ISSN 1188-7425
Volume 6, No. 1
Spring 1997

RAPHIA

The Newsletter of Canadian Organization
for Tropical Education & Rainforest Conservation

TORTUGUERO NEEDS YOUR HELP!!

Maniacs with machetes." This is the disturbing comment made by a recent visitor to Cano Palma Biological Station. Malcolm Enright was one of eight Canadians who accompanied Tom Mason (COTERC Vice President) for a one-week stay at the station March 21-28, 1997.

There is a magical moment when one turns from the main river into the Cano Palma — the small canal leading to the station itself. It is as though you are going back through time, to a period where the jungle ruled. Trees bend heavily over the small canal, forming a roof through which one catches glimpses of the sky and where one often sees howler monkeys, toucans, basilisk lizards and other creatures. Malcolm Enright recalls feeling the thrill on his first encounter into this world apart. He also recalls the horror of leaving the Cano Palma a few days later to discover that the east bank had been denuded of most palms and other brush literally overnight.

Unfortunately this has become all too common a sight in the Tortuguero/Cano Palma area. Squatters have moved in and now surround the cerro (the small mountain said to attract the sea turtles due to magnetic qualities. The east side has been completely cleared. Inroads of destruction have been made on the north and south sides of the cerro, and trails have been cut from the Cano Palma to the west side of the cerro. Much of this was primary forest.

Directly across from Cano Palma Biological Station a "conservation group" wish to put up lodging for ecotourism.

And directly across from Cano Palma Biological Station, the squatter known as Johnny has sold his land to a "conservation group" who wish to put up lodging for ecotourists!!

CANO PALMA AS IT USED TO LOOK.

All of this land is ostensibly protected — but only on paper. The authorities seem to be paralyzed and are doing nothing. We are asking our members to write to protest this unabated destruction before it is too late. This precious and unique ecosystem is systematically being destroyed, and

WE MUST ACT NOW!! If you have visited the area, then please voice your concern politely, as a tourist who has enjoyed the spectacular beauty of Tortuguero. Others might mention the positive reputation that Costa Rica enjoys in the world community with regard to rainforest conservation, and courteously enquire whether the authorities will take action.

WHO TO CONTACT

In Costa Rica:
Ing. Rene Castro Salazar
Ministerio del Ambiente y Energia
10104 - 1000
San Jose
Costa Rica

In Canada:
Mr. Manfred de Sasso
Consul General Remunerado
Embajada de Costa Rica
135 York St., Suite 208
Ottawa, Ontario K1N 5T4

In the USA:
Mr. Jose Thompson, Consul
Embajada de Costa Rica
2112 S Street N.W.
Washington, D.C. 20008

COTERC GOES TO SCHOOL

Since the beginning of the year COTERC volunteers have been busy planning and delivering a program on rainforest conservation to students in schools in the Toronto and area region. The program can be adapted to students aged four up to OAC level of high school and consists of modules of slide program, hands-on discussion of beetles and seedpods of Costa Rica, activities to reinforce conservation messages (such as planting rainforest seeds) and, very often, a live red-footed tortoise and rainbow boa constrictor. Here are some of the comments received:

"Students found the activities to be informative and reinforced topics covered in class. Doing just fine!"

"We would have liked more animals — preferably dead!"

Many thanks to volunteers Mellissa Winfield, June Barringham, Don Shanahan and Christina Ceenan for helping with these programs.

The program has proven to be very popular and more bookings are coming in all the time. To date the following schools have received the presentation:

McFarlane P.S. Whitby
Gr. 4/5
Conant P.S., Oshawa
Gr. 5/6

"It was a good program — very enjoyable, very knowledgeable presenter. Very well done!"

Sunset Heights P.S. , Oshawa
Gr. 4/5
McDonald Collegiate, Scarborough
Grade 11 (2 classes)

Montessori School, Pickering
Grade 5/6

Duke of Edinburgh P.S. Oshawa, Grade 4
Dr. S.J. Phillips P.S., Oshawa, Grade 4
Dunbarton High Environmental Club, Pickering, Grade 11 - OAC
Blaisdale Montessori, Pickering, 4 classes
E.A. Fairman P.S., Whitby Gr. 5
Brighton Public Library Board, Brighton, Ontario

On April 22 (Earth Day), we will be participating in a festival at Roy H. Crosby P.S., Markham, for students and their parents.

