# *Department of Marine Sciences*
## Annual Report Narrative 2015 – 2016

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***June 23, 2016***

## FACULTY NEWS AND HIGHLIGHTS

The Department of Marine Sciences (DMS) is a multi-disciplinary department conducting interdisciplinary research in biological, chemical, geological and physical oceanography, marine biology and marine meteorology. The DMS has a number of large and ongoing initiatives to enhance it research capabilities and scholarly reputation. For example, the DMS has greatly increased its research expertise and scholarly activities in Climate-related sciences through its Climate and Human Alteration of Coastal Ecosystems (CHACE) initiative. This has played a big role in the demonstrable increase of climate-related research in the department. The DMS is a leader in ocean observing initiatives with its regional Long Island Sound Integrated Coastal Observing System (LISICOS) and Coastal Laboratory for Marine and Atmospheric Sciences (CLAMS) within the NorthEast Regional Association of Coastal Ocean Observing Systems (NERACOOS). The DMS is working with the Department of Energy and Environmental Protection (DEEP) and Connecticut SeaGrant to establish a National Estuarine Research Research (NERR) site for the State. The DMS is working closely with CLAS to stretch and modernize its flagship R/V Connecticut from 76' to 90' in length. The project will greatly enhance the research capabilities of the R/V CT and allow it to operate over a wider range of oceanic conditions and locations.

The faculty completed another active year of research using our laboratory and campus facilities (including the Rankin Lab, IT Support, Machine Shop, Dive Operations, the R/Vs Connecticut and Weicker, and small boat fleet), and in a number of field campaigns around the globe. The field campaigns included work in the local waters of Long Island Sound and coastal New England; and further afield in coastal North Carolina, Florida, and California; as well as the Arctic, Southern/Antarctic, Atlantic, and Pacific Oceans.

We highlight a few of our scholarly success stories taken from our web page http://marinesciences.uconn.edu:

### Professor Hans G. Dam Elected Fellow of two Prestigious Scientific Associations – AAAS and ASLO

Hans G. Dam, a professor in the Department of Marine Sciences at the University of Connecticut, has been elected a Fellow of the *American Association for the Advancement of Science (AAAS),* the world's largest general scientific society, and publisher of the journal *Science*. Election as an *AAAS Fellow* is an honor bestowed upon AAAS members by their peers. Fellows are those whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished. As part of the Biological Sciences Section, Dam was elected as an AAAS Fellow for "distinguished contributions to the field of biological oceanography, particularly plankton carbon cycling and zooplankton evolutionary ecology."

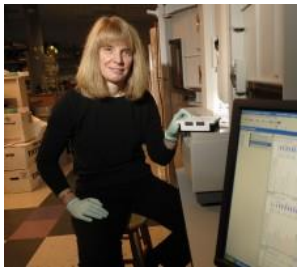
Professor Dam was also elected to the inaugural class of fellows of the Association for the Sciences of Limnology and Oceanography (ASLO), the leading professional organization for researchers and educators in the field of aquatic science. Fellows are recognized for having achieved excellence in their contributions to ASLO and the aquatic sciences.

## Asst. Prof. Julie Granger Earns an NSF CAREER Award


Assistant Professor of Marine Sciences Julie Granger has been awarded $791,496 over five years for her project, *The Biological Nitrogen Isotope Systematics of Ammonium Consumption and Production*. Granger's work seeks to create a basis through which researchers can better understand the oceanic nitrogen cycle. Isotopic data can be useful to interpreting nitrogen cycle processes in the ocean that are difficult to measure directly. Granger's research will investigate the processes behind isotope fractionation, or relative abundance, of ammonium during biological processes. It will investigate whether low concentrations of ammonium in the surface ocean affect isotope fractionation when the ammonium is recycled, and whether there is a trophic isotope effect associated with ammonium recycling by plankton.

The research will create a baseline from which researchers can interpret recycled nitrogen dynamics from ammonium isotope datasets, and will significantly enhance our ability to understand the ocean's fundamental chemistry and its vulnerability to human impacts. Granger also plans to integrate science with community-engaged learning by developing an undergraduate field and laboratory course requiring students to present their research to stakeholders in the community. A manual created for this course will be disseminated in open-access forums for teachers to develop similar courses.

