Field Biology 372

Time: Mon/Weds 12-1:30, lab Weds. 2-5
Classroom: Heustis 130
Taught by Prof. Bitty Roy
  Office: Room 461b Onyx Bridge  (enter 461 and go through a pocket door to the left)
  Tel. 346-4520
  E-mail: bit@uoregon.edu
  Please use 372 in the subject header

Office Hours:
Official office hour: Mondays 10-11, or by appointment, or feel free to drop-in, though it is always wise to call to be sure I am in.

GTF
Lorien Reynolds
Office hour and place TBA.

Schedule

Wk 1 Mar 31-Apr 4 Biogeography and Phenology
Mon:  Introduction, Phenology, Field notebooks
Weds:  Plant identification 101
Lab:  FIELDTRIP Phenology Project (leave from classroom)
Homework:
1. read pages 50-62 from Crow Planet: Essential wisdom from the urban Wilderness by Lyanda Haupt (on Blackboard).

Wk 2 Apr 7-11 Populations
Mon:  Demography and lichens
Weds:  FIELDTRIP (leave from classroom) Cemetery lichens: populations and demography
Homework:
Lab:  Statistics 101

Wk 3 Apr 14-18 of Birds and Rivers
Mon:  Bird identification 101
Weds:  Coastal Habitats
Weds Homework due: Exercise 1, Lichen demography
Lab:  FIELDTRIP Willamette River, Birds, cottonwoods, fossils
SAT April 19th Coast FIELDTRIP to OIMB (meet at Onyx loading dock; be early we leave on time at 7am)
Data: mudflats (alpha and beta diversity), elk, dunes & landslides
Low tide: 9:53 am, so leave Eugene at 7am, lunch at OIMB

Wk 4 Apr 21-25 Rivers link to the coast
Mon: Riparian Zones
Mon. Homework due: BRING Field Journals for Review= first third of term=100pts (back to you by Thursday)
Weds: Salmon
Weds. Homework due: mudflats
Lab: FIELDTRIP (leave from classroom) Willamette River, compare aquatic invertebrate communities in river and millrace

Wk 5 Apr 28-May2 Prairies I
Mon: FIELDTRIP Phenology Walk in Alton Baker Park (leave from classroom)
Weds: Metapopulations
Lab: FIELDTRIP (leave from Onyx loading dock) WEW Lupines and Metapopulations

Wk 6 May 5-9 Prairies II
Mon: L1 Humans, prairies and the Willamette Valley
Weds: Gophers
Weds Homework due: rest of the metapopulation exercise
Lab: FIELDTRIP (leave from Onyx loading dock)
Pisgah Estimating Gopher populations and consequences

Wk 7 May 12-16 Urban Ecology
Mon: FIELDTRIP (leave from classroom) Urban ecology, succession, invasions
BRING Field Journals for Review= 2nd third of term=100pts (back to you by Thursday)
Weds: Pollination and Insect identification 101
Weds Homework due: gophers
Lab: FIELDTRIP (leave from Onyx loading dock)
Insects and Pollination

Sunday 18th of May is wildflower show

Wk 8 May 19-23 High desert
Mon: L1 Oregon's High desert
Weds: Galls
Weds Homework due: pollination
Lab: Catch-up day and help session. Computers will be in lab and we will be there to help with analyses and identifications

24 Sat East side FIELDTRIP, leaving at 7am from Onyx loading dock
Data: Galls on sagebrush, geology, cascade transect
Wk 9 May 26-30 Forests
Mon: What is a forest?
Weds: Forest Dieback
Weds Homework due: Galls
Lab: FIELDTRIP (leave from Onyx loading dock) Old growth forest, bird and plant practice

Wk10 June 2-6
Mon: Predators
BRING Field Journals for Review= last third of term=100pts (back to you by Thursday)
Weds: Summing up
Lab: FIELDTRIP (leave from classroom). Everyone reports on phenology projects in Alton Baker Park

Final Exam: No exam, but 10:15 am Monday June 9th is when your phenology project is due.

Goals
Upon successful completion of Biology 372, a student will be able to:
1. Use dichotomous keys and be able to identify plants, insects, and birds
2. Know how to keep a field journal, and know the value of it.
3. Use surveys and experiments to understand the distributions and behaviors of organisms.
4. Understand the connections between geology, ecology and culture in shaping the environments of Oregon.

Methods
Field Biology is designed to teach you how to become a naturalist. A naturalist is an advocate of the doctrine that the world can be scientifically understood. Naturalists are knowledgeable about natural history, in particular of botany and zoology. We will be asking: how do we identify the plants and animals (including insect and birds) that we see and what are the biotic, abiotic and historical factors affecting the composition and distributions of organisms in the major physiographic regions of Oregon? Basic ecological principles will be taught, including adaptation, competition, mutualism, and invasion biology, using local examples. Not only will you learn to identify organisms and to see biological patterns, but you will also learn to test hypotheses about what you see.

