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

VOLUME 4, NUMBER 1, SPRING, 1995

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**CARBON SEQUESTERING PROJECTS IN COSTA RICA**

The United States has approved three local carbon sequestering projects in Costa Rica. The approval gives the green light to U.S. companies to offset their carbon emissions with forestry projects. According to the Minister of Natural Resources in Costa Rica, more than \$30 million will be generated over the next 15 years.

The approvals are the first move towards putting into practice accords signed at

the Rio de Janeiro Earth Summit in 1992 to halt the trend toward global warming caused by the emission of various gases. The 'joint implementation' of these accords is a key to Costa Rica's conservation policy.

The projects must now find funding from U.S. companies interested in local conservation in return for environmental credits back home.

### SAVE AN ACRE !!

We have our eyes on a great piece of rainforest that we would love to incorporate into the Cano Palma Station. With the continual threat to the rainforest within the region of Tortuguero, we would really like to ensure that the work of COTERC continues and grows. Acquiring land will guarantee that research can continue and that the rainforest can be protected.

For anyone who has visited Cano Palma, there is a sense of urgency to protect the area surrounding Cano Palma from the destruction that is evident in other nearby areas.

In global terms, our piece is very small but critically important to expand our knowledge of the rainforest and to become a link in the chain of other pieces of rainforest that are gradually coming under the protection of organizations such as COTERC.

HELP US SAVE LOTS OF ACRES! A quarter of an acre is \$35 and one acre is \$125.

### CANO PALMA GETS RAVE REVIEWS- in Costa Rica and in Canada

In the March 24 edition of the Tico Times (the Costa Rica English newspaper), there was a full length article describing the Station and the work of COTERC. Described as a "rich research spot for scientists that is now also being discovered by tourists", the reporter gives a full description of the work at the Station and back here in Ontario.

She describes the appeal of the Station, not only to researchers but to tourists "the sharp and intermittent noise of the colourful frogs compete with the various birds' calls and the powerful sound of the ocean as a harmonious background crossing the canal".

Victoria Stevens reported in the Toronto Star on COTERC's activities and did a wonderful job of interviewing Marilyn Cole, Executive Director of COTERC. In Ajax, where there is a weekly bingo supporting the work of COTERC, the group is known as "the tree people". Thanks to this weekly bingo, staffed by COTERC volunteers, COTERC has been able to raise funds to support the administrative

and educational activities that are central to the mission and objectives of COTERC in Canada.

### EXECUTIVE DIRECTOR'S REPORT

During December, I spent time at the Station. These are the highlights of my trip.

I arranged for a pager and a message service through Tico Pager. Messages can be given to Pat and Daryl by calling (506)296-2626. Most of the operators only speak Spanish.

We are still waiting for a phone line (probably by June).

Our mail service is working but it is advisable not to send parcels. There are long delays in customs and duty must be paid on each item.

I paid a visit to Ecole Travel who donate a portion of each trip they sell to Tortuguero to our Save an Acre fund and presented the manager with a certificate of thanks from COTERC. He has recently moved to a new office and was grateful for the certificate. I have offered to provide him with enlargements of photos of some wildlife around the station for his wall. He was very cooperative and has offered the use of his fax machine in order to get

messages to Pat and Daryl. The number is (506)223-4128.

While visiting a money changer, we discovered to our horror that an investment office is busy selling shares in a casino/resort complex to be developed in Matina, a small town located about halfway between Tortuguero and Limon on the coast. It will be called Royal Tortuguero Lodge. There will be a housing development nearby as well. This is being developed by the Rankin family in B.C. and the salesman is Canadian. This is getting too close for comfort!

Pat Opay, COTERC Scientific Officer, has initiated a plant inventory study, in conjunction with the Museo Nacional personnel; he is collecting leaves and fruit/flowers found at Cano Palma and taking them to the Museo for identification and donation to their collection. He has also made good contacts at Vida Silvestre, the government department responsible for the allocation of permits.

