DEAN OTIS BROWN: A LEGACY OF LEADERSHIP

After 14 years as Dean of the Rosenstiel School of Marine and Atmospheric Science, Otis B. Brown, Ph.D., has stepped down from his post with plans to return to Earth Science research. In recognition of his decades of service and dedication to the University of Miami, Brown was awarded the UM Presidents Medal during the May 2009 Graduate Commencement Ceremony. Established by President Donna E. Shalala in 2003, the University of Miami Presidents Medal honors individuals for their outstanding leadership and distinguished accomplishments in their fields of expertise as well as for their contributions to society. While presenting the medal along with UM Executive Vice President and Provost Dr. Thomas J. LeBlanc, President Shalala described Dean Brown as a recognized and dedicated professional who was often the calm in the eye of the storm, sharing his expertise in the complex systems that affect our planet, and helping to improve the University community and the world.

Dean Brown has spent more than 40 years as a member of the Rosenstiel community, rising from post-doctoral fellow to faculty member, division chair to Associate Dean and Dean. He has been instrumental to the continued success of the School by providing strong scientific and administrative leadership. He has helped to foster the growth of the School in excellence, which at present is amongst the top marine and atmospheric science graduate institutions in the nation, and boasts hundreds of accomplished faculty, students, staff and alumni.

Dean Brown has consistently been at the cutting edge of his field. He led a RSMAS team that developed an early, if not the first, SST and Ocean color processing system to bring satellite images to the ocean community, winning him a NASA recognition award in 1985. In the late 1980s, Dean Brown wrote a proposal to the National Science Foundation, which brought the Internet to the University of Miami. Since 1995, more than $555 million in extramural research has been conducted through the School. Dean Brown has served as a strong voice for the School within the scientific community during his tenure as dean, serving on prestigious national and international associations and organizations.

Two new centers were created during his time at the School, the Center for Southeastern Tropical Advanced Remote Sensing (CSTARS), and the Center for Oceans and Human Health. He was also instrumental in the establishment of the University-wide interdisciplinary Abess Center for Ecosystem Science and Policy.

Under Dean Brown’s leadership 77 faculty members were hired, incorporating exciting, new talent into the Schools academic ranks. He also earned the respect of his peers who have watched him triple the number of female faculty on campus from five to 16. His leadership has also helped to expand the number of non-research supported graduate assistant positions from 32 in 1995 to 84 in 2009.

(Continued on page 2)
DEAN OTIS BROWN: A LEGACY OF LEADERSHIP
(Continued from page 1)

Last year saw the addition of the first-ever undergraduate class in the Rosenstiel Schools history. Dean Brown led this effort, enrolling the best undergraduate marine science class to date, and restructuring Academic Affairs to provide enhanced oversight for this new offering.

We are grateful to Dean Brown for his leadership for the last 14 years, and his dedication to the Rosenstiel School for more than 40 years. We wish him the best of luck in the next chapter of his life, and look forward to seeing him on campus after some very well deserved time off!

Go here to see a gallery of images of Dr. Brown through the years:
http://www.rsmas.miami.edu/info/soundings/2009/05/images/otisgallery/index.html

CONGRATS TO THE GRADUATING CLASS OF 2009!!

Check out some of the photos posted on the Graduate Studies Office website from May's Graduate Commencement.  http://www.rsmas.miami.edu/grad-studies/graduation-2009

The Rosenstiel School's first group of spring commencement undergraduates also took the stage this month. As the first graduates to emerge from the program since UM President Donna E. Shalala signed Faculty Senate legislation last spring to formally transfer the full administration of the undergraduate Marine and Atmospheric Science (MSC) Program to the Rosenstiel School. The group consisted of 19 undergraduates representing the programs in Marine Affairs, Meteorology and Marine Science.

Corina Antal, B.S., Marine Science/Chemistry, received the award for Outstanding Marine and Atmospheric Science student.

Roque Cespedes B.S., Meteorology/Math, poses with his mother before the commencement begins. Cespedes was one of the three undergrads singled out for special recognition during ceremony for his outstanding academic accomplishments. He will stay on at UM as a graduate student in MPO.

Jenny Allen, B.S., Marine Science/Biology shows off her elaborately decorated cap.
FIRST SEA TURTLES TO CARRY NEW SOLAR-POWERED MINI SAT TAGS

Two loggerhead turtles raised at Florida Atlantic University’s (FAU) Gumbo Limbo laboratory for the past several months, were loaded onto a boat on Saturday, May 9 in West Palm Beach, and driven 10 miles offshore to be released. The turtles are released at the end of each study into currents that serve as nursery areas for the species. These young turtles are unique in that each carry new solar-powered miniature satellite tags, which will enable the researchers to track their movements.

The sea turtles are part of conservation-based research studies conducted by Dr. Jeanette Wyneken, associate professor of biological sciences in FAU’s Charles E. Schmidt College of Science. The turtles were released the help of several FAU students, Rosenstiel School Post-Doc Dr. Kate Mansfield, a remote tracking and turtle expert, and Dr. Dan Rittchof from Duke University’s Marine Lab. Together the team has developed a tagging system that doesn’t interfere with the turtles’ swimming or growth.

GEOLOGICAL GEMS

A special publication, ‘Perspectives in Carbonate Geology’ edited by Drs. Peter Swart, Gregor Eberli, and Judith McKenzie is a collection of papers most of which were presented at a symposium to honor the 80th birthday of Dr. Robert Nathan Ginsburg at the meeting of Geological Society of America in Salt Lake City in 2005. The majority of papers in this publication are connected with the study of modern carbonate sediments, pioneered by Ginsburg. His groundbreaking research unearthed the concept of comparative sedimentology – using the modern to compare, relate to and understand the ancient.

