THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

April - June 1999 **No 2 : 1999**

UPCOMING **JULY-SEPT**

LECTURES

08 July - Mammal conservation in T&T: transforming conservation ideals into policy by Howard Nelson

12 August - Members Evening

09 September - Diversity of flora and fauna through the eyes of a photographer by Roger Neckles

FIELD TRIPS

25 July - Oropouche North River

29 August - Mount Tabor

26 September - Oropouche Swamp

INSIDE

FIELD TRIP REPORT: Tobago: 23 - 25 April 1999

by: René van Dongen

The annual Field Naturalists Trip to Tobago took place during the weekend of 23-25 April 1999. The group of about 18 persons stayed at Speyside, in convenient and cheap guesthouses provided by Cordner's Guesthouse (660-4791).

Field Naturalists in Tobago.
Photo: Jean Pichiottino

Speyside itself is a small fishing village, located in the North Eastern part of the island, which has developed over the last few years into a scuba diving paradise. These developments however have left the friendly and non-commercial atmosphere of the village untouched - but for how much longer? Little Tobago and Goat Island can be spotted from almost evey position in the village. Goat Island used to be the residence of James Bond. No, not the secret agent known as 007 (although the island looked like a place that could feature easily in a James Bond movie....), but the ornithologist, J. Bond, who published several checklists of West Indian birds between 1959 and 1970 and also published the Collins Field Guide to the birds of the West Indies (HarperCollins, 1993).

After being awoken on the Saturday morning by a dozen crowing cocks and the grating *ka-ka-ra-ka* sound of the Chachalaca (*Ortalis ruficauda*), we started our first hike which took us past Bateau Bay into the very quiet seclusion of Gouleme Bay, just north of Speyside. It is one of those bays that are hardly ever visited by tourists, simply because the road leading to it is not paved and the last stretch includes a steep climb and an even steeper descent. But what a view! On our way to and from Gouleme Bay, we spotted the Prison bird (also called Barred Antshrike - *Thamnophilus doliatus*), a Rufous-tailed Jacamar (*Galbula ruficauda*), the Blue-crowned Motmot Cont'd on Page 4

The Importance of Biological Diversity: Lecture Notes

presented by
Prof. Peter Bacon, UWI Dept. of Life Sciences
at the April Monthly Meeting of the TTFNC

Professor Bacon began his lecture with a definition of the word "biodiversity," which he defined as "the variability and complexity of life on earth" (as compared to the individual creatures). He then examined the major groups of organisms and showed how they compared, using a pie-chart and other pictorial representation. In the chart, the group 'Insects' (56.3%) was most abundant. It was noted that this was a distortion caused by the great amount of research done on insects. Vertebrates occupied 2.7%, Plants (embryophytes) 14.3%, Mammals occupied a small space. He noted that there were many groups in T&T which no one has worked on and therefore little was known about them.

A diagram was then used to show the distribution of animal phyla. (A phylum is a large group of organisms). It showed the number of phyla present and the number which were endemic (i.e. found only in a particular environment) in the following environments :
Freshwater -14 phyla, 0 endemic; **Marine** - 28 phyla, 13 endemic; **Symbiotic** - 15 phyla, 4 endemic; **Terrestrial** - 11 phyla, 1 endemic

Prof. Bacon stressed the importance of shifting focus from research on land-based biodiversity to marine, coastal and freshwater environments. A diagram on the *Distribution of Algae Phyla by Habitat* revealed that greater biodiversity occurs in freshwater and marine environments compared to land.

He then listed a number of reasons why biodiversity was important.

1) Economic importance. He noted that in Trinidad and Tobago we depend on our plants and animals in a variety of ways. A map of Trinidad and Tobago was used to show that agricultural communities occupied the majority of the land surface. The need for agrobiodiversity was also examined. Agrobiodiversity was defined as "the genetic variability in cultivated plants and domesticated animals, together with their progenitors and closely-related wild species growing and evolving under natural conditions."