CANADIAN ORGANIZATION FOR TROPICAL EDUCATION AND RAINFOREST CONSERVATION

RAPHIA

Editor John Parry
Contributors
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Paul McGaw
Laura Montgomery
Pat Opay
Bonnie Ponwith

Costa Rican Advisors
Yolanda Matamoros
Director, Simon Boliver Zoo

Melania Ortiz Carazo
Director, Museo Nacional

OOPS WE GOOFED! In the last issue of Raphia we printed a partial list of mammals found at Cano Palma Biological Station and attributed it to the Texas Wesleyan University group. This list is actually from another source, and we apologize for the error.

WHO IS MAKING THAT NOISE?

by Pat Opay, Scientific Officer

As dusk falls at the Station, we are sometimes treated to the call of a very special animal. Its call is strong. Its call is very clear. At first, it seems like this particular creature is warming up, getting its throat going. Then, all of a sudden, the call slides into what some people might consider to be a two-pitched laugh. Here in Costa Rica some say it sounds like GUA-CO, GUA-CO....what is it? The laughing falcon of course!!

The laughing falcon is a definite treat of the tropical wet forest (rain forest) of the Tortuguero Conservation Area. This particular species of bird (*Herpetotheres cachinnans*) has a mask like a bandit, a brown upper-side and bands on its tail. It is a very pretty bird. It is about 53 cm (21 inches) long. While this species will eat lizards and rodents, a favourite food is the snake.

The laughing falcon is very vocal, likes to perch high up in the trees around dusk, and treat anyone who cares to listen to its call. It is a resident of Costa Rica whose common name is "Guaco", and the species can be found from Northern

Visit our website at:
http://home.interhop.net/~coterc
Thanks to Ian Morrison, our Membership Secretary and computer whiz, we now have photographs and sound!

THANK YOU!

We want to extend our very sincere thanks to Rick Stewart of Baka Communications, Mississauga, Ontario who took a great deal of time and trouble to procure the donation of a cellular telephone with data compatibility, to be used at Cano Palma Biological Station. We will now be able to communicate directly with the station via e-mail over a cellular line. For those of you who would like to try it out, our e-mail address there is **canopalma@sol.racsa.co.cr.**

ALSO many thanks to Mr. & Mrs. Ron Sion, Santa Ana, California for their generous donation of $500 to be used to support the butterfly farming project in the village of Tortuguero, Costa Rica. After having finally received all the necessary permits and licences, we began construction of the building in late fall, 1996 and hope to begin operations very shortly. This project is funded by Fondo Canada (a division of Canadian Industrial Development Agency), and is a joint effort with the community of Tortuguero. All profits generated from admission fees to the garden, as well as from pupae harvested, will go towards community development projects.

We are very grateful to Mr. & Mrs. Sion (who had visited Cano Palma Biological Station in a group conducted by Connie Sweet, Santa Ana, California in the fall of 1996.) This donation will assist us with the start-up costs involved.

VOLUNTEERS NEEDED!!

Like all non-profit organizations, COTERC is constantly seeking sources of funding. In the next few months we have planned a number of fundraisers and need volunteers to help. If you can spare a few hours, please contact Marilyn Cole (905) 683-2116. The following is the list of events coming up:

April 19	**Garage Sale, Ajax, Ont.**
May 31	**Barbecue, Pickering**
June 7	**Barbecue, Ajax**
July 12	**Barbecue, Pickering**
August 16	**Barbecue, Pickering**

We are also looking for good used items (particularly small furniture) for the Garage Sale. Check your basement and attic and call us!

RAFFLE TICKETS AVAILABLE

Cano Palma Biological Station needs a new boat and outboard motor. We are raising funds through a raffle. Tickets are in a pull-type booklet with prices ranging from zero to $2.00 per ticket. Prizes are

First	**Skateboard**
Second	**Walkman**
Third	**Dinner at Ruth-Chris Steakhouse**
Fourth	**Print of Wolf by Paul Harpley**

Draw is June 2, 1997

If you can help sell some tickets, please contact Marilyn Cole (905) 683-2116.

AN AMAZING SIGHTING!

by Bonnie Ponwith

Selecting a loop route over one that requires me to double back is my usual hiking and cross country skiing strategy. All too often, chronic postponement of the turn-around time or location has left me in precarious circumstances (i.e. in the dark, in the cold, in the rain, or all of the above). Kayaking in the narrow, rainforest-lined canals of Tortuguero National Park, Costa Rica required the discipline to double back; there are no loops. However, those kayak trips were my favourite break from my research, so who wants to be disciplined?

