THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

4th Quarter 1999 - 1st Quarter 2000 No. 04/99-01/00

LECTURES/ FIELD TRIPS

09 March - Environmental Impact of Quarries by Carrall Alexander

26 March - Valencia Wildlife Sanctuary

INSIDE

GROUPS REPORT AT THE ANNUAL GENERAL MEETING

Publications Committee

By Laurent De Verteuil

During 1999 the main focus of the Publications Coordinator was to effect publication of the Native Trees book, written by Victor Quesnel and Frankie Farrell. A proposal seeking funding was submittted to BP Amoco and was favorably received. Following some negotiations TTFNC received a grant of $50,000.00 from BP Amoco towards publication of the 'Tree' book. Some of this money is dedicated to the promotion of the book following production. As is known, the French Embassy had previously given the Club a grant of $15,480.00. The Club itself is putting $10,000.00 direct funding toward this project.

- 2500 copies will be printed, with 100 reserved for promotion and spoilage
- As part of the agreement with BP Amoco, 1000 copies will be jointly donated to schools and other institutions by BP Amoco and TTFNC
- TTFNC will market and distribute the book
- 1400 copies will be sold at $75.00 each
- Proceeds from the sale of the book will be put into a new Publication Fund, that will be used to finance additional publication projects, including the Living World Journal.
- BP Amoco will be acknowledged as a funding donor to the Publication Fund.

At the beginning of 1999, three other book projects were being considered: The Palm book, The Blue Box 3R book and a new edition of the Trail Guide.

The Palm Book of Trinidad and Tobago – including the Eastern Caribbean, is by Paul L. Comeau, Yasmin S.

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Tropical Dry Forests of St Lucia, West Indies: Vegetation and Soil Properties by Otto J. Gonzalez and Donald R. Zak

Reprint of an Abstract published in Biotropica 28: 618-26, 1996 by the above authors from the University of Michigan, Ann Arbor, Michigan, USA.

The following abstract was submitted by Christopher K. Starr, UWI. St Augustine.

ABSTRACT:
The tropical dry forest life zone of St Lucia is largely covered by scrub forest characterized by a short canopy and a large number of small-diameter trees. However, it is unclear whether these short-stature forests result from edaphic properties that limit the development of taller-stature dry forest or result from the repeated harvest of wood. To investigate the influence of edaphic properties on forest composition and structure, we sampled 21 stands within the dry forest life zone of St. Lucia. Mean canopy height in the scrub forest was 4 m and stands contained an average of 39,407 stems ha^{-1}; 96 percent of those stems were < or equal to 5cm in diameter. Mean basal area in the scrub forest (stems > or equal to 1.0 cm DBH) was 15 m^2 ha^{-1}, 62 percent of which consisted of stems < or equal to 5 cm in diameter. *Guettarda scabra* (*Rubiaceae*) and Croton spp. (*Euphorbiaceae*) were the most common species. Soil organic C averaged 3.2 percent, potential net N mineralization was 1.49 µg N g^{-1} d^{-1}, and potential net nitrification was 1.61 µg NO_3^- N g^{-1} d^{-1}. Concentrations of available P ranged from 1 to 3 mg kg^{-1}. We found no relationship between vegetation and soil properties in the scrub forest of St. Lucia. Moreover, most soil properties in the short-stature scrub forest did not significantly differ from those of relatively undisturbed tropical dry forest in our study area, even though overstory composition and structure differed dramatically. Rates of net N mineralization in the scrub forest were 57 percent of those in relatively undisturbed dry forest; that difference was significant. The similarity of soil properties between short-stature scrub forest and relatively undisturbed dry forest suggest that repeated disturbance, rather than edaphic properties, is a major influence on forest composition and structure within the dry forest zone of St Lucia.

COMMENT FROM CHRIS STARR: These results appear to have broad applicability in the drier islands of the Caribbean, including most of the Lesser Antilles.

Editors
Calista Pierre & Rupert Mends

The TTFNC is a non-profit, non-governmental organisation.

