Field Biology

**Time:** Mon/Weds 2-3:20 plus field trips Thursdays.

**Classroom:** Huestis 111

**Taught by** Prof. Bitty Roy

Office: Room 461b Onyx Bridge (enter 461 and go through a pocket door to the left)

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**Official office hours:** Wednesdays 3:20-5:20 in Huestis 111, also by appointment, or feel free to drop-in, though it is always wise to call to be sure I am in

**Graduate Teaching Assistant:**

Hannah Soukup, Time: Fridays at 10:00 Place: Huestis 111

**Course Goals:**

My expectation is that you will learn to be naturalists according to both of these definitions from http://wordnetweb.princeton.edu:

1. A naturalist is “an advocate of the doctrine that the world can be understood in scientific terms”
2. A naturalist is “a biologist knowledgeable about natural history (especially botany and zoology)”

Three questions are key: What, where and why. You will learn to identify the plants and birds, we see daily, as well as the insects and other animals that we see on field trips. You will learn to see where these organisms live and with whom. You will learn to ask what causes the patterns of distribution that you see, and how to test these hypotheses.

**Methods**

You will learn how to become a naturalist primarily through fieldtrips and field projects, augmented by reading, lectures, your field notebook and journal, and by discussions during the Tuesday seminar.

**Readings:** Reading will help to put much of what we see into context, so it is important that you do it in advance of class, and especially in advance of the field trips. Note that most of the readings I have assigned for this class overlap with those assigned for seminar or one of your other classes in this block course. Our hope is that this integration will improve your learning. All readings that are not part of one of the required texts will be made available on blackboard.

Please come to class prepared.

**Required Materials:**

• You are required to buy a write-in-the-rain field journal and a hand lens (for plant and insect identification). You can use the same field notebook for all your classes.
• A camera is strongly recommended. Cell phones work well for some things, but not all (birds, for example). If you don't have a cell phone at a minimum, borrow a camera from someone.
• You are required to have identification materials. These are in the form of FREE Apps, or books (we have most of these in the class room so no need to buy, but you will need to check them out)

•Four Free Apps to download BEFORE CLASSES START!:
  1. Oregon Wildflowers Search APP (or, buy Oregon Wildflowers for $9.99; note how similar the name is). The freee app is better for this class.
  2. Audubon Birds APP (or use any other bird APP you have; my two favorite bought APPS are iBridPro and Sibley Birds)
  3. Soil Web APP
  4. iNaturalist APP

Books to Check Out (or own) if you don't have a phone or want a book too:


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book that covers Western North America

Field Trips:
1. Most weeks there is an all day fieldtrip on Thursday (the times will vary so check the schedule).
2. During ALL of week six (6-11 May) we will be in Eastern Oregon at Malheur Field Station and not on campus at all. Plan for this!

Field Notebook and Field Journal: see handout 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. The formal field journal will have components that will be graded by all three faculty.

Natural History of a Place: see handout for more detail. You will be given a place along the Millrace or the River to learn the natural history of, and to follow over the course of the spring. You must visit this places at least once/week, with the exception of week six when we are away.

Term Project: Everyone will do a term project, but not all term projects will be a field biology project (yours could be multidisciplinary, biological, historical or geological). See Handout from Seminar.

Grading
1. Field Journal (including field trip data assignments) 70% (and also part of your other grades). Note that without a field notebook you will not do well on the field journal; you must use both.
2. Natural history of your Millrace place: 30%; to be incorporated into your field journal and iNaturalist

Participation
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.

Late Policy: Your work is due on the dates listed in the syllabus. For each day late, your grade will drop two letter grades. The only exceptions to this policy are documented illness (i.e., with a Doctor’s note), or death in the family.

Special needs: If you need accommodation, please contact me.

SYLLABUS
FYI in the syllabus draws attention to activities that are not required, but good activities for learning.

