

Spring 2011

# The Biology Flash

## Student News

- **Adam Badaczewski** was accepted at Temple Medical School, starting fall 2011.
- **Chris Buzas** was accepted at Pennsylvania College of Osteopathic Medicine, starting fall 2011.
- **Tyler Gillmen** was accepted at Lake Erie College of Osteopathic Medicine and Pennsylvania College of Osteopathic Medicine. He will matriculate at PCOM fall 2011.
- **Josh Greenleaf** was accepted at Pennsylvania College of Osteopathic Medicine, starting fall 2011.
- **David Lingenfelter** was accepted to the Altoona Hospital Medical Technology program, starting fall 2011.

## Students Spend Semester Abroad at Raystown Field Station

Saint Francis Biology students take part in a different kind of study-abroad experience. While traditional study abroad opportunities send students to remote corners of the globe, some SFU Biology Majors have instead opted to spend a semester at the nearby Raystown Field Station.

A cooperative venture between Saint Francis University and nearby Juniata College, twelve students per semester live and take classes exclusively at beautiful Raystown Lake in a state-of-the-art, LEEDs certified green facility.

This semester, students are taking four classes at the field station: Ecology (taught by Dr. Lane Loya of SFU), Animal Behavior (taught by Dr. Justin Merry of SFU), Vertebrate Zoology (taught by Dr. Chuck Yohn of Juniata College), and Geographic Information System (taught by Dr. Dennis Johnson of Juniata College).



Shuster Hall is a certified “green” facility with solar power, modern compostable toilets, and a fully outfitted technology classroom/laboratory for science education.

Taking a class at the field station is different than taking a class on campus. Each class occupies an entire day, which allows instruction to flow more freely between lecture and laboratory than is possible among traditional classes. Furthermore, the immediate access to the lake and its surrounding flora and fauna, along with small class sizes, offer

unique opportunities for students to engage in research activities as part of their classes.

“It’s an escape from the general classroom,” said senior Tina-marie DelValle, who spent Fall semester 2010 at the station. “You get to work in the field. It’s more hands on, and you get to be out in nature.”

## What’s New in the Biology Department?

- Dr. John Trimble received a prestigious Fulbright Award to spend his sabbatical teaching in Lithuania during Spring semester
- Dr. Lane Loya completed a sabbatical studying damselfly ecology (see reverse page)
- Ms. Kelly Garanich was appointed Instructor of Biology
- Mr. Andrew Scanlan, former student and instructor in the department, was married in January to Kristine Kolosky, also a former SFU student.

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**Alumni: do you have news to share? New jobs?  
Attending graduate school? Please contact us  
and let us know: [jmerry@francis.edu](mailto:jmerry@francis.edu)**

## Hunting for Odonates in Bedford County

Dr. Lane Loya, Associate Professor of Biology, completed a study of Odonate (dragonflies and damselflies) diversity at the Dunning Creek Wetlands of Bedford County (photo, right) during his sabbatical in the fall of 2010. These restored wetlands serve as an important habitat to a variety of specialized animals and plants, including insects, amphibians, fish, migratory waterfowl and songbirds. The main purpose of Dr. Loya's research was to determine the species composition and flight seasons of the dragonflies and damselflies inhabiting this 500-acre ecosystem. As aerial predators, they are important because of their ability to prey on mosquitoes and other insects. In turn, they serve as a critical link in the food web as prey for fish and birds. Biological surveys such as this one document the abundance and distribution of endemic (native) species, and allow ecologists to study how this diversity changes over time in consideration of factors such as climate change.

The research was completed in cooperation with Dr. Dennis McNair (University of Pittsburgh at Johnstown). Phillip Harchack, a junior Biology/Environmental Science major at Saint Francis, provided additional help with collection and identification. A total of 50



Muscovy Pool, with Teal Lake in the background, at the Dunning Creek Wetlands in Bedford County.

Odonate species were observed at the site, making it one of the richest locales for dragonfly diversity in the state. Of particular interest was the observation of 19 species new to Bedford County, and the identification of 11 species considered "imperiled" or "vulnerable." Also noteworthy was the Carolina Saddlebags, *Tramea carolina*, a southern species that is increasingly sighted in the northeastern USA. Dr. Loya will continue working with SFU students to investigate this ecologically-rich site.



## Senior Profile: Melissa Heintz

*Cryptocaryon irritans*, a small parasitic protozoan that lives part of its life cycle under the scales or in the gill tissues of saltwater fish, can cause the complete destruction of a marine aquarium. Melissa Heintz is interested in breaking the life cycle of *C. irritans* without chemical treatment that kills all invertebrates present in the tank. Melissa spent most of her junior year confirming research completed by Lisa Morse: *C. irritans* will emerge out of its encysted stage and enter the free-swimming stage when water from an aquarium holding fish is added to the infected tank, even if no fish are present for the protozoan to infect. Having confirmed this, the question for Melissa became, "What is the substance released from fish that stimulates the protozoan to emerge from its encysted stage?" This year, Melissa has been collecting water from infected aquaria and completing spectrophotometric measurements on the water from infected

aquaria to classify the substance. Once identified and purified, the substance has commercial possibilities. Melissa will be presenting her Honors Thesis research later this spring.

Research isn't the only activity filling Melissa's college life. As a senior majoring in marine biology, she has been involved in numerous organizations and had the opportunity to travel to many different places. As senior captain of the Red Flash Women's Swim Team, she was proud to be a part of the 2010 Northeast Conference Championship team. She plans on leading her team to the same level this year as they defend their title. Her main events are the 100, 200, and 500 yard freestyle. In addition to swimming, she is enrolled in the SFU Honors Program, is President of the TriBeta Biological Honor Society, and is the SAAC (Students Athletic Advisory Committee) representative for the swim team.

In an unforgettable experience, Melissa became a certified SCUBA diver and dove in the Galapagos Islands while traveling with the Saint Francis Field Biology class in 2009. She lived on a boat for a week, visited many of the islands, and learned much about the unique flora and fauna on the land and waters of the Galapagos.

Upon graduation from Saint Francis, Melissa plans to continue her studies in graduate school in pursuit of a Masters Degree in Marine Science. She has applied at several schools including Virginia Institute of Marine Science, University of North Carolina Wilmington, College of Charleston, and the University of South Florida. She has particular interest in continuing research on marine parasites.