OUR MISSION
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.

A Peculiar Concentration of Honey Bees

By
Christopher K. Starr
(UWI, St. Augustine)

There are two ways to go from the Carenage area of St Georges, Grenada to the other low-lying part of downtown, the market district. It is more scenic to walk up and over the ridge that separates the two, by any of several roads. It is simpler and quicker to go through the Sendall Tunnel.

The tunnel, built in 1894, is roughly 100 m long. At each end, the month of the tunnel is topped by a stone retaining wall that also extends for a way along each side away from the mouth. In January of this year, I noticed a mass of honey bees flying about in the area just above the tunnel mouth on the market side. It had the look of a swarm in preparation, but I could see no clustered mass of bees on the vegetation or any part of the stone wall. What I did find, after some looking, was an active colony in a cavity of the wall. Then I found more.

The three parts of the retaining wall at that end have a total of 49 rectangular cavities built into them, evidently for drainage of water behind the wall. These cavities are each about 20 cm high by 15 cm wide. Above each of three such cavities we could see gray ruins of the typical parallel nest combs of honey bees. It seems likely that these cavities had been occupied by especially successful colonies that had had to extend their combs out of the limited cavities and onto the wall above. In seven other cavities we could see active combs, with many bees on them, apparently healthy colonies. And we could plainly see bees flying in and out of two other cavities that must have harboured active colonies deeper inside.

The walls at the other end of the tunnel has 48 such cavities, none with any evident honey bees nesting in them. This most likely has to do with the prevailing winds, which are such that the market end of the tunnel is on the lee side of the ridge. Persistent and heavy winds are a serious problem for honey bees, as for other flying insects, and it is standard practice to locate bee yards in sheltered situations. In addition, the retaining wall is somewhat thinner at the Carenage end, so that the available cavities must be smaller on average.

How, then, can we account for this concentration of at least nine active honey bees colonies in a single place, with evidence of a longer history of occupation? We can begin by setting aside two hypotheses.

First, it is safe to suppose that the neighbouring colonies did not constitute in some way a federation or super-colony. Experiments in introducing individual bees from one colony to the entrance area of another would almost certainly show the guard bees just as vigilant against the intruders as if they came from kilometres or even thousands of kilometres away. And in the absence of such intrusion, the presence of other colonies within just a few metres is certainly irrelevant to the bees.

Second, we can safely exclude any suggestion that the immediate vicinity was especially rich in food resources. Just above the wall at each end is a nice patch of coral-vine (*Antigonon leptopus*), a favourite foliage plant of this and many other bees, but it is far from enough to sustain even one colony. Furthermore, honey bees have little reason to nest in close proximity to food sources. They are strong fliers, and a colony's foraging area typically covers several square kilometres, in which the members monitor the day-to-day state of a great many patches of flowering plants.

Honey Bees...from page 3

The first explanation for our observations is evidently just that there is an unusual concentration of suitable nesting sites in a generally favourable locality. There was no nesting in the lower two rows of cavities, within reach of people passing by, and the upper cavities were probably among the few undisturbed nesting sites in the area.

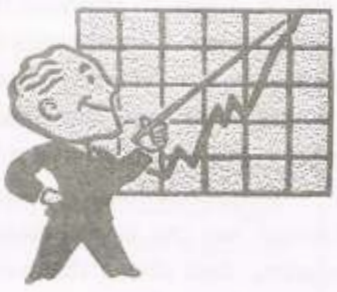
The other factors seem relevant. First, when a honey-bee colony dies out or abandons a nest site for whatever reason, at least remnants of its wax combs remain. It has been shown that, when they are searching for a new nest site, honey bees prefer one that has been utilised before. Accordingly, if a set of potential sites such as those at the mouth of the Sendall Tunnel comes to be favoured during one year, it will have a greater chance of being favoured in succeeding years.

