

April 19, 2006: Notebook

For students in Kenya, immersion in ecology

When ecology and evolutionary biology major Nick Lilly '07 arrived in Kenya in February, he and his classmates in Princeton's new tropical biology semester took a van ride from the airport to an ecology center in the capital city of Nairobi, which borders a national park. Riding on a highway, Lilly glanced out the window and saw zebras calmly grazing in the median. "I realized I was a long way from home," he said.

It was an apt welcome for Lilly and the seven undergraduates studying, among other things, the confluence of nature and development in east Africa. One of their first projects was to travel to the Princeton-affiliated Mpala Conservancy, a 48,000-acre ranch and research area in central Kenya, and design a conservation plan for the region. Students were required to take into account the viewpoints of various stakeholders, from local villagers to ecotourists to cattlemen. Professor Dan Rubenstein, chairman of the ecology and evolutionary biology department, said it was one of several experiences in the Kenya semester that simply cannot be duplicated in the classroom. By working in the field, he said, "[The students] actually understand the real world. They appreciate the subtlety of how things work. They see nuance."



Studying abroad is nothing new for the ecology and evolutionary biology department, which has run a spring semester program in Panama, in cooperation with the Smithsonian Tropical Research Institute, since 1998. But in recent years, the Panama program grew to include more than 20 students — beyond its ideal capacity — so the department decided to add a second program in Kenya, where Rubenstein and Professor Jeanne Altmann conduct field research. Of the 14 students who signed up for the tropical biology programs in Panama and Kenya this spring, eight chose the Kenya semester. "Though my interests lined up more with the program in Panama, my desire to experience a totally new culture drove me toward the Kenya program," explained Jenn Ruskey '07, whose only previous field experience had come in a high school marine biology course on Vancouver Island.




Student interest in Africa reaches well beyond the ecology and evolutionary biology department, according to Rubenstein, who half-jokingly calls it the "continent of the decade." Rubenstein heads the University's Program in African Studies, and he would like to expand the Kenya semester to reach a broader audience, including students majoring in areas such as the social sciences or engineering.

This year, though, the curriculum for the three-month program is focused largely on ecology and evolutionary biology, drawing on the expertise of Rubenstein, Altmann, and two graduate alumni working in Kenya. The semester began with a three-week course in ecology and conservation on African landscapes, taught on-site at Mpala by Nick Georgiadis, the director of the Mpala Research Centre, and Philip Muruthi '97, a program coordinator at the African Wildlife Foundation. Rubenstein taught the next course, on the natural history of mammals, with help from Altmann, who hosted a weeklong visit to her baboon research site in Amboseli, in the south of Kenya, near Tanzania. Princeton mechanical and aerospace engineering

professor Winston Soboyejo taught the third course, on global technology, and Paula Kahumbu '02 is scheduled to complete the program with a hands-on class in restoration ecology. Kahumbu is the general manager of Lafarge Eco Systems, a cement company subsidiary that works to rehabilitate the landscape at former mining sites in Kenya.

By taking one course at a time, the students are able to delve into their work as full-time researchers do. Lilly and Ruskey said they prefer the schedule, while colleague Paul Pawlowski '07 said that the intense study required him to make adjustments. Rubenstein said most students embrace the opportunity to be immersed in ecology early in the program, and the others adapt during the semester. Based on his experience with the Panama program, Rubenstein said that the tropical biology program will pay dividends when the juniors choose topics for their senior independent work. "Now they have some ideas of what's interesting to them," he said. "And passion matters."

Ruskey, who said she embarked on the Kenya trip with "the ominous shadow of a library thesis" looming over her, found her inspiration in Rubenstein's mammals course at Sweetwaters Game Reserve. She hopes to return to Kenya in the summer to study hybrid zebras for her thesis, and she is confident that she has the tools to get started.

"We've been designing and carrying out our own experiments — actually doing the real thing — with more independence than I've ever experienced in a course before," Ruskey said. "We now know how to ask the right questions and how to set out answering them." 

By B. T.