This book was published in collaboration with the International Association of Sedimentologists, an international association of more than 2000 members whose flagship journal Sedimentology is one of the highest ranked peer-reviewed journals in its field. Dr. Peter Swart serves as chief editor of Sedimentology.

“Bob Ginsburg has received the highest awards in his field from both the International Association for Sedimentologists and the Society for Sedimentary Geology,” said Swart. “His continued activity and enthusiasm are a major benefit to the Rosenstiel School and the University as a whole.”

Ginsburg, an explorer, world-class sedimentary geologist, educator and coral reef conservationist, received his bachelor’s degree at the University of Illinois, Champaign-Urbana, and his doctoral degree at the University of Chicago. He has been associated with the University of Miami’s Rosenstiel School of Marine and Atmospheric Science since the 1950s, and served as a long-time member of the Geological Society of America’s Committee on the History of Geology.
SUMAN SPEARHEADS COASTAL MANAGEMENT PLAN
BEING ADOPTED FOR BOCAS DEL TORO, PANAMA

The Bocas del Toro region of Panama is located in the northwest corner of the nation’s Caribbean coast. It has experienced a significant tourism and residential boom in the last decade.

A team of scientists from UM and the Rosenstiel School, led by Professor of Marine Affairs and Policy, Dr. Daniel Suman, recently completed development of a coastal management plan for Bocas del Toro, Panama. Funded by the Sustainable Development Program for Bocas del Toro (PDS-BT) and the Inter-American Development Bank (IADB), the project will help strengthen a new agency, the Panamanian Aquatic Resources Authority (ARAP), which has the responsibility for regulating marine and coastal resources in Panama.

In 2007, the project team conducted a diagnosis of the coastal and marine situation in Bocas del Toro, including studies of mangrove forests, coral reefs, sea grass beds, and fisheries. Researchers organized focus groups and interviews with many of the users of Bocas del Toro's coastal and marine resources, including dive operators, tour operators, hotel owners, fishers, marina owners, real estate agents, environmentalists and scientists. They also worked closely with the government agencies with authority over coastal resources, including the National Environment Authority (ANAM), the Panamanian Maritime Authority (AMP), the Panamanian Tourism Authority (ATP), and the Panamanian Aquatic Resources Authority (ARAP), and municipalities, among others.

During 2008 the team established that some of the principal problems in Bocas del Toro include the degradation of water quality, severe over-exploitation of natural resources, and the loss and destruction of coastal habitats. While the AMP has made great improvements in regulation navigation in the province, navigational safety is deficient in Bocas del Toro.

By January 2009, the project team had completed the Coastal Management Plan and officials from ARAP, the PSD-BT, other government agencies, and the public had prioritized recommended actions. The plan lays out a blueprint for policies and actions to protect the Bocas archipelago’s sensitive coastal and marine habitats and to only allow developments that will not create significant environmental impacts. Five Action Plans compose the Coastal Management Plan:

- Sustainable Fisheries
- Conservation of Coastal & Marine Habitats and Resources
- Natural Shoreline Protection
- Maritime & Coastal Eco-Tourism
- Institutional Coordination.

Each Action Plan analyzes the current state of affairs, describes a vision for the future, and then presents a coordinated response to address and resolve the problems. The response includes a step-by-step description of what needs to occur, a chronology for this to happen within a 5-year timeframe, responsible institutions and allies in the community and private sector, necessary personnel, required budget to carry out the actions, positive and negative social and economic impacts, foreseen obstacles to implementation, and indicators to gauge success of the actions.

The Coastal Management Plan recognizes the obstacles that implementation of the plans faces: lack of sufficient funding, the political transition of the new Panamanian government, and the weak institutional presence in Bocas del Toro. At the same time, the presence of ARAP and AMP in Bocas del Toro has improved considerably in the past several years, and the PDS-BT, USAID, and the private sector all appear to be potential supporters of portions of the Coastal Management Plan. The Plan also attempts to be consistent with ongoing Land Use planning efforts in Bocas del Toro so as not to create inconsistencies.

Implementation of the Coastal Management Plan and strengthening of the capacities of the ARAP, AMP, and ANAM in Bocas del Toro are essential components of a system of increased control over tourist and residential development in Bocas and heightened government responsibility to protection of Bocas’ natural environment.
Bocas del Toro houses the second largest area of coral reefs in Panama and is an important center of coral diversity. It also plays a globally important role in the life histories of four species of sea turtles. Two of these species – the Hawksbill and Leatherback sea turtles – that are “critically endangered” according to the IUCN (World Conservation Union) – nest on Bocas’ beaches.

For the past two years, UM has offered a course about Bocas del Toro, Panama called “Tourism: Conservation and Development,” created by Dr. Daniel Suman, professor of Coastal Management and Environmental Law at that university. The students participating in this course meet once a week to discuss the history, and social and environmental realities of Bocas del Toro. The highlight of the course is a 10 day trip to Panama. Upon their return to UM, students prepare reports about their research and present results to the class.

This year, 21 UM graduate and undergraduate students participated in the course. The course has attracted students largely from three departments: Marine Affairs and Policy, Latin American Studies, and Communications.

During their stay in Bocas del Toro, the UM students attended talks and discussions led by a number of experts on the region’s environmental and social issues. The lecturers included Juan Maté (Smithsonian Tropical Research Institute and coral reef expert), Cristina Ordoñez (coordinator of the sea turtle project of the Caribbean Conservation Corporation), Ana Spalding (doctoral students at the University of California, Santa Cruz who is studying the impacts of the new expatriates in Bocas), Iker Lasa (The Nature Conservancy and long-time Bocas environmental activist), Osvaldo Jordán and Feliciano Santos (Alliance for Conservation and Development – ACD) and experts on land tenure conflicts that the Ngöbe people are facing). Additionally, the UM students were active participants in Solimar’s workshop on best management practices for geo-tourism. The UM group also traveled to numerous sites of interest in the area, such as Bastimentos Island Marine National Park (Cayo Zapatilla), Dolphin Bay, and the Ngöbe communities of Salt Creek, Bahía Honda, and Cristóbal.

