THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

April – June 2007 **No. 2/2007**

A Note On Cigales And Their Songs

Victor C. Quesnel

Paperback books first appeared in Trinidad in the early 1940s. Among them was "Social Life in the Insect World" by Jean Henri Fabre, an entomologist living in the south of France. I believe I am right in saying that I paid two shillings and six pence (60 cents) for it although this is not written in the book, which I still have. The first chapter is titled "The Fable of the Cigale and the Ant" and it is followed by three more chapters on the life cycle of the common European cigale and the mechanism by which it produces its song.

The book was published in 1943 and I probably acquired my copy that same year at age 17 or 18 when I was a student of biology at St. Mary's College. I read these chapters avidly, as I did the rest of the book, and on a holiday at Monos a short time later was lucky enough to find a dead cigale. I dissected it and found that I could distinguish the sound-making organs exactly as Fabre had described them, though I must have had a different species.

Forty-two years later, after coming to live in Talparo, cigales re-entered my life. There were so many cigale songs here in the country I just could not ignore them, so I decided to match the songs with the species singing them. It has proved to be the most difficult study I have ever attempted for it is seldom easy to catch a cigale in the act of singing. I now have a small collection of about 12 species and 22 years' worth of records of their singing. I know the songs of two identified species and I have specimens of two other species caught while singing. At some future date I'll get all my specimens identified and write up the results as best I can.

Since to start with I knew the names of none of them I invented names for the songs or songsters so I could keep records. The following seven have been heard regularly during the past month of April: the siren, the loud buzz-pip, the soft buzz-pip, the stutterer, the long sigh, pee-ur, srr-srr-srr-srr. The siren is the loudest song and the one referred to when people say that the cigales are "calling the rain". It is the song of *Quesada gigas*, our largest cigale. The other song that can be loud and irritating is the long sigh. It starts with a series of "pips", quickening as they go along, then changes gear and becomes a penetrating high-pitched whistle. I have specimens of this fellow caught in the act so in time I will get a scientific name for him. Almost certainly cigales are not "calling the rain"

IN THIS ISSUE

when then sing but the purpose of the song is as yet unknown. The fact that only the males sing indicates a sexual function, but what is it? Even Fabre was stumped by this.

I hear all these songs every year. One tiny cigale that I have called Six O'Clock Cigale because I've heard it sing only near dusk hasn't been heard for years. Is it a periodic cigale like the seventeen-year periodic cicada of California in the USA, or have I simply overlooked it?

The following is the report from the Bug Group that was submitted by Chris Starr for the AGM. It was unfortunately omitted from the last issue (1st Quarter 2007).

The Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

March – June 2007

Editor……..…….. Reg Potter
Assistant Editor…….
Field Trip reports …….. Christopher Starr, Michele Lee, Esperanza Luengo, Robert Martinez, Feroze Omardeen
Contributors……Ian Lambie, Chris Starr, Elisha Tickasingh
Photographs…… Esperanza Luengo
Design & Layout…… Reg Potter

The Trinidad and Tobago Field Naturalists' Club is a non-profit, non-governmental organisation.

Management Committee, 2007-2008

President…. Reginald Potter (694-1160); Vice-President… Carrall Alexander (633-3373); Secretary….Shane Ballah (796-3335); Assistant Secretary…Paul Budgen (484-0373); Treasurer…...Selwyn Gomes (624-8017);
Committee Members...Dan Jaggernauth (659-2795); Alyssa Gomes 799-4087); Paula Smith (633-0697).

Website: http://www.wow.net/ttfnc
Contact: The Secretary, TTFNC c/o P.O. Box 642, Port of Spain. Email: ttfnc@wow.net

MISSION STATEMENT
To foster education and knowledge on natural history and to encourage and promote activities that lead to the appreciation, preservation and conservation of our natural heritage.

The Bug Group

Dr. Christopher Starr

As all naturalists are aware, the Arthropoda are by far the largest phylum of animals. At present, insects account for about half of all known species of organisms, and there is reason to think that the true fraction is even somewhat higher. My own calculations suggest that the number of species of land arthropods – i.e. insects, with the arachnids and myriapods thrown in as a lagniappe – present in Trinidad & Tobago is somewhere between 80 and 400 thousand, a majority of them undescribed. Plainly, then, the land arthropods offer a rich field for exploration in these islands.

The Club has long regretted that it does not include a special-interest group around land arthropods to stand alongside the well established Bird and Botany groups. Some while ago, Shane Ballah, Victor Quesnel & I agreed that such a group is, indeed, called for. After considerable dithering, we finally sat down at yesterday's wonderful social day above Maracas Bay and decided on the form and direction of the group in its initial period. Accordingly, you may record 10 December 2006 as the date of foundation of the Club's Bug Group. The name is chosen for alliteration with the Bird and Botany Groups and in hopes that we will enjoy longevity and success commensurate with theirs. "Bug" is a perfectly respectable common-speech synonym of "land arthropod". At our request, Margaret Cooper took a photo of the Founding Trio,

together with our esteemed friend Lester Doodnath, which we hope will find its way into the Club's archive.

The Bug Group does not have articles of foundation or a constitution, nor do we envision that it shall, but we do have a nascent plan. Central to this is the idea that the group will do much better if it has a project, something to engage part of our attention during every field trip, with definite results expected. We have not yet settled on project, but during our first field trips we expect to be especially alert to a) mud-nesting solitary wasps, and b) plants with extra-floral nectaries (EFNs). The latter are most readily recognised in the field by the presence of ants in a particular posture, and it is the present consensus that EFNs are maintained by natural selection for ants that guard the plant against herbivorous insects.

It is too early to decide how many field trips the Bug Group will undertake per year. However, our preliminary schedule calls for trips on the Sunday following the monthly meeting during some months, probably excluding any month in which the Botany Group has a trip on that same weekend. The first trip will be to Aripo Savanna 5 on Sunday 14 January 2007. Those with a serious interest in bugs are cordially invited to join us. Meet by the south entrance of UWI near the highway at 06:30. If you need a ride, it is suggested that you contact me at 662-2002 ext 3096 of Shane T. Ballah at 796-3335.

The second trip, which we expect to undertake in either February or march, will be to a forested area in north or central Trinidad.

FIELD TRIP REPORTS

Bug Group Trip To The Arena Forest – January 14th 2007

Dr. Christopher Starr

After long delay, the Bug Group was established at the Club's year-end party last December, with founding members Shane Ballah, Victor Quesnel and Christopher Starr. We selected two initial foci that we hope can lead to collective research projects: a) mud-nesting solitary wasps, and b) plants with extra-floral nectaries.