Daryl has done a super job at the station in keeping it clean and tidy. He has built a fabulous new kitchen, complete with red-tinted concrete floor and window screening all around; one end contains an extra room with a few bunk beds which doubles as a

library/office with a hot box for storing camera equipment, etc. He has also installed a water pump and we now have running water in all the areas. He has made many friends in the village and plays soccer with the local team. It was obvious to me that both Daryl and Pat are well liked in the community.

I visited Melania Ortiz, director of Museo Nacional, who told me they were anxious to work more closely with us in the future. They are working with Pat on the plant project and an ornithologist is interested in doing work at the station.

#### NOTICE...

#### ANNUAL MEETING AND BY LAW CHANGES

The annual meeting of COTERC will be held May 16, 1995, 7:30, Civic Garden Centre, Edwards Gardens, Toronto, Ontario. (see enclosed notice). At the Meeting the following changes will be made to the bylaws:

Bylaw 2 - Membership is based on declared commitment to and support of the objectives of COTERC plus the appropriate application and

fee.

Bylaw 2 - There will be six classes of membership with the addition of Institutional and Honourary Affiliates. Only individuals and institutions will be voting members.

Bylaw 8 - Directors are elected for two years in a manner to be instituted in such a way that five are elected every other year. If a vacancy shall occur for any reason, the board of directors may, by appointment, fill the vacancy.

Bylaw 19 - The officers of the Organization shall be president, vice-president, secretary and treasurer and executive director

Bylaw 21 - The officers of the Organization shall hold office for two years and meet on a regular basis during the year.

Bylaw 22 - The president shall perform such other duties as shall from time to time be imposed upon him by the board of directors.

Bylaw 23 (New) - The executive director shall direct the general and active management of the affairs of the Organization. He shall see that all orders and resolutions of the board of directors are carried into effect.

## SIGHTINGS

In July 1994, the University of Texas at Arlington reported the following sightings while studying bats:

### BIRDS

*on the station grounds:*

Montezuma's Oropendola  
Keel-billed Toucan  
Chestnut Mandibled Toucan  
Collared Aracari  
Semiplumbeous Hawk  
Gray-necked Wood Rail  
Black-cheeked Woodpecker  
Black Vulture  
Turkey Vulture

*in the canals:*

Great Egret  
Ringed Kingfisher  
Green Kingfisher  
Bare-throated Tiger Heron  
Yellow-crowned Night Heron  
Pinnated Bittern  
Northern Jacana  
Great Kiskadee

*on the trail to the beach:*

Brown Pelican  
Magnificent Frigatebird  
Squirrel Cuckoo

*in Tortuguero village:*

Variable Seedcater  
Tropical Kingbird

*plus:*

unidentified parrots,  
parakeets, hummingbirds,  
hermits and manakins

### MAMMALS

4- *Dermanura watsoni*  
(Thomas Fruit Eating Bat)  
1- *Glossophaga soricina*  
(Pallas Long-Tongued Bat)  
1- *Micronycteris nicefori*  
(Niceforo's Large-eared Bat)  
1- *Vampyrops helleri*  
(Heller's Broad-nosed Bat)  
1- *Hylonycteris underwoodi*  
(Underwood's Long-tongued Bat)  
2- *Rhynconycteris naso*  
(Long-nosed Bats)  
10-12 *Saccopteryx bilineata*  
(Greater White-lined Bats)  
7 *Alouatta palliata*  
(Mantled Howler Monkey)

### REPTILES

*Ninia sebae*  
*Boa constrictor*  
*Imantodes cenchoa*  
*Basiliscus vittatus*  
*Basiliscus plumifrons*  
*Iguana iguana*  
*Rhinoclemys funerea*  
*Caiman crocodilus*

### AMPHIBIANS

*Bufo marinus*  
(Marine Toad)  
*Rana palmipes*  
(Web footed Frog)  
*Leptodactylus poecilochilus*  
*Leptodactylus pentadactylus*  
*Dendrobates pumilio*  
(Arrow poison frog)

*Agalychnis callidryas*  
(Red eyed frog)  
*Eleuthrodactylus diastema*  
(Tink frog)

### FISH

*Cichlasoma nigrofasciatum*  
(Convict Cichlids)

## PLANT COLLECTIONS

A basic and important function of a biological station is to inventory the flora and fauna. Some of this work is done by visiting students and researchers. There is also an observation log book which station staff as well as researchers and visitors maintain.

