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The Canadian Organization for Tropical Education and Rainforest Conservation (COTERC) Newsletter.

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A NEW FAMILY MOVES INTO THE STATION

The importance of dead snags and tree trunks was recently re-emphasized at Cano Palma Biological Station. There are those who might say "decaying snag, chop it down and get rid of it." Yet general ecological principles tell us about the important relationships between organisms and things like decaying tree trunks (e.g. woodpecker searches these trunks for food). There is nothing like the sound of baby birds to drive home the point. One late afternoon in May, from the top of the decaying pejibaye tree (*Bactris gasipaes*) in front of the dorm, came the noise of baby birds. They were probably so actively calling

because they were hungry and because they knew one of their parents was right outside the nest, possibly with a morsel of food.

Indeed the parent bird (a barred woodcreeper) was ready to enter the nest, which had been made in the hollowed top portion of a rotting pejibaye tree. The pejibaye tree is a member of the palm family (Arecaceae), and this particular tree produces reddish-orange fruit (about ping pong ball size) which can be boiled and eaten. While one trunk is still producing, its sister trunk has died and the leaves have all fallen off the trunk. A hole in the top of the trunk exists, and through

either decay or the work of some local fauna a hole has developed. Interestingly, this hole extends down into the trunk, and as you might be guessing by now, has become home to a family of woodcreepers. (As a sidenote, a short time ago, this same hole was home to two white-crowned parrots, *Pionus senilis*.)

The parent bird did have something in its bill (it appeared to be a grasshopper or possibly a katydid). It waited a second or two and climbed down into the nest tail first. It then emerged, and flew off, presumably in search of more food.

The barred woodcreeper is not a flashy bird but they are pretty nonetheless. Perhaps one of the most interesting things about these birds is the way they are adapted to climb tree trunks.

The stiff shafts of their tail feathers extend beyond the vanes and are curved, thus helping the bird to climb the sides of tree trunks. The barred woodcreeper is brown with black bars on the body. It has a large, long black bill (Stiles and Skutch, 1987). Its food sources include insects, spiders, small frogs and lizards. This bird ranges from S. Mexico to Bolivia, N. Brazil and the Guianas. It is a resident bird in Costa Rica known locally as *Trepador Barreteado*.

Pat Opay, Scientific Officer

MANY THANKS

Canada Trust Friends of the Earth Foundation has generously granted COTERC funds to develop a rainforest resource package to be used in elementary schools. Thanks to Canada Trust, we will have this package ready for the school year in September.

COTERC ANNUAL MEETING ELECTS NEW BOARD MEMBERS

At the recent annual general meeting, the following Board was elected:

Dr. Peter Silverman,
President
Dr. Michael James,
Vice President
Roslyn Moore
Chair, Education Committee
Elaine Christens
Membership Secretary
Manon Jenkin
Treasurer
Dr. Suzanne McDonald
Chair, Research Committee
Michael Turk, Lawyer
Jack Wojcicki, Media Relations Consultant
Tom Mason,
Curator of Invertebrates,
Metro Zoo
Cynthia Santin, Accountant
Jo McQuarrie, Educator

COSTA RICA'S GREENHOUSE EMISSIONS

The United Nations Environment Program has financed a pilot project to reduce emissions to 1990

levels. The project is being conducted in nine countries including Costa Rica and Venezuela.

An initial inventory has concluded that in 1990, Costa Rica released 5.5 million tonnes of greenhouse effect gases into the atmosphere, 43.5% of which was made up of carbon dioxide.

Of the total emissions :-

- * 2.6 million tonnes corresponded to the energy sector
- * 2.3 million to shifts in land use, e.g. deforestation
- * 368,000 tonnes to industry
- * 137,470 tonnes to agribusiness and
- * 20,500 tonnes to waste disposal.

Of the total carbon dioxide content of the emissions: -

- * 48.7 % of total from the energy sector
- * 41.7% of total from changes in land use

Forests store large quantities of carbon. When large tracts are cut down, the trees produce CO₂ when burned or when decomposition occurs.

Other gases are emitted when organic material is burned such as carbon monoxide, methane, nitrous oxide and nitrogen oxide.

