

Fieldwork skills in the tropics: vegetation surveys, monitoring, and plant identification

This course provides the skills required to carry out plant-based biodiversity inventories and monitoring in the tropics, and the more specific skills required to identify plants based mainly on vegetative characters. Identification is the hardest part of most inventory and monitoring work in the tropics because of the high diversity, the low number of trained taxonomists, the lack of documentation for most areas, and the focus of most identification guides and floras on flowering characters which are rarely present on most of the plants.



Course details

Identification: The course covers >75 families of vascular plants and 20 frequently encountered tropical genera. We focus on the most common plant groups, giving you a broad understanding of tropical plants and confidence in the underlying ID techniques. During the course, we reinforce skills with daily practice, and you will encounter c. 200 species. The focus on the process of identification using principally vegetative characters or a combination of vegetative, floral and fruit characters means that the skills taught during the course are transferable to any country and all vegetation types.

Survey and monitoring: The course covers basic survey techniques (transects, permanent plot establishment following agreed protocols (e.g., RAINFOR network), Point-Centred Quarter method, ground-truthing of satellite images). The use of GPS, map reading, uploading GPS data to GIS

programs, and interpretation of satellite images in the context of understanding vegetation, form the core part of the student exercises.

General field work skills: The course covers preparation of herbarium specimens, data collection and data standards. The processes of planning, logistics, accommodation, transport, permits, and health and safety will be an important part of the course. The course will have host country nationals participating, providing a good environment to explore the similarities and differences in approach to field work in different countries.

Course dates

6-21st January 2015 (dates may vary slightly).

Course location

The course is taught in Belize. The training will take place at three different localities to give students experience with a wide a range of habitats and plants whilst keeping travel time to a minimum. The sites change from year to year and may include the Rio Bravo Conservation Area and the Belize Botanical Garden.

Course fee

The course is funded by NERC as an advanced training course, and 10 places are available for PhD students, postdocs and early career scientists. If accepted on this course your flights, accommodation, field transport and most meals will be covered.

Who is the course designed for?

PhD students and early career researchers working in environmental, biological and geosciences. You will join postgraduate students from the Royal Botanic Garden Edinburgh's MSc course, and the University of Belize.

How is the course taught?

The course is taught in the field. Teaching will be through exercises, informal lectures, workshops and demonstrations.

The course consists of twelve days teaching at three different sites in Belize, Central America. The research skills are built up each day using a series of exercises. Each exercise brings in new techniques and new plants and reinforces concepts learnt on previous days. Each morning is spent in the field collecting and learning practical skills of monitoring and surveying, whilst afternoons are used for working on plant identification, data recording, and analysis. Formal teaching is done in the evenings through lectures and seminars to integrate the skills and experience obtained during the entire day. Course assessment is based on field book notes made during the course, and a short plant identification exam.

The course will be taught by members of staff from the Royal Botanic Garden Edinburgh with extensive identification and inventory experience from around the world.

Training objectives

At the end of the course the participants will be able to run independent and safe fieldwork using best-practise methods of monitoring, identifying and surveying. The specific objectives are to

enable students to: (1) carry out basic surveys and monitoring regimes across tropical vegetation types, (2) identify unknown angiosperms from the tropics mostly in sterile condition, (3) collect high quality herbarium specimens and field images required for accurate plant identification, (4) record relevant ecological and observational data for survey sites, (5) use GPS units and to map data collected in the field into GIS systems, (6) be aware of the legalities of surveying and collecting plants in different countries.

The skills gained during the course relate to interdisciplinary research, concentrating on the overlap between ecology, global change science, social and physical geography, conservation biology, ecosystem science, and taxonomy.

How to apply?

Please download and complete the course application form from <http://www.rbge.org.uk/education/professional-courses/rbge-fieldwork-skills-in-the-tropics>, and return the completed form with a 1-page CV by the closing date Friday 10th October 2014 by 5pm to t.sarkinen@rbge.ac.uk, and a copy to d.harris@rbge.ac.uk.

The course is available to all environmental science students and scientists. There are 10 places available for the course each year. Priority will be given to those with NERC funding and to early career scientists.

Visas

In order to fly to Belize, transfer visa for US might be necessary due to most flight connections passing through US (EU citizens benefit from the waiver program). To enter Belize, British or European Union citizens do not require visas. If you are of other nationality, please check your visa requirements on <http://www.belizehighcommission.com/visas.htm#need>. RBGE will assist in providing the necessary support letters for your visa application to Belize if necessary once you have been accepted to the course.

Further information will be provided to course applicants. You will need to be accepted onto the course before you can apply for any visas required for the course.

Contact

Tiina Sarkinen (t.sarkinen@rbge.ac.uk) and David Harris (d.harris@rbge.ac.uk) for any questions.