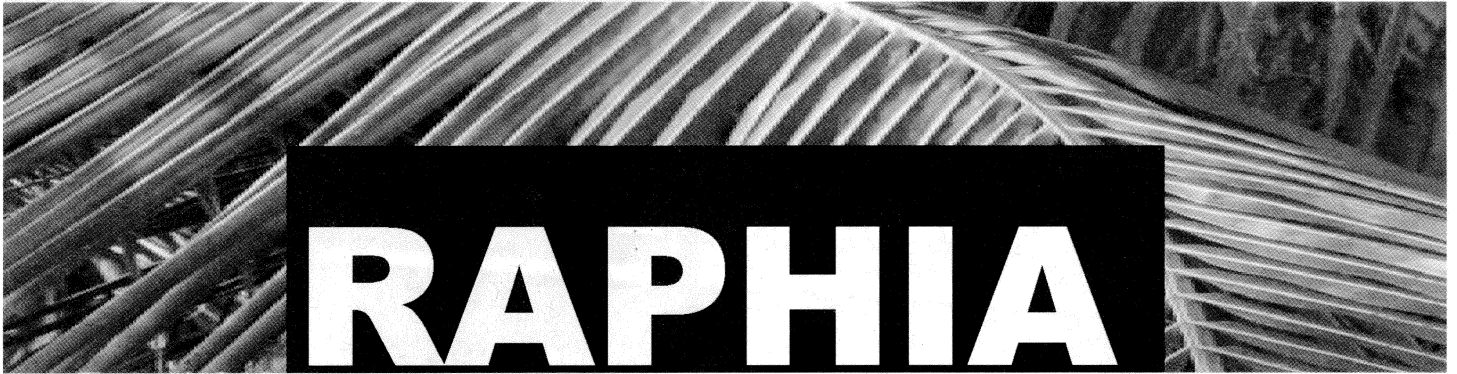


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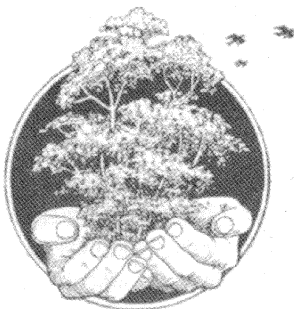


Summer 2008 Volume 17, Issue 3

**RAPHIA IS THE QUARTERLY NEWSLETTER FOR THE
CANADIAN ORGANIZATION FOR TROPICAL EDUCATION
AND RAINFOREST CONSERVATION**



Montezuma Oropendola, Photo courtesy of Jim Taylor



CANADIAN ORGANIZATION FOR TROPICAL
EDUCATION AND RAINFOREST CONSERVATION

Caño Palma Biological Station
Barra del Colorado Wildlife Refuge
Tortuguero, Costa Rica

COTERC Fiesta Verde

PROJECT FROG

Saturday, October 25

Toronto Zoo 6:30 pm

Featuring:

Live Entertainment

Dinner

Silent & Live Auction

Educational Speakers



For tickets or more information, call 905-831-8809 or email info@cotercc.org

STILL ONLY \$75 PER TICKET !!

You don't want to miss this!

COTERC ATTENDS LOCAL JOB FAIR

Our executive Director, June Enright and Tasha Vernhout attended a local job and volunteer fair in Ajax, Ontario on Friday June 27, 2008. Many dropped by the COTERC booth and took away information about our work and our need for volunteers here and in Costa Rica. We were able to engage with a few local teachers to discuss our current work in education as well as to discuss our current call for volunteers with Rogers Cable TV and some local news agencies.

NOTES FROM THE CHAIR

Tom Mason

Well, the summer issue is now here and the activity is amazing. We have volunteers helping our lone beleaguered staff person in office chores. There are people writing fact sheets, others looking for new ways to get our message out and still others working to increase our commitment to members. Then we have the group who are interested in what is happening at the station and of course there is the constant search for funds to keep us going.

Recently we have started several new projects to see what funds we can obtain in different ways. We have been traveling to green festivals to tell people what we do. We are regular participants at the Mississauga reptile swap meets and in June we have put together an art show hosted by Reptilia.

One of our more aggressive plans has been to put together a business proposal to secure corporate support. A little corporate funding would go a long way. Hopefully we will see something come from this soon.

I have been working on a slightly different tactic. As many people know, I have been leading groups to our station in Costa Rica for over 15 years. During that time I have learned about areas in Costa Rica that could be considered "hotspots". These are areas where there is a high concentration of diversity. Caño Palma is one such spot, but there are others. So what I am proposing is to develop a special trip for reptile enthusiasts that would take them not only to the Caño Palma Biological Station but

also to places where other species may be found. We hope to spend a couple of days in a highland forest where species not regularly seen along the coast are present. For example, this forest is known as the place where people go to find the bushmaster.

I want to make this a special trip. So we are hiring guides that know the species and the region. Josh Feltham will be on tour as the reptile guide and for anyone that has been there, I plan to have Mario "Rastas" lead us to the upland forest site which is not far from his home.

Of course this trip will cost more than the usual trips. We will be going to more sites, renting vehicles to travel and paying for hotel rooms. And of course, I also want to do this to raise some money for COTERC and Caño Palma.

In all past trips to the station I have taken a percentage as a gift for the station. This will again occur on this trip. I am not sure how many people will go but we will need at least 10 participants to cover the basic costs. If we get 15, then it is possible that I will also go as a second reptile guide.

I am not sure of the exact cost as flights may vary and car rentals, food and hotels will cost, but my estimate is \$2,800-\$3000.

To help promote the trip, Mr. Grant Crossman is buying one spot on the trip. This spot will be the prize for a raffle for which we will be selling tickets. Tickets will be \$5.00 ea

or 5 for \$20.00. And the winning ticket will be pulled on New Year's Eve. All profit from the Raffle will go towards our education program in Canada. (Thanks Grant)

Profits from the people traveling will be for COTERC and Caño Palma. For those that wish to do the station and not the extra travels, I will ensure that we have that trip as well.

