

FROM THE NATIONAL COSEE OFFICE

The COSEE Network News will now be published quarterly. The NCO and Executive Committee have been working together as COSEE transitions into an independent consortium. Individual membership will become available in the fall. The NCO hopes everyone had a pleasant summer!

Sincerely,
Romy Pizziconi
National COSEE Office
romy@mail.uri.edu

NEW VERSION OF CLIMB RELEASED!

A new version of the [COSEE-OS](#) Concept Linked Integrated Media Builder (CLIMB) concept mapping tools was released in early September. The new version contains rebuilt concept map building tools, and incorporates key features suggested by scientists, educators and student users of the software. New features include faster and more streamlined concept map creation and the attachment of assets, the ability to select and edit multiple objects at once (multi-select), as well as the ability to open and work on multiple concept maps in a single session. There are currently over 4,000 registered users for CLIMB, which can be accessed by the public at <http://cosee.umaine.edu/climb>.

SACNAS 2014

COSEE will have a presence at the upcoming National SACNAS Conference in Los Angeles, October 16-18, 2014. COSEE will sponsor a session, "Oceans and Climate Change: A Global and Interdisciplinary STEM Issue." A panel of ocean scientists will present perspectives on higher education and careers in ocean sciences, particularly as they pertain to exploring, monitoring, and maintaining a healthy ocean. Attendees will gain insights on forging a career path in the ocean sciences. The workshop will include presentations and a question-and-answer session. This year's panelists include Kwasi Connor, University of California, Irvine; Andrew Thompson, University Institute of Technology; and Joao Teixeira, Jet Propulsion Laboratory. COSEE will also host marine/ocean sciences tables during the "Conversations With Scientists" session where students may have one on one discussions with practicing scientists.

CENTER UPDATES

COSEE Island Earth's Climate Science Teacher Institute was an indisputable success! During the last part of June of 2014, the National Science Foundation, [Pacific Resources for Education and Learning](#), [COSEE Island Earth](#), and the Disney Foundation generously underwrote the "Climate Science Teacher Institute" at the [Hawaii Institute of Marine Biology](#) on Mokuolo'e (Coconut Island) in Kaneohe on the island of Oahu.

The first of a series to be offered at other sites across the Pacific, the workshop took place over the course of seven days. Each day covered a different topic, from general information on climate science to the specific impacts of climate change on Hawaii's marine communities. Guest speakers from multiple disciplines rounded out the curriculum and there were ample opportunities to collaborate with other educators present to explore how this information would be applicable in both the classroom and community education setting.

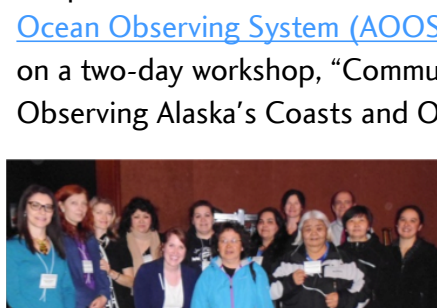
There were a total of 15 representatives from three Hawaiian Islands spanning grade levels and public and private educational settings. Participants received a stipend for their participation and those in need were granted housing on-board Coconut Island, a privilege usually reserved for visiting marine science researchers and dignitaries.



The program received rave reviews from participants inspiring one participant to shoot an e-mail to the ride to the airport, "Well, thanks again to our amazing hosts and masterminds at HIMB as well as to everyone in our group for committing to take the time out of our busy everyday lives to learn more about how we can better educate our students on this important topic of climate change. Missing Coconut Island already..." Indeed.

COSEE Alaska is happy to report that through sound and creative program and budget management, they are in Year 7 of a 5-year grant!

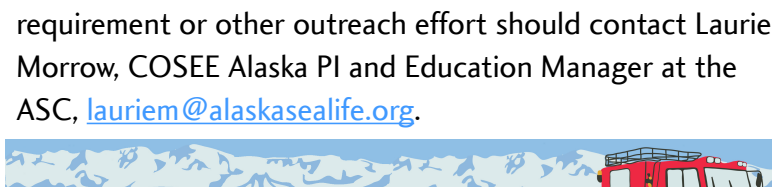
In April, COSEE collaborated with the [Alaska Ocean Observing System \(AOOS\)](#) and [Alaska Sea Grant](#) on a two-day workshop, "Community-Based Monitoring: Observing Alaska's Coasts and Oceans." Through COSEE



Alaska's participant cost budget, they were able to dramatically diversify representation at this workshop across cultural, geographic, professional and community lines. A

workshop report is featured on the [COSEE Alaska website](#). A handbook is currently under development that will become a guiding document for future community-based projects in Alaska and may be used by our Canadian and Russian neighbors who attended. All other workshop details are available at the following link: <http://seagrant.uaf.edu/conferences/2014/community-based-monitoring/> For more information about the workshop, contact COSEE Alaska Executive Director Robin Dublin, robindublin@coseealaska.net and for information on the handbook, contact COSEE Alaska Program Manager Marilyn Sigman, msigman@alaska.edu.

