Spring 2011

Spring 2011

NSU Oceanographic Center

Follow this and additional works at: https://nsuworks.nova.edu/occ_currents

Part of the Marine Biology Commons, Oceanography Commons, and the Terrestrial and Aquatic Ecology Commons

NSUWorks Citation

https://nsuworks.nova.edu/occ_currents/4

This Article is brought to you for free and open access by the Publications by HCNSO at NSUWorks. It has been accepted for inclusion in Currents by an authorized administrator of NSUWorks. For more information, please contact nsuworks@nova.edu.
On March 9, the Oceanographic Center hosted the groundbreaking for the Center of Excellence for Coral Reef Ecosystems Science facility. Situated by the Intracoastal Waterway, more than 200 people celebrated the start of construction on the 86,000-square-foot complex, which will be the only center in the United States devoted to coral reefs. NSU Chancellor Ray Ferrero, Jr., J.D., and NSU President George Hanbury II, Ph.D., welcomed the university’s Board of Trustees; the Oceanographic Center Dean’s Development Council; representatives from the National Institute of Standards and Technology (NIST); representatives from the offices of Senator Bill Nelson and Congresswoman Debbie Wasserman-Schultz; the design-build team of Cannon, Acai, and Moss-Miller; elected officials from the city of Hollywood; our OC neighbors from the U.S. Navy, the Coast Guard, and John U. Lloyd State Park; representatives from the Florida DEP

(continued on page 2)
Richard E. Dodge, Ph.D., dean of the Oceanographic Center and executive director of NSU's National Coral Reef Institute, addresses members of the NSU and Broward communities.

OC students display current research projects during the groundbreaking ceremonies (Front row): M.S. students Charles Walton, Shara Teter, Stephanie Bush, and Jenna Lueg (Back row): Ph.D. candidate Kirk Kilfoyle and M.S. students Cody Bliss, Kerri Below, Mauricio Lopez-Padierna, and Mae Taylor

Groundbreaking (continued from page 1)

and Port Everglades; and the Port Everglades Association. OC students, faculty and staff members, and friends were also in attendance.

“It will be transformational in terms of coral reef science,” said Richard E. Dodge, OC dean and executive director of NSU's National Coral Reef Institute. “We're at a tipping point for coral reefs. They're under serious global stress; they're under serious local stress.”

At the close of the ceremonies, the Port Everglades Pilot Association joined in the celebration by organizing the firing of the water cannon from the SDM New River.

The Center of Excellence for Coral Reef Ecosystems Science facility is the result of a $15-million federal grant from NIST. NSU was among 12 universities out of 167 applying nationwide to receive this competitive and prestigious grant. NSU was one of two universities that received the full amount of $15 million and the only university to get a grant that had an ecological theme. The award is the largest research grant in the university’s history. The center is expected to create 22 new academic jobs and 300 construction jobs, employ 50 graduate students, and preserve 22 existing academic jobs. It is expected to open in early 2012.

OC Researcher Wins Prestigious Remote Sensing Award

Jeremy Kerr, a research assistant in the Remote Sensing Lab, has won DigitalGlobe's inaugural 8-band Research Challenge for his paper, “WorldView-2 offers new capabilities for the monitoring of threatened coral reefs.” Judged by five leaders in the field of remote sensing, this international competition was created to encourage researchers from various fields to use high-resolution imagery from DigitalGlobe’s WorldView-2, an 8-band Multispectral Satellite, in their research. This new satellite, launched in 2009, is the first satellite to provide multispectral imagery across 8-spectral channels in the visible and near-infrared spectrums at a meter-scale spatial resolution.