On Sunday 14 January the Bug Group made its first field trip, to the Arena Forest in central Trinidad. The three founders were joined by ant specialists Vladilen Kipyatkov & Elena Lopatina of Russia, Erik Egerer of Austria, Feroze Omardeen, and Club stalwart Jalaludin Khan. Starting near the old Forestry building, we undertook a long ramble to Balata Trace and back by a different route.

My own first task of the trip was to acquaint Vladilen & Elena with timite, *Ischnosiphon arouma*. It was in dead leaves of this plant that JoAnne Sewlal and I had found two colonies of *Dolichoderus attelaboides* (*Living World* 2004:20-21), and this seemed like a good way for them to find colonies of this ant for their own experiments. Then I showed them a nest of another ant, *Anochetus emarginatus*, which is typically closed with leaflets from the abundant tree *Pentaclethra macroloba* (Dempewolf et al., *Living World* 2004 Suppl.:23-24). Experience has shown that one has a much easier time finding something if one has seen it before and has a search image of it.

find with respect to the group's other foci, extra-floral nectaries.

As the name suggests, extra-floral nectaries (EFNs) are nectar-producing organs on outside of the flowers. They are found in a broad variety of flowering plants, and there have been several ideas about general function. Because of their position, they plainly do not serve to attract pollinators, as floral nectaries do. The most generally accepted hypothesis is that, in attracting ants, they gain protectors against herbivorous insects and other animals. Shane's MPhil thesis dealt with the form and function of EFNs in the common forest balisier *Heliconia hirsuta*. Another common plant in which this phenomenon is readily observed is the wild ginger *Costus scaber*.

On one *Irlbachia alata* (Gentianaceae) plant, we noticed ants under the bases of leaf petioles. They were motionless, their mouthparts and antennal tips pressed to the plant surface. Even if no nectary is visible, this is a good indication that the ants are taking up droplets of nectar. In the course of our walk (not a hike, far from it, on the easy trails of Arena) we came upon several more *I. alata* plants, and in most cases we found ants in the same indicative posture.

The Bug Group seems to have been blessed with a promising start.

Birding Group Trip to Caroni Swamp – April 14th 2007.

Michelle Lee

The scheduled meeting time was 3:30 p.m. at the Caroni Swamp visitor's facility. By 4 p.m., participants comprising of 34 adults and 3 children were gathered and asked to board a 40 seater vessel captained by Shawn Madoo. At 4:15 p.m. we departed the facility and headed west on the Number 9 Drain also called the Blue River. Pausing for a brief welcome to the swamp and a bit of its history, Madoo then went on to describe the foliage lining the channel which mainly consisted of red (*Rhizophora mangle*), black (*Avicenna germinans*) and white (*Laguncularia racemosa*) mangrove trees. He also gave us an idea of what birds and reptiles we could expect on the trip.

The occasional Carib Grackle and Rudy Ground Dove flew overhead and then to the delight of the group, mere minutes in to the trip, high in the canopy on either side appeared beautiful Scarlet Ibis (*Eudocimus rubber*). As far as our eyes could see, fallen trees lined the channel on either side. When asked about it, Madoo informed us that the Ministry of Works and Transport Drainage Division cleared some of the trees to widen the channel in an attempt to aid access and improve vision. A noted visual improvement but one wonders what level of damage was done to facilitate human comfort. In their exercise, the Ministry also dredged certain parts of the river.

A partly hidden shy Two Toed Sloth also known as the Silky Ant Eater or the Poor-me-one was perched roughly fifteen feet above the water in a tree. A few meters down stream, a magnificently camouflaged female Common Potoo (*Nyctibius griseus*) sat motionless at the top of a dried stump, guarding her eggs. As we were about to veer left in to the North South Drain, two Green Throated Mango hummingbirds (which are indigenous to the swamp) were seen preening their feathers on a dry branch way above us. As most looked up at them others spotted a Striated Herron scurrying away on some nearby exposed roots as the boat approached.

The North South Drain produced Little Blue Herons, a Bicolored Conebill, a lone Anhinga commonly called the Snake Bird or Snake Duck and two Crested Oropendolas or yellow tails. We then went on to the Number Four Drain and Madoo scanned the trees for a recently seen Cooks Tree Boa also called the Cascabell but to no avail. In an area of the swamp called Nancy we saw Yellow Crowned Night Herons and in the nearby Bubble Hole area, Tricolored Herons and Snowy Egrets.

At 5:20 p.m. Madoo anchored the boat alongside four others and we sat waiting silently and patiently for the arrival of the Scarlet Ibis at their current highest populated roosting site in the swamp. A lone Osprey surveyed the area looking for dinner as migratory Neotropic Comerants flew in to roost. At 5:35 p.m., a spectacular show began. Flock after flock of Scarlet Ibis comprising of dull coloured juveniles to brilliantly coloured adults flew overhead; others skimmed the water and some made grand entries from up high. Within minutes the roosting area looked like a Christmas tree adorned with red lights. Other sightings here included Greater and Lesser Yellowlegs Sandpipers, Great Egrets, Semipalmated Plovers and Wilson Plovers.

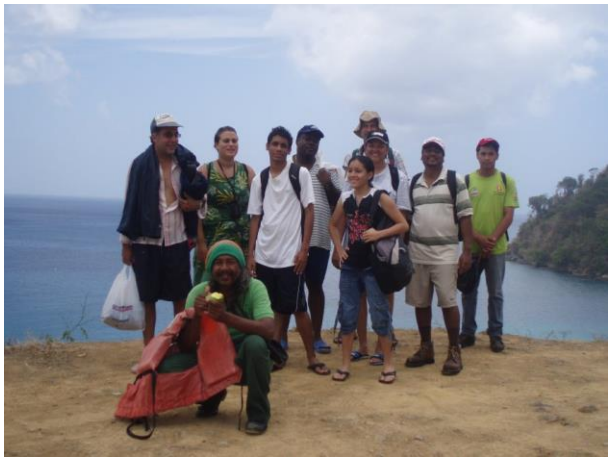
At 6:15 p.m. Madoo decided to head back to the visitors facility to avoid the onslaught of bugs. As if to bid us farewell, a solitary Cooks Tree Boa was seen tightly wrapped around a branch suspended over the water just minutes away from the facility. As the boat pulled in to the facility and we disembarked, "bug group specimens" were quite active. Despite that, attendees thanked young Captain Madoo and then bid each other farewell.

