

Raphia

The newsletter of COTERC

Canadian Organization for Tropical Education and Rainforest Conservation

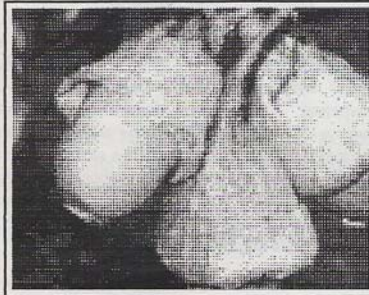
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New species recorded in Tortuguero Conservation area

By Pat Opay, Scientific Officer



The biodiversity of Costa Rica's rainforest is impressive to say the least. With more than 220 species of mammals, 350 species of reptiles and amphibians and over 9000 species of higher plants it is one of the richest environments on Earth.

But the question you might ask is "Are there any NEW species still waiting to be discovered?" The answer is yes but the probability of discovery depends upon many variables. Some groups, birds for example, have been studied more thoroughly than others so the chances of finding a new resident bird species are slim. The same is probably true of mammals. Invertebrates

are a very large group presenting greater opportunities for new species discovery.

The Cano Palma Biological station conducts and supports research in the surrounding forest. Over the last year the station has been working closely with the Natural History Department of the National Museum of Costa Rica paying particular attention to recording plants, birds and butterflies in the area. Each of these groups is interesting in its own right but one recent collecting trip turned up something very special; a new species of plant.

To carry out a plant inventory the museum's botanists collect samples of leaves, bark, flowers and fruit if available. Written descriptions of the plant are also recorded, for example the site at which it was collected, size of the plant, presence or absence of latex. During a recent collecting trip we followed a small river near Cano Palma to see if we might collect some interesting plant species for the herbarium. We spotted one at the river's edge and Alfredo Cascante from the museum collected it. At the time none of us knew the excitement that this sample would create. During the identification at the museum discovered that Alfredo had collected a NEW species!

Alfredo and his colleagues have identified the plant as a member of the genus *Licaria* which belongs to the *Lauraceae* family. The *Lauraceae* includes roughly 2500 species of trees and shrubs although there are a few parasitic climbers which lack true leaves. They are mainly tropical species found in SE Asia and tropical America but occur in other tropical regions primarily in lowland and montane rain forest. Many of these are familiar to us as food items: *Cinnamomum* produces cinnamon, *Persea americana* produces avocados and *Laurus nobilis* (Bay Laurel) is used for flavouring fish and meat dishes. (continued on back page)

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

Page 1

Executive Director's Report

This issue of **Raphia** has a new layout and we hope you will enjoy the format and contents. We like to hear your comments and encourage your letters. If we don't know what you like or dislike about the newsletter we don't know how to improve it! So send us your comments and ideas!

We have been busy continuing our fund-raising activities. Garage sales, barbecues and our Wednesday bingo afternoons, keep **COTERC** on a sound financial footing. The Board and I are working on new ideas that we expect to announce in the Fall.

Our educational programmes to schools and other groups are a continued success. A recent visit to Sir Alexander Mackenzie Public school prompted a rainforest assignment for a class of grade 7 pupils. Some of the poetry composed by the students is reproduced on pages 5&6. We think you will find these verses mature and insightful.

With this issue we welcome a new volunteer editor. John Parry is a zoologist by training and a writer by inclination. He has travelled widely and enjoys photography and fishing. Welcome John!

By the time you receive this edition of **Raphia** I will be in Costa Rica again and will report to you when I return. In the meantime I hope you are enjoying the summer, now that it has finally arrived.

COTERC board member wins Prize.

Suzanne MacDonald (COTERC board member and director of research) was one of three women at York University who received the President's Prize for demonstrating "sustained and outstanding achievement in teaching and research." Suzanne is a psychology professor at Atkinson College and has strong links with the Biology Department too. She also appears from time to time on the Discovery Channel where she presents items on animal behaviour.

Congratulations, Suzanne!

WANTED

Articles for Raphia

Letters, poems, cartoons or items of t(r)opical interest!

Send your contribution to

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Raphia

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Costa Rican Notebook #2

by Bill Derby

For most of the nineteenth and twentieth centuries coffee and bananas have been the economic mainstays of the Costa Rican economy.

