

Volume 21, Issue 1/2

Spring/Summer Edition

CANADIAN ORGANIZATION FOR TROPICAL
EDUCATION AND RAINFOREST CONSERVATIONCANADIAN ORGANIZATION FOR TROPICAL EDUCATION &
RAINFOREST CONSERVATION

RAPHIA

NEWS FROM THE CHAIR

Greetings to you all. My name is Shawn Blackburn and I would like to introduce myself to you. I became involved with COTERC about a year ago when I joined the Board of Directors as the Marketing Director. During the day, I am the Programs Coordinator for the Education Branch at the Toronto Zoo where I develop fun and educational events and activities for the Zoo visitors to participate in. Becoming the Marketing Director was a natural extension for me into COTERC. Since that time, a whirlwind of changes occurred in the Board and one of the end results was me becoming Chair. I am very excited and grateful to be given this opportunity to help guide COTERC over the next few years. Indeed, we have some great ideas we hope to offer very soon.

The Board has set some goals for COTERC that we hope to achieve in the near future. Our most important goal is to increase our accountabil-

ity to you, the Members. We are going to do this by bringing back Raphia, hosting more events throughout the year, increasing communication between Members and the Board and finally creating Member's exclusive meetings. These meetings will be hosted by the Board for the Members and the special guest at each of them will be our Station Manager, Charlotte. These will be chances for the Membership to learn about the station activities right from the source and get a chance to see exclusive and current photos of the great work happening at the Station.



In addition to all of these amazing plans, we are also going to be offering a chance for all of you to help us out. We are a dedicated but small Board and we could use all of the Volunteers we can find to help with the upcoming events. This is your chance to get more involved with COTERC

and help us reach our goals. Please watch for your invitation to volunteer and thank you in advance for helping out.

I look forward to meeting you all at our events and appreciate you all for being Members of this wonderful organization.

Thank You to Toronto Zoo

Management of Toronto Zoo have always been very supportive of COTERC in providing facilities and silent auction items for our events. We are extremely grateful for their ongoing assistance.

Another stalwart contributor has been Pennie Mason who has raised significant amounts of money as well as donating wonderful silent auction items. Thank you so much, Pennie

Book Review –WHAT A PLANT KNOWS

Daniel Chamovitz, director of the Manna Center for Plant Biosciences at Tel Aviv University reveals, in layman's terms, some of the fascinating discoveries about plants and their adaptations to survive. For instance, when lima beans are being attacked by an insect or bacteria, "it releases odours that warn its brother leaves to protect themselves against imminent attack". How does a Venus Fly Trap know when to close its jaws? Chamovitz claims that a plant can tell if you're standing over them and whether or not you are wearing a blue or a red shirt. These and many other facts, gained from his and others' research are presented in a compendium that is fun to read.

ANNUAL GENERAL MEETING NEWS

COTERC's AGM was held on May 12, 2012 in the Board Room of the Toronto Zoo. A small but keen number of people attended, and a summary of the meeting is mentioned below. Kim Blackburn joined the meeting via Skype.

Interim Chair Shawn Blackburn opened the meeting and asked for a motion to approve the minutes of the previous AGM held on May 14, 2011. Dr. Bill Rapley so moved, seconded by Dr. Gail Fraser.

The Board members each presented their annual report, including Dr. Bill Rapley (vice chair); Shawn Blackburn (Director of Marketing), Joanna Romani, (Director of Education), Betsy Melendez (Director of Finance), Dr. Kym Snarr (Director of Research & Conservation), Dr. Gail Fraser, (Director at Large) and new station managers Charlotte Foale and Manuae Arvaist. For complete details, please contact the COTERC office at info@cotercc.org.

Shawn Blackburn read out a letter from previous chair Josh Feltham indicating that he would not be seeking re-election, as he has entered graduate school and will not have the time to devote to COTERC.