Week 1 Willamette Valley I
Field Biology Theme: history can be seen in succession

Reading:
1. Kleptoparasitism of a coyote by Jung et al 2009

• Mon. 3 April: Introduction and Field Journals

• Weds. 5 April: Plant Identification 101
• Tues. 6 April FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Thurs. 6 April: Millrace Fieldtrip & assignment of "Millrace places"

• Fri. 7 April: work on field journals, meet with faculty to discuss projects.

**Week 2 Willamette Valley II**

*Field Biology Theme: Water is life*


• Mon. 10 April: Intro to birds

• Mon 10 April **FYI:** "Introduction to Local Butterflies" by Rick Ahrens **Organization:** North American Butterfly Association (NABA). **Time & Location:** Refreshments 7:00pm; presentation 7:30. The Eugene Garden Club at 1645 High, Eugene. **Description:** Join local naturalist Rick Ahrens for a look at the common butterflies in the Eugene / Springfield area. We'll explore life cycles, ecology, and talk about some of the best places to look for these beautiful creatures.

• Tues. 11 **FYI:** Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Weds. 12 April: Willamette Valley Wetlands

• Thurs. 13 April: Willamette Falls & Oregon City

• Friday 14 April: field journal & projects

• Saturday 15 **FYI** Audubon Society monthly morning bird walk; carpool at the east parking lot at South Eugene High School, leaving at 8 a.m.

Useful websites:

Checklists for Mount Pisgah, Skinner Butte, West Eugene, etc.
Springfield Community Birding trail, complete with bird lists and habitats.

“Your guide to birding in the PNW since 1994”

Cornell Lab of Ornithology
General and specific information and calls.

Lane County Audubon Society [http://www.laneaudubon.org/](http://www.laneaudubon.org/)
This group leads guided walks and has monthly slide shows
They meet at the Eugene Garden Club, 1645 High St. on the third Tuesday of every month at 7:30 pm. The Quail, a monthly newsletter on the website lists bird walks and talks

**Week 3 Willamette Valley III**

*Field Biology Themes: Prairies and restoration*


- Mon. 17 April: "Gophers" Guest Lecture by Jim Reichman
- Tues. 18 FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20
- Weds. 19 April: Invasive Species and Prairie Restoration

- Thurs. 20 April: 9-5 Fieldtrip to Mt. Pisgah & Dorris Ranch

**FYI** Thurs. 20th: public lecture "The Oregon Flora Project is transforming its interface with the world!" by Thea Jasper. **Organization:** Native Plant Society **Time & Location:** 7:30-9 (7pm for cookies). The Stellaria Building, 150 Shelton-McMurphey Boulevard, Suite 104, Eugene. Head east on West 3rd Avenue until it turns into Shelton-McMurphey Boulevard. Stellaria is inside Hummingbird Wholesale; go upstairs.

- Fri. 21 April: Projects, field journal

**FYI** Friday 21st public lecture "Pythons of the Sea: Natural History of the Nemertean Worms" by Svetlana Maslakova. **Organization:** Eugene Natural History Society **Time & Location:** presentation 7:30. Willamette 100

**Week 4 Coast Range**

*Field Biology Theme: What's a forest*

**Reading:** Chazdon et. al. 2016. “When is a forest a forest? Forest concepts and definitions in the era of forest and landscape restoration. *Ambio*, 45: 538–550. (seminar reading too)

- Mon. 24 April: What is a forest?

**Due:** Field journals for first evaluation; we will have them back to you by Thursday (we hope!)

- Tues. 25 FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20
- Weds. 26 April: Community Ecology
- Thurs. 27 April: 8-5 Field Trip Kentucky Falls: aesthetics and value; logging and landslides

- Friday 28 April: Projects, field journal

**Week 5 Salmon**

*Field Biology Theme: Responses of animals and fish to human-mediated change*

Field Biology

• Mon. 1 May: The Ecology and Evolution of Salmon

• Tues. 2 May FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Weds. 3 May: Aquatic Invertebrates (Fish Food)

• Thurs. 4 May: no trip as we leave Saturday for Malheur

• Friday 5 May: Projects, field journal, get ready for the Malheur trip

Useful websites:
Salmon: http://www.fws.gov/salmonofthewest/salmon.htm
General resources for Pacific Northwest; http://www.nwnature.net/macros/resources.html

