

PLEASE DO NOT PRINT THIS.

CORAL REEF BIOLOGY

BIOL 399: International Field Studies, Coral Reef Biology in Honduras

January 2013 Salisbury University Biology and Environmental Studies students traveled to the Roatan Institute for Marine Sciences in Roatan, Honduras. For more information about their experiences, go to pages 7-8.



ANNOUNCEMENTS AND AWARDS



Mallory Hagadorn has received this year's Biological Sciences Faculty Award. Mallory graduated with her BS in December 2012 and is now working toward her Masters degree in Applied Biology here at Salisbury University. Congratulations Mallory!

Salisbury University Student Research Conference - Friday, April 26, 2013

The Salisbury University Student Research Conference (SUSRC) committee announces the 11th annual SUSRC on Friday, April 26, 2013. Presentations are organized into themed sessions for all majors. The conference culminates in a poster reception during the evening. The conference is free and the public is invited. **The submission process involves three required steps:** (1) the deadline for a student to submit her or his intent to present is March 15; (2) the faculty mentor must approve the student's work; (3) the deadline to submit final abstracts is Monday, April 1, 2013, by midnight. For more information visit <http://www.salisbury.edu/susrc>.

The Spring 2013 Biology and Chemistry Seminar Series:

<http://www.salisbury.edu/biology/>

Relay for Life of Salisbury University: May 3, 2012

The SU Biology Department is participating in Relay for Life of SU on May 3, 2013. In the past three years we have raised almost \$6000. This year, Mallory Hagadorn will be heading the team as our Team Captain. If you would like further information, please feel free to email Mallory at <mailto:MAHAGADORN@salisbury.edu>.



If you would like to join our team (SU Biology) or make a donation, please go to the following link: http://main.acsevents.org/site/TR?pg=entry&fr_id=41439 and click on "Sign Up" and then "Join an Existing Team".

Washington Academy of Sciences

The Washington Academy of Sciences Salisbury University Chapter will be rekindling their group with plans of seminars, trips, and informational sessions. President Marshall Boyd and Vice President Dustin Parsons (under the supervision of Dr. Williams and Dr. Holland) have a group that is setting out to stimulate the interests and collaboration of students from a wide variety of sciences. WASSU is hoping to work alongside other science groups/clubs to have informational sessions and seminars presented to the Henson School. [Currently we have scheduled for Jim Cole, president of WAS in Washington, D.C. coming February 19th to give a seminar, and several seminars regarding applying for Graduate School and the GREs, joining a scientific society, and being Pre-Med and the MCATs.] We also plan to visit the National Institute of Standards and Technology (NIST) later this semester. The group is open to and encourages all Henson School students to join and present ideas promoting science education and professional interest in the sciences. WASSU currently meets in HS213 at 6pm on Thursdays but will relocate if a larger room is needed.

American Society for Biochemistry and Molecular Biology

In the fall, SU renewed its undergraduate affiliate network (UAN) chapter of the American Society for Biochemistry and Molecular Biology (ASBMB, <https://www.asbmb.org/page.aspx?id=114>) with 21 student members from both the biology and chemistry departments. Drs. Patti Erickson and Gene Williams are serving as advisors. This year's group started an extremely engaging journal club that met weekly last fall to discuss hot topics like the 2012 Nobel Prize discovery that mature cells can be reprogrammed to create pluripotent stem cells, the controversy surrounding the publication of papers describing the production of highly contagious, lethal bird flu strains, and the use of DNA as a digital data storage device. Hanna McFadden (December 2012 graduate) served as President, Zach Rathbun was Vice President, Jesse Miller was the Secretary, Ozzy Rivera was the liason to UMES, Sean James organized discussion topics and papers, and Amanda Biederman helped out with publicity. This years president is Sean James, Zach Rathbun is Vice President, Amanda Chapo is Secretary, and the group will be looking for a Treasurer. Ideas already suggested for this semester include students and faculty planning to give presentations on their own research projects. This allows those presenting at conferences to practice and get feedback in advance. Through ASBMB, Salisbury University is partnering with UMES, where a new UAN chapter is forming. If you are interested in joining the discussions or have a great idea about a potential topic, contact Zach Rathbun (zr76126@gulls.salisbury.edu). If you are interested in becoming an ASBMB UAN member, contact Dr. Patti Erickson (pterickson@salisbury.edu).