Dr. William Rapley, vice-chair;
Dr. Gail Fraser, Director at Large

Dr. April Stevens, Director at Large
Joanna Romani, Director of Education—have all indicated that they would not be seeking re-election due to other commitments. We thank all of them for their dedication and hard work on behalf of COTERC.

Nominations and election of the 2012 Board of Directors followed, and the following people were elected:

Chair—Shawn Blackburn

Vice-Chair—Marilyn Cole

Director of Marketing—Vacant

Director of Membership & Archives—Jim Taylor

Director of Special Events—Vacant

Director of Site Services—Tom Mason

Director of Education—Vacant

Director of Finance—Betsy Melendez

Director at Large—Susan Kunanec

Director at Large—Vacant

Executive Director—Kim Blackburn

Webmaster—Matt Verhout

Possible candidates for some of these positions were discussed and will be pursued.

There was a discussion about whether or not to continue the publishing of the newsletter "Raphia" and the general consensus was that this was an important method to communicate the various projects and events of COTERC and Cano Palma to the members. In addition, the Station Manager will arrange to have comments put onto COTERC's Facebook pages to keep people updated on current happenings. Marilyn Cole agreed to continue as editor of Raphia.

The COTERC telephone is currently only a message service. This has proved to be ineffectual when the calls are not returned. Kim Blackburn will investigate

Proposed changes to the by-laws had been sent to all members for comments. Marilyn Cole moved, and Jim Taylor seconded that the revisions to the by-laws be accepted as reported. Carried

Tom Mason moved and Susan Kunanec seconded that the contents of the storage locker be moved to Shawn Blackburn's garage and to cancel the monthly charge for the locker. Carried.

Meeting adjourned at 7:33 p.m.

CANO PALMA STATION MANAGERS

Dr. Todd Lewis, carried out the duties of Station Manager for two years—a difficult job indeed. He has moved on to other opportunities. Thank you, Todd for all your hard work and dedication, and we wish you success in your future endeavours.

The Board of Directors discussed Todd's replacement and offered the position to the team of Charlotte

Foale and her husband Manual Arvaist. Charlotte originally worked as a research assistant at Cano Palma a few years ago, met and married Manuel, who is a skilled carpenter, and they live in San Francisco with their young son, Emmanuel. Charlotte is an ideal person, as not only does she understand the Costa Rican culture and bureaucracy

Charlotte is camera-shy so you'll just have to visit Cano Palma to see what she looks like!

but also is skilled in administrative work. We feel very fortunate to have this team, and they have already made great strides in improving the station facilities. For instance, the composting toilet is now in working condition, roofs have been replaced where needed, and other repairs have been carried out.

RESEARCH COORDINATOR APPOINTED

With the ever-increasing number of research projects carried out at and near Cano Palma Biological Station, the Board of Directors determined that the appointment of a Research Coordinator (similar to the old Scientific Officer position) was needed. A search was carried out and many applications were reviewed before Aidan Hulett was offered the position. His background and story follow.

“When I arrived at Cano Palma Biological Station, passing through the canals with the rainforest encroaching on either side, I was filled with excitement about my new home and role as Research Coordinator. My background is as an ecologist and as such I am interested in understanding ecological and evolutionary processes and the interactions between different species. The incredible biodiversity across different taxonomic groups in and around the station provides the ideal setting for me to pursue these interests to their fullest extent.

I have an undergraduate degree in Ecology from Plymouth University in the UK. During this degree I gained practical experience in the field carrying out survey work in a wide variety of habitats including woodland, moorland, estuaries and salt marsh. For my honours project I designed an experiment to investigate the effect of different nectar removal regimes on the hummingbird pollinated plant *Syphocampylus giganteus*. Field work was carried out in the high Andes of Ecuador in the Paramó ecosystem, a habitat restricted to high altitude regions of the tropics and characterised by extreme environmental variation.

In 2011, I returned to Plymouth University to complete a Masters degree in Biological Diversity. Through the taught aspects of this course I gained a better understanding of tropical ecosystems and their biodiversity, like the Atlantic

lowland rainforest and swamp forest, which are the dominant habitat in the Tortuguero area.

