

# Raphia

The newsletter of COTERC

Canadian Organization for Tropical Education and Rainforest Conservation



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## Executive Director's Report

by  
Marilyn Cole

We are now into another Canadian winter and you should have already received our Partners in Preservation brochure. We are starting this new campaign to give all our members an opportunity to continue their commitment to rainforest conservation. By contributing a certain dollar amount, you preserve the habitat of a specific animal. The donation needed varies with the species you choose to protect. In exchange for your donation, you (or someone you bought this gift for) receives a certificate and other items as an acknowledgement of the support.

The Partners in Preservation program makes a great gift for that person on your list who is hard to shop for. Why not fill in the form now and send it to our office?

On another note, we welcome several new volunteers to our Education Committee. Melissa Winfield, Laura Montgomery, Jon Watson, Christina Ceenan and June Barringham joined us recently. Several of them will assist in our educational programs for local schools.

Recently Jim Williams and I visited the class of Rob Langridge at Sir Alexander MacKenzie School in Scarborough, Ontario, to follow up on an my earlier visit. This time we showed some video of the schoolchildren in Tortuguero and passed around some penpal letters from these children. We showed some very large seeds from rainforest plants and demonstrated how they could start their own rainforest from seeds. A rhinoceros beetle was the star attraction.

At the moment we are promoting our educational programs to Toronto area schools. If you know of a teacher who might be interested, please contact our office.

COTERC recently made contact with Peter Hagele, of Rainforest Seed Co., who has seeds collected from trees in Costa Rica. We are using these seeds in the classroom to teach children how to grow and care for these plants; in addition, we are providing a package of seeds to all new COTERC members. We have packets of seeds available for sale at \$3.00/package. For more information, please contact our office.

With regard to our Save An Acre program, I am pleased to say that we have accumulated over \$8,000 in donations towards the purchase of additional land near Cano Palma Biological Station.

**Raphia**-an oil palm that grows abundantly in Cano Palma

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## New Membership Secretary

We extend a very warm welcome to Ian Morrison who recently accepted the position of Membership Secretary. Ian lives in Kinsale, Ontario and has retired after working for 35 years at the Canadian Broadcasting Corporation as a Technical Producer.

Ian is a native of Winnipeg, Manitoba and studied engineering at McGill University. After a stint in the Air Force, he met his wife Syliva in Clinton, Ontario. Their two children are both married and live locally. His hobbies include amateur radio and remote controlled aircraft, and he admits to "hating gardening".

### Raphia

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## Wanted

We invite you to  
contribute to Raphia.

We welcome poems,  
cartoons, or any  
articles of t(r)opical  
interest.

Send your  
contributions to:

The Raphia Editor  
Box 335,  
Pickering, Ontario



**FLOODS HIT CANO PALMA.** Flooding continues to be a problem at the station. During a recent flood, waters damaged some of the host plants in the garden, saturated some of the wooden buildings and destroyed some of the trail lights. The buildings will dry out (eventually!) and lights can be replaced, thankfully no-one at the station was injured.

## Costa Rican Notebook # 4 by Bill Derby

Costa Rica is situated on the Cocos tectonic plate, bounded on its western seaboard by the Mexico Trench. This is a deep submarine trench and marks the subduction zone where the Caribbean tectonic plate slides underneath the Cocos plate and this forms part of the "ring of fire" that includes the Caribbean. Great temperatures and pressures are generated here and this geological fact adds the volcanic nature of Costa Rica.

Arenal, Pocas and Iruzu are described as *cascade* or *strato* volcanoes. These are typically steep sided cones composed of ejected magma and cinders. Arenal produces a type of eruption characterised by showers of small rocks and incandescent lava bombs. In the eruption of 1968, some of these bombs were large enough to produce craters 50 meters in diameter. Arenal's lava is described as an *andesite*, which indicates a silica content between 55-62%. Andesites are mildly basic lavas, medium grey in colour, containing small amounts of Iron, Calcium and Magnesium.