Coffee, "the Golden Bean" thrives on the deep, friable volcanic soils of Costa Rica and is grown mainly on small family farms or *fincas* of less than ten hectares in size. It is harvested in the dry season from January to April, when schools close for a few months to allow children to help their families pick the beans.

In 1800, the government was seeking a crop that was adaptable to the climate and suitable for export. By 1850 a large export market was established especially in Europe and N. America. The arrival of the railway from San Jose to Limon in 1890 increased exports even further. The line took nineteen years to build through steep and forbidding terrain. Some 400 workers lost their lives during construction.

Bananas were introduced to Costa Rica by Keith Cooper in 1874. Cooper was the founder of the port of Limon and the United Fruit Company. To clear the forest for plantations he imported labourers from Jamaica and this explains the large black population on the east coast.

By 1913 eleven million bunches of bananas were exported annually. Later many plantations had to be abandoned because of a leaf blight. After the second world war the United Fruit Co. started new plantations on the Pacific Coast.

Bananas, which are officially a herb not a tree take fifteen months to reach maturity. While they are growing, plastic bags are often used as covers. These act as protection against insect pests and as miniature greenhouses to keep the developing plants warm. When one bunch has been picked another starts to grow on the same plant.



Grade 7 students at Sir Alexander Mackenzie Public School with some of Marilyn's reptiles.

Not long now...

Suddenly, overnight, the willows
Will be a wash of green on the reddened sky
And the thaw will bring a brassy
Surface to the pond
Dogwood will bud and green and flower
Grasses will grow and get o seed
And the geese will
Majestically cruise
Their flottillas of goslings...
All too soon
They too will change
From yellow fluff
To gangly adolescence
And then they will be gone..
The first hint of chill after the summer's heat
Will call them north
And they will no longer breakfast
Beneath my kitchen window.

by Vanessa Dhelen

Endangered species update - The Great Green Macaw

by Pat Opay, Scientific Officer

Suddenly, out of nowhere a raucous squawking call and a large, brilliant green bird flies overhead. Sighting a Great Green Macaw is one of the most unforgettable occurrences in the area surrounding Cano Palma. Unfortunately, the dramatic visits of this wonderful bird may not continue for very much longer.

The Great Green Macaw (*Ara ambigua*) is in danger of extinction. It once nested from the north central part of Costa Rica down the Atlantic coast to the country's southern border but now only about 30 pairs remain and its nesting range is a small area in the NE. Habitat destruction through deforestation is just one of the survival pressures it faces. One species of tree in particular, the almendro (*Dipteryx panamensis*) is of special importance. It is a main source of food for the bird and is a preferred nesting spot but harvesting for lumber is making it scarce. Researchers estimate that 95% of the bird's habitat has disappeared in the last few years.

The second problem is poaching. Poachers take chicks from the nest to supply the pet trade and as the bird's reproductive success is low the population is in serious decline. Costa Rica is justly famous for its flora and fauna, but is none the less struggling with serious pressures on the forests that remain. The loss of any species is heartbreaking because extinction is forever. The demise of the Great Green Macaw in Costa Rica is another warning of the pressures on the biodiversity of the planet. It is also a dose of reality, highlighting the serious problems faced by Costa Rica's rainforests in spite of the high profile conservation fame the country enjoys.

This article is based on a report in La Nacion by Alejandra Zuniga, 17 Mar, 1996

Crossword

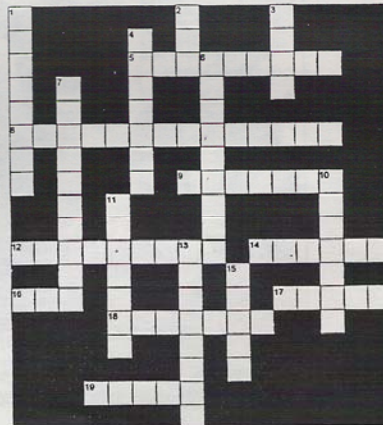
Across

5. a flash of light in the sky caused by electrical disturbances in the atmosphere
8. bands of light appearing in the night sky, northern lights
9. the moon passes between the earth and the sun cutting off sunlight
12. a mass of snow, earth or rocks sliding down a mountain
14. a spring from which boiling water and steam spew into the air at varying intervals
16. frozen water
17. inundation, deluge
18. time when the sun crosses the equator making day and night of equal length on the earth
19. frozen dew or vapor

