March for Science in Washington DC, April 22, 2017

Graduate students and faculty take a stand!
From left, Andrew Cronin, Jordan Roose, Dr. Ryan Taylor, Marissa Moran & Kelsey Flowers.

Dr. Jennifer Nyland (Left) and Stephanie Lamb (Right).
HONORS PROGRAM

WELCOME
Dr. Philip Anderson, Advisor
Beta Beta Beta

GRADUATE AND PROFESSIONAL ADMISSIONS
Dr. Stephen Gehrich, Chair

RECOGNITION OF ACHIEVEMENT AND PRESENTATION OF BIOLOGICAL SCIENCES FACULTY AWARD
Dr. Jessica Clark, Research Mentor

RECIPIENT
Hannah Ennerfelt

BETA BETA BETA BIOLOGICAL HONOR SOCIETY INITIATION
Presentation of Candidates and Initiation Ceremony
President – Callista Brown
Vice President – Graham King
Treasurer – Brenna Noone

Refreshments will be served after the ceremony. We will be happy to give tours of our teaching and research facilities.

BETA BETA BETA LAMBDA PSI CHAPTER INITIATES, 2017:

Chelsea Acheampong
Maame Agyapong
Christian Bandy
Tiffany Benton
Connor Burton
Judith Catron
Karyne Da Silva
Lauren Delong
Myra Dickey
Fiona Halloran
Matthew Hudgins
Brady Huttiger
Brittany Knight
Michael Kramer
Justin Maniatty

Michael Markman
Kendrick McCabe
Ryan Mihaly
Kelly Morsey
Mariah Passwaters-Stamper
Rebecca Paulis
Allison Regier
Justin Robey
Amanda Rocker
Hayley Schindler
Victoria Stubbs
George Taylor
Jacob Terry
Jessie Todd
WICOMICO CREEKWATCHERS ARE UP AND RUNNING FOR 2017

The Wicomico Creekwatchers Program is underway for its 15th season, with a record number of citizen volunteers, new coordination by the Wicomico Environmental Trust, and also a record number of SU student volunteers doing water analysis. The program is generously funded by the Chesapeake Bay Trust, the City of Salisbury, WET, and Salisbury University. Student volunteers this year include Andrew Jones, Brian Will, Carson Scharf, Cheyenne Young, Emily Zumstein, Erin McNally, Erin Post, Gabriel Pierce, Garrett Hansen, Justin Robey, Karly Lohan, Madison Warfield, Meleine Yao, Nathan Hirtle, and Zachary Vincent.

The Creekwatchers’ student volunteer leader and analysis coordinator, Nathan Hirtle, presented a comparison of the data for 5 years of sampling in the Wicomico and Nanticoke Creekwatchers programs at the March 2017 Atlantic Estuarine Research Society conference in St Mary’s City, MD. Nathan received a travel award from AERS for his attendance as well.

For more information on Creekwatchers, see: http://www.salisbury.edu/wicomicocreekwatchers/
It’s been a busy time for the American Society for Biochemistry and Molecular Biology (ASBMB) student chapter. With the help of five faculty members and more than 30 undergraduate and graduate students, we hosted more than 150 elementary school students and their teachers during the “Genetics Field Trip” for the Wicomico County Thinking and Doing program on March 31 and April 7th. Activities included making necklaces with DNA the students isolated from their cheek cells, analyzing DNA using agarose electrophoresis, exploring genetic disease screening for phenylketonuria, and discovering how genetically engineered organisms, like bacteria, plants, fish and worms, can express a gene from another organism to make the same protein, green fluorescent protein (GFP). A great time was had by all!

The ASBMB chapter offered a follow-up, DNA modeling outreach activity for TAD students and the public through the Wicomico Country Library’s “Build Explore Think” program on May 6th. Participants isolated and saved their DNA, and they also made foam and candy models of DNA, while decoding a mysterious message written in the ‘language’ of DNA. Thanks to everyone who helped make this possible, including ASBMB members and the national chapter, which provided funding support.
Biology alumnus Mercedes Harris, a MS student at UMass Amherst, recently received the Donald L. Mader Scholarship for academic excellence in the Environmental Conservation Department. This summer, along with another graduate student in her lab, she will be co-mentoring an undergrad in Harvard Forest’s undergraduate research experience program. Mercedes is also making preparations to teach a class on New England tree & shrub identification at Umass in the fall. Mercedes wrote “I helped out with the course last year. It was fun. It was my adviser’s idea for me to teach it this year.” Congratulations to Mercedes!
On April 8, Marissa Moran was awarded the Judith H. Shaw Award for best student poster presentation at the 717th meeting of the Helminthological Society of Washington. This meeting was held at Salisbury University on Saturday, April 8th and scientists from the western shore of Maryland, Washington, DC, and beyond, came to present their research on parasites. Marissa’s competition included posters from Rutgers University and Penn State York. Marissa is a first-year Master's student in Biology as well as a Teaching Assistant, working under the supervision of Dr. Ann Barse. Currently, she is working to elucidate the life cycle of a parasite by combining morphological and molecular techniques in collaboration with Dr. Anna Phillips of the Smithsonian Institution National Museum of Natural History.