## The State of the World's Oceans

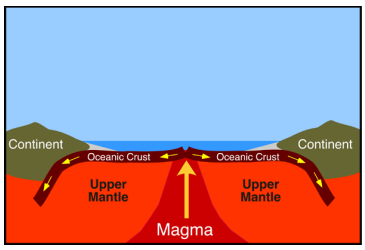


UConn marine sciences professor Ann Bucklin and emeritus professor Peter Auster were among 600 marine experts from many countries who participated in the recent United Nation's World Ocean Assessment (WOA), a global inventory of the state of the marine environment and problems threatening to degrade the oceans. This just-released international study marks the first comprehensive analysis on the ways humans benefit from and affect the world's oceans, which cover more than 70 percent of our planet. Bucklin and Auster served as co-authors on two different chapters, focused respectively on global patterns of biodiversity and threats to seamount communities

## Prof. Heidi Dierssen's COLORS Lab investigates the Southern Ocean's Appetite for Carbon

Marine Sciences faculty Dr. Heidi Dierssen and her postdoctoral researchers Dr. Shungu Garaba and Dr. Kaylan Randolph are involved in an inter-disciplinary airborne mission of carbon dynamics in the Southern Ocean (the ORCAS mission). Dr. Garaba participated in the research cruise aboard the R/V Lawrence Gould

stationed along the Antarctic Peninsula to provide ground truth measurements of the hyperspectral imagery from the NASA PRISM sensor.




## Prof. Davide Lund's research links activity on the Seafloor to Icy Ebb and Flow on Surface

As reported in the journal *Science*, UConn marine scientist David Lund and his colleagues studied hydrothermal activity along the mid-ocean ridge system – the longest mountain range in the world, which extends some 37,000 miles along the ocean floor and found a link between hydrothermal activity and glacial cycles. Their research suggests that the release of hot molten rock, or magma, from beneath the Earth's crust in response to changes in sea level plays a significant role in the Earth's climate by causing oceans to alternately warm and cool. This change in temperature is attributed to the release of heat and carbon dioxide (CO2) into the deep ocean.

## Emeritus Professor Edward Monahan Receives the Distinguished Service Award from CASE

The Connecticut Academy of Science and Engineering (CASE) presented a CASE award for Distinguished Service to its member Edward C. Monahan for his outstanding leadership within the Academy for his significant contributions through his 12 years of service as the CASE Bulletin Executive Editor for Science. The CASE Governing Council created the Distinguished Service Award in 2010 to honor members who have provided outstanding service to the Academy. CASE presented the award at its 41st Annual Meeting and Dinner on Tuesday, May 24th at the University of New Haven.

## GRADUATE EDUCATION AND ACCOMPLISHMENTS

The DMS is proud of its graduate program in Oceanography and has a long history of educating excellent young scientist who go-on to make their own positive impact in oceanography and marine sciences. During AY2015-2016, a total of 43 students were enrolled in Marine Sciences' graduate program in Oceanography, including 26 PhD and 17 MSc. During this academic year, 4 Ph.D. and 8 Master's degrees were conferred for a total of 12 graduating students. These numbers include the completion of degrees for 3 of our longer standing students, i.e., we did not give up on them! As in past years, our success at graduating students requires a strong recruitment effort to keep pace. This year we received 34 applications for the Spring and Fall 2016 entry. We made offers of acceptance to 12 applicants, of whom 7 (6 Ph.D. and 1 M.S.) accepted, which brings our current total to 38 graduate students. While this is a historically large incoming class and follow an even larger class of 9 students, it was not enough to offset the high number of graduating students this year. Therefore, we will continue our active recruitment efforts to maintain our heathy graduate program with high quality students. Our program Assistant Debra Schuler and members of our A&A and GPOC Committees are largely responsible for these efforts and the health and success of our program. We illustrate a few of the notable accomplishments from our graduate students below:

## Maria Rosa Receives NSF Post-Doctoral Fellowship in Biology

Maria Rosa was awarded an NSF Post-doctoral Fellowship in Biology. Maria will be conducting her post-doc at Stony Brook University with sponsoring scientist Dr. Dianna K. Padilla. The goal of the study is to determine the

relative importance of different feeding modes during early ontogenetic stages of representative species of suspension-feeding mollusks.