Communicating Science 2013: A Workshop for Graduate Students

The workshop will be held in Cambridge, MA during June 13-15, 2013.

Website: <http://workshop.astrobites.com/>

Communicating Science is a workshop organized by graduate students for graduate students focused on science communication skills. The workshop will emphasize written communication in particular and be held from Thursday, June 13, 2013 until Saturday, June 15, 2013 in Cambridge, MA. We welcome applications from science graduate students interested in learning how to effectively communicate their research to both scientific and non-scientific audiences. The 2.5-day workshop for 50 graduate students will feature panels by science and communications experts, writing workshops, and numerous opportunities to interact directly with the expert panelists. As part of the workshop, attendees will draft science compositions and receive feedback from the experts and other attendees. Funding is available to support travel expenses, lodging, and meals for a limited number of attendees; all interested science and engineering students nationwide are encouraged to apply. If you have any questions about the workshop, please contact us at ComSciCon@gmail.com.

WARD MUSEUM OF WILDFOWL ART

- **Faculty Art Exhibit**

Members of the Art Department showcase their works during the department's annual faculty art show, through February 22, in the University Gallery of Fulton Hall. Faculty exhibiting include Jeanne Anderton, Karen Bearman, Gary Brotman, Edward Brown, Alison Chism, Jessica Cross, Helene English, Paul Flexner, Carl Goldhagen, James Hill, Marjorie Hill, Susan Holt, Elizabeth Kauffman, Jinchul Kim, Somiah Lattimore, Lucia Michel, Sally Molenda, John Mosher, Margo Nolan, Pamela Olszewski and Brooke Rogers. This is the first SU Galleries exhibition curated by Galleries Manager Marisa Sage. Admission is free to the public. For information call 410-548-2547 or visit www.salisbury.edu/universitygalleries.

For more information about the following activities, please email wardeducation@salisbury.edu, or register online at <http://www.wardmuseum.org>.

- **Screen Painting in the Baltimore Folk Tradition With John Iampieri**

The Ward Museum of Wildfowl Art, Salisbury University, presents "Screen Painting in the Baltimore Folk Tradition With John Iampieri". Iampieri will lead a screen painting seminar on Saturday, March 2nd, from 10 a.m.-5 p.m. Seminar participants discover the history and functionality of the painted screen as they create a door-sized screen. Space is limited and pre-registration is required.

- **Bluebird Festival**

The Bluebird Festival will be held at the Ward Museum of Wildfowl Art on Saturday, March 9, 2013, from 1-4 p.m. Celebrate and learn about birds and bird conservation through arts, crafts, presentations and entertainment. The event will include a performance from the Snow Hill Middle School Glee Club and presentation by the Maryland Bluebird Society.

- **Salt Marsh Stories with Pickering Creek Audubon Center**

The Ward Museum of Wildfowl Art, Salisbury University, will host an introductory presentation called "Salt Marsh Stories with Pickering Creek" on March 14, from 4:00 – 4:45 p.m. at the Ward Museum. Pickering Creek Audubon Center is engaging the Lower Eastern Shore in taking pride and action in the salt marshes of the Shore through lectures, hands-on experiences, restoration projects and storytelling. Free - (Registration required.)

DNA-Encoded Birthday Wishes

In November, Dr. Patti Erickson's Biol 440 class threw her a surprise birthday party, complete with DNA-encoded birthday wishes! See photos below of the wonderful cake and the class members.