One student was awarded a fellowship to return to Bocas del Toro and work with the ACD in organizing Ngöbe communities threatened by hydroelectric dam construction. Another student has returned to Panama to conduct her master’s thesis research on Panama’s protected areas.
JACKIE DIXON NAMED INTERIM DEAN OF COLLEGE OF ARTS & SCIENCES

Effective July 1, Dr. Jacqueline Dixon, a senior associate dean of the College of Arts and Sciences who has served on the University of Miami faculty since 1992, has been named interim dean of the college. Executive Vice President and Provost Thomas J. LeBlanc announced that the longtime faculty member will lead the University's largest academic unit until a successor is found for the College.

Dixon, a professor of geological sciences in the college, was hired in 1992 in the Division of Marine Geology and Geophysics at the Rosenstiel School and held a joint appointment until 2006.

Dixon received bachelor’s and master’s degrees from Stanford University and a Ph.D. from California Institute of Technology. She received an Early Career Development award from the National Science Foundation for excellence in research and education, and is internationally recognized for her research on the Earth's deep carbon dioxide and water budgets. Dixon's research takes her and her students to Hawaii, Iceland, the Galapagos, and mid-ocean ridges around the world.

LIBRARY LINES

Take the Rosenstiel Library with you this summer!

Will you be spending all or part of the summer away from campus? If so, be sure to bookmark our new library website. You'll have quick and easy access to your favorite e-journals, databases and division LibGuides. If you'll be working in the Arctic, Antarctica or anywhere in between, remember the virtual RSMAS Library is available to you 24/7. All e-resources are accessible away from campus with an internet connection and your MyUM ID and password.

http://www.library.miami.edu/rsmaslib/

RSMAS Library Summer Hours:
May 14, 2009 to August 26, 2009
Monday – Friday 8:30am – 5:00pm
Saturday – Sunday CLOSED
RSMAS Library closes on all UM Holidays

Upcoming Training:
- How to use bibliographic management software including EndNoteWeb and RefWorks – watch for announcements!

UPRINT is coming to RSMAS:
- RSMAS Library will be an installation site for UPRINT copier/printers on our campus. We will have two machines installed for use by students (primarily) but also by faculty and others. We will provide more detailed information later this summer.

Training and Reference Assistance:
- Need help in using one of our various databases or other resources? Trying to decide what bibliographic management software to use? Can't find a publication? Contact us! The RSMAS librarians and staff can help you with your information needs. Our library email is libcirc@rsmas.miami.edu.

WWW.RSMAS.MIAMI.EDU
FACILITIES UPDATE

The Rosenstiel School Facilities team believes that preparation is of utmost importance to preserving our environment. With the increasing threat to groundwater posed by leaking underground storage tanks, and recent mandates imposed by the US EPA and the Florida Department of Environmental Protection (DEP), the Rosenstiel School recently completed the removal of a 4,000 gallon underground diesel fuel storage tank used to generate energy for the SLAB. An innovative double walled, 2,000 gallon above-ground tank located West of the SLAB building has replaced the underground tank.

Environmentally safe and a practical alternative, the ConVault AST vaulted storage tank system is designed for storing petroleum-based products under compliance with environmental and fire code regulations. The tank is highly durable, long-lasting and low maintenance. A seamless six-inch concrete vault provides thermal protection, minimizing temperature changes for flammable liquids stored in excessively hot or cold environments. The system contains no cold joints or heat transfer points on the bottom or sides, while the shell also provides ballistic and vehicle impact protection.

Since the actual costs associated with soil and groundwater clean up can be catastrophic, this investment by the University ensures cost-effective planning, compliance with regulatory requirements and the protection of our groundwater and the surrounding coastal communities from contamination.

KUDOS FOR KOSKI

Another testimonial as to the educational potential of Little Salt Spring. A class of 17 master’s degree students from National-Louis University in Tampa recently took around the spring along the north trail, through the fields and hammock, and got a chance to see the rain lilies (Zephyranthes atamasca) blooming, Professor Anne McCrary Sullivan, MFA, Ph.D., took time out of her schedule to write this letter to Site Manager Steve Koski.

Hi Steve,

Just wanted to thank you again for giving my grad students a great field experience. When we left the site, we went back to the classroom to debrief. One of the recurring themes was simply amazement that such a phenomenal resource is right there, on the same street where most of them teach, and they never had a clue. Dave (Heron Middle School) said, ‘I always wondered what was on the other side of that fence.’ They were doing some good thinking about how to integrate what they now know into their teaching, linking the global to the local, and trying to figure out how field trips might be possible. Field trips have gotten so hard for public school teachers to do, so many constraints. Abe was wondering if he could get a local golf cart dealer to donate a couple of multi-seat golf carts so he could just tell his kids ‘hop on!’ and they could whiz down the street. I’m afraid it won’t be that easy. But I do think you’ll hear from these high school teachers again. They may be asking if you’d be willing to come to their classrooms.

At any rate, you’ve made quite an impression on them, and I do mean you, apart from the site. They noted that you are somebody who ‘loves his work and lives it.’ Thanks for providing that kind of model and for teaching us all.

