled, technologically sophisticated workforce and ensure the success of students from all backgrounds.
- Communicate the activities, successes and impacts of COAST stakeholders and the public.
- Position COAST and its members to leverage state and federal funding opportunities and secure additional resources to support program activities.
- Implement a new five-year strategic plan to guide the program's activities through 2021.

APPENDIX

STUDENT AWARDS AND SUPPORT

GRADUATE STUDENT RESEARCH AWARDS AY 2015-16

All awards are $3,000.

CAMPUS	STUDENT	DEPARTMENT/ DEGREE PROGRAM	ADVISOR	PROJECT TITLE
FULLERTON	Angela Aranda	Geological Sciences	Dr. Joseph Carlin	Investigating the evolution of southern California salt marshes: a facies model to understand the influence of seismic events on environmental resiliency and sustainability
	Stacey McIntyre	Biological Science	Dr. Ryan Walter	Adapted for climate change? Comparative transcriptomics of osmotic stress in native and non-native oysters
HUMBOLDT	Emily Cooper	Environmental and Natural Resource Science	Dr. Alison O'Dowd	Upper mainstem Eel River salmonid habitat assessment
LONG BEACH	David Lizarraga	Biological Sciences	Dr. Bruno Pernet	Effects of large inedible particles on echinoderm larval feeding performance
	Laura Martinez Steele	Biological Sciences	Dr. Christopher Lowe	Comparing contaminant loads between stranded and healthy neonate common thresher sharks and assessing *Carnobacterium maltaromaticum* in their microbiome
	Caitlin McGarigal	Biological Sciences	Dr. Christopher Lowe	Physiological and behavioral effects of angling stress on two important gamefish in southern California, kelp bass (*Paralabrax clathratus*) and barred sand bass *(P. nebulifer*)
	Racine Rangel	Biological Sciences	Dr. Darren Johnson	Contrasting the effects of temperature and food availability on life history traits of the Bluebanded goby (*Lythrypnus dalli*)
	Alexander Tasoff	Biological Sciences	Dr. Darren Johnson	Can larvae of a marine fish adapt to ocean acidification?
	Ellie Wenger	Biological Sciences	Dr. Jesse Dillion	The impacts of sea level rise on decomposer communities in California salt marshes
MONTEREY BAY	Ryan Fields	Marine Science	Dr. Scott Hamilton (MLML)	Examination of spatial and temporal differences in demography and life history of central and southern California Rosy Rockfish (*Sebastes rosaceus*)
	Heather Fulton-Bennett	Marine Science	Dr. Michael Graham (MLML)	Ecological and reproductive consequences of morphological variation in *Egregia menziesii*
	Laurel Lam	Marine Science	Dr. Scott Hamilton (MLML)	Habitat-based life-history variations of Lingcod along the US West Coast

CAMPUS	STUDENT	DEPARTMENT/ DEGREE PROGRAM	ADVISOR	PROJECT TITLE
NORTHRIDGE	Russell Dauksis	Biology	Dr. Mark Steele	The effect of top-down trophic interactions in subtidal eelgrass (*Zostera marina*) communities
	Melissa Kurman	Biology	Dr. Casey terHorst	Evolutionary rescue in a marine foundation species in response to a warming climate
	Zoe Scott	Biology	Dr. Casey terHorst	Community-level effects of an invasive habitat-forming species across environments
POMONA	Sean Agler	Biological Sciences	Dr. Jayson Smith	An analysis of the successional recovery of a coralline algal turf and meiofaunal communities in a rocky intertidal southern California ecosystem following a disturbance and the effects of the ENSO on the rate of recovery
	Frances-Julianna Leiva	Geological Sciences	Dr. Jascha Polet	A tsunami magnitude scale based on DART buoy data
	Jennifer McCarthy	Biological Sciences	Dr. Ángel Valdés	The slug within the bivalve: reconciliation of shell-based taxonomy and molecular data in Juliidae (Heterobranchia:Sacoglossa)
SAN DIEGO	Miranda Brett	Biology	Dr. Todd Anderson	Cascading effects of a predatory fish on the grazing behavior of a host-specific limpet on a habitat-forming kelp
	Jennifer Cossaboon	Environmental Health	Dr. Eunha Hoh	Marine endocrine disrupting chemicals (EDCs) in the critically endangered California condor: assessing full contaminant exposure following reintroduction to coastal environments
	Robert Dunn	Biology	Dr. Kevin Hovel	Effects of size-selective fishing for an invertebrate predator on biotic interactions in the Southern California Bight
	John Haggerty	Biology	Dr. Elizabeth Dinsdale	Influence of temperature and microbial communities on decomposition process of *Macrocystis pyrifera*
	Julia Ledbetter	Biology	Dr. Kevin Hovel	The effect of bryozoan structure in eelgrass beds on fish foraging behavior
	Shelby Rinehart	Biology	Dr. Jeremy Long	Temporal heterogeneity of top-down effects can alter the asexual reproduction of restored cordgrass in southern California salt marshes

