

# RAPHIA



SUMMER 2000

Volume 9 Issue 3

## TROPICAL TREAT

SEPTEMBER  
16, 2000

TORONTO  
ZOO

LIVE &  
SILENT  
AUCTION

TROPICAL  
DINNER

DANCE

TICKETS \$45  
EACH

## TROPICAL TREAT 2000

Once again it is time for our annual major fundraising event - Tropical Treat.

Don't miss out on this fun-filled event!

You can help support COTERC's conservation activities in two ways:

- Solicit donations of items for the Live and Silent auctions
- Sell tickets to Tropical Treat

For more information, please contact Chair Malcolm Enright at the COTERC address or via e-mail [juenright@home.com](mailto:juenright@home.com)

**HURRY!!**

**DON'T MISS OUT! GET YOUR  
TROPICAL TREAT TICKETS TODAY!!**



## Lightning Strikes at Caño Palma

The antenna at Caño Palma Biological Station was recently struck by lightning, causing a tremendous power surge. Unfortunately it was necessary to purchase a new phone as a result of this accident, and consequently communications have been disrupted for some time. If you have been trying to telephone the station and haven't got through, you now know the reason!

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CONGRATULATIONS TO MONICA WROBEL, FORMER COTERC BOARD MEMBER, WHO HAS RECENTLY BEEN APPOINTED AS PROGRAM MANAGER, AFRICA REGION BY THE WILDLIFE CONSERVATION CENTRE LOCATED AT THE BRONX ZOO, NEW YORK.

BEST OF LUCK MONICA!

## Northeastern Costa Rica is a Herp Lover's Paradise

by R. Michael Burger  
(Reprinted by permission of the Author)

The onslaught of the evening rain didn't help much as we made an unsuccessful attempt to identify the trail that lay half-submerged in front of us. At some point, though, it became obvious that we couldn't proceed any farther, and we decided to backtrack to the first identifiable landmark we could find.

Roughly 20 feet past our decision to turn around, my flashlight managed to pick up the reflection of a large, dark serpentine figure slithering across the pathway. Instantaneous identification was next to impossible in the flooded darkness, but a quick shout to Tom Mason (COTERC Vice President and Curator of Invertebrates at the Toronto Zoo, as well as the person responsible for getting us lost in the first place) produced a short chase and dive as he managed to subdue a magnificent 2-meter-long (6 1/2 foot) mussurana (*Clelia clelia*). As we made our way back to camp that evening, we spotted the second coral snake (*Micrurus alleni*) of our trip as it lay placidly submerged and almost jewel-like in the swampy terrain directly in front of us. Completely drenched as well as encrusted with mud upon our return, that third night out in the Tortuguero area proved that it just didn't get any better than this.

- Tortuguero, Costa Rica, November 12, 1995

### Turtle Region

Lying approximately 40 miles south of the Nicaraguan border on the Caribbean coast of northeastern Costa Rica is Tortuguero, which means "Turtle Region". From February to October of every year, several species of sea turtles miraculously reconnoiter their way back to these remote Caribbean shores to nest.

(Continued on Page 3)

Four species of sea turtles are known to nest on the 22-mile long beach at Tortuguero. The village has one of the largest and most heavily documented nesting populations of green turtles (*Chelonia mydas*) in the western hemisphere.

## "Animals Helping Animals" Fundraiser

The spring fundraiser "Animals Helping Animals" unfortunately occurred on a cold and wet Sunday, and consequently was poorly attended. Perhaps choosing Mother's Day as the day to hold the event also contributed. In any event, over \$1000 was raised through sales of raffle tickets, silent art auction and barbecue.

The event was held at the Bowmanville Zoo, located east of Toronto, Ontario and featured a special show of animals demonstrating their abilities. We want to extend a big "THANK YOU" to Michael Hackenberger, owner of Bowmanville Zoo, plus the keepers who all worked hard to put on the event for us. Also, thanks to the volunteers who came out to help.