Anne McCrary Sullivan, MFA, Ph.D.
Professor, Interdisciplinary Studies (IDS)
Dept. of Integrated Studies in Teaching, Technology & Inquiry
National-Louis University, Tampa
On Monday May 18 at the Acoustical Society of America (ASA) meeting in Portland, Oregon, Thomas Hahn, Xiaojun Chen and Jennie Wylie were selected to write a ‘layman’s’ version of their talk about fish acoustics. Their paper will be added to the worldwide pressroom on the ASA meeting website and be available for journalist and news outlets to read. The paper is below:

Passive Acoustic Detection of Herring Size

Sound is well known to be the predominate remote sensing tool used to locate and measure fish in the ocean. In the traditional approach, which is similar to using a flashlight in the dark, an artificial sound signal is projected towards potential targets. From the reflected signal one obtains the location of the target, as well as species and size information if the reflectivity of the fish or fish schools is well understood. This principle is implemented in all recreational, commercial, and scientific acoustic fish finders.

In contrast, we attempt to achieve much of these results without using an artificial sound source, but solely using the naturally occurring sound in the ocean. Potentially, this has the advantage that only a very simple piece of equipment, a single micro- (hydro-) phone, needs to be deployed to cover a large area. Thus reducing the need for expensive ship operations. In principle, there are many ambient sound sources that could be used for this purpose, including the sound of breaking waves.

In the case of herring, we can use the sound the fish create themselves. Large herring aggregations that form during their spawning seasons can be significant sources of underwater sound. The sound is created when the herring release bubbling air from their swim bladders in response to predatory activity or when adapting to hydrostatic pressure changes that occur during migration from deeper water to the ocean surface for feeding. In a previous work by one of the others we demonstrated that this gas release produces a typical sound that uniquely signals the presence of herring. Included is a sound clip of the herring response to predatory activity and the following figure shows the graphical representation of this sound in the form of a spectrum.

(Continued on page 9)
A CAPITOL IDEA

More than 200 scientists and engineers converged on Capitol Hill for the Fourteenth Annual Science-Engineering-Technology Congressional Visits Day (SET-CVD). The event brought scientists, engineers, researchers, educators, and technology executives to Washington, D.C. to raise visibility and support for science, engineering, and technology. Attendees were treated to a workshop on how to communicate with legislators hosted by the American Geological Union (AGU), the American Geological Institute (AGI), and the Geological Society of America (GSA). A panel session with representatives from NASA, NOAA, USGS, NSF, and DOE's Office of Science, as well as receptions and meetings with members of Congress during the two day event.

One of only two oceanographers in attendance, UM Rosenstiel School Research Associate Professor, Dr. Villy Kourafalou, discussed coastal oceanography priorities around South Florida with Congresswoman Ileana Ros-Lehtinen, and the use of predictive models to address general oceanography issues in coastal and shelf seas with the offices of Sen. Nelson, Sen. Martinez, the Senate Energy and Natural resources committee and the House Science and Technology committee. Kourafalou also visited an alumnus of the Rosenstiel School's division of Meteorology and Physical Oceanography, Jerry Miller, Ph.D., Senior Policy Analyst for Ocean Sciences at the White House Office of Science and Technology Policy (OSTP/Executive Office of the President).

Rosenstiel Professor of Marine and Atmospheric Chemistry and chair of the UCAR Board of Trustees, Dr. Rana Fine also traveled to Washington recently to meet with Congressional members on behalf of UCAR. As part of the UCAR Board of Trustees meeting in DC, Fine was accompanied by UCAR staff member and former senate staffer, Mike Henry. Fine spoke with congressional staff, and Florida Representative Ros-Lehtinen about the need for the Hurricane Research Initiative, as well as the importance of climate change legislation and research to improve intensity forecasts. The UCAR Board also met for over an hour with President Obama's science adviser, John Holdren, head of Office of Science and Technical Policy.

SOUND WORK

(Continued from page 8)

When a school of fish is exposed to the ambient sound, their swim bladders begin to oscillate and start radiating their own characteristic sound, called the resonance frequency. This alters the ambient sound field in characteristic ways, particularly at the size-dependent pitch of the radiating swim bladders. When a school of fish is located between a source and a receiver, parts of the source spectrum are removed by the swim bladders because sound of this frequency is redirected in other directions. This leads to absorption lines in the spectrum. Likewise, when a fish school is located besides the direct source receiver line, the opposite happens and spectral emission lines appear. An example of a spectral emission line can be viewed in the figure below.

Over sufficiently long periods of observation both spectral emission situations will occur. The net effect is a stronger variability of the spectrum, which can be viewed using statistical analysis, at the frequencies corresponding to fish bladder resonances. If one knows roughly the depths at which the fish were located during the recording time, the size of the swim bladders can easily be inferred using this and the resonance frequency information. For many fish, the size of the swim bladder is a good indicator of overall fish length, which then can be obtained by our new method. In figures below, the spectral variability is shown along with a plot of fish length vs. resonance frequency. Using this data we estimated the fish size to be 21.3cm, which was in good coordination with the caught specimens during the recording time.
PROFESSOR’S VALUABLE RESEARCH PINPOINTS WHERE VOLCANO’S DEADLY LAVA COULD FLOW

Hawaii’s Mauna Loa volcano is due to erupt. When? That's anybody's guess.

But Rosenstiel School Associate Professor Falk Amelung believes his research shows where the most damage will be to Hawaii’s largest island. A geophysicist, Amelung worked with Stanford University and scientists conducting postdoctoral work at UM using satellite imagery to monitor Hawaii’s most dangerous volcano. The penetrating satellites can measure a volcano’s growth down to fractions — approximately two to three millimeters.

Mauna Loa, one of five volcanoes that make up the island of Hawaii, is a shield volcano, meaning it can erupt from its summit, through its slopes, or both. Amelung, who monitors the data from his Virginia Key office, measures bulges on the volcano’s flanks. One on the southwestern side has grown more than eight inches since the volcano renewed activity in 2002. Scientists believe that molten rock is pressing into it, and will ultimately cause a series of earthquakes that will spread lava to the island’s southern side, threatening several villages.