CAMPUS	STUDENT	DEPARTMENT/ DEGREE PROGRAM	ADVISOR	PROJECT TITLE
SAN DIEGO	Sadie Small	Biology	Dr. Matthew Edwards	The influence of abiotic factors on the invasibility of *Sargassum horneri* (Phaeophyceae: Fucales)
	Genoa Sullaway	Biology	Dr. Matthew Edwards	Assessing the impact of an invasive marine alga on ecosystem production
SAN FRANCISCO	Alison Fisher	Marine Biology	Dr. Edward Carpenter	Effects of climate change on the relationship between the sea anemone *Anthopleura xanthogrammica* and its two photosynthetic symbionts
	Theresa Fritz-Endres	Earth & Climate Science	Dr. Petra Dekens	Sedimentary controls on Foraminifera distribution in the Bay of Bengal
	KeChaunte Johnson	Biology	Dr. C. Sarah Cohen	Comparison of mitochondrial and nuclear genetic variation of copepods in the San Francisco estuary
	Melissa Patten	Biology	Dr. Katharyn Boyer	Investigating a novel ecotype of the native submerged aquatic plant *Stuckenia pectinata* in the San Francisco estuary: causes and implications of morphological variation
SAN JOSÉ	Catarina Pien	Marine Science	Dr. David Ebert (MLML)	Changes in the elasmobranch assemblage in Elkhorn Slough, CA
	Bradley Wilkinson	Biological Sciences	Dr. Scott Shaffer	Potential effects of offshore wind development on the foraging behavior of breeding Rhinoceros Auklets
SAN LUIS OBISPO	Katie Grady	Biological Sciences	Dr. Kristin Hardy	Effect of oxygen limitation on skeletal muscle metabolism in the giant acorn barnacle, *Balanus nubilus*
	Nicole Hack	Biological Sciences	Dr. Sean Lema	Using the hormone insulin-like growth factor I (IGF-I) as a physiological biomarker for growth rate and nutritional status of fishes in marine protected areas (MPAs)
	Leslie Hart	Biological Sciences	Dr. Jennifer O'Leary	Evaluating recruitment dynamics of red abalone (*Haliotis rufescens*) to inform fisheries management and conservation policy
SAN MARCOS	Patricia Byrne	Biology	Dr. Betsy Read	Mutagenesis of *Emiliania huxleyi* aimed at identifying genes and proteins involved in alkenone biosynthesis
SONOMA	Sarah Chinn	Biology	Dr. Daniel Crocker	Effects of lactation on immune function, energy regulation and oxidative stress of southern sea otters (*Enhydra lutris nereis*)

UNDERGRADUATE RESEARCH SUPPORT PROGRAM AWARDS AY 2015-16

Campuses marked with an * provided match funding.