Raffle ticket winners are as follows:

- First Prize - The Eastern Bluebird by Michael Dumas — Nancy Schuyler
- 2nd Prize - Marten and Gray Jays by Claudia D'Angelo — Cathy McCartney
- 3rd Prize - Autumn Solitude by J. Vandenbrink — Sandra Parratt



§ While Tortuguero is the largest nesting site in the western hemisphere for the green turtle (*Chelonia mydas*), both the hawksbill (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*) come ashore to nest in smaller numbers. Very rarely even an odd loggerhead (*Caretta caretta*) will arrive on the beaches to lay her eggs.

Second only to the leatherback in size, the green turtle formerly nested in at least ten large nesting aggregations, in addition to numerous smaller sites throughout the Caribbean. By the beginning of the 20th century, though, the largest nesting population ever known (Cayman Islands) was extinct, and today only two major sites remain (Tortuguero and Aves Island, Venezuela).

Tortuguero gained recognition as an important green turtle rookery in the 1950's when the late Archie Carr discovered the area. It has since become one of the most heavily documented nesting beaches. Considerable fluctuations occur from one season to the next, which has made assessing the actual health of Tortuguero's green turtle population difficult. The June to September nesting influx of green turtles might vary from several hundred to several thousand turtles per season, with each female laying eggs in intervals of two or more years. From three to five clutches are laid in a reproductive season, averaging more than 100 eggs per clutch. With more than a little luck, the eggs will hatch out 60 days later.

"Hawksbill turtles...are considered an endangered species primarily due to the worldwide trade in tortoiseshell products"

Receiving its common name from the shape of its head, the hawksbill is an inhabitant of warm tropical waters and is found in the Atlantic, Pacific and Indian Oceans. Typically nesting from June through October on the beaches at Tortuguero, clutch size ranges from 50 to 200 eggs, with as many as four clutches being laid in a season. Hawksbill turtles are not known to nest in large numbers wherever they occur, and are considered an endangered species, primarily due to the worldwide trade in tortoiseshell products. Almost 1 1/2 million pounds of hawksbill scutes (shells) were imported into Japan alone between the years 1970 and 1986, equalling approximately 600,000 turtles!

Largest of all living turtles, the leatherback is the only sea turtle without a hard shell. Lacking the keratinized scutes found in most other turtles, a layer of tough, rubbery skin strengthened by numerous bony plates serves as a protective covering for this wide-ranging sea turtle. Leatherbacks are found as far north as Alaska and can remain active at temperatures below 40 degrees F. Primarily nesting from February through April on the more southerly portions of the Tortuguero beach to as far south as Matina, leatherbacks are known to lay as many as nine clutches of eggs during a reproductive season.

Archie Carr and the Caribbean Conservation Corporation (CCC) have been instrumental in helping to protect and monitor the nesting beaches at Tortuguero since the 1950's. On

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OUR  
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the northernmost 5-mile stretch of the beach, the CCC tags sea turtles and records data that ultimately provide valuable information on the turtle population. A visitor's center is operated by the CCC in the village of Tortuguero, which gives insight into the excruciatingly strenuous life cycle of the sea turtle.

While Tortuguero National Park protects the southern three-quarters of the 22-mile long beach, the northernmost stretch that lies near the mouth of the Tortuguero River is perilously close to the village. Every year a number of sea turtles unfortunately end up as part of the local diet, as well as their eggs, which are illegally sold for about \$4 (U.S.) a dozen. Even though sea turtles are protected from international trade through a CITES Appendix One listing, this protection does not necessarily safeguard populations within a country's borders. Because sea turtles traditionally have been consumed by Costa Rica's coastal communities, the government still allows a significant number to be legally harpooned in the waters off their nesting beaches every year.

### Herpetofauna of the Tropical Wet Forests

While road cruising can be very herpetologically productive in other parts of Costa Rica, it simply doesn't work at Tortuguero. In fact, there are no roads or automobiles anywhere near this remote coastal region (yet!). Other than by foot, transportation is primarily accomplished via the vast network of rivers and canals that dominate the area. Waterborne travel is also the easiest way to view the diurnal herpetofauna of the Atlantic tropical lowlands. Species include the caiman (*Caiman crocodilus*), American crocodile (*Crocodylus acutus*), iguana (*Iguana iguana*), basilisk lizard (*Basiliscus plumifrons*), black river turtle (*Rhinoclemmys funerea*) and tropical slider (*Trachemys scripta ornata*).