My Masters degree also enabled me to pursue my fascination with canopy science and epiphytes. Due to the technical difficulties in accessing the canopies of large trees this habitat, and the species which are found there, remains under recorded. Globally, there are at least 24,000 species of plants which are known to be epiphytic which represents approximately 10% of the worlds plant species. In temperate woodlands epiphyte communities are dominated by lichens and bryophytes.

For my thesis, I studied the vertical distribution of canopy epiphytes in an upland oak wood. I devised a protocol for sampling epiphytic lichens and bryophytes throughout the forest canopy using modern arborist rope access techniques. My study showed the importance for sampling the entire canopy in recording species known to be indicators of ecological continuity and therefore habitat health.

As lichens have long been used to monitor atmospheric air quality one of my aims whilst working at Cano Palma is to carry out a similar study using the BioAssess methodology. This research



should initiate the first species list of corticolous lichens at the Station as well as give an indication of the human impacts on the environment in the local area.

Alongside this work I have already been involved with a Phd student from the University of Minnesota studying the effects of urbanisation on fresh water invertebrate diversity. The station also has a number of undergraduate students from HAS University in Holland arriving in the coming weeks to carry out their own research projects and also contribute to the turtle monitoring. All in all these are very interesting and exciting times for me and I hope to be an asset to Cano Palma Biological

SEA TURTLE VOLUNTEERS WANTED

MAKE A DIFFERENCE IN SEA TURTLE CONSERVATION

Marine turtle volunteers are needed to assist the turtle monitoring project at Cano Palma Biological Station in Costa Rica. Volunteers will assist in marine turtle monitoring which includes gathering data on nesting turtles, determining hatching success, and maintaining a presence on the beach to reduce poaching rates.

REQUIREMENTS:

- *Ability to walk up to 15 miles per day
- *Ability to live in communal setting with shared responsibilities
- *Positive attitude toward hard work and conservation
- *Minimum commitment of 10 days
- *Reasonably priced package includes training, housing, three meals a day, use of kayaks and jungle trails.

EMAIL STATION@COTERC.ORG TO APPLY!!!



WWW.COTERC.ORG



YORK UNIVERSITY INTERNS

This year, York University's International Internship Program has expanded their number of interns who work in the research programs at Cano Palma Biological Station. We now have four interns and, as in the previous years, YIIP's work in one main project but aid the other interns in other projects as well, to allow for a solid holistic learning approach. This year we have Shenique Turner, Kirstin Silvera, and Sarah Bradley, working mainly on the Turtle Monitoring Project and assisting with the Mammal Monitoring Program while Mariya Cheryomina is working on the Mammal Monitoring Program.

These four interns were jumping with excitement as the four YIIPs meet with four COTERC Board members at the Toronto Zoo in preparation for their three-month internship time.

ation for their three-month internship time.



Shenique Turner, Kirstin Silvera, Sarah Bradley, Mariya Cheryomina



Focus: YIIP Sarah Bradley

There's so much I want to say about my time here and it makes it hard to encapsulate the experience in a few paragraphs. I came to Cano Palma expecting to see the theories I have learned in university in practice, but I have learned much more here than I could have ever learned from a textbook. One of the most important things I have learned is how tricky the balance is between conservation and the social needs of San Francisco, espe-

cially in relation to the turtle project on Playa Norte. I've seen just how important this balance is, and how it must be constantly adjusted in order to suit the needs of a specific community. No amount of studying at York could replace this kind of first hand experience, nor could it better emphasize how complex and important

effective conservation is. Another part of my experience here at Cano Palma has been a reinforcement of my respect and curiosity for the natural world. Just when I think I've seen it all, something new and unexpected will show up - like bioluminescent sea turtles or a venomous snake on the path. Every day that I wake up I am more and more amazed and appreciative of this amazing place and this opportunity that I have been granted. Cano Palma has taught me so much in just three months.

