International Course

Tropical Dendrology: field identification of trees and shrubs

Objectives

General objective
To prepare participants in field identification of the most important trees and shrubs in different ecological environments anywhere in the tropics.

Specific objectives
- Students will learn to identify in the field:
  - The botanical family of most trees and shrubs in the Tropical region.
  - The genus of the most important trees and shrubs in those regions visited during the course, and
  - The species of some of the important trees and shrubs in the regions visited during the course.
- Students will gain skills and knowledge to make fast progress on their own in the identification of plants, down to species level, in different tropical life zones they visit in the future.

Registration in line

Contact
CATIE’s Area of Training and Conferences
CATIE Headquarters, CATIE 7170, Turrialba 30501, Cartago, Costa Rica.
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Contents

1. Plant Morphology. Macroscopic characteristics of trees and shrubs used for identification (trunk, roots, branches, leaves, exudates, smells, colors, flowers, fruits, etc.).


3. Identification of trees and shrubs down to family and genus levels. Predetermination and determination of species. Information on the current and potential uses of the taxa found in the field (This the main part of the course).

4. The use of practical techniques to gather and present class information, such as plant drawings, plant description, personal keys or matrixes. Preparation of simple dendrological keys, based on fresh plant material. Preparation of a personal matrix to “assemble” all dendrological information gathered during the course. The use of dendrology literature. Exercises using tropical dendrological literature such as field manuals, keys, dictionaries, checklists, and the like. Procedures to verify accurate identity of species.

Methodology

In this course, we use a teaching methodology of Dendrology, developed by Dr. Leslie R. Holdridge, who offered courses at universities in several countries; later on also Dr. Gerardo Budowski offered such courses. Two important features of such methodology are:

a): Identification of tree families, which is based on very short descriptions covering most of the species of each family, using vegetative characteristics;

b): Based on that knowledge we study genera and species.

Since 1993, a group of experienced botanists, led by Dr. H. Jimenez Saa – who had received classes from Budowski and from Holdridge – introduced innovative practical teaching techniques applied in such a way that participants learn more than it is normally expected in a two-week intensive dendrology course. During the course, participants work an average of 8-10 days per day, handling and studying fresh samples in the field. In these cases, we teach how to identify most of trees and shrubs in the tropics using field characteristics such as leaf class, leaf position, presence and class of stipules, twigs, bark, buttresses, odors, exudates, etc. We teach students to make well-designed drawings based on important field characteristics. We direct students in organizing their class notes and we also provide information about the main uses of the species we find, and about general relationships between plants, animals, and environment. A device successfully helping students to learn plant identification is the so-called “the Dendro-matrix” (developed by Jiménez Saa), a 6-page summary of all important families and genera studied during the course. Thus, students receive a complete training, allowing them to continue making progress on their own when they go back to their countries. As an additional advantage, our methodology gives the opportunity to those advanced students who make special efforts after the course, to make fast progresses in identifying plants following taxonomical methods (using flowers and fruits) down to family, genera, and species levels.

The course is developed in four very different environments (Life Zones), namely the Central Plateau (Premontane humid forest), Monteverde Cloud forest, Guanacaste Dry forest, and Basal wet forest of the Atlantic region.

Participants

The course is intended for students, professionals, or other interested persons in various areas relating to natural resources such as forest engineers, biologists, agronomists, ecologists, taxonomists, ornithologists, entomologists, ethnobotanists, agroforesters, tourism naturalist guides, and persons of other professions and trades with special interest in plants.

The course have been attended by persons from most of the countries of Latin America, North America (USA and Canada), Europe (England, Sweden, France, Germany), Africa (Ghana, Nigeria, Kenya, Liberia), Asia (Continental China, Malaysia), and Australia.
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Senior Lecturer

Humberto Jiménez Saa, Ph.D.

Important dates

English Course:
May 22, 2015: application deadline
June 22 – July 6, 2015: course dates

Spanish Course
March 12, 2015: application deadline
April 12–26, 2015: course dates

Cost

The course fee is US$1,600 per participant. This cost includes room and board, tuition, instructors, textbooks, materials, certification, field trips and closing activity. It does not include the cost of international travel, visas, and airport taxes.

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The Tropical Agricultural Research and Higher Education Center (CATIE) is a regional center dedicated to research and graduate education in agriculture, and the management, conservation and sustainable use of natural resources. Its members include the Inter-American Institute for Cooperation on Agriculture (IICA), Belize, Bolivia, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Venezuela and the State of Acre in Brazil.