

CENTROAMÉRICA: Biodiversidad para el desarrollo

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Plants of Central America on the Web

The information associated with the collection in Central America of about one million plant specimens is already available on the Internet. You only need to go to the section on Regional Information about Biodiversity on the project's Web page (<http://ceiba.inbio.ac.cr/pres/PresentationServlet?action=home>), and you can consult the data for diverse species, compiled by herbariums that are based within and outside the Central American territory.

This Web page shows integrated information from the herbariums of the Missouri Botanical Garden, the National Museum of Costa Rica, the National Biodiversity Institute (INBio), the Zamorano Institute, the Smithsonian Tropical Research Institute (STRI) in Panama and the National Autonomous University of Nicaragua in León. There are also some records from the University of Panama, the Forest Department of Belize, the Natural History Museum of El Salvador and the National Autonomous University of Honduras.

During the second half of the year we expect to have a progressive incorporation of information from the collections of the Center for Conservation Studies and the School of Biology of the University of San Carlos in Guatemala, the University of Costa Rica and the Central American University in Nicaragua.

The information is currently shown in table form and consultations can be made according to species, collection site, collector, herbarium, etc. At the end of the year we hope that the information can also be displayed in maps that show the localities where the specimens were collected.

The same Web site also offers a list of known plants for Central America, which only gives scientific names at present; the list does not yet include synonyms. Thanks to the support from a team of local specialists, we hope to begin the curation of this list and attain a better estimate of knowledge existing about the region's flora.

Some achievements

Plant database with greater support

Toward the objective of integrating the information into a database accessible to Central Americans and support the development of human resources for herbarium management, the Missouri Botanical Garden (MOBOT), the Field Museum of Chicago and the Smithsonian Institute in Washington were visited in July.

These three institutions showed great interest and desire to participate in the initiative. The MOBOT provided digitalized data, the Field Museum included the digitalization of some 350,000 specimens from the region in two funding proposals, and the Smithsonian offered information that is available for approximately 50,000 specimens.

All these centers offered facilities for young botanists from the region to conduct internships. The Smithsonian also proposed organizing a specific course that would allow these young professionals to become familiar with the operation of its herbarium and to have personal contact with the specialists.

Sierra de Los Cuchumatanes: a site rich in flora and culture

Sierra de los Cuchumatanes, situated between the departments of Quiché and Huehuetenango in Guatemala, has great cultural as well as floristic wealth, according to Julio Morales of the Center for Conservation Studies of the University of San Carlos.

“In an area of only 50 square kilometers are found more than one thousand plant species, many kinds of jungles and forests, several species that are new to science, eight languages and eight ways of dressing and understanding the material and spiritual world,” he said.

Sierra de los Cuchumatanes is also the highest and most ancient massif of Guatemala, at 3,800 meters above sea level. It is not unusual to find that it is home to exuberant tropical forests with abundant lianas, orchids and bromeliads, encino pine forest, cloud forests, Guatemala fir (*Abies guatemalensis*) forests, juniper (*Juniperus* spp.) forests and even extremely rare sub-alpine meadows, where up to 50 dwarf plant species can be found in a square meter, whose limited growth is due to the difficult environmental conditions.

Morales stated that on three botanical collecting trips it was possible to see roofs made of grasses and sedges, crops of colorful beans and corn, edible tillandsias, fences of agaves and many stories about the war in recent years. The specialist said that the tone of these stories denoted an enormous affection for the forests or “the bush”, and the people say: “When we left the village, this forest gave us life, in it we found freedom and food, things that were missing from here. We licked water from the mosses and ate tortillas of casco de



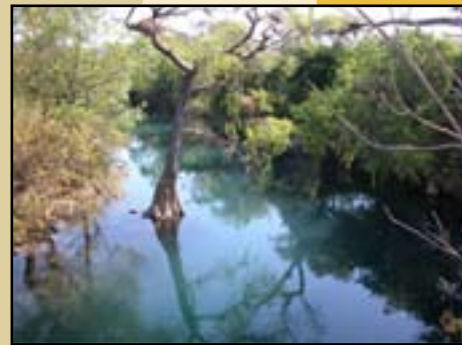
mula (a fern); since there was no corn field, we cried from inside the corn. But we have an eternal flame that never goes out and now we are a flicker of life, like a

tree that has been cut, flowering because it does not want to die”.

As part of the project initiative, information about the flora of Cuchumatanes is being processed in order to emphasize the relevant components for conservation. The data will be made available to the nation’s environmental authorities as well as the communities, given that many indigenous populations have expressed concern and interest in knowing about, using and protecting their natural resources.

Many communities consider that this may help them find options for improving their quality of life and sharing their history and culture, respecting nature.

“In this way our botanical knowledge can collaborate in the search for options that would mitigate deficiencies for our peoples,” emphasized Morales.



Activities underway

Insects of Central America only a *click* away

Now you can find more than just information about plants on our Web site. Thanks to collaboration from the Entomology Museum of León in Nicaragua, the Zamorano Institute and INBio, data about the insect species of Central America available at these institutions will also be included on the project Web page.

The objective is to facilitate study of the rich entomological diversity of the region while motivating other information providers to become integrated with this portal, which will be of great use to professionals and agronomists (with data about biological control, for example), health and veterinary workers (disease vectors, and more), and industry personnel (pests of manufactured products, etc.).

Central American biodiversity information

According to the latest information available, Central America as a region is one of the world's leading places with respect to number of species, in comparison with mega-diverse countries such as Australia, Brazil, Colombia, Indonesia and Mexico. Central America occupies second place in plant density and first place in birds and mammals.

The information about the number of species known in six of the seven Central American countries, their conservation status, the status of different ecosystems, introduced species, as well as basic data on their situation and threats to biodiversity, can soon be consulted on the project Web

page. This information is now being finalized for Costa Rica. This is the result of a joint effort between the project and the ministries of the environment in each country.

Costa Rica, Panama and Guatemala are among the first 32 places worldwide in number of vertebrate species and plants, on a list of 228 countries. Panama is the country in the region with the largest number of known vertebrate, bird and plant species, very closely followed by Costa Rica. However, in terms of density of species, Costa Rica occupies first place in the Central American region, followed by El Salvador and Belize. Amphibians are the group with the lowest number of species known in the region. In this group, Central American countries share anurans as the dominant order while in the case of reptiles the Colubridae family prevails. Bats, and within them the family Phyllostomidae, dominate the mammals group in all the countries of the region. All Central American countries have a higher species density than the mega-diverse countries of Latin America and the world, such as Mexico and Colombia.

For more information

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Credits

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