As in other areas of the Neotropics, one of the most productive methods of finding reptiles and amphibians is by hiking through the forest at night. I have been fortunate enough to have (hit the trail) at Caño Palma Biological Station run by COTERC during my visits to Tortuguero.

I have discovered a number of herps there during seemingly endless night forays, but possibly the most abundant have been a small cadre of nocturnally specialized serpents, including blunt-headed tree snakes (*Imantodes cenchoa* and *I. inornatus*), snail-eating or thirst snakes (*Dipsas* sp. and *Sibon* sp.), cat-eyed snakes (*Leptodeira septentrionalis*) and coral snakes (*Micrurus aleni*). It is quite a spectacular sight to pick up the colours of a coral snake under the illumination of a

"It is quite a spectacular sight to pick up the colours of a coral snake under the illumination of a flashlight"

### Rain Forest Ed-Venture - Kids Love It!

Imagine taking a group of young schoolkids from America to Costa Rica and attempting to provide an educational as well as exhilarating experience — without harming the kids. That's the brainchild of Christa Dillabaugh and Natalie Brenner, two teachers from Bexley Middle School of Ohio, and it has turned into a wonderfully successful program known as Ed-Venture.

Using the services of Costa Rican guides, Christa and Natalie have now made a few trips accompanying a group of children with the intention of having them gain an appreciation of the wonders of the rain forest. Caño Palma Biological Station has been part of their itinerary where the kids have enthusiastically trekked along the trails, searching for "big honking bugs", as well as boa constrictors, monkeys and other assorted wildlife. Each child has to complete an assignment on a chosen animal as part of this course, and we have been treated to some of their work in past issues of *Raphia*. Bexley Middle School also kindly made a donation to the station to enable a new education kiosk to be built, and there is a plaque there thanking them.

More information can be obtained from Christa Dillabaugh, 302 S. Cassady Ave., Bexley, Ohio 43209 (csdilla@cs.com) (614-231-1856).



flashlight, as the almost neonlike qualities of its triad pattern, amazingly stand out against the subdued colours of the ground. During a visit to the area last year in March, a coral snake (*M. alleni*) was actually found during an evening hike while in the process of swallowing a swamp eel (*Asynbranchus marmoratus*) almost equal to its own size. Keeping with coral snake dietary habits, a bicolor coral snake (*M. multifasciatus*) was also documented at Caño Palma in the act of consuming a caecilian in broad daylight.

Lizard species are well represented in the region and range from the tiny skink-like microteiids of the *Gymnophthalmus* genus to the large, wide-ranging common iguana (*Iguana iguana*). The ever ubiquitous house gecko (*Hemidactylus frenatus*) and the yellow-headed gecko (*Gonatodes albogularis*) can invariably be found in the village of Tortuguero, while the turnip-tailed gecko (*Thecadactylus rapicaudus*) is occasionally found in both deep forest situations as well as clearings. Diminutive geckos of the *Sphaerodactylus* genus also occur in the area, as I personally found out during an arduous hike to the top of the local hill or "cerro" nicknamed Turtle Mountain. Completely out of breath upon reaching the summit, I found an old piece of tin (of all places) and lifted it. I immediately spotted a small gecko and almost captured it as it attempted to escape by running between my feet. Quickly backing up in an attempt to thwart off its advance, I lost my footing and almost fell off a sheer drop on the hill's steep cliff side. Needless to say, I'm still here and the gecko is still there (actually it was apprehended and identified as a *Sphaerodactylus homolepis*).

The Polychrotidae family, which includes the 300 species of anoline lizards (*Anolis* = *Norops*) reaches a spectacular diversity in tropical America with nearly two dozen species of anoles represented in the Atlantic lowland areas of Costa Rica alone.