This was a day among days on the canals. Already I had encountered a flock of parrots, two species of tiger herons, a lone howler monkey living up to his name in earnest, and cichlid fishes charging the surface to slurp up tiny flowers which drifted down from high in the treetops. Honey-coloured sunbeams filtering through the canopy were my cue that I should consider running back, but at that point I heard what sounded like a parade going through up ahead and I simply had to investigate. My curiosity was rewarded by the spectacle of a group of coatimundi crossing the canal through interlacing branches overhead. And then the dilemma: by the time the last coati had passed, the sun was setting and the mosquitoes had found me and made a forest-wide announcement of my coordinates — but I really needed to paddle around just one more bend.

Eye level— that was probably what sticks in my memory the most. Standing on the bank, bathed in a sunbeam was a jaguar! She was at eye level with me and visible from head to tail. So perfect a view of so rare an event made me doubt my interpretation of what I was seeing. After all, there are tropical researchers, naturalists and even locals who spend a lifetime in the rainforest and have never seen a cat in the wild.

After she lifted her head to gaze at me, she froze for a moment and then stepped back about five meters into the surrounding vegetation. Her movement catalyzed a frenzied alarm call from the troop of white-faced capuchin monkeys in the trees above. From the cover of the brush she stared out at me for a full 30 seconds, and it was during that span that the reality of what I was seeing really sank in. Then, she simply melted into the forest. It was a dark but grateful paddle back to the research station.

"Eye level — that was probably what sticks in my memory the most. Standing on the bank, bathed in a sunbeam was a jaguar!"

My next sighting of a jaguar was a moving experience, but in a completely different sense. I was running a group of turtle taggers upriver to their monitoring site and docked at the park station to check in first with the rangers. In the bow of one of their boats was a jaguar, stiff with rigor mortis, the victim of a poacher's bullet. It was a pregnant female. One of the most disturbing sights of my life, this moment really drove home an important point. Our work as researchers, conservationists and people who appreciate the concept of biodiversity and who are dedicated to protecting it have a lot of work to do. Though the work seems daunting, our energy for the task must be driven by the importance of the mission.

Bonnie's 17 years in the field of marine ecology has taken her to New York to study anadromous fish migrations in the Hudson River, to Washington for work on salmon management and research, and to American Samoa where she studied the ecology of coral reefs and their associated fish assemblages. She is currently a Ph.D. candidate at Texas A&M University's Department of Wildlife and Fisheries Sciences and has just returned from a year long stay in Tortuguero where she conducted the field research for her dissertation.

Red-Eyed Tree Frog Project

Written By,
Anne, Max,
Kay, Marco,
and Netta.

For our project we studied the red-eyed tree frog. Our interest in this amiphibian began after spotting one. We saw a tree frog in the day, and because he is nocturnal, he was asleep at the time.

To hide from his predators, he blends his body color into the leaf that he is perched on. This is a form of camouflage. He tucked his legs in, to hide the blue strips on the side of his body; he also shut his eyes. He shut his eyes to hide his bright red, film-like eyes.

The red-eyed tree frog has red eyes to scare off predators. This tells the predator that he is poisonous to them. This deferise mechanism is really a lie to the predators. Realistically, the frog is not poisonous at all to animals / humans.

While he was sleeping we did an experiment on the frog. We tested the rate of his breathing. We found that his breathing is slower per minute, while asleep, than while awake. We found out that even though his breathing was harder when he was awake, we did not really frighten him. The red-eyed tree frog was trying to go back to sleep.

The reason each of us wanted to study the red-eyed tree frog, because he is (in our opinions) the symbol of the rainforest. He is one of the most photographed animals in the rainforest. Most people like the red-eyed tree frog because they are interesting and beautiful to look at.

Journal: Tortuga
6/18/96 (revised)
by Mark Bardwell

The biodiversity in the Tortuga area alone is amazing. One of the most spectacular insects I've seen thus far is the ant - not just any ordinary Berley ant but several varieties: the leaf-cutter, common black, Azteca and the aggressive bullet. (Later we saw carpenters, too).

Apparently, leaf-cutters had ravaged Tortuga at one time; trails lead all over the grounds to a colony of five cylinders. The leaf-cutters are amazing to watch as they carry vegetation from up to 100 yards away in this a massive horde. Cool.

Bullets are very different; their colonies lay at the base of a tree. At the slightest disturbance, the monster ants rush out with stingers at the ready. Later in the week, Randy Morgan managed such an annoyance that the bullets exited with a virgin queen and larva.

Where else could you see it but the rainforest?

