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THE FIELD NATURALIST

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Identifying Butterflies in the Field

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Butterflies of the order Lepidoptera currently number about 700 species distributed between 14 families in Trinidad and Tobago. Taking this great diversity into consideration we have limited this guide to families rather than the species found in this country. By isolating a specimen down to family level one can then check one's observations in a well illustrated guide to narrow it down to species.

Firstly one must be able to distinguish between a butterfly and a moth, the latter of which also belongs to the order Lepidoptera. Moths generally have fine tipping antennae; butterflies have antennae with knobs at the tips. The body of moths are larger and often covered with more scales and therefore appear more hairy. Features that one should take into account when looking at butterflies are: body size, shape of antennae - especially the tips, the size or wing shape, colour patterns of cells and scales and where possible flight pattern, speed and flying distance above the ground should also be taken into consideration. The size and shape of the wings as well as the presence size and location of eyespots should be noted. In particular, the size, colour and location of spots/eyespots (ocelli) serve to further distinguish among the groups even at the species level. It should be noted that the flight pattern is the best field guide either for the novice or the overwhelmed expert. In terms of flight one has to note if it is a fast or slow flier and the level at which it flies, that is near the ground, understory in the middle or high in the canopy. Size given refers to the wingspan: minute <2mm; small 2mm-3cm; medium 3-7cm; large 7-10cm; very large 10-15cm on average.

Acraeidae. Large butterflies. All species exhibit slow lazy flight. They posses thinly scaled wings which give the appearance of a lacy glassiness; hence they are commonly referred to as lace-wings. It should be noted that members of this family are quite hardy and can survive after a severe pinch to the body. The reason for this is the sectional flexibility of its exoskeleton. The only two species found in Trinidad are *Actinote tellenia trinitatus* and *A. anteas*.

Brassolidae. Very large to medium butterflies. They have wide wings on the undersides of which are eye spots reminiscent of the eyes of owls. Species differentiated by size and number of eye spots. These are generally fast fliers often found around dawn and dusk (crepuscular). The genus *Caligo* or "owl butterflies" belongs to this family.

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Danaidae. Large butterflies. Broad wings with long abdomens. Colouration is usually yellow and brown intermingled with black. Antennae is thin with clubbed tip: however this feature is indistinct and thus difficult to see. They are lazy fliers. Forelegs are short.
Ithomiidae. Medium to small butterflies. Wing colour is usually yellow and brown intermingled with black. They are referred to as the tiger stripe butterflies. Some species also have transparent wings due to lack of scales. They are slow fliers and are found in the darker parts of the forest.
Heliconidae. Medium butterflies. They have big eyes and slender bodies similar to that of a dragonfly. These slow fliers have long and rectangular forewings. Long and thin antennae. Wing colouration is completely black, with patches of red, blue, green, white, yellow, etc, or a combination of, on their upper wings. The Postman (*Heliconius melpomene*) is the most common of the group. Many butterflies mimic members of this family however, they do not possess the rectangular outline of the wings.
Hesperiidae. Medium to minute butterflies. Many are dull brown in colour. This is the only family whose members have antennae with hook-like tips. Head is broad and flat. They have stout, hairy bodies and possess a large body to wing size ratio. Wings have a characteristic triangular outline. Their appearance coupled with their great speed makes them easily mistaken for flies.
Libytheidae. Medium butterflies. They are commonly called snout butterflies because of their very long head. The only species found in Trinidad is *Libythea carinenta*, which is a migrant. These are abundant in the America but scarce in Trinidad.
Lycaenidae. Small to minute butterflies. They are generally fast fliers. This family contains two subcategories: the hairstreaks and the blues. Hairstreaks are easily identified by thread-like tails on their hind wings and a most intricate pattern of colours on the ventral sides. Blues on the other hand have rounded hind wings often with many cilia-like frills around their hind wings.
Nymphaliidae. Large to small butterflies. They are the fastest of the families and are found in all strata of the forest. Forelegs are either absent or brush-like. There is a bulge on the bottom of the hind wings. Great variation in colour and pattern.
Morphidae. Large butterflies. Most are an iridescent blue (morphos). They are lazy fliers often found in lowland forests along rivers, trails or other passageways. Abdomen and forelegs are small. Eyespots are present on the undersides of the wings. The Emperor (*Morpho peleides*) and *Antirrhaea philoctetes* are the only representatives of this family found in Trinidad.
Papilionidae. Large to medium butterflies. They are fast fliers attaining a great height. Although some of the more common species are yellow, less than half the total number of species in this family are yellow. Forewings

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have a square outline while the hind wings have tails. They possess medium length antennae which gradually thicken to form clubs at the tips. They are generally noted for their capability of long distance flight.

