
RAPHIA



Winter, 1999/2000
The Newsletter of Canadian Organization for Tropical
Education and Rainforest Conservation (COTERC)

ISSN 1188-7425

Volume 9, No. 1

TROPICAL TREAT III ANOTHER SUCCESS

The ever-popular fund-raising event called "Tropical Treat" was held on October 2, 1999 in the Atrium of the Toronto Zoo, with Mr. Calvin White, General Manager of the Toronto Zoo, as host for the evening.

Featuring a tropical dinner, the event drew a large crowd who eagerly bid on the live and silent auction items collected by committee members Malcolm Enright, Fran Mason and Marilyn Cole. A special bonus event featured Daniel Mason selling chances to win wonderful prizes. Contestants chose to mark a location on a map of Costa Rica with a flag, and at the end of the evening the pre-determined locations were announced. Debbie Mason acted as "Vanna" to take the live auction items around the tables for viewing.

What made this year's event so special was the presence of Station Manager Ross Ballard, newly hired Assistant Manager Nick Beale and former Station Manager Greg Mayne. They shared "war stories" throughout the evening. We were also pleased that Jake Wickham and

his professor Dr. Ken Mantai and his wife made the trip up from Fredonia University to attend.

There were opportunities to win one of many door prizes offered, so that just about everyone went home with something! And many people stayed for the dancing after the auction was over.

The committee would like to thank Barb and John Stoner, Daniel and Debbie Mason, auctioneers Randy Potter and Donna Shea, Catherine Hawthorne, Karen Fitzgerald and Brenda Henderson for volunteering their assistance, and for helping to make this annual event a great success!



Fran Mason and Malcolm Enright



Station Manager Ross Ballard and Board Member Dr. Fiona Reid

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New Assistant Station Manager

We are very pleased to announce the appointment of Nick Beale as our new Assistant Manager for Caño Palma Biological Station. Nick comes with a background in both practical and theoretical experience, having worked as an elephant and hippo keeper at London Zoo. A native of London, England, Nick has also spent time in Tanzania, East Africa. From July to September, 1992 he was a Research Assistant and then returned as Assistant Zoologist July 1996-Feb. 1997. He is the author of "Research Investigation into Altitudinal Differentiation of Amphibian Fauna in two Tanzanian Coastal Monsoonal Forest Reserves" and graduated from the University of East London with a Bachelor of Science degree and Honours degree in Environmental Sciences and Wildlife Conservation. Nick has also worked in the Dartmoor National Park Ranger Services and enjoys mountain climbing. Nick is a welcome addition to the staff at Caño Palma Biological Station, and no doubt you will enjoy chatting with him on your next visit to the station.

Welcome aboard, Nick!



Raffle Winners

The three winners for the COTERC raffle were drawn on the evening of the Tropical Treat event on October 2. First Prize winner of a Robert Bateman limited edition print "Leopard and Thompson Gazelle Kill" is Adam Wiech, Toronto, Ontario.



Second prize of a limited edition print "Silent Snowfall" by Cyril Cox was won by Kevin Fox, Fredonia, new York.

Third prize of a limited edition print "Kingfishers" by Barry Barnett was won by Bernice Walker, Toronto, Ontario.

Congratulations to all the winners!

New Corporate Sponsor

We would like to welcome Rainforest Cafe as a new Corporate Sponsor to COTERC. This chain of popular restaurants has a rainforest theme, complete with animated "creatures" in the trees, timed monsoon rainstorms and live macaw shows to add to the dining experience of patrons.

Mud, Macaws and Middle Schoolers

Why would anyone want to spend eight days in a remote jungle location in a humid rain forest in the middle of nowhere with a bunch of thirteen-year-old kids? Good question! Better question — why would thirteen-year-olds want to spend a week slogging through the mud, swatting mosquitoes, eating rice and beans while chaperoned by their middle school teachers? Because it is an incredible teaching and learning experience and one heck of a lot of fun!