Arenal produces another kind of *pyroclastic* called *nuees ardents*. These are deadly, searing clouds of red hot ash and gas that sweep down the volcano's conical sides. In 1968, many of the casualties were suffocated by these glowing clouds that reach temperatures of 700° C. Since the clouds can reach speeds of 100 kph, it is impossible to outrun them, and they burn everything in their path.

Volcanic activity can be as diverse as human nature and we often use humanlike terms to define a volcano's moods. If a volcano has erupted in historical time we say it is, "alive or active". If it has not erupted for some time we say it is, "dead dormant, extinct or even sleeping". If it shows sign of potential eruption, we say it is, "restless, awakening, stirring, or showing signs of life".

If you travel to Costa Rica, try to include a visit to a volcano in your itinerary. Costa Rica's volcanos are easily accessible, either by road or on foot, and are well worth a visit.

### TEXAS WESLEYAN UNIVERSITY visits CANO PALMA

The Texas Wesleyan University, Fort Worth, Texas is one of the universities whose professors brings their students to Cano Palma Biological Station for field studies. Dr. Loren K. Ammerman has provided a brief report from their most recent visit July 18-22, 1996.

We netted for bats each night except for July 20, and during these three nights we captured 22 bats of 10 different species (plus observed another *Rhynconycteris naso* in the boathouse).

We collected 10 different fecal samples. Five samples were from *Carollia* species (four *C. castanea* and one *C. perspicillata*). We have not identified the seed samples yet. Two of the *castanea* samples contained only insect pats, which is unusual for this frugivore. We did identify *Conostegia xalapensis* as a food source for *Artibeus watsoni*. Many of the *Artibeus* we catch have blue-stained mouths and teeth. According to our results, the blue berries of *Conostegia* are the reason.

We spent about two hours one morning netting birds. We caught two banded birds that might be of interest to the group doing the breeding bird survey. At net 3 we caught a female White-collared Manakin and at net 4 we caught a male White-collared Manakin.

*A list of mammals recorded by the Wesleyan team appears on the facing page.*



**PARTIAL LIST OF MAMMALS FOUND AT CANO PALMA  
BIOLOGICAL STATION**

(provided by Dr. Loren K. Ammerman, Texas Wesleyan University)

BATS

*Artibeus (dermanura) watsoni*  
*Artibeus lituratus*  
*Artibeus Jamaicensis*  
*Platyrrhinus (Vampyrops) Helleri*  
*Tonatia brasiliensis*  
*Tonatia silvicola*  
*Trachops cirrhosus*  
*Carollia perspicillata*  
*Carollia brevicauda*  
*Glossophaga soricina*  
*Hylonycteris underwoodi*  
*Eptesicus furinalis*  
*Myotis nigricans*  
*Rhynchonycteris naso*  
*Saccopteryx bilineata*  
*Noctilio sp.*  
*Thyroptera tricolor*  
*Micronycteris megalotis*  
*Micronycteris brachyotis*  
*Micronycteris nicefori*  
*Uroderma bilobatum*  
*Desmodus rotundus*  
*Ectophylla allsa*

Thomas' Fruit-eating Bat  
Large Fruit-eating Bat  
Jamaican Fruit-eating Bat  
Heller's Broad-nosed Bat  
Pygmy Round-eared Bat  
D'Orbigny's round-eared Bat  
Fringe-lipped Bat  
Seba's Short-tailed Fruit Bat  
Allen's Short-tailed Bat  
Pallas' long-tongued Bat  
Underwood's Long-tongued Bat  
Argentine Brown Bat  
Black Myotis  
Long-nosed Bat  
White-lined Bat  
Fishing Bat  
Disk-winged Bat  
Brazilian big-eared Bat  
Yellow-throated big-eared Bat  
Niceforo's large-eared Bat  
Common tent-making Bat  
Common vampire Bat  
Honduran white Bat