Unfortunately, without a magnifying glass, a key, a lot of patience and a trained eye, one would have great difficulty assessing one species from another. Without a doubt, though, the most unique species of lizard that occurs in the tropical forests of lower Central America is a distant relative to the anole, and known in Latin by the name of *Polychrus gutturosus*. Often compared to the Old World chameleons, *P. gutturosus* is a rarely encountered member of the Polychrotidae family that lives among the forest canopy. With an extremely slow chameleon-like gait and a prehensile like tail used during climbing, this cryptic lizard is an ambush or sit-and-wait predator of relatively large insects, though it has been found to also include vegetation within its diet. Its beautifully streamlined green dorsum is partitioned by a number of vertically light orange bars that fade onto a much lighter underside. The *Polychrus* genus stretches further south to Argentina and is represented by several other species.

Tortuguero National Park protects a huge tract of pristine wet forest in addition to the valuable beachfront for nesting sea turtles. As is the case elsewhere in Costa Rica, the park is only open during the day, which allows one an opportunity for viewing a tremendous variety of diurnal animals. Hiring a guide can be advantageous to the prospective visitor and especially to a person who appreciates eyelash vipers (*Bothriechis schlegelii*). While these beautiful arboreal and potentially deadly snakes occur elsewhere around Tortuguero, an almost amazing density inhabits areas within the

### Fire Kills 500 Rare and Exotic Animals

**T**ragedy struck at one of Australia's top tourist parks on July 16, 2000. A \$1,000,000 blaze swept through the Australian Reptile Park and Wildlife Sanctuary, located near Sydney, killing crocodiles, snakes, lizards, frogs, turtles and platypus. Some animals had been residents for over twenty years and included many rare species including several tuatara, some critically endangered species of frogs and other rare reptiles. Only an alligator snapping turtle was rescued and the staff are understandably devastated.

Home to Australia's top snake and spider venom milking station, the park also lost an extensive specialty library, computers, scientific data, cameras and a lifetime of memorabilia.

The fire is believed to have been started by an electrical fault.



park. During the spring of 1997, I had the opportunity to canoe through the northeast portion of the park with a guide who proved very deft in locating three eyelash vipers within a matter of minutes after disembarking onto a small trail. Two yellow phase or "oropel" as they are sometimes known, and a brown phase were all eloquently perched, as if a photo shoot had been prearranged before our arrival. Talking to the guide later that day, I found out that he actually visits the trail on the afternoon prior to taking a group out and notes the various location of individual snakes. He further elaborated that eyelash vipers generally will not move a great distance from a previous perch and because of the large population, he has occasionally found up to 15 snakes on a hike.

The deadliest snake in Costa Rica is undoubtedly the fer-de-lance (*Bothrops asper*). Locally referred to as the "terciopelo", it is known by a variety of other names throughout Latin America, including "barba amarilla" or "yellow beard", which make reference to the distinct yellow colour of its chin. Formidable in size, frequently found near human habitation, as well as excitable in nature, this deceptively cryptic snake is responsible for numerous fatalities each year. Even though they can be particularly common in many areas, the only one that I have seen in the Tortuguero area was a particularly timid 3-foot-long fer-de-lance that was apprehended at Caño Palma by Tom Mason. Quite striking in pattern, two exceptionally large specimens are currently on display at the Serpentarium in the capital city of San Jose.

#### Anurans

The rainy season quite often provides the best setting for the person interested in anurans, although a number of frogs call, as well as reproduce, in the February through April dry season. The term "rainy season" must be loosely applied and can often be an understatement of just how wet it can actually get at Tortuguero. While total rainfall might average around 200 inches per annum, accumulations in November or December can occasionally result in 2- to 3- foot flood levels. On the other hand, the "dry" season is not really devoid of precipitation, but just to a kinder or gentler degree than the rest of the year. Frequently referred to as the strawberry poison-dart or poison-arrow frog, *Dendrobates pumilio* is unquestionably the most abundant and visually brilliant amphibian in the lowland forests of the Tortuguero area. Usually bright red in coloration, this species can actually be quite variable throughout its Central American range, with brown, green, yellow or even blue colour forms being noted from island populations in Panama. Small and diurnal, these frogs are usually found amid leaf litter, but can also occasionally be found on tree trunks, as well as in low arboreal epiphytes. *Dendrobates pumilio* has an interesting parental care behaviour that was first noted a number of years ago from captive observations. Females periodically place unfertilized eggs in the water-filled vases of bromeliads as a food source

