

# Raphia

The newsletter of COTERC

Canadian Organization for Tropical Education and Rainforest Conservation

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## Diary of a trip to Costa Rica June/July 1996

By Executive Director Marilyn Cole.



MARILYN, PAT, FRANCIS & DARYL

The station is being well maintained. The manager's and assistant manager's houses now have new tin roofs instead of thatch. Improved ventilation is provided by screening that replaces the solid wood around the eaves. The dormitory is next in line for upgrading because it is always uncomfortably hot. A dormitory extension will be added and some dry toilets installed to end the need to go outside during the night.

The *bodega* (storage area) by the docks has suffered termite damage and the dormitory porch collapsed under a visitor's weight during my visit. The porch steps to the manager's house have also succumbed.

The trails are in good shape. A Youth Challenge International group visited one day and laid out planks in the muddiest areas along the Raphia trail. The group intended to stay longer, but their travel schedule prevented this.

I took 13 pieces of luggage with me to Costa Rica, four of which were supplies donated by the John Wanless school in Toronto for the Tortuguero school. I think we'll source some essential items locally in future because handling that much cargo is really hard work and the excess baggage charge was \$710!

I made four presentations using our COTERC educational program and I would like to extend these sessions to include the local lodges and the capital San Jose. This will raise people's awareness COTERC. I also made a point of visiting most of the lodges as a public relations initiative and to introduce myself (reintroduce in some cases). We have a good relationship with the lodges and they send their tourists to the station. Our staff, or the volunteers give a talk and guide these visitors on the trails.

Two volunteers were staying at the station when I visited. Ann Woods from Ontario and Evelyn Shlatter from Switzerland were both hard workers and in fact this was Ann's second visit. She continued surveying the boat traffic past the station.

Traffic has increased considerably and the lodges send their tour boats up the Cano Palma because it is free. The national parks charge an admission fee for the use of the rivers. This is a two edged sword because although most boats stop at the station and bring visitors, the noise of the motors drive animals away and there are fewer to see as a result. We are trying to persuade the lodges to bring tourists to the river mouth by power boat then transfer to canoes for the trip up the canal. The tourists can enjoy a much better experience and the noise and pollution will be reduced. Pachira lodge has already taken this approach and their patrons seem to enjoy the experience of paddling quietly up the Cano Palma.

**Raphia** - an oil palm that grows abundantly at Cano Palma.

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## Hurricane Cesar devastates southwest Costa Rica.

Hurricane Cesar devastated Costa Rica's southwestern coast on July 28, 1996. The Tico Times (August 9th 1996) called it, "the worst national disaster since the 1991 earthquake in the Atlantic port city of Limon." Fifty six people may have lost their lives and many residents have lost their entire food crops as well as their homes. Heavy rains washed out the main Inter-American highway, making it extremely difficult to send aid to those in need. Bridges were washed away and damage is estimated to run into hundreds of thousands of dollars.

One of the hardest areas hit was Uvita de Dominical, home of Profelis, the official cat rescue centre for Costa Rica. This facility housed ocelots and margays confiscated from people who kept them illegally as pets. Five of the cats are confirmed dead and another 21 are missing. According to Carlos de la Rosa, director of the environmental foundation FIREMA, a wall of water washed through the Profelis facility early on the morning of July 28, tearing down cages and drowning the cats. Fortunately, none of the project volunteers were killed and 18 cats survived. Some of the missing cats have returned of their own accord, but there are still many missing.

**COTERC'S** executive director, Marilyn Cole visited the facility early in July and came away impressed with the staff's dedication to the welfare of these endangered cats. An emergency fund has been set up, if you would like to help, send donations to Banco National in San Jose.

# WANTED

## Volunteers

To present **COTERC** lectures in  
Toronto area schools.

Training will be provided.

Those interested contact;

Jim Williams

**416 297 6099**

### Raphia

Editor John Parry

Contributers  
Lynn Dyan  
Bill Derby  
Pat Opay  
Marilyn Cole

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## Costa Rican Notebook #3 by Bill Derby

The dominant topographical feature of Costa Rica is the chain of volcanic peaks that run the length of the country from Northwest to Southeast. A number of these reach a height of 12,000 feet or more and they are at times dangerously and destructively active.

Arenal is the country's most active volcano. The perfectly shaped cone rises to 5092 feet and has no vegetative cover. It is continuously active, giving daily displays of latent power as it belches smoke and spews out rocks and flame. These minor eruptions look particularly spectacular when viewed at night.

