

Ecology of Plant-Animal-Interactions in the Tropics is an intensive two-week course designed to get hands-on experience on how to effectively perform research on biotic interactions between plants and animals. The main goal is to expose students to different types of biotic interactions, and to teach analytical skills and study methods to understand these interactions. Thereby we put particular emphasis on teaching methods to study ecological and evolutionary principles of the chemical ecology of plant-animal interactions. Chemical Ecology, the study of the chemical signalling involved in the interaction of living organisms, is of increasing scientific importance because of its high explanatory power in understanding multi-trophic interactions and therefore became a focus of this course.

Lectures, discussions and workshops will provide students with the basic knowledge on the different types of interactions that can be found in nature, the chemical mechanisms behind those interactions and a critical view on the different ways to study them

Topics:

- Plant defense mechanisms
- Evolution and costs of plant defenses
- Plant behavior
- Herbivory in tropical systems
- Pollination ecology
- Multitrophic interactions
- Plant-insect interactions in tropical ecosystems.

Through faculty-led field projects and workshops the students will enhance skills to conduct observational and manipulative experiments to address conceptually motivated questions regarding plants and their associated herbivore community, mutualists and neighbouring plants. Those projects and workshops will also train students in the use of tools and equipments, which are important for studying various aspects of plant-animal interaction.

Training:

- Designing, planning and conducting bioassays in the field
- Analysis of pollinator rewards
- Manipulation of plant defense signalling
- Measuring of leaf/floral secondary metabolites in the field i.e. volatile trapping, quantification of protease inhibitors and phenolic compounds

Throughout the course the students will train their entire skill set to successfully follow the scientific approach (observation, formulating questions, hypothesis testing, experimental design and data analysis, developing group and independent projects, oral and written presentation of their research), which will help them to better integrate their creativity with an objective treatment of scientific data. This course will be taught in English and bring graduate students together from South-, Central- and North America to exchange their different perspectives on nature and to discuss and develop new methods to better study and understand biotic interactions in the tropics.



Andre Kessler

WHEN: 6-18 January 2010 (arrive 5 January, depart 19 January)

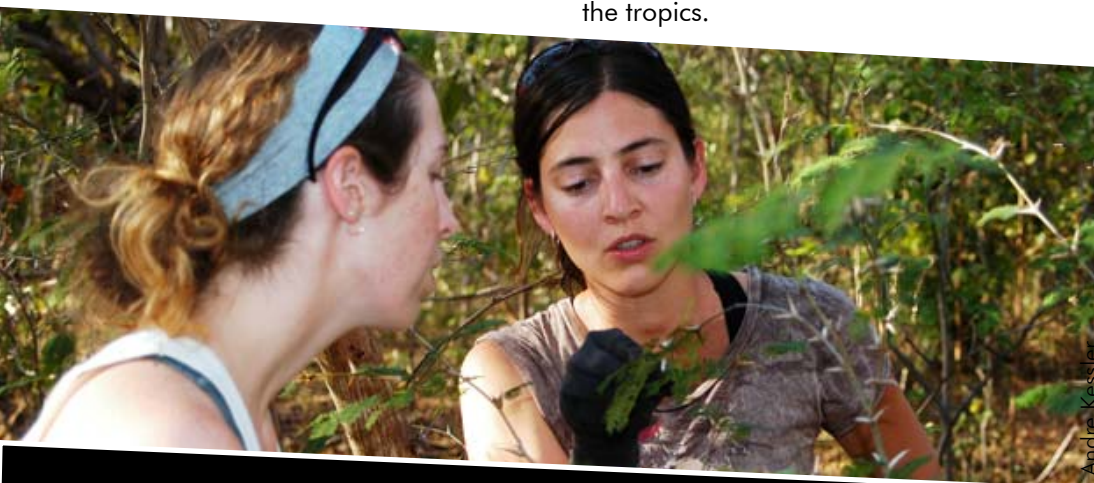
WHERE: Costa Rica
La Selva Biological Station

PARTICIPANTS: Up to 22 graduate students in the fields of ecology, behavior, evolution, conservation biology, or related disciplines.

APPLICATION DEADLINE:
16 September, 2009 for priority admission, followed by rolling admission until fully enrolled.

TUITION:
\$2,000 OTS consortium applicants.
\$2,500 Non-member applicants.

Partial need-based scholarships may be available. Priority will be given to OTS consortium members and students from Latin America.



Andre Kessler

FACULTY

Anurag Agrawal	Cornell University
Rodolfo Dirzo	Stanford University
Andre Kessler	Cornell University
Katja Poveda	Göttingen University
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FURTHER INFORMATION:

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For course content contact Katja Poveda (kpoveda@gwdg.de) or André Kessler (ak357@cornell.edu).