SMALL MAMMALS

*Bradypus variegatus*  
*Dasybus novemcinctus*  
*Lutra longicaudus*  
*Philander opossum*  
*Proechimys semispinosus*  
*Eira barbara*  
*Procyon lotor*  
*Trichechus manatus*  
*Tayassu pecari*

Three-toed sloth  
Nine-banded Armadillo  
Southern river Otter  
Four-eyed opossum  
Spiny rat  
Tayra  
Raccoon  
Manatee  
Wild peccary

Cont'd on Page 9

## Excerpts from The Tico Times, Costa Rica:

**November 1996** -- Costa Rica was the host of the annual meeting of the signatories of the ozone-protection treaty known as the Montreal Protocol, held Nov. 18-29, 1996. Approximately 750 delegates from virtually every country in the world attended the conference held at the Hotel Herradura. Vice-Minister of the Environment, Marco Antonio Gonzalez hoped the meeting would allow Costa Rica an opportunity to exercise leadership in promoting greater funding from industrialised nations to pay for the environmental conservation in developing nations, in order to stop ozone depletion. "The most important aspect will deal with replenishing the multilateral fund to finance conservation" he said in an interview with the Tico Times. "The industrialised countries put in the money, and the developing countries use it." Gonzalez was hoping to persuade countries such as Europe, Japan, the United States and Canada to increase the original offer of \$490 million for this fund.

Some of the problems contributing to ozone depletion include the ongoing use of CFC's in refrigerators and freezers, as well as the use of methyl bromide in the manufacture of fertilisers. Some refer to the latter as a "deadly necessity" because of the effectiveness of the use of fertilisers in food production. Many environmental groups have lobbied for a global ban on the use of methyl bromide, but the participating countries are very divided on this topic.

**Dec. 6, 1996** -- The Dutch Embassy has promised to provide \$19,000 to assist an innovative household waste recycling program launched by the Costa Rican government two months ago. This new program allows families to sell their household waste to recyclers for profit. Although there have been a few problems in establishing the program (e.g. the use of color-coded bags rather than sorting into boxes), it appears that as much as 15 percent of San Jose's daily production of 1600 tons of waste will be recycled. The money provided by the Dutch funding will pay for specialised collection trucks, uniforms and special shoes for staff. The project is expected to expand to the Atlantic region around Limon in the near future.

**Dec. 13, 1996** -- Two baby jaguars who were confiscated by the wildlife authorities in June, are outgrowing their facilities at the Simon Bolivar Zoo in San Jose. These twins (a male and female- Little Brutus and Agatha) were found in possession of a hunter who had shot their mother. He was arrested and charged. Because they were hand-reared (including round-the-clock bottle feedings when they first arrived), they are unsuitable for rehabilitation to the wild. They are currently housed in the veterinary section of the zoo, but are rapidly becoming too dangerous. Like domestic kittens, baby jaguars love to use their teeth and claws in play and don't understand that humans can be hurt by their rough -and -tumble antics. However, the zoo has no suitable caging for them and funds are needed to build appropriate accommodation in the newly established Santa Ana Zoo, located just outside of San Jose. This new area is under construction and contains all the more modern concepts of keeping animals in captivity in a naturalistic environment.

If anyone is interested in making a contribution towards the construction of a large cage for these two endangered jaguars, you can send funds to:

Fundacion Pro-Zoologico, Apdo 11584-1000, San Jose, Costa Rica, or send funds directly to Banco Nacional, account #165313-8.

# Canadian Organization for Tropical Education and Rainforest Conservation

## Membership

Yes, I want to join **COTERC** and support its work in Costa Rica:

Individual membership	<b>\$25</b>	Name.....
Family	<b>\$35</b>	Address.....
School Class	<b>\$25</b>	.....
Senior/Student	<b>\$15</b>	City.....
International	<b>\$50</b>	Province/State.....
Corporate	<b>\$100</b>	Postcode.....
Donation (tax deductible)	<b>\$.....</b>	

Send your cheque and completed form to;

**COTERC**  
P.O. Box 335  
Pickering, Ontario  
L1V 2R6

**Coterc** has a Home page!  
If you are on the Internet, you can visit us at:  
[HTTP://HOME.INTERHOP.NET/~COTERC](http://HOME.INTERHOP.NET/~COTERC)

## New Board Member

We extend a warm welcome to Brian Henshaw. Brian immigrated to Canada from the U.K. in 1988. He has pursued a career that includes freelance environmental consulting and has considerable expertise in wetland habitats and wetland birds.