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
BAKERSFIELD	Jazmine Mejia-Munoz	Biology	Dr. Antje Lauer	Coccidioidomycosis in pinnipeds stranded along California's coast	$2,500
CHANNEL ISLANDS*	Robert Anderson	Biology	Dr. Cori Newton	Biochemical analysis of skeletal muscle in developing baleen whales	$1,727
	Lila Marcial-Hernandez	Biology	Dr. Rachel Cartwright	Documenting developmental changes in tissue type in young baleen whale muscle tissue	$427
CHICO	Kevin Kunkel	Crops, Horticulture and Land Resource Management	Dr. Amanda Banet	The effects of cortisol and temperature on salmonid egg survival	$1,250
	Ravi Shankar	Applied Mathematics	Dr. Sergei Fomin	Numerical modeling of tsunami wave dynamics over complex seafloors	$1,250
DOMINGUEZ HILLS	Carlos Alvarado	Biology	Dr. Brynne Bryan	Malacology: conversion of an extensive shell collection to a museum-quality resource	$500
	Ashley Arambula	Biology	Dr. Jacqueline Padilla-Gamiño	Aquaculture threatened by global climate change: physiological responses of purple-hinge rock scallop (*Crassodoma gigantea*) to decreased pH and increased temperature	$1,000
	Azia Mitchell	Biology	Dr. Jacqueline Padilla-Gamiño	Effects of thermal stress on coral reproduction in Hawaii	$500
	Richard Sato	Biology	Dr. Jacqueline Padilla-Gamiño	Culturing symbionts from *Anthopleura* in California	$500
EAST BAY*	Yesenia Lopez-Ornelas	Biology	Dr. James Murray	Quantifying gene expression in sea slug *Tritonia*	$500
	Emily Nguyen	Biology	Dr. James Murray	Quantifying gene expression in sea slug *Tritonia*	$500
	William Schneider	Biology	Dr. James Murray	Elucidating magnetoreceptive structures in *Tritonia tetraquetra*	$1,500

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
FRESNO	Omoshola Aleru	Biology	Dr. Mamta Rawat	Identification of novel antibiotic producing cyanobacteria	$900
	Jovany Canchola	Geology	Dr. Mathieu Richaud	Study of the influence of El Niño Southern Oscillation on the Morro Bay Sandspit	$300
	Christian Cunningham	Biology	Dr. Steve Blumenshine	Effects of ethanol preservative on freshwater invertebrates over time and its correction	$400
	Akusha Kaur	Biology	Dr. Steve Blumenshine	Analyzing temperature effects of juvenile Chinook salmon	$500
	Rachel Nelson	Geology	Dr. Tricia Van Laar	Antibiotic resistance in the microbiome of urban vs. rural American crows (*Corvus brachyrhynchos*)	$400
FULLERTON	Dulce Cortez	Geological Sciences	Dr. Joseph Carlin	Investigating spatial and temporal variations in suspended sediment concentrations above intertidal mudflats	$510
	Stacy Schkoda	Biological Science	Dr. Kristy Forsgren	The presence of the phytoestrogen, 8-prenylnaringenin, in brewery waste-water and its effects on the reproductive physiology of zebrafish (*Danio rerio*)	$640
	Sarah Annie Singleton	Biological Science	Dr. Kathryn Dickson	Ocean acidification effects on hatching success of California grunion embryos	$199
	Austin Xu	Biological Science	Drs. Bill Hoese and Danielle Zacherl	Examining use of *Ostrea lurida* and *Zostera marina* beds by birds in upper Newport Bay, California	$1,151
HUMBOLDT*	Marco Amezcua	Chemistry	Dr. Matthew Hurst	The determination of copper (II) concentrations in UV treated wastewater through voltammetric analysis in Arcata Bay, California	$350
	Thien Crisanto	Biology	Dr. Frank Shaughnessy	The ability of *Phyllospadix* to buffer ocean acidification effects on intertidal calcifying organisms	$100
	Jeremiah Ets-Hokin	Biology	Dr. Paul Bourdeau	Effects of tidally driven variation on the response of coralline algae to ocean acidification	$350