Down

1. violent wind and snow storm
2. thick, obscuring mist at or near the earth's surface
3. frozen rain that occasionally falls during thunderstorms
4. normal or prevailing weather conditions of a place
6. violent tropical storm with winds over 73 miles per hour
7. shaking of the earth's crust
10. a wearing or washing away of soil
11. a large mass of ice and snow
13. the degree of dampness or moisture in the air
15. condensed water vapor in the atmosphere

Natural Phenomena



My World

*My unique, beautiful little world,
Full of life, shelter beyond compare,
Beauty among the looming trees,
Wet shadowed little corners,
Scent of beautiful flowers in the fresh
humid air,
Slithering snakes winding in the bushes,
Monkeys swinging from tree to tree,
The sound of all the little creatures,
And I know I'm home.*

*Destruction, rage full of hate,
Cut down my home I do not,
Know why, for they have warm,
Peaceful shelters, I did too,
But now all I have is my magical,
Warm, peaceful memories,
That's what keeps me alive.*

by Sidil Nur



Rainforest

The rainforest is full of danger,
Jaguars and tigers are hidden between
the bushes,
Snakes and frogs are hidden beneath
the fallen leaves,
Forest floor, where is below the trees
and leaves,
Is like a place where ghosts live,
With dark, creepy shadow everywhere.

The rainforest is a magical place,
With strange things you've never seen.
Giant Rafflesia bloomed on the
ground,
Beautiful birds flying around,
The rope vines are hanging on the tree,
Different plants for cancer and
disease,
The vital jungle is in danger now,
It takes days to be destroyed,
But forever to grow,
So save the kingdom and save lives.

by Jack Lion

Enchantment

Blinded by its mystic beauty,
tangled in its web of co-adaptation.
Trapped within their kingdom.
Once it is disturbed,
the laws of Nature are broken.

The birds perched up high in the trees,
singing a song happily.
Beetles munch on leaves of green,
while iguanas camouflage to be unseen.
Animals roam the forest floor like kings,
while eagles soar through the sky with
their wings.

The peacefulness of Nature is trapped
within it's zone,
It's hidden secrets are of the unknown.
The warm, humid mist like fairy dust,
sprinkled all about.
A weird feeling comes over you,
freedom, no doubt.

The luscious green trees like walls
looming over the water fall.
The thick strands of green grass,
are vines that grab at your feet.
The river cries out in glee,
for everything is living in harmony.

by Betty Huynh



The Destruction of the Rainforest

Animals

Walking in the rainforest,
Searching everywhere for food
Lurks the wild beast.
Suddenly a little Mammal,
Scurries across the floor.
The wild beast pounces,
Surprisingly bars fly up around the beast,
And the beast shall never walk free again.

Fish

In the peaceful waters of the rainforest,
Swim colourful and elegant creatures.
They come in all shapes and sizes,
And can be deadly as a shark.
A man comes to the river with a harpoon,
And all the creatures are gone.

Extinct

The rainforest is a mysterious place,
The insects crawl beside your feet.
Birds fly and glide above your head.
Animals watch from the bushes,
And watch you sneak around.
This is their territory,
And when you take their territory,
Theydie.

by Anthony Farouse

Canadian Organization for Tropical Education and Rainforest Conservation

Membership

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

Individual membership	\$25
Family	\$35
School Class	\$25
Senior/Student	\$15
International	\$50
Corporate	\$100
Donation (tax deductible)	\$.....

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Send your cheque and completed form to;

COTERC
P.O. Box 335
Pickering, Ontario
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Crossword Solution



(from page 1) The new species is a small tree with fruits that resemble large acorns. Each fruit is partially surrounded by a cupule or cup. The plant was found on the bank or a small river in tropical lowland wet forest and at the moment neither its ideal habitat is known nor the extent of its range. More work is needed to find additional specimens and learn more about its natural history and life cycle. This is why COTERC's support of research into the rainforest is so exciting and so important. Who knows what other new species of plants and animals await researchers in the rainforest?

The population of Costa Rica is 3,342,000 slightly more than that of British Columbia!