COSEE Alaska and the [Alaska SeaLife Center](#) are happy to announce the completion of our third virtual field trip (VFT), [Southern Exposure: An Arctic Adventure](#) for grades 5-8. In Southern Exposure, Dr. Jo-Ann Mellish and her team travel to Antarctica's McMurdo Sound to investigate how changing sea ice conditions may impact ice-dependent seals like Antarctica's Weddell seals. Also, the Alaska SeaLife Center has plans and the capacity to create additional VFTs that will soon be housed online in a new "Basecamp" website that is currently under development. Researchers interested in developing VFTs with the Alaska SeaLife Center as part of a NSF Broader Impact requirement or other outreach effort should contact Laurie Morrow, COSEE Alaska PI and Education Manager at the ASC, lauriem@alaskasealife.org.



COSEE Alaska Lead PI Michael Castellini is proud to announce that the [R/V Sikuliaq](#) will successfully launch and is on its way to [R/V Sikuliaq](#) is a fully global class, ice-capable research vessel that will support science that helps us learn more about marine life, our oceans, our atmosphere and our global climate, and is headed to her homeport of Seward, Alaska. [R/V Sikuliaq](#), pronounced [see-KOO-lee-aw], translated from Inupiaq as "young sea ice," is a 261-foot ship designed for weather harsh conditions to help advance polar and subpolar scientific research. Owned by NSF and operated by the University of Alaska Fairbanks, [R/V Sikuliaq](#) was launched in October 2012. The vessel is outfitted with state-of-the-art equipment to bring scientists to ice-choked polar regions. It is able to cut through ice up to 2.5 feet thick. Additionally, the vessel design strives to have the lowest possible environmental impact, including a low underwater radiated noise signature for marine mammal and fisheries work. [R/V Sikuliaq](#) will be able to accommodate up to 24 scientists and students at a time, including those with disabilities, providing scientists from around the world and in the [UNOLS-National Oceanographic Laboratory System](#) (UNOLS) a unique and important research opportunity. As part of COSEE Alaska's extension into Year 7, they will assist UAF in the development of information and a workshop for researchers and outreach specialists who are planning to conduct research on the vessel. This will include information on the state-of-the-art telepresence and other communication tools available on the ship.

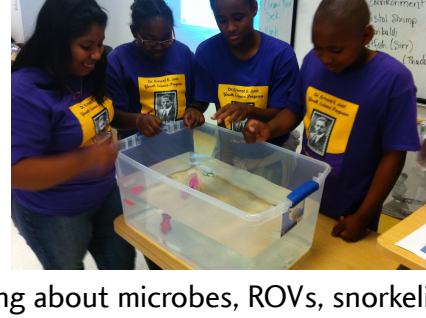
COSEE COUNCIL REPRESENTATIVES

- COSEE Alaska (Robin Dublin, COSEE Alaska)
- COSEE California (Craig Strang, UC Berkeley)
- COSEE Florida (Edwin Massey, Hawaiian River State College)
- COSEE Island Earth (Judy Lemus, Hawai'i Institute of Marine Biology)
- COSEE Networked Ocean World (Janice McDonnell, Rutgers University)
- COSEE OCEAN (Bob Chen, University of Massachusetts)
- COSEE Ocean Systems (Annette deCharon, Darling Marine Center, University of Maine)
- COSEE Pacific Partnerships (Jan Hodder, Oregon Institute of Marine Biology)
- COSEE SouthEast (Carrie Thomas, North Carolina State University)
- COSEE TEK (Ivar Babb, University of Connecticut)
- COSEE West (Linda Duguay, University of Southern California)
- National Science Foundation (Lisa Rom)
- National Ocean and Atmospheric Administration (Sarah Schoedinger)
- Smithsonian Institution (Trish Mace)
- Alaska Sealife Center (Tara Riemer Jones)
- Association for the Sciences of Limnology and Oceanography (Adrienne Sponberg)
- College of Exploration (Peter Tuddenham)
- Hawaii Institute of Marine Biology (Judy Lemus)
- Oregon Institute of Marine Biology (Jan Hodder)
- Institute of Marine & Coastal Studies, Rutgers (Janice McDonnell)
- Scripps Institution of Oceanography (Cheryl Peach)
- Seattle Aquarium (Jim Wharton)
- Smithsonian National Museum of Natural History (Trish Mace)
- University of Massachusetts (Craig Strang)
- University of Massachusetts Boston (Bob Chen)
- University of Rhode Island, Gail Scowcroft
- University of South Carolina, Marine Science Program (Claudia Benitz-Nelson)
- University of Southern California, Wrigley Institute (Linda Duguay)
- Woods Hole Oceanographic Institution (Jim Yoder)

