

RAPHIA IS THE QUARTERLY NEWSLETTER FOR THE CANADIAN ORGANIZATION FOR TROPICAL EDUCATION AND RAINFOREST CONSERVATION (COTERC)



Breanna Hall (from the Zoo Crew) painted a sign for one of the dorm rooms — "more to send along when I get a chance to paint...school is keeping me pretty busy" Thanks Breanna!



Caño Palma Biological StationBarra del Colorado Wildlife Refuge
Tortuguero, Costa Rica

EDITOR'S NOTE:

You may well be wondering why this issue is getting to you so late. There is no real excuse that can readily explain the tardiness. I do apologize and promise that future Raphia issues will be done in a more timely manner.

Marilyn Cole

.....Meanwhile, here I am back in 1992 at Cano Palma Biological Station (Note the wet feet!)





Cano Palma's First Kitchen!! Food was cooked on a wood stove.

Our first student group. That's Kym Snarr on the left!



Almost a year ago, I sat down as the new interim Chairman of the Board of Directors for COTERC and wrote my first letter to you. I decided to write about change at that time and opened the letter with the following quote:

"The hardest thing in the world is to simplify your life. It's so easy to make it complex. The solution, maybe for a lot of the world's problems, is to turn around and take a forward step."

Yvon Chouinard, Founder: Patagonia Clothing Company World-renowned Rock Climber & Environmentalist 180° South: Conquerors of the Useless

In the summer of 2011, I took six enthusiastic, capable and accomplished students from Sir Sanford Fleming College's School of Environmental and Natural Resource Sciences. We piloted a new Tropical Field Ecology course that I'm working to get off the ground at Fleming. Life is simple at Cano Palma Biological Station. We get up early...or stay up late, depending on the nature of our fieldwork. We work hard, eat well, and take plenty of time to enjoy our surroundings. A new bunch of students will shortly be leaving Canada with me to continue this fieldwork.

In 2010, we focused on getting ourselves "turned around" and "taking a forward step" toward focusing on Cano Palma Biological Station and keeping things simple. Our Annual General Meeting in May, 2011 was a good indicator of the continued changes we will see in the year to come. The board is a little smaller now as several board members stepped down from their positions due to other commitments. Bryan Bridgeman stepped down as the Director of Site Services and Christine Phillips stepped down from her role as a Director at Large. Matt Vernhout and Natasha Whalen-Vernhout stepped down earlier in 2011 as the Directors of Marketing and Special Events. We thank Bryan, Christina, Matt, and Tasha for their assistance and dedication to COTERC's mandate and wish them the best in the future. For the time being, we are keeping things simple and managing the portfolios of the Director of Site Services, Special Events, and Director at Large amongst the remaining board members.

We have one new director. Shawn Blackburn was nominated and voted in as our new Director of Marketing. As the Programs Coordinator at the Toronto Zoo he has a great deal of experience dealing with a demographic that we intend to connect with more often: students in Canadian schools. He comes to us with some great ideas to use available technology and media to share our message with a larger audience. In keeping with our theme, the message will focus on Cano Palma Biological Station and how our activities in Costa Rica promote *leadership in education, research and conservation in the tropics*. Welcome aboard Shawn.

We also say goodbye to June Enright, COTERC's Executive Director, a long time, and dedicated supporter of COTERC. June worked tirelessly for over 6 years to keep the board on track. Thank you June for all your hard work. We hope you enjoy some well deserved down time at "The Cabin" in the mountains.

Our station manager, Dr. Todd Lewis, has had a very positive impact on the station in his first year as manager. The operation is running smoothly and, most notably, our research projects have improved a great deal. Todd recognized the need to have several "pick-up-and-go" research projects for volunteers to participate in throughout the year. As such, he applied for permits from MINAET, the Costa Rican Ministry of the Environment and Natural Resources, which grant permission to conduct hands-on scientific research with reptiles, amphibians, invertebrates, fish, plants, and marine turtles. For the most part, protocols will focus on collecting data that can be acquired at any time of the year with very little cost or effort. After 4-5 years, we will have a significant database of relevant and valuable data that provides insight into a variety of the species and processes in the rainforest surrounding Cano Palma. Thank you for all your hard work Todd. Best of luck in your new venture now that you have decided to accept a post-doc position. We welcome Charlotte Foale as the new Station Manager, who will share this position with her husband Manuel. Charlotte came to Cano Palma as a volunteer six years ago and never left the area. We are now seeking a Science Officer to complement Charlotte's work.