Because of use by man, many species were lost or had almost disappeared. Some of these were cited by Spence, 1999 as: the Cocoa 'Gene Bank', "Cush-Cush" yam, Maize - St Augustine variety, Beef cattle,
Water Buffalo, Poultry - common "yard fowl" and "clean neck fowl".

2) Potential uses. This includes any plant which can be used for medicine, food etc.

3) Stability of the natural world. The more species present, the more sustainable the system becomes. When you reduce the variety you reduce the stability.

4) Climate. The importance of biota to the hydrologic cycle

Cont'd on Page 3

Editorial Team:
Calista Pierre, Rupert Mends

Contributors:
Peter Bacon, Doreen Jodhan, Krishanta Maharaj, Rupert Mends, Mike Oatham, Victor Quesnel, Rene Van Dongen, TTFNC Management Committee

The TTFNC is a non-profit, non-governmental organisation. Our Mission is "To foster education and knowledge on natural history and to encourage and promote activities that would lead to the appreciation, preservation and conservation of our natural heritage."

Botanical Notes on Fishing Pond from the Field Trip of October 25 1998

by

Victor C. Quesnel

Author's Note: There are two main reasons for these notes 1) to correct an error in labelling and 2) to report on the presence of Caesalpinia bonducella

As regards the first, some members who attended the trip may remember looking at the labels on some of the trees along the nature trail from the open area through the forest to the beach. One label read Acoma, *Sideroxylon quadriloculare*. The tree was fairly small, perhaps 8-9 metres tall and had many side branches coming off from the trunk close together and at right angles to it as they often do in the conifers of temperate countries. This tree, however, is not a conifer, but neither is it *S. quadriloculare* of the family *Sapotaceae*; it is *Rheedia acuminata* of the family *Guttiferae*. The two trees really look nothing like one another though they have a common feature - latex. The latex of *Sideroxylon* is white whereas the latex of *Rheedia* is yellow. If you want to see a true *Acoma* you can find one (if memory serves) in the southwest corner of Memorial Park.

Now to the second main point. At the beach end of the boardwalk I found a short prickly plant I thought at first was a Cassia. The numerous flowers were closely packed and yellow, but one petal of the five on each flower was speckled with red. It turned out to be *Caesalpinia bonducella*, with the common name bonduc, and a close relative of Barbados Pride. The National Herbarium has only two or three sheets of it from other beach localities but none from Fishing Pond.

In the swamp through which the boardwalk passes I noticed four species of mangrove: *Avicennia germinans, Avicennia schaueriana, Laguncularia racemosa* and *Rhizophora harissonii.* I saw no *Rhizophora mangle* or *Conocarpus erectus.* There were two other interesting plants in the tangle of vegetation just behind the beach. One was *Sarcostemma clausum*, a slender vine with an inflorescence of pretty white flowers of a shape similar to those of the milkweed, *Asclepias curassavica*, and the other was *Matalea viridiflora*, another vine, and one of the few plants with truly green flowers. Both are in the family *Asclpiadaceae.*

Lecture...From Page 2

was noted.

Professor Bacon suggested that we should focus our attention on protecting areas where biodiversity is the richest. Seven different types of biodiversity were discussed. He noted that, as naturalists, ideally, we should want a situation where all types of systems with their respective biodiversities are protected.

The floor was then opened to questions and discussions from the audience.

(*Momotus momota*), a tropical Mocking bird (*Mimus gilvus*) and something that sounded like a "Mountain dove" (most likely a White-tipped Dove - *Leptotila verreauxi*).

After lunch in lovely Charlotteville, we were all ready for a dip in Pirate's Bay. Unfortunately, the afternoon fun was disturbed by a nasty eel biting one of the Club members in the foot. She started to bleed profusely and had to be taken to the hospital in Scarborough where she received three injections as a safeguard against infection. Some people saw the eel and most likely it was the Spotted Moray (*Gymnothorax moringa*) which can grow to a length of 120 cm. The Spotted Moray is non-poisonous and all the medication worked, because the next day the recovering patient could be seen climbing hills again with great speed and vigour!!