Second, let us return to those three past colonies that outgrew their nesting cavities. One important factor in stimulating the process of swarming — by which a healthy colony divides into two smaller colonies, one of which flies off to occupy a new site — is crowding. Beekeepers know that their colonies are more likely to swarm if their hives are too small. If one of the Sendall Tunnel cavities has no silting or growth of roots into it, the available volume for nesting will be about 20cm x 15 cm x 100cm or 30 litres. This is a respectable space, but by no means grandiose of honey bees, and it seems unlikely that many of the cavities are that large. If most are small, the rate of swarming will be relatively high. A swarm in search of a new site is not obliged to choose one far away from the original site, and in this case many may find it convenient to nest just a few metres away from their former estimates.

Honey bees almost never sting except in defense of the home colony, so that the Sendall Tunnel colonies pose no threat and will presumably be left undisturbed. It will be interesting to see whether this concentration remains for years to come.
□

INCREASE IN MEMBERSHIP FEES

At the recent Annual General Meeting the majority of members accepted a proposal to increase membership and entrance fees. The following are the new fees which went into effect from January 2000:



Entrance fee : $30.00
Membership fees:
Ordinary member: $50.00 per annum
Junior member: $20.00 per annum
Life membership: $500.00

REMEMBER : YOUR MEMBERSHIP FEE FOR THE YEAR 2000 ARE NOW DUE!

LETTER TO THE EDITOR

December 13 1999

THE EDITOR, FIELD NATURALIST

If this is not a hiking club then what is it?

People are attracted to the Field Naturalists'Club for many reasons. I often wondered what attracted me to the club. After an almost two year absence from the club's activities I found myself being drawn back again.

I used to have awful guilt feelings when one of the elders would remind no one in particular that it was not a hikers club. Members in the club are drawn to the various interest groups: birding, botany, geology, etc. The penny dropped on Sunday at the Christmas luncheon at Simla estate when I looked around and saw the different variety of humankind gathered in the middle of the forest. All shapes and sizes but more importantly each a unique and interesting individual. I looked around and realized this is what I missed. Not just any humankind but just those that for whatever reason are members of the TTFNC. It would be quite impolite of me to even imply that some of them should be certified and kept in a padded cell so I most certainly will not do that. There are some members, once you get them talking are walking encyclopedias of information. One of my personal favorites is the insect man. I always look out for him. I enjoy observing him in full flight spewing venom at anyone who manages to incur his wrath. Which is a small price to pay for the benefit of his company and knowledge. This individual is unable to disguise his displeasure and is probably the most brutally honest in the group. In my non-scientific opinion he is quite a harmless and valuable member. The TV review man is another unique character pouncing around in his sleeveless tops and shorts. No two of the females in this group are similar, each a diamond in the rough and not so rough. I could mention some of my favorites but they may not be as thick-skinned as the insect man.

While waiting for lunch I read some of Dr Beebe's Jungle book writings. If ever I needed a serious reason for going on field trips with TTFNC I found it in the following words:

"One thing is certain, no one can walk for long through a jungle and remain conceited. Exactly as an ant creeps over the ground in a field of grain three feet in height, so we must trudge slowly and silently in dim cool shadows of these great growths, listening to the strange sounds, sniffing odours from unknown sources. I know of no better cure for human vanity."

Natura maxime miranda in minimis. Thank you for a delightful Christmas lunch with special thanks to the parang serenadas led by Phillippe and Glen. Happy New Year.

Leonard Chan Chow

MANAGEMENT NOTES & NOTICES

EDITORS' NOTE

We wish to apologise to members for the long delay in the publication of the quarterly bulletin. We hope that this bumper issue would make up for the delay.

We remind members that their reports and articles provide the main content of the bulletin. With Christmas and Carnival seasons over, we look forward to receiving your submissions. E-mail articles to the editor at meei@wow.net or send them by regular mail to: Calista Pierre, 30 St Lucien Road, Diego Martin, Trinidad and Tobago.

DISCOUNT ON PHOTOGRAPHIC SUPPLIES

J.N. Harriman & Co. is offering members of the TTFNC 10% discount on photographic supplies at its Tobago, San Fernando and Port of Spain branches.