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
HUMBOLDT*	Kenny Gossow-Smith	Chemistry	Dr. Matthew Hurst	A flow-injection spectrophotometric method for copper determination in natural waters	$300
	Wesley Hull	Biology	Dr. Paul Bourdeau	Do predatory crabs affect the distribution and abundance of mussels on Northern California rocky shores?	$350
	Dylan Inskeep	Biology	Dr. Christine Cass	Humboldt State University's marine debris program	$250
	Alexandra Mongarro	Biology	Dr. Karen Kiemnec-Tyburczy	Investigating genetic diversity in a local population of the red octopus (*Octopus rubescens*)	$100
	Alex Strawhand	Biology	Dr. Sean Craig	An analysis of the impact of flow rates on the growth of two invasive bryozoans (*Watersipora subtorquata* and *Watersipora* new species)	$350
	Kyle Swanson	Biology	Dr. Paul Bourdeau	Behavioral response of an invasive snail to a native crab	$150
	Kristen White	Fisheries Biology	Dr. Timothy Mulligan	Spawning of figure eight puffer in captivity	$200
LONG BEACH	Brian Cohn	Biology	Dr. Darren Johnson	Has the removal of top predators affected the behavior of surfperch populations?	$500
	Karla Gonzalez-Reyes	Biology	Dr. Bengt Allen	Diversity effects in a long term study of a coastal wetland	$500
	Sarah Luongo	Marine Biology	Dr. Christopher Lowe	Acclimated metabolic Q_{10} of the horn shark, *Heterodontus francisci*	$500
	Maria Rivera	Microbiology	Dr. Jesse Dillon	Assessing the impacts of sea level rise on decomposer communities in California salt marshes	$500
	Janine Rodriguez	Biology	Dr. Douglas Pace	Linking feeding efficiency and larval morphology between two echinoderms, *Strongylocentrotus purpuratus* and *Centrostephanus coronatus*	$500

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
LOS ANGELES	Russel Bacosa	Microbiology	Dr. Andres Aguilar	Effects of aquatic hypoxia on fish microbiota	$750
	Lisa Lugo	Biology	Dr. Patrick Krug	Do water-borne cues mediate density dependent reproductive effects in *Alderia willowi*	$500
	Christian Ramirez	Geology	Dr. Mohammed Rezae-Boroon	Polycyclic aromatic hydrocarbon (PAH) in water, sediment, pore water, and biomass of Baloona and Marina del Rey Lagoons, CA	$1,250
MARITIME*	Ryan Darfler	Mechanical Engineering	Dr. William Tsai	Closed loop water flume: simulating tidal flows in the Carquinez Strait for testing renewable energy technologies	$625
	Christine Edmiston	Global Studies and Maritime Affairs	Dr. Alexander Parker	The effect of anti-fouling coatings on marine biofouling communities	$625
	Emily Shimada	Marine Engineering Technology	Dr. Alexander Parker	The influence of nitrate and ammonium concentrations on diatom and flagellate population in the low inflow estuary of Drakes Estero, California	$625
	Jacob Steiner	Mechanical Engineering	Dr. Michael Holden	Autonomous marine data collection vessel	$625
MONTEREY BAY	Patrick Carilli	Marine Science	Dr. Cheryl Logan	The physiological response of sanddabs to hypoxia: how obligate benthic species compensate	$1,250
	Jesirae Collins	Marine Science	Dr. Corey Garza	The impact of seafloor structure on a dominant marine organism of the shallow, sandy habitat in Monterey Bay, CA	$1,250
NORTHRIDGE	Courtney Button	Biology	Dr. Steve Dudgeon	Nontrophic effects of the sea hare, *Aplysia californica*, on the Rhodophyte, *Plocamium cartilagineum*	$1,250
	Brenda Rodriguez	Geological Sciences	Dr. Kathleen Marsaglia	Submarine geomorphology of the Arguello Submarine Canyon System	$1,250