## Doctoral Student Brittany Sprecher selected for a NSF Graduate Research Fellowship

Doctoral Student Brittany Sprecher is among a select group of researchers from across the United States being awarded a prestigious Graduate Research Fellowship from the National Science Foundation. The primary goal of Brittany Sprecher's research in biological oceanography is to look at phytate as a growth substrate for dinoflagellates. Dinoflagellates are an important class of primary producers. Key findings will provide a novel perspective on phosphorous utilization in dinoflagellates. If phytate utilization is found, phytate could be used as a molecular marker for future studies to survey the phytate-utilizing ability in global phytoplankton communities.

## Melissa Pierce Receives Awards at the International Aquaculture 2016 meeting

Doctoral candidate Melissa Pierce received the Johnnie Castro Montealegre Award from the FUCOBI Foundation. The FUCOBI foundation is an international collaboration of researchers and NGO focused on "ONE HEALTH," a program aimed at conserving healthy ecosystems to maintain biodiversity and healthy animals to protect human health.

Melissa Pierce also received the Thurlow C. Nelson Award for Outstanding Student Oral Presentation from the National Shellfisheries Association. Melissa received the award for her talk entitled "Bivalves maintain a core gut microbiome: seasonal trends and species variation," at the Aquaculture 2016 meeting. The Thurlow C. Nelson Award is given for an outstanding oral presentation of research that represents a distinctive and valuable contribution to shellfisheries science. The Award is named after the distinguished shellfish biologist who served as NSA President from 1931-1933 and contributed more than 125 papers, many relating to oyster biology.

## 20th Anniversary of Feng Graduate Research Colloquium

The 11th Biennial Feng Graduate Research Colloquium was held on May 12, 2016. This was also the 20th anniversary of this event, which showcases and celebrates the research projects of graduate students in the Department of Marine Sciences. The all-day event featured talks and posters from nearly every graduate students. The colloquium was run by Steering Committee

members Chris Murray, Steven Schmidt and Emily Seelen with coordination by Profs. Hans Dam, Julie Granger and Hannes Baumann. This colloquium honors the memory of Professor S. Y. Feng, Director of the former Marine Sciences Institute, and founding Head of the Department of Marine Sciences, University of Connecticut. The Colloquium is funded by the Department of Marine Sciences and the S. Y. Feng Scholarship Fund.

## UNDERGRADUATE EDUCATION

The Marine Sciences' undergraduate program has continued to grow under the leadership of Program Coordinator Claudia Koerting. Applications to our program remained high for the fifth straight year with 20 new students entering the program last fall as freshmen. Over the year we added a couple of transfer students as well. The total number of students increased slightly from 74 to 79 students from Fall 2014 to Fall 2015. At the moment, 15 of those students list their campus as Storrs and one lists the Stamford campus. We are particularly pleased with the growth of student enrollment at Storrs and are working to improve retention of these students by making it easier to stay at Storrs for the first two years and beyond. For example, we have worked with Geosciences to set up MARN 2002 labs in Beach Hall, which allows students to take this sophomore level course at Storrs using iTV and this lab. All ten of the students that took this course in Spring 2015 transferred to the Avery Point campus this year and quickly became part of the marine sciences community – primarily due to this iTV experiment.

Our students gain experience that give them employable skills in, e.g., molecular biology, chemical analysis and data analysis through our upper level courses and opportunities in the research labs. For example, 15 faculty mentored over 20 students in their labs over the summer and throughout the 2015/16 academic year, including several of our most talented freshmen. One of our rising seniors, Liz Arsenault, landed a summer job in molecular biology with Perkin Elmer as a result of her expertise gained in Prof. Lin's lab.

