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# Aboard GSO: A Newsletter for Alumni and Friends of the University of Rhode Island's Graduate School of Oceanography for Spring 2014

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URI Graduate School of Oceanography, "Aboard GSO: A Newsletter for Alumni and Friends of the University of Rhode Island's Graduate School of Oceanography for Spring 2014" (2014). *Graduate School of Oceanography Publications*. Paper 1. https://digitalcommons.uri.edu/gso\_pubs/1

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# **ABOARD GSO**

A Newsletter for Alumni and Friends of the University of Rhode Island's Graduate School of Oceanography

# A GSO Workshop— Green Boats & Ports for Blue Waters

Annette DeSilva, UNOLS Office

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magine dance floors on cruise ships that capture the energy from their passengers as they party the night away, or vessel solar reflective paintcoverings that can lower air coditioning requirements by 30 percent, or ships that are totally powered by biofuels. These are just a few of the innovative technologies presented at the Green Boats and Ports for Blue Waters Workshop held on April 8 and 9 at URI's Graduate School of Oceanography. The Workshop was well attended with close to 70 participants from a variety of marine sectors including naval architects, shipbuilders, research vessel operators, marina and harbor managers, oceanographers, and state and federal representatives. All shared a common interest to

learn more about environmental sustainability technologies, strategies, and applications for ships and ports.

The initiative to "green" vessels and ports is a vision of Dr. Bruce Corliss, GSO Dean. This recent workshop at GSO is a follow-on to a "Greening the Fleet" Workshop held in 2012 at Duke University and hosted by Dr. Corliss. The first workshop was devoted to sustainable applications for ships, with a focus on research vessels. The workshop was a big success in introducing alternative energy, propulsion, and hull design concepts. Partnerships between industry and academic ship operators and scientists were formed. The purpose of the Green Boats workshop was to promote environmental sustainability of boats and ports. The key objectives were:

- Promoting environmental sustainability within marine vessels and ports in the New England region;
- Development of guidelines for construction, operation, and recycling of vessels and future port development;
- Identifying business opportunities promoting green vessels and ports in New England;
- Connecting the recreational boating industry with key leaders in environmental sustainability to assist them in operating in a more environmentally sustainable way.



Participants at the Green Boats & Ports for Blue Waters Workshop pause for a group portrait. Photo: Alex DeCiccio

Since 2012, greening technologies have advanced significantly. Additionally, the importance of expanding sustainability practices to the harbors and ports our ships rely on has been recognized. Impacts of climate change on port facilities are forecasted to be significant, and the need to prepare these facilities to withstand future severe weather events is critical. The recent Green Boats and Ports for Blue Waters Workshop builds on the findings of the 2012 workshop with added attention on shore-side support facilities. The 2014 workshop also had more focus on Rhode Island and the surrounding region. We hope partnerships between industry and our URI scientists will form as one of the outcomes of the workshop. The workshop reflects a new initiative at GSO in ocean sustainability with the aim of providing solutions to environmental problems.

Although Rhode Island Senator Whitehouse could not attend the workshop in person due to his obligations in Washington, he sent a pre-recorded video expressing the importance of this workshop and his support for the initiative.

Experts in the fields of yacht building, ship design, propulsion and energy, fuels and lubricants, ship operations, marine science, and port management provided presentations. A very brief summary of these presentations follows:

■ Gregory Marshall of Gregory Marshall Naval Architects kicked off the technical program with a presentation on "Smarter Greener Better Ships," which has become his company's business strategy. As a designer of mega-yachts, Greg is also a strong promoter of sustainable technologies; —*continued on page 3* 

THE UNIVERSITY OF RHODE ISLAND GRADUATE SCHOOL OF OCEANOGRAPHY

# From the Dean



Photo: Alex DeCiccio

Dear Alumni and Friends,

We are enjoying a very pleasant spring on Narragansett Bay after an extremely cold and long winter. The campus is greening, boats are beginning to appear out on the water, and everyone is looking forward to the summer. We just finished a beautiful commencement weekend with 25 graduates joining our 800+ alumni.

Since the last *Aboard GSO*, we have had a number of events at the Narragansett Bay Campus. We initiated a Friends of Oceanography Lecture Series in the fall with a lecture by Professor John King entitled "The Role of GSO and URI in Mitigating the Impacts of Climate Change on Coastal Rhode Island." We just hosted a Friends spring lecture by Professor Chris Kincaid on "Unraveling the Mysteries of a Dynamic Ocean Planet: A User's Manual for Motion in Our Oceans and Inner Earth." These lectures were well attended by Friends, including many GSO alumni, and we plan to continue to present spring and fall lectures each year as part of our ongoing Friends events.

In November, GSO partnered with the URI Business Engagement Center and Department of Ocean Engineering to host a workshop on "Innovation in Oceanography, Ocean Engineering, Defense, and Marine Trades," which was part of our ongoing effort to reach out to the private sector in the region and begin a dialogue about possible future collaborations and research partnerships. Participants came from NUWC (Naval Undersea Warfare Center), SENEDIA (Southeastern New England Defense Industry Alliance), and RIMTA (RI Marine Trades Association). This spring we hosted a national workshop entitled "Green Boats and Ports for Blue Waters" focusing on environmental sustainability of boats, ships, support facilities, and ports–and the lead article in this newsletter offers an overview of this event. In continuing our outreach efforts, we hosted the Mystic and New England Fleets of the Corinthians Yacht Club at GSO this spring. This past winter I visited the New York Yacht Club in Newport and presented a talk on environmental sustainability of boats, and the club visited GSO in April for a tour of the RV *Endeavor* and the Inner Space Center. This October Bob Ballard, Myrna Bizer, and I will be visiting the club in New York City, and Bob will give a talk about his future ocean exploration plans.

As you may recall from alumni letters sent earlier this year, we have combined alumni fundraising with Friends of Oceanography as part of the *Fund for URI: GSO* annual campaign. We proudly recognize each donor to GSO as a Friend of Oceanography. Our target this year is to provide at least one full \$60,000 fellowship for a new graduate student, as well as funds for student travel, research, and alumni events. If you have contributed, thank you for your gift and support. If you have not, please consider a donation before July 1 to support GSO and enable us to dramatically increase assistance to the graduate students who benefit from your donations. Your gift will make a large impact on our educational program and will be appreciated by all at GSO.

Regards,

Bruce H. Corliss Dean

ABOARD GSO newsletter is funded by the GSO Alumni Association, Friends of Oceanography, and the Dean of GSO to keep friends, alumni, and the community informed of what is happening at GSO.

For more information about the Alumni Association, contact Walter Berry, Chair (berry.walter@epamail.epa.gov). To learn more about Friends of Oceanography, contact Deb Coty (debicoty@ mail.uri.edu).

ABOARD GSO is published twice a year by the University of Rhode Island's Graduate School of Oceanography.

Send news and correspondence to: Deb Coty, URI Graduate School of Oceanography, South Ferry Road, Narragansett, RI 02882-1197

# Green Boats continued from page 1

two areas often at opposite ends of the green spectrum. Incorporating the use of solar reflective paints, electrocromatic or smart glass, and LED lights can result in the reduction in HVAC needs by 65 percent. For a super yacht, this can mean an annual cost savings of \$150,000 and at the same time 30,000 gallons of fuel saved. Greg's latest venture, and perhaps his most creative, uses piezo tiles to harvest noise energy. Ship engine rooms are noisy places, but by using piezo tiles, the engine room noise can be dampened and at the same time converted into useful energy. In turn, this concept has led to the first self-powered dance floor on a 240-foot yacht!