Contribute to CNN! Send news and announcements of interest to the COSEE community to Romy Pizziconi, romy@mail.uri.edu.

CENTER UPDATES

COSEE West has had a busy summer providing marine science opportunities for under-represented audiences. The High School Marine Science Lab, a partnership with [C-DEBI](#), [USC Sea Grant](#) and [Wrigley Institute for Environmental Studies](#), brought together 20 high school students from around the nation at the Wrigley Marine Science Lab on Catalina Island to build a greater understanding of themselves and ocean science careers by immersing



themselves in learning about microbes, ROVs, snorkeling and doing a pilot research project. Several of the students are the first or second in their families to go to college. All will conduct an outreach project back home in their communities during this upcoming school year.

At the [National Marine Educators Association](#) Conference Lynn Whitley and Dena Deck shared about the strengths of the marine science partnership with [Zeta Rho Foundation's EE Just Science Program](#), together reaching African American youth in South Central Los Angeles. They found many in the audience curious about how to build relationships with agencies that bring underserved audiences to marine science opportunities.

In addition COSEE West joined with [Wishtoyo Foundation](#) (Chumash native American organization) and [Pitzer's Native Pipeline to College Program](#) to facilitate native American teens in a day of exploring plankton at the Channel Island Boating Center in Oxnard. The partnership with Wishtoyo Foundation and Pitzer's Native Pipeline to College program provided an ideal opportunity to bring traditional knowledge of knowing and caring for the environment into the discussion of marine science.

COSEE Pacific Partnerships offered their final opportunity for community college students through the Promoting Research Investigations in the Marine Environment (PRIME) research internship program this summer. Thirteen interns spent 8-10 weeks conducting research with a scientist mentor affiliated with one of their partners, including the [Oregon Institute of Marine Biology](#), the [Hatfield Marine Science Center](#), and the University of Hawaii's marine laboratories. The [Oregon Department of Fish and Wildlife Marine Reserves Program](#) co-funded three of these opportunities. In addition, through COSEE Pacific Partnership's collaboration with the [Quinalt Indian Nation](#), they supported an additional intern to work on a project with the Quinalt Department of Natural Resources in Washington State. From 2008-2014, the PRIME program has supported 74



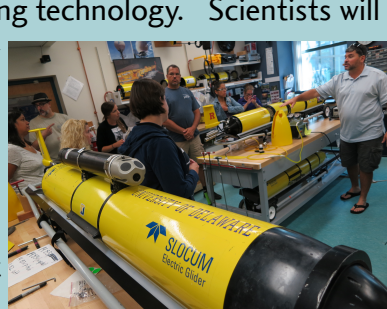
students to work with 47 ocean scientists their region. The interns have come from 26 different community colleges in Oregon, Washington, California, Hawaii, American

Samoa, Guam, and Commonwealth of the Northern Mariana Islands. You can read about many of the student's research experiences on the PRIME Blog. <http://coseeprime.blogspot.com/>

COSEE NOW

Twenty-five educators from New York and New Jersey have been selected to team up with scientists from Rutgers University, University of Delaware, University of Alaska Fairbanks, Polar Oceans Research Group, and the Virginia Institute of Marine Science to study Antarctica and share the research experience with middle and high school students, grades 6-9. The teachers started their year-long collaboration with scientists called [Project CONVERGE](#) at a professional workshop, at Rutgers University, August 18-22, 2014. During this workshop, the teachers met the project science team, became familiar with the science, and learned the tools that will enable them to bring this ocean science research into their classrooms over the coming school year. The teachers and their middle school students will be participating in a series of live video calls in January 2015 to provide a first-hand opportunity to interact with the scientists.