Kerr's research expanded on a developed depth derivation model and demonstrated that, combined with the expanded model, the increased spectral information provided by this new satellite resulted in more precise depth estimates. This new model will be used to create bathymetric maps for remote coral reef systems as part of the Living Oceans Foundation's Global Reef Expedition. The first destination
Electromagnetic Observatory established in the Straits of Florida

In December 2010, TowBoatU.S. Fort Lauderdale’s 96’ Richard L. Becker was contracted by the Oceanographic Center and Ocean Data Technologies to deploy a state-of-the-art, subsurface buoy off the coast of Fort Lauderdale. Funded by the U.S. Office of Naval Research, this is a cooperative project involving the Oceanographic Center, Naval Surface Warfare Center, South Florida Testing Facility, and Florida Atlantic University’s SeaTech.

This buoy will provide physical oceanographic data for the Electromagnetic Observatory Project. Measuring 49 inches in diameter and housing an acoustic Doppler current profiler, the buoy rests at a depth of 250 meters in the Straits of Florida. Members of the OC’s Physical Oceanography lab, led by Alexander Soloviev, Ph.D., associate professor, will use this data and compare it to computer models to help make predictions about the impact of oceanic currents on electromagnetic fields in the ocean.

is Cay Sal Bank in the western Bahamas, followed by visits to Great Inagua, Little Inagua, and Hogsty Reef. The Remote Sensing Lab will use the expedition to ground-truth benthic habitats and seafloor topography at these research sites. The results of this research will be shared with the Bahamian government to assist in their management of these remote locations. The research will also be used to investigate how the landscapes in remote reef systems differ from those with a closer proximity to coastal communities.

Kerr’s supervisor, Sam Purkis, Ph.D., NSU-OC associate professor, stated:

“The award Jeremy has won reaffirms the use of cutting-edge technology to confront the coral reef crisis. Satellite imagery provides a unique regional-scale view of reefs and serves to bridge the gap between traditional fieldwork and the country-wide assessment. Jeremy has shown that satellite data are much more than just pretty pictures, but instead quantitative tools for ecological assessment. I’m proud that his work has been recognized by the scientific community.”

Kerr will receive his award in August 2011 at a geospatial conference hosted by GIS development in Rio de Janeiro, Brazil.
OC Library Adds New Librarian and Services

This January, the Alvin Sherman Library added a second reference librarian to the William S. Richardson Oceanographic Center Library. Jaime Goldman (’10) joined Kathy Maxson at the OC as a reference librarian. Goldman started working at the Alvin Sherman Library on NSU’s main campus in 2001 and has been in the Public Library Services Department and the Collection Development Department, as well as working in library administration. She has also worked as a virtual reference provider for Ask a Librarian since 2008.

With this increase in personnel, the library is now able to offer OC students additional librarian services. These include extended weekend and evening hours, instruction for class or research needs, and a continually updated library guide available at http://nova.campusguides.com/oclibrary.

We welcome Goldman and thank her and Maxson for all of their hard work on behalf of the students and faculty and staff members at the OC.

OC and GHRI Researchers Track Tiger Sharks Seasonal Migration

The tiger shark is a charismatic, but little understood, species that lives in tropical and temperate oceans throughout the world. There is increasing evidence that tiger sharks play a key ecological role as apex predators in many marine environments, including shallow seagrass habitats and coral reefs. Scientifically informed fisheries management and conservation are essential to prevent overfishing, causing tiger shark population collapses and disruptions to normal functioning of these ecosystems.

The OC and the Guy Harvey Research Institute (GHRI) have been tracking seven tiger sharks tagged in 2009. Researchers have been able to follow these tiger sharks for an unprecedented length of time (12–17 months and counting). Five of the seven sharks tagged in 2009 have had their locations reported to the satellites frequently enough to see a clear migratory pattern emerging. The study is continuing with the tracking of more tiger sharks (5 in the U.S. Virgin Islands, 4 in the Bahamas, and 11 in Bermuda) that were tagged with satellite tags in 2010. To view where the sharks have gone and for more information about this project, please go to www.nova.edu/ocean/ghri/tshark.html.