Please show your interest and give a director a call if you are interested. I don't think anyone has been disappointed yet.

Tom



Darren & Ryan Bolton looking at a fer de lance

Photo courtesy of
Alex Simpson

Donations of items needed for Fiesta Verde!

On October 25th, 2008, we will be holding our fall fundraiser, **COTERC Fiesta Verde: Project Frog**. This event will bring together 120-150 of COTERC's valued members, family, friends and members of the community who share in our concerns and goals. There will be a silent and live auction, dinner, and educational presentations.



We would like to offer you the opportunity to donate items for the silent and live auction. These auction items are a large contributor to the success at this event. Likewise, any monetary donations that would aid in the funding of the evening's events would also be greatly appreciated. With your support, COTERC will be able to continue providing leadership in education, research and conservation and the educated use of natural resources in the tropics.

By donating auction or monetary items, you would help to save the world's rainforests and benefit from:*

- **Your name appearing in Raphia**
- **Your name listed among contributors on our official website**
- **Exposure to all those who attend the event, which strengthens your reputation among key players in the environmental community**
- **A charitable tax donation receipt**

For those who would like to become a sponsor with a monetary donation of \$1,000 or more, we will also place your logo/name on the event's publicity materials and program, mention your organization as a sponsoring partner in all communications, and provide two tickets to the event.*

Contributions can be forwarded to our head office. Alternatively, you can call us directly to arrange pick-up.

We thank you in advance for your participation and support!

**Any items received on or after October 11 may not be recognized in printed materials but will be acknowledged in Raphia. We reserve the right to save items for the next year's auction depending upon the breadth and variety of items received. For sponsorships, please inquire as to publication dates to ensure inclusion in marketing materials.*

CANADIAN ORGANIZATIONS TEAM UP TO BRING RAINFOREST CONSERVATION TO YOUR MOBILE PHONE

Stay connected with COTERC's work in the Costa Rican Rainforest with wallpaper and ring tones for use with your mobile phone. COTERC has partnered with ecolmage to bring images from the field to your phone, and the best part - 50% of funds come direct to COTERC to support Rainforest Conservation.

Get your free image and ringtone at www.ecoimage.ca/test_centre.php and eco-tize your mobile phone.

- Try out the service at no cost www.ecoimage.ca/test_centre.php
- Make an eco statement and spread the word about COTERC's work
- Of course, buy a subscription for yourself and all your eco friends because 50 percent of funds come direct to COTERC to support our work!

Choose from the most popular one-time downloads or the 3 or 12 month subscription where you receive new images and sounds twice per month. You also receive interesting facts about the species we feature and their important roles in the rainforest ecosystem.

www.ecoimage.ca/COTERC.htm

Thanks for your support!

UPDATE FROM CAÑO PALMA

Jonathan Willans, Manager, Caño Palma Biological Station

It has been a busy few months here at the station and it is not looking like it is going to be slowing down soon. After a very busy Leatherback Turtle season that saw over 90 nests on our 3 mile stretch of beach, we are getting ready for the onset of the Green Turtle season. It has been rather quiet to date but we are seeing more nests on the beach with each passing week. Currently an average night seem to be producing 2 or 3 nests per night, with some nights having 6 or 7.

We are getting ready for the height of the season when there may be 60 or so nests in a single night. It is nights like these, where you can be out on the beach at night for 8 hours and see 10 turtles, which makes you realize why it is hard for people to think that these creatures are actually endangered. The entire beach can be covered in tracks and the craters left behind where a turtle has nested, but still these turtles are at risk. You can still hear it said by many people in the area when the topic comes up. "There are plenty of turtles. They come here every year. They are not endangered". This is one reason that the poaching that we are trying to reduce is still a problem.

The past two weeks here have

been a sad reminder that poaching is still an issue on our beach.

Green turtle eggs are generally preferred to Leatherback eggs and their nests are much easier to poach than that of the Leatherback due to the shallowness of the nest and the large, conspicuous hole on the beach left by a Green. This means that there are more people looking for eggs and more poaching. This has been reflected in a higher than usual poaching rate.

"We need many people who care and are passionate about these creatures to help patrol the beach and be a deterrent"

As well as turtle eggs being poached, in the past few weeks there have been 4 known turtles that have been taken off the beach and killed. This includes a critically endangered Hawksbill Turtle, a treasure for poachers due to the value of its carapace, which is used to make jewelry, amongst other things. With no police or guards from Minae, (the ministry of the environment), there is no enforcement of the existing laws that are in place to protect the turtles. So what can be done to help stop this troubling trend? One answer is being as much of a presence as possible on the beach at night, getting to the turtles before the poachers

do and making sure that they can get back to sea safely. This requires manpower and volunteers. This job can not be done by one or two people alone. We need many people who care and are passionate about these creatures to help patrol the beach and be a deterrent. Without volunteers, the project is not possible. In September we will need people to come to the station and walk the beach. This time of year is generally the peak of the season and when we are most in need of people to help. I invite you all to come down here to Caño Palma and help make a difference. To see a turtle emerge timidly from the sea, carefully crawl up the beach dragging its seldom felt weight on the sand below, sculpt an egg chamber with precision, deposit 100 or so golf ball sized eggs into it, then cover its precious content for almost an hour and finally drag her exhausted body back to the sea is something that I wish we could all witness. It is nature at its purest.

I hope that this summer is a fantastic one for everyone and I hope to see you here at Caño Palma in September.