Professional science writer Hugh Powell and photographer Chris Linder, who will be part of the science mission, serve as the physical eyes and ears for the students as the scientists explore Antarctica using underwater robots, or gliders, and animal tagging technology. Scientists will be researching the behavior



of the resident Adélie penguins, their food source, tiny shrimp called krill, and how ocean conditions impact them. Antarctic krill play a fundamental role

in the pelagic ecosystem of the Southern Ocean as a primary food item for many of the region's top predators, including whales, seals and penguins. Krill also are an important grazer of the phytoplankton, the tiny plants of the ocean that produce oxygen for our atmosphere and serve as the base of the ocean food web. The science team will be mapping the ocean circulation patterns that influence the distribution of both the phytoplankton and krill and tracking the Adélie penguins with satellite tags. The Adélie are thought to be leaving the Antarctic Peninsula because of changing food patterns and a warming climate. The scientists are looking forward to partnering with the teachers. Chief scientist and physical oceanographer, Dr. Josh Kohut says, "This project is an exciting opportunity for us as members of the science field team to share our experience in Antarctica with teachers and students back in the US." The entire science team will be interacting with the teachers at the workshop, either in person or via Skype.

Following the research mission, [Liberty Science Center](#) in Jersey City, NJ will host a student research symposium for participating teachers and their students. This will provide an opportunity for the students, who have been following and participating in the research, to present their own research projects related to this work and receive feedback from their peers and scientists. In addition, the scientists for the project will participate in the meeting sharing their own experiences and recent results with the students.

Teachers participating in the program are motivated to participate because the science is real and will allow students to connect what they see in their books and practice in the classroom to research being played out in the real world. Students will have the opportunity to meet the research scientists at the end of the year. Teachers comment that knowing that there are actual people out there and that this isn't just some contrived classroom experience will be amazing for the students. Too often the outcome of a classroom lab experience is easy to guess, particularly for the brightest students, but by connecting students to real science projects, we expose students to the realities of science.

COSEE Ocean Systems

This past spring, COSEE-OS collaborated with research scientists at Woods Hole Oceanographic Institution and the [International Pacific Research Center](#) to develop a [two-part webinar series](#) about marine debris. Dr. Erik Zettler, of Woods Hole, presented on his research observing plastic pollution in the ocean and micro-communities making a living on this plastic debris. Drs. Nikolai Maximenko and Jan Hafner examined marine debris in a larger context, explaining their research investigating debris jettisoned out to sea following the 2011 earthquake along the Pacific coast of Tohoku, Japan. A total of 137 participants attended this series, with participants joining in from 23 states, the District of Columbia, and four countries (Argentina, Barbados, Canada, and Portugal). Since 2010, COSEE-OS has conducted over 50 scientist-lead [webinars](#).

In collaboration with the [Institute for Broadening Participation](#) (IBP), COSEE-OS co-hosted a pilot workshop entitled "Positive Factors that Impact Success in STEM" in Honolulu. Participants learned about the positive factors that reduce barriers to participation in STEM fields and that also enable individuals to succeed in their careers. During the workshop, Dr. Ashanti Johnson, Executive Director and Allyson Fauver, Director of Policy & Analysis presented their experiences and research on the "Positive Factors." Participants then self-selected into groups representing four positive factors (i.e. mentors, role models, authentic science engagement, and campus and classroom culture & climate) to explore and discuss ways to further incorporate these factors at their home institutions.

COSEE Florida

Over 400 ocean scientists have graduated from a [Presentation Boot Camp](#) (PBC) sponsored by COSEE Florida. The next PBC will be held on [September 27-28](#) at Florida Gulf Coast University in Ft. Myers, Florida. During the intensive two-day workshop scientists receive training in planning and preparing presentations that communicate messages more clearly and effectively and have a lasting impact on the audience. Topics include: identifying the needs of the audience, highlighting big ideas and take-home messages, decoding complex concepts with diagrams, and displaying data in meaningful ways. Scientists also receive training in the use and application of a protocol for evaluating the effectiveness of scientific presentations.

In January 2015, COSEE Florida will be adding a new [Video Storytelling Boot Camp](#) to the Presentation Boot Camp family of professional development workshops. The 3-day workshop will introduce participants to the power of video as a communication tool and will provide hands-on training in producing videos that engage, motivate, and inspire audiences. Participants will be guided by expert instructors through all aspects of video planning and production. Topics will include basic and advanced storytelling techniques, storyboarding, camera work, audio recording, and post-production compression and distribution. For more information, contact Rick Tankersley at rtankers@ft.edu.