Arenal's most recent major eruption occurred in 1968. A cloud of smoke and ash rose 45,000 feet into the atmosphere. Carried in a northerly direction by high altitude winds the ash rained down on Managua some 250 miles away.

Irazu is located 40 miles from the Costa Rican capital San Jose. It is possible to drive almost to the summit

of the 3432 metre peak.

Irazu erupted several times between 1962 and 1968. Ominously perhaps, the first eruption took place on the day that President Kennedy arrived in Costa Rica for an official visit! From the crater rim one looks down almost 1000 feet to the soupy, yellow-brown lake at the bottom.

To the North of San Jose lies Volcan Po'as national park. A paved road leads to the park which has extensive parking, well kept trails and excellent lookout points. The hospitality centre has a museum and shows video films. The volcanic crater is almost a mile and a half in diameter and reputed to be the second largest in the world. Although it erupted in 1953, Po'as is now covered with a very lush cloud forest.

The name Turrialba comes from the Spanish *torre alba* and refers to the impressive plume of white smoke that rises above the peak. *Torre alba* means white tower. The 3328 metre peak last erupted in 1866. *To be continued.*

### *The Great Turtle Mother*

by  
Lynn Dyan, Sorrento, ME.

Lynn was a visitor to Cano Palma and felt inspired to write this in the guestbook.

*The Great Turtle Mother was watching. Slowly, the land of her beings was changing. Not as before, by storms, tidal changes more rain one year than the next. She lay quietly listening to the murmur of the plates of continents grind along. She was accustomed to change, but this was different. A new animal had moved onto her sacred island's long dark beach of the turtle mothers. She watched as lights appeared confusing her children. New and terribly efficient predators were coming to the nesting grounds. The Great Turtle Mother watched all this and she thought in her own slow way of a hope. So she sent out a quiet call. She had long been patient, but now she called with urgency, "Stop now, too much. Some must come to help."*

*Some of the new animals heard her. They turned to the beach and said, "We are here to help." And so it began and spread. Some came as midwives to her children on the long dark beach. Some came to help the dwellers on the island find a middle way to live in this verdant tropical sanctuary. All who came were touched by the gentle breezes on their skin, the warm sand between their toes and the rough surf against their mortal bones. None who came lived a day without thanks for the sun through the palms and the pervasive dampness of breath and rain. The Turtle Mother watched and was glad. She thanked them and urged them always to go slowly and use care and grace in their ways.*

## *Heliconia pogonatha*

by Pat Opay, Scientific Officer



*Heliconia pogonatha* is a member of the Heliconiaceae family, and a common plant at the Estacion Biologica Caño Palma. The Heliconiaceae belongs to a large group of closely related families including the Musaceae (bananas), Costaceae (costas) and Zingiberaceae (ginger) plants.

*Heliconia* is a genus in the order Zingiberales and contains about 250 different species. Although *H. pogonatha* looks similar to a banana plant in the shape of its leaves and its general outline, and at first sight, could be mistaken for one. Botanists describe this growth habit as "musoid".

The plants propagate by means of extensive underground stems called rhizomes. The rhizomes, which have buds and scale-like leaves, produce "shoots" composed of a stem (really a pseudostem), leaf, petiole and leaf blade. The flower structure or inflorescence develops on a shoot. Flowers may be erect (extending upwards) or pendent (hanging). Colourful "bracts" surround the flowers and these are a

magnet for hummingbirds that are the primary pollinators. In an interesting example of co-evolution, these birds such as the Bronzy Hermit *Glaucis aenea*, have evolved beaks that match the curvature and depth of the *Heliconia* flower, thus allowing the bird to reach the nectaries deep inside. Sucker foot bats often use new, unrolled leaves as a daytime roost.

*H. pogonatha* grows well where it receives sunlight and some shade (between 20-50%). The plant reaches a height of 25 feet, has hanging flowers bearing bright red bracts and produces blue fruit. *Heliconia* is popular as a pot plant and for providing cut flowers. Your local greenhouse or horticultural supplier may be able to supply the cut flowers also.

If you would like to know more about the Heliconids, ask at your library for this book, "Heliconia - an Identification guide" by Fred Berry and W. John Kress, Smithsonian Institution Press.

Attention Birders!