Station Manager's Comments—Charlotte Foale

1 Loggerhead nest
15 green nests
62 leatherback nests
11 hawksbill nests

As I sit here to write, it's hard to believe how quickly the last 3 months have gone.

An eclectic mix does not even start to describe the visitors we've had here - forensic pathologists, university workers, MTV reality stars, zoo workers, ornithologists, herpetologist, anthropologists, physicists and students from every major country under the sun. Jamaicans, Germans, Indians, Brits, Israelis, Ukrainians, Americans and of course, Canadians! For many, this was a once in a life time opportunity to visit and work in the tropics; for some, this was a life changing experience. Every last one of them worked their butts off and for that I'd like to say thank you! To quote one of the best: "Put me on the beach, I'm not here to sleep, I'll sleep when I get home." A special thanks also to the couple who taught me the cheapest and most effective way to get rid of corpses.

With a fantastic team of interns from York University trained as patrol leaders, Khriissy Bonham, our turtle coordinator, has been working with our volunteers to make sure the beach is well patrolled on a nightly basis, poachers are already active and we're working on strategies to make their lives a little harder to ensure that our turtles make it back to sea.

Khriissy's been instrumental in recruiting additional volunteers through internet postings and her contacts in the sea-turtle world. These will supplement our university and college groups and help increase the number of patrols on the beach at any given time. Aware of the limited response that MINAET can realistically provide when poaching occurs, we have to get

our patrols to as many turtles as we can and stay with them until they get back to sea. Our working motto for the season is "No turtle left behind." Several locals have already expressed a desire to volunteer with us at night, to help us provide MINAET with more accurate information about who's poaching and we have a number of people calling in regularly with information about who's selling meat and eggs, all of which we pass on to the authorities, while maintaining the individual's anonymity.

Our most recent group, from Laurentian University, brought an amazing amount of donations for the station - mostly for the kitchen,



Dona Petrona

which made Doña Petrona, our cook, very happy. In addition to working on primate and turtle surveys, the Laurentian students also brought down some replacement computers donated by the Liquor Control Board of Ontario, and spent their "spare" time getting these primed for use. These will replace some of the ailing computers we have on base and we will donate the older models to the San Francisco School to supplement donations already made. A town of diverse talents, San Francisco has a computer programmer who has volunteered to make sure that the computers we're retiring are fixed and in good working order for the students.

In addition to the turtles we are currently doing mammal and caiman surveys, and mist netting is running regularly. The arrival of our new Research Coordinator – Aidan Hurlatt – brings a new dimension, with his interest in studying the local lichen. He also gives us the capacity to regularly include the plant phenology project in the schedule, and we'll be teaming up with former station manager Mario Garcia to make sure all staff and volunteers are properly trained to collect this data.

"With a fantastic team of interns from York University trained as patrol leaders, Khriissy Bonham, our turtle coordinator, has been working with our volunteers to make sure the beach is well patrolled on a nightly basis"

With the number of people we have coming through this year, we are also relieved to share that we have added 3 new toilets to the infrastructure. Two new flush toilets have been placed in the existing bathrooms by the dorms and the composting toilet from the old manager's cabin has been relocated next to the staff building by the dock. We are hoping to revive at least one of the other two compost toilets by combining parts.

As long as the hours have been, Manuel, Emanuel and I are enjoying the challenges and opportunities. Thank you again to all who've been through, the Shawnee State, Laurentian University and Fleming college groups, and all of the individuals who have dedicated their vacations to do their part for conservation. It's a privilege to be able to share Caño Palma with you and we're looking forward to seeing you again soon.

Netherlands Students Coming to Cano Palma

COTERC has developed a partnership affiliation with the Netherlands' HAS den Bosch University of Applied Sciences. The university is especially known for providing its students personal attention and support as well as professional supervision. Students in Applied Biology carry out a 20-week internship where they design, carry out and report on a project from the field. In this newly established partnership, we will have three HAS students coming from July/August through until December, 2012 and another three potentially coming in 2013. Each has been requested to express their interests as they align with our research programs, and



specific projects have been selected for them. They will participate in the main ongoing research project as it relates to their work, and are willing to participate in any research program where needed.