Predicting the eruption site is important because thousands of people live in the volcano’s shadow. When Mauna Loa erupted in 1950, it took only four hours for the lava to move from the summit to the ocean. The last eruption in 1984 sent lava within four miles of the island’s largest city Hilo, population 45,000. No one was harmed. ‘The lava goes quickly,” said Amelung. ‘If an eruption happens somewhere where a lot of people are living, four hours may not be enough time to evacuate.’

The fastest observed advance of a lava flow was during the 1950 Mauna Loa eruption at 5.8 miles per hour, according to Hawaiian Volcano Observatory, a U.S. Geological Survey facility. Most lava flows produced during eruptions advance quite a bit slower at up to 0.6 miles per hour.

Amelung, who grew up near Hamburg, Germany, became intrigued by volcanoes on a pre-college trip to Indonesia. He was drawn to the University of Miami by its Center for Southeastern Tropical Advanced Remote Sensing, also known as CSTARS in South Miami-Dade County, where University scientists can monitor changes in everything from coral reefs and forests to the expansion of Central America’s volcanoes in near-real time.

Amelung’s next project: installing a seismic network in the Galapagos. Known for its rich biodiversity, the area’s volcanic activity has been less studied – in part because as a national park, not many humans are affected by it, Amelung said. A May 2008 eruption did threaten a group of 100-year-old giant tortoises living around a volcano’s crater.

Prepared by: Marika Lynch

SHARKS IN THE WOMB

This mother’s day, research by Dr. Sam Gruber, professor emeritus at the Rosenstiel School, was featured on National Geographic’s cable television show, “In the Womb: Extreme Animals.” The documentary featured a segment on the birthing of lemon shark pups. Click here to watch a live shark birth:

A collaborative research cruise conducted aboard the NOAA ship Nancy Foster in the northeastern Caribbean. This cruise, the third field survey of the Coral Reef Ecosystem Research (CRER) program, was designed to simultaneously sample larval reef fish populations and the underlying oceanographic conditions.

During the 2009 survey scientists began to notice areas of low surface salinity and very high chlorophyll. Confirmed by satellite ocean color imagery, this large "green water" could be traced back to its source in the Orinoco River. In situ observations of this remote riverine signal revealed a surface layer approximately 20m. thick, relatively high in temperature, low in salinity, and rich in plankton and other biological content.

Though observed in the general area during most years, Orinoco and Amazonian riverine signals typically appear farther west, south of Puerto Rico, advected by Atlantic inflow through the Caribbean Island passages. However, the Orinoco plume observed this April extended farther to the northeast, surrounding the US and British Virgin Islands. Eye witness reports from fishermen and charter dive boats, as well as islands residents, described this green water event as something that they had never seen in the area before.

Previously these river plumes have been primarily studied using remote sensing. Surreptitiously, the April 2009 CRER survey was able to capture this unusual, transient event with a full suite of oceanographic and biological sampling methods. The additional in situ data gathered during will aid in understanding the extent of this event and its potential effects on the region.

The following collaborated in this article and/or participated in the CRER cruise: UM/CIMAS (Estrella Malca, Akihiro Shiroza, Nelson Melo, Grant Rawson, Samantha Whitcraft, A. Ender); NOAA (John Lamkin, Ryan Smith, Trika Gerard, Libby Johns, Barbara Muhling); UVI (K. Brown).
KEY ECO-STEPS

In the task of reducing the University's reliance on energy derived from fossil fuels, the Facilities Administration staff at the Rosenstiel School has embarked on a number of initiatives to minimize the carbon dioxide emissions required to conduct daily operations. The team has spent more than four years ‘greening’ buildings, assessing the usage of energy in research labs, and developing ways to reduce the School's carbon footprint.

As an international leader in environmentally focused research, the School is dedicated to preserving and protecting the natural world. Beginning in 2004 Director of Building Facilities, Ramon Alfonso, spearheaded a campaign to address energy waste, and in turn showcase the benefits of improvements made to the campus. By replacing fluorescent lighting, providing local on-demand water heaters instead of a large centralized system, reducing excessive exhaust of air-conditioned air from laboratories, and transferring lighting and research based sea-water pumps from 24-hour operation to more regulated levels, the School reduced its annual energy consumption in 2008 by 20% over what it was in 2004 – the equivalent of 2.5 million+ pounds of carbon dioxide, at a cost of nearly $190,000.

Collaborating with Florida Power & Light Company and nearly a dozen other community partners in 2008, Alfonso and his team accomplished the School's greatest energy saving project yet: the replacement of an antiquated ammonia refrigerant thermal storage plant with a traditional high efficiency conventional chiller. Housed on-campus in a newly renovated containment space, the two new chiller units cool and circulate water to air handling components or fan coils where the chilled water is converted to cool air. The cooled air is then supplied to the nearly 300,000 square feet of research laboratories, classrooms, and administrative offices that comprise the Rosenstiel School campus on Biscayne Bay – an improvement which has resulted in an average of 30% in energy savings since January 1, 2008.

The Rosenstiel community has embraced these environmentally friendly improvements with open arms, recently establishing the RSMAS Green Committee, a collective of divisional representatives that will provide input into future campus improvements and help to keep the rest of the community engaged with energy saving techniques, upcoming projects and the school's newly expanded recycling program.

Even with a proven record of accomplishments behind them, the School still has a way to go before achieving its goal of reducing net reliance on fossil fuels to zero. With a targeted list of projects and the support of the entire Rosenstiel community, the School is working hard to provide a more environmentally friendly environment for the development of cutting-edge research and world-class eco-scientists.