■ Joshua Frederickson of the Navy discussed the Navy's energy programs and goals that include reducing Navy shorebased and total energy consumption from alternative sources by 50 percent. They are working to increase efficiency and reduce consumption. In addition to energy savings, there is also the operational benefit of spending less time refueling and having more time for Navy missions. The Navy is engaged in international discussions regarding biofuel development.

■ David Kring, a local South County engineer, of Navatek Ltd., spoke about the "Hydrodynamic Analysis and Design Methods for Energy Efficient Ships." Navatek is partnering with academia, government, industry, and foreign groups as they develop analysis and design tools for greener boats and ports. David reviewed Navatek's case study on a wind farm service vessel. He reviewed the step-by-step process to review candidate designs, the analysis, and ultimately, optimize the vessel design for efficiency.

■ Paul Jamer, Aspin Kemp & Associates, presented "The Practical Application of Hybrid Technology in the Marine Industry." Aspin Kemp & Associates designed the world's first hybrid tug. Their proven environmentally friendly technologies can be incorporated into vessel designs without compromising performance or sacrificing cost competitiveness.

■ Nigel Calder of Calder Marine Enterprises gave two presentations; one focused on "Hybrid Efficiency versus Optimized Conventional Installations" and the other on "Minimizing the Extraordinarily High Cost of Generating House Energy on Boats." In both talks, Nigel presented compelling analyses and charts comparing propulsion options and house energy costs for various configurations.

Rufus Van Gruisen, Cay Electronics, Inc., gave a talk on "The Electric Launch Reimagined." Cay Electronics has designed an electric recreational launch that is easy and fun to operate, has sufficient range for day trips, is comfortable, and applies current technologies. The boat was built in Newport, RI, in 2013. A short video of the launch elegantly cruising local waters was featured as part of Rufus' talk.

Dennis Donahue, NOAA's Great Lakes Environmental Research Lab (GLERL), highlighted "Recent Developments in Marine Alternative Fuels." GLERL has been a leader in pro-



Dean Bruce Corliss with Kate Neubauer, program manager, 11th Hour Racing, lead sponsor of the Green Boats & Ports for Blue Waters Workshop. Photo: Alex DeCiccio

moting green ship initiatives. The vessels of the Great Lakes fleet have been using biofuels (B100) successfully and exhibiting many benefits. In recent years, they have shared their technologies with other federal agencies including the Army Corps of Engineers and MARAD. Additionally, GLERL is evaluating other alternative fuel options for added flexibility in their marine operations

■ Ben Bryant (URI alum), Kluber Lubrication, gave a presentation on "Environmentally Acceptable Lubricants (EALs): Regulations, Applications, and Options." EPA is strongly encouraging the use of EALs, and in some cases, they are required. Ben encouraged operators to have a transition plan, look for alternative solutions, and go beyond the regulations in developing their plan.

■ Timothy Leach, The Glosten Associates, gave two presentations, one on the "Regional Class Research Vessel (RCRV) Green Ship Design Alternatives" and the other on "Marine Vessel Environmental Performance Assessment Methodology, Ship Survey and Impact Calculations." In Tim's first talk, he highlighted the RCRV greening design features which include hull hard coating, variable speed generators, waste heat recovery, and EPA Tier 4 engines, among other recommendations still under consideration. In Tim's second talk, he discussed the SNAME initiative to develop guidance documents for how to reduce the environmental impact of marine vessels.

■ Paul D'Annunzio, Royal Caribbean Cruises, Ltd., presented a talk on "Environmental Stewardship with the Cruise Industry." Royal Caribbean Cruises' environmental initiatives date back to 1992 when they established the "Save the Waves" program. Their commitment remains strong and continues to grow. Through their sustainable practices, they have reduced their overall greenhouse gas footprint by 20 percent over 2005 per passenger per cruise day levels.

■ Jonathan Benvenuto, a URI graduate student and USCG officer, discussed "Recycling of Fiberglass Boats." Joshua recommends Rhode Island investigate the novel use of microwave pyrolysis (in simple terms, turning fiberglass into powder) as a means of recycling.

-continued on page 4



Photo: Michael Salerno

### **Hickox Receives Administrative Excellence Award**

Congratulations to Sara Hickox, Director, Office of Marine Programs, for being chosen as this year's recipient of the URI Foundation's Administrative Excellence Award. This award honors an outstanding administrator who has gone beyond his or her responsibilities to enhance the objectives of the University, and approaches the job with creativity, imagination and dedication while helping to sustain the support of the teaching, research and service missions of URI.

Sara is director of the Office of Marine Programs at URI's Graduate School of Oceanography. Over the years, she has developed a reputation as a creative administrator who is excellent with people and committed to URI, GSO, the ocean sciences, the environment, and the programs and scientists with whom she works. She has built on GSO's core strengths and introduced an impressive range of new initiatives that have expanded the capabilities of the office and widened its geographic reach. She is a constant reminder of the significant marine and oceanographic expertise at URI.

Many programs fall under the umbrella of Hickox's office including the Narragansett Bay Classroom and Metcalf Institute, both of which she helped establish. She led the international outreach efforts for the Census of Marine Life, an unprecedented, decade-long effort by 2,700 scientists worldwide to catalog the nature and extent of marine life in the world's oceans. She currently oversees the Engagement Team for a global research project called the Deep Carbon Observatory, a international community of 1,000 multi-disciplinary scientists forging a new, integrative field of deep carbon science to the unlock the secrets of carbon in Earth. These are just a few examples of her extensive body of work on behalf of GSO during a career spanning 39 years.

# Green Boats continued from page 3

■ GSO researcher Pamela Rubinoff presented "Building Resilient Waterfronts and Coastal Communities." The total economic impact of the maritime trades cluster is more than \$2.2 billion in sales for Rhode Island businesses. Future forecasts are for increasing sea level and storm surges and more frequent natural disasters. Pam highlighted how some local municipalities are preparing for these changes and shared strategies for consideration.

■ Edward Anthes-Washburn from the Port of New Bedford spoke about "Greening Initiatives at the Port of New Bedford." New Bedford is the nation's number one fishing port in fish value. Safe harbor and cost efficiency are critical. Some of the sustainable projects over the past four years have included offering shoreside power (cold ironing), pier lighting, a bilge water treatment project with Buzzard's Bay Coalition, providing a trash shed, a fishing for energy project, and seeking coastal pollution remediation grants.

■ Austin Becker of URI presented a talk on "Climate Ready Seaports: Setting a Research Agenda for Holistic Planning." Research to improve climate projections and risk assessments is critical. Austin stated the importance of engaging the full stakeholder network in planning efforts.

Mike Gaffney, Alaris Companies, wrapped up the technical program with a talk about "Vessel Energy Management: Cost and Mitigation." He provided interesting and useful information about energy efficiency and cost, cost and consumption, and useful tips on how to reduce energy cost.

Workshop participants had time to network during an evening reception and dinner at GSO's Ocean Science and Exploration Center. The reception coincided with a poster session highlighting GSO student projects, the RV *Endeavor's* biofuel project, UNOLS greening the fleet initiatives, and commercial sustainable activities.

The workshop concluded with an open discussion on strategies that can be implemented now, areas where more attention is warranted, and suggestions for future activities. One general theme that clearly rang out during the discussion was the interest to stay engaged as a group. Rather than wait another two years for a follow-on workshop, individuals suggested various networking options allowing regular and more frequent communications. In response to these suggestions, URI and UNOLS will develop a website dedicated to greening initiatives for ships and ports. Additionally, UNOLS will create a listserve so announcements for future meetings and technology news can be distributed to all interested parties. If you wish to be added to this listserve and/or have an announcement to share, please contact Annette DeSilva at the UNOLS Office <office@unols.org>.