Jordan Roose, MS student of Dr. Judith Stribling, presented his work at the March conference of the Atlantic Estuarine Research Society (AERS) in St Mary’s City, MD titled “Denitrification rates, potential, and limitations in a newly-constructed wetland.” He received a travel award from AERS to attend this meeting. Jordan also gave a presentation of his research to the Maryland Coastal Bays Program’s Scientific and Technical Advisory Committee meeting on January 18th at Horn Point Laboratory in Cambridge, MD.
2017 EXPERIMENTAL BIOLOGY MEETING, CHICAGO

In April Drs. Gene Williams and Patti Erickson, graduate student Andrew Baskerville and undergraduates Callista Brown (Left), Ruth Heying (left) and Lauren DeLong (Right) attended the 2017 Experimental Biology Meeting in Chicago. This week-long event is a joint meeting of several biological Societies includes the annual meeting of the American Society of Biochemistry and Molecular Biology. All the SU travelers are active members of the ASBMB. The students presented posters and all attendees were privileged to enjoy many interesting presentations, lectures, workshops and symposia on a wide variety of biological topics. Baskerville presented “Identification of an Arabidopsis WD-repeat protein that activates the deubiquinase UBP3 and interacts with two E3 ubiquitin ligases“. Brown and Heying’s poster was titled “High-throughput fluorescent analysis of reactive oxygen species in C. elegans after Knockdown of mrck-1”. DeLong presented “The isolation, identification, and characterization of local wild yeasts for use in fermentation”.

From Left, Lauren DeLong, Ruth Heying, Dr. Patti Erikson, Callista Brown & Andrew Baskerville
31ST ANNUAL NATIONAL CONFERENCE ON UNDERGRADUATE RESEARCH, MEMPHIS
Julia Howell. Acute effects of hyperglycemia on zebrafish peripheral nerves in a genetic-chemical ablation model. Mentor: Dr. Jessica Clark

NORTHEASTERN REGIONAL HONORS COUNCIL CONFERENCE, CAMBRIDGE MA
Amanda Rocker. A potential link between a connexin41.8 mutation and peripheral neuropathy. Mentor: Dr. Jessica Clark
MANY BIOLOGY STUDENTS PRESENTED THEIR RESEARCH:

Erin Allar & O. Hamilton
Thermal imagery as a tool for studying bat drinking behavior. Mentor: Dr. Aaron Hogue

Samantha Allen
A knockout mutation in the yeast DUF1 gene increases oxidative stress survival. Mentor: Dr. Les Erickson

Sunny Choudhary, J. Shilling, L. Engleman & D. Pidhorodetska
Docosahexaenoic acid (DHA) inhibits metastasis in B16 cell lines by altering membrane molecular order and cell adhesion potentials. Mentor: Eugene Williams

Nathan Hirtle
The Nanticoke and Wicomico Rivers: The efficacy of best management practices. Mentor: Judith Stribling

Julia Howell
Acute effects of hyperglycemia in a chemical-genetic cell ablation model. Mentor: Dr. Jessica Clark

Matthew Houlihan, Kelly Morsey & Stephanie Lamb
Estimating Population Parameters of Eastern Mud Turtles (*Kinosternon subrubrum*) on the Delmarva Peninsula. Mentors: Dr. Tami Ransom & Dr. Eric Liebgold

Stephanie Lamb
Estimating the habitat and population parameters of spotted turtles (*Clemmys guttata*) on the Delmarva Peninsula. Mentors: Dr. Tami Ransom & Dr. Eric Liebgold
Maggie Lundy & Sarah Edwards
Carbon Sequestration by the Salisbury Arboretum. Mentor: Dr. Chris Briand

Justin Maniatty
Measurement of the microbial influence on soil carbon sequestration in four different landscapes on the Salisbury University campus. Mentor: Dr. Elizabeth Emmert