**"The deadliest snake in Costa Rica is undoubtedly the fer-de-lance"....."This deceptively cryptic snake is responsible for numerous fatalities each year."**

### Scientists Meet to List Endangered Species

**A**n historical event recently took place in Costa Rica when a group of local scientists joined up with members of the World Conservation Union (IUCN) Conservation Breeding Specialist Group in June, 2000. The intent is to compile an endangered species list using IUCN criteria. Under the guidance of IUCN's chair Ulysses S. Seal, and hosted by the engineering department of the University of Costa Rica, more than 400 species were reviewed over a period of days to determine which should be included, and under what classification — a first for Costa Rica.

Yolanda Matamoros, director of Simon Bolivar Zoo explained that "this list will be the basis for future conservation plans". Many local species are endangered but are not on the list, while others should be removed from the list. However, there are many species of plants and animals for which there is very little scientific data on which to determine whether or not they are endangered. A critically endangered species would be one with a population size of less than 250. The cutoff for an endangered species is a population of 2,500.

The main threats to animal and plant life are human activities such as habitat alteration, introduction of foreign species, hunting and illegal trade.





for their tadpoles. From that remarkable discovery, it has since been found that "oophagy" or egg-eating, occurs in other related *Dendrobates* species as well.

Showing a remarkable propensity toward climbing, the unique, as well as common, *Bufo coniferus* is a diurnal inhabitant of primary forests. Interestingly brown and green in coloration, a series of small spine-like bumps project laterally from its sides, which possibly aid the toad in scaling tree trunks and branches. My initial discovery of *B. coniferus* came as a result of carefully looking through an immense stand of bamboo when, quite by chance, my eye came in contact with a 3-inch-long specimen amazingly perched 4 feet high on the side of a bamboo stalk. During March 1997, an extraordinary number of young *B. coniferus* were found, suggesting breeding had occurred a few months earlier.

Of the more than 500 species of frogs that compose the *Eleutherodactylus* genus, more than 20 may be found in the Atlantic lowland regions of Costa Rica. Generally small in size and similarly coloured, most of the eleutherodactyline frogs can be inherently difficult to identify, as well as capture. One particularly common species has earned its name from its surprisingly loud and distinctive call, which approximates the word "tink". Hiking at night is the best way to become acquainted with this arboreal frog's sharp call, but to actually find a tink frog (*Eleutherodactylus diastema*) can be quite another matter. Like many other members of the genus, the tink frog lays a small complement of eggs that hatch out into perfectly formed froglets.

#### Final Thoughts

The lowland wet forests of Tortuguero, like other areas in the world, are experiencing tremendous pressures from humankind. Slash-and-burn practices are evident throughout the area, and while much of the region north of Tortuguero National Park is supposedly a wildlife refuge, protection of the land is virtually non-existent. The proliferation of ecotourism lodges is another problem that, if left unchecked, could ultimately ruin the very reason for their existence in the first place. Last, but definitely not least, talk of a roadway connecting Tortuguero to the rest of Costa Rica is currently in the air. One only has to travel down any stretch of highway in the U.S. to realize the effect a road has on the local wildlife.

As one of the world's prime locations for viewing nesting sea turtles, coupled with an outstanding diversity of lowland wet forest reptiles and amphibians, Tortuguero is a herp enthusiast's paradise. With slightly more than 100 species thus far recorded from the area, there is continually the promise of photographic opportunities, as well as the prospect of finding something new. Ultimately, even though I maintain a herp collection myself, the biggest thrill is to see a tropical reptile or amphibian in the wild and not in a cage. There are so few special places left on this planet.



### Barbecue for COTERC

**R**ecently we held two separate barbecues to raise funds for COTERC. Each one took place at Loblaw's grocery superstores- one in Pickering and the other in Ajax, Ontario.

With the help of volunteers Fran Mason, Debbie Mason, Tom Mason, June Barringham, Scott Staples, David Speed, Pam Evett, and Marilyn Cole, we sold hot dogs, sausages, ribbits (barbecued pork without the bones) and soda pop to visiting customers. Most of the stores' employees came out to sample the wares and we managed to raise about \$400.



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