Jasper Buis is the first intern, who arrived in late July 2012. His project will examine populations and habitat usage of *Atta cephalotes* and *Acromymex octuspinosa* (both leafcutter ants).

Mark Groen will be arriving in August. His project will examine non-



Jasper Buis

venomous snake or lizard populations. Ilse Leemans will be arriving in August. Her project will be examining the beach profile in the first mile of Playa Norte & hatchling success to aid future research regarding turtle nursery & slope preferences.

For more information on our partnership affiliations, please visit http://www.coterc.org/?page_id=227

Petra Kranzfelder—PhD Student

"After graduation from my undergraduate institute, I accepted a research assistantship position with the Sea Turtle Conservancy in Tortuguero, Costa Rica. For this position, I cooperated with a bilingual, international research team tagging, collecting biometric data, and recording nesting activity of endangered nesting green and leatherback sea turtles. It was during this position that I was exposed to the aquatic systems of the northern Caribbean coast of Costa Rica and fell in love with the diverse flora and fauna of Tortuguero Conservation Area.

For my Master's degree at the University of Minnesota, I designed a thesis project involving biodiversity and ecology of an aquatic fly, the midge, in brackish waters of Tortuguero National Park, Costa Rica. The objectives of this research were to determine the economy of a midge sampling method for studies in Neotropical brackish waters and the temporal

and spatial variability of midge emergence and taxonomic composition. Generally, the data will expand the knowledge base of Neotropical ecology and zoology. In addition, I created a bilingual guide to midges of Tortuguero National Park that will be web-based and will permit identification of the midge to species and can be used by a variety of audiences.

Currently, I am a Ph.D. student and my dissertation will focus on the consequences of urbanization on aquatic biodiversity of Neotropical estuaries on the Caribbean coast of Costa Rica. One family of aquatic insects abundant in estuarine systems is the Chironomidae (Insecta: Diptera), a family of flies commonly known as the non-biting midges.

For the next two years, data will be collected from a total of eight

estuaries from the Caribbean coast of Costa Rica. Estuaries will be chosen near cities that represent low to high levels of urbanization."

"Preserving a state of harmony between man and nature has always taken precedence in my life"

We are pleased that Petra has chosen Cano Palma Biological Station as one of her research locations.



Papaya



Carica papaya is native to the southern parts of the Americas. It is thought to have originated in Mexico and Central America. The first written reference to papayas dates back to the early 16th century. Subsequent historical records indicate the Spaniards carried seeds to the Philippines around 1550 and the papaya traveled from there to Malacca and India. Seeds were sent from India to Naples in 1626.

It has been naturalized to the West Indies, Bermuda, the Pacific Islands, Hawaii and India and now grows in all tropical/semi-tropical regions around the world. It grows (wild) in and around the Cano Palma area and is farmed in some areas of Costa Rica.

Banana and papaya plants are often mistakenly referred to as trees. They are both large herbaceous plants. Papayas are fast growing, short-lived, growing at a rate of 1.8 to 3 metres in the first year. At maturity, they can reach as high as six to nine metres. The average farmed life span is four years.

The leaves of the papaya emerge directly from, and are confined to, the upper part of the stem. Both the stem and the leaves contain a milky latex. Some plants bear only short-stalked female flowers, waxy and ivory white. Some are hermaphrodites, having both male and female parts, with ivory-white flowers and bright yellow anthers borne on short stalks. As well some plants bear only male flowers. There may even be monoecious plants having both male and female flowers. Sexuality is quite diverse amongst papayas.

Generally, the fruit is oval to round, melon-like or elongated club-shaped, 15-20 cm long and 10-20 cm thick. Fruits from bisexual plants are usually cylindrical in shape with a thick wall of firm flesh.