Patrick Miller
Neural specializations for audition in the spectacular tui. Mentor: Jeremy Corfield

Marissa Moran & Melina Rodriguez
Echinostome Trematodes in the Mud Snail (*Ilyanassa obsoleta*), the Ribbed Mussel (*Geukensia demissa*), and Gulls (*Larus* spp.) in a Delaware Salt Marsh. Mentor: Dr. Ann Barse

Jessica Novak, MJ Dickey & IS Ralph
What’s killing the buzz? The effects of neonicotinoids on *Apis mellifera* mitochondrial metabolism. Mentor: Stephen Gehnrich

Nicole Hammond, Anthony LaBarck, Sarah Mahmoud & Erika Parhurst
Soil quality in the Salisbury University Arboretum linked to habitat type. Mentors: Dr. Samuel Geleta & Dr. Chris Briand

Robert Phillips
Identification of genes promoting resistance to enzalutamide. Mentor: Dr. Philip Anderson

Rebecca Paulis
*Bdellovibrio bacteriovorus* as a biocontrol agent against blackleg disease in potatoes. Mentor: Dr. Elizabeth Emmert

Logan Poore
Geographical Factors Influencing Movements and Population Size of Spotted Turtles (*Clemmys guttata*) a Species of Conservation Concern, on the Delmarva Peninsula. Mentors: Dr. Art Lembo, Dr. Eric Liebgold & Dr. Tami Ransom

Amanda Rocker
A Potential Link Between a Connexin41.8 Mutation and Peripheral Neuropathy. Mentor: Dr. Jessica Clark

Hayley Schindler
Analysis of soil bacterial and fungal biomass and determination of soil microbial activity in four different landscapes on the Salisbury University campus. Mentor: Dr. Elizabeth Emmert

Megan Short
Becoming a veterinarian: What students really need to know. Mentor: Dr. Kimberly Hunter

Jessica Tague & Anuradha Balaggan
Determining the Specificity and Sensitivity of the Human, Gull, Ruminant, and Poultry Genetic Markers Used to Track Fecal Contamination in Environmental Water. Mentor: Dr. Mark Frana
Samantha Utt, Danielle Ortmann, Nicole Schiffler & Stephanie Lamb
Estimating Population Parameters of Painted Turtles (Chrysemys picta) on the Delmarva Peninsula. Mentors: Dr. Eric Liebgold & Dr. Tami Ransom

Our Faculty

FACULTY PUBLICATIONS


¹Professor Emeritus Paul Grecay has been having a very productive retirement indeed!
EXCELLENCE IN ASSESSMENT AWARD
Dr. Sarah Winger of the office of University Analysis, Reporting, and Assessment gave the Department of Biological Sciences a Certificate of Appreciation for Excellence in Assessment. The certificate was awarded on May 19, the last day of the Biology Faculty Learning Community (FLC) for the 2016-2017 academic year. FLC participants include (from left to right) Drs. Elizabeth Emmert, Patti Erickson, Kim Quillen, Philip Anderson and Mark Holland.
Like other biology departments across the country, the Department of Biological Sciences at SU has started a process that will align the biology curriculum to the Core Concepts and Competencies as outlined by Vision and Change (AAAS, 2011). This is a multi-year process that will enable us to demonstrate that all biology majors, whether premeds or ecologists, have a firm foundation in all the core concepts and skills needed for success as biologists. Many thanks to everyone who has contributed to this process so far, for example:

- Thanks to the faculty who have participated in the Biology Faculty Learning Community this year, working to align the Biology 210 curriculum to Vision and Change as a starting point for aligning other courses. (And thanks to the Provost for the funding!)
- Thanks to Biology 210 students who have completed the Pre- and Post-surveys in Canvas to help with our data collection.
- Thanks to the Biology 210 students last fall and the students in Ecology, Cell Biology, Genetic Analysis, Molecular Genetics, and Evolution this spring who have taken the Bio-MAPS assessment that measures mastery of the Vision and Change core concepts.

Stay tuned for the next steps! Meanwhile, contact Dr. Kim Quillin (kxquillin@salisbury.edu) if you have any questions.
SU BIOLOGY ALUMNI

Stay Connected

We want to hear from you! Please let us know where you are living and what you are doing! We would love to hear from you. In the future we plan to have an Alumni Connection section in our newsletter.

Send information to:
Sandra Ramses, Program Management Specialist
SHRAMSES@SALISBURY.EDU

Your Editorial Team

Dr. Chris Briand (editor) &
Dr. Philip Anderson (co-editor). Send any contributions to
chbriand@salisbury.edu