

# Biogeography

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Syllabus

Biol. 582/782 (Lecture); 3 credit hr

Fall 2007

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**LECTURES: 9:30–10:50 AM, TUES/THUR.**

**PLACE: 320 DYCHE**

**Instructor:** Dr. Rafe Brown, e-mail: [rafe@ku.edu](mailto:rafe@ku.edu)  
417B, Dyche Hall; Phone: 864.3403 (O); Office Hr: Anytime, by appointment.

*Required Text:* M. V. Lomolino, B. R. Riddle, and J. H. Brown. 2006. *Biogeography*, 3<sup>rd</sup> Ed. Sinauer.

*Graduate Students Additional Text:* M. V. Lomolino and L. R. Heaney (eds.). 2004. *Frontiers of Biogeography, New Directions in the Geography of Nature*. Sinauer.

## EXPECTATIONS

Reading assignments from class text (Lomolino, Riddle, and Brown, 3<sup>rd</sup> edition) and regular attendance in all scheduled lectures is required. Part of your grade will be determined by your regular participation in class, so active classroom interaction is a must for those who want to do well in this course. There are two midterm exams, a comprehensive final, and a term paper. Graduate students are required to read additional materials from Lomolino and Heaney (2004) and participate in separately scheduled discussions. Undergraduates are welcome and encouraged (but not required) to participate in these discussions as well.

**Important Dates:** see: <http://www.registrar.ku.edu/calendar/079deadlines.shtml>

*\*Note: it is your responsibility to be aware of all add-drop deadlines; please plan well in advance if you desire to drop the course or change your status to pass/fail.*

**Grades will be based on:**

Exam 1	- 20 %
Exam 2	- 25 %
Exam 3	- 25%
Prospectus	- 5 %
Term Paper	- 20 %
Participation	- 5 %

**Term Paper: Prospectus due: 14 November (or earlier)**  
**Final Term Paper Due: 14 December, 10 AM (NO LATE PAPERS)**

**Final Examination: Thursday, 13 December: 8:30 am (last 1/3 of course)**

## Lecture Schedule

16 August: Introduction and Orientation to the class.

21 August: The Science and History of Biogeography  
Reading: LRB, Ch. 1+2

23 August: The Physical Environment  
Reading: LRB, Ch. 3

28 August: The basics of Species Distributions  
Reading: LRB, Ch. 4

30 August: Geography of Communities (Esp. Tropical Patterns)  
Reading: LRB, Ch 5: p. 97–100; 106–138.

4 September: Plate Tectonics and Continental Drift  
Readings: LRB, Ch. 8; *see also*: [www.scotese.com](http://www.scotese.com)  
GRAD STUDENTS (LH Ch. 1)

**6 September: Rafe away (IL); class cancelled (*get started studying for Exam 1*).**

11 September: More continental drift  
Readings: LRB, Ch. 8; *see also*: [www.scotese.com](http://www.scotese.com)  
GRAD STUDENT DISCUSSION 5 PM

Speciation and Extinction, Part 1  
Reading: LRB, Ch. 7

13 September: Speciation and Extinction, Part 2  
Reading: LRB, Ch. 7

13 September: 2<sup>nd</sup> half of class period: review session

**18 September: Exam 1**

20 September: Speciation and Extinction, Part 3  
Readings: LRB, Ch. 7  
GRAD STUDENTS (LH Ch. 4)

25 September: Glaciation and Biogeographic Dynamics of the Pleistocene.  
Readings: LRB Ch.

27 September: The theory of Island Biogeography part 1

Readings: LRB Ch. 13 ; selections from MacArthur & Wilson, 1963

2 October: The theory of Island Biogeography part 2

Readings: LRB Ch. 13 + 14; selections from MacArthur & Wilson, 1963

**GRAD STUDENT DISCUSSION 5 PM**

4 October: Island Biogeography part 3: assembly and evolution of insular communities

Readings: LRB Ch. 14; selections from MacArthur & Wilson, 1963

9 October: Diversity Gradients

Reading: LRB, Ch. 15

**11 October: Class Cancelled — Fall Break (11–14 Oct.)**

16 October: Measuring Dispersal

Reading: LRB, Ch. 6

Catch up & review for Exam 2

**18 October: Exam 2**

23 October: The Geography of Diversification

Reading: LRB, Ch. 10

GRAD STUDENTS (LH Ch. 9)

**GRAD STUDENT DISCUSSION 5 PM**

25 October: Historical Biogeography of Lineages

Reading: LRB, Ch. 11, minus p. 404–408

GRAD STUDENTS (LH Ch. 11)

30 October: Phylogeography Part 1

Reading: LH, Ch 5 (graduate and undergraduates);

LRB, “Phylogeography” p. 404–408

1 November: Phylogeography Part 2

Reading: TBA

6 November: Historical & Vicariance Biogeography (biogeography of biotas)

Reading: LRB, Ch 11 + 12

GRAD STUDENTS (LH Ch. 12)

8 November: Rafe away (OK); lecture cancelled

13 November: More historical biogeography

Reading: LRB, Ch 11 + 12

***Prospectus due in class***

**GRAD STUDENT DISCUSSION 5 PM**

15 November: More historical biogeography: testing biogeographical hypotheses

Reading Bossyut & Milinkovitch “Out-of-India” Science paper

20 November: Lecture Cancelled to provide time to *work on Term Paper*.

**22 November: Thanksgiving**

27 November: Island Biogeography and Conservation, Part 1

Reading: LRB, Ch. 16

GRAD STUDENTS (LH Ch. 18)

**GRAD STUDENT DISCUSSION 5 PM**

29 November: Island Biogeography and Conservation, Part 2

Reading: LRB, Ch. 17

4 December: The Future of Biogeography: Pattern and Process in Biogeography,

Reading: LRB, Ch. 18; extra readings TBA

GRAD STUDENTS (extra readings TBA)

6 December; official last day of classes; & **Class Evaluation**

7 December: Stop Day

10 December — 14 December: FINALS WEEK

**Final Exam Thursday, 13 December: 8:30 am (last 1/3 of course & first lecture-history)**

21 December: grades finalized midnight

***Term Paper: Prospectus due: 13 November (or earlier)***

**Final Term Paper Due: 13 December, 10 AM (NO LATE PAPERS)**

The prospectus must include a 1-page outline or text summary and at least three primary references for your topic. Term papers may be on any topic in Biogeography that is approved by the instructor. They should be about 10 pages in length, in double-spaced, 12-point type. Papers should review some topic of interest from a conceptual point of view, i.e., there should be some issue or question involved, not just a summary of facts.