Biology 104b: Principles of Ecology and Evolutionary Biology

Spring 2015, Michael Donoghue (EEB)

Synopsis: An introduction to the fundamentals of evolutionary biology and ecology, an overview of patterns and processes in the history of Life on Earth, and reflections on overarching themes in the interpretation of evolution and ecology.

Fundamental principles

1. W Feb 25 - Evolution, the basics

2. M Mar 2 - Population genetics and speciation

3. W Mar 4 - Phylogeny and its uses

Spring Recess (Mar 7-22)

4. M Mar 23 - Principles of ecology

The history of life

5. W Mar 25 - Origin and early evolution of life

6. M Mar 30 - Major events in plant and fungal evolution

7. W Apr 1 - *Midterm Exam (covering lectures 1-6, problem sets 1&2, and readings)*

8. M Apr 6 - Major events in animal evolution

9. W Apr 8 - Special topics - sex, behavior, societies, etc.

Overarching themes

10. M Apr 13 - Rates of evolution - genomes to adaptive radiation

11. W Apr 15 - Evolution and development

12. M Apr 20 - Coevolution and its consequences

13. W Apr 22 - Global ecology and biodiversity through time, closing thoughts

14. F May 1 - *Final Exam (covering lectures 8-13, general principles, and readings)*