

Biogeography Project Fall 2008

I. Description

For your class project, you will research a topic on biogeography that interests you. You will then present your project to the class as well as turn in a paper.

Group projects are encouraged, but the scope of the project should increase proportionally. Each group member will be required to list their contribution to the project in the paper as well as participate in the class presentation. All members of a group will receive the same grade. See me if you'd like to do a group project.

You will turn in your proposed topic as part of a homework early in the semester.

In-class presentations of class projects will occur during the final two weeks of class. You will be expected to give a 10-15 minute presentation on your topic. This presentation should be developed concurrently with your paper and summarize the paper. You will also be expected to evaluate and grade other students on their presentations. More information on the schedule will be given later in the semester.

The final paper will be roughly 10 pages (double-spaced; figures and references extra), printed out and handed in to me, that includes the following items: introduction and background (including significance/justification of topic; why is this topic important and why did you select it?), methods and results OR synthesis, conclusions, references. All appropriate statements in your paper should be cited; see <http://www.dartmouth.edu/~sources/about/when.html> for examples or ask me. Use a common style for your bibliography and be consistent; a good style is from the American Geophysical Union at <http://www.agu.org/pubs/AuthorRefSheet.pdf>. Grammar, syntax, correct citations and clarity of writing will count for 15% of your paper score.

II. Topics

Possible questions:

1. Perform some modeling or data analysis, such as modeling the effects of climate change on tree habitats in the US. Please see me for more information.
2. Select a topic of your choice that relates to biogeography.
3. Chose from a topic below:

How will different aspects of global environmental change affect selected plant or animal species distributions?

How have long-lived tree species survived climate variability since the end of the last ice age?

Why are there more megafauna in Africa than other continents?

What controls differences in treeline among mountain ranges?

Why are some plants and animals good invaders?

Why do marsupials dominate in Australia?

Why don't penguins occur in the Northern Hemisphere?

Why does the Antarctic Ocean have higher diversity than the Arctic Ocean?

III. Grading

You will be graded on four aspects of your project:

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| a. paper | 55% |
| b. presentation, including demo of code | 35% |
| c. your evaluation of others' presentations | 10% |

IV. Resources

To get the most current information, I encourage you to rely heavily on scientific journal papers.

For your purpose, reviews and papers written for discipline-independent journals will be valuable. Good sources include: *Science*, *Nature*, *BioScience*, *Trends in Ecology and Evolution*, *Frontiers in Ecology*. Journals written for the general public such as *Scientific American* are also useful. The *National Inquirer* is not.

Disciplinary journals are also helpful. The broad scientific topics covered in biogeography mean that there are a large number of possible journals. Suggestions include: *Journal of Biogeography*, *Global Ecology and Biogeography*, *Diversity and Distributions*, *Ecology*.

Books (including the course text books) can also provide useful information. One that may be of interest is *Song of the Dodo* by David Quammen.

The Internet may or may not be a useful provider of information. It is an excellent means of finding sources of information, but not necessarily for providing accurate information. In other words, check out the information listed in Wikipedia, but don't cite that directly. Instead, follow the links and references listed.

I believe the most useful tool for you will be the ISI Web of Science journal search (<http://ida.lib.uidaho.edu:5660/portal.cgi?DestApp=WOS&Func=Frame>). This is a powerful search engine that allows you to search by topic, keyword, journal, and author. A major advantage is the ability to look "forward" in time to see papers that cite the one you are looking at, giving you the capability of seeing the most current ideas on your topic.