OC Faculty Members and Students Attend International Reef Symposium in the Netherlands

From December 13 to 17, eight OC faculty members, students, and alumni and one Farquhar College of Arts and Sciences (FCAS) student attended the Euro International Society for Reef Studies Symposium in Wageningen UR, the Netherlands. Faculty member Joshua Feingold, Ph.D.; Ph.D. candidates Abigail Renegar and Anastasios Stathakopoulos; and OC alumni and senior research assistant Elizabeth Larson (’10) contributed oral presentations at the symposium. Renegar; M.S. student Stephanie Bush; OC faculty member David Gilliam, Ph.D.; OC adjunct professor Vladimir Kosmynin, Ph.D.; OC research scientist Alison Moulding, Ph.D.; and FCAS student Angelica Garcia all contributed to the poster session.

Topics for the presentations and posters included land-based coral nurseries, geomorphology and paleoecology of Holocene reefs of Southwest Florida, demography of Acropora cervicornis populations off Broward County, effects of anthropogenic stressors on Porites astreoides, sponge injury recovery and growth, tissue/skeletal interactions in regenerating and larval coral, and the distribution and abundance of fungiid corals and sea pens in the Southwest Gulf of California.
OC Faculty Member Stars in *Messing with Nature*

OC professor Charles Messing, Ph.D., premiered his two pilot episodes of *Messing with Nature*, a half-hour television series, at the Cinema Paradiso on November 16, 2010. Messing describes his series by saying, “Imagine Alton Brown (*Good Eats*) hosting *Planet Earth* with a bit of Monty Python thrown in.” The first episode, *Let's See What's Out There*, examines whether current nature programming (e.g., man-eating sharks, poisonous snakes, and spiders) accurately reflects biodiversity and how scientists go about describing new species. The second episode, *The Maltese Aquifer*, puts a new twist on an old film noir to explain Florida’s fossil and geological history, derailing the space-time continuum between the present, the past, and a run-down office in a seedy part of town.

WLRN public radio and television is scheduled to air the episodes at the end of March 2011.

---

OC Faculty Members and Research Scientists Recognized for External Funding

On February 1, 2011, NSU held the External Funding Recognition Ceremony at the Alvin Sherman Library to honor the university’s faculty and staff members that received external funding in FY2010. Hosted by Ray Ferrero, Jr., J.D., NSU chancellor, this annual event recognizes the efforts of NSU faculty and staff members who received external grant funding in the last fiscal year. Fiscal year 2010 saw great progress in the area of external funding, which in total exceeded $71 million. The reception serves to honor the extraordinary efforts of those who contributed to this milestone and to encourage the continued pursuit of additional external funding.

The OC carried the day with 16 awardees, including one for the late Kevin Kohler, whose joy of research will be continued through the Kevin Kohler Memorial Scholarship Research Fund.
OC Hosts WISTA

The Women’s International Shipping and Trading Association (WISTA) January 2011 meeting was held at NSU’s Oceanographic Center. WISTA is an international organization for women in management positions involved in maritime transportation business and related trades worldwide. Elaine Heldewier, environmental director of Carnival Cruise Lines and a member of the OC Dean’s Development Council, is a member of WISTA and brought the group to the OC for their business meeting. The group toured the OC and met with researchers from various labs to learn more about OC research.

Fourth Annual NSU Oceanographic Center Fishing Tournament Held in Florida Keys

The Fourth Annual NSU Oceanographic Center Scholarship Fishing Tournament was held October 21–23 at Hawk’s Cay in the Florida Keys. The weekend included an offshore and flats tournament, as well as an awards banquet, captain’s meeting, and kick off party. Scholarship recipient and Ph.D. candidate Andia Chaves-Fonnegra was on hand to update the tournament’s sponsors and participants on her research. Also, students from various OC labs held a poster session during the kick off party so the participating anglers could learn more about their exciting research. Students from Dave Kerstetter’s Fisheries Lab collected gut samples from the dolphin, tuna, wahoo, and kingfish that anglers caught during the offshore tournament.