Sponsorship for this workshop was generously provided by 11th Hour Racing, a not-for-profit organization that seeks to mobilize the sailing and marine industry to create systemic change for the improved health of our ocean. Their sponsorship and interest in this initiative was greatly appreciated. Additional support was provided by URI's Graduate School of Oceanography, the University-National Oceaonographic Laboratory System (UNOLS), Braemer Energy, and Utilidata.

The presentations from the workshop can be viewed online— (www.unols.org/meetings/2014/URI\_Green-Boats\_April2014/ GW\_Presentations2014.html

# An Invitation to Alumni

# Share Your Oceanography Stories at oceanbites.org

Carrie McDonough

W hether through footage of a mysterious, deep-sea creature or a new model explaining how the oceans influence climate, oceanography has long-captured the public imagination. For the most part, scientific research makes its way to the public in short, simplified snippets, leaving many readers hungry for more information. Finding out more about a study can be challenging; journal articles are often extremely detailed and use specialized language so esoteric they can be difficult for other scientists to parse, not to mention the general population.

With these concerns in mind, graduate students at GSO have started a new blog called oceanbites (oceanbites. org), which provides in-depth explanations of new findings in oceanography. Inspired by the similarly-named as-

tronomy blog started at Harvard (astrobites.org), the goal of oceanbites is to increase public awareness of recent discoveries related to oceanography and to explain complex ideas in concise, compelling terms. In the process, graduate student writers are gaining valuable experience translating scientific research for a broader audience.

With support and enthusiasm from the GSO community, oceanbites has been steadily growing since its inception in September, 2013. Currently, 14 students are writing for the site, mostly hailing from GSO and URI main campus. Every month, each contributor writes a post explaining the findings and broader implications of a recent journal article of their choice with a strong focus on telling a research "story," showcasing how researchers used observations to draw conclusions, and emphasizing the importance of the scientific method in all areas of oceanography.

At oceanbites, we hope to publicize research we believe is important and interesting so a broader audience can share



Oceanbites contributors: Back row, left to right: Lis Henderson (GSO alum), Brian Caccioppoli (MS candidate, GSO), Carrie McDonough(PhD candidate, GSO), Yiya Huang (GSO alum), Gordon Ober (PhD candidate, URI CELS). Front row, left to right: Cathleen Turner (MS candidate,GSO), Erin Markham (MS candidate, GSO), Kari St. Laurent (PhD candidate, GSO). Additional contributors not pictured: Samantha Decuollo (GSO alum), Sarah Fuller (MS candidate, GSO), Annie Hartwell (GSO alum), Zoe Ruge (GSO alum), Catarina Silva (PhD candidate, Victoria University of Wellington, NZ), Caoxin Sun (PhD candidate, GSO), and Valeska Upham (PhD candidate, University of Florida). Photo: Alex DeCiccio

our passion for oceanography. As oceanbites continues to grow, we look forward to incorporating the perspectives of GSO alumni. We invite GSO alumni from around the world to participate either as a regular contributor, writing monthly posts about current research in their field, or by sharing their experiences through our new "day in the life" section, where we conduct email interviews with people who have careers related to oceanography. If you are interested in contributing in either way, or have any ideas on how we could improve oceanbites, please contact us at oceanbitesorg@gmail.com. We would love to hear from you!



# **Recent Events**

# Fire in the Bowl!

Kellen Rosberg, President, Chowder & Marching

he peer review process was in action at 4:00 pm on Wednesday, March 19, as GSO students, faculty, and staff tasted the 15 entries in the Fifth Annual Chowder & Marching Chili Cook-off. Chilies were reviewed by peers for spiciness, creativity, and flavor. Prizes were awarded in eight categories, and all others were returned to the recipe author for revisions. Mike Fong (student, Bio Ocg.) took home the best overall chili award with his entry entitled "Holy Mole Chili," and best vegetarian chili went to "You're a Vegetarian? We Made Lamb! Vegetarian Chili" by Michael Bueti (student, Physical Ocg.) and his girlfriend Nina. Sarah Fuller's (student, MG&G) "Sweet Sassy Potato Chili" won both best looking and most creative chili. Kira Homola's (student. MG&G) "Chili Chili, Bang Bang!" white bean and chicken chili also won in two categories: most tame and best name. The battle over spiciest chili led to a tie between Dan Iwanksi's (student, Physical Ocg.) "Smokey Mocha Chili" and

Carrie McDonough's (student, MAC) "Fierce Bad Rabbit!" Best cornbread went to a maple cornbread made by Nicole Raineault (Ocean Exploration Trust). A late-entry honorable mention went to Susanne Menden-Deuer and Tatiana Rynearson (faculty, Bio Ocg.) for their "Newborn Parents' Chili"—an unopened can of chili and a box of cornbread mix—which made for a good laugh. The cook-off brought in a crowd of more than 50, and raised over \$100 for Chowder & Marching events. ■

The Chowder & Marching chili cook-off has been held for the past five years and serves as Chowder & Marching's biggest fundraiser of the year. Money raised at the cook-off goes to support Boat Burning, the traditional new student welcome event, as well as other events throughout the year. Donations can be made to Chowder & Marching at any time (contact: chowder. marching@gmail.com).

OMP's Maryann Scholl (right) and students discuss outreach opportunities over bowls of chili. Photo courtesy of Chowder & Marching





More than 50 chili tasters came down to Mosby's to judge chili recipes and socialize. Photo courtesy of Chowder & Marching



MG&G student, Christina Wertman, tastes another chili: Chris Roman's "Black Beauty's Revenge." Photo courtesy of Chowder & Marching

# **Congratulations 2014 Graduates!**

Merideth Clark, GSO Admission Advisor

**O**n Friday, May 16, the GSO community gathered together to recognize twenty-five students who completed their graduate degrees in Oceanography from August 2013 to May 2014. The event was held in Corless Auditorium and a reception followed at the Mosby Center.

#### Meet our new alumni:

Christelle Balt, PhD (Christopher Kincaid) Matthew Baumann, PhD (Bradley Moran) Samantha DeCuollo, MS (Susanne Menden-Deuer) Elizabeth Eddy, MS (Charles Roman) Matthew Gusto, MoO (David Smith) Anne Hartwell, MS (Rebecca Robinson) Leanna Heffner, PhD (Charles Roman) Lis Henderson, MS (Jeremy Collie) Yiya Huang, MS (Art Spivack) Colin Hughes, MS (Isaac Ginis) Lauren Killea, MS (Lucie Maranda) Luke Logan, MS (Chris Roman) Marion Lytle, PhD (Katherine Kelley) Brendan Mackinson, MS (Bradley Moran) Yackar Mauzole, MS (Tetsu Hara) Francoise Morison, MS (Susanne Menden-Deuer) Cameron Morissette, MS (John King) Kelsey Obenour, MS (Peter Cornillon) Kari Pohl, PhD (Rainer Lohmann) Dayna Rignanese, MoO (David Smith) Zoe Ruge, MS (Rainer Lohmann) Courtney Schmidt, PhD (Rebecca Robinson) Kerry Whittaker, PhD (Tatiana Rynearson) Rebecca Williams, PhD (Karen Wishner) Liwei [Mavis] Zhu, MS (David Smith)



David Smith, associate dean, addresses GSO Graduation Ceremony attendees.