In keeping with our trend to simplify and change, we decided to have a picnic instead of a formal fundraising dinner this year. Our 20th Anniversary was celebrated at the Toronto Zoo on September 25th, 2011. COTERC's mandate is to *provide leadership in education, research and conservation and the educated use of natural resources in the tropics.* We strive to be a catalyst for positive change in a small, but very important corner of the world. Costa Rica's Atlantic lowland wet rainforest.

COTERC uses the tools of *education* and *research* to guide *conservation* efforts and learn about how to *wisely use tropical resources* in a *sustainable* manner. COTERC's founder Marilyn Cole described her encounter with the area as "magical" when she first visited the area of Caño Palma in 1990. She felt compelled to protect at least a small portion of this lowland tropical rainforest, and to educate Canadians about this vital habitat. Hence COTERC and Cano Palma Biological Station came into being — A small corner of the world that has enchanted countless visitors who hiked the Raphia Trail, paddled the dark waters of Caño Palma, walked the beach at night in search of marine turtles and listened to the pounding tropical rain quench the insatiable thirst of the lush rainforest vegetation. If you have had the pleasure of staying at Caño Palma Biological Station, you have first-hand experience of the power of this little corner of the world. If you haven't already, visit our website at www.coterc.org and read the blogs of volunteers working at the station this summer.



Joshua Feltham and Friend

OBITUARY — BILLY JAMIESON 1954-2011

by Marilyn Cole

We are saddened to report that William (Billy to his friends) Jamieson passed away suddenly from a heart attack on July 3, 2011. An unconventional individual, Billy was a good friend of COTERC, allowing us in the past to hold a fundraising event in his spectacular home in downtown Toronto and inviting many of his influential friends to attend. I still remember being fascinated by his collection of shrunken heads, mummies and skeletons and meeting the then president of the Explorers Club of Canada Joseph Frey as well as Olympian Donovan Bailey..

Billy is perhaps best known for his astonishing collection of ancient tribal art and as a dealer of objects from cultures such as New Guinea, Indonesia, Ecuador, Peru, Africa, India and many more bizarre finds, with worldwide clients including the Royal Ontario Museum, the Metropolitan Museum of Art, Mick Jagger and Steven Tyler. He had fascinating tales to tell and was, at his death, in the process of shooting a series for History Television following his adventures in remote parts of the world. At this time the show is unfinished, but Billy's fiancée Jessica Phillips is working on completing the episodes.

In 1999 Billy acquired the Niagara Museum, Canada's oldest museum (1827) and set about restoring it, and exhibiting ethnographic material from the South Pacific, Hawaii, Africa, Indonesia and the Americas.

A celebration of Billy's life last summer brought together an eclectic mixture of people including elite from the art world, bikers, musicians and tattoo artists. Toronto's art scene will surely be poorer now that Billy has passed.

COTERC'S DIRECTOR OF CONSERVATION & RESEARCH WEDS

.Kymberley Snarr, Director of Conservation and Research formalized her marriage to Arthur Shannon of Arbor North, on June 25, 2011. To celebrate their public commitment, they exchanged vows on their organic farm, The Arbor, with 150 of their family and friends. In lieu of a registry and gifts, they asked for donations to support Cano Palma Biological Station. While the final tally is not known as donations were made online and some



guests sent in cheques, they received over \$2000 donations in celebration of their love and commitment to the ongoing work at the station. Below is a list of known donors. If you donated but did not let Kym or Art know, they appreciate your well wishes and support for the biological station.

> Cliff and Joan Shannon Matheson, Ontario

Darren and Jamie Shannon and family Valcaron, Ontario

Duane and Cindy Shannon and family Timmins, Ontario

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George and Janet Shannon and family Shelburne, Ontario