Front row, left to right: Hanna McFadden, Patti Erickson, Jesse Miller, Amanda Chapo.
Back row, left to right: Grant Goldberg, Amanda Frushour, Aisha Ullah, Morgan Taylor, Ozzy Rivera, Sean James and Mike Davis. Not pictured: Ashlea Raleigh and Christian Kramer.

OPPORTUNITIES

Wadsworth Center: Summer Undergraduate Research Program

Program URL: <http://www.wadsworth.org/reu>

The Wadsworth Center participates in summer research experiences for undergraduates. Students are selected from colleges across the country to work for 10 weeks (from early June through mid-August) on independent research projects in the laboratories of Wadsworth scientists. Deadline: 03/01/2013.

Brown and Caldwell: Minority Scholarship

Web Site: <http://brownandcaldwell.com>; Program URL: <http://brownandcaldwell.com/scholarships.asp>

The program consists of three elements designed to increase student's interest in the environmental profession and to support them in defining career goals. Deadline: 03/01/2013.

University of Kentucky: Summer Program in the Biochemical Sciences

Web Site: <http://www.mc.uky.edu/Biochemistry/REU/program.html>

This REU Site Program is targeted at undergraduates who are residents of Appalachia and/or underrepresented minorities. Applicants should be majoring in biochemistry, chemistry, biology or a related subject, and should be seriously considering pursuing a graduate degree and/or career in biochemical research. Deadline: 03/01/2013.

University of Wisconsin-Milwaukee: Summer Internships in Aquatic Sciences

Web Site: <http://home.freshwater.uwm.edu/reu/>

Program URL: <http://home.freshwater.uwm.edu/reu/summer-program-announcement/>

This research experience program will provide undergraduate students with laboratory and field training in aquatic science (including lake and ocean systems) with extensive shipboard field research opportunities. The goal of this activity is to develop, through hands-on experience, future scholars to pursue Interdisciplinary research toward an understanding of the aquatic environment. Deadline: 03/04/2013.

Alabama Space Grant Consortium: Undergraduate Scholarships

Web Site: <http://www.uah.edu/ASGC/>

Program URL: <http://www.uah.edu/ASGC/ScholarshipsFellowships.php>

The Alabama Space Grant Consortium (ASGC), as a participant in the National Space Grant College and Fellowship Program (NSGCFP), invites applicants for NASA Space Grant Undergraduate Scholarships for study in fields related to space at one of its seven member institutions. Deadline: 03/04/2013.

National Institute of General Medical Sciences/NIH/DHHS: Initiative for Maximizing Student Development (IMSD)

Program URL: <http://grants1.nih.gov/grants/guide/pa-files/PAR-13-082.html>

National Institute of General Medical Sciences (NIGMS) invites applications to develop the pool of a diverse group of highly trained undergraduate and graduate students who go on to research careers and will be available to participate in NIH-funded research. The program provides institutional grants to research-intensive institutions that propose well-integrated developmental activities designed to increase students' academic preparation and skills that are critical to the completion of the Ph.D. degree in biomedical and behavioral sciences. This FOA will use the NIH Research Education (R25) grant mechanism. Deadline: 03/14/2013.

**Friends of Blackwater National Wildlife Refuge:
Scholarships for rising juniors, seniors and grad students**

Three annual scholarships, one each of \$3000, \$2000 and \$1000, are offered by the Friends of Blackwater for students who are pursuing careers in fish and wildlife management, environmental education and science, and related fields. Students must have a minimum GPA of 3.0 and be residents of Cecil, Kent, Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, Worcester, or Somerset County. Applications are due by March 15 and must include a completed application form, proof of enrollment from the college, transcripts, three letters of recommendation (one from college advisor) and an essay describing career goals. For more information, see www.friendsofblackwater.org/scholarship.html.