In addition, students are broadening their skill set by pursuing minors including Ecology and Evolutionary Biology, Mathematics, Geography and Chemistry. The Mathematics and Chemistry minors require a couple of upper level courses be taken at Storrs. Geography offers on-line classes which make that minor feasible for our students, while the EEB minor is made possible because of APIR, Michael Finegerra.

Some of the research undertaken by our MARN students is at a very high level. This is particularly true of senior Matthew Lacerra and junior Sarah McCart, both of whom are working with Prof. David Lund and his recently graduated master's student, Emily Seeley. Prof. Lund considers their work to be at graduate student level. Matthew provided evidence for this through the excellent talk he gave at the Feng Symposium that reported evidence for increased carbon storage in the deep South Atlantic during the last deglaciation. His talk reported recent model results that show a reduced AMOC (Atlantic Meridional Overturning Circulation) during HS1 (14.5-17.5 years BP) increased the residence time of NADW (North Atlantic Deep Water in the North Atlantic), allowing for accumulation of respired carbon (Schmittner & Lund, 2015). Matthew tested this hypothesis by reconstructing Atlantic records of [CO32-], a known indicator of past carbon changes, using B/Ca of benthic foraminifera. Matthew's research will constitute his honor's thesis.

Sarah is looking at hydrothermal activity as a negative feedback that triggers deglaciations. Her particular project focuses on a deep ocean sediment core that covers the past 5 glacial terminations. She will be using the mass spectrometer this summer to analyze trace metals in the core as a proxy for hydrothermal activity--an increase in metal concentrations indicates an increase in hydrothermal activity. Sarah will convert her work into her senior thesis.

A few additional accomplishments from our DMS highlights page include:

## Participation in the Sea Education Association (SEA) Semester at Sea

For some, the words 'study abroad' may conjure thoughts of London or Paris or Tokyo. But for three UConn marine sciences students this past spring semester, it meant taking to the high seas aboard a sailing ship equipped with sophisticated research facilities. Tim Bateman '16 (CLAS) and Maya Thompson '16 (CLAS) spent five-and-a-half weeks sailing from New Zealand to Tahiti on the Sailing School Vessel (SSV) Robert C. Seamans, a 134-foot steel brigantine – a two-masted sailing ship – fitted with some of the most advanced oceanographic equipment in the world. Olivia Robson'16 (CLAS) embarked on the SSV Corwith Cramer, another two-masted brigantine that also boasts state-of-the-art research facilities. Her voyage started in Puerto Rico on April 20 and took her to Bermuda and the Sargasso Sea in the North Atlantic, before docking in New York City a month later.

The programs that enticed the three UConn students to take to the high seas are collectively known as SEA Semester, and they are run by the Sea Education Association (SEA), an internationally recognized leader in undergraduate ocean education with an emphasis on developing environmental literacy. The educational focus of the semester for Bateman and Thompson's Pacific voyage was 'The Ocean and Climate', while Robson's North Atlantic voyage concentrated on 'Marine Biodiversity and Conservation.'

## Marine Sciences student Ronald Tardiff outstanding CLAS student for 2016

Marine Sciences student Ronald Tardiff was featured by CLAS as one of their outstanding students graduating in 2016. Ron completed a dual major in Marine Sciences and Maritime Studies, while traveling to 3 different countries for internships!

**RESEARCH and SCHOLARSHIP**

Research and scholarship are paramount for Marine Sciences; our publication rates are excellent by the usual metrics of our disciplines as evidenced by individual rankings in Google Scholar and Research Gate. For 2015-2016, the 20 tenure-track faculty reported publication of a total of 80 peer-reviewed publications, including both papers and book chapters. A number of these publications demonstrate both the visibility and recognition of our faculty members and the many successful research collaborations among department faculty, staff, and students. Notable examples include several papers published in the prestigious journals *Science* and the *Proceedings of the National Academy*:

- **Profs. Heidi Dierssen, George McManus, Senjie Lin and colleagues** used hyperspectral imagery from the space station to map a red tide ciliate bloom in Long Island Sound from space. This achievement was the first of its kind and was published in the *Proceedings of the National Academy of Science* in an article entitled "Space station image captures a red tide ciliate bloom at high spectral and spatial resolution." Plankton in the ocean often undergo short periods of rapid reproduction known as

blooms, which can be dangerous to people and other organism. The ability to identify blooms from space will help researchers track these potentially harmful events.