The next day (Sunday) brought us to the Tobago Forest Reserve which is located on the way to Bloody Bay. This reserve is said to be the oldest protected rainforest in the western hemisphere (since 1765). It was the Englishman Stephen Hales who began researching the forest around 1765 and suggested to a British MP (Soame Jensyns), who was responsible for the development of Tobago at that time, to give the forest the status of 'protected area.'

We started our hike from the Forestry Division hut where we could see in the ocean the group of small islands referred to as the Sister's Rocks. We descended into the forest down a steep and slippery track, through the emerald green, lush vegetation. Near the creek a dense growth of *Heliconia bibai*, or Balisier (*Heliconia wagneriana*) could be found, all in full bloom. Although this forest was quite heavily hit by Hurricane Flora way back in 1963, there were not many signs of disturbance. Halfway down the trail we lost sight of it and started to follow a track which led us through an overgrown cocoa plantation. I didn't expect to see a lot of interesting things on this old cocoa plantation, but was proved to be very wrong in that! A Rufous-tailed Jacamar (*Galbula ruficauda*) posed for several minutes in front of us on a branch and we saw the hanging nests of the Crested Oropendola and the bird itself (*Psarocolius decumanus*), we heard members of the Woodcreeper (*Dendrocoloaptidae*) family and observed a small tree snake chasing a lizard high up in a cedar tree (*Cidrella odorata*). I was advised to stay far away from the stinging nettle and one of the members showed me a cocoa fruit, half eaten by hungry squirrels.
And of course there was the mysterious dead bird that was found on the road near the Forestry Division's hut. The bird looked liked a White-tailed Nightjar (*Caprimulgus cayennensis*) which some of the members also had spotted during their walks at night. If anybody is interested to find more about this dead bird, please contact Dan. He gave it a proper burial and took a GPS reading on the grave, so that it could be traced back easily in case further autopsy is required....

This very successful weekend was concluded with a lovely meal above the breaking waves of the Caribbean Sea in Jemma's Place, located in Speyside, with an almond tree (*Turminalia catappa*) growing inside her restaurant.

Thanks to the Field Naturalists for organizing such a wonderful trip!

Report on a Visit to the South-West Peninsula

by Krishanta Maharaj

Before joining the Field Naturalists' Club last year I never imagined getting out of my bed at 5 a.m. on a Sunday. After attending my first two field trips, however, I must admit that it was definitely worth it and I actually look forward to doing it again. This is in part attributed to the trip to Icacos and surrounding areas on April 28th which was related to Professor Kenny's lecture on coastal processes in Trinidad's South-West peninsula.

Coastal erosion, S.W. Peninsula Photo. K. Maharaj

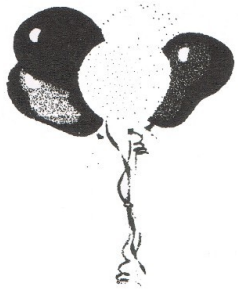
This was my first visit to the South-West of Trinidad and I was initially a bit skeptical about the length of the drive. I realized, however, that there was no need to be concerned as we stopped several times along the way to observe various features and different places of interest. One of our first stops was at the Pitch Lake in La Brea. Although we observed from a distance and did not actually approach the lake itself, I still found it fascinating. We then stopped further into La Brea to look at a sea wall constructed four years ago in an attempt to slow down erosion by the destructive waves in the area. The wall had become a bit distorted in some places where there were upwellings of pitch in the unstable ground. The pitch now acts as a barrier in these parts, protecting the wall from wave action. A member of the group also found a dead sting ray which was presented to us by Dan Jaggernauth and the specimen was kept to be added to the Club's collection.