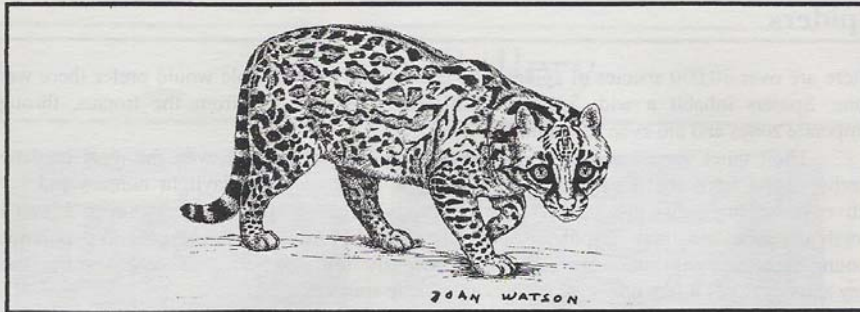
## Christmas in Costa Rica

Join us and participate in the Audubon Society's Annual Christmas Bird Counton December 29th at Cano Palma Biological Station, Tortuguero, Costa Rica.  
Accommodation and 3 meals from just \$35 US per day!

COTERC P.O. Box 335  
Pickering, Ontario L1V 2R6  
Phone (905) 683 2116  
Fax (905) 683 5897  
E-Mail coterc @ interhop.net



## The Ocelot or Painted Leopard, *Felis pardalis*



Today, ocelots occur primarily in sub-tropical areas, from Mexico through Central America and most of tropical South America, but at one time they ranged across most of the Southern US and into Northern Argentina. Fossils of this species have been discovered in Florida, and some authors believe the species may still live in Arizona. Recent investigations recorded remnant populations in the brush country of southern Texas and a feral population of former pets in Florida.

Ocelots inhabit a wide variety of habitats, including tropical forests, chaparral, savannahs, coastal mangroves, swamp forests and any dense cover. The crucial component is dense cover because ocelots avoid open country. In Bolivia the cat occurs from tropical valleys of the Andes at 3000 metres to low areas of the east. Ocelots will tolerate human disturbance and can co-exist if they are not persecuted.

Ocelots are primarily nocturnal, solitary and territorial. Adult females defend an exclusive territory while the territories of males overlap one or more female territories. The cats, cross and recross their home range in search of prey sometimes travelling the entire range every two to four days. They eat a wide variety of small to medium sized mammals, birds, reptiles, amphibians and insects. They also consume a high proportion of grass (20%) a trait shared with other New World carnivores.

The ocelot is a very beautiful cat. The coat is short and soft and forms two whorls on the shoulders with the hairline of the neck directed towards the crown. Ground colour varies from whitish or tawny yellow to reddish grey. The markings run in chainlike streaks and blotches,

forming elongated spots bordered with black, enclosing an area darker than the ground colour.

The head is rather large and has two black cheek stripes on each side enclosing an almost white area. Irises are brown or golden. The underside is snowy white with black spots and the tail is ringed with black on the upperside and black tipped. The legs are relatively short but stout, with large padded feet and are marked with solid black spots and bars. Like most wild cats, the backs of the ears are black with a white central spot.

Ocelots are excellent swimmers and good climbers although not as agile as the Margay.

### Feline Facts

Length	48-64 " (120-160cms)
Weight	25-36 lbs (11-16 kg)
Range	Southern Texas, Mexico, Central & South America
Habitat	Tropical & sub-tropical forest, savannah, scrub, prefers dense cover.
Diet	Small mammals, birds, reptiles, insects, grass.
Reproduction	1-2 kittens per litter, sexually mature at 10-18 months
Gestation	70-80 days
Colouring	Golden coat with dark brown or black spots, rings or blotches.

## Spiders

There are over 30,000 species of spider in existence and many people would prefer there were none. Spiders inhabit a wide variety of different environments from the tropics, through temperate zones and are even found in the Arctic.

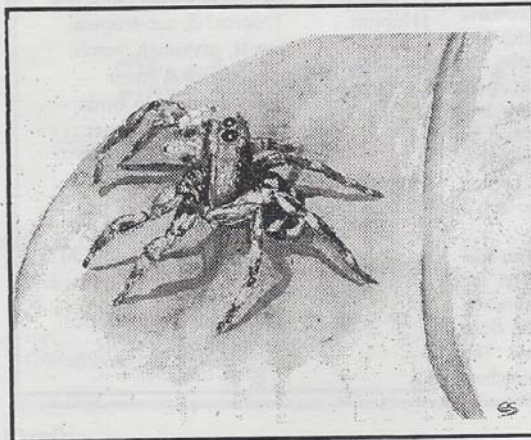
Their quiet ways and bizarre diet puts many people off, but even the most hardened arachnophobe finds the jumping spiders cute. The *Salticidae* are daylight hunters and very active, possessing large eyes. Salticids are not very large, indeed very few exceed 15mm in length and some are jumping spiders. Being so active, they are great sun lovers and populations abound in the tropical rainforests. They leap vigorously from one perch to another and trap their prey actively. Only a few primitive species are able to spin webs.

