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CANADIAN ORGANIZATION FOR TROPICAL  
EDUCATION AND RAINFOREST CONSERVATION

CANADIAN ORGANIZATION FOR TROPICAL EDUCATION &  
RAINFOREST CONSERVATION

**RAPHIA**

# COTERC'S ANNUAL

## FIESTA VERDE EVENING

Takes place in the Atrium, Toronto Zoo

**New Date: April 13, 2013**

**Featuring Cocktails at 5 pm - Dinner at 7 pm**

**Silent auction.....Live auction  
Entertainment**

**Proceeds to advance conservation research  
at Cano Palma Biological Station**

**Members \$65/per person...Non-Members \$75/per person  
Request tickets from [info@coterc.org](mailto:info@coterc.org)**

**Plan on attending this fun filled evening!!**



# STATION MANAGER'S REPORT

by Charlotte Foale

Happy New Year from Caño Palma!

Manuel, Aidan and I are gearing up for what we hope to be, a tremendous 2013. We are sanding, painting, cleaning, sewing, writing, editing, posting and emailing, emailing, emailing, to get the base ready and the volunteers primed for a busy year.

We have big goals for all of our projects, not least of all, the turtle project. In order to meet these goals we are soliciting not just volunteers, but an increased intern presence on base. COTERC has built some great intern relationships with York and HAS den Bosch Universities, as well as Vanier College, and we welcome the 2013 intake and are looking to forge new relationships with additional institutions.

In response to volunteer feedback, we also are doing a trial run of post-grad internships, for those who want a little



Pot Scrubbing

have given us such tremendous support over the years. We hope that the presentations will give their guests the kind of information that makes them look a little more closely at the environment they're visiting, and encourage them to make the kind of small changes in their lives, that will help to preserve it.

Interns will also be helping us to ensure that visitors to the base remember to take some time off (!), organizing small but regular social events, with a focus on fun, and interaction with the community and environment.

We've had some great applicants and while all of the Leatherback season positions are well and truly taken, at the time of writing, there are still a couple of spots left for the green season. With resume reviews and Skype interviews, it's a made our "quiet" season a little crazy, but we look forward to the pay-off of a smooth-running turtle season, with the occasional day off for all!

*"While all of the Leatherback season are taken, there are still a couple of spots left for the green season"*

more than a volunteer experience to put on their resumes. Our aim is to offer a quality work experience in this challenging environment, enabling participants to build on their personal and professional skills. With a minimum stay of 6 weeks, and some staying as long as 6 months, this gives us an opportunity to improve on many aspects of our projects, as well as enabling us to work harder at the Costa Rican end, on the educational goals of COTERC. As these interns are paying to be here, we're going to be working hard to ensure that they get as much from the experience as possible, with regular feedback and support.

In addition to working on the projects, all interns will be developing conservation oriented presentations and delivering them on base, to volunteers and visiting groups, as well as in local hotels and where language skills permit, in the local community. This enables us to give back to some of the hotels like Vista Al Mar and Turtle Beach, which



Screen Replacement—long overdue!



## TWO NEW BOARD MEMBERS

In late 2012 we welcomed two new members to the Board of Directors of COTERC. Brandon Roy has taken on the position of Director of Finance, while Susan Kunanec is Director at Large.

Brandon is a Certified Management Accountant and is currently working as an Internal Auditor at Sun Life Financial. Prior to joining Sun Life, he worked for the Department of Justice Canada in their Finance department. If Brandon hadn't studied business, he would have studied something where he could have worked with animals as he has a huge passion for dogs, wildlife and in particular, marine life. As the Director of Finance, he hopes to make a difference for the marine ecosystem.



Susan Kunanec first stayed at Caño Palma Biological Station in 2004 and was immediately hooked by the fauna and flora of the rainforest. She has been a supporter of COTERC since then and visits the station annually.

Susan holds a BSc. in Applied Chemistry and is an Associate of the Institute for Canadian Bankers. She has worked at Bank of Montreal headquarters for over 25 years in a variety of roles combining technical, financial and business knowledge. On most Saturdays she can be found volunteering at the Toronto Zoo, sharing her passion for nature and conservation with visitors.

Welcome aboard, Susan and Brandon!