From there we went to Point Fortin where we visited a bioremediation site. This area was involved in using anaerobic bacteria found in the soil to decompose hydrocarbons from various companies. We were quite fortunate meet a young woman overseeing proceedings at the site who was most willing to answer our questions. We then moved on to Clifton Hill beach where we observed the construction of a wall of interlocking concrete blocks. The project was being undertaken by Atlantic LNG, Phoenix Park and BP Amoco in an effort to ensure the integrity of their newly laid natural gas pipeline as well as to return use of the eroded beach to Point Fortin residents. From there we went to Cedros where we met other members of the Club, such as Sheldon and Juanita, who had spent the night in the area. At Cedros Bay we observed coastal deposition in the area, and then it was on to Icacos Point to get a first hand look at evidence of coastal erosion in the form of a house being undercut and destroyed by the powerful waves.

The trip culminated at Columbus Bay, where members of the group got an opportunity to enjoy a refreshing sea bath. We the junior members, however, decided to be more adventurous and decided to climb to the top of an arch we discovered while exploring the area. After reaching the top and marvelling at the view we were told that we were on unconsolidated sand that could collapse at any time - ah well! Soon after, we headed back home while some of the other members who still had some energy left decided to go on to Chatham. The trip was a great deal of fun and we thoroughly enjoyed ourselves, while at the same time gaining some valuable information relevant to our geography classes. We certainly look forward to our next field trip and would like to specially thank all the members of the Club for making us feel so welcome.

MANAGEMENT NOTES & NOTICES

108th ANNIVERSARY — MEMBERS ARE INVITED!!



Members are invited to attend the Formal Opening of our Natural History Resource Center and also Meet New Members as part of our 108th anniversary celebrations. The highlight will be an exhibition of the photography and paintings of Ray "The Devil Man" Johnson.

DATE: July 10th 1999
TIME: 4:00 p.m.
PLACE: #3 Keate Street, Port of Spain

PEAKE'S DISCOUNTS ON CAMPING GEAR

Remember to get your camping and hiking gear from Thomas Peake with up to 15% discount for Club members (with your membership card).

CORPORATE SPONSORSHIP NEEDED!!

We are still seeking sponsorship for the following publications

1. Native Trees of Trinidad and Tobago by Frankie Farrell and Victor Quesnel
2. The Palm Book of Trinidad and Tobago - including the Eastern Caribbean by Paul Comeau, Yasmin Comeau and Winston Johnson

FUND-RAISING DINNER & DANCE

GET YOUR TICKETS !!

DATE: October 3rd 1999
COST: $125.00
VENUE: Anchorage, Chaguaramas

Volunteers Needed. Contact Selwyn Gomes at 624-8017 (H)

REMINDERS!!!

⇒ **PAY YOUR 1999 MEMBERSHIP DUES!**
⇒ **BRING YOUR COLLECTIONS, ETC. FOR AUGUST MEMBERS' EVENING**

OVERSEAS TRIP TO ST VINCENT & THE GRENADINES - ALL SPACES TAKEN ITINERARY

Day 1 Bequia
Hike across the island to a Turtle Sanctuary
Day 2 Petit Nevis
Visit to a tiny whaling musuem and also to a whale station on the island of Petit Nevis
Day 3 Southern Grenadines
Participating in an environmental project with the Tobago Cays marine park due to be officially opened in November 1999
Day 4 Bequia
Visit to Princess Margaret Beach, Lower Bay
Day 5 St Vincent
Hike to Soufriere Active Volcano. Study on succession species
Day 6 St Vincent
Hike to the Parrot Sanctuary in the Vermont National Park
Day 7 St Vincent
Boat trip to the Waterfalls of Baleine
Day 8 St Vincent
Tour of the Marine OWIA Salt Ponds

NEWS, VIEWS

OPENING DAY - PLANNED PROGRAMME

4: 00 p.m.	National Anthem
4:05 p.m.	Welcome Address by the President of the TTFNC
4:15 p.m.	Founders of the TTFNC by Victor Quesnel
4:25 p.m.	History of the TTFNC by Ian Lambie
4:35 p.m.	Aranguez Junior Naturalists
4:40 p.m.	Future for the TTFNC by Carrall T. Alexander
5:00 p.m.	Ray Johnson by V. Quesnel
5:10 p.m.	Feature Address by the Environment Minister
5:20 p.m.	Vote of Thanks

OPEN HOUSE TO MEMBERS & INVITED GUESTS

JUNE LECTURER

The lecturer for the June Monthly Lecture was given by Christopher Starr due to the unavailability of Stanley Temple. The topic remained the same.The topic remained the same.