Hasta Pronto,

Jonathan

NEW (OLD) RAPHIA EDITOR

Jennifer Corris has been the Raphia Editor for the past year or so and came with great credentials. She is the Assistant Manager, Product and Consumer Experience for Harlequin Enterprises, the company that publishes all those romance novels, amongst other things. However, Jennifer is moving on in another direction and will shortly be leaving for Korea to teach English. She has done an outstanding job in bringing a professional "look" to our newsletter and will be missed.

Marilyn Cole, the co-founder of COTERC and Past Chair, has returned from her road trip and has agreed to become the Raphia Editor once again. She said "I'm delighted to be participating actively once again in COTERC and will do my best to carry on the high standard set by Jennifer."

WHAT DO VIDEO GAMES & COTERC HAVE IN COMMON?

Matt Vernhout,
COTERC Marketing
Director

Last week I had the pleasure of attending the "Amp Your Game" Tour, a Cross Canada event that is looking to fill in the last spot on the Amp Energy Pro Team, **North of 49**, to compete with existing team members; Nelson Triana (gamer tag: G-SpOt), Leo Vitelli (gamer tag: Alpha XFactor) and Bo Kovacevic (gamer tag: The Bo).

But, what does that have to do COTERC, you ask?

A special media event, for Video Games personalities in the Toronto Area, was held on Wednesday July 2, 2008. As the night progressed the "Amp Your Game Media Charity Challenge" was held by the tours key, sponsor Amp Energy Drink. During this challenge I was able to drive my way to victory (see picture). As the winner I received a very cool prize pack and I got to pick the recipient of a charitable donation.

This brings us back to the original question "*What does this have to do with COTERC?*"

As the charity event winner, and the Marketing Director for COTERC, I was granted the ability to pick a charity of my choice as the recipient of a donation from Amp Energy for the sum of \$500. This of course was COTERC.

On Behalf of COTERC I'd like to say - Thank you AMP Energy for your generous contribution.



Check out this blog:

<http://coterc.blogspot.com/2008/07/what-do-video-games-and-coterc-have-in.html>

MEMORIES OF CANO PALMA

Alex Simpson

To preface, I spent the past five years of my life in and out of Guelph, Ontario, Canada -- a city known for its biologists, knitted-sweaters, green bins, and fair-trade cafes (Although, Peterborough could surely compete). This is a place where a conversation of about the failure of our governments, and ultimately ourselves, to protect the earth wasn't more than a few yards away. Like most youth fresh out of college or university, I had intended on doing a bit of traveling, working for the cause, building some experience, and seeing the sights. Once I delved into the search, I found this was a little bit easier 'said than done'. I did, however, finally run into COTERC and Caño Palma. This, as I recall, was the result of some independent research and a vague recollection of a former boss (Peter Klose, Jungle Cat World) speaking about a friend's encounter with a Juvenile Fer-De-Lance (some might recall)

When I stumbled upon COTERC, I had been searching for a 'little break' from a winter of sitting at a desk and a chance to stretch my legs. No sooner had I got in touch with Jonathan Willans, *Caño Palma Station Manager*, then those same legs were riding on a public bus (full of giggling school kids) through the bumpy banana plantations. A few hours and basilisks later, we came out on to the Penetencia River. This is where the world opened up. This was the place where the massive palms and dense vegetation loomed over the shores and a buzz of excitement tied up my stomach. This was a buzz that didn't quite leave until I left the station.

Continued on Page 11

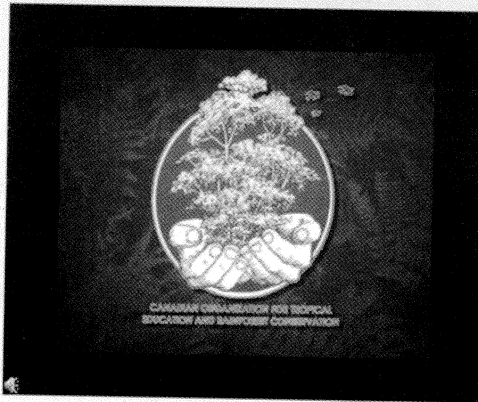
SAVE AN ACRE

Support a unique strategy to establish a wildlife reserve. You can Save an Acre by buying an acre. Habitat destruction is the greatest threat to wildlife today.

We are a registered Canadian non-profit charitable organization (#890096183 RR0001) which is establishing a wildlife reserve in the Atlantic Lowland Tropical Rainforest of Costa Rica. We currently own 100 acres on which the Cano Palma Biological Station is located. The properties nearby are being bought up for use as lodges and farms; trees are being cut down to clear the way to build cabins and other buildings, thus destroying the habitat of many species of animals.

The Save an Acre Project is very special, dedicated to promoting conservation through the acquisition, protection and sustainable use of threatened habitat.

One hundred percent of your contribution goes directly to the land trust to buy land for the wildlife reserve. The money is held in trust until we reach our goal of \$450,000 to purchase land presently available



Help us to save this precious piece of our planet!
Each acre costs \$450.
You will receive an Acreage Certificate acknowledging your participation in the land trust

YES, I want to Save an Acre by contributing towards the cost of _____ acre(s) at \$450, for a total of \$ _____ OR 1/2 acre at \$225 _____ OR 1/4 acre at \$120 _____
Other amount \$ _____

Name _____

Street Address _____

City _____ Province/State _____

Postal Code _____ Phone _____

Email (optional) _____

Tax receipts are available on request. Please mail to COTERC office Box 335, Pickering, Ontario L1V 2R6, Canada info@coterc.org www.coterc.org

IN SEARCH OF THE HERPS OF COSTA RICA—A TOUR OF A LIFETIME

COTERC is organizing a trip to Costa Rica specifically to search for reptiles and amphibians – A camera safari. It is a trip for both beginners and experts. Unless you're a constant visitor to the Costa Rican bush I guarantee you'll see new species. After sixteen years I still find something new every time. The following is the tentative itinerary.