KNIFFIN NAMED DIRECTOR OF MARINEOPS

A seasoned sailor, long-time friend of the University of Miami Rosenstiel School of Marine and Atmospheric Science, and the first-ever captain of the School's research vessel, the R/V F.G. Walton Smith, Richard Kniffin has returned after nine years to become the School's new Director of Marine Operations.

Born and raised in Miami, Fla., Kniffin spent his early adult life working as a commercial diver, and as a captain aboard vessels throughout Florida and the Bahamas. He joined the University of Miami in 1992, and served aboard several Rosenstiel School vessels, eventually becoming the captain of the R/V Calanus. After years of successful scientific cruises, the R/V Calanus was retired and Kniffin became the first captain of the School's newly commissioned 96-foot catamaran. In 2000, Kniffin switched careers, becoming a full time yacht broker.
UM THEATRE ARTS GIVES INTERACTIVE INSIGHT INTO FACULTY REVIEWS

SEEDS Interactive Theatre presentation of ‘The Mid-Term Review,’ is a sketch that portrays interactions during a faculty meeting to evaluate an assistant professor’s progress toward tenure. The inaugural presentation of the sketch at the University of Miami took place at the Rosenstiel School. Directed by Jennifer Burke and facilitated by Dr. David Wilson, it involved faculty and professional actors affiliated with UM’s Department of Theatre Arts.

With funding from NSF-ADVANCE and the Provost’s Office, the University recently established ‘Scientists and Engineers Expanding Diversity and Success (SEEDS)’ to promote the recruitment and success of women and underrepresented minorities in these fields. One valuable tool for better understanding and dealing with unintended obstacles to success is through interactive theatre. Using a solid foundation of research on faculty and student experiences to develop and present provocative vignettes, interactive theater engages the audience in thinking and talking about issues of diversity, pedagogy, and inclusion. The skits draw the audience into a scene with a mix of comedy and drama designed to portray the complexities and challenges of everyday academic situations. After each sketch, audience members engage in dialogue with the actors who continue to play their roles, answering questions and making comments to audience members. For more information and to see who comprises the SEEDS troupe, see http://www.as.miami.edu/seeds/theatre

NEW SLATE OF MSGSO OFFICERS ANNOUNCED

The Marine Science Graduate Student Organization (MSGSO) provides a link between students and Rosenstiel School administration. We are here to listen to students’ ideas, concerns, and answer any questions they have, as well as to provide activities and opportunities to interact with other students locally and at other university graduate programs. MSGSO’s leadership welcomes all new students as it looks forward to a fun-filled year.

MSGSO leadership will update the community through e-mails, but please feel free to contact us at msgso@rsmas.miami.edu, or through any of our division representatives.

2009-2010 MSGSO Board Officers
President: Janet Genz
Vice President: Katie Inderbitzen
Treasurer: Laura Fiorentino
Secretary: Eliza Martin

Division Reps
AMP: Tripp Collins
MAC: Robert Letscher
MAF: Katrina Phillips
MBF: Ross Cunning
MGG: Lyanne Yurco & David Weinstein
MPO: Marcela Ulate Medrano

Special thanks to everyone that helped last year’s MSGSO board. We couldn’t have executed all of the events and raised as much money for STF without the help of a lot of people. We hope all of those people (and many more) will provide as much support to this coming year’s board!
BOXER CRABS KNOCK OUT THE COMPETITION IN 5TH ANNUAL UNDERWATER PHOTO CONTEST

In its fifth annual Underwater Photography Contest, the Rosenstiel School attracted a diverse array of national and international photographic talent representing 23 countries. The 918 images were judged in one of three categories: “wide angle,” “macro,” and “fish or marine animal portrait.” Recognition was also given to the best among University of Miami student entries.

The Best Overall photo (left) was an image submitted by Marchione Giacomo from Italy. The photograph depicts two Boxer crabs (Lybia tasselata) with sea anemones in each claw. When threatened Boxer crabs wave the stinging tentacles in defense against predators. The image was shot in Manado, North Sulawesi, Indonesia.

Winning images were chosen via anonymous judging by a panel of experts in underwater photography and fine arts, including underwater photographers Myron and Nicole Wang, wildlife photographer Tim Calver, and Wilfredo Lee from the Associated Press. Awards included a weeklong trip with Blackbeard’s Cruises and cash prizes.

Winners, listed by category, include:

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<th>Macro</th>
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<td>Vickie Coker</td>
<td>Michael Rosenfeld</td>
<td>Judy Townsend</td>
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<th>Fish or Marine Animal Portrait</th>
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<td>Steven Kovacs</td>
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<tr>
<td>Neil Hammerschlag</td>
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<tr>
<td>Evan D'Alessandro</td>
<td>Alessio Viora</td>
<td>Thomas Carey</td>
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Winning images can be see on our website: http://www.rsmas.miami.edu/support/advancement/uw-2009/uw-2009-winners.html

RENE BOITEAU EARNS CHURCHILL FOUNDATION SCHOLARSHIP

Rene Boiteau, a senior in the honors Integrated Science Program at Northwestern University, majoring in chemistry and earth and planetary sciences, who worked as an intern for NOAA’s AOML on a Hollings Scholarship last summer. Now, after assisting with the UM Center for Oceans and Human Health epidemiological study on Hobie Beach, and participating on the FACE dye tracer study cruise aboard the R/V F.G. Walton-Smith, his hard work has was recognized with a prestigious Winston Churchill Foundation Scholarship which he will use to pursue his master’s degree abroad at Cambridge University in England. The prize recognizes outstanding academic achievement and research potential among the best students from the nation’s top colleges. The Churchill Scholarship marks Boiteau’s second prestigious national academic award in as many years. Prior to his junior year, he won a Goldwater Scholarship, considered by many to be the most prominent academic award given to undergraduate math and science majors in the United States.