Thanks Chris for filling in, in such short notice!!

ON THE LIGHTER SIDE

Sign on a fence in the countryside: If you cross this field you had better do in 9.8 seconds. The bull can do it in 10 seconds. NO TRESPASSING

There are two ways to be clever. First, think of a bright remark in time to say it. Second, think of it in time not to say it.

A key chain is a gadget that allows us to lose several keys at the same time

ENVIRONMENTAL OUTREACH

The students of Aranguez Junior Secondary were taken on a visit to the Herbarium and to Chris Starr's Zoological Museum.Their next field trip will be to Arena Forest Reserve to practise what they learnt at the Herbarium.

BIRD JOURNAL

Anyone with interesting observations on birds please contact Courtenay Rooks (622-8826). Information is being sought for compilation of the Bird Journal by Richard ffrench and Courtenay Rooks.

CONDOLENCES

Our sympathy to the family & friends of Mr. Clyde Critchlow, a long-standing member of the TTFNC, who died on June 16th 1999.

NATURE WORD FIND

by Krishanta Maharaj

T A E B F N S O J U T C Y R T
F P C O N S E R V A B T N H N
I A O J L P Q H T U I M A P E
N W S F I R N I K S T L R G M
S I Y A T L B C R T F I O T N
E P S U R A B E E B N P L S O
E C T N H O V C C S J Q F I R
T G E A E I K B Y L Y B E N I
A L M C D N Y J C T A L S A V
N D Y O Q I S R L W O C U E N
A O I Z K D A N E C Z T E C E
M B S P N A L T W B P J R O O
E C A L P E R E D U C E J L S
C O N S E R V E I T N S F D K

WORDS: Conserve, Ecosystem, Environment, Fauna, Flora, Habitat, Biodiversity, Ocean, Manatee, Pawi, Reduce, Reuse, Recycle, Replace

Plant Data Collection Sheet
by Mike Oatham and Doreen Jodhan

This data form has been created to cater for both observational records of plants that need not be collected for identification, for example well known trees such as Mango, Samaan, Crappo, or Chaconia, or well known shrubs. But the form can also be used to take information on plants that can not be positively identified in the field, in which case a specimen should be taken for identification at the National Herbarium. Please see below for information about when a specimen should be collected.

Plant Data Collection Sheet **Site**_____

Date_____ **Sheet** ____ **of** ____

Specimen No.	Other Information/Comments
Common Name	
Scientific Name	
Collector	
Identification Information	**Location and Ecology Data**
Habit	Grid Reference
Leaf Arrangement	Phenology
Bark/Stem Colour	Canopy Closure
Bark/Stem Texture	Slope
Bark/Stem Exudate	Altitude
Flower Colour	

Notes on the Plant Data Collection Sheet

The plant data collection sheet is designed to give the collector a prompt for the information that should be collected when observing and/or collecting plants in the field. The data collector should endeavour to fill in as many of the spaces as possible for each observation made or specimen collected. Please refer to the notes on collection methods for plants (below) for information on how to collect a plant specimen and preserve it so it can be identified at the National Herbarium at U.W.I. and possibly added to the collection.

How to Fill in the Plant Data Collection Sheet

When Should an Observation be Made, and When Should a Specimen be Collected?
The general idea behind this sheet is to capture information that amateur naturalists or non-botanical scientists can easily collect in the field as part of their field activities. It is not expected that extraordinary lengths should be taken to obtain specimens that would conflict with the original purpose of the data collector's field excursion.
Two types of records can be taken;

(1) Known Plants: Observational records of plants that are known to the observer and can be reliably identified
(2) Unknown Plants: collection of specimens of plants which cannot be reliably identified

Cont'd on Page 7

In summary, observational records should be taken of all plant species that can be reliably identified by the observer and specimens should be collected of only those species that are flowering and/or fruiting, or are relatively common and cannot be reliably identified. Remember also that collections should only be made in appropriate areas and if you are on private land, in wildlife reserves or other controlled areas, collections should only be carried out if you have permission or you are in possession of the correct permits. Remember also that over collecting of some plants (for example orchids or ferns) can lead to their extirpation from an area or even from Trinidad. So always be responsible when collecting and do not unnecessarily collect or damage plants while collecting.