Papayas can weigh up to nine kg. The skin is waxy and thin but tough. When the fruit is green and hard, it is rich in white latex. As it ripens, it becomes softer, light or deep yellow and the flesh is succulent and aromatic, yellow to orange in colour or shades of salmon red. The fruit is juicy and sweetish. Attached to the wall by soft, fibrous tissue are numerous small, ovoid, black peppery tasting seeds about five mm long. Each seed is coated with a transparent, gelatinous aril.

The fruits are eaten by a variety of frugivores, including birds, bats, and rodents. They assist in the dispersal of seeds away from the parent plant. When farmed, propagation can be from seed or cuttings. Germination takes three to five weeks or earlier if the aril is first removed before planting. Fruits can be harvested when the plant has been growing for about 11 months. Some farmers wait until the colour darkens before harvesting, these being for their own or local consumption. Papayas are at their sweetest when the skin of the fruit is 80% coloured. Paler fruits are picked for export.

Papayas are a rich source of carotinoids, vitamin C, B and dietary minerals and fibre. The seeds are edible and have a spicy flavour. The stem and bark are used to make rope. Both the green fruit and the latex from the stem and leaves, rich in papain, are used as a meat tenderizer. Around the world papaya is used to treat a variety of human ailments, for example, in some parts of the world, the papaya leaves are boiled and used as a treatment for malaria.

Today, there are multiple cultivars of the plant. Some of the well-known varieties today are Kapoho Solo, Waimanalo, Higgins, Wilder, Hortus Gold, Honey Gold, Bettina and Peterson. Mountain papaya is native to Andean regions at altitudes of 1,800 – 3,000 m. It is cultivated as well in the mountain valleys of Ecuador. Successful commercial production now occurs in tropical areas around the world.

By Annette Sims

CAMP COTERC



COTERC is taking over the Serengeti Bush Camp for one special night. Members are invited to this exclusive overnight adventure at the Toronto Zoo. The event includes tent accommodations, dinner and breakfast, guided tours and a chance to go behind the scenes!

Date: Saturday September 8th, 2012

Time: 4:15pm to 10:00am

Cost: \$100 per adult, \$90 per child

For more information about the Bush Camp, visit torontozoo.com
To receive a registration form, email us at: info@coterc.org

PHOTOS SUBMITTED FROM CANO PALMA BIOLOGICAL STATION



Herpetology lesson



Semi-plumbeous hawk caught while mist-netting



Mariya & Emmanuel



Kyla Gilbert, Vanier College Student

Vanier College is located in Montreal, Quebec, Canada

Kyla came as an intern in January and February, 2012 as a student in Environmental & Wildlife Management program. Her main project was to establish a forest plot on the Cano Palma property and prepared a paper entitled "An Evaluation of a One Hectare Plot Using the ACER program in Manicaria Swamp Forest at Cano Palma Biological Station. Her work allowed CPBS to move forward with adding data to the Smithsonian Forests & Climate Change project.



Looking for Monkeys



Mariya Cheryomina, Large Mammal Monitoring Technician Intern, York University

York University is located in Toronto, Ontario, Canada. Maria is completing her Honours B.Sc. In Biology. She states "Performing conservation-related field work in a Neotropical ecosystem environment has always been my dream due to the high species richness and unique climate found in this ecosystem. This will be a priceless chance to apply numerous skills gained during my undergraduate studies and to obtain a cross-cultural perspective on approaches used for ecosystem management. Knowing that work in a tropical environment will differ from my past experience, I look forward to overcoming new challenges and gaining a variety of new skills during the three months that I will spend at Cano Palma."



I'm a turtle!

Dispatches from the Rainforest: On Volunteering at Cano Palma

By Daphne Paszterko

On sleep and dreams:

We dream vividly. As if there's too much life for the forest to hold in waking hours, it seeps into our sleep. I dream in green, monochrome, broken only by butterfly, blue morpho and fluttering. Walking off trail, I have lost my guide, but I am not afraid. The forest floor soft and damp beneath my rubber boots, I move through manicaria, step and sink down deep into jungle mud. Like the day I arrived, it just takes a moment to become a captive of this place. We are strange prisoners here, resisting our release.