Week 6 Great Basin, Malheur Field Station Sat 7 May through Thursday 11 May
Field Biology themes: adaptation to arid environments and migration
Sat. 7 May 8:00 am leave from parking lot behind Klamath for the trip to Malheur

Reading:
Denzel and Nancy Ferguson, Oregon’s Great Basin Country (Bend, OR: Maverick Publications, 1978) Ch. 7, “Adaptations to Arid Environments,” pp. 78-87, and Ch. 9, “Environmental Problem,” pp. 95-107. Chapters 6 & 7, pp. 32-77, also posted on Canvas, are good references for the plants and animals.

Week 7 Eastern Oregon Retrospective
Field Biology theme: conservation


Mon. 15 May: Retrospective of trip

• Tues. 16 May FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

Weds. 17 May: Conservation

Thurs 18 May: No Trip catch up on journals and projects

FYI Thurs May 18, Native Plant Society talk 7:30-9 (7pm for cookies). The Stellaria Building, 150 Shelton-McMurphey Boulevard, Suite 104, Eugene. Head east on West 3rd Avenue until it turns into Shelton-McMurphey Boulevard. Stellaria is inside Hummingbird Wholesale.

Friday 19 May: work on project and journals!
FYI Friday May 19, Eugene Natural History Society talk 7:30pm in WILL 100, by Ed Alverson: Southern Willamette Valley Natural Areas through the Seasons

Saturday 20 May FYI Audubon Society monthly morning bird walk; carpool at the usual location, in the east parking lot at South Eugene High School, then leaving at 8 a.m.
Sunday 21 May FYI Annual wild flower Show at Mt. Pisgah Arboretum. If you volunteer the day before or the day of, it is free. Fund raiser for MT. Pisgah Arboretum.

Week 8 Oregon Coast
Field Biology Theme: dunes and succession


• Mon. 22 May: Oregon Dunes Ecology

• Tues. 23 May FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Weds. 24 May: Urban Ecology I: Jeff Kruger Rivers to Ridges guest lecture

• Thurs. 25 May: 8-6 Field Trip Coast

• Fri 26 May: Projects, field journal

Week 9 Towns and Cities
Field Biology themes: Urban Ecology


• Mon. 29 May: HOLIDAY

• Tues. 30 May FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Weds. 31 May: Urban Ecology II.

Due: your Natural History of a Place

• Thurs. 1 June: Delta Ponds fieldtrip **BRING YOUR BICYLES**

• Fri. 2 June: work on project & Presentations & Field journals

Useful websites:
West Eugene Wetlands plan: https://www.eugene-or.gov/1766/West-Eugene-Wetlands-Plan
Rivers to Ridges: https://www.eugene-or.gov/650/Rivers-to-Ridges-Partnership
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Week 10 Presentations
• Mon. 5 June: Presentations

• Tues. 6 June FYI: Phenology and bird walk with Bitty & Peg meet on Autzen bridge 12:05-1:20

• Weds. 7 June: Presentations

• Thurs 8 June: 10-3 Field Trip Spencer Butte Hike

FYI on Saturday June 10th, the North American Butterfly Association is holding a butterfly count. Beginners are welcome!! From their website "This field trip, the first of two "Fourth of July" butterfly counts, will be led by our experienced local NABA-ES officers. Four different count groups will explore for butterflies in the West Eugene Wetlands, Mt. Pisgah Arboretum, East Buford Park, and Spencer Butte. Beginners are encouraged to participate in this outing as a learning experience in butterfly identification. We will meet at 10:00 a.m. in the Campbell Senior Center parking lot (155 High St., Eugene) to split into groups and to carpool to the sites. There is a $3.00 fee for this event Preregister with David & Lois Hagen (NABA-ES) by email NABA.ES.trips@gmail.com."

Final Exam Week

Final Projects due Monday, June 12

Field notebooks due no later than Weds June 15th.