DAY ONE: Depart Toronto for San Jose, Costa Rica. You will be met at the airport and head up the Central Valley to make a stop or two in the Braulio Carillo National Park. The first evening will be spent in Siquirres. After a meal and settling in, there will be an option to go for a night cruise or prepare for the next morning.

DAY TWO & DAY THREE: Two days of exploring the Guayacan de Siquirres. This is the forest that is famous for the bushmaster, one of the most elusive and sought after herps in the Americas. The area is also good habitat for species that are known from the Limon region. At the optimum times of day you will travel into areas of this unique forest to hunt the elusive herps. Meals will be taken at local restaurants.

DAY FOUR: You are up early and on the way to Tortuguero and Cano Palma. You will drive through Guapiles to Caño Blanco. On the way you pass through banana plantations and cattle ranches. You will get the chance to see a population of Ctenonotus, an introduced anoline lizard from Puerto Rico and associated islands. At Caño Blanco you will take a boat ride through Tortuguero Park and onwards to Caño Palma at the southern end of the Baro de Colorado Wildlife Refuge. On the way, one can see many shore birds but with a quick eye the possibilities abound to see caiman, crocodiles, iguana, plumed basilisk and a couple species of basking turtles.

After a mid afternoon arrival, you will be given an orientation session about staying in the rainforest. It then is time to see some of the diversity of Caño Palma Biological Station.

DAY FIVE & SIX: Your time will be spent exploring the trails and canals of Caño Palma and the surrounding area. The property alone has produced over 100 species of reptiles and amphibians. In the evening, night walks will be conducted into the forest or you can join the nightly search for the leatherback sea turtle. Ranking as one of the world's largest reptiles makes it a true thrill to see one. If you are tired, you can spend the evening checking out the compound. By just checking out the local vegetation there is the possibility to see up to three boa species, over 20 species of lizards, many snake species, 5 freshwater turtles and a myriad of frog species.

DAY 7: We say goodbye to Caño Palma and hop on the boat back to Caño Blanco and San Jose. There we return to the Cacts and you have a free afternoon in the city. Taxi's will take you to souvenir shops or to the zoo or museum. There is a good book shop downtown or if you want there are travel buses that would take you up to the local volcano..

DAY 8: It's back to the airport and back to Toronto.

This trip is designed to look for herps but I guarantee that there will be many more things to see. Orchids, bromeliads, palms and ferns are everywhere, flowers never stop blooming and of course birds, butterflies and oddball bugs are everywhere. Birders will even recognize species from their own backyard. Often you get a chance to see sloth, peccary, tamandua or opossums. Otter swim by the dock and five species of wild cats have been recognized living on the property.

At this time, the approximate cost of the trip is \$2,800 - \$3,000 per person. If one wishes only to go to the Cano Palma, please contact us.

If you are interested, call **Tom Mason at (905) 839-6764** or contact the **COTERC office at (905) 831-8809**. For photos of the region please check out the COTERC website at: www.COTERC.org. It features checklists of species found at the station.

It would be great to show you the animals you love in their natural setting. Come and see why so many people continue to go back..

Personal items, alcoholic beverages and the cost of a passport not included

The Collared Peccary – The Large Mammals of Caño Palma

**Dr. Kimberley A Snarr, University of Toronto, Centre for Environment
Director of Conservation and Research, COTERC**

With the establishment of the large mammal monitoring program at the research station in fall of 2007, data has been collected on a regular basis to begin to understand the population of large and medium-sized mammals which utilize the habitat surrounding the station. One terrestrial mammal found ranging at the station is the collared peccary (*Tayassu tajacu*).

While there are two species of peccaries ranging in Central America and found at the station, I will discuss the collared peccary. As you can see in the image, peccaries are related to pigs and other even-toed ungulates. There are two species of peccary found in Central America with two species in South America, including a new species of peccary called the giant peccary (*Pecari maximus*) found in the Brazilian Amazon.

Adult collared peccaries weigh from 24-88 lbs and are the smallest of the peccary species. With the widest range of all the peccary species, they can be found from southwestern United States through to the South America, and are found to exploit a wide range of habitat including moist and dry tropical forests, open deserts, and oak forests. These highly social mammals range in small feeding groups of 2-5 during the day with herd sizes averaging 10-15 individuals with smaller herds found in tropical dense semi-deciduous forests. These territorial mammals have large home ranges which are variable in size, and dependent upon the habitat, although they only use only a small portion each day. As they produce a musky odour from their scent glands, you can often smell them before you see them.

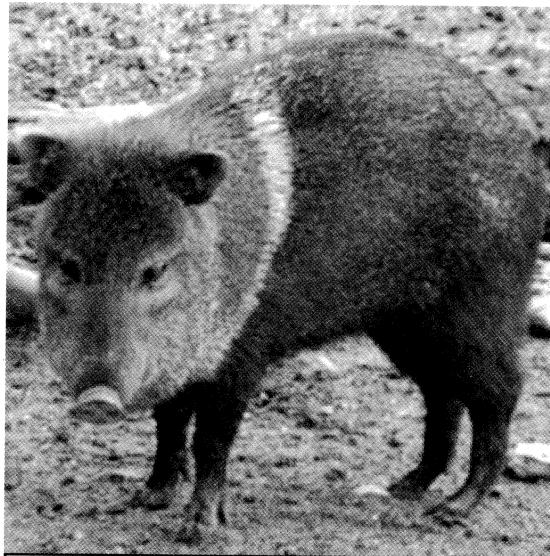
Collared peccaries are grazers and rooters, feeding on fruit and seeds, and are important seed vectors. As they feed on palm seeds, and exploit hard seeds, they act as agents of dispersal for palm seeds. They also eat palm flowers, seedlings, and roots, and trample seedlings, thus impacting palm spatiotemporal distribution and demography. Thus, local extinction or low numbers can impact on palm population. As the forest around the Caño Palma Research Station has a high component of palms, their presence is im-

portant to the regeneration and overall health of the forest ecosystem.