A recent goal has been to formalize and advance projects which were done by the station. The Plant Inventory project is intended to formalize the process.

There will be a numbered inventory list and corresponding sample species for educational purposes on the station property. In this way, a visitor can use the inventory list to find species of interest on station property in order to study it in more depth. If someone encounters a numbered plant on the trail which interests them they can

check the list for more information than is presented on the sign accompanying the plant.

There has been a renewed cooperation with the natural history department of the National Museum of Costa Rica. The station is working with them to inventory the plants at the station. All information collected during this project will be shared with other Costa Rican and international organizations interested in rainforest flora.

Pat Opay has reported the following list in the first round of the plant collecting project at the station. It does not include any plants already marked.

Araceae

*Xanthosoma*  
(*violaceum* ?)  
*Philodendron*  
*radiatum*  
*Caladium* sp.  
*Syngonium*  
*podophyllum*

Areaceae

*Astrocarum*  
*Calitrogyne*  
*Manicaria saccifera*  
*Raphia taedigera*

Bombacaceae

*Pachira aquatica*

Cecropiaceae

*Cecropia obtusifolia*

Clusiaceae

*Vismia* sp.

Costaceae

*C o s t u s*  
*pulverulentus* or  
*scaber*

Cyperaceae

*Hypolytrum*  
*longifolium* sp.  
*nicaraguensis*  
*Scleria* sp.

Fabaceae Mimosaceae

*Inga* sp.

Heliconiaceae

*Heliconia*  
*pogonantha*

Melastomataceae

*Conestegia*  
*xalapensia*  
*Henrietta* a.f.*succosa*

Meliaceae

*Carapa guianensis*

Mimosaceae

*Calliandra bijuga*  
*Pentaclethra*  
*macroloba*

Myristicaceae

*Compsoeura*  
*sprucei*

Orchidaceae

*Epidendrum* sp.

Passifloraceae

*Passiflora*  
*oerstedii*

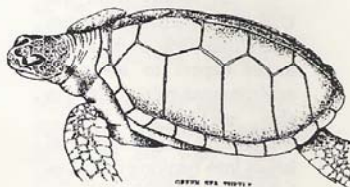
Pteridaceae

*Adiantum* sp.

Rubiaceae

*Hamelia* (maybe  
*patens*)  
*Psychotria*  
*glomerulata*

*Psychotria*  
*poepigiana*  
*Sabicea*  
*panamensis*



PROJECTS IN BIODIVERSITY

AGUADEFOR operates in the Tempisque Conservation Area in Costa Rica. It concentrates on the implementation of buffer zone management and environmental education activities.

For information on AGUADEFOR, contact: Juan Martin or Narco Vinicio Zamora Guanacaste Association for Forestry Development, Apdo. 36 Nicoya, Guanacaste, Costa Rica. T:506-686-62442 F:506-685-5914

## UNEP REPORT ON ECO-INVESTMENT

A report from the U.N. Environment Program states that 88% of 90 major banks expect to invest in environment-related firms in the next 15 years. Integrating environmental issues into banking practices is good, solid business.

Although many banks consider environmental risk before they invest in companies, few banks monitor their clients' environmental behaviour once contracts are signed. Just under half of the firms never monitor their clients' environmental activities and about half avoid post-contractual environmental monitoring of their clients.

Half the firms admitted that they do not stay current on environmental policies and practices in other countries even though they are engaged in international lending and investment.

Seventy per cent of the banks now believe that environmental issues have a material impact on their business. Most felt the impact would be in "non core" activities such as energy conservation and recycling but core activities such as risk analysis and lending will address more environmental concerns.

## MANY THANKS

Thanks to Pat Brooks of Ajax for the French translation of the trail interpretation brochure.