The farewell dinner

The whole rainforest '96 group at the huge table, realizing with a degree of sadness that this would be their last time together. After dinner group would go to the hotel and to most would go to Columbus. Margher and Charlie would stay in Costa R Rebecca would keep traveling. It was the last time that everyone would be together, probably. The dinner proceed far too quickly. Our last few minute over too soon. The dinner disbanded tears and hugs.

by Melissa Grubbe

Portion from Denise's Journa

We went on real trails and rides the ride called Aerial Tram. W Saw black Viper, 4 wood peck leaf cutter ants, and more. I tho it was really fun. The hikes were nice because you got to take and feel the leaves and the (Rainforest). It was a big ride, but it was worth it. The ride was cool & warm ride; it wasn't hot or really cold. It was just for me that is. My group he these birds they sing so high so smooth, it was beautiful. Guide said they sing better than Michael Bolton, but Then we ate lunch and went on a 2 hour hour hike to Tortuguero.

PAGE EDITOR Nell-Morgan Schieber

A VISIT TO THE RAINFOREST

by Paul McGaw

Carolyn King and I visited Cano Palma Biological Station from February 4 to 15, 1997. In 1995 we had toured on the Pacific slope of Costa Rica and had seen Monteverde, but had never experienced the Caribbean rainforest. When Tom Mason (COTERC Vice President) told us about Cano Palma, we had to see it.

For anyone interested in learning about the complex ecosystems of our disappearing rainforests, Cano Palma is a great opportunity whether you're interested in studying birds, butterflies, amphibians, botany, bats, monkeys or moths (or all of the above!).

Sixty percent of the 75 bird species we identified were "lifers" (never seen before by us). Along the beautiful lush canals lined with towering Raphia palms and flowering trees, we saw birds such as bare-throated tiger herons, a pair of social flycatchers hunting insects from a branch, a crested guan spotted from a dugout canoe, and a rare scarlet macaw squawking hoarsely from the forest canopy.

We were also fascinated by the extraordinary beauty and diversity of colour, pattern and shape of tropical butterflies. We recorded 26 butterfly species, mostly in the vicinity of the station — the remainder in Tortuguero or near the beach. Five of the 17 *heliconius* species (which all use *passiflora* species as host plants) were seen. Four of the beautiful, but often challenging to identify *parides* species were seen, usually in rainforest edges or light gaps. The commonest of the large morphos (*Morpho peleides limpida*) was often zigzagging along canal edges. But one of my favourite butterflies was the strikingly patterned *antirrhea militiades*, another member of the spectacular Morphinae subfamily.

The commonest of the large morphos (Morpho peleides limpida) was often seen zigzagging along canal edges.

Since I have been recording moth species in my garden and throughout Ontario for twelve years on behalf of the Toronto Entomologists Association, I decided to take a 160 watt mercury vapour collecting light to look at neotropical species. For one to four hours (depending on volume of rain!), over ten nights the light attracted an estimated 100-150 species, 50 of which I photographed with a 100 mm macro lens and a ringflash. The majority of species were very strikingly patterned and coloured and, although I recognized many as members of families with which I was familiar, I was only able to identify positively one species (*utetheisa ornatrix* —ornate moth) due to the lack of identifications material on neotropical moths! Other insects attracted to the very bright bulb and white sheet hung on the shower stall were katydids, praying mantis, large beetles, crickets, cockroaches and even a large dragonfly.

Automeris sp. moth - Saturniidae family

I am also attempting to identify the many plant species I photographed near the station. They are very challenging!

Carolyn and I had an exciting and intensely stimulating stay at Cano Palma. We intend to return next April or May during bird breeding season and perhaps I will be able to identify more moth species by then!

Paul McGaw is a new COTERC member who lives in Scarborough, Ontario, Canada, and we thank him for his interesting article.

EXECUTIVE DIRECTOR'S REPORT

by Marilyn Cole

On March 23 COTERC had a booth at the Metro East Trade Centre to publicize the organization and also to raise funds by sales of T-shirts and items from Costa Rica. Thanks to Fran Mason, Debbie Mason, Daniel Mason, Bill Derby, June Barringham and Ian Morrison for their assistance in manning the booth.

We also had membership brochures distributed at the "All About Pets" show held at the International Centre in Mississauga, Ontario April 4-6, as well as the spring show at the Royal Botanical Gardens, Hamilton, Ontario, April 18-20. Thanks to Tom Mason and Peter Hagele for arranging these.

On March 18 a new musical group called Selvaje was launched at Lee's Palace, Toronto, Ontario. This group is made up of individuals from Chile and other South and Central American countries who play music described as a "cross between Santana and the Gypsy Kings". The members are very conscious of conservation problems within their home countries and have offered to donate proceeds from the sales of bandanas at their future concerts to COTERC. We are very grateful for their concern and thank Dave Fowler, their manager, for contacting us.