Pieridae. Medium to small butterflies. Almost all members are entirely white or yellow, variations include brownish white and yellow-orange and white. Wings have a rounder and fuller appearance. Antennae can be either long or short with well defined clubs at the tips or gradually thickening to form clubs at the tips. Fast flight is seen in medium sized species but smaller species fly slower and close to the ground. They are found in open areas with lots of sunshine and flowers.

Riodinidae. Members of this small family are the most diverse found in the neo-tropics with respect to colour and body size. To assign a butterfly to this family, one has to go through the process of elimination. In other words if it does not appear to have the characteristics of the other families, then it is likely to belong to this family.

Satyridae. Medium to small butterflies. Colour varies from dirt brown to shades of brown with secondary colourations such as purple. Some species are grey with markings of blue or white. Wings have a square outline. Almost all species have a single or a series of eyespots on the undersides of the wings which are always visible since these butterflies have a habit of folding their wings. Two species are notably translucent and coloured. They are characteristically weary fliers (almost hopping) and keep close to the ground. Forelegs are short.

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We are very grateful to Rajindra Mahabir of the Arthropod Museum (UWI) who verified the accuracy of family list and Dr. Charles De Gannes who reviewed our guide.

Getting out of Bush Bush the hard way

Victor C. Quesnel

On the Club's field trip to Bush Bush of 29 August 2004 I and two other members, Betsy Mendes and Esperanza Luengo got separated from the others and had a little difficulty getting out. There are some lessons to be learnt from our experience so I am writing it up that others may profit from it.

We were all together up to the spot where we came upon some large trees with huge buttresses. One tree I thought might be a swamp bloodwood (*Pterocarpus officinalis*) turned out to be a wild chataigne (*Pachira insignis*). To verify whether another similar one was a swamp bloodwood I cut into a buttress with my penknife. The sap did not flow quickly and I waited for it. Betsy and Esperanza waited with me. Eventually the sap flowed and it was white, proving that the tree was not a swamp bloodwood, but something else, probably a *Ficus*. We moved on and came to another huge tree which we also tested for sap. This one too was slow to produce sap, and we moved on to another giant which was easily identified as a sandbox (*Hura crepitans*), the largest one I had ever seen. When we had finished admiring that we turned to join the others we thought to be nearby but could not find them. After following the path we thought they had taken we found ourselves back at the sandbox tree. No problem, I thought; I would take a compass bearing north and meet them at We House. We House was the name given to the cabin at the tip of the Bush Bush peninsula when it was the field station of the Trinidad Regional Virus Laboratory in the '50s and '60s. (For an entertaining account of this see A Naturalist in Trinidad by Brooke Worth). We

walked north for half an hour or so without finding We House or any of the others or even a decent trail. The first hint that we might be in some trouble entered my mind. At that point we had lunch.

After lunch we decided that it was too late to try to reach the others, so we turned back on a compass bearing south and in due course found ourselves back at the sandbox tree. “Great” I thought; “now it’ll be easy. We’ll find the trail and be back in no time”. But, we could not find the trail. In the morning there was no sun, the forest was dim, but the trail was clear. Now the sun was high in the west, streaming in through a broken canopy casting on the ground a dappled pattern of bright spots that camouflaged the trail as effectively as dark spots camouflage the hide of a leopard sitting in ambush in the crotch of a tree. Now I knew we were in trouble and Betsy and Esperanza must have thought so too though they gave no sign of it.

We discussed the matter and decided to keep going south on a compass bearing. As we went along I noticed water on our left hand though we had seen no water on our right hand on the outward journey. Seeing a slight ridge on our right I decided to look for the trail there. No sign of it. Keeping south we now found water on our right and then in front of us with no way through. More discussions. We decided to follow the edge of the water until we found a way through, regardless of direction. We did this and after some minutes found ourselves once more at the sandbox tree.