## PICS FROM THE LAST EUCHRE GAME



# EDITORIAL—MONKEYS AS PETS

by Marilyn Cole

A recent incident that occurred in Toronto reminded me of the tendency of many humans to want to keep a wild animal as a pet. This particular situation made headlines in all the local papers and beyond, in December, 2012 and involved a baby macaque monkey found wandering around the parking lot of a local Ikea store, wearing a heavy winter coat and a diaper. It wandered around the parking lot before being cornered inside the store. This monkey, named Darwin, was taken to Story Book Farm Primate Sanctuary in Sunderland, Ontario, over the protests of his owner, a local real estate lawyer. She is now in court attempting to get him back, claiming that he is a “member of the family”. Story Book is countering with claims of alleged abused by the lawyer and her family in order to make Darwin “behave”.

Unfortunately, for the monkeys, there are many such animals in private ownership. One woman in Florida put out a request on the internet “We’re looking for a baby monkey to love and spoil. We are unable to have anymore children and have a void in our hearts. We need a baby to love”. The internet reveals a thriving trade in just about every species of primate, from capuchins to chimpanzees and prices range from \$1,500 to \$50,000. (National Geographic News, Oct. 28, 2010).

Prof. Frances Burton, a noted primatologist, has commented as follows:

“Let us be clear: legislation must be implemented to keep wild animals out of human homes. In the case of non-human primates, which I have studied for some 40 years, this is particularly true. Monkeys are social animals, requiring their own group in order to grow and function properly. Monkeys not raised with monkeys lack proper com-

munication skills. Since they cannot learn human communication, they are left adrift—in effect deaf and mute. Monkey discipline is subtle and appropriate to the rules by which they live. A simple glance by an adult can send an infant screaming back to its mother. I have witnessed this amongst *Macaca sylvanus*, as well as *Macaca fuscata* and *Macaca mulatta*. They are never beaten; humiliated; incarcerated, although they may be bitten or chased. Macaques signal each other when they want to approach, and they do this by gesturing with their mouths and voices; they communicate friendship, irritation, sources of food, need to be groomed or cuddled. Humans who have not studied monkeys will not recognize these signals and might respond to any signal incorrectly, confusing the monkey, and aggression is a natural outcome. Because monkeys are sentient beings—as are we—they feel a complex range of emotions, and because they are cognitive—as are we—they think about things and then act.

Grooming is as vital to macaques as is eating. A monkey invites another to groom, or a monkey approaches signaling the intent to groom, and then the contact is made. The social structure of a macaque society is revealed in observing who grooms who and for how long. My list of behaviours of this kind—as indicated by my publications—goes on. A corollary of these kinds of behaviours is the fact that monkeys need stimulation. A brain capable of what I have described and more needs that. If you think about the habitat in which Darwin’s kind live, and start to consider all the stimuli in it, you will produce a very long list. The wind, rain, the sound of these and the

stirring of insects, the flap of wings, the calls of other animals and their smells, the scents of food, of flowers, of waste and there is so much more. A human place does not begin to match these, and monkeys go mad: they start harming themselves, biting their arms, pulling out their hair, rocking, walking back and forth, crying, sitting staring at nothing. Keeping a monkey like Darwin in a human abode is not only wrong, it is obviously indefensible. What a mother does for her infant begins with the formula of her milk, let alone the comfort of her breast, and the gaze from one to another that cements bonds and actually stimulates the infant’s growth. Wrenching an infant from its mother is unconscionable, destroying that bond for what?—to then call oneself ‘mother’ as if that sufficed. A mother teaches its infant according to the regulations of their society. Pages and pages have

been written acknowledging that monkeys do this and how they do so. By the time the monkey baby is physically independent of its mother, it knows most of the rules by which it will live. Some

knowledge comes later as the juvenile finds out what s/he was allowed to do as an infant is no longer acceptable. Monkey babies grow up and that process takes them to adolescent sexuality and adult positioning for status. Both of these mean that cute baby is now a powerful and dangerous monkey. Look at their canine teeth. These daggers are monkey adaptation for eating, yes, but also for fighting. I had a student who got between a mother and her infant, and got wounded by one of these. Not good.

*“That cute baby is now a powerful and dangerous monkey. Look at their canine teeth”*

*Continued on Page 10*



# TURTLE INTERNS FOR 2013

by Charlotte Foale

Introducing the one and only, no, actually, the first of two...Head Turtle Interns for 2013...

This year we have expanded the role and brought in extra personnel, to make sure that we have the capacity to increase our coverage of North Beach, as well as meeting our education goals.