The whole tournament was a huge success, raising $125,000 for the endowed Fishing Tournament Scholarship. A big thank you to all the tournament sponsors; participants; NSU trustee Andy DiBattista; the Tournament Committee; and especially to John J. Santulli II, NSU vice president of facilities management, and his staff for making this another successful fund-raiser for the OC!
It has continued to be a busy time here at the OC. We found Tammy Frank during our fall faculty search. She will be joining the OC this July. Frank is a world-class researcher and teacher with an international reputation in the fields of ecology and physiology. She will fill the critical need we have for a marine physiologist at the OC, and we are very lucky to have found someone of her caliber. Her research interests involve deep-ocean animals with emphasis on light effects on distribution and visual physiology.

Frank comes to us from Harbor Branch Oceanographic Institute, where she has advised both M.S. and Ph.D. students. In addition to continuing her research, she will be teaching in our graduate program and teaching undergraduate Anatomy and Physiology at the Farquhar College of Arts and Sciences on the main campus. Please join me in welcoming her to our graduate program and the OC family.

The Kevin Kohler Memorial Scholarship Research Fund has been established. During his life, Kevin Kohler was involved in innumerable important and cutting-edge research projects here at the OC. This memorial is an appropriate tribute to the man and his career. The fund provides students with $500 for small research projects. It is intended for capstone, thesis, and dissertation students who wish to do small, stand-alone research projects with a faculty adviser. More information on the details of the award procedure will be coming shortly.

Beginning this August, we will add two new degree programs to our curriculum: an M.A. in Marine and Coastal Studies and a B.S. in Marine Professional Studies. The M.A. is aimed at individuals that may not need a strong science background, but who must be conversant with the general concepts surrounding the marine environment (e.g., educators, journalists, administrators, and policy makers). The B.S. targets students interested in careers involving the marine environment that are, typically, technically oriented and do not require an intensive science background (e.g., those interested in working on various aspects of marine transportation or port and harbor security). Both programs will begin online, but our intention is that they rapidly become hybrid courses where students can select their preferred mode of delivery: online or on-site. The addition of these programs will add a host of exciting new courses and broaden the coursework we can offer all OC students.
The following degree defenses took place October–December 2010

**M.S. Defenses**

Atsushi Fujimura, “Effects of water flow on bleaching of *Palythoa caribeorum*.” Committee: Bernhard Riegl, Ph.D., Chair; Alison Moulding, Ph.D.; and Alexander Soloviev, Ph.D. Thesis. October 29.

Julia Ossler, “Seasonal and salinity effects on the distribution of higher filamentous marine fungi at Rookery Bay, Florida.” Committee: Scott Schatz, Ph.D., Chair (Midwestern University); Harold Laubach, Ph.D.; and Curtis Burney, Ph.D. Thesis. October 29.

Mae Taylor, “Spiral valve parasites of selected tropical pelagic elasmobranchs and internal parasites of mesopelagic teleosts.” Committee: David Kerstetter, Ph.D., Chair; Harold Laubach, Ph.D.; and Jose Lopez, Ph.D. Thesis. November 2.

Patricia Waikel, “Analysis of a partial expressed sequence tag (EST) library and differential expression of genes in biochemical morphotypes of the marine sponge *Discodermia dissoluta*.” Committee: Jose Lopez, Ph.D., Chair; Mahmood Shivji, Ph.D.; and Emily Schmitt, Ph.D. Thesis. November 12.


Lisa Morse, “Understanding the complexity of cleaning symbiosis within coral reef fishes and the effects on community dynamics.” Committee: Richard Spieler, Ph.D., Chair, and David Gilliam, Ph.D. Capstone. December 10.