He will be pursuing an MPhil degree in Earth Sciences at the University of Cambridge. His plan is to work in the geochemistry laboratory of Dr. Henry Elderfield in the Cambridge Department of Earth Sciences. The objective of his research project will be to better understand the causes of past perturbations in the ocean carbon cycle. Best of luck to him!
AQUACULTURE RECEIVES RAVE REVIEWS IN B-SCHOOL COMPETITION

For the second year in a row, judges at the annual University of Miami (UM) School of Business Entrepreneurship Competition awarded prizes to a sustainable fisheries project developed by students from the UM Rosenstiel School of Marine and Atmospheric Science. At this year’s 7th annual competition, John Stieglitz, a Marine Affairs and Policy graduate student, won runner-up and $3,000 in the competition’s High-Potential Venture category. His venture, Blue Ocean Aquaculture, focuses on the production and shipment of sustainably cultured juvenile yellowfin tuna for the billion-dollar global offshore aquaculture industry and the capture-based tuna aquaculture industry.

Originally from Miami, Fla., Stieglitz received his undergraduate degree in Environmental Science from the University of Denver. Following years of charter fishing experience and Florida Keys/Everglades fish population research he entered University of Miami’s Aquaculture program in 2007. In 2008, he was awarded the Rosenstiel School’s Iversen Award for Aquaculture. Stieglitz is currently working toward his graduate degree at the University of Miami’s internationally renowned Aquaculture Program.

Last year, Aaron Welch and Ron Hoenig, both graduate students in the Rosenstiel School’s Aquaculture Program, won first place in the High-Potential Venture category for their sustainable aquaculture concept designed to produce and sell valuable bait fish, known locally as the ‘goggle eye,’ to bait retailers throughout the state of Florida.

The School’s Aquaculture program was recently awarded funding from NOAA and the National Marine Fisheries Service to begin to look at growout technologies for two new species, blackfin tuna and goggle-eye. Stieglitz, Hoenig and Welch will be taking leading roles in these projects.

Established in 2003, the School’s Entrepreneurship Competition is open to all University of Miami students. Individuals or teams of students must first submit a concept synopsis, outlining a novel idea for a product, service, or business in one of the two categories. This year, 74 entries were submitted, from which 28 went on to the second stage to be formalized into detailed business plans. From those, 18 finalists were selected to present their ideas to a panel of judges that included business executives, entrepreneurs and venture investors. The winners were announced at an awards luncheon.

SAVE THE DATE!

Alumni Weekend Waterfront Happy Hour
Friday, November 6th 4 - 6 p.m.
RSMAS Commons
$10 includes hors d’oeuvres and cash bar

Open to all RSMAS alumni, students, faculty, staff and affiliates! All UM alumni are welcome to attend!
Contact: Karen Wilkening at 305-421-4612 or alumni@rsmas.miami.edu
NAPLES SEA SECRETS – NO LONGER A SECRET!

The Rosenstiel School's Advancement Office recently concluded another successful spin-off Sea Secrets lecture series in Naples, Fla. The program marks a long-standing partnership with NCH Healthcare System, Inc. and, similar to the series in Miami, attracts a diverse group of people interested in environmental topics. Audiences of close to 100 attended three lectures at the Naples Community Hospital’s Telford Center. Lectures included “Sharks: Exploring the Planet’s Most Fierce and Least Understood Predators” by marine biology and fisheries graduate student Neil Hammerschlag, “Are South Florida’s Fisheries Sustainable” by professor of marine biology and fisheries graduate student Jerry Ault, and “Chasing Science at Sea” by adjunct professor Dr. Ellen Prager. Both Ault and Prager signed copies of their new books following their talks. Guest at Hammerschlag’s talk were so enthralled that they invited him back for an encore performance speaking to students at the Community School of Naples. Folks in Naples are becoming increasingly immersed in the Rosenstiel School's science! Thanks to all of the speakers for their time and energy!

HONORARY ALUMNI RECOGNIZED

In the School's 66 years, only two very special individuals have been recognized as Honorary Alumni – Jean Yehle and Don Heuer. During the Rosenstiel School’s 2009 Spring Commencement breakfast on May 15, Dean Otis Brown honored Yehle and Heuer, along with the 2009 graduating class, for their commitment and dedication to the University of Miami.

Yehle became an Honorary Alumna of the Rosenstiel School in October 1998 in recognition of “her significant and much appreciated contributions to the School.” For more than 14 years, Yehle served as the School's Public Information Officer until her retirement in 1985. She has since remained faithfully involved, working tirelessly as a campus historian; authoring both written and oral histories of the School and its scientists, and compiling an extensive collection of archives. Her dedicated work will provide subsequent generations with an essential account of the founding and development of the School.

Upon his retirement in May of 1998, Heuer was made an Honorary Alumnus of the Rosenstiel School in appreciation of “his 37 years of exceptional service to the students of the School.” Heuer worked as the Print Shop Supervisor from 1961 to 1998, influencing the entire community during his tenure, and becoming a true staple of the campus. He is credited as a friend, mentor and advisor whose dedicated and exceptional service has touched all areas of the University and will continue to benefit it for years to come.

This year, the School made their commendations official by resolution of the University of Miami Alumni Association (UMAA). The UMAA Board of Directors presented them with framed proclamations to acknowledge their unwavering commitment to our University and award them recognition as honorary alumni. Both were given UM Alumni cards, granting them a free lifetime membership in the UMAA and access to special members-only offers from UMAA partners.
ROSENSTIEL ALUMNI LECTURE

The RSMAS Alumni Association presented its 6th Annual RSMAS Alumni Lecture on Earth Day, April 22. Tyler B. Smith, PHD ’05 (MBF) returned to campus to present “Ark or Alamo? The Importance and Future of Caribbean Mesophotic Coral Ecosystems in a World of Shallow Water Coral Decline.” A crowd of more than 100 alumni, students, faculty, staff and community members attended the lecture and reception afterward in the F.G. Walton Smith Commons.