New Alumni (back, I to r) Brendan Mackinson, Matthew Baumann, Cameron Morissette, Matt Gusto; (front, I to r) Rebecca Williams, Lauren Killea, Courtney Schmidt, Liz Eddy, Kelsey Obenour, Françoise Morison, Yackar Mauzole, Colin Hughes, Christelle Balt



GSO held a reception during the February **2014 Ocean Sciences Meeting** in Honolulu. More than 70 faculty, marine scientists, staff, alumni, graduate students, prospective graduate students, and friends attended. The event, part of GSO's ongoing effort to reach out to our alumni, was a great success. Photo Holly Morin



Brita Jessen and Deb Coty highlighted GSO at the **Earth Day Celebration** at EPA on Saturday, April 26. It was a very nice turnout even though it was cold and rainy. Brita, a PhD candidate in Biological Oceanography (see p. 10), is on the left.

# **D**ff The Job

# **Oceanography Grad Rocks**

Dan O'Neill, MS 1980



At 9:00 pm, the lights in the bar dim. The chatter slacks as the focus moves to the stage. The bass player digs into the bottom end of a funky groove. The drums kick in, tight as a bad wrap on an A-frame winch with two km of cable out. I lay out triads on the guitar. This thing is grooving! Gonna be a good night. Donna steps up to the mic. Our version of the Isley Brothers tune "It's Your Thing" fills the room. Toolbox is in motion. So begins another four hour gig. It will be 45 more songs until the amps get powered down and the drums get packed up for next time.

Toolbox is a four member band playing blues, funk and rock. Three of the members are URI alumni. I (M.S. 1980, GSO) play guitar. Donna O'Neill (B.S. 1978 and former graphic designer for Sea Grant) leads the vocals. Bill Gilroy, (M.S. 1976, A&S) plays bass, and Mark LaHoud, owner of Java Madness coffee house in Wakefield, drums and sings. We've been together for a couple of years and have been playing at local Rhode Island bars and events for almost as long.

I played guitar a little bit in high school. Just simple chords and scales; enough to look cool, but no one got hurt. During my student tenure at GSO, the urge grew a bit stronger. Doug Lowenthal (M.S. 1976, Ph.D. 1986, GSO) and I drove to Caruso Music in New London, and I came back with a Guild acoustic guitar. I figured out some jazz chords from a book, but that was about it. It pretty much sat in a closet.

About nine years ago, I picked up the guitar again. I chose electric for its lower string tension so that if I needed to put it down for any significant period I wouldn't have to condition my fingers so much to get going again. A book of transcriptions of songs of the Allman Brothers Band got the blues and rock thing going. Now I play almost every day.

Playing at local blues jams eventually got an invitation to sit in at the Bon Vue Inn in Narragansett with the band "Your Tax Dollars at Work," composed primarily of government employees. An offer to join the group followed. Donna, my wife, was in the audience during one of our gigs one night when the lead singer's voice began to fatigue. At the bands request, she stepped in to give the singer a break and soon after she joined the band. We re-formed as "Toolbox" after the singer left for health reasons. We immediately put a lot of blues numbers in our set list to keep gigging because they were easy to incorporate. Although we still play a lot of blues, we've moved some of those numbers out of rotation to pull in more songs that fit our musical predilections. Our drummer Mark sings well too. Donna's and Mark's tight harmonies have become a band trademark.

The bands current song list fills the floor with dancers. Donna is especially good at generating excitement. It's fun, it's a party. It's also a challenge. Each player has to cover



the most content of the song without omitting the signature elements that give the song its identity. Sometimes, I play the "guitar part," sometimes the "keyboard part," and sometimes I'm the "horns." We're really lucky to have Mark and Bill holding down the rhythm and to have Donna up front. They work so well together, sometimes I wonder if I'm needed.

I'd like to credit Doug Cullen (M.S. 1984, GSO) for his seminal encouragement while we were both graduate students living in different Grad Village apartments. I would occasionally play my saxophone during the afternoon. Doug often called from his open window, "Hey Dan, take five!" Wow! I felt that if he thought I could handle a 5/4 time piece by brilliant jazz composer Dave Brubeck, I must have potential! I never forgot Doug's encouragement. I'm sure the circle will be complete when I play at Doug's grandchildren's wedding. "Take Five" is going to rock the house! "We Are Family" will come in a distant second, I'm sure.

It's a humbling experience to play the Rhode Island circuit. The state has a powerful popular musical lineage and an impressive talent pool. From current members and alumni of Roomful of Blues and the James Montgomery Band and other performers associated with the Berklee College of Music, Rhode Islanders can enjoy professional entertainment at little or no cost. It's truly an honor to be performing in the same clubs and sometimes on the same stage in a jam session. Who knew! If you're in the area, check us out! Just don't request "Take Five." We're saving that one.

Toolbox maintains a Facebook page and its own website at toolboxband@cox.net. Check there for upcoming shows.

# Skis and Oceanography

Brian Amaral, MBA, MO, 2013

've always loved the water; whether it is a pond, lake, bay, ocean, or an estuary, the water gives me a sense of tranquility and inner peace. Water also makes many of my favorite pastimes possible as they include waterskiing, jet skiing, and barefooting. Since I was so fascinated by the water, I chose to attend URI for Ocean Engineering. While working on my degree I found myself needing a Christmas gift for a friend. The family lived on a lake and I thought some sort of chair made out of vintage water skis would be pretty unique. Considering it was already Dec. 21, I went straight to my basement to start building with water skis I found in my attic. Twenty four hours later I had my first Water Ski Adirondack Chair. Since I had some left-over skis from the chair, I crafted the remaining skis into an ottoman and table. The set can be seen in Figure 1. When my father saw what I had built he wanted a set as well. So for Christmas, Father's Day and his birthday, I made him the patriotic set seen in Figure 2. After talking with some family and friends. I decided to build another chair and put it in an art gallery. The chair sold within the month. At this point I realized that I had a unique product that had a targeted niche market. I was later invited to exhibit my work at the prestigious Fine Furnishings Show in Providence. There I met a couple from Scotland who ordered a custom set and had it shipped abroad.



1. The first Water Ski Adirondack chair, ottoman and table.



2. My father's set.



3. Audio Ski Tower–a Cypress Garden two-tone ski with a Bose sound system and center volume control.

Although 'Water Ski Furnishings' could have taken off from there, I wanted to focus and solidify my education. Upon graduating in 2010, I decided to pursue an MS in Ocean Engineering at URI and then followed it up with the Blue MBA program at URI in which I earned an MBA and a Masters of Oceanography. The combination of these degrees, as well as the opportunity to work with the diverse skill sets, personalities, and outlooks of the faculty and staff broadened my perspectives immensely. Being part of the GSO community while learning how the world and its oceans work was a fantastic experience which I would recommend to anybody who has the interest.

While going through

the Blue MBA program I decided to 'rebrand' my work because I found that I could make a variety of products rather than just chairs and that I was actually 'up-cycling' the skis, saving them from the trash. I changed the name from Water Ski Adirondack Chairs to Ski Furnishings. I

have since expanded my product line to include benches, wine rack towers, night stands, audio ski towers (Figure 3), picture frames (Figure 4), end tables, book cases, shelves, table top wine racks, key racks, ottomans, coat racks as well as customized products. Some of these products can be seen at www. SkiFurnishings.com. I will be part of an ETSY page coming soon called 31 Evertt. Since graduating, I have been working full time at the Naval Undersea Warfare Center in Newport. For questions, comments, or inquiries feel free to contact me at (401) 285-1572.