Joe, Bridget, Patrice, and Isaac Shannon Mayo, Quebec

William and Dorothy Snarr Hanover, Ontario

Scott Snarr and family Mississauga, Ontario

Anne-Marie Snarr Mississauga, Ontario Jerry and Linda Shannon Matheson, Ontario

Janet Mepham and Eric Sorenson Lake Country, British Columbia

Denise, Ian, and Maggie Furlong, Longfield Farms Southgate, Ontario

Ken and Suzie Furlong, Southgate, Ontario

Elie Pennings Southgate, Ontario

Ingo and Sabine Huesing, Saugeen County Organic Dairy, Ontario

Jennifer and Dave and Luke Smith, Maple, Ontario

Leonard and Kerry Copetti and family Stouffville, Ontario

Wendy and William Stewart and family Priceville, Ontario

Dave and Mayda Reid Owen Sound, Ontario

Teresa Hollingsworth and Ted Briggs London, Ontario

Nick and Alice Finoro Guelph, Ontario

Doug and Edda Matthews Collingwood, Ontario

Rick and Maria Reuse Stouffville, Ontario

Marilyn Cole, founder of Cano Palma Biological Station

Laura and Wayne Sharpe London, Ontario

Heather and Ed Shaw Toronto, Ontario

Faith Robillard Milton, Ontario

Jackie Richards Haliburton, Ontario

Debbie Olson Toronto, Ontario

YORK UNIVERSITY INTERNATIONAL INTERNS 2011

For the past eight years, there has been a partnership between York University and COTERC/CPBS where funded interns come to the station to help create and assist in on-going projects. Each year, the different interns bring different approaches and assistance with their background and variable abilities. In this summer 2011, following an intense selection process, three York International interns spent their summer at Cano Palma Biological Station. Each of them came with their own individual skills and experience to contribute to the station, each of them hoping to gain new experiences in Neotropical conservation work. Alex Fields and Danai Matowanyika were brought in to assist in setting up comparative transects to expand the mammal monitoring program. The transects will also be used in other monitoring and specialized research projects. These two interns, while concentrating on the mammal data collection following the transect work, also assisted in the gruelling turtle monitoring program which involves night and morning walks on Playa Norte Beach. Melissa Fernandez was assigned as a turtle monitoring intern. She was intensely trained and worked long hours on the Playa Norte Beach, collecting and inputting data.



Melissa Fernandez



Danai Matowanyika

Alex Field (obviously not taken in Costa Rica!

As part of their work, they help mould the programs by creating training presentations for the mammal monitoring project and updating the York Intern handover book. They have worked long and hard this summer, creating special memories and lasting friendships. Their experiences and new or refined skills will allow them to further their careers. In the fall, we will update with images and stories from the field from these three successful York International Interns.

LIGHTHAWK PLANE AIDS IN SEA TURTLE RESEARCH

Excerpted from Waypoint — Lighthawk's Newsletter July, 2011 Issue 54

Dr. Archie Carr (founder of Caribbean Conservation Corporation) began his research on green sea turtles (*Chelonia mydas*) in Costa Rica in 1955. While flying in a small plane to Tortuguero, a small fishing community reachable only by boat or plane, he leaned closer to the window to get a better view of what he thought he saw below: numerous turtle tracks on the beach and dunes below. As it was not the season for green turtles to emerge from the sea to lay their eggs, Dr. Carr suspected the tracks were probably made by leather-back turtles (*Dermochelys coriacea*).

This past February, LightHawk flew over the Tortuguero area continuing the tradition of Dr.Carr who relied on small aircraft to make his remarkable discovery. LightHawk volunteer pilots Denise Corcoran (CO) and Andy Young (CO) flew missions for Tortuguero Conservation Area (ACTo), Costa Rica's National System of Conservation Areas(SINAC) and the Ministry of the Environment (MINAET). These flights assessed connectivity inside the park and surveyed park boundaries that in recent years have been heavily affected by the advancement of the agricultural frontier. Flights also located instances of illegal deforestation and illegal crops which led to increased ground patrols in those areas to curb that activity.

11 Habitats, 1 Reserve

Tortuguero National Park, which lies within the 1,300-square-mile Tortuguero Conservation Area (ACTo), is the most important breeding grounds for green turtles in the western Caribbean. It is also utilized by other endangered species like leatherback and hawksbill turtles (*Eretmochelys imbricata*), jaguar (*Panthera orca*) and manatees (*Trichechus manatus*). ACTo itself boasts 11 distinct habitats including rainforest, swamps, beaches, and lagoons. A biodiversity hotspot, ACTo is home of about 160 species of mammals, 405 species of birds, 400 species of trees and more than 2,200 species of other plants. Many of these species are at risk of extinction, and despite its protected status, ACTo faces many threats from deforestation, hunting, sea turtle poaching and expansion of the agricultural frontier. Cano Palma Biological Station is located in this region.

