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).*
I. Faculty: Dr. Sydney Cameron  
Dr. Jim Whitfield  
Abigail Berkey  
215 Morrill Hall  
215 Morrill Hall  
68 NRB  
scameron@life.illinois.edu jwhitfie@life.illinois.edu ajmaley@gmail.com  
217-766-5631  
217-778-9944  
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 ***
<table>
<thead>
<tr>
<th>Topics for IB 447 – 15</th>
<th>Smokies Trip</th>
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<tbody>
<tr>
<td><strong>Mar 30 (Mon)</strong></td>
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<tr>
<td>1. Geological history of the Appalachian range</td>
<td>Brett Petersen</td>
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<td>2. Biogeographical history of the flora and fauna</td>
<td>Megan Kramer</td>
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<td>3. Plant communities (overview) – Whittaker habitat map</td>
<td>Ellie Moen</td>
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<td><strong>April 6 (Mon)</strong></td>
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<td>4. Weather and climate (Appalachians)</td>
<td>Xorla Ocloo</td>
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<td>5. Human settlement history of the area</td>
<td>Craig McIntyre</td>
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<td>6. Land use threats to the Smokies – human induced</td>
<td>Chanung Park</td>
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<td><strong>April 13 (Mon)</strong></td>
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<tr>
<td>7. Environmental disturbances (disease and pest introductions, ozone, acid rain, etc.) and their impacts</td>
<td>Jenn Shen</td>
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<td>8. Origins and development of Great Smoky Mountains National Park</td>
<td>Jason Schaap</td>
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<td>9. Dangerous plans</td>
<td>Megan Flanagan</td>
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<td><strong>April 20 (Mon)</strong></td>
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<tr>
<td>10. Dangerous animals</td>
<td>Maksim Sergeyev</td>
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<td>11. Fungi, mosses, lichens</td>
<td>Shoham Band</td>
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<td>12. Wildflowers</td>
<td>Annika Clementi</td>
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<td><strong>April 27 (Mon)</strong></td>
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<td>13. Shrubs</td>
<td>Neil Wagner</td>
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<td>14. Trees</td>
<td>Jessica Ayers</td>
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<td>15. Non-arthropod invertebrates</td>
<td>Nicole Wonderlin</td>
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<td><strong>May 4 (Mon)</strong></td>
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<td>16. Insects</td>
<td>Thor Hansen</td>
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<td>17. Other arthropods</td>
<td>Luke Dewton</td>
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<td>18. Amphibians</td>
<td>Jnae Thurmond</td>
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<td>19. Freshwater fish</td>
<td>Sarah Molinaro</td>
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<td><strong>May 11 (Mon)</strong></td>
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<td>20. Mammals</td>
<td>Zac Belida</td>
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<td>21. Birds</td>
<td>Emily Blok</td>
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<td>22. Reptiles</td>
<td>Austin Meyer</td>
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Logistic Committees

Pre-trip planning
Equipment checkup (Pre-trip and during trip)
  (tents) (3)
  (stoves) (1)
  (lamps) (1)

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

Librarian (1)

Group logistic assignments throughout week (1)

Grocery shop (4) (same people as below during trip)
Cook 1
Cook 2
Breakfast
Lunch

Organize food and pack (4)

Pack vehicles before leaving and during trip (3)

While on Trip
Breakfast
  Food (1) (same person who does grocery shopping)
  Cleanup (1)

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

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

Camp Cleanup (1)
Vehicle Cleanup of Trash (1)

Austin Meyer
Jason Schaap
Jessica Ayers
Brett Petersen
Nicole Wonderlin

Craig McIntyre
Abigail

Maksim Sergeyev
Shoham Band
Annika Clementi
Sarah Molinaro
Neil Wagner,
Megan Flanagan
Xorla Ocloo
Jenn Shen

Luke Denton
Ellie Moen
Emily Bick

Neil Wagner
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 kerchiev

**“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