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
POMONA	Kendall Garabedian	Zoology	Dr. Ángel Valdés	Pantropical rainbow of the sea: a systematic approach to genus *Cyrce* (Heterobranchia: Sacoglossa) using 18S	$504
	Danielle McHaskell	Zoology	Dr. Jayson Smith	The effects of phlorotannin concentrations of brown seaweeds (Phaeophyceae) on the feeding rates of the black sea hare *Aplysia vaccaria*	$800
	Christian Pirijanian	Biology	Dr. Ángel Valdés	Asymmetric introgression of a hermaphrodite invasive sea slug in a native species	$742
	Natalie Yedinak	Environmental Biology	Dr. Ángel Valdés	Molecular systematics of *Colga*, an Arctic genus of sea slugs	$454
SACRAMENTO	Bethany Parker	Chemistry	Dr. Justin Miller-Schulze	Quantification of polycyclic aromatic hydrocarbons as chemical tracers of storm water runoff on the Sacramento State Campus	$833
	David Ricci	Chemistry	Dr. Justin Miller-Schulze	Development of an analytical method for quantifying chemical tracers associated with livestock activities	$833
	Emily Thao	Chemistry	Dr. Justin Miller-Schulze	Adaptation of developed methods for chemical tracers of human wastewater analysis by GC/MS	$833
SAN BERNARDINO	Alexandria Bulato	Anthropology	Dr. Amy Gusick	Coastal and desert technological innovation within California	$1,500
	Jared Stevens	Criminal Justice	Dr. Nerea Marteache	Illegal, unreported, and unregulated fishing: an analysis of factors that facilitate the offload of illegally caught fish and the country level	$1,000
SAN DIEGO	Hannah Joss	Environmental Science	Dr. Walter Oechel	Coastal air-sea CO_2 exchange during an El Niño from the Scripps Pier in San Diego, California	$602
	Felicia Miller	Biology	Dr. Elizabeth Dinsdale	Variation of carbon use of bacteria in different micro-habitats	$1,105

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
SAN FRANCISCO	Saad Bhatti	Biology	Dr. Karen Crow	Sexual dimorphism in anal fins of surfperches	$500
	Jaymee Chaides	Biology	Dr. Karen Crow	Characterizing development in the anterior pectoral fins and cephalic lobes of various species of batoids	$333
	Bridget Hansen	Microbiology	Dr. William Cochlan	The effects of temperature on the bloom dynamics of the diatom, *Pseudo-nitszchia australis*	$500
	Liam O'Malley	Biology	Dr. Karen Crow	Characterizing development of a novel reproductive anal fin structure in surfperch	$333
	Cristina Provencio	Biology	Dr. Karen Crow	Multiple paternity in the Bay pipefish, *Syngnathus leptoryhnchus*	$333
	Rachel Weinberg	Biology	Dr. C. Sarah Cohen	*Didemnum vexillum*: an invasive colonial tunicate	$500
SAN LUIS OBISPO	Carly Banks	Biological Sciences	Dr. Lisa Needles	Size preference of moon snails for predation on Pismo clams	$263
	Chelsey Beck	Biological Sciences	Dr. Elena Keeling	Quantification of telomerase in colonial ascidians	$500
	Brooke Darrah	Biological Sciences	Dr. Nikki Adams	Use of Phos-tag™ labeling to determine effects of UV-radiation on checkpoint kinase-1 in sea urchin embryos	$500
	Shawn Hannah	Biological Sciences	Dr. Heather Liwanag	Coccidioidomycosis in rescued marine mammals along California's coast	$360
	Andrew Hostler	Electrical Engineering	Dr. Bridget Benson	Cal Poly underwater remote operated vehicle (U ROV)	$377
	Hali Morgenroth	Animal Science	Dr. Heather Liwanag	Impacts of attached instrument recovery on fur seal thermoregulation	$500

CAMPUS	STUDENT	PROGRAM/ MAJOR	ADVISOR	PROJECT TITLE	AWARD AMOUNT
SAN MARCOS	Daniel Cubbedge	Music and Biological Sciences	Dr. Betsy Read	Developing microinjection techniques for *Emiliania huxleyi*	$1,250
	Tiersa Cosaert	Visual and Performing Arts	Ms. Judit Hersko	The weather on steroids: the art of climate change science	$1,250
SONOMA	Kiera Craig	Biology	Dr. Sean Place	Profiling the methylation status of the innate immune response gene, MPEG1	$778
	Kathryn Schwan	Biology	Dr. Mackenzie Zippay	Do mussels like it hot? Examining heart rate in a changing climate	$821
	Ryan Yoast	Biology	Dr. Daniel Crocker	Dominance rank influences immune function in breeding northern elephant seals	$901
STANISLAUS	Mark Hilgers	Biology	Dr. Ritin Bhaduri	A comparative analysis of coexisting larval helminths associated with their intermediate host, the sand crab *Emerita analoga*	$1,250
	Mikaila Hickman	Biology	Dr. Ritin Bhaduri	A comparative analysis of coexisting larval helminths associated with their intermediate host, the sand crab *Emerita analoga*	$1,250