Natural predators of the collared peccary include the larger cats (pumas and jaguars), and large raptors are known to take infants. Anthropogenic, or human causes, are the key issues relating to the abundance and distribution of this species. This includes loss of habitat and poaching.

Collared peccary are an important protein resource for subsistence hunters in the Neotropics. They are listed on the CITES Appendix II and are known to be locally extirpated in some areas where hunting is not carried out sustainably. They are likely poached in the unprotected unmanaged areas around the Caño Palma Biological Station. The station provides them with needed intact habitat and acts as a conduit for their movement between the Barro Colorado Wildlife Refuge (BCWR) and Tortuguero National Park. The management at the station is likely to help reduce poaching, aiding in their survival and ability to flourish in this area.

As further research is conducted on the large mammals at the station, further light can be shed on the population and ecology of the collared peccary.



Adult collared peccary, —, note the stocky body and thin legs covered with coarse hair, and the cream-coloured collar running from the shoulder to the chest

Sources:

- Beck (2006) A review of Peccary-Palm interactions and the ecological ramifications across the Neotropics. *Journal of Mammalogy*. 87(3):519-530
- Ferrari and Prto-Carvalho (2003) Predation of an infant collared peccary by a Harpy Eagle in eastern Amazonia. *Wilson Bulletin*. 115(1):103-104
- Reid (1997) A field guide for the Mammals of Central America and southeast Mexico. Oxford University Press, New York
- van Roosmalen, Frenz, van Hooft, de longh, and Leirs (2007) A new species of living peccary (Mammalia: Tayasuidae) from the Brazilian Amazon. *Suirform Soundings* 7 (2):9-18

COTERC RECEIVES GRANT

Greg Mayne,
Director of Site Services

MARINE TURTLE CONSERVATION EFFORTS ADVANCED BY CANADIAN CONSERVATION ORGANIZATION

Media Release (June 25, 2008) The Canadian Organization for Tropical Education and Rainforest Conservation (COTERC) recently received \$30,000 from the Donner Canadian Foundation to support critical efforts to study and protect endangered marine turtles at an important nesting beach on the northern Caribbean coast of Costa Rica.

Based in Pickering, Ontario, COTERC has been advancing conservation efforts since its founding in 1991 as a registered Canadian charity and the creation of the Caño Palma Biological Station in the lowland rainforest of Costa Rica. When station biologists began studying nesting marine turtle abundance on this unprotected and poorly understood beach, they found turtles in greater numbers than expected. Unfortunately, biologists and volunteers also recorded turtle mortality and high rates of poaching coincident with rapid coastal development.

Of the seven species of marine turtles found in the world, the leatherback, green, hawksbill and loggerhead come ashore to nest on this beach. Virtually unchanged since the time of the dinosaur, the leatherback is the largest living reptile in the world. Leatherbacks nesting at this beach migrate throughout the Atlantic Ocean; spending much of their time in Canadian waters before returning to nest years later. Familiar to some Canadians, from postage stamps illustrating leatherback turtles as species at risk under Canada's new Species at Risk Act, it is also listed as critically endangered globally by the International Union for Conservation of Nature.

Critical conservation concerns on this nesting beach are related to human development and poaching of adult females and their freshly laid eggs. After years of spending time maturing in the Atlantic, many turtles come ashore to nest, only to meet their demise at the hands of poachers. Fisheries bycatch by coastal fisheries plus international longline fisheries have been identified as sources of turtle mortality.

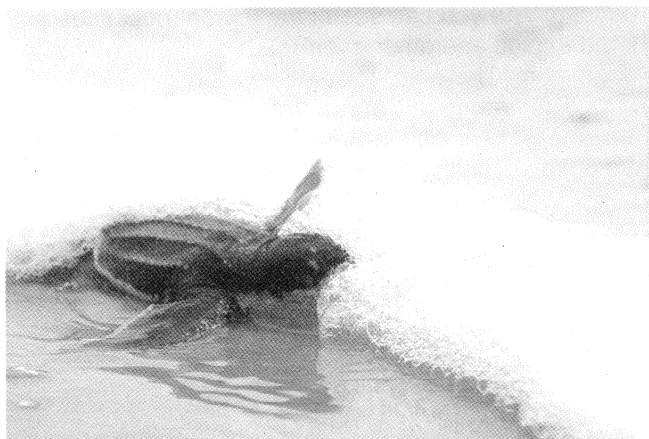


Photo courtesy of Guillaume Feuillet and Seaturtle.org

With the generous donation from the Donner Canadian Foundation, COTERC will study these majestic creatures in greater detail through coordinated beach monitoring, turtle tagging, community-based conservation outreach and education projects, partnership building and information sharing with the conservation community.

Excitement is in the air at Caño Palma Biological Station. COTERC partners and the many international volunteers who have worked so hard on the Marine Turtle and Community Conservation Program over the years have reason to celebrate. The donation comes on the heels of a \$2000 grant from Turtle Beach Lodge, a local business that recognizes the intrinsic natural heritage value of marine turtles. "Our relationship with local lodges is positive", reports station manager, Jonathan Willans. He goes on to say that, "It also demonstrates how businesses can support critical conservation efforts."

COTERC's years of work have greatly improved our understanding of the tropical rainforest biodiversity, and with continued support from sponsors, COTERC's staff, volunteers and partners are confident that turtle poaching will continue to decrease on this beach.

It is the mission of COTERC to provide leadership in education, research, conservation, and the educated use of natural resources in the tropics. For more information on COTERC and its conservation efforts and volunteer programs contact June Enright, at info@coterc.org, or visit our website (<http://www.coterc.org>).