A large component of this class is the experiential learning that will take place during field study. Most of the three-hour “lab” periods will be spent in the outdoors, and there will also be two day-long weekend trips. We will focus on the Willamette Valley prairies, coastal rivers, dunes and mudflats and we will take one trip through the Cascades to the high desert of Eastern Oregon. These fieldtrips and labs are designed to gain hands-on experience with different organisms and habitats. A large portion of the grade for this class is the field journal in which you will make observations and reflect on what you see and do in the field.
**Required Materials:**

1. You are required to buy a write-in-the-rain field journal and a hand lens (for looking at small things, like flowers). You will also be keeping a field journal. The form that this takes is up to you. See examples in class.


3. Sibley D. 2003. *Field Guide to Birds of Western North America*. New York: Alfred A Knopf. The two books you have been asked to buy for this course will be your constant companions on every field trip and hopefully for the rest of the time you are in the PNW.

4. SimUText Exercise on Metapopulations

5. JMP Computer program, for statistical analysis. This program is available FREE to UO students by going to this website: [https://it.uoregon.edu/software/jmp](https://it.uoregon.edu/software/jmp) and then clicking on “Login to view available downloads” at the bottom of the page. Choose the software that fits your operating system. If you have difficulty downloading or getting the software running, contact the IT helpdesk in 151 McKenzie Hall; you can reach them in person, by telephone 541-346-4357, or by email at helpdesk@uoregon.edu. If you do not have your own computer, JMP is installed on the computers in the Microcomputer lab in the basement of Klamath (KLA B13).

6. A camera and binoculars are strongly recommended.

**Field Trips:**

1. Most weeks our "lab" on Thursday is a fieldtrip, so come prepared with:
   - rain jacket (and rain pants if you have them)
   - hand lens and field notebook
   - camera and binoculars (borrow if you don't own these)
   - closed toe shoes—NO SANDALS
   - expect to get dirty
   - long pants (poison oak is everywhere)

2. There are two Saturday trips. You are REQUIRED to be on at least one of them

3. Several of our hour twenty lectures will be outdoors, so come prepared to go outside (see syllabus).

**Field Notebook and Field Journal:** see write-up for more detail. Briefly, you will keep notes and data from field trips and any additional fieldwork you do in your write-in-the-rain field notebook. You will also keep a formal field journal where your notes are fleshed out.

**Phenology Project:** see write-up for more detail. You will be given a plant species to follow over the course of the spring.

**Grading**

400 pts (40%) 4/5 Data Exercises (lowest score will be dropped)

- Lichen demography

- Comparison of two fresh water invertebrate communities
Metapopulation Computer exercise
Gopher population size and consequences
Pollination, comparison of two species

100 pts (10%) Field trip data exercise (there are 2 trips, only 1 is required, if you turn in both, we will drop the lowest score)
   Coast: Mudflat invertebrate diversity (alpha and beta)
   Eastern Oregon: Environmental correlates of sage galls

300 pts (30%) Field Journal (which should include your data AND additional materials)
200 pts (20%) Phenology Project

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**Participation** will aid your success in the class, and will make it more enjoyable for all. You all have skills that you can share and there are many ways you can contribute.

**Plagiarism will not be tolerated.** You are expected to do your own work on assignments. You are encouraged to discuss ideas and identifications with each other and to study together, but do not copy someone else’s work, or allow them to copy yours. Penalties for cheating range from receiving a zero score on the relevant test, quiz or exercise to receiving an F grade in the class. The student conduct code can be found at: http://studentlife.uoregon.edu/LinkClick.aspx?fileticket=puLfAzFDbsg%3D&tabid=69

**Late Policy:** There are NO LATE PAPERS and NO MAKE UP EXAMS, except for genuine **Emergencies and crises**. When crises do occur, I will work with you to make arrangements and accommodations. I don’t ever want anyone lying in a hospital bed worrying about class! Documentation may be requested.

**STUDENTS WITH SPECIAL NEEDS**
We do our best to support students with special needs. If you have special needs, such as test accommodations, note-taking, and sign language interpretation, please contact Disability Services so that their personnel and I can work together to help you learn comfortably in this class. The Disability Services office is located in 164 Oregon Hall. Telephone 541 346-1155. TTY: 541 346-1083. Fax 541 346-6013. On the web: http://ds.uoregon.edu. E-mail: disabsrv@uoregon.edu

If English is your second language and you find understanding my speech difficult, please contact me. I may be able to help you (I too have lived in countries and have had to function in other languages).