6:41 p.m. marked the end of another enjoyable and successful birding trip

Tobago - May 5 - 6, 2007

Esperanza Luengo

On Friday May 4th a group of nine international members (Dan, Darren, Edmun, Graham, Komi, Sharon, Alyssa, Esperanza, María) gathered at the POS Port terminal to board the Trinidad and Tobago Express. We left at “Trini” time (any time after the departure time), and after two hours and a half of rocking passage we reached Tobago at 9.20pm. Selwyn and Stephen were waiting for us with three rental cars. After some practical food resuscitation we headed for Charlotteville with a waning moon leading our way. The temperature must have been high not only because we saw a bush fire at the back of Dwight York Stadium, but also a fight between two drivers. We arrived at Man O´War Cottages after midnight.



The Group

On Saturday morning Damian joined the group, and at about 9 a.m we left Charlotteville heading towards Bloody Bay River along the L´Anse Fourmi (which means The Bay of the Ant , we wonder why) new road. The dry season showed its impact in the burnt roadside, the dry bamboo shoots, and at the 35 km sign on the left we saw a drying waterfall.

We drove past Hermitage Bay on the right and

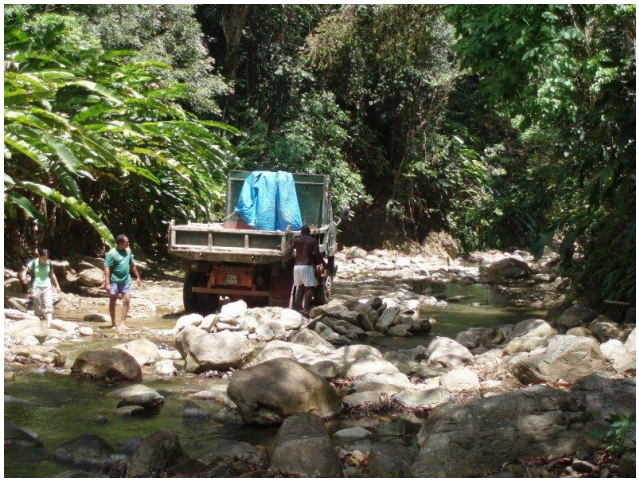
Sisters Rocks could be seen in the distance. Higher up the slope on the left was the Main Ridge Forest Reserve, the Western Hemisphere's oldest protected Forest Reserve, established in the 1760s, shortly after the island fell under the British rule, in order to preserve the island's watershed.

On the way we stopped several times to identify trees. We spotted the followings: the Strangler tree or epiphytic vine with its aerial roots; Ficus Sp; Balsa tree (*Ochroma pyramidale*) used in the construction of canoes and rafts for its insulating qualities and its lightness. Balsa is the Spanish word for raft; *Prestoea Acuminata* known as the Mountain Cabbage Pal, the *Genipa Americana*, Dan explained that animals eat the edible fruit and forestry rangers plant it to attract wild life, Hog Plum (Spondias Purpurea L.), Clusia Sp, Bois Flot (*Ochroma Pyramidale*) whose flower is used for fluffy pillows, Caimite (Amerindian name) or Star Apple *(*C*hrysophyllum Cainito L*.). Also we picked up some red Jumbie beads, and a little later some Donkey Eye seeds from the vine *Mucuna Sloanei*.

At 10.15 am we started to walk along the Bloody Bay River which carried little water due to the end of a severe dry season. Maybe due to that fact, despite the time of the day, we could see a vast array of bird life. We were fortunate to have Graham, a bird expert in the group, and he recorded fifty birds out of the 210 species that have been recorded in Tobago in the last count: Cocoa Woodcreeper, Laughing Gull, Giant Crowbird, Bare-eyed Thrush, Tropical Mockingbird, Bananaquit, Tropical Kingbird, Barred Antshrike, Great Black Hawk, Rufous-tailed Jacamar, Little Blue Heron, Oranged-winged Parrot, Black-faced Grassquit, Blue-back Grassquit, Green-ramped Parrotlet, Piratic Flycatcher, Smooth-billed Ani, Green Heron, Spotted Sandpiper, Ruby Topaz Hummingbird, Copper-rumped Hummingbird, Collared Trogon, Yellow-bellied Elania, Northern Waterthrush, Red-rumped Woodpecker, Red-crowned Woodpecker, Cattle Egret, Southern Lapwing, Streaked Flycatcher, Yellow-breasted Flycatcher, Brown-crested Flycatcher, Grey Kingbird, Green Kingfisher, Crested Oropendula, Blue-crowned Mot Mot (and the nest), Caribbean Martin, White-tipped dove, Grey-rumped Swift, Rufous-breasted Hermit (and the nest), Blue-backed Manakin, Blue-grey Tanager, White-winged swallow, White-fringed Antwren, Shiny Cowbird, Housewren, White-necked Jacobin and the national Bird of Tobago, the loud Rufous-vented Chachalaca (*Ortalis ruficauda*)or Cocrico.

Along the river there were small pools where we spotted tadpoles, and some fish: Mountain Mullet, Grey Snapper, and Yellow Goby.

On the banks of the river we saw a Crapaud tree, Dan explained that agoutis eat the seed, the fruit is medicinal for arthritis, the Guyanese make soap with part of it , and the lumber is good for housing construction; Rubber Tree (*Castilla Elastica*); the shrub Wild Passion fruit (*Capparis spinosa var. nummularia),* the flower is similar to the crown of Christ. Closer to the water we could see Zingerberaceae, Balisier, Firs, *Costus* Sp, and observe that trees had been removed to plant bananas.



Quarrying Gravel in Bloody Bay River

After an hour walking we had a break next to a truck that was taking gravel from the river. While we listened to the cicadas (of the order *Hemiptera*), we saw a *Peripatus* (a genus of *Onychophora*), a worm that feeds by trapping its prey in a white, sticky fluid it ejects from two antennae.

Regarding lizards Stephen reported to have seen the following:- a Juvenile *Gonatodes ocellatus* and an adult female, a matte (*Tupinambis negropunctatus*), *and* a young Zandolie or Ground lizard (*Ameiva).*

We reached a nice deep pool, in which we had a splash, a rest and a bite, then we headed back and reached the cars at 2.30pm.

We drove to Bloody Bay where a retention wall was being constructed, and it no longer looks a virgin unspoilt place. Then we stopped in Parlatuvier for refreshment, and continued to Englishman´s Bay lookout for a breathtaking view. On the way back to the main road we heard the spectacular call of the Blue-backed Manakin that cannot be found in Trinidad.

At this point most of the group returned to Charlotteville but one car remained in Castara enjoying an energizing sunset and meal. At night not much could be seen in the pitch black road from Castara to Charlotteville, just the White-tailed Nightjar (*Caprimulgus cayennensis*) standing by the road curbs. However the drive back was serenaded by crickets and frogs, and this team of experts Graham, Dan and Stephen identified five different frog calls: Flying Frog (*Hyla Crepitans*), Whistling Frog (*Leptodactylus Fuscus*), Crapeaud (*Bufo Marinus*), Savanah Frog (*Sinax Rubra*), Blue-eyed Tirk (*Eleutherodactylus Urichi*).