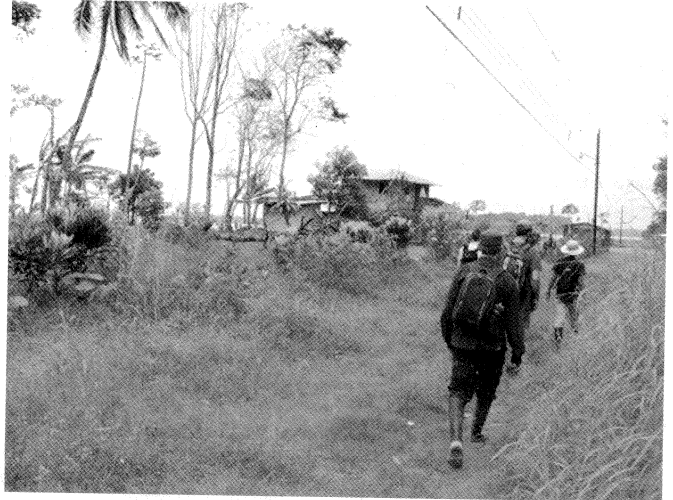
MEMORIES OF CAÑO PALMA—Continued

On our first night at the station, after a solid briefing from Jon, we decked out our flashlights with red filter paper, put on our ninja clothes, and headed for the beach. We were headed for a hike up and down the beach searching for any signs of turtles that had hauled, or were hauling, themselves up onto the beach to lay their eggs. We would head out on these hikes for five out of the seven nights we stayed at Caño Palma. With my delicate feet torn and aching after these walks, I couldn't help but be incredibly impressed by those volunteers and staff who hauled themselves up and down that beach day-in day-out. On our third night, I was granted the opportunity to witness the shadowy, red figure of a massive leatherback, lit only by the stars and two team members' headlamps. Without doubt, I identify the most memorable moment as that when I watched the outline of a massive female pulling herself back down the beach after dropping off some precious cargo --- the next generation of a critically endangered species.

It is a place where money is an issue, but also one where you feel like even in a short week, you've done something rewarding, supported the cause, seen something incredible, and met some fantastic people in the process.

After spending this week prying information out of the station's residents as often as possible, I discovered that this place was much more than a little hammock (and Juancho-rich) piece of paradise. It was a place where not only the nights were aglow with herpetologists' flashlights, but every morning at 5:00am there was a dedicated avian nest surveyor out to gather data; 'Socks' (the happiest San Franciscan dog of all time) was following the morning Turtle surveyor; Jon and volunteers were

trudging through waist-deep mud on a mammal monitoring walk, and a young Canadian in his early twenties was lucidly dreaming about *Bothrops asper* as a result of the chloroquine salts! This is a place where I will surely find myself again and for which I will speak considerable praise. I have worked and do work in the non-profit sector, have met those who have, and have family members



*a group of us taking a walk to the little remaining primary forest and the view.
Photo courtesy of Alex Simpson*

who plug away working from grant to grant, but at Caño Palma, I saw the labors of dedicated fundraisers and volunteers manifest in an effective, bare bones operation led by a dedicated biologist. It is a place where money is an issue, but also one where you feel like even in a short week, you've done something rewarding, supported the cause, seen something incredible, and met some fantastic people in the process.

STAY CONNECTED WITH COTERC

Recently COTERC has taken steps to spread our message via several new communication channels. These include a new Facebook "Fan page"

[<http://www.facebook.com/business/dashboard/?ref=sb#/pages/Canadian-Organization-for-Tropical-Education-Rainforest-Conservation/18690441382>]

and the launch of our "Save an Acre Cause" [<http://apps.facebook.com/causes/beneficiaries/20818?m=b85bc>] on both Facebook and MySpace (powered by CanadaHelps) and our new blog [<http://coterc.blogspot.com/>].

If you are a member of one of these service please join us and show your support by joining us, and inviting your friends.

Matthew Vernhout
Director of Marketing

SLOW BUT STEADY WINS THE RACE

Endangered sea turtles get help from Early Childhood Education students

If Methuselah had been a reptile, he surely would have been a marine turtle. After inhabiting the oceans for more than 100 million years, sea turtles have outlasted nearly all their prehistoric counterparts. But, as is true for most endangered species, sea turtles have now met their biggest threat in humans.

During the nesting season, in tropical and subtropical areas around the world, female turtles emerge from the water and drag themselves onto beaches. There, they dig holes and deposit roughly 100 golf-ball sized eggs. The mothers then cover the eggs and return to the ocean, leaving the young to hatch and find their way to the sea. Sadly, many of the baby turtles never make it. Instead, the eggs are poached by local residents for black-market sale to cultures that consider turtle eggs an aphrodisiac.

Thanks to several Ryerson Early Childhood Education (ECE) students, however, more turtles may soon wander the beaches of Central America. And it's all part of a unique outreach project supported by the Toronto Zoo.

During their studies, ECE students complete experiential learning placements. One such posting at the zoo enables students to develop on-site educational activities. "The students work with biologists and environmental scientists and they learn to branch out beyond traditional settings like a classroom or a child-care centre," says ECE Field Education Coordinator Patricia Rego.

Or even Canada, it seems. Since last fall, the zoo's interns have been working on an ongoing project for the Canadian Organization for Tropical Education and Rainforest Conservation (COTERC). Among the charity's many activities, it manages educational, research and conservation projects in Costa Rica, home to five per cent of the world's biodiversity.