- **Prof. Robert Mason, Prentiss Balcom, PhD Student Kathleen Gosnell and colleagues** published a study on the human cost of clean energy in *Proceedings of the National Academy of Science* in an article entitled "Freshwater discharges drive high levels of methylmercury in Arctic marine biota." In addition to higher level of methylmercury due to climate-driven processes, the study showed that these elevated biological methylmercury levels will be exacerbated by hydroelectric development planned throughout many northern regions. It concluded that the increase due to development of these dams and the associated flooding will be greater than those resulting from climate change.
- **Prof. Senjie Lin** and his colleagues published a study entitled "The Symbiodinium kawagutii genome illuminates dinoflagellate gene expression and coral symbiosis" in *Science.* The study reported the first-ever sequence of the complete genome of the dinoflagellate species *S. kawagutii*. The study showed that *S. kawagutii* is an essential inhabitant of corals, which depend on the dinoflagellates' photosynthesis for sugars and nutritious compounds. The study reported that without it, the corals bleach white, cannot grow and usually die, which is becoming more and more common.
- **Prof. Heidi Dierssen and PhD Student Brandon Russell** published a paper entitled "Open-ocean fish reveal an omnidirectional solution to camouflage in polarized environments" in *Science*. The study investigates the ability of some fish to camouflage themselves by mimicking the light around them. This particular study focused on polarized light and the role it play in the fish's ability to disappear from view.

Another measure of Marine Sciences research accomplishments is the number, diversity, and funding level of extramural grants and contracts. This year, the 20 tenure-track faculty members were engaged in a total of 73 active projects totaling more than $25M, including funding from NSF, NOAA, DOD, NIH and EPA, as well as state, local, and private sources. The management of these grants and support for purchasing, shipping and associated travel are expertly handled by our Executive Assistant Elise Hayes and her staff of Janet Laflamme and, our newest member, Elizabeth Rawlinson. Among this year's new awards are the following:

- **Asst. Professor Julie Granger** received an NSF CAREER award ($792K over 5 years) entitled *CAREER: The Biological Nitrogen Isotope Systematics of Ammonium Consumption and Production.* As described above, her work seeks to create a basis through which researchers can better understand the oceanic nitrogen cycle. Isotopic data can be useful to interpreting nitrogen cycle processes in the ocean that are difficult to measure directly.
- **Asst. Prof. Melanie Fewings** received am NASA award ($200K over 2 years) entitled *Using RapidSCAT Ocean Vector Winds to Understand the Origin of Ocean Temperature Extremes off the U.S. Coasts.* Her research will use wind and temperature fields measured remotely by satellite-borne instrumentation to investigate the processes responsible for recently observed extreme events off the West Coast of the United States and beyond.
- **Prof. Hans Dam, Asst. Prof. Hannes Baumann and Asst. Prof. in Res. Michael Finguerra (EEB)** received an NSF award ($510K over 3 years) entitled *Collaborative Research: Transgenerational Phenotypic and Genomic Responses of Marine Copepods to the Interactive Effects of Temperature and $CO_2$*. Their research will continue their recent efforts to investigate the impact of extreme temperature events on copepods in a changing climate with increasing $CO_2$ concentrations.
- **Prof. Pieter Visscher** received an NSF award ($265K over 3 years) entitled *Collaborative Research: Alteration of Microbially Produced Carbonate Rock by*

*Unicellular Predators to Better Understand Early Earth's Dominate Ecosystem.* This investigations will reveal how the internal structure of "living rocks" (carbonate rocks built by microbes, which are ancient counterparts of coral reefs) is formed and how it is altered by the action of microscopic unicellular predators.