STUDENT TRAVEL AWARDS

*Denotes undergraduate student

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
FULLERTON	Angela Aranda	Dr. Joseph Carlin	2016 Ocean Sciences Meeting	New Orleans, LA	$700
	Velvet Park*	Dr. Kristy Forsgren	Society for Advancement of Chicanos/ Hispanics and Native Americans in Science 2015 National Conference	Washington, DC	$893
	Evelyn Ruelas*	Dr. Kristy Forsgren	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$1,000
HUMBOLDT	Brendan Foster	Dr. Margaret Lang	Fish Passage 2016	Boston, MA	$750
	Nathaniel Jones*	Mr. Hal Genger	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$930
	Colby Peffer*	Dr. Daniel O'Shea	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$825
	Gavin Zirkel*	Dr. Andrea Achilli	North American Membrane Society 26th Annual Meeting	Bellevue, WA	$750
LONG BEACH	David Lizarraga	Dr. Bruno Pernet	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$250
	Annie Jean Rendlemen	Dr. Douglas Pace	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$850
	Amber Von Tungeln*	Dr. Bruno Pernet	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$250
MARITIME	Hannah Foster*	Dr. Alexander Parker	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Austin Gearty*	Dr. Alexander Parker	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Jacob Steiner*	Dr. Michael Holden	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
MONTEREY BAY	Jessica Jang	Dr. David Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$400
NORTHRIDGE	Maureen Ho	Dr. Robert Carpenter	13th International Coral Reef Symposium	Honolulu, HI	$1,000
	Ulises Lopez	Dr. Gilberto Flores	American Society for Microbiology Microbe 2016	Boston, MA	$1,000
	Alexa Mutti	Dr. Steve Dudgeon	11th International Temperate Reef Symposium	Pisa, Italy	$750

CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
NORTHRIDGE	Hannah Nelson	Dr. Peter J. Edmunds	13th International Coral Reef Symposium	Honolulu, HI	$1,000
	Leah Reidenbach	Dr. Janet Kubler	4th International Symposium on the Ocean in a High-CO_2 World	Hobart, Tasmania, Australia	$1,000
POMONA	Jennifer McCarthy	Dr. Ángel Valdés	5th International Workshop on Opisthobranchs	Porto, Portugal	$950
	Sabrina Medrano	Dr. Ángel Valdés	5th International Workshop on Opisthobranchs	Porto, Portugal	$950
SACRAMENTO	Hali Rederer	Dr. Ronald Coleman	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$1,000
	David Ricci*	Dr. Justin Miller-Schulze	American Chemical Society Western Regional Meeting 2015	San Marcos, CA	$245
SAN DIEGO	Miranda Brett	Dr. Todd Anderson	Gordon Research Conference: Predator-Prey Interactions	Ventura, CA	$750
	Michael Doane	Dr. Elizabeth Dinsdale	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$649
	Robert Dunn	Dr. Kevin Hovel	Gordon Research Conference: Predator-Prey Interactions	Ventura, CA	$750
	Mariangel Garcia	Dr. Jose Castillo	8th International Congress on Industrial and Applied Mathematics	Beijing, China	$1,000
	Megan Morris	Dr. Elizabeth Dinsdale	2015 Ecological Society of America Annual Meeting	Baltimore, MD	$750
	Shelby Rinehart	Dr. Jeremy Long	Gordon Research Conference: Predator-Prey Interactions	Ventura, CA	$750
	Genoa Sullaway	Dr. Matthew Edwards	Western Society of Naturalists	Sacramento, CA	$355
	Mallarie Yeager	Dr. Kevin Hovel	Gordon Research Conference: Predator-Prey Interactions	Ventura, CA	$750
SAN FRANCISCO	Anastasia Ennis	Dr. C. Sarah Cohen	96th Annual Meeting of the American Society of Mammalogists	Minneapolis, MN	$750
	Julie Gonzalez	Dr. Katharyn Boyer	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Ryan Hartnett	Dr. Karina Nielsen	2016 Ocean Sciences Meeting	New Orleans, LA	$655