According to official Costa Rican statistics, about 10,000 hectares of primary forests were cut down in 1994. It is predicted that this figure will drop to 6,000 in 1995. The government has stated that they are targeting more trees to be planted than are felled in 1996.

CIDA SERIES ON INTERNATIONAL FORESTRY

The Canadian International Development Agency publishes a series of profiles and issues papers on international forestry. The following titles are currently available:

- *Cida And International Forestry
- *Leadership In World Forestry
- *Non-Wood Forest Products
- *Structural Adjustment Programs And Tropical Forests
- *Forests And Food Security
- *Conservation And

- Development: Opportunities In The Central American Wetlands
- *Community Participation And Gender Issues In Forest Conservation
- *Canadian Capabilities And Comparative Advantage In The Forest And Conservation Sector
- *International Forestry (Pamphlet For High School Students)
- *Sustaining Our Forests Brochure
- *The Role Of CIDA In International Forestry Development
- *CIDA And The Tropical Forestry Action Program (TFAP)
- *Forestry Poster
- *Forestry And The Environment
- *Forestry Sector Technical Coordination Unit (SADC)
- *ICRAF Agroforestry Research Network (SADC)

Forestry profiles:

- *Canada-Jamaica: Trees for Tomorrow (Jamaica)
- *Hardwood Forest Development Project (Honduras)
- *Biological Pest Control in Eastern and Southern Africa
- *ASEAN Institute of Forest Management
- *SADC Regional Tree Seed Centres Network
- *Integrated Intensive

- Forest Management (China)
- *Tree Growers Cooperative Project (India)

All of the above publications are available free of charge by contacting:

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UPDATE TO CANO PALMA PLANT LIST

The following is a list of additions that have been made to the plant inventory being developed by the Scientific Officer.

- Adiantaceae
 - Adiantum ferrugineum*
- Annonaceae
 - Xylopia frutescens*
- Araceae
 - Anthurium sp.*
 - Montrichardia aff. arborescens*
 - Urospata sp.*
- Areaceae
 - Bactris wendlandiana*
- Aspleniaceae

Bignoniaceae
 Bombacaceae
 Ochroma lagopus
 Cantaceae
 Clusiaceae
 Clusia sp.
 Connaraceae
 Connarus sp.
 Cyclanthaceae
 Dioranopigym sp.
 Thoracacarpus sp.
 Convolvulaceae
 Ipomoea sp.
 Cyperaceae
 Calyptrocaria sp.
 Soleria sp.
 Esneraceae
 Columna sp.
 Fabaceae-Mim.
 Phitecolobium sp.
 Fabaceae
 Lonchocarpus sp.
 Pithecellobium sp.
 Pterocarpus sp.
 Swartzia sp.
 Hippocrataceae
 Maranthaceae
 Calathea sp.
 Nyotaginaceae
 Nees amplifolia
 Ochnaceae
 Gustavia sp.
 Orchidaceae
 Dichiaea sp.
 Sobralia sp.
 Trigonidium sp.
 Passifloraceae
 Passiflora oerstedii
 Piperaceae
 Piper sp.
 Polypodiaceae
 Poaceae
 Rhizophoraceae

Cassipourea sp.
 Schyzaceae
 Schyzaea sp.
 Solanaceae
 Solanum sp.
 Telipteridaceae
 Tiliperis sp.
 Vittaraceae
 Vitaria sp.
 Hongos--
 Aurioulariaceae
 Aurioularia
 auricula
 Ganodermataceae
 Ganoderma
 lucidum
 Polyporaceae
 Earliella scabrosa
 Polyporus
 tricholoma
 Pycnoporus
 sanguineus

THE RAINFOREST ON THE INTERNET

Rainforest Action Network opened its World Wide Web site April 24.

The URL (Internet address) for the RAN home page is <http://www.ran.org/ran/>

The home page features an animated charging jaguar and bright colored graphics inspired by the art of indigenous rainforest people. One click at the top of the page provides access to RAN's latest Action Alert, where Netsurfers can send e-mail or faxes right off the page.

Other interactive features include online membership sign-up and e-mail to RAN staff. A page of "Tribal Links" connects surfers to Web sites of other environmental and human-rights organizations around the world. Continuing the interactive theme, visitors can add new pointers from the page right on the spot.