On Sunday at 7.30 am we waited in the jetty for two pirogues to take us to St. Giles Islands, while a local Calypsonian entertained us. According to the guide the sea was not rough, but it turned out to be quite a fun and wet ride. This rocky island lies on the Northeast shore of Tobago and is known as a seabird nesting site. It has little substantial vegetation, and although we were told of the possibility of landing in the island, staying on the rocking pirogues, and holding our heads to see the birds flying over was challenging enough for some of us. It was the first visit to this island for everybody and the interest was to record birds. According to Graham we saw the following:- Magnificent Frigate bird, Red-footed Booby, Brown Booby, Brown Noddy, Caribbean Martin, Laughing Gull, Red-billed Tropic Bird, Sooty Tern.

The fisherman had been fishing in the early morning and carried in the boat:- Yellow Fin Tuna, Black-fin Tuna, Carite, Kingfish, Dolphin and Salmon. Then we headed back to Pirates Bay via Iguana Bay, as the guide said because iguanas lay their eggs there. The water had an appealing green colour due to the mineral rocks around, but nobody ventured for a dip when we were told of sharks swimming around. We disembarked the boat at Pirates Bay where we had a twenty minute relaxing swim and snorkelling. We spotted Spotlight Parrotfish, Queen Parrotfish, Sargent Major, Triggerfish, and Blue Tang.

At The St. Giles Islands

We walked back to Charlotteville where we got the cars to go to Speyside for a typical Tobagonian Sunday Lunch at Jemma's Tree House, (which seems bigger and bigger every time we go there). We saw a virgin orchid (*Caularthron bicornutum*) in "Jemma's" tree, the West Indian Almond (*Terminalia catappa*).

On our way back to Charlotteville and despite the "macajuelitis" (sleepiness), we stopped by an Immortelle tree to count twenty-four Crested Oropendula nests. The most shocking scene was that of a dead Cornbird (*Psarocolius decumanus*) stuck outside of its own nest.

Then we packed and left Charlotteville to reach the airport to make our way back to Trinidad. As we were flying on "Trini" time we limed a while and thanked everyone for having shared an enriching experience.

Bird Group Trip Chaguramas - Sunday May 20th 2007.

Michelle Lee

Conditions: Slightly overcast with a high tide.

The sound of a cock's crow pierced the silence as we entered the village of Carenage. Early morning sea bathers dotted the gently rippling coastal waters from as early as St. Peters Bay as we headed west to the scheduled 6 a.m. meeting place, the Police Post at Williams Bay. Peering out over the ocean, small flocks of egrets in synchronized flight were seen skimming the mass of water between Centipede Island and the distant Trinidad Yacht Club. As the group formed, the "early birds" were treated to a Yellow Headed Caracara and a flock of twenty plus Brown Pelicans flying low in formation over the Pier1 facility. Orange-Winged Parrots, Ruddy Ground Doves, Cattle Egrets, Snowy Egrets, Palm Tanagers, Blue Gray Tanagers and the ever present and abundant (*Coragyps atratus*), the Corbeau or Black Vulture also presented themselves for viewing.

Minutes after six, with a compliment of 15, we drove over the Cuesa River and turned right on to the Tucker Valley Road, commonly called the Maqueripe Stretch. Heading into Mt Pleasant village, the sun beaten, water starved surrounding hills looked down on us as we drove past the rifle range, the archery range and the dilapidated Saint Chad's Church. On either side of the road, streams once filled with clear flowing water were now reduced to naked beds and mere trickles due to the harsh dry season. Between trying to avoid the occasional runner or cyclist and driving, some of us saw Smooth Bill Anis (*Crotophaga Ani*), Southern Lapwings (*Vanellus Chilensis*), Tropical Mockingbirds (*Mimus Gilvus*) and a lone White Hawk (*Leucopternis Albicollis*) purched on a Bois Canot (*Cecropia Peltata*) tree surveying his surroundings.

The itinerary for the day originally included three stops; time permitted two. For our first leg we turned right in to the road just before the beautiful Samaan Park. The road sign informed us that this route led to the "North Coast Trail", "The Arboretum (landscaping designs)" and the "Covine River Trail". We drove for a few minutes then parked opposite a cordoned off road which leads to a military compound. With one spotting scope and quite a few binoculars in use we spent over an hour there sometimes busily facing east, west, north and south to view birds as members spotted them.

It was interesting to note just how many birds we covered in much less than a ¼ mile of walking. These included Crested Oropendolas, Shiny Cowbirds, Giant Cowbirds, Yellow Orioles, Fork-tailed Flycatchers, a Squirrel Cuckoo, a Ruby-topaz Hummingbird, Copper-rumped Hummingbirds, White-chested Emeralds, Black Throated Mangoes, a Rufous-breasted Hermit, a Green Hermit, Boat Billed Flycatchers, Yellow Bellied Elainas, a Rufous-breasted Wren, Barred Antshrikes, a Rufous Browed Peppershrike, a Tropical Pewee, Golden Fronted Greenlets, a White Tailed Trogan, Violacious Trogans, a Cocoa Thrush, Bananaquits, Palm Tanagers, Blue Gray Tanagers, Turquoise Tanagers, White Lined Tanagers, Silver-beaked Tanagers, Blue Dacnis, Green Honeycreeper, a Zone Tail Hawk and Orange-winged Parrots.

The second leg took us to the Cazabon Park. This route led to the "Bamboo Cathedral", the Tracking Station" and the "North Coast Trail". Though not as productive as the earlier route, it provided one of the most refreshing moments of the trip. Beneath the Bamboo Cathedral, as if the rustle of the leaves in the cool morning breeze and the melodious clashing of the overhead bamboo was not enough to uplift us, we were serenaded by a Sunday morning choir of relatively close but unseen Red Howler Monkeys (*Alouatta Seniculus Insulanus*). The efforts of our resident howler mimics in the group failed to draw them near and the unuttered decision was made to "stick to birding". Great Kiskades, White Flanked

Ant Wrens, White Bearded Manekins, Golden Headed Manekins, Violacious Euphonias, a Zone Tail Hawk, Blue Black Grassquits, Turkey Vultures, Black Vultures, a Rufous Tailed Jacamar, Gray-breasted Martins and Band-rumped Swifts were seen here.

Two members made it to the dilapidated tracking station at the summit; some ventured just beyond the Bagatelle Trail entrance (which was hilariously marked with a sign pointing back down the hill which read "This Way Fool"); while others choose to remain on the flat portion of the trail. With over an hour and a half spent on this route the decision was made to postpone the final leg, Mount Saint Catherine.