He presents a Scientists in Schools program entitled "Battles in the Rainforest", to Grade 4 and 5 pupils. He was the founding editor of the magazine *Birder's Journal*, co-editor of the *Durham Natural History Reports* and has been an active member of various natural history organisations in Ontario.

Every year, Brian escapes to Costa Rica, where he is an organiser and leader of ecotour groups. He brings to COTERC a business background, knowledge of the ecotourism industry and a coati-nose for conservation issues.

### *Executive Director's Report (cont<sup>d</sup>)*

At present there is a dispute concerning ownership of some of the land in the region, and the Board of Directors has decided to invest the money, in trust with Caldwell Securities until such time as the dispute is settled.

I visited Costa Rica between Oct. 28 and Nov. 10 and am pleased to report that the butterfly garden project has finally obtained all the necessary permits and agreements with the local authorities, and that building has finally commenced. This project has been long outstanding while we waded through the required paperwork, and is intended to be a sustainable development project for the local community.

The butterfly garden will generate income from admission fees and sales of pupae to North American butterfly exhibits. Any profits will go towards community development projects to be decided jointly between the Tortuguero Village Association and COTERC. Funds for this project were obtained through a grant from the Canadian International Development Agency.

The plane trip to Tortuguero started routinely enough. The skies were clear and sunny in San Jose and the other passenger was Henrique Obando, the Tortuguero village headman who was just returning from a vacation in Spain. Our first stop was to be Barra del Colorado, near the Nicaraguan border. How many airfields would you arrive at only to abort the landing because there were cows on the runway? Eventually we landed to pick up other passengers, then travelled on to Tortuguero. As Cano Palma Biological Station is a distance away from the airport, I sat down by my luggage and waited for Pat or Francis to arrive in our boat. The heavens opened and torrential rains began to fall. Soon a guide from nearby Laguna Lodge ran up clutching an umbrella and explained to me that during the night a tree had fallen across the Cano Palma canal. So I was invited to wait at Laguna Lodge until the tree could be cleared to allow our boat to pass through. Five hours and several cups of coffee later, Pat came to collect me. All was not lost, as I managed to videotape a Pale-billed woodpecker busily pecking at a tree during my wait.

We made a stop in the village to see the progress on the butterfly garden-before heading to Cano Palma Biological Station. It is always a thrill for me whenever we turn from the main river into the Cano Palma where the tropical vegetation forms a tunnel through which the boat glides. There is something very magical about this area, and seeing a troop of howler monkeys made it extra special this time.

I spent eight days at Cano Palma Biological Station, getting updated reports on the present situation and exploring the trails. I saw several troops of howlers, capuchin and spider monkeys, and on three occasions saw the endangered green macaw fly overhead. I managed to find time to canoe on the adjacent rivers before returning once again to the bustling city of San Jose for the return trip to Canada and the reality of a Canadian winter. There is such a contrast between Tortuguero and Toronto that I often feel that I am stepping into two separate worlds whenever I travel between the two regions. I hope that all of our members will have an opportunity some time to experience the thrill of the Tortuguero rainforest personally. It is something not to be missed.

One very disturbing situation remains. Squatters become more and more prevalent in the area surrounding the station, despite its status as a wildlife refuge. Our staff have been diligent in reporting this influx of people to the authorities but so far nothing has been done to prevent other people claiming land and cutting down the rainforest. A place further up the Cano Palma is offering holiday accommodation to Costa Ricans.