LIFE MEMBERSHIP

Nora Jones has been awarded life membership for her work in cataloguing the Club's materials and her contributions of a computer, computer accessories and books to the TTFNC.

2000/2001 Lectures/Field Trips

The agenda is being prepared and will be published in the next issue of the quarterly bulletin.

TTFNC SEEKS A HOME

You will no doubt recall the joy that members felt in July 1999 when the Trinidad and Tobago Field Naturalists' Club opened its offices at #3 Keate Street, Port of Spain, after 108 years of using the homes of members and facilities of other organizations to hold management meetings and to store our books, exhibits and equipment. This joy has proved to be short-lived, as the owners of the above premises have asked all tenants to vacate the building.

Undaunted by this setback, the Management Committee of the TTFNC, led by its President, Mr. Carrall Alexander, has once again begun to seek accommodation for the TTFNC. Their efforts, thus far, have been unsuccessful.

The Management Committee welcomes any suggestions, ideas or offers regarding alternative accommodation for the Club.

ANNOUNCING PUBLICATION OF A NEW RAPTOR JOURNAL

INTERNATIONAL HAWKWATCHER

(ISSN 1527-0319)

FREQUENCY: ONCE OR TWICE A YEAR PRICE: US$12.50
COVERAGE: WORLDWIDE TOPICS: HAWK MIGRATION, ROOSTING, FEEDING & MORE...
PUBLISHER: DONALD S. HEINTZELMAN EMAIL: dsh@early.com
ADDRESS: 629 Green St. Allentown, PA 18102, USA.

Seeking concisely written, short notes about odd or unusual raptor activities or behavior that deserve to be published but would not normally be accepted in major ornithological journals.

MANUSCRIPT PREPARATION GUIDELINES

- All articles and short notes must contain original, previously unpublished raptor observations. Previously unpublished reviews of raptor behavior, situations, etc. also will be considered.
- Enclose a self-addressed, stamped envelope so manuscripts not accepted can be returned to the author.
- All manuscripts must be done on a computer word processor, or typewriter.
- Use continental dating, such as 5 May 1999
- If possible, include appropriate literature citations within the manuscript, using the following style: "The eagle was adult (Jones, 1975)" or "Miller (1975) stated the eagle was an adult."
- Double space and submit two (2) printout copies of the manuscript. If possible, also submit the manuscript on a 3.5 inch PC disk using MS Works. Check with the author first.
- Avoid complicated tables and graphs, but submit high quality camera ready printouts of all absolutely necessary tables and graphs. Single space lines in tables.
- Photographs can not be used.
- Use the following style to list sources in the Literature Cited section.

Heintzelman, Donald S.
1979a A Guide to Hawk Watching in North America. Keystone Books (Penn State University Press), University Park,PA.
1979b Hawks and Owls of North America. Universe Books, New York, NY.
1981 Diurnal Raptors in Amazonia. Explorers Journal, 59 (3): 122-123.
1986 The Migrations of Hawks. Indiana University Press, Bloomington, IN
Heintzelman, Donald S. and Robert MacCray.
1974 Turkey Vultures Thermal Soaring into Opaque Clouds. Auk, 91:849.
Heintzelman, Donald S. and Alexander C. Nagy.
1968 Clutch Sizes, Hatchability Rates, and Sex Ratios of Sparrow Hawks in Eastern Pennsylvania. Wilson Bulletin, 80:306-311.

- Retain a printout and hard drive copy of the manuscript for your permanent records.
- Be sure to include the complete mailing address for author(s) at the end of the manuscript.
- A small page charge (a few dollars) will be required from each author for all manuscripts accepted for publication. This is necessary to help pay printing costs.
- Write or email an inquiry before sending a manuscript to determine suitability.
- Mail all requested manuscripts to the publisher.

Cont'd from Page 1

Comeau and Winston Johnson. Paul Comeau has succeeded in raising funding for this project and is publishing it without further direct involvement by TTFNC.