In retrospect, quite a few bird groupings were encountered on the trails. These included Icterids, Cuckoos, Parrots, Manakins, Flycatchers, Tanagers, Trogons, Thrushes, Vireos, Euphonias, Honeycreepers, Hummingbirds, Jacamars, Raptors, Swifts, Martins, Wrens, Antbirds and Finches. Many eluded us due to their speed especially in the Hummingbird grouping. We heard the call of a Blue-crowned Motmot, a Great Antshrike and a distant Raptor but it was just not our day to see them. Not limiting ourselves to birding, we appreciated the beautiful flowering Epiphytes and the different trees around us. Butterflies and moths including Skippers, Flambeaus, Buckeyes and a few others whose names eluded us were seen. This sent a strong signal to us that we needed to pack more than just bird identification books on our trips. On this beautiful island with such eco-diversity we must be prepared for anything.

Wrapping up the trip, some of us sat beneath the beautiful Bamboo Cathedral chatting and it did not take much to discover the source of Cazabon's inspiration and desire to capture this sight on canvas. We then bid our farewells and reminded each other about the up coming Mt. St. Benedict bird trip on June 17th.

Mystery Trip Report – Sunday 27th May 2007

Robert Martinez

The club's annual Mystery Trip took us to Rio Seco, in North-east Trinidad – just off Salybia Bay. After a cool Sunday morning drive from the U.W.I. Assembly point, we were greeted at the entrance by a semi-vandalised Ministry of Environment sign. Its message set the tone for a short, enjoyable hike - "Take nothing but photographs, Leave nothing but footprints, Kill nothing but Time".

Led ably by Dan Jaggernauth and John Lum Young (a recent Boston Marathon participant), we set off promptly at 8:30am. Our chosen route was not the usual waterfall trail, whose entrance is found higher up the dilapidated road. Instead we passed through the much less frequented (i.e far more exciting) lower trail, its lack of use being indicated by the expanse of untapped forest. As an enthusiastic group of 24 (including 2 guests), we made our way through the wet, slippery, and at times steep, terrain.

The savannah flower (*mandevilla hirsuta*) was the day's first botanical discovery. Its edible petals tempted those of us who had skipped breakfast for the trip – especially after John's observation that they taste like pomerac! After a few slips and slides through the wet fallen leaves, the group adjusted quickly to the conditions. For this trip, the main vehicles of exertion were not the feet and legs but the sweat glands, as we perspired mightily under the damp, humid canopy. As we continued through the tall, undisturbed second-growth forest, we encountered the tree of the Wild Nutmeg (Viro*la surinamensis*), also known as Cajuca. Its perpendicular branches made for an interesting sight. The fruit of this peculiar tree is enjoyed

by the Pawi, and it is often used for lumber. In the valley at the end of the first downhill walk, we encountered some *heliconia arabica* and the popular suhari leaves, which are used as plates in traditional Indian weddings. Next, the gentle upward slope of the trail greeted us with more natural inhabitants. Included in this group were the handy tirite plant (used in weaving baskets), a patch of mora trees (including some saplings), the white olivier tree, cooper hoop (also known as mountain rose), the calls of some Bearded Bellbirds (*Procnias averano*) echoing from the valley, the rattling cry of cicadas and the edible Manac palm (*Euterpe broadwayi*.).

Less than forty-five minutes after the start of our adventure, we arrived at our 'destination', a secluded pool on the beautiful lower portion of the Rio Seco river. Though this was officially the end of the hike, the mystery and adventure was about to begin! After a few minutes of rest and banter, some members (i.e those who came prepared for swimming) enjoyed the river's cool, clean, tranquil waters. Others from the group explored the hunter's quarters, while Nicholas sighted a white-bearded manakin's nest on a minor jaunt through the bushes. Unfortunately, in his excitement to relay this discovery to others, he forgot where he spotted the nest – but this was not a problem at all – indeed, the (second) search yielded even more discoveries of natural beauty. We assembled a small group and instantly combed the surrounding shrubbery for this well-hidden nest. In our search, which took us along the bank of the river, we also came upon some bromeliads (*Guzmania sanguinea, Aechmea nudicaulis* and *Guzmania monostachea*), the seed of the mora tree (*Mora excelsa*), and even another bird's nest - later identified as that of the Barred Antshrike (*Thannophilus doliatus*). This nest, standing 1.5m off the ground, was certainly not that of the manakin, and contained three eggs, all seemingly hatched. The eggs, each about 1 inch in diameter, were cream/pale-coloured, with brown spots, and added to the (expanding) group's interest in this ornithological adventure. After a few minutes of further exploration, Nicholas had his Eureka moment, finding the manakin's nest once again (to his great relief)! The small, well-ordered nest stood 1m off the ground, and contained no eggs (unfortunately).

After the enjoyable nest diversion, the group began to make its way back at 10:25am. During the cool walk back along the trail, we heard the distinctive call of the white-bearded manakin, though we could see no representatives of this eminently interesting species (whose males do a tree-to-tree dance as part of the mating ritual). We also came upon some butterflies, notable among them being the white-tailed page, the emperor and the banded king shoemaker – in addition to the ubiquitous postman. Botanic discoveries along the way included mango and chataigne trees, but more interestingly, we came upon a C*lusea* tree, which apparently had grown some strangler vines and strangled itself! The parasite had killed the host tree, which was seemingly gripped in its own roots. With that strange phenomenon behind it, the group consoled itself with the delights of the aromatic, edible tonka bean (*Dipteryx ordorata*) – the kernel of this versatile fruit is also used in hot cocoa drink ('chocolate tea'). Coming down to the end of the trail, we passed a very neatly-planted patch of cassava, and encountered a beautiful blue-bodied spider (*Avicularia avicularia*), which was doing some exploration of its own, under the shade of a large bois canot tree. The non-arachnophobic among us did a good paparazzi job on the creature, taking endless pictures and observing its movements through the dead leaves which covered the ground. At around 10:55am, we returned to the cars, signalling the end of this pleasurable adventure.

Bird Group Field Trip Mount St Benedict – June 17th 2007

Feroze Omardeen

This was Father's day, so we had a short but nonetheless interesting trip with fast paced birding recording 35 species in three hours. These ranged from the common-or-garden Bananaquit (*Coereba flaveola*) to the dazzling and exotic Red-legged Honeycreeper (*Cyanerpes cyaneus*).