To help us in our endeavours, Raul Garcia was engaged as part of the Head Turtle Intern team. He is a biology graduate from the [University of Seville](#), Spain, and has a variety of tropical fieldwork experience. The most significant from our perspective is his training and experience with the [Sea Turtle Conservancy](#) (STC) in Tortuguero, in 2012. Arriving with an intimate knowledge of local conditions, issues and experience with our protocols, which are based on the protocols of the STC, Raul will be able to hit the ground running in March.

Raul has already been initiated into the ways of Cano Palma, coming in to help us with excavations at the end of the 2012 season. He impressed us with his work ethic, enthusiasm and sense of humour (as well as his skills with a hammer!), and we can't wait to have him back here in March.

Bienvenidos Raul!



And the other half of our Head Turtle Intern team is Nadja Christen, who has her Master of Research in Marine Biology from Plymouth University, England. She has worked in a number of diverse and difficult ecosystems and spent 6 months working with Leatherbacks in Costa Rica.

Nadja has a few languages under her belt, including English and Spanish.

In her own words..."I first visited Costa Rica as a volunteer in 2004/05 and fell in love with its beautiful rainforests and amazing wildlife. I am very excited to now have the opportunity to contribute to Caño Palma's research and conservation efforts.

Despite growing up in landlocked Switzerland I always had a fascination for marine biology. After studying biology in Switzerland I worked as a supply teacher in a secondary school. Shortly after, I went to England to do a Master in marine biology. South-West England really grew on me with its stunning coast line and people's generally outdoorsy life style, so I decided to stay and got a fixed term contract as a field/research assistant in Cornwall."

We are very pleased to welcome Nadja here in March and hope that the time she is currently dedicating to altitude training on the ski slopes of Switzerland, will prepare her for the physical demands of North



# RESEARCH COORDINATOR'S REPORT—DECEMBER by Aidan Hulett

## Meteorological Data

Average Daily Maximum Temperature  
November: 26.02°C

Average Daily Minimum Temperature  
November: 22.52°C

Total Rainfall September: 801mm

## Mammal Monitoring Program

During December the mammal survey was carried out a total of nine times. The transect at Caño Palma was surveyed four times with two morning and two afternoon surveys. The Cerro was surveyed five times, with two morning and three afternoon. The morning surveys began at 05.30 and afternoon surveys at approximately 14.30. Each survey lasted a minimum of one hour. Mammal activity was greater in December than in November and Cano Palma, although still partially flooded had long sections of dry ground.

At Caño Palma the White-lipped pecary (*Dicotyles pecari*) was once again present once the water levels had dropped and significantly Bairds tapier (*Tapirus bairdii*) was recorded for the first time on both transects for several months.

## Land Bird Monitoring Program & Migrants



There were 3 survey days at CPBS with a total number of 39 captures, 12 birds were migrants and 27 residents. Of these birds 23 were recaptures, 15 were new birds and 1 was released un-banded. There were no mortalities during December .

## Shore bird Survey

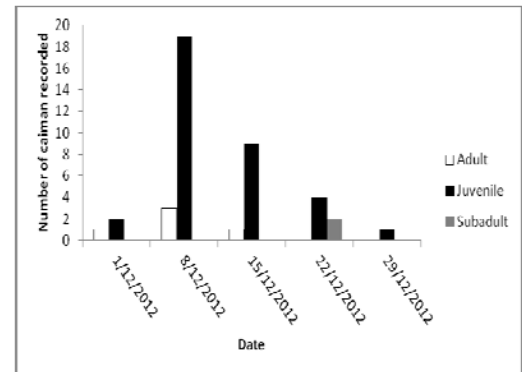
The Research Proposal was completed in December and has been sent to ornithologist CJ Ralph for review. Ralf heads the protocols for the Land Bird Study in the States and has been involved with the project for a number of years.

## Plant Phenology Project & ACER forest plot

With the Vanier College students arriving in January both of these projects will be started up in the new year once again. Mario Garcia is coming for the first week of their internship to assist them with botanical classes and plant identification.

## Caiman Census

In total there were five surveys in December. There was an average of 8 caiman observed on each census with a maximum of 22 and minimum of 1. The total number of caiman seen in December was 42, with 31 on the north transect and 11 on the south. Figure 2 shows the counts for the numbers of adult and juvenile seen on each survey during December. The survey extends north to Laguna Quatro and south out to the entrance of Caño Palma. The average survey effort was 2 hours.



