

IB 447: Field Ecology

CRN 34665

1 hr credit

5:00-5:50 pm Mon., NHB

Contact Information

Instructors:

Sydney A. Cameron, Professor, Entomology: 217-333-2340, scameron@life.illinois.edu

James B. Whitfield, Professor, Entomology: 217-333-2567, jwhitfie@life.illinois.edu

Offices: 215 B and D Morrill Hall

Office Hours: by appointment

Office Phones: 333-2340 and 333-2567

Teaching Assistant: to be determined each semester course is taught; typically, a graduate student with expertise outside departmental home of instructors.

Prerequisites: Students are selected from applicants based on being an SIB student with some interest in and background in a field-biology related subject, typically in their Junior year. Prerequisites: IB 203; or consent of instructor.

The course is not required for a degree.

Course Description

Study of habitats in various sections of North America. Includes outdoor camping and cooking; extended hikes; transportation in University cars. See Class Schedule. May be repeated to a maximum of 3 credit hours. Limit: 22 students (with instructors and TA, = 25).

Offered Spring semesters, with field trip after Final Exam week. Next offered Spring 2019 (not offered Spring 2018). A \$250 fee is required from each student to help offset trip costs.

Textbook: No text is required; a series of readings will be developed based on the locations and habitats to be visited during the field trip.

Course layout:

First two weeks, 1 hour per week by arrangement, include overview of discussion topics for selected trip habitat and trip details. **Second half of semester, 1 hour per week “lecture”**, featuring topics presented by students on the natural history of the location/habitat of the field trip site. The end of the semester focuses on detailed logistics/planning sessions for the trip. The enrolled students will be polled to determine an optimal time for the weekly meeting, and a place organized to fit that time. The main focus of the class is the 9-day Field Trip after graduation day in May.

Assignments (subject to change depending on field trip to given region)

Student Reports

Geological history

Biogeographical history of the flora and fauna

Plant communities (overview)

Weather and climate

Human settlement history of the area

Environmental disturbances (including disease, pest introductions and pollution) and their impacts
Origin and development of the protection plan for the area
Dangerous or harmful plants and animals
Fungi
Mosses
Lichens
Wildflowers
Shrubs
Trees
Non-arthropod invertebrates
Insects
Other arthropods
Mammals
Birds
“Reptiles”
Amphibians
Freshwater fish

Field Trip

The Field Trip is scheduled to start directly after Final Exams, and Graduation weekend, and lasts roughly 9 days, including transportation to and from the location in University vans.

Each day on location features tent camping, preparation and cooking of meals by the students, and organized hikes with the instructors and TA featuring natural history of the location. Students are expected to contribute expertise in the area they covered in their lecture presentation. Evenings after dinner are devoted to recounting the day's findings, identifying sightings of animals and plants and other items discovered during the day, and planning for the next day. On some evenings, night excursions may be scheduled for spotting nocturnally active animals.

Assessment

Grading is based on quality of student reports presented during the first 6 weeks of the course (20%), and on participation, both academic and logistical, during the field trip (80%). Participation in field trip preparation (each student has specific duties), discussions in the field, and participation in group activities are weighed heavily; each student will represent a particular aspect of the habitat that will be explored during the fieldtrip, and their mastery of that aspect during the fieldtrip will be assessed.

Student Learning Outcomes

Students should gain a basic knowledge of how to study natural history of organisms
Students should become familiar with basic field work in natural habitats
Students should learn team collaborative skills for problem-solving
Students should learn the basics of outdoor safety planning

Many of the students in the course have never had experience living in and studying the natural world. This course opens up a new world for them, which may influence them throughout the course of their lives. In most cases, students develop strong bonds with other students and instructors on the course and stay in touch with each other long after the course ends.

Attendance

Attendance in lectures is expected and only excused with advance notice. The field trip is typically in a remote location, and attendance is of course required for the 9 days.

Academic integrity

According to the Student Code, 'It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.' Please know that it is the responsibility of an instructor to uphold the academic integrity policy of the University, which can be found here:

http://studentcode.illinois.edu/article1_part4_1-401.html.

Disability accommodations

To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class are asked to see the instructors as soon as possible. The course involves considerable outdoor activities and hiking on rough trails, so accommodations will be challenging.

**(attached are some materials from our last offering of the course in Spring 2015, which included a trip to the Great Smoky Mountains National Park. The exact details differ based on the location chosen for the field trip. This includes the names of the students on the trip so should not be posted with the syllabus! It is meant to serve only as an example).*

IB 447 (1 hr credit)
Orientation

Great Smoky Mountains National Park
Spring 2015

- | | | | | |
|----|----------|--|---|---|
| I. | Faculty: | Dr. Sydney Cameron
215 Morrill Hall
scameron@life.illinois.edu
217-766-5631 | Dr. Jim Whitfield
215 Morrill Hall
jwhitfie@life.illinois.edu
217-778-9944 | Abigal Berkey
68 NRB
ajmaley@gmail.com
814-233-9843 |
|----|----------|--|---|---|

- II. Orientation
A. General B. Habitats C. Organisms

- III. Dates
A. Leave U of I – May 18 (Mon) at 5:30AM
B. Arrive U of I - May 27 (Wed) by ~ dinner

- IV. Pre-trip Required Classes (Mondays at 5 in 140 Burrill)
See Moodle for schedule of classes and topics
11 April – Pre-trip Committee work; discussion of issues for trip