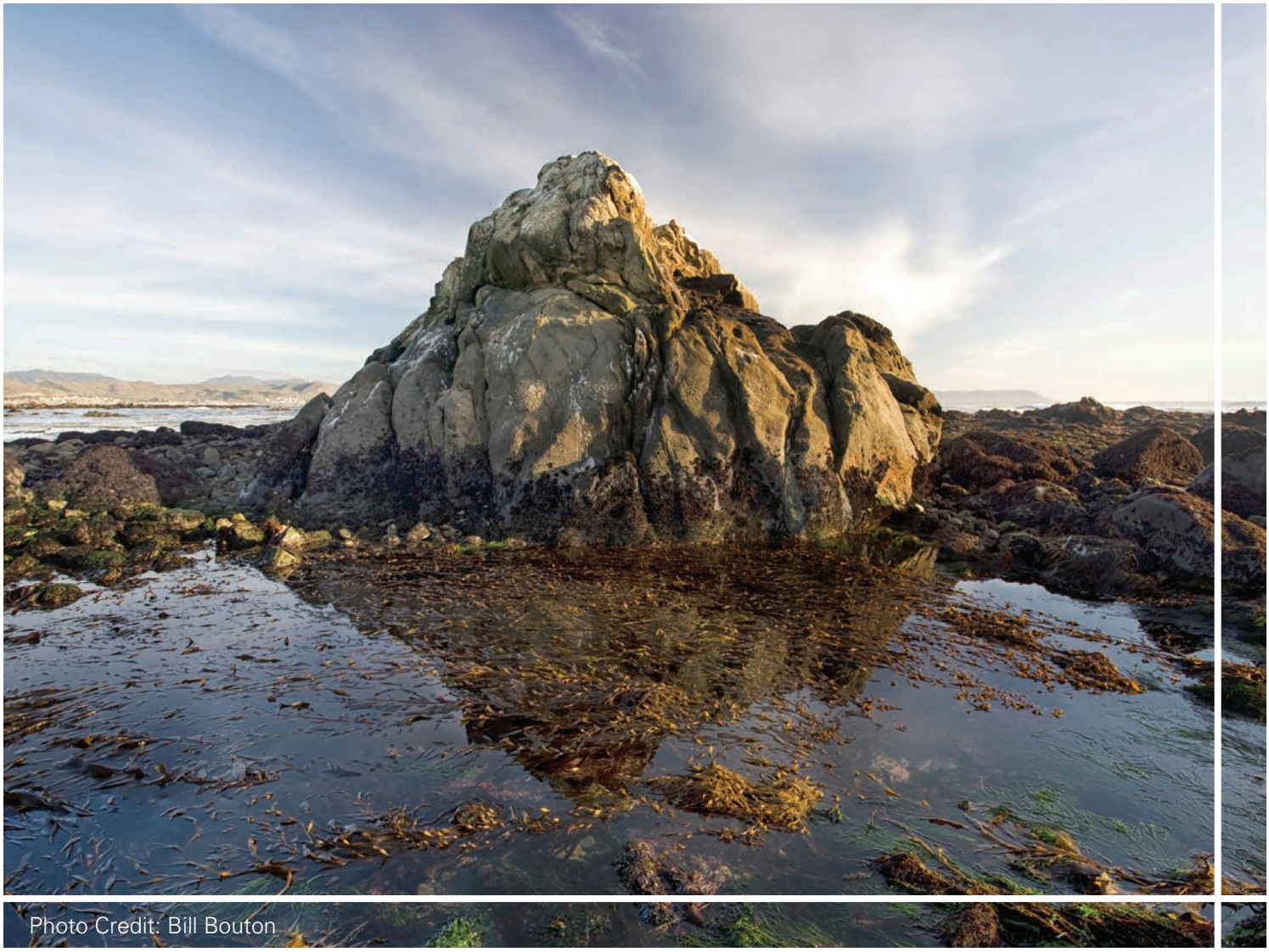
CAMPUS	STUDENT	FACULTY MENTOR	CONFERENCE	CONFERENCE LOCATION	AMOUNT
SAN FRANCISCO	Mehrdad Hejazian	Dr. Jason Gurdak	The Geologic Society of America Annual Meeting	Baltimore, MD	$1,000
	Morgan Meyers	Dr. Ed Carpenter	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$1,000
	Tricia Lee	Dr. Frances Wilkerson	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$956
	Melissa Patten	Dr. Katharyn Boyer	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Serina Sebilian	Dr. Katharyn Boyer	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Heather Richard	Dr. Ed Carpenter	2016 Ocean Sciences Meeting	New Orleans, LA	$700
	Victoria Elena Vasquez	Dr. David Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$400
	Crystal Weaver	Dr. Katharyn Boyer	Coastal & Estuarine Research Federation 23rd Biennial Conference	Portland, OR	$500
	Charles Wingert	Dr. William Cochlan	4th International Symposium on the Ocean in a High-CO_2 World	Hobart, Tasmania, Australia	$668
SAN JOSÉ	Paul Clerkin	Dr. David Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$400
	Melissa Nehmens	Dr. David Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$400
	Kristin Walovich	Dr. David Ebert (MLML)	Joint Meeting of Ichthyologists and Herpetologists	Reno, NV	$400
SAN LUIS OBISPO	Katie Grady	Dr. Kristin Hardy	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$1,000
	Madelyn Roycroft	Dr. Benjamin Ruttenberg	13th International Coral Reef Symposium	Honolulu, HI	$750
	Nicole Uibel	Dr. Nikki Adams	Society for Integrative and Comparative Biology Annual Meeting 2016	Portland, OR	$1,000
SONOMA	Joshua Hancock	Dr. Sean Place	American Fisheries Society 145th Annual Meeting	Portland, OR	$1,000