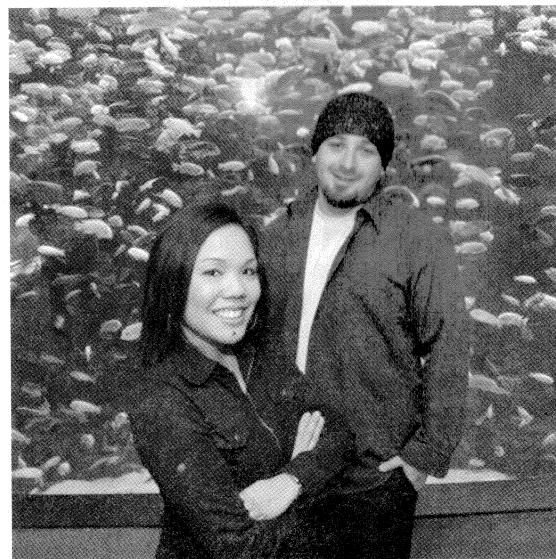
ECE students have developed an environmental-based curriculum and activities for children in a village where turtle-egg poaching is common practice. The Spanish-language project has two goals: to enhance appreciation of local flora and fauna and to teach introductory English skills that will help locals find work in the growing ecotourism industry. Although the initiative is aimed at children, it's hoped parents will also increase their environmental awareness and stop poaching.

The project was launched by ECE students Lisa Bolt, Yhalinie Navaratnam and Subashini Ramsarmujh, who passed the torch to interns Gal Koren and Jennifer Balido. The duo worked with York University student Sami Abdelmalik, who is pursuing a Master's degree in Environmental Studies. Mr. Abdelmalik will take the entire curriculum package to Costa Rica this summer.

"We wanted to simplify scientific concepts and make them fun and interesting, instead of creating an encyclopedia," Gal says.

"We also wanted older children to act as mentors for the younger ones," says Jennifer. "Teachers can provide details, but when a child sees an older sibling do or explain something, it offers a valuable learning experi-

Dana Yates



Jennifer and Gal

Photo courtesy of Ryerson University

ence."

The COTERC partnership was the brainchild of Caroline Greenland, Manager of Education at the Toronto Zoo, and COTERC's Director of Volunteers and Membership. Everyone benefits from the collaboration, she says, including the zoo. "We want ECE students to understand the importance of bringing nature into teaching, and to show young children that nature should be embraced and not feared."

It's a sentiment echoed by COTERC's Executive Director **June Enright, Telecommunications Management '04**. "When you're working on a project, it's sometimes hard to see the broader impact. This project lets ECE students see that their work will have an immediate environmental impact. Plus, as a charity, we're grateful for the students' expertise and volunteer commitment. It helps us continue to do our work."

Would you like to offer an internship or co-op placement to a Ryerson student? If so, contact your School or Department for more information.

FIELD DIARIES

Sami Abdelmalik

Field Diaries is a series of logs that provide an insight into the daily life of Sami Abdelmalik, a former researcher at Caño Palma Biological Station who worked on the ongoing Sea Turtle Conservation project. This personable series allows readers to get a sense of what it is like to venture out into the depths of the Costa Rican coastal rainforest, with the intent of enlightening and even inspiring participation in the collaborative conservation effort.

Log 12: Hard to Swallow the Reality

The work seems as easy as a walk on the beach, yet it is serious and entails great responsibility. Since the beach is part of a protected wildlife refuge, it remains unexploited by the public (both tourists and locals), especially since swimming is also not recommended due to strong currents, sharks, stingrays, and other hazardous deterrents.

Occasionally, during the systematic sea turtle surveys, I do come across local men who pass by me on the beach. They are usually from the small village of San Francisco where most people live in basic conditions. As they casually pass by, I intuitively know that they are on the hunt for turtle eggs (at times I have even observed them carrying sacks full of eggs), which provide them with a decent meal for their families. It is still hard for me to accept the current reality. I am neither in a position to say anything, nor am I willing to try to stop them, since evidently they are poaching out of necessity. It could also be dangerous to have such a confrontation.

As an environmentalist and conservationist, I have the urge and duty to protect every single endangered sea turtle. More importantly, however, as I have learned through previous experiences, conservation initiatives are neither possible nor viable without the collaboration and support of local community members. In line with this view, COTERC is currently reaching out to the community through an environmental education program. By acknowledging the fact that impoverished locals need to eat while at the same time turtles need to be protected, COTERC seeks to strike a balanced outreach approach. Their message for the locals advocates the taking of only a small percentage of the endangered sea turtle eggs, if need be, while leaving enough to hatch and to repopulate the species. This is a precarious balance; it can easily tip and create a complete fall-out on one side or the other. Poachers can easily be taking more eggs than sustainably possible, creating a long-term decline in the already endangered sea turtle population.

Nevertheless, in the short-term, the locals need to eat. At the moment, it is not known whether the poachers are taking a small percentage of the eggs while leaving the rest to hatch, or whether they are taking the entire clutch. Since the chances of a hatchling reaching sexual maturity is very low, it is not known if the poachers are leaving too few of the eggs behind to adequately regenerate the turtle

population. In addition, if one agrees with the notion of allowing the collection of some of the eggs, then one poacher may do this at a specific nest, then another poacher would take his share from that same nest, and so would another, until there is nothing left of the nest.



Fast Fact: It is estimated that only 1 out of 1,000 to 10,000 hatchlings ever reaches reproductive maturity.

Photo courtesy of Sami Abdelmalik

Clearly, this indicates the flaw in the existing system and alternatives are desperately needed.

Currently, I am pushing to find alternatives that would take the pressure off the turtle population while still addressing the poverty of the local villagers. Mario (the former field station manager) has stated that local people would always eat turtle eggs as they have been for generations, no matter what their circumstances are. However, in collaboration with the villagers, I am certain that if we search for alternatives to put food on their tables they would at least cut down on the exploitation of this dwindling sea turtle "resource".

Continued on Page 14

COTERC ATTENDS WINDFALL ECOLOGY FESTIVAL

Thanks to our volunteers, COTERC has been attending various events to promote the organization and our conservation work. Just recently we manned our booth for the Windfall Environmental Festival, held on June 7 and 8 at the Windfall Ecology Centre in Fairy Lake Park in Newmarket, Ontario, just north of Toronto.



