This field study represents one of many unique experiences during the 2½ months I spent during Spring semester as a Biology graduate student participant in an Organization of Tropical Studies' tropical ecology course in Costa Rica. Palo Verde, one of the first biological field station sites that we visited during the OTS course lies in northwestern Costa Rica. Due to Costa Rica's unique variety of climactic regions for a country of its size, and the range of habitats that this variety provides, participation in the OTS course increased my appreciation of biodiversity as well as my exposure to a range of ecological topics.

In the Palo Verde study, we netted a total of 10 different species of bats which exhibited a surprising variation in body structure and foraging habits. My personal, rather anthropomorphic response during this field study was admiration for the tiny bats' ferocious character—bats continuously gnash and bar their teeth and hiss or squeak while being handled. Such behavior is certainly meant to intimidate, but is hard to take seriously from an organism whose body size is approximately that of a gerbil. During the OTS course, other typical field projects included censuses of fungal diversity and location within the forest, and studies of gnatcatcher foraging patterns, movements of army ant swarms, and interactions among different monkey species. As a biology graduate student, I found working on a variety of different projects to be one of the most fulfilling aspects of the course, as this opportunity to examine such a range of systems and organisms is far beyond the narrow scope required by dissertation work.

It was during the bat study, one of the first extended periods I have spent in a primary forest, that I became impressed by the dramatic difference in scale between the tropics and the temperate zone. It is amazing to walk through the primary forests and be dwarfed by the ‘understory individuals’—generally the smallest plants on the forest floor below the tree canopy. In a temperate zone such as Indiana, these are relatively small weedy, herbaceous plants. However, in some tropical forests the smallest individual plants, or 'weeds' are taller than the average person. Moreover, the upper canopy of a tropical forest is too dense to be penetrated by direct sunlight—thus, when standing in the middle of the forest even your shadow disappears. The oldest trees of these forest, whose age approaches Methusaleh in years, further diminish the sense of human significance. Gaining this perspective is increasingly important as technology advances to become seemingly indispensable to everyday life, and as we become distanced from nature, overestimating our position within ecosystems.

The controversial nature of current conservation debates was poignantly highlighted while at the OTS Palo Verde fieldsite. There, we met Gordon Frankie, a tropical researcher for over 20 years, who recently became involved in a conservation project involving a small, but vital stretch of land targeted for development. Dr. Frankie hopes to procure protected status for the land, based on the support the region provides for rare, migratory, and endemic species, and OTS students contributed to this conservation effort by surveys of indigenous flora and fauna, including our bat study and subsequent netting efforts. However, one month after our departure from Palo Verde field station, 85% of the nearby Lomas Barbadol Reserve was destroyed by an arson attack in an apparent attempt to undermine the conservation effort. Despite Costa Rica's relatively admirable record in ecological planning, closely experiencing such an attack only underscores the problems and vital importance of forest administration.

One of the most important features of the OTS curriculum was the professional expertise of the local resource people. At Palo Verde, as at other sites, the class spent the first two days on 'Orientation Walks' led by local taxonomists to introduce us to the basic ecological factors typifying the region. Ulysses, a local taxonomist, was able to identity any and all plants we encountered in our walk in a forest containing up to 700 plant species. Ulysses was one of several Costa Rican taxonomists with whom we interacted at a number of the sites with larger biological stations, who were being trained and employed to catalogue all plant and animal species present in the country. The OTS program also recruits faculty resource people from Central American universities. In addition to instruction in their areas of expertise, Costa Rican faculty and local taxonomists were able to provide an interesting, more balanced picture of the research, conservation, and development achievements and aims of their country.

My OTS tropical ecology study program in Costa Rica not only fundamentally changed the way I approach and develop questions for research, but also increased my respect for the intricacy and range of ecological communities in the world and my understanding of the necessity for conserving them.

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