Alaska Space Grant Program: Alaska Space Grant Summer Fellowship Program

Web Site: <http://spacegrant.alaska.edu>; Program URL: <http://spacegrant.alaska.edu/student/summer>
The sponsor invites applications from U. S. Citizens for research and public service/education fellowship stipends. These stipends are offered to students in aerospace, engineering, space science, Earth systems science, biological sciences, computer science, and other related science, technology, engineering or mathematics (STEM) fields. Students working on educational research and public service topics in mathematics, science, engineering, or technology are also eligible to apply. Preference is given to projects directly related to aerospace, engineering, space science, Earth system science, and directly related educational efforts. Stipends available under this announcement are limited to students attending Alaska institutions of higher education. Deadline: 03/15/2013.

American Association of Candy Technologists: AACT's John Kitt Memorial Scholarship

Web Site: <http://www.aactcandy.org>
Program URL: <http://www.aactcandy.org/aactscholarship.asp>
This non-renewing scholarship is awarded to qualifying college students enrolled in an accredited, four-year college or university within North America. Deadline: 04/19/2013.

British Society for Cell Biology: Summer Studentships

Web Site: <http://www.bscb.org/?url=main>; Program URL: <http://www.bscb.org/?url=studentships/index>
The sponsor provides support for high caliber undergraduate students, who wish to gain research experience in cell biology during their summer vacation. Their aim is to encourage students to consider a post-graduate research career in cell biology after their undergraduate studies. Deadline: 04/29/2013.

Oak Ridge Institute for Science and Education:

Student Research Participation at the Centers for Disease Control & Prevention

E-mail: melissa.goodman@orau.org;

Program URL: <http://see.orau.org/ProgramDescription.aspx?Program=10110>

Under this program, postgraduates, college and university faculty, and students are provided opportunities to conduct research in infectious diseases, environmental health, epidemiology, occupational safety and health, exposure and disease registries, health investigations, toxicology, emergency response, public health assessment, and health education. Deadline(s): Most of the Research Participation Programs at the CDC do not have application deadlines; applications are accepted on a continuing basis.

TRAVEL and PRESENTATIONS

BIOL 399: International Field Studies, Coral Reef Biology in Honduras

Article written by: Dr. Ann Barse

The Winter Session course in BIOL 399 was taught for the 13th time during January 2013. After a week of classes at SU where students read scientific articles on coral reefs, 13 Biology and Environmental Studies Majors traveled to the Roatan Institute for Marine Sciences in Roatan, Honduras. We had six days of Caribbean diving, with lectures between dives on topics such as fish and coral identification, reef monitoring research, cetacean and sea turtle anatomy and physiology, and life in the mangroves. For the first time in the history of this course, all students had their Open Water Scuba certification, and for all but one student, this was their first experience diving in the ocean.



Every day, we went out on the vessel "Haydee" for morning and afternoon dives in different sites. Students read about fish cleaning stations and damselfish farming, and then witnessed these important mutualisms on the reefs during dives. Highlights of our dives include spotting 9 sea turtles – hawksbill, and green turtles. Divers gained experience in different reef zones, such as mangroves and back reef areas, which are important nursery grounds for juvenile fishes, and the offshore reef slopes and walls where larger groupers, snappers, barracudas and eagle rays are found. We saw the beautiful gastropods known as Flamingo Tongue on sea rods and sea plumes waving in the currents near the reef crest. Sadly, we witnessed many "invasive" lionfish in all of these habitats, from mangroves to 60+ foot depths. These Indo-Pacific natives are consuming vast quantities of small finfish and invertebrates and thereby disrupting the Caribbean reef ecosystem's food web.

Continued on next page...

Coral Reef Biology in Honduras (continued)

We did one night dive and saw a resting turtle, fish exhibiting their nocturnal colorations and habits of lying on their sides or in crevices in the reef, and spotted spiny lobsters. Students turned off their dive lights to see flashes of light emitted from bioluminescent organisms such as annelid worms, jellyfish, ctenophores, and dinoflagellates. Students also had the chance to learn from professional bottlenose dolphin trainers about dolphin anatomy and behavior, and then we swam freely with a pack of about 30 animals.