The presentation explored enigmatic Mesophotic Coral Ecosystems (MCE) that form on deep (30-100m) walls, shelves, and banks and remain some of the least studied and most poorly understood reef systems in the world. Despite their historical anonymity, a new wave of MCE study has been propelled by the recent degradation of many shallow water coral reefs, and new technologies that extend the time and safety of in situ observation. Emerging ecological research is addressing questions concerning the structure, extent, and health of MCE, and their connectivity to shallow water coral reef ecosystems. Among the most pressing questions are whether MCE will be able to serve as a refuge for shallow water faunas under multiple, interacting, and possibly synergistic stressors (Ark) or whether MCE will be the last stand of ecologically intact coral reef ecosystems that are ultimately doomed (Alamo). Available data for the Caribbean and extrapolation from bathymetric data suggest that these environments are extensive. Recent studies in the US Virgin Islands have revealed vast MCE resources with unique morphologies, but strong affinities with shallow water fauna, raising the prospects for viable refugia. However, large-scale degradation tied to severe seawater warming and a spatially coherent disease and mortality event tied to an unknown abiotic driver(s) underscore our ignorance of MCE trajectories and disturbance regimes. This presentation will peel back the curtain on these rarely seen environments with new data and new visualizations.

Smith is an alumnus of Western Washington University (B.S. 1996) and the Rosenstiel School (under Dr. Peter W. Glynn). He is currently a Research Assistant Professor in the Center for Marine and Environmental Studies (CMES) at the University of the Virgin Islands where he conducts ecological research, coordinates the USVI Territorial Coral Reef Monitoring Program, and teaches to the next generation of marine scientists and managers.

Smith's return to the Virginia Key campus as the Alumni lecturer was particularly special to the RSMAS Alumni Association, as Tyler is also a past recipient of the RSMAS Alumni Fellowship.

JOIN AN OCEANOGRAPHIC EXPEDITION TO ANTARCTICA

Join UM's Rosenstiel School for the journey of a lifetime: A voyage to Antarctica for the most unusual and exciting Rosenstiel Expedition ever.

In December 2009 cruise aboard the all-suite Corinthian II, the most elegant ship sailing to Antarctica. The UM group leader will be Dr. Ellen Prager, the renowned author who has appeared on The Today Show, Good Morning America, Fox News, CBS Early Show and many other national media.

Aboard Corinthian II you will learn about Antarctica’s natural history and unique ecosystems. On zodiac trips to shore and treks across the frozen tundra, you will experience firsthand the stark beauty of this icy landscape while getting an up close look at its wildlife and geology.

ALUMNI NEWS

2000s

In May 2009, Erica Key, PHD ’04 (MPO) joined the Office of Polar Programs staff as Associate Program Director for the Arctic System Science (ARCSS) program. She is at the National Science Foundation (NSF) through the Visiting Scientists, Engineers, and Educators (VSEE) program.

After completing her graduate studies and a postdoctoral fellowship at RSMAS, Erica served as a Researcher First-Class in air-sea interaction at the Centre d’Etudes des Environnements Terrestre et Planetaires (now the Laboratoire Atmospheres, Milieux, Observations Spatiales [LATMOS]) near Paris. She returned to the U.S. to work on marine biophysics at Columbia University’s Lamont-Doherty Earth Observatory (LDEO) before joining the ARCSS program. Erica has extensive field experience, having worked in all five oceans collecting data for both oceanographic and atmospheric research, and uses these observations to further advancements in remote sensing retrievals, modeling, and forecast analyses.

NEW OFFICERS ELECTED TO RSMAS ALUMNI ASSOCIATION

The RSMAS Alumni Association has elected new officers to its Board of Directors! Jenny Litz, BS ’96, PHD ’07 (MBF) has taken the helm as President, following her term as Secretary. Jenny was the 2001-02 RSMAS Alumni Fellowship recipient and we are thrilled to have her continued involvement and leadership. Marilyn Brandt, PHD ’07 (MBF) is joining the Alumni Board as Vice President. She has been an active volunteer in the RSMAS Alumni Association for some time now. Long-standing Alumni Board member, Jennifer Schull, AB ’97, MA ’00 (MAF), is our newly elected Secretary. Our inaugural Alumni Fellowship recipient (1997-98), Jen served as Vice President last term and has previously served in all officer roles. Our outgoing President and another veteran Board member, Erica Rule, MA ’99 (MAF) will stay active as a Board member. Joan Feil Clancey, MS ’55 (MPO), Laura Bracken, MA ’07 (MAF), Tammy Laberge MacDonald, PHD ’09 (MBF), Susan MacMahon, BBA ’85, MA ’92 (MAF), and Nancy Voss, MS ’54 (MBF) were also elected as Board Members.

The RSMAS Alumni Association is dedicated to building a strong network among our graduates; enhancing their careers and opportunities, advancing their interests, and harnessing their skills and resources for the benefit of the RSMAS community. One of the primary objectives of the Alumni Association is to raise funds in support of an annual student fellowship, which provides tuition and a stipend for an entire academic year.

To become involved in the RSMAS Alumni Association, contact alumni@rsmas.miami.edu. For more information, visit www.rsmas.miami.edu/alumni

THE LAST WORD

“There are times to cultivate and create, when you nurture your world and give birth to new ideas and ventures. There are times of flourishing and abundance, when life feels in full bloom, energized and expanding.”

Chogyam Trungpa, Buddhist meditation master, scholar, teacher, poet and artist