- **Assoc. Prof. Penny Vlahos** received and NSF award ($135K over 1.5 years) entitled *Collaborative Research: Spray-Mediated Gas Fluxes across the Air-Sea Interface*. Her research will use a microphysical model and knowledge of the rate at which spray droplets are produced by breaking waves and bubbles to evaluate the role of sea-spray in enhancing air-sea gas exchange, and compare this to other sea-air gas exchange rates, and mechanisms.

**RESEARCH AND MARINE OPERATIONS**

The dissolution of the Marine Sciences and Technology Center (MSTC) has done nothing to slow our Research and Marine Operations Groups. Despite continuing University budget challenges, operation of the R/V Connecticut remain "in the black" and fully-staffed by securing ship time that was above our annual average; i.e., 130 versus 125 days. The R/V Connecticut is at its mid-life point and we worked to provide justification to lengthen the vessel from 76' to 90' and modernize its infrastructure and research capabilities. As a result of these efforts, we were given the go-ahead for the project in early 2016. Marine Operations Manager Turner Cabaniss has worked with CLAS and UConn purchasing to develop an RFP for the ship design. A contract to Glostin Marine was recently awarded for the design work. Turner is now working on an RFP to award a contract for the construction phase.

Our IT Manager Todd Fake worked with our Communications Committee to upgrade the way we share information within the Marine Sciences building. The ongoing effort will upgrade the AV capabilities of our third floor conference room, provide large-screen displays of current research in our lobby, and set up two video kiosks for faculty and staff directories and announcements. The Rankin Lab managed by Charles Woods and machine shop run by Gary Grenier were in continual use this past year in support of laboratory and field research. DMS research technicians were also kept busy supporting these laboratory and field operations including maintenance of LISICOS array, construction of the meteorological mast for CLAMS, and deployment of a research pontoon boat in Mumford Cove led by Kay Howard-Strobel and Dave Cohen. Dive Safety Officer Jeff Godfrey attended the Boston Sea Rovers Show in March with representatives of the AVPT Dive Club. Jeff also ran dive operations for a research cruise in Gulf of Alaska overseen by Keven Joy of NURTEC. Research Operations Manager Dennis Arbige was particularly busy with a number of field projects in addition to his usual duties. Two of these projects are given below:

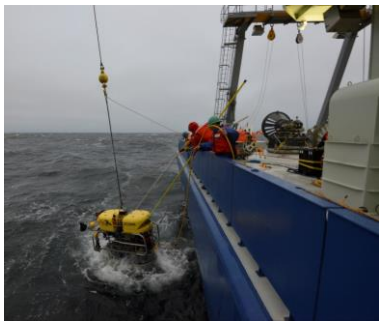
## Solar Powered Systems to Measure $CO_2$ Exchange over a Marsh and Estuary

A research team led by Craig Tobias and Jim Edson completed ambitious deployments of autonomous sensors at two locations (marsh and upper estuary sites) at the New River Estuary at Camp LeJeune, North Carolina. The remote location of these deployments required the installation of solar panels in the marsh and at the end of a long pier to power a sophisticated set of instruments capable of directly measuring $CO_2$ exchange with the atmosphere. The solar panel array and supporting infrastructure was

designed by Dennis Arbige, Tobias, Edson and research technicians Gary Grenier and Bob Dziomba from our machine shop. The marsh deployment has run flawlessly since October 2015; while the upper estuary deployment was successfully completed in June 2016.

## RV Armstrong Shakedown Cruise

The University of Connecticut was selected to perform the initial shakedown for Remotely Operated Vehicle (ROV) operations onboard WHOI's newly commissioned research vessel, the RV Neil Armstrong in May of 2016. The principle participates from the UConn team consisted of Kevin Joy from NURTEC and Dennis Arbige from DMS. The goal was to test the ability of the R/V Armstrong to conduct Remotely Operated Vehicle (ROV) work associated with the recovery of a sea-floor docking station. This was conducted in preparation for a major moored array infrastructure service cruise (Pioneer-6) aboard the R/V Armstrong. In order to service the mooring on the Pioneer-6 cruise, the Dock must be disconnected and recovered. While the ROV operations went very well, the exercise uncovered several issues with this shipboard operation that will be addressed prior to the actual recovery.



