

## Restoration news bites:

- ◆ Recent ERIE IGERT graduate Shannon Seneca published her dissertation research in *Environmental Science & Technology* with her advisor, Dr. Alan Rabideau.
- ◆ Summer 2012 REU participant Lee Joan Villafuerte recently presented her research at the *Gulf of Mexico Oil Spill & Ecosystem Science Conference*.
- ◆ ERIE IGERT trainee David T.R. Stewart recently published a paper with multiple co-authors in *Environmental Toxicology & Chemistry*.
- ◆ ERIE IGERT Trainee Isabel Hannes presented her dissertation work on Unionid mussels at the *Freshwater Mollusk Conservation Society 2013 Symposium on Species Recovery and Restoration*.
- ◆ ERIE IGERT Trainee Beynan Ransom gave a talk entitled "Traditional Ecological Knowledge and the interpretation of predisturbance landscapes" at the *SUNY Landscapes across the Disciplines Symposium*.
- ◆ Former ERIE REU students Peter Byrley & Elizabeth Hennessy will be presenting on their research at the *3rd International Conference on Algal Biomass, Biofuels and Bioproducts Conference* this June.

## ERIE Practicum: Wetland Restoration at Tiff Nature Preserve



Invasive Japanese knotweed in bloom at the Tiff Wetland site. Photo: David Spiering

In the fall 2012 semester, ERIE IGERT trainees embarked on the fourth ERIE Practicum course. This course is designed to allow students to work in an interdisciplinary team on a local restoration project. The latest Practicum course focused on a wetland restoration project at Buffalo Museum of Science's Tiff Nature Preserve in Buffalo, NY.

Wetland restoration is being considered for a 0.32 acre area immediately adjacent to a remnant cattail marsh at Tiff. The area is heavily impacted by the invasive species Japanese knotweed (*Polygonum cuspidatum*) and the common red ant (*Myrmica rubra*). The goals of the project are to increase biodiversity and enhance public education and recreation. Invasive species reduce the biodiversity and public use of the area and effective control of these species is a primary objective of this project. The creation of a persistent emergent wetland similar to the adjacent cattail marsh was identified as the preferred option since it should have the highest probability of successfully controlling the invasive species. Additionally, with limited intervention a cattail marsh will have long-term persistence in this location.

Restoration would involve removing soil containing Japanese knotweed rhizomes to an elevation that would re-establish the wetland hydrologic conditions. Planting of native wetland plant species would follow and recolonization by Japanese knotweed and other invasive species such as *Phragmites australis* would be monitored and controlled.

ERIE Trainees submitted a report and will continue to work with Tiff on the wetland restoration project.



ERIE IGERT Trainees, Isabel Hannes (left) and Jonathan Pleban (right) dig a soil pit with Tiff Technician. Photo: David Spiering

## Donations to Assist in ERIE Student Research Requested

Please consider donating to the **Ecosystem Restoration Scholarship Fund**. Your tax-deductible gift will support summer student research in ecosystem restoration in the Great Lakes & western New York Region. **Your support is greatly appreciated.**

Donations are accepted [online](#). Thank you!



Participants gain field experience in quantifying stream flow with UB's Dr. Chris Lowry. Photos: Douglas Lambert



Learning about invasive species with Paul Fuhrmann (Ecology & Environment) and Helen Domske (NY Sea Grant).

## Stream Restoration Professional Certificate Program

In 2012, a professional Certificate program was implemented by the UB ERIE Program. The Certificate program was developed to address the educational needs of professionals and students who intend to work in the growing field of stream restoration, as there are limited educational opportunities available in the U.S. to receive formal training in river and stream restoration.

A professional **Certificate in Stream Restoration** will be awarded to participants who complete 15 days of summer workshops, including a set of core/introductory courses, within a three-year period. The core/introductory workshops, each two to four days in length, introduce participants to stream restoration topics in: 1) physical processes; 2) ecological processes; 3) design and planning; and 4) monitoring and assessment. The remainder of the 15-day Certificate requirement can be made up of selected elective workshops. Elective offerings will vary by year, but generally include topics related to invasive species, field data collection, modeling, and stream assessment techniques. The workshops combine classroom, field, and lab experiences. The Certificate does not provide academic credit or transcript notation, but is a professional program tracked by continuing education credits (CEUs).

This summer we have an exciting line-up of workshops and instructors. We will continue to modify the workshop offerings to address the needs of participants and to incorporate the latest research and field techniques available.

For more information, please visit our [workshop webpage](#).

## Research Experience for Undergraduates (REU)

We are very pleased to announce that the University at Buffalo's Ecosystem Restoration through Interdisciplinary Exchange (ERIE) Research Experience for Undergraduates (REU) grant was recently renewed by the National Science Foundation (NSF) for three more years (2013 through 2015). This summer we will host eight undergraduate students at UB who will work with faculty mentors and ERIE doctoral students on ecosystem restoration and engineering for sustainability research topics such as river re-meandering, phytoremediation, native mussels, low-tech drinking water treatment methods, and more.

Students from last summer's REU have presented their work at scientific conferences over the past year including the Great Lakes Research Consortium, Geological Society of America, and the Society for Hispanic Professional Engineers. Many of these students will be continuing their education in graduate school beginning this fall. Stay tuned to future newsletters to learn more about our 2013 ERIE REU participants and their research work.

## IGERT Poster & Video Competition

The 2013 IGERT Video & Poster Competition will take place May 21 - 24. Everyone can [visit the competition website](#) to view IGERT research that is taking place around the U.S. While you are there, you can vote for your favorite video and poster submission via the "Public Choice" option.

This year, the ERIE IGERT program will be represented by Michael Habberfield, a Ph.D. candidate in the Geography Department. His presentation will be entitled "Using translocations to identify the spatial scale at which vernal pool amphibians select habitat patches." Please consider visiting the site and voting for our project beginning May 21st!

We hope you enjoyed this issue of the ERIE Newsletter. Please share with others who may be interested. If you have any suggestions, comments, or concerns, please contact Amy Bartlett, Program Coordinator, at [amyb@buffalo.edu](mailto:amyb@buffalo.edu).

You can find more ERIE news and information at [www.erie.buffalo.edu](http://www.erie.buffalo.edu)

Thank you!