Continued on Page 6

Executive Director's Report (Continued from Page 5)

Like all non-profit organizations, we find ourselves competing with many other very worthy causes for the public's money. With government cut-backs and downsizing many smaller non-profits are finding their revenue dramatically decreased.

Bingos continue to be our main source of funding, but the increase in the number of independent casino/bingo halls is having an affect on our revenue. Consequently, we must turn to other sources of funding, one of which is grants and we are currently researching this area. We are also planning a major fundraising event for the fall. Please keep posted for further information in the next issue of Raphia. Increasing the membership is another area that we are actively pursuing. In this regard we are asking our members to tell their friends. Invite them to become members as well. All new members will receive a packet of rainforest seeds.

Some of the equipment at Cano Palma Biological Station was purchased in 1991/92 and consequently will need to be replaced in the near future. Our wooden dugout has finally succumbed and will be replaced by a fiberglass runabout. A new 15 HP outboard motor is needed for this boat. The 40 HP outboard motor has been deteriorating and has become increasingly unreliable; the canoe came to an unhappy end; and the computer has also stopped working!! If you would like to help with a local fundraising initiative on our behalf, such as a garage sale, etc., please let us know.

The article on Page One reflects a very disturbing trend in an area that was pristine only five short years ago. We cannot allow the destruction to continue without attempting to do something. As foreigners, we walk a very fine line between interfering in a domestic problem and the bigger picture of the destruction of the world's rainforests. The continuing ravage of these precious areas is the concern of everyone. Please take the time to write to the addresses listed to voice your concern. If you have visited Cost Rica, so much the better. You can explain from first-hand experience how impressed you were with the large tracts of rainforest in all areas of the country. Tortuguero is a very special place. Let us not allow it to be destroyed.

I want to take this opportunity to invite all of you who live in the Toronto area to the Annual General Meeting. It is an opportunity to meet the Board of Directors and to chat informally with your fellow members.

KIDS SAY THE DARNDEST THINGS!

A monkey has a reprehensible tail.

Some people say we condescended from the apes.

The leopard has black spots which look like round soars on its body. Those who catch soars get leprosy.

A cuckoo does not lay its own eggs.

To remove air from a flask, fill the flask with water, tip the water out and put the cork in, quick.

The three cavities of the body are the head cavity, the tooth cavity and the abominable cavity.

The earth makes a resolution every 24 hours.

BEXLEY MIDDLE SCHOOL VISITS COSTA RICA

A lively group of 7th and 8th grade children from the Bexley Middle School, Columbus, Ohio embarked on a Costa Rican Rain Forest Workshop June 15-22, 1996. The focus was on the ecology of the region and its impact on our world. The objectives of the trip were:

- To foster world environmental awareness in the middle school students through a hands-on rain forest experience.
- To provide an opportunity for personal involvement in the study of the fragile rain forest environment.
- To increase global awareness.
- To assist research scientists in their study of the rain forest ecosystems
- To provide students with an opportunity to experience a culture and ecosystem otherwise unavailable to them.

The students had several orientation meetings before departure and were well prepared for this unique experience. As part of their visit to the Tortuguero region, the students visited Cano Palma Biological Station. On the next page you will find some excerpts from the newsletter they compiled. Thanks to Rebecca Rose and Christa Dillbaugh for supplying this wonderful material! We look forward to their return visit this summer.

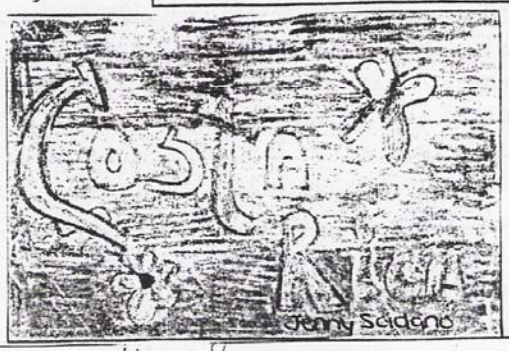
Students of Bexley Middle School relaxing on the steps of the dormitory at Cano Palma Biological Station

RAIN FOREST REVIEW

PAGE EDITOR: Neil-Morgan Schiebert Kelcye Ball

June 22, 1996

Published by the participants of the
Bexley Middle School Children's Costa Rican RainForest Workshop '96



Turtle walks

The sky was clear and filled with stars. Occasionally a flash of lightning lit up our dark world. The only noise was the waves gently lapping at our feet as we searched for the rare sea turtles. The group stopped and finally rested on the sands that turtles had laid eggs on for thousands of years. After a few minutes, we got up to search again, the taste of sleep sticking to our curious eyes.

By Melissa Grubbe

Epiphyte

Brassa Bola-orchid

Field Study!