Tracy Dirks, “Effects of estrogenic substances on gonochoristic teleost fish populations in the aquatic environment.” Committee: Bernhard Riegl, Ph.D., Chair, and David Kerstetter, Ph.D. Capstone. December 15.

Jaime Goldman, “Seasonal aggregations of the Florida Manatee in the Port Everglades and Intracoastal regions of Fort Lauderdale, Florida.” Committee: Edward Keith, Ph.D., Chair; Curtis Burney, Ph.D.; and Alan Sosnow (Port Everglades). Thesis. December 17.

M.S. degree specialties are marine biology, coastal zone management, marine environmental sciences, and biological sciences. Each course carries 3 credit hours or may be audited. Tuition is $863 per credit hour (50 percent less for audit). Classes are 12 weeks in length and meet once a week from 6:30 to 9:30 p.m. at the Oceanographic Center (unless otherwise specified). Registration ($25 fee) for summer term runs March 14 through May 16 and takes place at [www.webstar.nova.edu](http://www.webstar.nova.edu) or at the Oceanographic Center. The summer term is May 16–August 5. For further information, call Richard Spieler, Ph.D., or Melissa Dore at (954) 262-3610 or 800-396-2326, or email [imcs@nova.edu](mailto:imcs@nova.edu). More information can be found at the Web site: [www.nova.edu/ocean](http://www.nova.edu/ocean).
Distinguished Researcher Seminar Series

On February 11, the OC welcomed Heinrich Hühnerfuss, Ph.D., as part of the Distinguished Researcher Seminar Series. Hühnerfuss presented his seminar, “Crude oil in the marine environment: Chemical aspects, their detection by airborne surveying systems, their fate, and toxicological implications” to more than 80 students and faculty and staff members. After his talk, he joined OC students at a buffet dinner where they could continue to discuss his research.

Hühnerfuss has been associated with the University of Hamburg since his undergraduate days in the 1960s, and became a professor there in 1996. He has participated in or organized numerous international projects and experiments, including JONSWAP (Joint North Sea Wave Analysis Project); MARSEN (Maritime Remote Sensing); SAR 580 (Synthetic Aperture Radar); SAXON-FPN (Synthetic Aperture Radar X-Band Ocean Nonlinearity-Forschungs Platform Nordsee), and the German Commission for the Development of Coastal Airborne Crude Oil Surveying Systems. He has more than 220 professional publications, including articles in journals such as *Journal of Chromatography, Environmental Science and Technology, Chemosphere, Marine Environmental Research*, and *Marine Pollution Bulletin*.

The Distinguished Researcher Seminar Series represents the Oceanographic Center’s contribution to NSU’s Quality Enhancement Program and is held twice a year.

Associate professor Sam Purkis, Ph.D., has co-authored a book entitled, *Remote Sensing and Global Environmental Change*. The book, published by Wiley-Blackwell, is co-authored by Victor Klemas (professor emeritus, University of Delaware). It is intended to provide the reader with a broad grounding in the science of observing our changing planet. It contains a comprehensive, sequenced discussion covering the significant themes of global change, their causes, and how they can be monitored through time. Topics covered include degrading coral reefs, melting ice caps, sea-level rise, urban sprawl, and global changes in vegetation, among many others. The text will serve as an invaluable reference for managers and researchers, regardless of their specialty, while also appealing to students of all ages.
ALUMNI NEWS

Neugaard (`03) Wins Oceanographic Center’s Distinguished Alumni Achievement Award

This January, Erik Neugaard (`03) was awarded the distinguished alumni award for the OC at NSU’s Celebration of Excellence. Neugaard has experience in all aspects of environmental project management, planning, permitting, mitigation, science, and education and has specialized experience in National Environmental Policy Act analyses and compliance. He has been a professional SCUBA diver since 1981 and has performed many seagrass surveys, including the federally listed Johnson’s seagrass, benthic community surveys, and fish surveys to depths of 300 feet using mixed-gas SCUBA. Neugaard has maintained his connection to the OC and fostered a sense of community between current students and the professional consulting world. He is president of the Florida Association of Environmental Professionals and encourages students to attend the networking luncheons and events. Neugaard was also instrumental in attracting other alumni to join the group. Additionally, he has hired NSU students and alumni on his staff due to their “outstanding qualifications and personalities.”