Attire for the trip ranged from Standard Jungle Wear (Murray Guppy) to the Movie Towne 2007 Summer Season on the flamboyant and vivacious group leader Kay Hinkson. Sadly, the rest of us failed to meet these high standards, and seemed on the whole a bit shabby. But we made up for it in enthusiasm, pouncing on every hummingbird that passed our way. The Copper-rumped (*Amazilia tobaci*) and the White-chested Emerald (*Amazilia chionopectus*) were around, but more memorable were the several Black-throated Mangoes (*Anthracothorax nigricollis*) of both sexes who flitted about. The female plumaged birds outnumbered the adult males. They seemed less territorial than the others and tolerated the *Amazilias* at the flowering trees. We found a female Mango tending to a tiny nest on a sparsely leafed branch at the side of the road. No matter how many times I see these little cups, I am always amazed by their size relative to the birds. Nesting season for the Mango is January to July, As in all hummingbirds, nesting is done wholly by the female, feeding her young by regurgitation. We saw a Mango hover gleaning for small insects, and Hilty does say that this species is notably insectivorous.

Robert Kong led us up the fire tower. For height-challenged individuals, it was not the easiest exercise, but I discovered the technique of holding on tightly with all four limbs and moving only one limb at a time, while peering up out of a slit like opening in one eye. Once there the views of the valley and Caroni plain were spectacular. We saw the White Hawk (*Leucopternis albicollis*) way across the hillside to the southwest. This is an elegant raptor with striking plumage, brilliantly reflecting white against the canopy, with contrasting black wings. Robert has been acquainted with this pair of White Hawks for some time, and has actually found a nesting site for the hawk, observing the upbringing of a fledgling. Finding of a nest is a rare occurrence, and great for the birders who come from all over the world to Pax Guest House.

In response to the call of the Pygmy Owl, a nearby mixed species flock came to investigate, mostly honeycreepers and tanagers. But a strikingly yellow bird with a strikingly black throat caught our eyes. As Murray pointed out it was slightly smaller and more slender than the Semp, and the black throat and collar were diagnostic, even before we heard the call. This was the Trinidad Euphonia (*Euphonia trinitatis*), a group of at least four individuals including two males. This was the first time many of us had seen this Euphonia, locally known as the Cravat, and we were treated to excellent views. The high pitched thin whistle comes in a double note with a fraction-of-a-second pause in between: *tee, dee* . Interestingly once we became familiar with the call we kept hearing it at various places on the hillside.

Descending again to the car park, there were lots of calls to stop us. The Chivi Vireo (*Vireo olivaceus*) and the Rufous-breasted Wren (*Thryothorus rutilis*) were visible, but the Rufous-browed Peppershrike (*Cyclarhis gujanensis*) stayed out of sight. The penetrating call of the Yellow-breasted flycatcher (*Tolmomyias flaviventris*, also known as the Ochre-lored Flatbill) was all around, and we saw several of these birds, who in this area seem to have a curious and self confident personality. However there was a low growl of a call: *caaw*. It had to be a bird, but what was it? It sounded like a crow, but corvids do not exist in Trinidad. We were perplexed for several minutes until the Barred Antshrike (*Thamnophilus doliatus*) revealed itself. Usually the snarl is at the end of its accelerating series of notes, but this time this was all the bird would say, probably in alarm at our presence. We saw many of these comical birds, sexually dimorphic with both sexes interestingly marked, entertained by their tail-wiggling and crest-raising during calls.

Well, the colourful forest tanager species never turned up, and the gray raptor unfortunately turned out to be a branch. These things happen. But inexcusable was our group leader eating a chicken pie (*Gallus gallus*) during the trip. The Management Committee surely will have to refer her to Matt Kelly for a lecture on vegetarianism. See you on the next trip!

Hilty, S.L., 2003. Birds of Venezuela. Princeton University Press, Princeton, New Jersey, 403p.

CONTRIBUTIONS

Memories of Bush Bush Forest and the Nariva Swamp

Elisha S. Tikasingh

In December, 2006, I attended a function sponsored by the Environmental Management Authority, to witness the signing of a document declaring the Nariva Swamp an Environmentally Sensitive Area. Listening to Dr. John Agard speak about the Nariva Swamp brought back many memories to me, having worked there from 1960 to 1969. Fresh from Graduate School I joined the Trinidad Regional Virus Laboratory (TRVL) in 1960, initially, as a Rockefeller Foundation Fellow, later to become a staff member of the University of the West Indies (UWI) and stationed at TRVL. Other members of staff at that time included Drs. Wilbur G . Downs (Director), Thomas H. G. Aitken, C. Brooke Worth, Andries Jonkers (all of the Rockefeller Foundation), and Leslie Spence later to become Director and Professor (Virology) at TRVL/UWI. On joining the staff, I noted an excitement amongst staff members about a place called Bush Bush. Everyday brought new excitement as arthropod-borne viruses (insect, tick and mite- transmitted viruses, commonly called arboviruses) were being isolated regularly. And some of these viruses with names such as Bushbush, Restan (named after the northern section of Bush Bush), Cocal and Nariva, were eventually described as new to science.

But how did TRVL become interested in Bush Bush Forest anyway? The Laboratory was heavily involved in a study of Ilheus virus in the Melajo and Rio Grande forests when yellow fever struck the island in 1954 after an absence of 40 years. Where was the virus all this time? Were there periodic introductions from Venezuela through infected mosquito vectors or infected monkeys? It was known then that monkeys were involved in the cycle of the yellow fever virus. Or, was the virus present in Trinidad on a continuous basis and maintained in a silent cycle with mosquitoes and monkeys and then giving rise to periodic epizootics and epidemics?

In 1959, two wood-cutters working at different times and in separate areas in the Caratal Forest on the western edge of the Nariva Swamp, came down with fevers. Subsequently, yellow fever virus was isolated from both individuals. Discussion with them and other people living in the area recalled that there were heavy mortalities of howler monkeys in Bush Bush Forest in the 1956-1957 epidemic of yellow fever and not in the 1954 epidemic. The question in the mind of TRVL staff workers was “could this area be the home of yellow fever virus in Trinidad”? Work in the Rio Grande Forest was stopped and a full scale operation was transferred to Bush Bush Forest in September, 1959.

Previous to 1959, few people knew of the existence of Bush Bush Forest, except for a few hunters and a few Cascadoux fishermen. During the dry season, it was possible to walk to Bush Bush, but at the

height of the wet season it was impossible to get there by walking. A canal was dug out by fishermen from the 46 mile post on the Manzanilla - Mayaro Rd. to Bush Bush Forest which allowed the men to use a small boat providing transport into and out of Bush Bush. The TRVL enlarged this canal, built a caretakers camp at the end of the boat canal in the forest, and hired one of the fishermen as a caretaker and a general assistant. He, or one member of his family, lived there continuously. TRVL's activities were carried out five days per week sometimes on a 24-hour basis. Later, another building was erected and dubbed "We House" in which scientists spent many nights to carry out certain studies. At the end of the wet season when it was impossible to use a boat, we had to walk through the mushy swamp. I recall, at the end of one season when we had to leave the boat at the Caretaker's camp and walk to the main road, each step I took I sank to my knee.

