

# Students Partnering with Faculty

## IN RESEARCH



*Phoenix Golnick and  
Doug Kane on Lake Erie.*

By Michele Tinker, Director of Annual Giving

For several years, Professor Doug Kane has been sharing his passion for ecology with Defiance College students and teaching them about the environmental challenges facing Lake Erie. Dr. Kane utilizes a lot of lab work in his teaching – and that lab is incredibly large – encompassing the Thoreau Wildlife Sanctuary, the upper Maumee River, and western Lake Erie.

Quite often, college students will assist research being done by faculty, but at Defiance, students are not just assisting, they are identifying and conducting their own projects. Kane relates that he works with his students to help them identify research projects.

Kane points to Phoenix Golnick '13 as one example. Phoenix's project involved dissolved oxygen in Lake Erie, and she had the opportunity to present her findings at both the Ohio Academy of Science's annual meeting and at the National Collegiate Honors Council. Phoenix is now a graduate student in environmental science at the University of Toledo's Lake Erie Center.

DC students have conducted senior research projects for three years on macro-invertebrates in the Maumee River, using Ohio Department of Research's long-term

data to look at water qualities in the river. The students have been studying the correlation between the drop in water quality and how it impacts the number of species found.

The next step is to figure out why the water quality is dropping. Kane hopes to interest a student in pursuing this topic of study.

Several students have had their research funded through the Great Lakes Innovative Stewardship through Education Network (GLISTEN). Students serve as stewardship liaisons – monitoring what's going on. March through November, these students are collecting water quality data on the Maumee River and working with the Upper Maumee Watershed Partnership.

Junior Alison Rifenburg is one of Dr. Kane's students involved in the GLISTEN project. She tests water on the Maumee weekly at four locations between Fort Wayne and Defiance.

Alison jumped at the chance to be part of the project when it was offered. She plans to attend graduate school, with an eye to teaching science at the college level and possibly conducting more research into invasive species.

About working with Dr. Kane, Alison says, he's very knowledgeable in his field, and he can be a lot of fun to work with too,

adding “despite the fact that many of his popular culture references go way over the heads of his students!” She appreciates that Kane has his students going places and doing things all the time. In her Fisheries and Wildlife Management class, Alison reports there was a field trip every week. Plus she feels the small sizes of the classes at DC offer students more opportunities for hands-on work.

These students are literally getting wet, Kane observes. They're doing data collection, analysis, and following all the steps of the scientific method. It's good for their careers to have this experience, he notes. It is beneficial to their resumés to have presented their research at professional groups.

Kane feels strongly that the research he and his students are conducting in the Upper Maumee River Watershed (everything upstream from the Tiffin) is important to the Great Lakes and beyond.

“Right now the harmful algae blooms in Lake Erie are caused by the soluble reactive phosphorus running off the fields. It's important to know what's happening before we can fix it. We didn't know what the problem was ten years ago. The next step will be developing new best practices for the farms, and the farmers seem to be on board for this,” Dr. Kane says optimistically.



*Alison Rifenburg and Stephanie Singer sampling the Upper Maumee.*