I caught 3 butterflies today. Running around in the field searching for butterflies and carrying our nets made Laurel, Kelcye, Jenny and I look like such nerds. We still had a lot of fun. I was the only one who caught some and preserved them in envelopes. Laurel caught one, but it got away. After catching them I folded their wings up carefully and placed them in the envelopes. Randy Morgan, a bug specialist said they would be fine like that for hours. Later we took them out to feed them sugar and water. Watching them eat was amazing. Then we let them go. We plan to catch a lot more and give a demonstration with them. The butterflies were Passion-flower butterflies from the Heliconia family.

By Neil Morgan Schieber

07

Haiku

Now the rain has stopped,
The sun has peeked through the clouds,
The plants are glowing.
By Anne Robbins

By Andi Fein

Michael Powell, Dan Bahls and I did our project on poison arrow frogs. We were trying to figure out what kind of ground they like best. We went out into the rain forest in Costa Rica and caught strawberry poison arrow frogs. Then we set up a pile of sand, forest soil, green leaves, red and yellow leaves, and dry brown leaves in a circle with cement in the middle. The frog was placed in the center, and we recorded what it chose However this wasn't very accurate because usually the frogs were scared and just tried to escape. To solve this problem we added a wall of posterboard and left the frogs for a while

The results of the first experiment were that most frogs chose dry or green leaves. Next were red and yellow leaves and forest soil. The sand was last. In the second experiment, the two frogs in it both chose dry leaves.

We concluded that the frogs like leaves to hide under and for shelter. We also noticed that when they tried to escape, they always went toward their home. Therefore, we believe frogs have a sense of direction that can lead them home.

Journal Excerpt by Andi Fein

Last night we saw a green sea turtle laying eggs on the beach. We had to walk for a long time in the pitch black with no flashlights. We had to be quiet and could not have lights because if the sea turtles thought people were there, they wouldn't come out and might not lay eggs at all.

Once we finally found one, we had to wait for about an hour in the sand for the turtle to dig its nest and start laying her eggs. Once sea turtles start laying their eggs, they get in a kind of trance, and you can come near them. While waiting, I was able to see an amazing number of stars. They were really bright because there is no light pollution. The turtle we saw was about three to four feet long and two feet wide. We saw her lay eggs and then cover them with sand. This was one of the most incredible experiences I have ever had.

"Poison Arow frog"

Ben Showman

PAGE EDITOR Neill Hagensmeyer

HELP WANTED!

COTERC HAS A SMALL MEMBERSHIP BASE AND WE ARE VERY GRATEFUL TO ALL OF YOU WHO HAVE SUPPORTED US OVER THE YEARS. WE WOULD LIKE TO EXPAND OUR MEMBERSHIP AND ARE CALLING UPON OUR MEMBERS TO HELP.

YOU CAN DO THIS BY PASSING YOUR COPY OF RAPHIA TO A FRIEND OR CO-WORKER AND ENCOURAGING HIM OR HER TO JOIN COTERC.

FOR ANY MEMBERSHIP THAT IS GENERATED IN THIS MANNER WE WILL SEND A PACKAGE OF RAINFOREST SEEDS TO YOU!!

PLEASE HELP US TO GENERATE FUNDS FOR COTERC THROUGH THIS CAMPAIGN SO THAT WE CAN CONTINUE TO CARRY OUT OUR CONSERVATION WORK.

THANK YOU!!

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THANK YOU!!

CHRISTMAS BIRD COUNT A SUCCESS

By Pat Opay, Scientific Officer

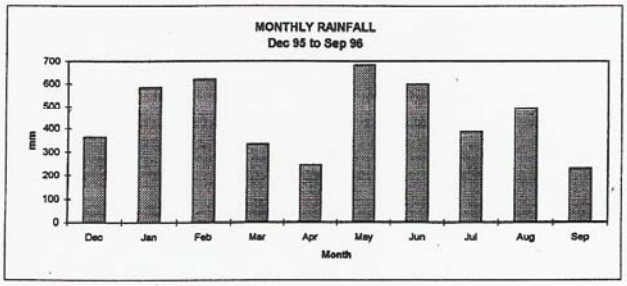
Once again, Cano Palma Biological Station participated in the Audubon Society's annual Christmas Bird Count. A total of 566 indviduals and 84 species were sighted, as follows:

2 Magnificant Frigatebird
1 Neotropic Cormorant
6 Anhinga
7 Brown Pelican
43 Little Blue Heron
23 Snow Egret
2 Great Blue Heron
10 Great Egret
109 Cattle Egret
3 Green-backed Heron
1 Agami Heron
1 Yellow-crowned Night Heron
2 Bare-throated Tiger Heron
52 Black Vulture
16 Turkey Vulture
3 Osprey
1 Semiplumbeous Hawk
2 Common Black Hawk
1 Short-tailed Hawk
1 Hawk, sp.
2 Hawk, sp
1 Slaty-backed Forest Falcon
1 Bat Falcon
1 Sungrebe
9 N. Jacana
1 Spotted Sandpiper
3 Willet
2 Peep, sp.
5 Short-billed Pigeon
5 Green Green Macaw
6 Olive-throated Parakeet
1 White-crowned Parrot
1 Red-lored Parrot
5 Mealy Parrot
2 Squirrel Cuckoo
10 Groove billed Ani
7 White collared Swift
1 Bronzy Hermit
1 Long-tailed Hermit
1 Little Hermit
1 Crowned Woodnymph
5 Rufous-tailed Hummingbird
2 Hummingbird, sp.
4 Slaty-tailed Trogon
2 Belted Kingfisher
5 Ringed Kingfisher
3 Green Kingfisher
1 Am. Pygmy Kingfisher
1 White-necked Puffbird
26 Collared Aracari
8 Keel-billed Toucan
3 Chestnut-madibled Toucan
2 Black-cheeked Woodpecker
2 Lineated Woodpecker
1 Pale-billed Woodpecker
4 Plain-brown Woodcreeper
1 Purple-throated Fruitcrow
4 Red-capped Manakin
12 White-collared Manakin
4 Boat-billed Flycatcher
3 Gray-capped Flycatcher
2 Social Flycatcher
5 Tropical Kingbird
1 W. Kingbird
10 Great Kiskadee
1 Wood Thrush
3 Bay Wren
1 Wren, sp.
18 Barn Swallow
3 Blue&White Swallow
9 Cliff Swallow
1 Gray-breasted Martin
1 Warbler, sp.
4 Red-legged Honeycreeper
3 Olive-backed Euphonia
7 Blue-gray Tanager
6 Golden-hooded Tanager
11 Scarlet-rumped Tanager
4 White-shouldered Tanager
5 Variable Seedeater
1 Blue-black Grassquit
1 Yellow-faced Grassquit
2 Black-cowled Oriole
22 Montezuma Oropendola
1 Nicaraguan Grackle(?)

YES, VIRGINIA, IT RAINS IN THE RAINFOREST

How much does it rain at Cano Palma? Quite a bit, as you can see from these charts.

Thanks to Bonnie Ponwith for compiling the data.



Why not make plans to join us at Cano Palma Biological Station for next year's Christmas Bird Count? Please contact us for further details.

FEATURE ANIMAL — CORAL SNAKE

By Laura Montgomery

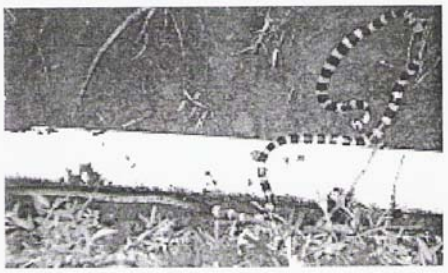
Family - Elapidae
Genus - Micrurus
Species - (4) negrocinctus; mipartitus; clarki; alleni
Common Name - Coral Snake
Length - rarely more than 1m
Range - Southeastern & southwestern United States to Argentina
Habitat - Desert to wet tropics at elevations ranging from low to moderate
Food - elongate vertebrates including eels, caecilians, lizards and other snakes
Gestation Period - Eggs are laid. Little is known about reproductive biology
Description - Long bodies, small heads, short tails, smooth scales. Colouring is red, black, yellow, with white bands.

This highly adaptable and venomous snake is found in a wide variety of habitats. Activity occurs both during the day and night.

Prey is sensed by chemical and perhaps visual clues. The Coral Snake seizes prey with a rapid movement and holds it until it is still. The snake then sinks a hollow fang that fills with venom into the prey, while other teeth hold the prey still.

When disturbed, the snake exhibits a dramatic display of flattening its body, swinging the head back and forth and alternately hiding the head, biting and coiling an upraised waving tail. In some cases biting as a part of this display may not contain venom; however, if it does contain venom it can be fatal to humans.

Reference:
Greene, H.W. & R.L. Seib in Costa Rican Natural History, ed. Daniel Janzen. pp 406-8. U. of Chicago Press, 1983.



Coral Snake eating a caecilian. Photographed in 1994 by Daryl Loth.