*continued on Page 8*

*Partial list of mammals at Cano Palma (cont<sup>d</sup>)*

PRIMATES

*Alouatta palliata*  
*Cebus capucinus*  
*Ateles geoffroyi*

Black Mantled Howler Monkey  
White-faced Capuchin Monkey  
Spider Monkey

CARNIVORES

*Felis pardalis*  
*Felis wiedii*

Ocelot (ID'd through footprint)  
Margay (ID'd through footprint)

**FORESTS & SPECIES DECLINE CONTINUE -  
STRONGER ACTION NEEDED**

A series of recent reports indicate that as forests continue to shrink, more species are being pushed to the brink of extinction. Not surprisingly, stronger international action is needed to stem these declines. World Wildlife Fund released a decade-long mapping project that indicates only about 6 percent of the world's 13 million square miles of forests are protected against logging and other development. The U.N. estimates that between 1980 and 1990 the world lost 13 percent of its forests to logging, farming and development. At this pace it would take only 76 years to completely eradicate the world's natural forests. In the lower 48 states all but 2 percent of the native forests present around the time of Columbus have been logged at least once. The report and maps can be viewed at <http://www.panda.org>.

The impact on wildlife from lost habitat, pollution and hunting have been severe. The Species Survival Commission of the World Conservation Union list of threatened wildlife indicates species continue to decline at an increasing pace. The list was recently updated using revised criteria for determining the risk of extinction, and the news is grim: 1,096 mammals, nearly one-fourth of all known species, are considered threatened, as are 1,108 birds, more than 11 percent of the world's bird species.

from, Western Ancient Forest Campaign [wafcdc@igs.apc.org](mailto:wafcdc@igs.apc.org)

**many thanks to:**

BLUE PLANET DESIGN INC., 42 Aldridge Ave., Toronto, Ontario  
for designing our Partners in Preservation brochure

and to:

EDU FUN, 52 Carrier Drive, Unit 11, Rexdale, Ontario  
for providing some of the premiums for the Partners in Preservation program.



*Executive Director's Report (cont' )*

During the past week I was told that new signs have appeared on the property across the river from the station. These claim that the property is now for sale through a real estate agent. I shudder to think of this property becoming a lodge instead of staying a haven for monkeys, iguana, otter, caiman, toucans and other assorted wildlife. Their survival here is not helped by the clearance of many of the trees. On my recent visit, it was clear that no one was living there any longer, and I am assuming that the squatter has now moved on, having claimed ownership of this beachfront property by squatting and now making a profit by selling it to others. It is absolutely imperative that the authorities take action before all this precious rainforest is gone forever, and COTERC is actively involved in reporting these events. There are renewed attempts to force a road through to Tortuguero, as was previously reported in an earlier edition of *Raphia*. Apparently some council members have a vested interest in seeing the road built and are spearheading a group to promote the "benefits". As foreigners we feel a sense of frustration in observing the slow destruction of this area. Let us hope that the authorities act before it is too late!

I would like to take this opportunity to extend to all of you best wishes for the holiday season and for the New Year. Thank you all for your continued support to COTERC. With your help, 1997 will be even better!



## Observations

By  
Pat Opay, Scientific Officer

The southern river otter has been hanging around the dock this month, and seems to move around Cano Palma. Great news for any visitors! Additionally, Great Green Macaws have been around (five were recorded during the Christmas Bird Count).

Chris Darling had a lot of interest in the species of wasp hanging out in the bathroom. He will be sending anything he learns about it to the station. It is a wasp which feeds stunned spiders to its larva in little mud cells. He did not know the spider or the wasp, but will let us know. We are monitoring four cells to determine the time from egg to wasp, so he has this data as well.



### *thank you....*

to the group led by Connie Sweet, Santa Ana, California, who recently visited Cano Palma Biological Station. At the end of their stay, they presented us with a \$700 donation which will be put towards the purchase of a new boat.

*Partial list of mammals at Cano Palma (cont<sup>d</sup>)*

PRIMATES

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