Jumping spiders recognise prey up to about 14 x their own body length and while they can leap onto their victim from this distance, they prefer to stalk it, moving forward with great stealth to improve their chance of a meal. Although small, they will take prey many times their own size.

Courtship in long sighted, diurnal hunters is a very visual affair. Males are first attracted by a female's scent, but once he gets fairly close he can recognise her visually. Once he is within range, he begins a series of signalling movements with his legs and palps. This semaphore acts as a signal to the female to let her know that he is not potential prey and has amorous intentions. Many male salticids have beautifully marked legs and coloured palps unique to a particular species. This combination of pattern and signal ensures that a female will recognise a male from the same species and not mate with one from another species. Once she accepts the presence of the male, he approaches carefully and spends a long time caressing and stroking her before risking mating.

Spiders bodies are made up of a combined head and thorax or *cephalothorax* and an abdomen, joined by a stalk or *pedicel*. The dorsal surface of the cephalothorax is called the *carapace* and is elevated at the front, housing the creature's eyes.

The abdomen houses the digestive system, gonads and respiratory systems as well as the silk glands. Most spiders use silk in different ways and produce 7 different kinds of silk.



## Anagrams

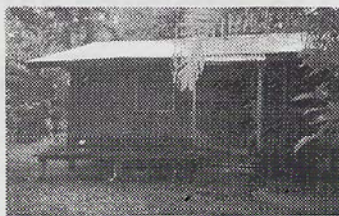
Rearrange these to find the names of some common insects.

AAEELTEENBJ EPS  
BGUALYB  
CRTKECI  
HFO YSLEU  
HOMT  
IQMTOUSO  
LKINCTSWIGKA  
OHCKCRAOC  
LRYFEIF  
MIPSTRYN GANIA  
MIRETET  
NE OBEYEH  
NFTEA RI

Answers on back page.



## Photo Gallery



*Dormitory at Caño Palma*



*Scientific Officer, Pat Opay, with Tortugero schoolchildren*



*Working on the children's playground*



*Marilyn and passenger in canoe*



*Tortugero children taking classes at Cano Palma Biological Station*

## Canadian Organization for Tropical Education and Rainforest Conservation

### Membership

Yes, I want to join **COTERC** and support its work in Costa Rica:

Individual membership	<b>\$25</b>	Name.....
Family	<b>\$35</b>	Address.....
School Class	<b>\$25</b>	.....
Senior/Student	<b>\$15</b>	City.....
International	<b>\$50</b>	Province/State.....
Corporate	<b>\$100</b>	Postcode.....
Donation (tax deductible)	<b>\$.....</b>	

Send your cheque and completed form to;

**COTERC**  
P.O. Box 335  
Pickering, Ontario  
L1V 2R6

### Costa Rica's Zoo has a new Education centre

In the past few years, San Jose's Simon Bolivar Zoo has been upgraded thanks to the efforts of the zoo's director and COTERC advisor, Yolanda Matamoros. The newest addition is the education centre intended for use by school groups. In a recent interview with the Tico Times, Ms Matamoros said that, " the growth of the physical facilities is parallel to the growth in outreach. In the past, school groups walked through the zoo, saw the animals and then left. We want to encourage the children of the city to learn about nature, why and how they can save nature and what they can do for nature. Funding for the new centre was provided by Coca-Cola and H.B. Fuller C<sup>o</sup>.

**Coterc** has a Home page!  
If you are on the Internet, you can visit us at:

[HTTP://HOME.INTERHOP.NET/~COTERC](http://HOME.INTERHOP.NET/~COTERC)

Answers to anagrams.  
Japanese Beetle, Ladybug, Cricket,  
Housefly, Moth, Mosquito, Walkingstick,  
Cockroach, Firefly, Praying Mantis,  
Termite, Honey Bee, Fire Ant,

Costa Rica covers an area of 19,730 sq. miles, slightly smaller than Nova Scotia!