

Stellar Students Become HEROs

By Scott Berghegger
The Scarlet Newspaper
May 1, 2006

Clarkies may know about African deforestation and land change in Scotland. Maybe they even know about emergency water restrictions due to droughts in central and eastern Massachusetts. But what many Clarkies might not know is that we've got our very own heros.

The Human-Environment Regional Observatory-Central Massachusetts (HERO-CM) offers a chance for some of the best and brightest undergraduate minds at Clark to study and research field questions and to analyze the relationship between humans and natural landscapes, especially in central Massachusetts.

The university-wide program is available to students in all majors. However, the nature of the HERO-CM program — hard science tied with economic, ecological and environmental concerns — draw students from the mathematics, environmental science and policy and global environment studies programs as well. Each HERO fellow, chosen from a highly competitive applicant pool based on their strong academic record (the 2006-07 HERO fellows had a mean GPA of 3.7) and valuable research skills, work closely with a faculty member in the School of Geography to answer a research question with a long-term study, just as professionals do.

Colin Polsky, assistant professor at the Graduate School of Geography and the Marsh Institute, directs the HERO program and advises three to five HERO fellows, as well as some Ph.D. students, each year. "Research is very important, but so is undergraduate teaching," he said. "HERO is all about doing research in an active learning format." Despite the focus on undergraduate education, the research of the HERO fellows doesn't stay within the microcosm of Clark University. The students and their advisors present their findings at Clark Fall Fest and Academic Spree Day, but the information doesn't stop moving. "Part of it is the magic of the internet," said Polsky. "But the program here has existing research connections to researchers and policy-makers." In other words, the HEROs are making history and influencing lawmakers in Massachusetts and in Washington, D.C. with their work. HERO fellows go on to forge relationships with top undergraduate and graduate geography programs across the country, including programs at Duke, Harvard, American University, the Yale School of Forestry and Columbia's Earth Institute.

In addition to the personal and professional connections they make, HERO fellows have won prestigious awards and published research in professional scientific journals. Some advisees of Gil Pontius, associate professor in the School of Geography and Department of International Development, Community, and Environment, have created new methods to analyze maps. "These methods are now being adopted by other scientists around the world to study a variety of topics," Pontius said.

B.L. Turner II, director of the School of Geography, views the HERO program as “a very special kind of research experience for undergraduates that exudes and amplifies Clark’s claims as one of the better institutions of higher learning in the U.S. in terms of undergraduate research.”

“There’s a movement in American higher education for undergraduates to engage in original research, mentored by faculty” said Kevin Keenan, research assistant for the HERO program and graduate student in geography, who also says that “It is a privilege to be among such an esteemed and scholarly group of students and faculty.”

According to Keenan “The HERO program is at the vanguard of two movements within higher education in the United States: providing research and mentoring opportunities for undergraduate students and allocating resources to understand and explain environmental change through the study of human-environment relations.

The HERO program focuses on three areas of study: forest change monitoring, land change prediction and Polsky’s specialty, vulnerability analysis, specifically an inquiry into the drought problems in eastern Massachusetts suburbs. “Because of suburban sprawl, even with the large amount of rainfall this area gets, water restrictions are often in place,” Polsky said.

The program generally accepts seven students to join the fellowship each year but chose to expand the enrollment to nine starting this summer. Next year’s HERO fellows are John Connors ’06 (geography), Kate Del Vecchio ’07 (IDCE), Joe Fortier ’07 (geography), Ryan Frazier ’06 (geography), Dawn Gedenberg ’07 (mathematics), Paula Kiviranta ’09 (geography), Dominic Pascarelli ’08 (global environmental studies), Nagraj Rao ’08 (economics and mathematics) and Alina Taus ’08 (geography and mathematics). “The program here is definitely growing,” said Keenan.

For more information on the HERO program, contact Kevin Keenan at kkeenan@clarku.edu .