Almost at once we began to isolate viruses - four in 1959, rising each year thereafter, to a peak of 244 strains representing 19 viral types by 1964. Ironically, we did not isolate YF virus. Some of these viruses have wild vertebrates as hosts. Consequently, we sampled various vertebrate species, particularly rodents, for virus isolations. We also made an inventory of all species of vertebrates noted in the area. Likewise we made a collection and inventory of blood-sucking arthropods. It was during such collections we noted the variety of species inhabiting this small area, which has been described as "rich and varied". We recorded 59 species of mammals including 32 species of bats. The most conspicuous mammals were the two species of monkeys present in Trinidad - *Alouatta seniculus* and *Cebus albifrons.* We listed 171 bird species, 27 reptiles and seven amphibians. The number of species of blood - sucking arthropods recorded from the area was as follows: mosquitoes 92; Phlebotomine sand flies 10; Culicoides sand flies 10; horse flies 18; sucking lice 4 (from 4 species of mammals); ticks 8 and Trombiculid mites 13.

It was because of this rich diversity of animal species present in such a small area that the Staff members of TRVL, particularly Dr. T. H. G. Aitken, persuaded the Forestry Division to declare the area a Wildlife Sanctuary. A land survey was undertaken by the Forestry Division and although it was not completed at that time, it was nevertheless declared the "Bush Bush Wildlife Sanctuary" on July 16, 1968 with some ill-defined boundaries.

TRVL's protection of BBF came to end around 1970, but staff members of the New York Zoological Society (NYZS) stationed at Simla used the area for their scientific studies and they provided some measure of protection. However, when the NYZS closed their Trinidad operations, the Sanctuary was handed back to the Forestry Division.

Later, permission was given to a manufacturer to cut Jereton trees for their manufacturing operation, even though it was a Wildlife Sanctuary. Apparently, such permission is possible with our conservation regulations. By cutting these large trees the canopy was opened and when a hurricane hit the area there was no protection from and other trees and many were destroyed.

In April, 1993 Trinidad & Tobago became a signatory to the Ramsar Convention declaring the Nariva Swamp a Wetland of International Importance. That year too, BBF and the larger Nariva Swamp became threatened when a rice farmer started to bulldoze the area without permission to plant rice. The Minister of Agriculture declared the Nariva Swamp a Prohibited Area, but the farmer took the matter to the High Court and lost his case.

It was with great pleasure therefore, I witnessed the signing ceremony declaring the Nariva Swamp as an "Environmentally Sensitive Area". Hopefully, this designation will give the area some measure of protection.

Don't You Think That It's Time to Debunk These Myths?

By Ian Lambie

1) "*Trinidad is the land of the hummingbird"*

How should this be interpreted? Hummingbirds are found only in the Western Hemisphere where 339 species have been recorded. Seventeen species of hummingbirds have been recorded for Trinidad and Tobago.

Does (did) Trinidad have more species of hummingbirds than any other country?

Of course not.

Brazil has 163 species, Columbia has 143 species, Venezuela has 97 species, Costa Rica has 54 species, Mexico has 51 species.

Why then has Trinidad been known as the "Land of the Hummingbird"?

During the 19th century when birds' feathers were used to adorn hats etc., the majority of birds' feathers, including thousands of hummingbirds (skins), which had been collected on the mainland, were shipped to Europe from Trinidad. Hence Trinidad, the point of shipment became known as the "Land of the Hummingbird".

When Richard ffrench was doing his research for his book "A Guide to the Birds of Trinidad and Tobago" in the late 1960s and early 1970s, he came across hummingbird skins in the museum indicating incorrectly that the bird was indigenous to Trinidad.

2) *"Barbados is the Land of the Flying Fish"*

That was so until the early 1960's when Chally Jones, the jockey, purchased two fishing boats and caught his flying fish off Tobago .

The catch was landed in P.O.S. A call was made for persons who could fillet the flying fish and it was only then that I realised how many Barbadian women, who all knew the technique of filleting flying fish, were resident in Trinidad.

Apparently at that time the Tobago fishermen did not know what was on their doorstep.

In addition around that time Barbadian fishermen acquired larger boats which could stay out at sea for longer periods, and more efficient methods of catching the flying fish. This apparently depleted their stocks. I have also heard that the flying fish migrate between Tobago and Barbados. Jake Kenny knows more about this matter than I do.

3. "*The Double Chaconia is our National Flower"*

Our national flower is the single 'Chaconia', *Warzewiczia coccinea*, which was selected in 1962 before the existence of the double variety was generally known to Trinidad and Tobago.

Professors Julian Kenny and Julian Duncan both accept the opinion of Prof. Dennis Adams (now deceased) that the correct spelling is *"Chaconier"* and has nothing to do with the last Spanish Governor Chacon, as is incorrectly taught in schools. The name Chaconia has nothing to do with the last Spanish Governor, Chacon, but more with a native dance in which red ribbons or pieces of red cloth were used.

The only specimen of the double 'chaconia' ever found in the wild was found by a party of amateur horticulturists including Au Young and Atteck growing on the side of the Blanchisseuse Road about 1957. However this original plant was inadvertently destroyed soon after its discovery during road repair works. Fortunately cuttings which had been taken were successfully propagated at the ICTA at St. Augustine. Specimens were sent to Kew Gardens for identification.

The Club and similar organisations should continue to lobby for the double 'Chaconia' to be recognised as our National Flower.

4. *"Christopher Columbus landed in Trinidad at Moruga".*

When Columbus arrived in Trinidad in 1498 during his third voyage he was suffering from a bout of gout and did not disembark from his ship. However his men landed at Erin Point to replenish their fresh water supply.

Columbus's Flagship the *"Santa Maria"* was wrecked when it ran aground on a sandbar near to what is today called Cap Haitien in Haiti , on Christmas Eve of 1492. How then could he have arrived in Trinidad on the *"Santa Maria"* in 1498. as is incorrectly taught in our schools.

(During his four voyages - in 1492,1493,1498, and 1502, - Colombus lost a total of nine ships.)

The Club, while not being a Historical Society, should endeavour to determine the truth. All these opinions were forwarded to the late Commander Jack Williams , the then Chairman of the National Emblems Committee for his consideration.

The following letter was submitted to the editor of Newsday by Ian Lambie:

With only three months of the Nesting Season completed, what good news it is to learn that there have been large numbers of Leatherback Turtles coming up nightly to nest on the Matura Beach.