4. Picture frame.

# 2013–14 Alumni Awards

#### Brita Jessen

In 2013, the GSO Alumni Association contributed funds for a field research trip to the Jobos Bay National Estuarine Research Reserve in southeastern Puerto Rico, where I have been conducting a two-year nutrient enrichment experiment in a coastal mangrove to decipher how mangrove systems may respond to tropical land use changes such as agriculture and urban growth.

Each time I recall the August 2013 field research trip, my mind brings up a moment when I am standing on the stern platform of a Boston Whaler, leaning out as far as I can balance, and keeping a tight grip on a mangrove stilt root for balance. I am trying to keep my cell phone connection with Arthur Gold, one of my committee members, as he and I check for the final time my nitrogen stable isotope (<sup>15</sup>N) addition calculations.

"Okay," Art says, "80 percent of your nitrogen addition will be <sup>15</sup>N. So that is five grams of <sup>15</sup>N, which you say is 22.37 grams of ammonium sulfate. Looks right to me, go ahead with it."

I jump back into the boat, and five sets of eyes are on me. Two of the crew are URI undergraduate students, both on their first research project and the farthest from home than they've ever been. Two other members are young Puerto Ricans just out of college and looking to gain research experience before

> applying to graduate school. They drive at least two hours to work on my project for five hours a week. The fifth member is our boat captain, Carlos, who grew up in this area and knows Jobos Bay like the back of his hand. Carlos is trying to make a living as a fishing and ecotourism guide, but it's been rough in this economy. Still, he made sure not to take any clients on the day I selected for this big event when we spray the mangrove plots with a stable isotope tracer. <sup>15</sup>N, or nitrogen with an additional neutron,

GSO PhD student Brita Jessen (in pink) with her research team before the N-15 nutrient spray at the Jobos Bay National Estuarine Research Reserve in Salinas, Puerto Rico.

is rare in nature but for the most part acts just like the abundant <sup>14</sup>N, so ecologists can experimentally apply it to trace how the nitrogen flows through components of an ecosystem (for a coastal wetland this includes plant uptake, litter fall, decomposition, and export with the tidal waters). I explained to my team that labeling a system with a stable isotope is like throwing a can of red paint everywhere and then looking at samples to see if there's pink (fans of *The Cat in the Hat Comes Back* may remember the pink stain that migrated from room to room). In this vein, we're all wearing neon-colored t-shirts with the words "<sup>15</sup>N Tracer" drawn on with black fabric marker.

Labeling a system with <sup>15</sup>N can only happen once, so we have to get it right. We've rehearsed in the field and at the research station. We have everything labeled and color-coded. We've checked and triple-checked our weights and calculations. We brought extra supplies in case anything fails. And now there's nothing ahead but the start. I take a garden sprayer with a band of grey tape labeled "Control" and a zip-lock bag with the



Heading into the mangrove forest for a nutrient spray. Nutrients are applied every-other week to experimental plots to mimic nutrient loading from agriculture and urban run-off.

same grey tape containing the measured amount of ammonium sulfate. I mix the powder with a liter of seawater into the spray canister. My research assistants do the same with the other two sprayers, one blue ("Urban") and one yellow ("Agriculture").

"Can I have one? I want to spray!" one of the students says. I hand her the blue sprayer and give a nod. The Puerto Rican assistants take the other two sprayers. The assistants have been doing sprays with natural nitrogen every-other week since they've been on the project. They know what to do. We've done it so many times even Carlos knows the protocol. The research assistants climb through the thick canopy to the experimental plots and I stay on the boat to prepare the other three spray bottles for our next site.

"Hey...why are you spraying there?" I hear one assistant say. I freeze. After a pause I hear, "Oh...no." I dash up off the boat and climb over the prop roots to the plots. At once I understand what has happened. The student held her blue-labeled spray bottle over a plot with white posts. She had sprayed "Urban" treatment on our "Control" plot.

"I didn't spray long!" she said, "Just like...a minute, even less!"

A minute of spraying N-enriched solution could be more N-15 than the total bottle of Control spray. The student looks frozen with fear. I take the sprayer from her and we finish spraying the other plots, until the boat, and head for the next station.

No one says a word. I watch the boat's wake through hot tears. In my mind I review each step of preparation to find what went wrong. We practiced. We color-coded. I imagine the letter I will write to my mentors about this day, and feel complete shame at letting them down. They've shown confidence in me, and I've relied on that external strength at times when I haven't felt it in myself.

#### Ashton Flinders

The GSO Student Award I received last spring allowed me to participate in a summer field school in Iceland. The program was run through the South Dakota School of Mines and Technology and included two professors, a handful of undergraduates, and myself. We spent three weeks camping, hiking, and exploring the geological outcrops of this amazing place. As a geophysicist who spends too much of my time sitting behind a computer, this was an unique opportunity to get into the field and actually see first hand the types of settings I study. This would not have been possible without the funding I received from the alumni—thank you and keep it coming!



Looking landward from the coast over the low-lying marsh that separates two different lava sequences in the Skalafell deposit of the Reykjanes Ridge, Iceland.



A cross-section of ancient massive pillow lavas and submarine pahoehoe flows in the Skalafell deposit of the Reykjanes Ridge, lceland.

#### Jessen continued from page 10

That thought makes me turn to look at the student sitting on the stern bench. She's hunched over in the wind and fighting tears. She's tired, I think. We're all tired. We've been doing field and lab work for three weeks without a break. I think about how important this experience is for her: her first research project, with the possibility of a lifetime ahead in science.

We come up to the second station. Carlos cuts the engine as we duck under the dense canopy and pull along branches to tie the bowline to a tree stem. Once that's complete, I walk to the stern and pick up a spray bottle.

"What color is this?" I ask.

"Blue," she answers with a small voice.

"What color are the plot posts for this sprayer?" "Blue."

Blue.

Realizing now why call-and-response is an important part of command protocols, I hold the sprayer out. "I know you are upset. I know you are sorry. But you can't help us by staying here. The one thing you can do to make me proud is to get back to work. Can you do that?"

"Yeah!" she says as she jumps up, takes the sprayer, and heads into the tangle of stems.

When we get back to the reserve headquarters we conduct "spray tests" to see how much spray was accidentally applied to the control plot, and estimate amount of <sup>15</sup>N applied. Since we can't correct the mistake, at least we'll have a good idea of what we had done.

The student stayed on the project through the summer and asked to do an independent research project with me in the fall. Over this time I've watched her mature and grow confident. I am sure other people can say the same as they've watched me.

Funds from the GSO Alumni Association contributed to making this research trip happen, and the <sup>15</sup>N tracer experiment will hopefully be a significant part of my doctoral dissertation. But as you can tell from this story, these funds provide more than a research trip, or a conference registration, or a piece of equipment. Through these opportunities my peers and I are growing, learning, making mistakes, and picking ourselves up off the mat to try again. What's incredible about my experience is that I get to watch a new academic generation do the same. Together, my co-workers and I are finding out how coastal mangrove ecosystems respond to a changing tropical coastline. Individually, we are finding our places in the science community. I am very grateful for this opportunity to try my best.