**SERVICE AND OUTREACH**

The DMS is actively involved in Service and Outreach activities at the Avery Point campus, Southeastern Connecticut and beyond. A few of these activities include:

## 2015 Taste, Touch, and Smell of Science

On Saturday, September 26, 2015, 14 Marine Sciences graduate students put on another successful installment of Taste, Touch, and Smell of Science marine science day camp. The camp held annually is an entirely graduate-run program which serves local and under privileged middle school students ages 9-13. The day's activities included a trip on the Eviro Lab II, boat time donated by Project Oceanology, and several interactive activities put on by graduate students for a group of 19 middle schoolers. A special thanks to Connecticut Sea Grant, Department of Marine Sciences, and Project Oceanology for making this fun-filled and educational day possible.

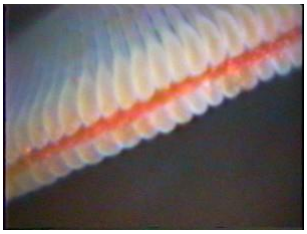
## Faculty, Staff, Students and Crew aboard the R/V Connecticut participate in the CT Maritime Heritage Festival

DMS and the Avery Point campus were well-represented at the CT Maritime Heritage Festival held along the Thames River in New London this past September. Turner Cabaniss and his crew brought the R/V Connecticut dockside for tours of the vessel. Claudia Koerting and a group of MARN student volunteers talked up our program under the information tent. Jim Edson and Steve Schmidt launched a weather balloon in front of a large audience filled with future meteorologists.

## MARN Students work with Citizen Scientists at Wequetequock Cove

Real-world problems in Wequetequock Cove that have been one of the challenges taken on by the citizen science group CUSH, or Clean Up Sound and Harbors, this fall turned into an opportunity for some marine science students. CUSH, an all-volunteer organization concerned with pollution in local marine waters, began monitoring estuaries in Stonington and Mystic six years ago. Now, a class from the University of Connecticut's Avery Point campus, working in collaboration with CUSH, has made the cove its semester-long project. "They're involved in a real-world problem," said Asst. Prof. Julie Granger Granger said her students were able to draw on the six years of data collected by CUSH, giving their results a meaningful context otherwise impossible in the course of a semester. "It's much easier to teach this class in the context of what CUSH has already done," she said. This is the first year students in her Measurements and Analysis in Coastal Ecosystems Class are researching a troubled local waterway specifically to make a contribution to a community group's efforts, she said. Julie will continue to pursue this effort as part of her CAREER grant.

## Professor Evan Ward's Research Video Highlighted in TV program about Microplastics



Professor Evan Ward of Marine Sciences has been studying how microparticles, including plastics, are captured and ingested by bivalve molluscs (mussels, oysters, clams) for over 20 years. Recently, one of his research videos of the process, recorded inside living bivalves by means of endoscopy, was highlighted in an Australian TV story about microplastics in the marine environment. The story was produced by Australia's leading science TV program, Catalyst, and aired on ABC in that country.

**GIFTS TO MARINE SCIENCES**

Two long-term private gift funds have been extremely important for the life of the Department and the success of our graduate students. The *Feng Memorial Scholarship Fund* and the *Feng Marine Sciences Student Activity Fund* are named for the founding Head of the Department, Prof. Sung Yen Feng. These funds are used in part to fund proposals from students to participate in summer courses and for professional travel.

The *William A. Lund, Jr. Fellowship Fund*, established in 2010 to honor the memory of a Marine Sciences faculty member, provides valuable support to encourage students to publish the results of their research and thus help ensure that our graduate students have publications prior to graduation.

Most recently, we have been working with Becky Salustri of CLAS and the UConn Foundation to set up a *LISICOS Coastal Observational Network Fund.* The Fund is intended to be a restricted, non-endowed account to support the Long Island Sound Integrated Coastal Observing System (LISICOS) buoy array in Long Island Sound including operating costs, the replacement of buoys and hardware, labor and other related coastal observation expenses.