What a difference it is from June1963, forty-four years ago, when members of the Trinidad and Tobago Field Naturalists Club first visited the Matura Beach to investigate the claims that large numbers of Leatherback Turtles were being slaughtered when they emerged from the sea to lay their eggs. At that time and for some years thereafter, Club members were always greeted by rotting turtle carcases on the beach.

Information collected by Club members during their weekly visits to the beach during the nesting seasons from 1965 to 1970 resulted in the submission, to the then Government, of recommendations for the updating and amending the then existing legislation for the Conservation of turtles and turtle eggs.

From 1971 to 1980 the Field Naturalists Club embarked on a Turtle Tagging Project at Matura Beach, Las Cuevas Beach , Paria Bay, Grand Tacarib Bay and during two visits to Tobago, at Grafton and at Turtle Beach The co-ordinator of the Club's project was Professor Peter Bacon of the UWI (now deceased).

We were indeed very pleased when in 1990, the Government's Wildlife Section organised the villagers of the Matura and Fishing Pond Communities and later those of Grande Riviere in Turtle Conservation Projects. These have been very successful, not only in generating awareness for Turtle conservation among their respective communities but also among the general population of Trinidad and Tobago.

The Nature Seekers of Matura and Fishing Pond , and the community group, GREAT of Grande Riviere must be commended for their work and their dedication in the protection and conservation of nesting turtles on the beaches of North-east Trinidad which has no doubt contributed to this year's success story.

OBITUARY

THOMAS H. G. AITKEN 1913 - 2007

By Elisha S. Tikasingh

Dr. T. H. G. Aitken, former entomologist at the Trinidad Regional Virus Laboratory, forerunner of the Caribbean Epidemiology Centre (CAREC), died in Corning, New York on 19 April, 2007. He was 94.

Dr. Aitken, or Tommy, as he was popularly known, arrived in Trinidad in 1954 and remained until the end of 1966. When he came very little was known about our mosquitoes, except perhaps the *Anopheles* genera, vectors of malaria. He set about collecting, using various techniques, to study them and process them for virus isolations. We now know there are about 165 species of mosquitoes on Trinidad. In addition, he collected many species of blood-sucking arthropods. As a consequence TRVL - CAREC has one of the best collections of these arthropods in the region. Some of the arthropods he collected were new to science and some of them were named after him, including a new genus of mite *Aitkenius.*

The TRVL was established in 1953 to study arboviruses (viruses transmitted by insects, ticks and mites), so they were not only interested in studying the vectors, but vertebrates which might be hosts to these viruses. Thus, a large number of vertebrate skins were collected, identified and housed in CAREC's Museum. The best collection of bird skins are housed in that museum. These collections were made by Drs. W. G. Downs, Aitken and other TRVL-CAREC staff members. Richard ffrench studied these skins when he was writing his book "A Guide to the Birds of Trinidad and Tobago". Some plant specimens Tommy collected were pressed, mounted and identified and later given to the National Herbarium in the late 1970's. During a mosquito collecting trip to Cedros he discovered a species of balisier plant, which was said to be new to Trinidad and Tobago at that time.

When our Club was revived in the 1950's Dr. Aitken became a member and served on the Advisory Board of our Journal. He has given talks to the Club and contributed articles to the Journal. He was also a member of the Horticultural Society winning prizes at their Annual Flower Show. When that Society celebrated their Diamond Jubilee in 1974, he was awarded the Gilt Medal for his significant contribution to the Society.

During studies on arboviruses in Bush Bush Forest, staff members became aware of the uniqueness of the area, but it was Tommy who was in forefront persuading the Forestry Division to declare the area a Wildlife Sanctuary. It was so proclaimed in 1968.

A fuller account of Dr. Aitken's life and work will be published in the 2007 issue of "Living World".

MANAGEMENT NOTICES

Editor needed – **Urgently!!……** For the Quarterly Bulletin.
Please contact any member of the committee.

Volunteers needed… to type index for period 1986 to 1988 – 16 issues

We finally have Polo Jerseys!

Sizes: small, medium, large and extra large
Colours: khaki and green
Cost $TT50.00

EACH ONE, BRING ONE

Members are encouraged to bring a friend or two to be part of our Club – their knowledge, talents and skills would be most welcome.

Missing copies of Naturalist Magazine needed for library

- 1976 Vol. 1 No. 5
- 1981 Vol. 3 No. 9
- 1987 Vol. 6 No. 12

THE GREENHALL TRUST

Started in 2005, in memory of Elizabeth and Arthur Greenhall, dedicated artist and zoologist respectively, the Trust offers financial assistance to aspiring artists and biologists (in the areas of flora and fauna) in Trinidad & Tobago.

Full details about the Trust are available at their website:
http://www235.pair.com/greenhal/home.htm

A HOME FOR THE TTFNC

We are seeking a permanent location to conduct our business and house our historic records and materials. Please contact the Management Committee if you can be of assistance.

PUBLICATIONS

- The 2006 issue of the Living World Journal has been published. Please collect your copy at the next monthly meeting. The 2007 issue will be published shortly.
- The 2nd Edition of the Native Trees of Trinidad and Tobago is available at $TT100.00 per copy for members
- Issues of the Living World Journal from 1892-1896 are now available on CD.
- The Trinidad and Tobago Field Naturalists Club Trail Guide is available at $200 per copy for members.

TTFNC'S RESPONSIBILITY TO THE NATION'S STEWARDSHIP OF THE ENVIRONMENT – THE ENVIRONMENTAL SUB COMMITTEE

The Environmental Sub-Committee has been formed. The first meeting was held on 24th May 2007. Agreement was reached on the terms of reference and certain actions. To join call Shane Ballah 796-3335.
Letters issued by the Club on its position on various environmental issues can be viewed on the Club's website: www.wow.net/ttfnc on the "ENVIRONMENT PAGE".

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

NEXT GENERAL MEETING

The next general meeting of the Club will be on 19th July and not 12th July as formerly advertised. This is to allow time for the return of the Venezuela Trip.

NOTES TO CONTRIBUTORS

Guidelines for Articles and Field trip reports:

Font Type: Times New Roman
Font Size: 12 point
Maximum Length: 1,750 words (approx. 3 pages unformatted)
Photos: JPEG files only

Submit to any of the following: 1) rjpotter@opus.co.tt; 2) ttfnc@wow.net.tt;
or any member of the Management Committee.

Deadline for submission of articles for the 3rd Quarter 2007 issue of the Bulletin is September 9th, 2007. Please note that all field trip reports for this quarter must be in by the deadline, with the exception of the September report.