Thanks to Peter Silverman for obtaining a donation of a cellular phone from Bell Mobility for use at the station.

Thanks to Barbara Downey, Customer Relations Manager, Bell Mobility for the cellular phone for the station.

## NGO's IN CENTRAL AMERICA

As part of the ongoing process to better understand and document the role of Central American NGOs in the policy arena, a series of case studies have been developed which examine activities of NGOs in environmental policy making.

To obtain a copy contact:

Gwen Thomas  
CARE International,  
Environmental Project for  
Central America,  
Apdo. 3571-1000, San Jose,  
Costa Rica.  
Tel:506-234-9580

## IN MEMORY...

COTERC has lost a valuable supporter. Maurice Christens, a respected international banker and COTERC director since 1994, passed away earlier this year. He was a great asset to the Board and will be missed. A donation in his memory was made by COTERC to the Heart and Stroke Foundation, and our sympathies are extended to his daughter, Elaine Christens, COTERC membership secretary.

## CHRISTMAS BIRD COUNT AT CANO PALMA

by Pat Opay

On December 26, 1994, the Estacion Biologica Cano Palma participated in the 95th Annual Audubon Society Christmas Bird Count. This year the count was held between December 17 and January 2, 1995 and over 43,000 volunteers were expected to participate. National Audubon explains that this count was the 95th anniversary of the Christmas in 1900, when conservationists decided to protest the traditional bird shoot and instead of shooting birds, they counted them. The count is done all over the United States,

Canada, and parts of Central America, Bermuda, South America and the West Indies and the Pacific Islands. Each count group works within a 15 mile diameter circle and tries to cover as much ground as possible in their 24 hour period. We had a small count group this year, and even though it rained, we had a great time birding at and around the area of the station. We counted 27 different species, some of which included:-

*Collared Aracari*  
*Keel-billed Toucan*  
*Black Vulture*  
*Great Egret*  
*Northern Jacana*  
*Chestnut Colored Woodpecker*  
*Tropical Kingbird*  
*Blue-gray Tanager*  
*Variable Seedeater*  
*Common Pauraque*  
*Lineated Woodpecker*  
*Green-backed Heron*  
*Turkey Vulture*  
*Anhinga*  
*Oropendola*  
*Kingfisher*  
*Bay Wren*  
*Chestnut-mandibled Toucan*

For those members who might be interested in the Christmas Bird Count in your area, call the National Audubon Society at 212-979-3000 or 212-979-3083.

## THE DUGOUT

*by Daryl Loth*

So there I was, wondering, as I often do, how on earth I got into the situation I was presently in. It wasn't life or death but there was definitely a serious responsibility factor and a degree or two of stress.

First of all, I should say that basically, all I was doing was taking some building supplies and a couple of helpers to a construction site. I didn't think about it until I was fully committed but virtually everything about this scenario differed from the image one would normally conjure up.

"Honestly, Marilyn", to paraphrase something I once said. "I've had experience in the bush. I can build you a kitchen in the jungle!"

Taking half a ton of building materials down a treacherous, winding river in the rainforest in a dugout canoe ought to take this statement to task. With an experienced captain and an extra hand to help push us over the sand bars, we embarked on the water slide of the century.

Navigating a river with an outboard motor attached to a log is a relatively absurd

notion. Hollow out the log, sharpen the bow end and slap an outboard on the blunt end and you have something that legally needs to be registered with the Marine division of the Costa Rican Ministry of Transport.

Now replace all the wood that was removed while hollowing out your vessel with a few dozen concrete foundation blocks, a number of sacs containing cement and several board feet of rough cut timber and you have a big wooden sled which counterintuitively A)floats B)responds vaguely to efforts to steer and C) can actually get you and your cargo to where you want to go.

Although, they both basically fulfil the same basic transport function, a dugout is hardly a graceful or romantic sailing yacht worthy of bearing the name of a constellation or a mythical goddess. In fact, far from some high tech carbon fibre creation with stainless steel fittings and satellite navigation equipment, the dugout is, in fact, next to the log (or several logs tied together to form a raft), probably the most ancient form of water craft known to humankind.

