“Centres of Plant Diversity” on the Web

Centres of Plant Diversity: A Guide and Strategy for Their Conservation—Volume 3: The Americas, published in 1997 by the World Wildlife Fund and The World Conservation Union (IUCN), has been recreated into a user-friendly website, available at http://www.nmnh.si.edu/botany/projects/cpd/. The book and website were prepared under the coordination of the Smithsonian Institution’s Department of Systematic Biology - Botany. The website is part of a three-volume work that contains accounts of nearly 250 major sites for conservation of plant diversity worldwide. Volume 3 deals with the Americas, and contains six sites in North America, 20 in Middle America, 46 in South America, and three in the Caribbean. The web version of the printed volume contains all the same material, including tables, figures and additional pictures.

The rationale for the project is the international concern about the rapid global loss and degradation of natural ecosystems and the urgent need to highlight areas of pristine botanical importance, with the hope that these will receive adequate levels of resources to ensure their protection. The 75 sites have been selected partly on the basis of floristic studies, but especially with reference to the detailed knowledge of over 100 botanists familiar with this region. Each site is set within a regional context, outlining wider patterns of plant distributions, threats and conservation efforts. Regional overviews include very useful tables giving information on species richness and endemism, floristic diversity and endemism by region, degree of threat, and an analysis of the conservation status of the sites.

This work is essential reading for all those concerned with planning land use strategies for conservation and appropriate development. It is hoped that this global assessment will be followed by further assessments at the local level, so that the vital tasks of conservation of plant diversity can be well integrated in detail into national and regional conservation and development strategies.

Coral Reef Ecosystems in Danger

In a recent paper published in Ecosystem Health (2000, 6:227-236) by Walter Adey of the Smithsonian Institution’s Department of Systematic Biology - Botany, the global status of coral reef ecosystems was reviewed. Based on widespread consensus in the coral reef research community, and a now completed, five-year research project by Adey and his students and colleagues, it was shown that coral reef ecosystems are in danger of large, irretrievable biodiversity losses. Coral reefs have an extraordinary physiology and structure that gives rise to both high biodiversity (over three million species globally) and the development of unique defensive secondary chemical compounds by many reef organisms. Coral reef organisms have the potential for providing antiviral, antibiotic, and anticancer compounds along with other pharmaceutical possibilities. Yet, as Adey points out, “less than 10% of reef biodiversity is currently known and only a small fraction of that percent has been tested for active compounds.” It is predicted that 70% of coral reefs worldwide will be destroyed over the next 40 years unless countermeasures are taken. Adey advocates that an “international effort is required on a proportionally short time frame to bring together a mutually supportive effort to preserve and enhance the health of both human society and coral reef ecosystems.” An intensive and immediate, expanded research program by natural history museums and other systematic research organizations is necessary to provide the understanding of the biota required to support this effort.
Swinging Back From the Brink of Extinction

The Golden Lion Tamarin (Leontopithecus rosalia), one of the world’s most endangered primates 30 years ago, now has a chance of survival. A recent birth brought their population in the wild to 1,000. In the 1970s, the Tamarin was on the brink of extinction, with less than 200 left in the wild. After years of conservation work, the 1000th, a baby male, was born in March 2001. The Golden Lion Tamarin is found only in the lowland coastal Atlantic forest in the state of Rio de Janeiro, Brazil.

The Golden Lion Tamarin Conservation Project, supported by the Smithsonian Institution’s National Zoological Park and the World Wildlife Fund (WWF), aims to protect the Tamarin’s highly diverse and threatened habitat, the Atlantic Forest of Brazil. The world’s second most endangered vegetation type after the forests of Madagascar, it once covered more than 100 million hectares, but has been reduced to 7% of its original area by urban and resort developments along the coast and agricultural developments inland. The biggest threat of the Tamarin is habitat destruction for urban development, rice fields and cattle pasture. The Golden Lion Tamarin is found in the Poço das Antas and União Reserves and in privately owned forests. The area of forest now under protection measures 16,600 hectares, including the original 6,300 hectares of Poço das Antas.

- adapted from WWF

Current Literature


Information Highway Hi-Lites

Earth Science Photographs <http://minerals.cr.usgs.gov/cabston/dds21lib.htm> is a database of photographs from the US Geological Survey (USGS). Photographs are searchable by geologic category, national park or monument name, photographer, or search term. The photographs, from the USGS library, are both color and black-and-white, recent and historic, and many are accompanied by explanatory captions. The geologic categories include erosion, glaciation, ground water, volcanism, and sedimentary processes, among others. Some of the spectacular National Parks and Monuments represented include Hawaii Volcanoes, Death Valley, Arches, and Mammoth Cave. A few photos taken by USGS geologists in foreign countries are also included. The thumbnails expand to full-sized jpeg images. This is a good source of stock photos of geological features.


The nonprofit organization Discover Life <http://www.discoverlife.org/> has combined forces with the National Park Service to conduct an “All Taxa Biodiversity Inventory”—a comprehensive inventory of all life forms in Great Smoky Mountains National Park. The 800-square-mile national park lies within the states of North Carolina and Tennessee and encompasses some of the richest biodiversity in the Temperate Zone. The Discover Life homepage provides background information on this ambitious initiative, including an internal search engine (for accessing additional resources on the Park’s taxa and experts involved with the project), links to educational resources, status of the inventory, and much more.

- from The Scout Report


The Biological Conservation Newsletter is a monthly publication provided free of charge. If you would like to be added to the mailing list, contact Dr. Gary Krupnick at: Department of Systematic Biology - Botany, MRC-166, National Museum of Natural History, Smithsonian Institution, Washington DC 20560-0166, or by e-mail: krupnick.gary@nmnh.si.edu. You may also subscribe to receive e-mail notification when new issues are posted to the web. Send an e-mail message to listserv@svm.si.edu containing only the following text: “SUBSCRIBE BCN FIRSTNAME LASTNAME”. For more information, go to the web page http://www.mnh.si.edu/botany/bcn.

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