## Sea Turtle Monitoring & Conservation Project

During discussions with Dr Snarr we have arranged for a former volunteer to return to the Station to work on updating the turtle data base. Jessica Kunz spent six weeks working on the project last year and knows it intimately. She has experience working with Microsoft Access in her current role and will update our tagging data from 2006 to the present. This will collate all tagged individuals into one data base that is easy to search. With six years of tagging information we should start to see when individuals are returning to nest within seasons and between seasons.

A couple of minor changes have been proposed based on our experiences this year. Due to the greater numbers of volunteers than in previous years we tagged and collected more data on nesting females. By following protocols we attempted to check and excavate nearly 1500 nest records. The problem with this protocol was that we were spending up to eight hours on morning patrols looking for nests of unknown status; for example they may have been poached, predated or simply mis-identified by night or morning patrols. As this data cannot be used for calcu-

lating poaching rates we are going to focus our attention in 2013 on triangulating as many nests as possible and only excavate these as we know the specific location of them and original status. This is where the Head Intern Raul Garcia will prove useful as he already has a lot of experience in triangulating and locating nests from his time at the STC.

### Internships

**Applied Biology Internships, University of Applied Sciences Has den bosch, Netherlands**

*Jasper Buijs*

*Foraging preferences of two different leaf cutter ant species*

*Mark Groen*

*A study of the herpetofauna in two vegetation types at Cano Palma Biological Station*

*Ilse Leemans*

*A study of the influence of beach profile on Green turtle hatching success*

All three HAS students finished their internships in December and their reports have been assessed and graded

The incoming students; Kas Koenrads, Esmee Ross and Anouk van den Bosch will be expected to deliver presentations on a regular basis about their research and interests to people on base and out at some of the lodges. This will help their professional development and be educational and informative for others.

**Vanier College, Montreal, Quebec**

**Environmental & Wildlife Management Internships**

Five Vanier interns plus their leader Brandee Diner will be joining us as interns early in 2013

The Research Passports have been obtained already for this group and we expect them to arrive on the 20/01/13. They will participate in all of our surveys and gain a breadth of field work experience.

### Research Development

**Dr Nathan Lovejoy, Tropical Ecology Field Course 2013**

**University of Toronto**

There are a total of 11 people coming with the group in February, which include Dr Lovejoy, his TA, Matt Kolmann, 9 undergrad students and an additional videographer. They will have a chance to participate in some of our studies as well as the field work being organised for them

**Nicolas Vanlangendonck**

**University of Kent, England**

This student has now submitted a research plan to COTERC and has his own funding in place. As an MSc project it is ambitious but an interesting project and should lead to further exposure of the Station.

### Research Coordinator

**BioAssess Canopy lichen project**

I am persevering with my research and have submitted the research proposal to MINAET. Samples will be left with Inbio and Natural History Museum in London.

**We're on the web!**

**[www.coterc.org](http://www.coterc.org)**





*Honduran White Bats on Heliconia Leaf*



*Rufous Breasted Hermit*

## Distribution

Heliconias are found throughout the Neotropics.

## Habitat

They flourish in humid lowland tropics and are quite common in rainforests. It has been widely cultivated as a garden plant.

## Description

There are likely 200 to 250 named varieties. This is a family of medium to large herbaceous perennials. The leaves of this plant are paddle-shaped, and they are related to the banana family.

## Adaptations

Depending on variety, heliconias need shade, partial shade or full sun. Bracts produce not only vivid colours but also complex tropical shapes. Heliconias in Costa Rica are almost always pollinated by hummingbirds. This is known as a symbiotic relationship.

## Animal Connections

These plants provide habitats for several species of bats, including tent-making bats. Here we show Honduran white bats. They construct shelters for themselves by chewing along both sides of the midrib of heliconia leaves so that the sides fold down, making temporary tents.

Some species of hummingbirds have developed long curved bills. Even the tongue is long, enabling them to reach down into the flower tube for the rich nectar the plant provides. Often the flower tube on the plant matches the exact size of the bill on the pollinating bird. Certain heliconias with deep flower tubes rely on specific hummingbirds with extra long bills to pollinate them.

Water collects in the bracts of the straight stems and provides habitats for many small aquatic species, including tiny frogs.

These are native mostly to Central and South America. A few species are found in the South Pacific Islands.

