

Syllabus – Evolutionary Ecology Lab – Fall 2007
Thursday afternoons 2 pm – 4:45 pm in OE 169 and other locations
Dr. Suzanne Koptur



This lab course will involve students directly with organisms in the field and laboratory, to explore various aspects of evolutionary ecology with plant and animal examples in natural and disturbed habitats. The lab will have some demonstration content, with displays of specimens of organisms involved in various interactions discussed in lecture, and books and articles about the subjects displayed. We will have several field trips, which will take the place of labs on the weeks concerned. We will first perform exercises as a group, then students will design and conduct an independent investigation relevant to the content of the course. This project will be a report on an investigation of a particular case of adaptation or the functioning of a “strategy”. This may involve mostly field work or largely lab work, plus appropriate library study, according to choice. Results will be written up and presented at the end of this class.

Course Policies: You are expected to be on time to class, and to stay the full period. You are expected to maintain high standards of academic honesty. Any student found in violation of these standards will earn an automatic F and be reported to the Deans Office, no exceptions made. In accordance with FIU's policy on academic honesty, as set forth in Section 2.44 of the Academic Affairs Policies and Procedures Manual (<http://academic.fiu.edu/docs/aapolicies.htm>), it is expected that students in Evolutionary Ecology will not submit the academic work of another as their own. Additional discussion of academic honesty and integrity may be found in the Manual of Student Conduct.

Learning outcomes: Students will learn to acquire data in systematic ways, and to perform controlled field experiments with living organisms. They will learn to interpret their results with elementary data analysis, using spreadsheet programs and simple statistics. They will review relevant scientific literature and use it as background for writing up their results as lab reports. Working in our local habitats, they will also learn about south Florida flora and fauna.

Requirements: This course, a companion to Evolutionary Ecology (PCB 4673/5687), will rely, as background, on the readings for that lecture course. The instructor will provide lab handouts and some additional references of relevant reading for each lab. A resource book that we will use is a classic, very useful little paperback (Ambrose & Ambrose, see below). Each student will assume primary responsibility for the write-up of one group lab project, and also the execution, analysis, and write-up of a project of her/his own design. The grade will be based on the lab write-up (25%), individual project execution and write-up (50%), presentation of individual project (10%), and class participation/attendance (15%).

PCB 4999L/5687L Evolutionary Ecology LABORATORY

Schedule of Events

Reference book: Handbook of Biological Investigation (5th ed.) 1995.

by [Harrison W. Ambrose](#), [Katharine P. Ambrose](#) Paperback: 194 pages Publisher: Hunter Textbooks; 5th edition (April 1, 1995) ISBN: 0887252168

Day/ date	Topic	Readings in Ambrose & Ambrose
R / 30 Aug	First meeting – introduction and plans	
R / 6 Sep	Asking questions in nature	Ch. 1 & 2
R / 13 Sep*	No class meeting – data description (read)	Ch. 3
R / 20 Sep*	No class meeting - dispersion	Ch. 4
R / 27 Sep*	No class meeting – experimental plans	Ch. 5
R / 4 Oct	Mechanical defenses	
R / 11 Oct	Chemical defenses	
R / 18 Oct	Biotic defenses	
R / 25 Oct	Planning for Independent Projects	
R / 1 Nov	Seed shadows of wind-dispersed plants	OE 169
R / 8 Nov	Choice tests and animal preferences	
R / 15 Nov	Territorial behavior	
R / 22 Nov	THANKSGIVING HOLIDAY	
R / 29 Nov	Data analysis and presentation planning	
R / 6 Dec	Last class – final presentations	OE 169

* The class being scheduled on Thursday afternoon brings it into conflict with three holidays in the month of September, so we will not have lab on those days to allow students observing those holidays to fully participate in lab course activities. You will all appreciate having more field time later in the fall as conditions are a little cooler.