Snorkeling the back-reef just north of this reserve we caught organisms in hand nets and studied them on board the Haydee in tanks, before releasing them unharmed back to the sea. Organisms we observed include Donkey Dung Sea Cucumbers, Cushion Sea Stars, and Red Heart Urchins with their pure white Pea Crab commensals living amongst their spines.

We return to Roatan next year - if interested, please contact Dr. Ann Barse soon!



The Economics of Biodiversity – Costa Rica

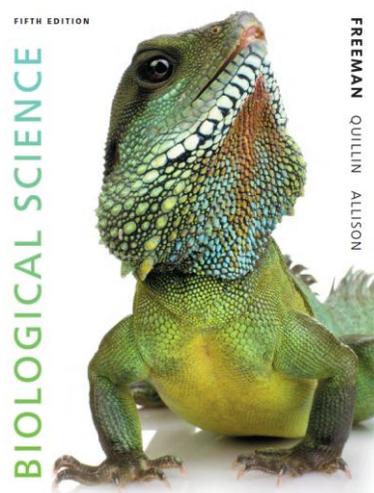
The winter program The Economics of Biodiversity went to Costa Rica for 11 days in January. The program was led by adjunct faculty Mary Roman Gunther and Dr. Eric Liebgold. The program was designed to give students the opportunity to experience the impressive biodiversity of Costa Rica and study firsthand the impacts of ecotourism. Twenty-three students from 12 different majors across the campus. The students visited Tortuguero; La Selva Biological Station; the Monteverdi Cloud Forest Preserve (where Ms. Gunther finally got to see a Resplendent Quetzal!); Manuel Antonio National Park; and Sarchi a town known for artisans and local crafts. They also had the opportunity to go on a night hike, zip line, boat tour, chocolate tour and even dance lessons. It was an excellent experience for all!



PUBLICATIONS

Hot off the press!

Kim Quillin has just published her fifth edition of the biology textbook *Biological Science* with coauthors Scott Freeman and Lizabeth Allison. Dr. Quillin has worked with Scott Freeman on this book for fourteen years, since the first edition. She is currently the author and illustrator of the evolution, ecology, and animal diversity chapters.



Barse, A.M. and S. A. Bullard. 2012. Redescription and new host record of *Capsala laevis* (Monogeneoidea: Capsalidae: Capsalinae) from gill of Roundscale Spearfish, *Tetrapturus georgii* (Perciformes: Istiophoridae) in the Northwestern Atlantic Ocean. *Journal of Parasitology* 98(4):735–745.

Klein B.A, J. Stein, and **R.C. Taylor** 2012. Robots in the service of animal behavior. *Communicative & Integrative Biology* 5:467–473.

Harvey, M. B., G. N. Ugueto, and **R. L. Gutberlet, Jr.** 2012. Review of Teiid Morphology with a Revised Taxonomy and Phylogeny of the Teiidae (Lepidosauria: Squamata). *Zootaxa* 3459:1–156.

Parveen, S., L. DaSilva, A. DePaola, J. Bowers, C. White, **K.A. Munasinghe**, K. Brohawn, M. Mudoh, M. Tamplin. 2013. Development and Validation of a Predictive Model for the Growth of *Vibrio parahaemolyticus* in Post-Harvest Shellstock Oysters. *International Journal of Food Microbiology* 161:1–6.

Stribling, J. 2012. A simple device for measuring elevation changes in wetlands. *Wetland Science and Practice* 29:17–19.

ALUMNI NEWS

Salisbury University alumnus Greg Burzynski '07 is helping unravel the roots of the animal kingdom. See press release: <http://www.salisbury.edu/newsevents/fullstoryview.asp?ID=5194>

If you have announcements to add or general comments regarding the Newsletter, please email dlprice@salisbury.edu.

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