Maintaining connectivity and healthy habitats, from swamp forests near the coast to tropical wetlands and rainforest, is extremely important for wide-ranging species like jaguars. Deforestation causes fragmentation of forest canopy, reduces wildlife populations, accelerates soil erosion and stream sedimentation, and increases the risk of wildfires. Logs and branches from illegal logging can drift toward beaches used by sea turtles, disrupting nesting attempts and increasing the mortality of hatchlings trying to get to the open ocean.

LightHawk aerial surveys are critical to maintaining the Tortuguero Conservation Area because it is difficult to access many locations, especially the numerous important wetlands and coastal lagoons. Visiting these locations by boat, the only other workable mode of transport, would take many days to cover the same area flown by a small plane in just a few hours.

After the flight biologist Elena Vargas reflected, "The flight was very productive... LightHawk's donation was a great support for us. We were able to learn a lot and get a different perspective of the area that we manage and that we are trying to protect." LightHawk donated flights empower local groups with the aerial perspective that is vital to protecting this rugged and often impenetrable coastal wild land. Walking in the footsteps of Dr. Archie Carr, these flights further local efforts to monitor and identify threats jeopardizing this region, which is so important to sea turtles.

About LightHawk

What started in 1979 with one man, a borrowed plane and a vision for making a difference in the western U.S. has grown to over 200 volunteer pilots flying for conservation across the North and Central America. Light-Hawk leverages the capacity of more than 300 conservation partners each year by providing an unbiased view of the intersection of land, water, wildlife and the human footprint.

TORONTO ZOO GRANT

COTERC received a grant of \$1,500 from the Toronto Zoo Endangered Species Fund in 2010 in order to create a pamphlet in both English and Spanish to inform tourists to the Tortuguero region about the endangered sea turtles and how they should behave when they are out with a licensed guide.

Unfortunately, it does not appear to be possible to recreate the pamphlet in Raphia in its final form.

We greatly appreciate the ongoing support of the Toronto Zoo and would like to thank the management for their assistance. If you are in the Toronto region, be sure to visit Canada's Premier Zoo

http://www.torontozoo.com/

BLOG EXCERPTS

Heather Mundy is a graduate of Fleming College Ecosystem Management Technician Program and is a student of a Tropical Field Ecology Course held at Cano Palma Biological Station July 7—August 16, 2011

These blogs are tough, trying to sum up so much into a few paragraphs but here we go! This week there have been a few highlight moments for me. First of all 2 nights ago on a caiman census going north on the canal, where there is less boat traffic and subsequently more caimans, we found 9 caimans! Seven of them were babies, maybe even siblings, and 2 were sub adults to adults. This was exciting because the last caiman census we only found one and I thought I was just really horrible at caiman hunting! But I sniped a fair few the other night. When we were taking the GPS co-ordinates of one of the caimans, I looked up and 2 to 3 feet away from me was a Ringed Kingfisher! This is the biggest type of Kingfisher in the area and he was just sitting very still on a branch over head. It was the closest encounter I've had

with probably any bird and it was kind of magical for me.

Another highlight for me this week was that there was a lot of talk about research projects and master's degrees and PhD's. Instead of these talks being scary and turning me off it has actually inspired me to do research of my own and take life slowly and know that there is always time to learn more and do what you want to do. Anyone can write a paper. The research question does not have to be complicated, keep it simple and go out there and do it and have fun and learn something new. And when it comes to analyzing data, get it done no matter how boring it is compared to fieldwork! lol.

Last night 8 of us went out on the motor boat north on the canal to look around for mammals in the trees which you can spot by eye shine or unnatural moving of the branches and leaves, or sound. It was a clear night and that usually means less activity because the creatures are less protected by dark-