This is a very diverse group of plants often found in the under story of tropical forests. The greatest number of species are found in middle elevation rain and cloud forest habitats. The most remarkable members of the genus inhabit open sites in secondary growth along roads, riverbanks and in patches of light in the forest.

Heliconias are sometimes called "lobster claws" or "parrot flowers", because of their beak-like "bracts" which can be orange, purple, red, yellow, pink, green or a combination of these. A bract is a leaf structure at the base of a flower. The heliconia's true flowers are tiny and found inside these bracts, which are so large they almost hide the flowers. These colourful clusters of bracts are referred to as inflorescences and are quite long lasting. Some species have upright facing flowers (bracts) and in some the flowers dangle down from the main stem. Leaves are from 15 to 300 cm long, oblong, growing opposite one another. They vary greatly in size. Some stay low at 60 cm; others are quite tall reaching heights of over 3 m.

Heliconias produce fruits that are eaten by birds. A researcher in a Costa Rican rainforest observed 28 species of birds eating the fruit of one heliconia species. The pulp of the fruit is digested, but the whole seed is regurgitated, thus allowing for seed dispersal. The fruits develop within the bracts. Most heliconias have developed long, tubular, curved flowers that only a hummingbird can negotiate. These contain rich nectar that the bird feeds on. The bird's actions assist in pollination. These plants are self-compatible.



**Canadian Organization for Tropical Education and Rainforest Conservation**

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*This is a request for:* NEW Member: \_\_\_\_\_ Membership Renewal: \_\_\_\_\_ *Date:* \_\_\_\_\_

*Membership Type:* Individual\$25: \_\_\_\_\_ Student/Senior:\$20 \_\_\_\_\_ Family: \$40 \_\_\_\_\_ Corporate \$100 \_\_\_\_\_

Surname: \_\_\_\_\_ Given Name: \_\_\_\_\_ Initial: \_\_\_\_\_

As a member of COTERC a copy of our quarterly newsletter “*Raphia*” will be sent to your primary E-Mail address unless you check one of the following options.

- Do not E-Mail the newsletter to me. Please send a hard copy to my Mailing Address
- I do not wish to receive the “*Raphia*” newsletter

NOTE: Sending the newsletter by E-Mail is both environmentally friendly and cost effective, ensuring that more of your membership payment goes towards assisting with COTERC goals.

- COTERC may contact me for additional donation requests as required
- COTERC may contact me with opportunities to volunteer my time to assist with COTERC events

**MAILING ADDRESS:** *(For membership Renewals, only changes need to be entered in this section)*

Street: \_\_\_\_\_ Apt: \_\_\_\_\_

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**Method of Membership Payment:**

Cheque, payable to CO- TERC		Credit Card	No.  Expiry Date	Cash		
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Persons visiting a COTERC station who have not previously arranged membership can pay in cash directly to the Station Manager.

***Please mail form to Box 335, Pickering, Ontario L1V 2R6, Canada***

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## MONKEYS AS PETS (Continued)

Monkeys live in three dimensions. Do you really want a monkey swinging from your precious chandelier? Will you then, confine the animal with neck shackle, depriving the animal from the space it requires for exercise and stimulation? There are no trees in the usual home; no twigs, branches, rocks, or streams. Couches or worse, cages, are no substitute for running up and down hills, through thickets and across trees. Monkeys are omnivores, that is, they eat 'meat' in the form of insects, lizards and birds as well as their eggs, and in some areas, fish. They eat a variety of leaves, buds, blossoms,

grasses, fruit, fungi, seeds and will dig for roots. The variety of the diet provides all the nutrients they require. Humans cannot offer the same. The implications for health—mental and physical—are clear. Foraging to obtain these foods is part of the mental stimulation mentioned above. The acts of finding appropriate food, hunting for the right grove, choosing the ripe fruit, stalking the lizard and so forth cannot be duplicated in a home and that fact constitutes intolerable deprivation. Deprivation causes ill health, and monkeys are particularly vulnerable to human diseases", and vice versa, in some cases."

Legislation regarding the keeping of primates as pets varies from city to city, province to province, state to state, country to country, thus making it difficult to police to prosecute those who persist in breeding monkeys. Tearing the babies away from their mothers so they can sell them as "pets" for ridiculous prices is simply unacceptable. So many of these poor creatures end up in miserable conditions as they mature and become dangerous.