David L Nieland

Subject: Neotropical Herpetology Field Course in Panama

2016 SUMMER COURSE ANNOUNCEMENT (June 15-July 10)

FIELD COURSE IN NEOTROPICAL HERPETOLOGY (NEH B-16)

COURSE LOCATION: Bocas del Toro Biological Station, Boca del Drago, Isla Colon, Republic of Panama. The biological station is located on a hill facing the Caribbean Sea. Coral reef and seagrass ecosystems lie in front of the station and lowland tropical rain forests surround us. This juxtaposition of the two most biologically diverse ecosystems provides tremendous opportunities for education and research. See: http://www.itec-edu.org/ for details.

INSTRUCTOR: Dr. Peter N. Lahanas, Institute for Tropical Ecology and Conservation (ITEC), tel: 352-367-9128, email: lahanas@itec-edu.org, web: http://itec-edu.org/tropical-herpetology/, Specialty: Neotropical herpetology, forest ecology, animal behavior, biogeography, molecular genetics of sea turtles.

COURSE DESCRIPTION: This course will emphasize the ecology, behavior, biogeography and systematics of the amazingly diverse Neotropical herpetofauna. The material covered is equivalent to a university upper-level course in herpetology. The course is divided into three parts. During the first few days students will become familiar with the many ecosystems found in our area and with the trail systems during "orientation" walks. The bulk of the first 10 days will be spent learning field techniques, working with collections and carrying out various group projects or exercises (see below). Midway through the course the entire station community will take a field trip to the cloud forests of Boquete (see details below). On returning to the field station, students work on their individual research projects and continue to receive lectures or other activities in the evening.

Formal lectures: Formal lectures will take place in the classroom and will include the use of PowerPoint presentations and chalkboard. Lectures will generally be given in the evening so that more daylight hours can be spent in the field. Lecture topics will include:

- History of Neotropical herpetology
- Evolution of amphibians and reptiles
- Overview and classification of amphibians
- Overview and classification of reptiles
- Historical biogeographic relationships
- Reproduction strategies and mating systems
- Ecology, reproduction and genetics in marine turtles
- Life history strategies
- Evolution of polymorphism in poison dart frogs
- Herp-human interactions
- Conservation issues

Informal Lectures: Informal lectures will be provided periodically during orientation walks, during group field projects or in discussion groups. These will cover a wide variety of topics and will generally be prompted by what we encounter in the field, or by the direction taken during group discussions.

READINGS: Readings corresponding to lecture subjects will be assigned in the texts. We will also read and critique papers brought by students and faculty and additional readings may be assigned from time to time.

REQUIRED TEXTS:
Vitt, Laurie J. and Janalee P. Caldwell. 2014. Herpetology. 4rd ed. Elsevier and Academic Press.
Köhler, Gunther. 2008. Reptiles of Central America, 2nd edition. Herpeton, verlag Elke Köhler.
Köhler, Gunther. 2011. Amphibians of Central America, 2nd edition. Herpeton,

verlag Elke Köhler.

NOTE: These books are expensive but will enhance your herping experience during the course. Copies are maintained in the field station library.

FIELD BOOK: A water-proof field notebook will be required in the course. The field book will contain all data related to group projects and independent research project. The field book should also contain all other incidental observations such as species lists, behavioral notes, etc., and contain detailed location information.

GROUP FIELD PROJECTS: These projects, exercises, demonstrations and excursions are designed by the faculty and worked on in groups of four or six students. The purpose of these projects is to familiarize students with an array of field sampling techniques and equipment commonly used in field studies. With help from a faculty member, students set up projects, collect data, and generally (depends on the project), analyze data, present the results to the class, and write a report.

GROUP PROJECT TOPICS:
- Forest night hikes
- Population biology in poison-dart frogs
- Tail flicking behavior in geckos
- Comparative leaf litter herpetofuana
- Soropta Beach, nesting leatherbacks
- Canopy herpetofauna (canopy access techniques)
- Cave ecology, bats, rats & snakes
- Soropta canal, iguanas, caimans and crocodiles
- Herpetofuanal biodiversity analysis
- Mainland herp excursion
- Resource partitioning in frog breeding colonies

Individual Research Projects: Working closely with faculty, students will be responsible for designing and completing an original herpetological research project of their choosing. These projects will be carried out during the second half of the course and students will have about 10 days for data collection. A few days before the end of the course students will analyze their data, write a technical report, prepare a PowerPoint presentation of their work and orally present their findings during a station-wide symposium on the last day of the course. NO PERSONAL COLLECTING OF THE HERPETOFAUNA WILL BE ALLOWED.

BOQUETE CLOUD FOREST FIELD TRIP: This three-day field trip takes place midway through the course and will allow students the opportunity to experience assemblages of amphibians and reptiles found in tropical cloud and seasonally dry forests. We travel in ITEC boats to the mainland and then by private bus to the town of Boquete which lies at the base of 11,000 ft Volcan Baru. The bus trip will take us up and over the central mountain range and through remote Palo Seco National Park. Several stops will be made in route.

COURSE LENGTH: ITEC Summer field courses are about four weeks in length. The NEH B-16 will run from June 15 through July 10, 2016.

TUITION: $2250 USD. Tuition fee includes all lodging, meals and airport transfers in Bocas del Toro. The tuition also covers transportation and lodging during the 3-day cloud forest field trip to Boquete.

REGISTRATION DEADLINE: May 15, 2016. The course is limited to 10 students and applications will be evaluated as they arrive. If you believe that your application may arrive late, notify ITEC.

GRADING and COURSE CREDIT: Up to 6 units of credit will be given, 3 for the lecture portion and 3 for the field portion. A letter grade will be assigned based on exams, reports, proposals, attendance at lectures, as well as by less tangibles such as personal attitude, motivation, and contribution to the course. Course credit must be arranged through the student's institution. Contact ITEC for details.

APPLICATIONS can be found at: http://itec-edu.org/education-programs/application/

<http://itec-edu.org/education-programs/application/> .

A list of amphibians and reptiles found at the field station and adjacent mainland areas can be found at http://itec-edu.org/amphibians-reptiles-bocas-del-toro/ <http://itec-edu.org/amphibians-reptiles-bocas-del-toro/> .

CONTACT: Institute for Tropical Ecology and Conservation, 2911 NW 40th PL, Gainesville, FL 32605, tel: 352-367-9128, email: itec@itec-edu.org, web: http://www.itec-edu.org. ITEC is a 501(c)(3) non-profit organization founded in 1996.

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