

TEACHING INTERESTS -- PATRICK A. ZOLLNER

For many students, science courses are among the most challenging aspects of their undergraduate education. These courses require the students to master a multitude of detailed facts, a suite of new techniques, and develop the ability to examine all of this unfamiliar information from a critical context. All too often, these challenges are framed around abstract theoretical concepts that the students cannot relate to their own lives or experiences. For student to understand the balance between the myriad details and general principles they are being taught they need to learn to see patterns in the world around them and to identify the processes underlying those patterns. Courses in wildlife ecology can help students learn how to identify such patterns in the ways that organisms live and to discern the processes that shape these patterns. As they examine the numerous exceptions to these general patterns and their causes, these courses also provide a wonderful opportunity to develop a healthy skepticism in students that will make them better scientists as well as better citizens.

As a teacher I aim to foster in students the ability to analyze the logic of an argument, critically muster facts for or against the assumptions and conclusions of said argument, effectively communicate the strengths and weaknesses of the argument and the evidence for or against it. In short, I want my students to comprehend not only the text but also the essence of the scientific method. Accomplishing such a goal requires a creative, flexible, and dynamic teaching style, which I developed during years of teaching introductory biology labs. This approach emphasizes the experience that students gain by applying the material they are being taught as the most effective learning method. It employs such tools as small group exercises, an interactive lecturing style, and appropriate application of web based technology. Obviously, large introductory lectures constrain some of these innovations but my experiences as both a student and teacher have shown me that well designed exercises greatly enhance a student's education. In my opinion other components of excellent teaching include, listening to and incorporating constructive input from students and colleagues, paying careful attention to students, both to assess their progress and to inspire their efforts, and investing time to present students with carefully prepared and well organized materials. Such components can be further enhanced by the use of an improvisational teaching style that takes advantage of unplanned opportunities whether they are questions from students or chance encounters in the field. Finally, my experiences teaching for the School for Field Studies in Australia showed me that time spent in the field is a critical component of learning about the natural world. Thus, I believe that good ecology courses should incorporate field exercises whenever practical.

My teaching interests are flexible and I would gladly contribute to whatever courses would most help the department. I would enjoy the opportunity to teach classes such as mammalogy, wildlife ecology, population biology and wildlife habitats. In these courses I could provide the same type of positive learning environment for my students that I benefited from as an undergraduate. Of course, I would also wish to teach graduate seminars and courses in my area of expertise. For example, I would like to develop a course focused on simulation modeling as a tool in ecology. The goal of such a course would be to teach students to understand the advantages and limitations of models to both researchers and managers. The course would be structured around each student developing a model of his or her own from scratch. This experience would allow each student to apply appropriate modeling techniques to aid in their own research while helping them develop the critical understanding to test and debunk models. In general, I have an interest in the development of courses that bring a behavioral perspective to issues in ecology, conservation, and management while helping students apply quantitative tools to their own research.

Ultimately, my philosophy of teaching is to view each student as my employer and to treat my job not only as the dissemination of information, but also as the inspiration of the student. Throughout my life, I have benefited from the counsel of and interaction with many wonderful formal and informal mentors. I hope to provide the same sorts of opportunities and enlightenment for others by extending my role as an educator beyond the traditional classroom and developing an active graduate and undergraduate student presence in both my lab and office.