I will be woken by Howler Monkeys, a Vesper Rat under my pillow, rain on the roof of the dorm. I am kept awake (although never for long) by helicopter cane toads, the human groan of a Potoo, rain on the roof of the dorm. My mantra before sleep, I repeat the names of friends I have recently met: Scaly-throated Leafhopper, Smoky Jungle Frog, Chestnut-backed Antbird, Halloween Snake. Violet-crowned Woodnymph in the palm of my hand. Olingo in the almendro tree. Eyelash Viper in a Ziploc bag. Maggie sleeping under the bench. Maggie swimming across the canal. Creatures of dreams inhabiting my days. I don't want to wake up from here, ever.

Tips for walking in the jungle:

1. Choose branches wisely, avoiding those with 2 inch spikes.
2. Beware ants.
3. If you wear glasses (even just for driving at night, or watching a film) do wear them on night safari.
4. If you wish to keep boots on feet and not in swamp, ensure that boots are not one size too big.
5. Kill horseflies dead.
6. On the matter of headlamps: no scrimping! Buy the best and brightest.
7. Beware mosquitoes.
8. Beware those who don't get bitten by mosquitoes. They are not to be trusted.
9. Beware ants.

On (Re)search: We all come here searching. For data, evidence to support theory, how to build community, that elusive animal, ourselves. The lucky ones discover more than what they are looking for. They find answers to questions they didn't know they were asking, friends they didn't know they needed. I have been so very lucky my Cano Palma friends, so lucky.



Kirstin Silvera, York University Intern

Kirstin is completing her Masters in Environmental Studies focusing on biological conservation law & policy. She is hoping to learn how conservation work for marine turtles in Costa Rica influences policies and laws to further protect the species.



Shenique Turner, York U Intern

"I have had the opportunity to meet and engage with community members as well as assist in the turtle monitoring and conservation project. Activities such as a fundraiser at the local community school in San Francisco has increased my admiration of community members and the values they uphold.

Through working along with the team at the station, I have in less than a month acquired a wealth of knowledge regarding not only sea turtles but also numerous other species that I encounter on base and in the surrounding community. "

COTERC HELPS SAN FRANCISCO SCHOOL



Dr. Snarr & Brian Campos, new school headmaster

Thanks to the generosity of the Liquor Control Board of Ontario, Dr. Kymberley Snarr, Director of Conservation & Research, is seen here presenting one of several laptop computers to the headmaster of the San Francisco school, located very near Cano Palma Biological Station. It is part of COTERC's involvement in this vital community, and in return the residents of San Francisco showed their appreciation by constructing a special building to house these computers (seen in the background).

Dr. Snarr's students from Laurentian University, Barrie, Ontario, Canada were able to repair and clean up the laptops, and accompanied Dr. Snarr to the official presentation. We would like to acknowledge the cooperation of Jim Taylor, Director of Membership and Archives for his part in obtaining some of the laptops.

MORE DONATIONS FOR ESCUELA SAN FRANCISCO

Station Manager Charlotte Foale reports... "As with many rural Costa Rican Schools, Escuela San Francisco works on a very tight budget to educate the almost 80 children who now attend. As part of our ongoing efforts to support the community in selected development projects, we were proud to deliver this week some of the items on the school's wish-list. Maps, science books, Spanish language story-books, workbooks, protractors and arts and crafts materials had the children buzzing.

We strive to update constantly the school list to ensure that donations are always what is needed and most appreciated. A huge thanks to the volunteers and families who contributed to this. A special thanks for the generosity of Bev Wiseman, Eric Zinger, Paddy McSweeney, Lisa Jones, Dorothy Snarr, the Arsenault and Jansen families, and the students from the April Fleming College field trip."

Saoirse Pottie, Anglia University, England, is an undergraduate student studying biology, who will be arriving on Sept. 5th to gather data on the distance of green turtle nests from the high tide mark. She hopes to collect data from 30 nests during her stay.



