Professor: Steven R. Beissinger, 29 Mulford Hall, 643-3038, beis@nature
Office hours: Monday. 1-2, Wednesday. 1:30-2:30

Instructor: Ben Becker, 15 Mulford, bbecker@nature, Office Hrs. Tues. 8-9, Th. 11-12

Course Description:
This course will examine the application of biological principles for conserving biological diversity. We will explore in particular how biological theory can be useful and necessary to guide decisions on conserving biodiversity.

In the first half of this course, we will develop general principles of conservation biology. Biological diversity is defined at different hierarchical levels: the gene, species, community, and landscape. The processes that create and destroy diversity at each level will be studied. The ecology of rarity and factors affecting the distribution of biological diversity are examined. Extinction is studied from a historical and modern perspective. An assessment of threatened biological diversity of the world will be made.

In the second half of the course, we will examine tools derived from ecology and evolutionary biology to prevent the loss of biological diversity, or to restore species and ecosystems. Population viability assessment is used to evaluate risks of extinction. Biogeographic theory is used to understand the problems of habitat fragmentation and reserve design. Ecosystem and landscape management will be explored. Methods of intensive management of wild and captive populations of endangered species will be examined. Biological concepts behind ecosystem restoration will be developed.

Course Format: Two 1.5-hour lectures and one 1.5-hr lab/discussion section weekly. The lab/discussion section will present new materials by extending or demonstrating the ideas presented in lecture. Thus, attendance in labs is mandatory. Undergraduates must sign up for lab/discussion sections 1, 2, 3 or 4, while graduate students must attend their own section.

Credits: 4

Graduate Student Instructors: Eric Punkay [epunkay@nature] 643-3946, 6 Mulford
Erica Rosenblum [ericabr@socrates] 642-7928, Museum of Vertebrate Zoology


Requirements:
1. Read assigned readings in the text before class meets.
2. Attend class and labs, and participate in discussions (50 pts).
3. Midterm exam (100 points) and Final Exam (150 pts).
4. Write a 5 page essay analyzing an issue in conservation biology (75 points).
5. Do two problem sets - (50 points).