Six Alumnae Meet at FAEP Treasure Coast Event

The Florida Association of Environmental Professionals (FAEP), Treasure Coast Chapter, held its annual Environmental Networking Reception and Membership Drive on Thursday, October 14, 2010, at the Abacoa Golf Club in Jupiter, Florida. The Oceanographic Center was a Panther-Level Sponsor. While there, Melissa Dore, OC director of academic support and administration, connected with OC alumnae Melinda Parrott (`02), Kelly Egan (`07), Adrienne Carter (`07), Courtney Arena (`05), Erin Hodel (`07), and Stefanie Ouellette (`06). Ouellette and the Gumbo Limbo Nature Center were awarded the FAEP Treasure Coast award for Environmental Education.

Alumnae monitor Deepwater Horizon Gulf Oil Spill

Three recent graduates of the OC are now working on various Deepwater Horizon oil spill projects in the Gulf of Mexico. Gabriela Wisniewski (`10) has been working on subsurface oil detection, Stephanie Healey (`10) has been collecting a variety of samples working on offshore boats, and Amber Little (`08) has been working on a project with the Louisiana Department of Fish and Wildlife.
Shutter Shark 2010 a Great Success!

November 5, 2010, marked the awards ceremony for the third annual Shutter Shark student photography contest. Following the ceremony, the winning photos were unveiled as a permanent display at the OC, serving as a backdrop for a special reception held for the winners and attendees. There were more submissions than ever this year, with 42 students submitting more than 300 photos in 5 different categories. Thanks to our extremely generous sponsors, there were some fantastic prizes in store for the winners, including dive gear, apparel, and multiple dive trips. Also included in the donations was an Oceanic Geo 2.0 dive computer that was raffled off. The lucky winner was James Brown, an M.S. student. The judging panel consisted of several OC faculty members and an array of experienced and talented local underwater photographers. A single “Best Overall” image was selected for the grand prize, and the top three photos (plus honorable mention) for the following categories were commended: Vertebrate Portrait, Invertebrate Portrait, Seascape, Topside, and Black and White. Kirk Kilfoyle, Ph.D. candidate, was awarded the grand prize for a photo taken at a local dive site of a sand perch trying to eat a blue crab.

Winning photos can be viewed at www.nova.edu/ocean/shuttershark_10/ss.html.

OC Student Contributes to Fisheries Outreach in the Caymans

Travis Moore, an M.S. student working in David Kerstetter’s lab, was invited to attend the Cayman Swordfish Challenge, an annual recreational swordfish tournament held in Grand Cayman, to conduct field research and function as a scientific consultant for the tournament. Another part of the trip was to provide scientific outreach to the Cayman Island fishing public and help build international connections with the Cayman Government. The visit included a live interview broadcast on Cayman Radio, talks at the tournament captains’ meeting and awards banquet, and three full days of collaborative at-sea field work. Moore’s last day at sea was spent with members of the Cayman parliament and discussing fisheries science and management related to the islands.
Next issue—OC to open Sea Turtle Education Center in Hollywood, Florida.

Editor: Melissa L. Dore
Published quarterly by
Nova Southeastern University
3301 College Avenue
Fort Lauderdale, Florida 33314-7796

NOTICE OF NONDISCRIMINATION
Nova Southeastern University admits students of any race, color, sex, age, nondisqualifying disability, religion or creed, sexual orientation, or national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school, and does not discriminate in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school-administered programs.

Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone number: 404-679-4501) to award associate's, bachelor's, master's, educational specialist, and doctoral degrees.

Follow us on