# 2013–14 Alumni Awards

#### Anna J. Malek

In 2013, I was granted a GSO Alumni Award enabling me to participate in one of the most beneficial workshops of my graduate career, the PICES Summer School on Ocean Observing Systems and Ecosystem Monitoring in Newport, Oregon. I was honored to be one of seven early career scientists from the United States, selected from a pool of over 200 applicants, to attend the program. The five-day workshop included interactive classroom lectures from premier ocean scientists, laboratory demonstrations with state-of-the-art ocean monitoring technology, and field work aboard a 40-foot research vessel in Yaquina Bay. Throughout the week we used a suite of modern sampling techniques, including rosette CTDs, Slocum gliders, ADCPs, and underwater video systems to assess the impacts of terrestrial runoff and

offshore upwelling on the Yaquina Bay ecosystem. In the end, I learned how to apply cutting edge technologies to understand complex ocean processes, such as carbon dynamics, ocean acidification, hypoxia, fisheries ecosystem dynamics, ecosystem metabolism, and ocean circulation. In addition to the educational component of the workshop, Oregonian microbrew tastings and foosball games provided ample opportunity to network with a wide variety of interdisciplinary and international colleagues. Overall, my attendance of the PICES Summer School greatly benefited my current and future research initiatives, including habitat characterization and industrybased ocean observing, while also cultivating professional relationships and preparing me for a career in the evolving field of ocean sciences.



PICES workshop participants aboard the RV Elakha in Yaquina Bay Estuary, left to right: Ata Suanda, OSU; Sung Yong Kim, Korea Advanced Institute of Science and Technology; Anna Malek, URI GSO; Alejandra Sanchez, OSU; Dr. Jack Barth, OSU; Hiromu Ishiyama, Hokkaido University; Genki Terauchi, Nagasaki University; Marianne Corriveau, University of Ottawa; Christine Cass, Humboldt State University; Dubrava Krievskaya, Russian State Hydrometeorological University.



PICES workshop participants enjoying a final afternoon on the Oregon coast (Devil's Punch Bowl State Park).



The author inspects an Argo float during an international ocean observing session led by Howard Freeland.

#### Françoise Morison

It was an honor to receive support from the Ann Durbin Memorial Fund in 2013. During my first two years at GSO, I have tried to make the most of the many opportunities given to me to study oceanography and pursue oceanographic research.

My work focuses on plankton food web dynamics. I am particularly interested in a group of microscopic but voracious unicellular marine herbivores known as heterotrophic protists and their effect on the microscopic organisms they eat, tiny plants that grow in the waters of the ocean surface known as phytoplankton. Although these organisms can be seen only under high magnification, their feeding interactions greatly influence the carbon cycle and thus our climate. How much plankton eat, who eats whom, what drives these interactions, and how all of it



may change as ocean conditions change is what I am trying to measure and understand.

I particularly like doing fieldwork at sea. Since September 2011, I have been very fortunate to go on two research cruises at opposite ends of the world; one in the sub-polar North Atlantic between Iceland and Norway, and the other along the Antarctic western peninsula. Balancing family life with being back in school demands some personal sacrifices, but has been very fulfilling. Being recognized for my efforts makes it all worthwhile and encourages me to continue to do my best.

1. Setting up incubation tanks for dilution experiments on the RV *Meteor* in the North Atlantic.

2. Preparing dilution experiments in the wet lab of the RV *Meteor*.

3. Typical late austral fall scenery in fiords along the Western Antarctic Peninsula (WAP).

4. Lowering the CTD (conductivity, temperature, depth) from the RVIB (icebreaker) *N.B. Palmer*, which will collect water samples and high resolution data of temperature, pressure, salinity, and fluorescence. These data yield vertical profiles of physical and biological conditions of the water column in WAP.

 Filtering water samples collected at different depths using the CTD to be used in krill feeding experiments in the "Baltic room" of the *N.B. Palmer*.
Work conditions in Antarctica are not always ideal! Measuring incoming irradiance in incubation tanks

on the N.B. Palmer.









# 2013–14 Alumni Awards

#### Kerry Whittaker

In both 2013 and 2014 I received alumni support to travel to important international scientific meetings: ASLO, which was held in New Orleans, Louisiana, in 2013 and Ocean Sciences, held in February in Honolulu, Hawaii. At these meetings, I presented different aspects of my research and networked with scientists from around the world, sparking new collaborations, and gathering new ideas. I am grateful to the Alumni Fund for supporting this type of travel, which enriches the graduate experience by allowing us to make direct links between our research and the greater oceanographic community.

In general, my research explores the structure of diatom diversity from local to global scales with the particular goal of understanding features of the marine environment that have led to the evolution of diatom species and populations. Marine diatoms are known to be some of the most diverse organisms on the planet, with an estimated 100,000 species thought to exist. They exhibit astounding molecular diversity both within and between species. Diatoms are also important mediators of the earth's atmosphere and climate; as primary producers, they are thought to contribute up to 40 percent of carbon fixation in the ocean. Unfortunately, very little is known about the factors of the ocean environment responsible for the evolution of this extraordinary diversity, or how the dynamics of diatom evolution may be affected by a rapidly changing climate. My research seeks to understand the distribution and evolution of diatom diversity over global geographic space. I use measurements of global population structure to infer those ecological drivers of genetic connectivity and isolation that have contributed to the vast diversity of diatoms, and their widespread ecological success.

My personal goals for attending both scientific meetings were simple: First, I aimed to tell my scientific story to the oceanographic community, relaying the exciting research that I'm so fortunate to be a part of at GSO. Secondly, I intended to gain new scientific insight and expose myself to the latest research in the field. Thirdly, I sought to inter-

#### Katie Coupland

Thanks to the award from the Alumni Association, I was able to travel to San Diego, California, and attend the 2013 Coastal and Estuarine Research Foundation conference. I presented my first graduate poster, *Examining pH in Estuarine Waters Using Narragansett Bay Fixed Site Monitoring Network Data and Measured Alkalinity*. The experience was invaluable—with more than a thousand different talks to attend, I was able to learn an incredible amount in such a short time period of time. ■



Kerry Whittaker aboard the RV *Kilo Moana* off the coast of Na Pali, Kauai, on a research cruise to the Hawaii Ocean Time-Series station in 2011.

act with oceanographers from around the world, maintaining professional relationships that I have established over my academic career, and forging new ones. Both meetings were productive and successful for me. It always blows me away to be surrounded by hot-off-the-press oceanographic research and top-notch researchers present at these large science conferences.

At the 2013 ASLO meeting, I received an award for my presentation. The award was granted to only 7 percent of student attendees and was based on "clarity of presentation, quality of experimental design, clarity of conclusions, innovation and scientific insight." I was honored to receive this award, and hope it reflects the passion I have for my research and how it fits into our larger understanding of the ocean and its ecology. Again, I am so grateful to the alumni who give to the Fund for URI/GSO for supporting these experiences that have enhanced my academic career, and helped disseminate the great research conducted at GSO!



Katie Coupland presenting her first graduate poster at the Coastal and Estuarine Research Federation conference in San Diego.

#### Kun Gao

I received a GSO Alumni Award to support my trip to the 31st AMS Conference on Hurricanes and Tropical Meteorology held in San Diego, April 2014. As a PhD candidate at GSO, I am currently involved in developing and implementing a new approach to represent boundary layer roll vortices in the U.S. Navy's hurricane model COAMPS-TC. The scientific questions I focus on include the favorable environment for roll vortices, the factors determining their characteristics, as well as their effects on the hurricane evolution. I gave an oral presentation summarizing the highlights in my research entitled, "Interactions between Roll Vortices and Largescale Flow in the Hurricane Boundary Layer." The AMS hurricane conference is held every two years and brings together hurricane experts from National Weather Service, research institutes, and universities throughout the world. This conference provided me an excellent opportunity to get helpful advice from other scientists, and cutting-edge information in the hurricane research field.



Kun Gao, PhD candidate at GSO, stands in front of the conference room for the 31st *Conference on Hurricanes and Tropical Meteorology*, sponsored by the American Meteorological Society. He gave an oral presentation on the boundary layer roll vortices in hurricanes during this conference.