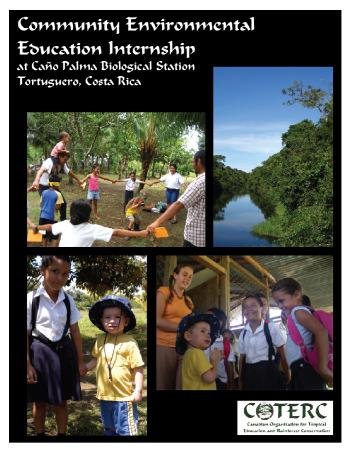
ness. But non-the-less, Josh caught a juvenile caiman with one hand and we got a mini lesson on caimans and got to feel its scales and feet and tail. It was so cool! A caiman right there for us to touch, wow. Planet Earth here we are! Caimans have a palette like us on the roof of their mouth so they can keep just their nostrils out of the water and submerge their mouths and still breathe. This is different than other types of reptiles whereas they don't have a palette so when they breathe air it goes into their mouth first; whereas when caimans breathe through their nostrils it goes directly to their lungs. It is one adaptation that allows them to breath while their mouth is in the water and open.

km north of Tortuguero in Limon Province in northeastern cations of their actions and they admit they do not know Costa Rica. The station was established in 1991 as the how to ensure their growth and activities are sustainable. primary vehicle for The Canadian Organization for Tropical They have asked COTERC to help them understand the Education and Rainforest Conservation (COTERC) to systems they depend on so they can minimize the negative achieve its mandate: to provide leadership in education, effects they have on the system and in turn, improve their research and conservation and the wise use of resources in health and standard of living. the tropics. Although research and conservation work were the initial focus of activities at the station. It quickly became the area. They lived in small huts along the beach and evident that education was also a key function of the sta- made their living fishing, harvesting forest resources (both tion: education of students traveling internationally, tourists, plants and animals) and occasionally working for local busiand more significantly local people.

lived in small huts along the beach and made their living of Costa Ricans and Nicaraguans to the area. These fishing, harvesting forest resources (both plants and ani- "settlers" hacked out a place for themselves just south of mals) and occasionally working for local businesses such the largest and only hill in the area, the Cerro Tortuguero. as tourist lodges, restaurants or shops. mained relatively uninhabited for well over a decade; how- over 300 residents with a school, hydro and telephone serever, from 2001-2005 there was a dramatic influx of Costa vice. The impact of this settlement on the ecosystem has Ricans and Nicaraguans to the area. These "settlers" been dramatic with impacts on the vegetation, wildlife, and hacked out a place for themselves just south of the largest water quality being the most notable. Furthermore, inand only hill in the area, the Cerro Tortuguero. Now, the creased tourism has provided additional pressure on the settlement known as San Francisco is home to over 300 system. Many of the residents of San Francisco recognize residents with a school, hydro and telephone service. The the implications of their actions and they admit they do not impact of this settlement on the ecosystem has been dra- know how to ensure their growth and activities are sustainmatic with impacts on the vegetation, wildlife, and water able. They have asked COTERC to help them understand quality being the most notable. Furthermore, increased the systems they depend on so they can minimize the tourism has provided additional pressure on the system.

Cano Palma Biological Station is situated approximately 8 Many of the residents of San Francisco recognize the impli-

nesses such as tourist lodges, restaurants or shops. The area remained relatively uninhabited for well over a dec-Initially, only a few local people inhabited the area. They ade; however, from 2001-2005 there was a dramatic influx The area re- Now, the settlement known as San Francisco is home to negative effects they have on the system and in turn, improve their health and standard of living.



INTERNSHIPS AVAILABLE

The Board of Directors for COTERC has strongly supported establishing two internship positions at Can Palma Biological Station. Two interns are required each year to ensure that if one finds they cannot continue or gets ill, the second person will be able to continue with the work until their colleague is better or a replacement is found. Interns would be asked to commit to a minimum of 4 months at the station. This time period coincides well with the semester system at most post secondary institutions as we anticipate many of our candidates will be current students or recent graduates. We also anticipate that some students may take the position as part of their field requirements for their studies.

The positions have been filled for 2012, but it is never too early to apply for 2013.

For further information on this internship initiative, please contact the COTERC office, info@coterc.org



Former station manager Pat Opay with children from San Francisco

The best gift of all is a donation through CanadaHelps

No matter which occasion or person on your list, the best gift you can give this holiday season is a donation to an important cause. CanadaHelps makes it easy with 2 different options:

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Canadian Organization for Tropical Education and Rainforest Conservation



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> COTERC P.O. BOX 335 PICKERING ONTARIO I 1V 2R6 **CANADA**

Phone: 905-831-8809 Fax: 905-831-4203 E-mail: info@coterc.org WWW.COTERC.ORG

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