SUMMER 2016 INTERNSHIP PROGRAM

*Denotes undergraduate student

HOST ORGANIZATION	INTERNSHIP *LOCATION (ALL WITHIN CA)*	CSU STUDENT *HOME CAMPUS*
California State Lands Commission	Ballast Water *Hercules*	Benjamin Potter* *Cal Maritime*
	Vessel Biofouling Management *Long Beach*	Alice Dornblaser* *Cal Poly San Luis Obispo*
California Department of Fish and Wildlife	Marine Invertebrate Fisheries Management *Bodega Bay*	Hayley Naomi Sneiderman* *Sonoma State*
	Southern California Fisheries Research and Management *Los Alamitos*	Morgan Johnson* *Humboldt State*
Marine Applied Research and Exploration	Marine Biology *Humboldt*	Jessica Coming* *Humboldt State*
	Marine Engineering *Richmond*	Dao Vang* *Fresno State*
Channel Islands National Marine Sanctuary	Ocean Exploration *Santa Barbara*	Ryan Hartnett *San Francisco State*
Greater Farallones National Marine Sanctuary	Tourism and Recreation *San Francisco*	Jenna Batchelder* *Humboldt State*
	Tourism and Recreation *San Francisco*	Alyssa Bellamy* *CSU Monterey Bay*
Monterey Bay National Marine Sanctuary	Management Plan Review *Monterey*	Kristen Hart *CSU Monterey Bay*
NOAA National Marine Fisheries Service	Abalone Conservation and In-Situ Abalone Behavior Analysis *Long Beach*	Frances Glaser* *Cal Poly San Luis Obispo*
	Sustainable Fisheries *Long Beach*	Michael Andrews* *Cal Maritime*
Ocean Aero, Inc.	Electronics/Software Engineering *San Diego*	Sylvia Trinh* *CSU Northridge*
	Mechatronics *San Diego*	George Cruz* *CSU Long Beach*

HOST ORGANIZATION	INTERNSHIP *LOCATION (ALL WITHIN CA)*	CSU STUDENT *HOME CAMPUS*
Office of National Marine Sanctuaries West Coast Regional Office	Resource Protection *Monterey*	Steven Eikenbary* *CSU Monterey Bay*
Remote Sensing Solutions, Inc.	Ocean Modeling and Prediction (Hydro) *Pasadena*	Shahar Janjua* *CSU Long Beach*
	Ocean Modeling and Prediction (ROMS) *Pasadena*	Frances-Julianna Levia *Cal Poly Pomona*
Seatrec, Inc.	Thermal Energy Generator *Pasadena*	Phuong Tran *CSU Long Beach*



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