What to Do with the Data Sheet and Specimens

The specimens collected as well as the data sheet should be deposited either with Doreen Jodhan or Winston Johnson at the National Herbarium (tel. 645 3509) or with Mike Oatham in the Dept. of Life Sciences U.W.I. (Tel. 645 3232 ext 3088).

What to Record Under each Heading

Site and Date: Date is the date on which the plant is observed/collected. Site is the name of the general geographical location of where the specimen/observation was collected. For example site may be "Matura" or "Sans Souci River". Basically site is the name that the club has used to promote the field trip. A more precise location is given for each observation under Grid Reference.

Common Name and Scientific Name: This heading allows the collector to record a name for the species that is being recorded. If the species is known, a definite name, preferably a scientific name, can be entered. If a scientific name is not known then a common name can be entered. If the species is not known and a specimen has been taken for identification, a nickname can be entered which will be corrected later when the specimen has been identified. A scientific name will be added once the specimen has been identified.

Specimen Number: This section should be completed for all observations and all specimens collected for identification. On each field trip or research program each specimen or observation should have a unique number or combination of letters and numbers. The unique number must be entered on the data sheet and in the case of collected specimens, written on the newspaper that contains the plant specimen. Care must be taken in this area as it is very easy to mix up specimens by giving them the same number or putting the wrong number down on the record sheet. Every botanist has experienced the frustration of incorrectly labeled specimens at some time or another. Species Numbers should be given to observational records even where no specimen is collected.

Grid Reference: A precise location of where the record and specimen were taken is vital for plant distribution studies. This is distinct from Site, which is the general area in which the specimen was collected or the observation made. A location adds immeasurably to the value of the record.
The more precise the location data the better. Ideally the field trip should include a Global Positioning System (GPS) unit. These handy little devices use satellites to give a grid or latitude/longitude position of where you are standing at the time the record was taken. If the Club/ Expedition does not have access to one, it is suggested they investigate getting hold of one. The next best thing to a GPS fix is a

Trinidad and Tobago Field Naturalists' Club
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MARK YOUR CALENDAR!!

July 11	TTFNC Headquarters Opening
August 6-13	Overseas Trip - St Vincent & the Grenadines
October 3	TTFNC Fund-Raising Dinner
October 6	World Habitat Day
October 16	World Food Day

FROM THE EDITOR'S DESK :
THE SUCCESS OF THE BULLETIN DEPENDS ON YOUR ARTICLES & SUBMISSIONS!!

From Page 9

grid reference read off the 1:25000 topographic maps available from the Dept of Lands and Surveys in Port of Spain. Inevitably navigation error creeps in so this location is not as accurate as the GPS fix. The third type of location is descriptive, for example "2km up river from the Marianne River Bridge". The vagueness of this type of location is fairly obvious but if it is the only location available please record it. Please indicate on the record sheet which method was used to get a location.

Phenology: Phenology is the study of the fruiting, flowering and changing of leaves of plants. In Trinidad to date only a general idea of the phenological timing of the more common plant species is known. Any new data is valuable particularly in these days of global climate change. Phenology of plants is also very important as it is through fruit and flowers that plants mainly provide food for animals. Under this heading the observer should record whether the plant species has fruit (nuts, pods, fleshy fruit etc...), flowers (record if any animals are visiting them in the Other Information/Comments section) and finally what state the leaves of the plant are in (is the plant leafless, does it have new leaves and are all individuals of the same species the same?)

Editor's Note: This article will continue in the next issue. Eager botanists can contact Mike or Doreen (see inside) for the complete version.