The RAN site also connects to leading "hot lists" of other Web sites. "RAN offers its page as an organizing platform for Web-based activism," said

COTERC'S NEW NUMBERS

Please note the new fax number for the COTERC office in Canada:

1-905- 683- 5897

Cano Palma Station can now be reached through an English speaking pager system. The number is :

1-506-296-5656

executive director Randall Hayes. "We want the tools to be at your fingertips."

The easy-to-navigate RAN Web site also includes sound effects and voice messages, hypertext versions of RAN newsletters, recent RAN news releases and news clippings, profiles of RAN campaigns, information on rainforests and rainforest peoples and species, the Kids' Corner, and a global list of rainforest activists.

TRAVEL TO COSTA RICA USING THE 'NET'

Calypso Tours in Costa Rica has implemented an on-line venture known as "Costa Rica's Travelnet". Travelnet is located on the World Wide Web and will allow travelers to browse through pictures of Costa Rica's National Parks and Reserves. Users will be able to obtain information on hotels, airlines and car rentals throughout the country.

Internet address is : <http://magi.com/calypso>

Calypso can also be reached by electronic mail at calypso@cosricon.com.

COTERC RAISES FUNDS FOR TORTUGUERO SCHOOL DESKS

Over the past year, Cano Palma Station has become more and more involved in nearby Tortuguero. There have been several visits to the Station and our staff has been to the local school.

COTERC has become involved in a local initiative to construct desks for the students at the school. Each desk will cost about \$20 US and we have already had one fund raiser. Money has been sent for the first twenty desks to be made by local craftsmen in Tortuguero.

Anyone interested in donating money towards the building of these desks should send their donation to COTERC (address on back page). Please make the cheque payable to COTERC and indicate that you would like the money put towards the desk project.

A class in the Toronto school of West Preparatory sent a very large 'penpal' letter to the kids at the Tortuguero school. We are planning more letter swapping next year.

FUNDACION NEOTROPICA CENTER FOR ENVIRONMENTAL STUDIES AND POLICIES

The Fundacion Neotropica is a private, non-profit environmental organization. Its mission is to contribute to the sustainable development of the neotropical region through investigation, implementation, and dissemination of actions that generate viable alternatives to destructive patterns of natural resource use. The Center for Environmental Studies and Policies (CEAP) seeks to promote the discussion and debate of environmental issues and to promote informed and effective environmental policy decision making at the national level.

CEAP's strategy is to review and consolidate existing documentation on Costa Rica's natural resource base, identify gaps in environmental research needs, and bring together a team of experts to generate research and information on priority environmental themes and share it with key decision makers through seminars,

meetings, and informal discussions. Many of CEAP's initiatives have mobilized a high powered and respected "thinking group" of experts to research, document, and analyze a variety of environmental issues, from specific thematic studies on forestry issues and the carrying capacity of protected areas in Costa Rica, to state of the environment reports for Costa Rica.

One obstacle regularly confronted by the CEAP staff is the difficulty of defining policy change. For many, policy making and change focus specifically on the legal aspects of changing environmental law. CEAP's mission is broader. Its mandate is not to monitor environmental laws, but to heighten the discussions revolving around policies and to promote informed decision making. In this capacity, CEAP serves as an important information node, critical in the coordination of information flow and for catalyzing policy dialogue among key decision makers, NGOs, researchers, academia, technicians, and the general public.

The Environmental Project for Central America (PACA) is an integrated conservation and development project implemented by two North American private voluntary organizations: CARE and The Nature Conservancy (TNC). PACA seeks to strengthen Central American non-governmental organizations to plan and implement projects in biodiversity conservation, management of natural resources, and sustainable development. To date, PACA is working in four pilot areas in Belize, Costa Rica, Guatemala, and Honduras.

The Fundacion Neotropica/CEAP, one of PACA's counterpart organizations, operates in the Tempisque Conservation Area in Costa Rica. CEAP collaborates with PACA in the implementation of wildlands management and environmental monitoring activities.