### **Ballard Elected to American Academy of Arts & Sciences**

#### April 24, 2014

Robert Ballard, Ph.D. 1974, GSO professor of Oceanography and director of the Center for Ocean Exploration, has been elected as a member of the American Academy of Arts and Sciences. Members of the Academy come from academia, business, the arts and sciences, and educational and philanthropic organizations. Others members of this year's class of 204 honorees include winners of the Nobel Prize; the Wolf Prize; the Pulitzer Prize; National Medal of the Arts; MacArthur, Guggenheim, and Fulbright fellowships: and Grammy, Emmy, Oscar, and Tony awards. An induction ceremony will be held in October at the Academy's Cambridge, Massachusetts, headquarters.

Ballard, best known for discovering the wreck of the *Titanic*, also serves as president of the Institute for Exploration and president of the Ocean Exploration Trust. He has been a pioneer in the development of advanced deep submergence and telepresence technology. Although his PhD is in Marine Geology and Geo-



physics from GSO, his scientific interests run the gamut from volcanic, tectonic, and hydrothermal processes of the midocean ridge to deep-sea archaeology and maritime history. He has authored numerous best selling books about his undersea archaeological explorations, received Best Documentary Emmy awards for "Search for Battleship Bismark" and "Last Voyage of the Lusitania," and was nominated for an Academy Award for Best Documentary Film. Dr. Ballard is also involved in various educational outreach programs including the JASON Project, Immersion Learning, NAUTI-LUS Live, and television programs for the National Geographic Society, where he is an "Explorer-in-Residence." ■

Photo: Alex DeCiccio

# Veronica Berounsky to Serve on Rivers Council

On June 4, 2013, the Rhode Island Senate confirmed Governor Lincoln Chafee's appointment of Narrow River Preservation Association (NRPA) Board member **Veronica Berounsky**, **Ph.D. 1990,** to the Rhode Island Rivers Council.

The Rivers Council was created by state statute to coordinate efforts to improve and preserve the quality of the state's rivers and other water bodies and to develop plans to increase river use. The Council is charged with coordinating state policies to protect rivers and watersheds and strengthening local watershed councils as partners in river and watershed protection.

NRPA is one of nine watershed organization designated by the Rivers Council and over the years has received enabling grants from the council for various initiatives, most recently to cosponsor a series of teacher workshops with the Wood-Pawcatuck Watershed Association.

Veronica will serve as one of three Rivers Council members "with con-



servation organization experience," as specified by statute.

And conservation organization experience she certainly has. Veronica, a marine biologist with the URI Graduate School of Oceanography, has been an active member of NRPA since 1990, with special focus on NRPA's educational mission. She has also been volunteer monitor in the NRPA Watershed Watch program and an organizer of the annual Narrow River Turnaround Swim. ■



Perry Jeffries and Ted Smayda both received their M.S. degrees from URI in 1955.

Two 1955 grads and 55-year survivors of the Narragansett Marine Laboratory (NML)-GSO: Perry Jeffries, left, who turned 85 April 15, 2014, and Ted Smayda. Photos courtesy of H. Perry Jeffries

# Alumni News

#### Rebecca Asch, M.S. 2006

completed a Ph.D. at Scripps this summer and recently started a post doc at Princeton.

#### Linda Auker, M.S. 2006

was married to Jason Signose on June 8, 2013. Congratulations!

#### Jason Breves, M.S. 2006

has accepted a tenure track job at Skidmore College in the Biology Department that fires up next Fall. He and the family are shipping out to the Saratoga area this summer. Son, Tim is ready for the journey too!



#### Susan Bourassa-Panichas, M.S. 1984

received the honor of being appointed a Technical Fellow for Northrop Grumman.

#### Luke Cole, M.S. 2005

published an editorial on nutrient policies with **Wally Fulweiler**, M.S. 2003, **Ph.D. 2007** in *Frontiers in Ecology*, March 2013 edition.

#### Joseph Paul Dauphin, Ph.D. 2006

is enjoying retirement and living on a beautiful lake in North Carolina doing wood turning.

#### Joe Doebler, M.S. 1966

is proud to say he's now an octogenarian. Congratulations, Joe!

#### Adria Elskus, M.S. 1985

was hit by the government shutdown and sequestration. She said it was very anxiety provoking and unsettling especially since she's on the inside seeing government function (or not).

#### Larry LeBlanc, M.S. 1989

has a musical career that's going well. His band, NEVAH, released its first CD in fall 2013. Check them out online. And his science is going well also.

#### David Evans, Ph.D. 1975

is currently the executive director of the National Science Teachers Association.

Thomas Fogg, Ph.D. 1983 and his wife are now proud grandparents!

#### Newell Garfield, Ph.D. 1990

started a new job with NOAA/NMFS/ SWFSC as director of the Environmental Research Division.

#### Ruth Hittinger, M.S. 1975

is now the vice-chair of the Rhode Island Fisheries Management Council.

#### Kelly Knorr, M.O. 2013

is at the Naval Oceanographic Antisubmarine Warfare Center (NOAC) in Yokosuka, Japan.

#### Michael Ledbetter, Ph.D. 1978

is retired but teaching online courses in oceanography and climate. He plans to move to Hilton Head Island, SC.

#### Haley Brew McMurray, M.S. 2008

is teaching chemistry as an adjunct instructor at the Massachusetts Maritime Academy.

#### Allen Myers, Ph.D. 1974

retired from parish ministry in October 2013 and is still teaching physical geology and marine science at the University of Maine Community College. He also restores reed organs (www.mudfogreedorgan.com) and has four grandchildren.

Anthony Paulson, M.S. 1978 sends a Golfer's Alert: Tickets to the 2015 U.S. Open go on sale June 9. The 2015 venue is at Chambers Bay Golf Course, University Place, WA, one quarter mile (an eight minute walk) from Tony's home. Tony is offering to rent rooms to GSO alumni. He will donate 20 percent of all rent received from GSO alumni to the GSO Student Fund. Please contact Tony before May 28, 2015 at (253) 566-4334 or anthony.paulson@nventure.com for details.

#### Victoria Paris Sacks, M.S. 2010

has a new job working for ENVIRON. Congratulations!

**Neil Savage, Ph.D. 1975** has five grandchildren now; the youngest born August 16, 2012.

#### Cara Sucher, M.S. 1998

is moving to the DC area in July. She will still be with NSF's Antarctic Program contractor, Lockheed Martin, but she'll be taking a new position with them as the Manger of Science and Planning for the Antarctic Support Contract (ASC).

#### George Tamm, M.S. 1976

has spent 30 years working as a financial advisor for Stifel, Nicolaus & Company, Inc. His kids are now in college.

#### Virginia Tippie, M.S. 1975

has retired from NOAA and is doing consulting.

#### William Woityra, M.S. 2005

is working at the U.S. Embassy in Malta as a Coast Guart Attache.

# In Memoriam

### THOMAS A. GAUCHER M.S. 1960, Ph.D. 1965 from Honolulu Star-Advertiser, July 12th, 2013

Thomas A. Gaucher, 85, of Kapaa, Kauai, a scientist, died in Samuel Mahelona Memorial Hospital July 5, 2013. He was born in Willimantic, Conn. He is survived by son Norman, daughters Daniele E. and Lorraine, brothers Harry S. Jr. and Philippe, sister Jacqueline Goettlich, stepsister Gail Bryne, and four grandchildren.

