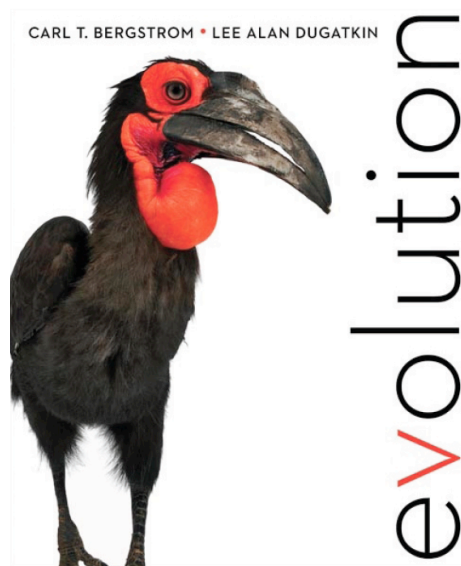


Biology 354, Spring 2014

Instructor: Carl Bergstrom, cbergst@u.washington.edu
Time and place: MW 1:30-2:20
Hitchcock Hall Room 132
TAs: Jake Cooper, yankel@uw.edu
Frazer Meacham, fmeacham@uw.edu

Textbook: C. T. Bergstrom and L. A. Dugatkin (2011) *Evolution*. W. W. Norton and Co.



Website: <http://octavia.zoology.washington.edu/teaching/354/>

Grading: Your course grade will be determined as follows:

Exam 1 May 5 th in class, material through April 28	30%
Exam 2 June 4 th in class, covering the full quarter.	30%
Section Includes participation, exercises,	15%
Problem sets To be turned in weekly	25%

There will be *no* final exam during the exam week June 10th-14th.

Readings and Course structure: Evolutionary biology is a broad subject and a quarter is not much time—so we are going to have to move at a rapid pace in this course. In each lecture, my aim will be to provide you with a high-level overview of the material in each chapter, why it matters, and how it relates to the big picture of evolutionary biology.

For this to work, you need to come to class prepared. *I expect you to have read the assigned readings prior to each class.* To succeed in this course, you will need to come to class having read the textbook carefully and worked through a number of the review problems at the end of the chapter.

Problem assignments: Short problem assignments will be due in section each week. These will be drawn from the end-of-chapter questions in the textbook.

No late work will be accepted for any reason.

All of the work that you submit in this course must be your own independent work. Collaborating with classmates on the assignments is not permitted. Submitting unattributed material lifted from any source, including the web, constitutes plagiarism. Acts of plagiarism will result in a failing grade for the assignment in question, and will be forwarded to the College Disciplinary Committee.

Course schedule

Date	Topic	Reading
March 31	History of evolutionary thought	B&D ch. 2
April 2	Natural selection and adaptations	B&D ch. 3
April 7	Phylogeny and evolutionary history	B&D ch. 4
April 9	Phylogenetic inference	B&D ch. 5
April 14	Evolution at one locus	B&D 7.1-7.7 Review B&D Ch. 6 if needed
April 16	Drift and the coalescent	B&D 8.1-8.2
April 21	Drift, selection, and neutrality	B&D 8.3-8.5
April 23	Evolution at multiple loci	B&D 9.1-9.2
April 28	Fitness landscapes and quantitative genetics	B&D 9.3-9.4
April 30	Genome evolution	B&D ch. 10.1-10.5
May 5	In class exam	Material through 4/28
May 7	Origin of Life	B&D ch. 11
May 12	Major transitions in evolution	B&D ch. 12
May 14	Speciation	B&D ch. 14
May 19	Evolution of sex	B&D ch. 16
May 21	Cooperation and conflict	B&D ch. 18.1-18.2
May 26	<i>Memorial day – no class.</i>	
May 28	Evolution and medicine	B&D ch 20.1-20.4
June 2	Evolution of senescence	Williams 1957, B&D ch. 20.5
June 4	In-class Exam II	All course material

Due date	Problems (from the end of chapter problems in B&D)
April 8	2.6, 2.7, 2.8, 3.2, 3.6, 3.10
April 15	4.6, 4.9, 4.11, 5.2, 5.3, 5.7, 5.10
April 22	7.1, 7.3, 7.5, 7.7, 7.8, 8.1, 8.2, 8.3
April 29	8.6, 8.8, 8.9, 9.1, 9.4
May 6	9.5, 9.6, 9.7, 9.9, 10.2, 10.5, 10.6, 10.8, 10.9
May 13	11.2, 11.5, 11.7, 11.10
May 20	12.1, 12.6, 12.10, 16.5, 16.6, 16.9,
May 27	18.5, 18.7, 18.9, 18.10,
June 4	20.1, 20.3, 20.5, 20.9