Passiflora viridiflora photographed at Cano Palma Biological Station by Paul McGaw

THINGS YOU CAN DO EVERY DAY

- ◊ Recycle everything you can
- o Use reusable food containers to store food, not foil & plastic wrap
- ◊ Re-use brown paper grocery bags, both to shop with & to line your garbage
- ◊ Use cloth napkins, not paper
- ◊ Clean your windows with vinegar & water, not chemicals
- ◊ Use old newspapers to wash those windows
- ◊ Use cloth rags for cleanups, not paper towels
- ◊ Use phosphate-free soaps for your laundry & dishes
- ◊ Don't leave your water running
- ◊ Use water-saving shower head
- ◊ Set your water heater at 130 degrees F.

CANADIAN ORGANIZATION FOR TROPICAL EDUCATION AND RAINFOREST CONSERVATION

NOTICE OF ANNUAL GENERAL MEETING

THURSDAY, MAY 29, 1997
7:00 P.M.

CIVIC GARDEN CENTRE
(EDWARDS GARDENS)
LESLIE STREET & LAWRENCE AVE. W.
DON MILLS, ONTARIO

GUEST SPEAKER: BRIAN HENSHAW, COTERC BOARD MEMBER
"A BIRDER AT LARGE IN THE NEOTROPICS"

YOU ARE CORDIALLY INVITED TO ATTEND. MEET YOUR BOARD OF DIRECTORS AND LEARN ABOUT THE ACTIVITIES OF THE ORGANIZATION THIS PAST YEAR. ENJOY THE FOOD AND REFRESHMENTS.

IF YOU ARE UNABLE TO ATTEND, PLEASE COMPLETE THE FOLLOWING PROXY VOTE AND MAIL TO: COTERC, BOX 335, PICKERING, ONTARIO L1V 2R6, CANADA.

PROXY VOTE

I HEREBY GIVE MY PROXY TO PETER SILVERMAN, PRESIDENT, OR IN HIS ABSENCE TOM MASON, VICE-PRESIDENT OR IN HIS ABSENCE, BRIAN HENSHAW, 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 29TH 1997.

NAME (PLEASE PRINT).....

SIGNATURE.....

CANADIAN ORGANIZATION FOR TROPICAL EDUCATION AND RAINFOREST CONSERVATION (COTERC)

MEMBERSHIP FORM

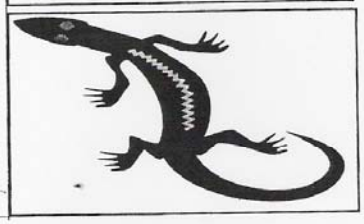
YES, I want to join COTERC and support its conservation work.

Individual Membership	$25
Family Membership	$35
School Class Category	$25
Senior/Student Membership	$15
International	$50
Corporate	$100
Donation (tax deductible)	$_____

Send your cheque and completed form to:

COTERC
Box 335
Pickering, Ontario L1V 2R6
Canada

Name.....
.....
Address.....
.....
City.....
Province/State.....
Country.....
Postal Code.....



EXCERPT FROM RAINFOREST ACTION NETWORK

by Randall Hayes

Scientists call the rainforests "the lungs of the planet" but these vital organs are everywhere under attack by an aggressive strain of cancer: namely, human greed. The Earth is sick, and the patient's days are few. There is little time left to save the rainforest ecosystem and the people who live within it. By our figures, corporate greed will consume the last remaining rainforests in less than 40 years. Rainforests once covered 14% of the earth's land surface; now they cover a mere 6%. One of the Earth's lungs has already collapsed.

We humans are not using our resources wisely. We have only to look at the tall, ancient trees that fall daily to make plywood, temporary sets for movies and disposable chopsticks to know that something is deeply wrong. The rainforests' contribution to the environment defies dollar value. What is the price tag for controlling weather patterns? Providing catchment for water run-off? Absorbing greenhouse gases? A single rainstorm in the Philippines killed over 2,400 people overnight due to flooding. What was to blame? The land, despoiled by illegal logging, no longer had the rainforest to hold soil in place and regulate the flow of water.

Twenty-five percent of the active ingredients in cancer-fighting drugs come from organisms found only in the rainforest. Medical science is finding new cures all the time. Even so, the rainforests are being logged, flooded and and burned down in the name of short-term profit. Harvard's Pulitzer Prize-winning biologist Edward O. Wilson, says we are losing 137 plant, insect and animal species per day. That's 50,000 species per year. This catastrophic biological meltdown far exceeds anything the Earth has seen since the extinction of dinosaurs.

We can stop the disease that is killing the rainforests only if we acknowledge that it is our disease, too. We are all guilty of consuming products without recognizing the consequences. We need to reduce our use of forest products. We need to demand alternatives.