Shawnee University Students at Cano Palma

Under the guidance of teacher Dave Todt, students in BIOL 4999 of Shawnee State University located in southern Ohio, stayed at Cano Palma for two weeks and participated in many of the Cano Palma survey projects, including turtle survey, caiman survey, bird mist netting & migration survey and mammal survey. For most, this was their first venture into the tropical rainforest. Participants included Rita Haider; Aaron S Krentz; Adam M Phillips; Angela M Staten; Anissa D Blankenship; Carrie M Breech; Emily Nickell; Ethan Allen; Fahim Hamid; Franklin J Wallbrown; Jeff Bauer; Jeffrey Martin; Jessica Ruth; Jonathan D Phillips; Nicholas K Phillips; Nicholas P Ball; Sadeddin Yamlikha.

Part of their final mark was a journal of their experience. Nick Phillips commented " *There are a few things I wish I had known before I went on the trip. I don't think the group was prepared for the physical nature of the trip.*" "*I was totally out of my comfort zone which made the experience memorable and worthwhile.*"

**CANADIAN ORGANIZATION FOR TROPICAL
EDUCATION & RAINFOREST CONSERVATION**

Box 335
Pickering, Ontario L1V 2R6
Canada

Phone: 905-831-8809
info@coterc.org
www.coterc.org

Facebook—Cano Palma Biological Station



CANADIAN ORGANIZATION FOR TROPICAL
EDUCATION AND RAINFOREST CONSERVATION

BOARD OF DIRECTORS

Chair	Shawn Blackburn
Vice-Chair	Marilyn Cole
Finance	Betsy Melendez
Executive Director	Kim Blackburn
Marketing	Vacant
Membership & Archives	Jim Taylor
Education	Vacant
Site Services	Tom Mason
Conservation & Research	Dr. Kymberley Snarr
Special Events	Vacant
Director at Large	Susan Kunanec
Director at Large	Aidan Hulatt

OTHER VOLUNTEERS

Webmaster *Matt Verhout*

Raphia Editor & COTERC Co-founder *Marilyn Cole*

Fiesta Verde Committee: *Elaine Christens, Colette Howell, Annette Simms, Jason Clark, Daphne Paszterko*

SITE SERVICES COMMITTEE

Tom Mason

Bryan Bridgeman

Malcolm Enright

Dr. Kymberley Snarr

Jim Taylor

ADVISORY COMMITTEE

Dr. Robert Murphy

Dr. Fiona Reid

Dr. Peter Silverman, Order of Ontario

Dr. Wm. Rapley

Previous York Interns

YEAR	NAME
2004	Laborde, Adriana
2005	Abdelmalik, Sami
2006	Van Oudenhoven, Frederik
2007	thompson, Anne
2007	MacDonald, Christina
2008	Garcia, David Leonardo
2008	Jafferally, Deirdre
2010	Acosta, Carla
2010	Ashtine, Masao
2010	Zuloaga-Villamizar, Juan Gerardo
2011	Fields, Alex
2011	Matowanyika, Danai
2011	Zanartu, Melissa

BEAUTIFUL CANO PALMA

*Peacefulness, lights out
creepy crawlers move about,
Little bats under our dock,
and juancho the cayman spooking our dog.
Our pooch's name's Maggie,
she comes and she goes,
calls out for intruders,
sometimes even toads.
Spider monkeys and howlers,
colourful toucans, loud growlers,
are all our neighbours here at the station,
...so what is so beautiful 'bout all this invasion?
It is "we" who invade, their serenity, their shade,
and it is them who take us in, who make it all better,
this World we live in. Cano Palma's true beauty,
turtles-a-hatchin', and army ants marchin',
birds-a-singin', it's all about livin'
Cano Palma's true colours,
come alive to all lovers, Lovers of sunshine, lovers of rain,
lovers of forests, and sandy terrain.*

By. Melissa Zanartu York Intern, July 2011