Even if you are not a teacher, as a COTERC supporter you can probably imagine the thrill of sharing tropical nature with enthusiastic kids. That explains how we found ourselves knee-deep in rain forest mud with other people's children. Six years ago we were just two average working moms — a science teacher and a language arts teacher in a quiet suburban school district. Just two middle school teachers with the crazy idea that we needed to visit the rain forest. A few weeks later we were deep in the rain forests of the Peruvian Amazon, surrounded by the most incredible array of biodiversity and sending our perceptions of ourselves and our place in the world changing forever. A year later we found ourselves back in the rain forest, this time in Tortuguero, Costa Rica, with twenty-three of our students. The first Rain Forest Ed-Venture was underway.

Imagine now that you are one of those thirteen-year-olds and you have traveled to the lowland rain forests of Tortuguero, Costa Rica. You wake up to the screeching calls of a troop of howler monkeys perched in a tree outside your window. Later, you catch sight of an elusive three-toed sloth foraging slowly in the cecropia tree right above your head. Peering through foggy binoculars, you locate the flock of noisy birds perched high overhead. You listen eagerly as your expert guide explains the habits of the great green macaw that you are lucky enough to have encountered. The next day you spend the afternoon on your knees examining the trails of leaf-cutter ants guided by a renowned entomologist. As you write in your journal before going to bed, you wish you had twice as many hours in the day, so you could learn and experience much more.

Over the last five years we have had the pleasure of working with exceptional students in the world's best classroom - the rain forest. We have made a commitment to teaching these students more than just the names of a few exotic birds and plants. Our goal is to introduce them to not only the awesome neotropical rain forests but also the incredible diversity of their own backyards. Preparation begins well before departure and focuses on making connections between temperate and tropical ecosystems. Students learn the basics of forest ecology and how it applies to temperate woodlands and neotropical rain forests. Through field trips, activities and lectures students are introduced to biodiversity, tropical botany, entomology, neotropical animals, ethnobotany, conservation, ecological data collection, and anything else we can fit in before we go. Whether at home or in the rain forest, we try to take advantage of any opportunity that presents itself.

One such opportunity involves our visits to COTERC's Caño Palma Biological Station. For those of you who have visited the station, you will agree that Caño Palma has the most wonderful "driveway" in the world. Just floating down the canal is reason enough to justify our visit to the station. As the cañal narrows, the palms close in and vines and lianas drape across the water. The students fall silent as they drift into another world. Indeed, one of our goals in visiting the station is to give the students the opportunity to see how scientists live and work in another world — the real world of Tortuguero's rain forests.

During the Rain Forest Ed-Venture, our students have the opportunity to conduct independent field studies on an organism of their choice. They are "set loose" to explore and investigate a particular plant or animal that they find most fascinating. Our visit to Caño Palma helps set the stage for this field work. We use the station and the research conducted there as a model for how scientists live and work in the rain forest. Currently we are working with Marilyn Cole and Ross Ballard to develop long term research projects at the station that all future Ed-Venture students would participate in.

Our visits to Caño Palma have become an important part of our program and every year we have been enthusiastically greeted by the staff members. We

assume it is because they are delighted to enrich the lives of thirteen-year-olds. (Or could it be they need contact with the outside world and even a bunch of teenagers will do?) On our first visit Francis gave us a great rice dish for lunch. Pat Opay was an excellent host and informative guide for two of our visits. This year Ross lead us on a mud sloshing, bug swatting, exhilarating tour of the swamp forest found on the Raphia research trail. Students worked independently on their field studies for a portion of their afternoon and we were even treated to an army ant raid and a manakin "firecracker" serenade. Every year we plan on having our students stay at least one night at the station. We hope that giving our students an opportunity to experience, even for a short time, the life and work in a biological field station will broaden their horizons and prompt them to venture further afield in the future. We feel so fortunate that COTERC and Caño Palma are willing to help us make this opportunity available to our students.