#### KAREN A. MARTIM.S. 1982, M.S. 1986

#### by Paul Fofonoff, Ph.D. 1994



On July 17, 2013, Karen A. Marti died suddenly, after a long illness. She was a friend to many people at GS0, for her generosity, hospitality, enthusiasm, and helpfulness. We'll remember her love of the sea, of sailboats, of music, of good food, and her dog Bozo, who inspired many of Dean Knauss' dog memos. She left

GSO in 1986 to work in telecommunications in the Washington DC area. She lived in several locations in the DC suburbs, before buying a house in Annapolis, partly out of her love of sailing. She worked for British Telecom, and later for Concert, a joint venture with MCI.

I got in touch with Karen again in 1995, after I moved to Maryland. As at GSO, she gave memorable parties with good food, mellow music, and good conversation. In 1996, she purchased a large sailboat, *Royal Salute*, and had a crew of friends who had a year of wonderful sailing before the boat developed some expensive engine problems and she had to sell it. In 2001, she sailed on one leg of British Telecom's round-the-world Global Challenge yacht race. After the Concert venture folded, she started a gardening and landscaping business.

Karen was always interested in music, art, and nature, and was a good companion at concerts, museums, and on my less strenuous hikes. Even when times were difficult for her, she would always make an effort to help the people around her. In the last few years, she became active in a local church, which helped her in troubled times, but also gave her an opportunity to help others. A memorial service was held for Karen on Sunday, July 28th. Her family has asked that memorial donations be given to the Bay Ridge Christian Church, 1071 Bay Ridge Rd., Annapolis, MD 21403.

### THOMAS S. LOUTIT, Ph.D. 1981 September 1952–October 2013

from Houston Chronicle, Nov. 1, 2013

Thomas Loutit passed away after a lengthy illness. Beloved husband of Karen and father of Jennifer and Alastair. Son of John (dec) and Margaret. Brother of Jeffery and William. Tom will be greatly missed by his family and many friends in Houston, Texas. Gone fishing...

In lieu of flowers, donations to the ACT Cancer Council or Clare Holland House (Hospice) in Canberra, Australia, or similar organizations in the U.S. would be appreciated.

### ELIJAH SWIFT, 1938–2013

by Bruce H. Corliss



Elijah Swift, Professor Emeritus at the Graduate School of Oceanography, died New Year's Eve as a result of injuries suffered in a two-vehicle accident on the Pell Bridge on Christmas Eve. Elijah was on his way to choir practice and church service in Newport when the accident happened. Elijah was peaceful and surrounded by friends and family at the time of his death.

Elijah received an undergraduate degree in biology from Swarthmore College, followed by two summers at the Marine Biological Laboratory in Woods Hole, and went on to receive a MS and Ph.D. degrees from Johns Hopkins University. He joined the Graduate School of Oceanography as an Assistant Professor in 1969 and became Professor of Oceanography and Botany in 1980. He retired in 2003 from GSO as Professor Emeritus. He was a mentor to a large number of students during his time at GSO and focused on the distribution and biology of dinoflagellates and their production of light in the sea. He was a scientific pioneer and one of the first researchers to provide explanations for bioluminescence and migrations of the deep scattering layer of zooplankton. He contributed in many ways to the GSO and URI community over the years and was instrumental in establishing GSO's international reputation in oceanography.

A memorial service was held January 11, at Channing Memorial Church, 135 Pelham Street, Newport. In lieu of flowers the family suggests donations to this church. Our thoughts and condolences are with his family and friends.

### THEODORE A. NAPORA 1927–2014 by Bruce H. Corliss



It is with great sadness that I report the death of Professor Ted Napora on February 9th at the age of 86 as a result of a fall. Professor Napora was an Emeritus Professor at the Graduate School of Oceanography, following his retirement in 1991.

Ted served in the Army in the US Forces in Austria during the

closing years of WWII. He attended Columbia University and graduated in 1951 with a B.S. in biology, followed by a M.S. in Oceanography at URI, and a Ph.D. in zoology at Yale University in 1964. While at Yale, he studied under Gordon Riley and was part of the lineage of Yale biologist G. Evelyn Hutchinson. In 1956 he served as the Assistant to the Director of the Bermuda Biological Station. He came to URI as a research associate in 1959, became an instructor in 1959, an Assistant Professor in 1964 and was promoted to Associate Professor in 1972. He became the first GSO Assistant Dean for Students in 1968 and remained in that position until 1987. During his tenure as Assistant Dean for Students, 396 graduate students graduated from GSO.

One of the rights of passage for GSO students was (and is) the weekly graduate student seminar, which Ted presided over as Assistant Dean of Students. He would open the seminar by declaring in his commanding voice, "Are there any announcements" which served to silence the crowd and begin the seminars. Professor Napora was known as a dedicated teacher and mentor and a talented artist whose lectures were highlighted by precise illustrations. As Assistant Dean of Students, he helped provide the foundation for the graduate educational program at the Graduate School of Oceanography that had a lasting legacy to over 800 alumni that continues to this day.

A meeting to celebrate the life of Professor Napora by friends, colleagues and former students is being planned and will include a showing of his artwork. We send condolences to his family, friends and colleagues for the loss of a dedicated educator and friend to many at the Graduate School of Oceanography.

### GSO Benefactress, JUDY FILLMORE by Bruce H. Corliss

We recently received word of the death of Ms. Judy Fillmore. Judy was a great friend of GSO, and in honor of her parents, she established the Robert H. and Marjorie P. Fillmore Memorial Endowment, which supported our students beginning in 2004. While Judy lived in Virginia, she maintained a house in Jamestown and visited GSO every September. During her visit she took great pleasure in meeting the student who was supported by the endowment that year and discussing the progress of her students with Associate Dean David Smith. She delighted in hearing about their research projects and connected with them on a personal level. There is no better example of her dedication to supporting student research than during the recent stock market crash when the URI Foundation was prohibited from paying out on endowments. When she was informed of this, she immediately called to say that she was sending a personal check to support a student that year. Judy bequeathed her estate to GSO to provide further support of the Robert H. and Marjorie P. Fillmore Memorial Endowment to support GSO students. While this will greatly benefit future GSO students, it is sad that they will not get the chance to have lunch with Judy and find out for themselves how special she really was and how much she was committed to GSO students. We extend our condolences to her family and friends for the loss of a very caring person.

Graduate School of Oceanography University of Rhode Island Narragansett Bay Campus Narragansett, RI 02882-1197

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# **Upcoming Events**



GSO's Office of Marine Programs, Narragansett Bay Classroom, is offering several free programs this summer. You are invited to one or all!

**Beachcombing for Families** will be held Sunday, July 20 and Sunday, August 17, 2014 from 8–10 a.m. at Fort Getty in Jamestown. Meet at the Pavilion. To register (required), please call the Office of Marine Programs at 874-6211. This program is for families; all children must be accompanied by an adult. Beachcombing events are free and open to the public. Held light rain or shine. Rained-out events will not be rescheduled.

**Historic South Ferry Walking Tours** are scheduled Wednesday, July 16 and Wednesday, August 6, 2014. Tours begin at 10:30 a.m. at the Coastal Institute Visitors Center, URI Bay Campus, 218 South Ferry Road, Narragansett, Rhode Island. The program is free and open to the public. In the event of rain, the program will continue with an indoor presentation by tour leaders, Wayne and Bernice Durfee.

For more information about these programs, please call (401) 874-6211.

# Save the Date!

#### September 5–7, 2014: GSO Alumni Reunion Weekend and Boat Burning 50th Anniversary Celebration

The 2014 Alumni weekend will kick off Friday evening September 5 on the Bay Campus beach with food and drink, conversation, and a roaring 50th anniversary fire. Festivities will continue all weekend. Details will be announced soon. Don't miss it!