- V. Cost
A. \$250 –billed through UI
B. Other costs to be paid by student
Meals while driving to and from Smokies
One “posh” dinner

- VI. Student Responsibilities
- A. Academic
1. Serve as resource specialist during class and while on trip
 2. Browse the web sites
 3. Keep a journal during trip
 4. Fully participate in trips/lectures/exercises
- B. Logistics
1. Pre-trip committees
 2. Trip committees

VII. Your stuff

*Limited to 1 backpack (no hard frame) or duffel and 1 day pack

Bed

sleeping bag (must be small and highly compact); warm
sleeping pad/pillow

Kitchen

silverware
cook kit (or plate, bowl, and cup)

Closet

hiking boots tennis shoes (will get wet/muddy) tevas/sandals
socks
long pants
long-sleeved shirt; t-shirts
shorts
underwear
rain parka windbreaker/ jacket
sweater or sweatshirt (record min = 22; record max = 96)
(multiple layers for 50s-70s degrees; average Min 46-50; Max 71-75)
sun hat with broad brim ***

Toys

camera and film
binoculars
field guides
knife
portable notebook/pad/pen/pencil

Personal

toothbrush and toothpaste
soap
towel and washcloth
shampoo
hairbrush
lip balm ***

Other: Most critical items:

canteen/water bottle (minimum 2 quart) ***
flashlight/headlamp ***
sunscreen ***
insect repellent ***

Topics for IB 447 – 15

Smokies Trip

Mar 30 (Mon)

1. Geological history of the Appalachian range
2. Biogeographical history of the flora and fauna
3. Plant communities (overview) – Whittaker habitat map

Brett Petersen
Megan Kramer
Ellie Moen

April 6 (Mon)

4. Weather and climate (Appalachians)
5. Human settlement history of the area
6. Land use threats to the Smokies – human induced

Xorla Ocloo
Craig McIntyre
Chanung Park

April 13 (Mon)

7. Environmental disturbances (disease and pest introductions, ozone, acid rain, etc.) and their impacts
8. Origins and development of Great Smoky Mountains National Park
9. Dangerous plants

Jenn Shen
Jason Schaap
Megan Flanagan

April 20 (Mon)

10. Dangerous animals
11. Fungi, mosses, lichens
12. Wildflowers

Maksim Sergeyev
Shoham Band
Annika Clementi

April 27 (Mon)

13. Shrubs
14. Trees
15. Non-arthropod invertebrates

Neil Wagner
Jessica Ayers
Nicole Wonderlin

May 4 (Mon)

16. Insects
17. Other arthropods
18. Amphibians
19. Freshwater fish

Thor Hansen
Luke Dewton
Jnae Thurmond
Sarah Molinaro

May 11 (Mon)

20. Mammals
21. Birds
22. Reptiles

Zac Belida
Emily Blok
Austin Meyer

Pre-trip planning

Equipment checkup (Pre-trip and during trip)
 (tents) (3)

Austin Meyer
Jason Schaap
Jessica Ayers
Brett Petersen
Nicole Wonderlin

 (stoves) (1)
 (lamps) (1)

Radios (1) (Pre-trip and during trip)

Craig McIntyre

Librarian (1)
Group logistic assignments throughout week (1)

Abigail
Abigail

Grocery shop (4) (same people as below during trip)

Cook 1
Cook 2
Breakfast
Lunch

Maksim Sergejev
Shoham Band
Annika Clementi
Sarah Molinaro

Organize food and pack (4)

Neil Wagner,
Megan Flanagan
Xorla Ocloo
Jenn Shen

Pack vehicles before leaving and during trip (3)

Luke Denton
Ellie Moen
Emily Bick

While on Trip

Breakfast

 Food (1) (same person who does grocery shopping)
 Cleanup (1)

Annika Clementi
Chanung Park

Lunch

 Food (1) (same person who does grocery shopping)
 Cleanup (1)

Sarah Molinaro
Jnae Thurmond

Dinner

 Food (2) (same 2 who do grocery shopping)
 Cleanup (1)

Shoham Band
Maksim Sergejev,
Zac Belida

Camp Cleanup (1)

Neil Wagner

Vehicle Cleanup of Trash (1)

Brett Petersen

What you'll need to bring:

Luggage

Limited to 1 backpack or duffel, and 1 day pack

Bed

sleeping bag (small and highly compact); warm
sleeping pad/pillow

Kitchen

silverware
cook kit (or plate, bowl, and cup)

Closet

hiking boots, running shoes (will get wet/muddy), sandals (Keen, Teva, etc.) and
lip-flops (shower)
socks (plenty)
long pants (quick-dry material is great)
long-sleeved shirt; t-shirts
shorts (quick-dry is useful)
bathing suit (possible rafting, waterfalls if not too cold)
underwear (quick dry)
rain parka, windbreaker/jacket
sweater or sweatshirt (record min = 22 F; record max = 96 F)
(multiple layers for 50s-70s degrees; average Min 46-50; Max 71-75)
sun hat with broad brim or baseball hat with neck kerchief

“Toys”

camera
binoculars
field guides
knife
portable notebook/pad/pen/pencil ('write in the rain' work well)

Personal

toothbrush and toothpaste
soap (small container liquid soap is convenient)
towel and face cloth
shampoo
hairbrush/comb
lip balm

Other critical items:

water bottle (minimum 2 quart)
flashlight/headlamp
sunscreen
insect repellent; sulphur powder prevents ticks
mosquito netting to cover head
bow and arrow/spear for bears