In April, a proposal for funding for the Blue Box book was submitted to the Canada Fund. Ms. Brown, the fund's coordinator, wrote back asking for additional information and urging us to focus the project further. After some discussions within the club, it was decided that this project lacked the momentum needed to be carried further. Our funding request to the Canada Fund was withdrawn.

A new revised edition of the club's *Trail Guide* is very high on the list of priorities for publications. During 1999, some progress was made towards systematically revising and checking trails that have changed significantly since the publication of the first edition. Unfortunately, more such work needs to be completed, and the book's manuscript and maps revised, for the new edition to become reality. Sheldon Edwards and Louis Guy are together coordinating this effort.

The Living World Journal is healthy and a new issue was prepared during the year. The Journal's Editorial Board have prepared a separate report in this regard, as has the Editor of the Bulletin.

During the coming year, Laurent De Verteuil will use the momentum of the Tree Book launch to raise more dedicated project money for club publications, and will pursue the Trail Guide and additional book projects.

Botany Group

By Laurent De Verteuil

The botany group was spectacularly inactive during 1999. For the second year running, no general field trips to plant habitats were organized for the membership. This sad truth was only slightly offset by a minor research thrust on the ongoing Hollis Mapping Project. Three visits to the Hollis Reservoir field site were made during the year. During one visit, Glenn Wilkes' surveying equipment was tested, with limited success, as a means of quickly and accurately locating trees in the grid. This method still looks very promising and will be tried again. Completion of the tree inventory in the Hollis grid is still some way off, and Mike and Laurent plan to continue this project over the long term as time permits. Of course, when they do make field visits, naturalists and UWI students will be welcome and are invited to participate.

In the meantime, however, it seems clear that more field trips of a general nature need to be organized (as happens in the Bird Group). Recognizing that things are falling through the cracks, Laurent intends to step aside as " Leader of the Botany Group" and concentrate on publications, his estate, and getting something done in Hollis. He is pleased to note, however, that a most able replacement has been found in the person of Nicholla Johnson, a member of botanical bent who will be known to many. Nicholla hopes to engage the help of Botany Group types to organize 3 or 4 trips this year. During at least some of these trips, the utility and "look and feel" of the Plant Data Collection Sheet system, developed and presented to members last year by Mike and Doreen, will be field tested.

A PICTORIAL REVIEW OF SOME 1999 EVENTS

Victor Quesnel gives botany lessons: North Oropouche Field Trip : July 25 1999

Photo: Dan Jaggernauth

TTFNC Members at Fort Charlotte 600 ft. above Kingstown, Trip to St Vincent & the Grenadines : August 1999.

Photo: Selwyn Gomes

Jack and Nora Jones present the President of the TTFNC with a computer, printer and office equipment and stationery : September 1999.

Photo: Selwyn Gomes

Trinidad and Tobago Field Naturalists' Club
P.O. Box 642, Port of Spain, Trinidad and Tobago

2000 MANAGEMENT COMMITTEE

The following are the members of the 2000 Management Committee of the TTFNC elected at its Annual General Meeting held on January 131999 at St Mary's College, Frederick Street Port of Spain.

President :	Carrall Alexander	Vice-President :	Nigel Gains
Secretary :	Anna Griffith	Asst Secretary :	Cheryl Lee Kim
Treasurer :	Selwyn Gomes	Member :	Sheldon Edwards
Member :	Dan Jaggernauth	Member :	Krishanta Maharaj

NATURE WORD FIND

by Krishanta Maharaj

B	R	A	D	N	O	C	A	N	A	F	P	R	N	O	F
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G	V	X	T	P	E	O	K	A	P	A	U	Y	L	Y	L
E	L	P	U	E	K	X	E	V	U	N	D	U	B	A	E
Y	E	K	N	O	M	N	I	H	C	U	P	A	C	E	D

ENDANGERED ANIMALS

Blue and Gold Macaw	Pawi
Scarlet Ibis	Caiman
Manatee	Golden Tree Frog
Ocelot	Capuchin Monkey
Anaconda	Leatherback Turtle