Biodiversity and Conservation in Belize  
Academic Session: Spring 2020  
Travel Dates: May 10 – 25, 2020

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>BIOL 520</td>
<td>Field Course in Tropical Biology</td>
<td>6</td>
<td>Consent of the Department</td>
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Students must have BIOL 313/Biological Sciences Core Curriculum to apply

From the University calendar:
An examination of biodiversity in a selected region of the tropics, including aspects of ecology of animals and plants, animal behaviour and an introduction to field techniques for observing and censusing selected taxa. Field studies will take place at forest and savannah sites with consideration of community-based conservation efforts.

Program Description
The Tropical Biodiversity and Conservation in Belize, Group Study Program will introduce students in the Biological Sciences Department and other related majors to tropical biology, field techniques, and biodiversity and conservation in a developing country. Prior to departure, students will participate in a one week, on-campus introduction to patterns of global biodiversity, tropical ecology, the natural history of organisms local to the field site, conservation efforts in a developing country, as well as a brief overview of the history, politics, and culture of Belize.

While in the field, from the base at Lamanai Outpost Lodge in the Orange Walk District, students will gain first-hand experience in observation, data collection and analysis of local flora and fauna, including birds, bats, insects, crocodiles, lizards, plants and more. Experientially, you will have the opportunity to view and consider anthropogenic effects, both current and historical, on the tropical landscape of Belize. Students will develop and carry out a team-based project and present their results to the class.

Itinerary

Pre-Departure
May 4-8, Calgary: On-campus Introduction Sessions (5-6 hours/day of lecture and discussion)

In-Field
May 10-11, Calgary/Belize: Overnight layover in Houston, land/water transport and orientation to Lamanai Outpost Lodge

May 12-17: Group investigation of local habitats, plants and animals including:
- Variation in forest structure and diversity
- Insect sampling and observation
- Aquatic invertebrate diversity
- Bird census
- Mist netting for bats
- Camera trapping
- Medicinal plants tour
- Crocodile tagging

May 18-23: Small group research projects – planning, data collection, analysis and report writing
Additional visits to Lamanai Archaeological Reserve, and the local community (Indian Church) and school
May 24: Project Presentations; farewell dinner
May 25, Belize/Calgary: Land/water transport to Belize City, Belize City to Calgary or independent travel.
TEXT: Required: Instructors’ handouts

Copies (1-2) of these will be available in the classroom.

Other supplies: See suggested packing list

MARK DISTRIBUTION:

A. Composition of Final Grade

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Taxon Exercise (Written – 7%; Oral – 3%)</td>
<td>10%</td>
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<tr>
<td>Exam</td>
<td>20%</td>
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<tr>
<td>Paper Summary (Written – 7%; Oral – 3%)</td>
<td>10%</td>
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<tr>
<td>Field Project (Written – 30%; Oral – 5%)</td>
<td>35%</td>
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<tr>
<td>Participation</td>
<td>25%</td>
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B. Final Exam

There will NOT be a final exam scheduled by the Registrar’s Office.

C. Components of course for which a passing grade is essential

A passing grade is required for the entire course, but not for any individual component.

Course Objective

Introduction to the diversity of animals and plants in the Neotropics, patterns of diversity on local and global scales, with field work in forest and riverine sites in interior Belize. Tropical biology contrasted with temperate biology. Introduction to taxa which are rare or absent from temperate areas. Techniques of field sampling for invertebrates and vertebrates. Aspects of biodiversity with respect to agriculture. Conservation efforts in developing countries.

Graded components:

Taxon exercise (10% - 7% written; 3% oral): Three-page paper on a group of animals or plants which may be encountered at the study site at which we will be staying and which is either unique to or much more common in tropical areas than other places where you have spent time (i.e. Alberta/Canada). There will be a list of suggested taxa available on Monday of prep week. Information sources will be available in BI 211 or you can use other material in the library or online. The exercise is due on May 8.

Exam (20%): This will consist of a 60-minute quiz on 14 May on material from the readings and lectures during the preparation week.

Paper Summary (10% - 7% written; 3% oral): Students will provide a two- to three-page summary of a relevant research paper dealing with biodiversity and conservation issues in Belize or the tropics (preferably the Neotropics). A variety of titles will be available for you to consider or you may choose one of your own provided it is: a) recent and b) approved. You will be asked to do an oral summary of the contents of the paper while at the field site. You may turn this in at any time prior to the departure from Lamanai.

Field Project (35% - 30% written; 5% oral): Students will prepare a brief proposal for a short-term project, collect data to address the question in the proposal and write a report on the data. Topics for projects may be selected by students from a suggested list or proposed independently, subject to approval by the instructor. Students will normally work in pairs or threes. You should be prepared to give a brief presentation of your results on the last one or two evenings. The report/paper will be due on May 24 by 4 pm.

Participation (25%): This portion of the grade will consist of the instructors’ evaluation of: a) student participation in field exercises and discussions on the trip and during the preparation week and b) a field
notebook recording events of interest or significance which occur during the trip. The notebook is due 25 May in the airport in Calgary (in other words, you bring them home and give them to us - if you are not returning immediately, you can give them to us there).