New for Spring 2003

Phylogenetic Biology --- BIOS 429/829 (4 cr.) Lec 3, Rct 1.

Instructor: G. Ortí <gorti1@unl.edu>
Mon, Wed, Fri, 9 AM to 10:15 AM, 128 Manter Hall

Prerequisites: BIOS 204, and 201 or 301; BIOS 302 or parallel; or equivalent (or permission)

Description: Basic principles of phylogenetic inference with emphasis on the application of phylogenetic hypotheses in biology and the biomedical sciences. Focus on showing how inferences derived from phylogenetic trees can be applied in different areas of biological investigation including systematics, biogeography, conservation biology, molecular evolution, genome structure, epidemiology, forensics, population biology, ecology, character evolution, behavior, and macroevolution.

Objective: students will understand how to use phylogenies as working hypotheses for testing ideas in several areas of biology. Application of phylogenies as interpretive tools will promote evolutionary thinking.

Classroom procedure: two lectures (70 min each) per week plus a one-hour recitation. Lectures will provide the basic conceptual tools. Recitation sessions involve structured discussions of current scientific literature in a “cooperative learning group” environment.