We have been privileged to share an extraordinary experience with some wonderful students and all of us are better because of it. Even though only a few of our students might pursue a career in the natural sciences, and probably none will be the next E.O. Wilson, I think we can safely say that all have a new and lasting sense of wonder. Certainly, all of them will never take the natural world for granted again. So, as we begin to organize yet another group for June of 2000, perhaps you can understand why the question should not be "Why would any one want to?", but rather "Can I come too?" And our response is "Sure, why don't you join us on our next Ed-Venture!"

Christa Dillabaugh, Rainforest Ed-Venture Coordinator,
Bexley, Ohio

Editor's Note: It was the 1999 group of students who donated funds to re-build our Natural History Museum at Caño Palma Biological Station, and we are very grateful for their support.

Excerpts from "Rainforest Review" published by
Participants of the Bexley Middle School Rainforest
Ed-Venture

Leaf Cutter Ants

by Christine Bupp

I studied leaf cutter ants because I am interested in them because they carry leaves almost 10 times their size and keep working all day long non-stop. I studied them with another boy. One of the things we did was stick a leaf in the middle of their path; it took them 27 minutes to take it all to their nest. We also timed one ant to see how long it takes to take the big piece of leaf to their nests. It took them 42 minutes. It surprises me that they don't eat the leaf but take it to their nest and grow fungus on it, then eat the fungus. I enjoyed doing this and want to do it again.

Favorite Animal or Place

by Blake Kirberg

My favorite animal was the American Crocodile. They were my favorite animal because I saw two of them on the night boat ride through the canals. I also like them because they were almost hunted to extinction for their skins. Crocodiles are one of the oldest animals alive. They have lived since the dinosaurs and should be saved. Crocodiles have adapted to their surroundings very well. Crocodiles are masters of camouflage and extremely hard to see. That's why it was my favorite animal. It is very rare to see crocodiles in the water.



The Nuts and Bolts of Conservation

by Ross Ballard, Station Manager

A recent Raphia newsletter focused on efforts by COTERC to inform student groups and individuals in North America on issues of rainforest conservation. Education is a significant part of the organization's mandate.

But I do not know of an issue of Raphia that profiles Caño Palma Biological Station's efforts in this direction within Costa Rica, so let's do it. Let me say a few words about the educational role of the station and its personnel, and our involvement in the community of Tortuguero.

COTERC is the support organization for a visionary project, a biological field station, which conserves a piece of neotropical rainforest and serves as a facility for biologists to conduct research. Caño Palma Biological Station also provides a venue for conservation education to visiting student groups, volunteers and people living in the Tortuguero area.

The station is located in the lowland Atlantic rainforest of northeastern Costa Rica, a habitat which has been largely dismantled through most of its former range in Central America and originally stretched from southern Panama well into the Yucatan Peninsula of Mexico. An extremely threatened habitat, most of it has "disappeared", that is, been destroyed in only the last fifty years. Different conservation projects have been attempted to protect what remains of this biologically vital forest and COTERC is one of them.

Understand, the earth's tropical rainforests, while encompassing only 7% of the world's surface, give rise to more than 60% of the species with which we share the planet. Conservation efforts in the tropics therefore take on a considerable urgency.

With COTERC's assistance, Caño Palma Biological station opens its doors to numerous biological student groups, mainly from North America. As many as twenty students and their professors come to the station to conduct field studies here and observe nature at her most

vibrant. The kids, ranging from junior high school to college age, are dazzled by what they find here. This forest is teeming with the best known and most spectacular neotropical fauna, including four species of toucan and three species of monkeys, but perhaps the deepest impressions are made by nature's humbler denizens and their complex inter-relationships to one another. The way that a tree may provide food and shelter to a particular species of ant, for instance, which the ant then repays by loyally defending its patron against predators which include even other plants trying to compete against it. These student groups are a lot of fun for those of us at the station, too, and we involve ourselves in their projects.

Recently the Bexley Middle School of Ohio sent a contingent of eleven students and their four professors through Caño Palma for a day trip. Early supporters of COTERC's initiatives, Bexley on this occasion left a significant donation which was used to rebuild the station's little natural history museum,, it having been destroyed by natural history — mainly termites. Thanks again guys! You arrived in the nick of time.