As part of an ongoing process to better understand and to document the role of Central American NGOs in the policy arena, PACA's regional Environmental

Policy and Strategic Planning Component (EP&SP), has developed a series of case studies which examine the evolution, activities, and experiences of seven Central American NGOs in environmental policy making. Together with a variety of additional lessons learned documents, EP&SP seeks to stimulate discussion, exchange of experiences, and lessons learned on NGO participation in the policy process in Central America.

To obtain a complete copy, contact:

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In addition, six other case studies on the role of Central American NGOs in the environmental policy arena are available from PACA. For a list of the other studies please contact Gwen Thomas at the above address.

For additional information on CEAP, contact:
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MESOAMERICAN CONSERVATION WORKSHOP

COTERC has a close working relationship with the Zoologico Simon Bolivar which recently hosted a conference to establish a conservation strategy for zoos in the Mesoamerican region. Representatives from 13 Mexican and Central American Zoos and many related organizations participated.

The idea of managing animals collectively as a population (rather than as individuals significant only to the home institution) was introduced and discussed extensively. The paradigm of small population management became a focus for the group, both as a tool for conservation and as a vehicle to initiate

cooperative projects in the region.

The Mesoamerican participants decided to begin a pilot regional studbook for the margay, *Felis wiedii*, with the eventual formation of an SSP-type program and the inclusion of other species.

GUANACASTE ASSOCIATION FOR FORESTRY DEVELOPMENT

The Guanacaste Association for Forestry Development (AGUADEFOR) was established in 1986 to identify mechanisms for diversifying agricultural production in response to diminishing local natural resources and a crisis in the cattle and large scale agriculture industries. It is a non-profit federation of seventeen (17) grassroots agricultural producer organizations with a mission to strengthen, integrate, and represent affiliated organizations to assure that agricultural and forestry activities are planned and implemented to promote sustainable development in the region.

In this capacity, AGUADEFOR has been instrumental in interpreting forestry policy, developing a local level response and advocating for policy change.

As an organization, AGUADEFOR has established a provincial network of community and regional producer organizations and strengthened them to assist small and medium size producers to take advantage of forestry incentives. To participate in the incentives program, small and medium farmers must be organized and maintain an organizational affiliation. Each year AGUADEFOR and its 17 member organizations collectively organize local farmers, lending them the credibility and collateral necessary to obtain economic resources for reforestation and develop a yearly plan of forestry projects which is presented to the General Forestry Directorate for approval and disbursement of funds.

AGUADEFOR has built upon a history of regionalism to draw further attention to the area, to identify local level needs

and priorities, and to utilize local successes to initiate dialogue on forestry policy. AGUADEFOR and its associates recognize that to have a long-term impact on forestry policy, they must interpret forestry policies, work closely with their beneficiaries to develop a local level response, and apply pressure on national level decision makers to accept and incorporate local realities into policy decisions.

For additional information on AGUADEFOR, contact:

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PACA's e-mail address is:
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CARBON ABSORPTION CHARGES

For every metric ton of carbon dioxide absorbed by its forests, Costa Rica wants to charge the world \$2.70. Carbon content of the trees will be measured from year to year. Chile and Pakistan have already signed "joint implementation" agreements for this gas absorbing solution to reducing the threat of global warming. Among ideas endorsed by the 1992 "Earth Summit" in Rio de Janeiro is one that countries jointly attempt to reduce the carbon dioxide output which feeds global warming and destabilizes the world climate.

Most industrialized nations undertook to reduce emissions to 1990 levels by year 2000. However the positions of several governments - including that of the United States - indicated that such a commitment was not universally supported. In Rio, the Group of 77 (developing countries caucus at the United Nations) refused to commit themselves to reducing

emissions saying this would impede their economic progress.

The problem is that as yet there is no agreement authorizing an industrialized nation to deposit its carbon dioxide emissions in a developing country. The G-77 are opposed to this as it may result in debt for pollution swaps.

Costa Rica is already working with the United States and has approved three jointly financed carbon dioxide reducing projects. One of the projects with the United States involves an area of forest measuring 290,000 hectares, 71,000 of which are national park.

The country also has 8,700 hectares of tropical rain forest with a market value of \$6.5 million in private hands. The initiative is expected to include a further 5,000 hectares per year.