Windfall Ecology Centre has a focus on community action which is informed by observation and participation at the global, national and provincial level.

The Festival was multi-faceted and featured food demonstrations of healthy meals; over 100 vendors demonstrating environmentally sound products; cycling demonstrations and workshops on how to affordably fix your bike, and the best places to ride in the Region; a World Music Stage packed with two full days of music featuring performers such as Bob-Cajun Band, Dualing Pianos Martin Aucoin & Michael Keys, Dulcimerhead, Hobson's Choice, Dave Lotimer, Kay Pettigrew and Stumblepoint. A Kids Zone featured Garden Jane sharing her stories about Garden Fairies, and a Children's stage featuring YTV's Chris McKhool and in another area Tina Therrien taught the benefits and advancements in straw-bale construction and demonstrated how to build a straw bale dog house!

In order to support the Centre (a non-profit environmental group), COTERC donated a prize to the silent auction.

Overall, It was a very successful weekend, and in particular allowed us to acquaint many visitors with COTERC and, hopefully, encourage them to join.

FIELD DIARIES—Continued

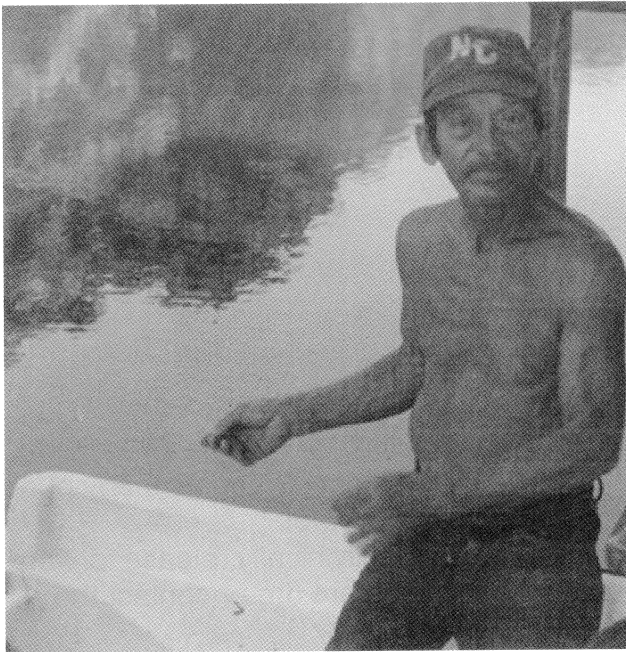
In order to obtain suitable solutions, first it is important to pinpoint the underlying problem(s). In this case, the problem is plainly the current circumstances of the people. One alternative means of assistance is by creating income or jobs. This can be done indirectly through the process of education or directly by developing sustainable projects that would generate income (i.e. through ecotourism). Facilities can be established and locals can work as guides, vendors of handicrafts, maintenance workers, and as other staff members of Cano Palma and adjacent businesses. On the other hand, another problem of poverty is hunger. Hunger could be alleviated in a sustainable way by giving people the tools and skills needed to feed themselves. One such idea (that I am still thinking through) may be through the acquisition of chickens. If each household maintains a flock of chickens, perhaps chicken eggs would be a substitute for turtle eggs. Another idea I am advocating is the establishment of vegetable gardens in every household (or even just having a community garden). To establish such a project, we only need seeds, tools, and agricultural supplies, which can be easily obtained through donations. A workshop would also be set up in order to educate participants on proper farming care and techniques. This strategy would put food directly on the table and any surplus produce could be sold. One initial step to start such an

FIELD DIARIES—continued from Page 14

initiative is to establish a small garden or greenhouse at the local elementary school. The students could be taught all about growing produce and about the local medicinal plants. As the nursery grows, students would be encouraged to take some of their plants home, thereby, inspiring parental involvement.

I understand that alternatives are never easy to implement, and that it is much easier for foreigners to come in with 'wishful thinking'. However, by being sensitive, understanding, and respectful to the local people and their customs, one could slowly start a working relationship that will aid the community while, simultaneously, sustaining the endangered sea turtle population. It is pivotal to start establishing something now and have it progress into the coming years, especially since extinction could be the face of the near future.

For the only world we've got,
Sami Abdelmalik



One of many cheerful and friendly faces seen around the San Francisco community.

Photo courtesy of Sami Abdelmalik

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Become a member of COTERC**

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Please print clearly

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Select the appropriate membership category:

Senior/Student \$15.00

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Will you assist us in our conservation efforts and receive your quarterly newsletter, *Raphia*, electronically?

Yes No

Please let us know if you wish you volunteer:

I would like to help with efforts here in Canada Yes No

I would like to volunteer in Costa Rica at Cano Palma.

Yes No

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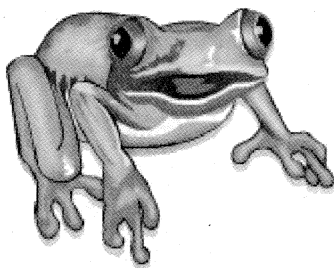
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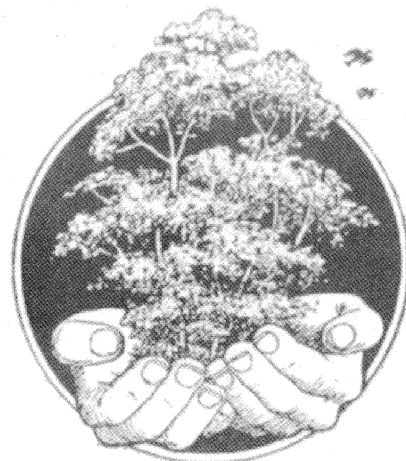
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