The station also hosts students from the elementary school in Tortuguero. At the end of each school year, the children come out for the day and we try to show them a good time, including cookies and ice cream.

Recently, the town established a high school, up to grade eight, and we help to raise money for school texts by renting kayaks to our volunteers, researchers and student groups.

Caño Palma also sponsors a volunteer project, which attracts applicants from around the world. This affords an opportunity for interested individuals to actually live at the field station for a short period of time and to participate in its operation. Originally I came to the station as a volunteer myself, and I think the program serves a vital role in tropical education, and also supports our conservation efforts.

Volunteers pay at a rate of \$100 U.S. per week, and stay for two weeks or longer. Typically our volunteers help with the day-to-day functions of the station, which may include kitchen work and grounds maintenance, and the

recording of wildlife observations. They may also assist visiting biologists in their research. Volunteers also lend their time and increasing knowledge to an interpretive morning tour of the station for a few of the fifty-thousand plus tourists arriving in Tortuguero each year. This program is an excellent way to experience a tropical forest directly, and is open to virtually everyone. I highly recommend it.

We also try to make ourselves useful to the local community. In the spring of 1998, the village of Tortuguero began plans to construct a recycling depot and a system of collection to support it. Tourist lodges, hotels and small businesses in and around the village were canvassed to provide financial support for the project. Caño Palma Biological Station and the Caribbean Conservation Corporation (the other biological station in this area and which is involved almost exclusively with sea turtle research and conservation), were also asked to contribute. COTERC and Caño Palma Biological Station are now among the major benefactors of this initiative, which is in its final stages.

On a "grass roots" level, the station provides occasional employment to people living in Tortuguero. This is one of the two most economically depressed regions in Costa Rica. Despite the huge number of tourists coming to this region, most of the money generated leaves Tortuguero to absentee lodge owners. Wages from lodge jobs are low and yet living costs are high, because food, clothing and building materials are delivered by boat via a system of canals or by plane to an airstrip outside the village. There are no roads here. No railway.

When the number of people using the station is sufficiently large, we hire cooks from the village. When construction work is needed, which requires particular expertise, we hire locally. Our natural history museum, for example, was built by local men skilled in the tradition of Miskito Indian building techniques and palm roof thatching.

Another of the ways we make ourselves useful to the community is by purchasing our groceries locally and not importing them from the capital of San Jose, as the tourist lodges do. Insofar as possible, we try to spend our money in our own community.

On an even more basic level, this year we shared a bumper crop of breadfruits and limon acidos (a popular citrus fruit) with many of our neighbours. This little gesture of goodwill was returned in the form of avocados, yucca and other fruits and vegetables. One farmer even brought us a live chicken.

Life is good here. Come see for yourself!

Bird Websites of Interest

List of the birds of Mexico:

www.siti.com.mx/musave.dir/htm.dir/filogene.htm

Satellite tracking of threatened species:

<http://ded.gsfc.nasa.gov/ISTO/satellitetracking/birdshome2.html>

Electronic resources on ornithology:

<http://www.chebucto.ns.ca/Environment/NHR/bird.html>

The Institute for Tropical Ecology & Conservation:

<http://home.earthlink.net/~itec>

Gallery of bird art

[:http://gardnerbirds.com/index.html](http://gardnerbirds.com/index.html)

Guidelines to the use of wild birds in research:

<http://www.nmnh.si.edu/BIRDNET/GuideToUse/index.html>

THANK YOU!

As we enter a new millennium, so much has been said and so many dire predictions made about what is to happen. It is my profound hope that rainforest conservation will continue throughout the world, but particularly in countries such as Costa Rica where there is still hope, still time. Thank you so much for your continuing support of our conservation efforts. In our own small way, we ARE making a difference.

Marilyn Cole



Debbie Mason, as "Vanna"

PHOTOS FROM TROPICAL TREAT



Dr. Bob Murphy & June Enright



Cal White, General Manager Toronto Zoo & Host of Tropical Treat



COTERC President Derrick Fulton



Randy Potter, Auctioneer



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