What was at work in the mind of the first craftsman as he chipped out the hull? Was he aware of the

principles of buoyancy or hydrodynamics? Or was he just trying to change the shape of the log so he could have a dry place to sit and a container to bring home the day's catch?

And what of the many variations on the same theme at work in the four corners of the globe? Some dugouts in the South Pacific have been used to transport the local military, paddling in unison, to conquests on neighbouring islands. Others like the ingalawa in east Africa have sprouted outriggers and sails to whisk their four man crews over the breakers to the schools of fish that feed out on the horizon.

More modest ones, like the one that resides in the station boat house, are a simple modification of the paddling canoe. Large enough to carry cargo, the stern has been cut square to accommodate the ubiquitous outboard motor - the "burro" of this water based region.

Between thoughts of yachts, Africa and buoyancy were those airline bouts of intense concentration and panic. How shallow is the water? Is this bend too sharp? Is that log deep enough that it won't tear the prop off, leaving us helplessly ballistic? And what if those waves crash

over the gunnels filling our boat and sending us with our heavy cargo to the bottom only to become another hazard (or a footing for a bridge).

Of, what it would be like to phone up the neighbourhood Home Depot, credit card in hand, and have all this delivered the same day to the driveway? Well, it just wouldn't be the same. Besides, challenges are what helps keep life interesting. I wondered as we pulled up to the dock if we could bring another load before dark.

### **ECOLOGICAL SUMMIT FLIES(FALLS) SHORT**

Last year, Central America's presidents outlined the regional goals for environmental preservation. Near the end of the summit, the presidents released some parakeets into the forests of Masaya Volcano National Park in Costa Rica, not realizing the birds had clipped wings. Instead of flying to freedom, most plummeted to the ground and stumbled down rocky slope into the woods.

Hopefully, not a bad omen, the presidents signed two documents. One creates a

regional Alliance for Sustainable Development which will function through national and regional sustainable development councils. The second document - the Masaya Declaration - sets forth the commitments for achieving the alliance's goals.

There is doubt whether the centres for the study of biodiversity can be established within the stated time and concerns that the goal of cataloguing biodiversity first requires consolidating the systems of protected areas in every country.

One of the more concrete results of the summit was the commitment of \$50 million in seed money for the Central American Environmental Fund which will be administered by the Central American Bank for Economic Integration which will finance some of the projects that arise from the accords.

### **THREATS**

According to Greenpeace, Central America's farmers use more pesticides every year, many of which are banned in other countries.

An estimated 370,000 hectares of forest are destroyed in the isthmus every year and this is followed by soil erosion and contamination of rivers.



NOTICE  
ANNUAL GENERAL MEETING

CANADIAN ORGANIZATION FOR TROPICAL EDUCATION AND  
RAINFORREST CONSERVATION

MAY 16, 1995  
7:30 PM.

CIVIC GARDEN CENTRE  
EDWARDS GARDENS

Leslie St. and Lawrence Ave.  
TORONTO, ONTARIO

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If you are unable to attend, please complete the following proxy vote and mail to:  
COTERC, Box 335, Pickering, Ontario. L1V 2R6.

PROXY VOTE

I hereby give my proxy to Peter Silverman, President, or in his absence Michael James, Vice-President or in his absence, Catherine Ward, Board Member to vote on my behalf at the Annual General Meeting of the Canadian Organization for Tropical Education and Rainforest Conservation, to be held on May 16, 1995.

NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

CANADIAN ORGANIZATION FOR  
TROPICAL EDUCATION AND RAINFOREST CONSERVATION

**MEMBERSHIP**

*YES, I want to join COTERC  
and support its efforts in the  
tropics. I'm enclosing my  
membership fee of :*

- Senior/Student     \$ 15.00
- Individual         \$ 25.00
- School Class      \$ 25.00
- Family             \$ 35.00
- International     \$ 50.00
- Corporate
- Membership       \$100.00
- Donation\*         \_\_\_\_\_

TOTAL \_\_\_\_\_

\*tax deductible

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