

Biology 389: Senior Seminar
Topic: Emerging Issues in Conservation Biology
Fall 2002 – Monday 2:30-3:45 PM, R223e

Instructor: Bette A. Loiselle
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Course Description:

This seminar course will address emerging issues in the field of conservation biology. Each week 1-2 readings from the primary literature will be discussed following a brief presentation by the discussion leader. The goal is to identify what are the major issues, should they be of concern to conservation biologists and society, how do these issues relate to basic principles in ecology, population biology or molecular biology, etc. Topics will likely include, but are not limited to: (1) *what are the factors affecting vulnerability of habitats or native species to biological invasions*, (2) *do genetically modified organisms represent a threat to biodiversity?*, (3) *what are the consequences of global climate change?*, (4) *are national parks large enough to protect biological diversity?*, (5) *do we need to worry about genetic variation in developing management plans for endangered species?*, (6) *are corridors effective tools for biodiversity conservation?*, (7) *predicting rarity*, (8) *“are the forests too deer?”*. The journals *Nature*, *Science*, *Conservation Biology*, *Biological Conservation*, *Ecological Applications*, *Journal of Wildlife Management*, *Wildlife Society Bulletin* will likely be the sources for articles discussed in class.

Student Evaluation:

Students' evaluations will be based on class participation (50%) and a written assignment (50%). Class participation includes the student's role as discussion leader (roughly 33% of participation evaluation) during one of the sessions, and on their role as a participant in discussions during other weeks (roughly 67% of participation evaluation). Considerable emphasis is placed on participation as discussion is a key part of any seminar class! Students should read carefully each week's article, and *think* about it ahead of time. Some points to consider include: what does the article focus on, what is the big picture, are the authors convincing that this is an important topic, do their data support the conclusions they reach, what questions remain unanswered or are raised by the article, where do we go from here, etc. As a discussion leader, you will provide a brief (15-20 minute) introduction to the article, and be prepared to lead discussion. Feel free to direct questions at your colleagues to help move the discussion forward. Each student will also be required to turn in a written assignment one week after their presentation. This should be a 10 page maximum (double-spaced) essay that provides a review of the selected article(s). In your essay, you should summarize the main points of the article, put the article into the “bigger picture” (i.e., how does it contribute to advancing our

understanding of basic and applied science), provide a critique (is the article effective; why or why not?), and concluding comments. A lively and directed discussion may help you get material for your essay!

Each student will select 1-2 articles for the class at least one week prior to their presentation and identify for us the topic of the presentation. Students should provide a clean hard copy or a .pdf version to Bette so that she can post it on *UMSL Gateway* (<http://mygateway.umsl.edu/>) for everyone to download or print at least one week prior to class (the earlier the better). To access the UMSL Gateway, go to the web address – your student ID is your login and your password is year of birth-day of birth-last 4 digits of your social security number. For example, if you were born on July 10, 1980 and your SSN # is XXX-XX-1234, then your password is: 80101234.

Class Schedule:

Date	Topic	Leader
August 26	Class Introduction	Bette Loiseau
September 2	LABOR DAY – no class	
September 9	Climate Change and Invasive Species	Group
September 16		Andrea Link
September 23	No Class	
September 30		Angie Ince Lynn O'Shea
October 7		Israel Collier
October 14		Scott
October 21		Greg Schmid
October 28		Kim Immer
November 4		Jen Bowlin
November 11		Kaira
November 18		Barbara Canepa
November 25	Thanksgiving week – no class	
December 2		Dana Dixon

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September 9

Dukes, J. S. 2000. Will the increasing atmospheric CO₂ concentration affect the success of invasive species? Pages 95-114 *in* H. A. Mooney and R. J. Hobbs (eds.), *Invasive species in a changing world*. Island Press, Covelo, CA.