At first, this seemed to me a cruel setback, but the situation had changed again. The sun had slipped a little lower and now there was no dappled light to obscure a clear path leading away from the tree. The only trouble was that the trail headed north and we wanted to go south. More discussions. It seemed to me that we must have missed a branch in the trail that we should have taken, so we decided to take the trail north and look for a branch going south. We found no branch, but in a short while the trail began to turn west, and at about the same time Esperanza found a fresh blaze mark on a tree trunk. This must have been made by Dan on the outward leg. More blaze marks appeared and the trail gradually bent south. Our spirits rose, and when we came to the large sign we had seen on the way in earlier in the morning we knew we were virtually “home”.

We were hardly out of the forest when Dan and a small party of rescuers came out behind us. They said that they had regularly called out as they searched for us. On our side, Betsy and Esperanza had taken turns blowing a whistle after the third encounter with the sandbox tree. They must have blown that whistle 50-100 times, yet we did not hear them, nor they us. Either the two parties were never near one another, or the vegetation prevented the sounds from carrying far enough.

I stopped writing at this point on 5 September 2004 and did not begin again until 24 September. In the meantime I had reconstructed the trail from the description given in the club’s Trail Guide. I was hoping to find an S-bend somewhere but my reconstruction yielded no such thing. I rang Reg Potter to see if he had GPS readings for the trail. I can’t remember his answer, or even whether I got to speak to him, but on 24 September I received from him a drawing of the trail made from GPS readings and there, right where I expected to find it, was an S-bend with the trail leading north for a bit before bending to the west and eventually south. We must have crossed the trail when we went south on a compass bearing from the sandbox tree. Why had I not seen it? Probably it was still being camouflaged by the dappled light, though I can’t specifically remember seeing this.

So, what lessons had I learned? 1. Always remember to bring my compass. (It is ironic though had I forgotten it we would have been forced to remain at the sandbox for the others, and there would have been no adventure – unless the others had failed to connect with us on the way back). 2. Never just “follow the others”. Keep looking for landmarks and look back along the trail ever so often to see what the trail will look like on the way back. 3. Take a Xerox of the account in the Trail Guide even if someone else is guiding. 4. Look for blaze marks as well as for the trail. Dan always remembers to make them.

Reviewing the Reviews of
The Snakes of Trinidad and Tobago

By
Hans E.A. Boos

An author awaits reviews anxiously, much like a parent awaiting approbation of their child. Before I completed writing the book, I had the good fortune to reacquaint myself with Dr. Charles Carpenter of Oklahoma University, and Dr James Dixon who were visiting Trinidad, and they recommended that Texas A&M University publish the book, with the understanding that it would have to pass the scrutiny of peer review.

The peer reviews were passed on to me and I was able to tailor both the existing text and future pages to conform to the specific needs of the Press. Maybe a few quotes will suffice to show how encouraging these unknown reviewers were.

> "…a comprehensive review of the historic and present-day occurrence, natural history and distribution of snakes on these islands…"
> "… certain to become a valued component of the libraries of serious students of herpetology."
> "… work is well-researched and painstakingly documented."
> "…skillful blending of folklore with scientific fact."
> "The manuscript reads very easily;… narrative that flows in an almost conversational way…"

Criticism of its format and chapter divisions was addressed and handled, causing several reshuffles and rewrites by me and the editors of the press before arriving at a format that was acceptable to the publishers. This process took at least three years.

The first review of *The Snakes of Trinidad and Tobago*, published in 2002, appeared in the in-flight magazine of the national airline of Trinidad and Tobago, BWIA; with limited space available in their book section, two paragraphs gave a brief synopsis of the book. The writer, (LW), recommended that it was "A remarkably thorough and readable work." I thought that was a good start.

Then Dr. Chris Starr of the University of the West Indies had a stab at a review. In the Quarterly Bulletin of The Trinidad and Tobago Field Naturalists' Club for Oct-Nov 2001, No. 4, his critique, which came out less of a review than a recounting of his own impressions and involvement with ophidiophiles (snake-lovers). Of the nine paragraphs he wrote as a "review," only one can be considered in any way an assessment of the merits or faults of the book itself, and this is a matter of two extended sentences totaling approximately fifty words. Though, to his credit, he did recommend that his readers should go out and buy the book.

Dr. Victor Quesnel had a go in the 2002 issue of *Living World*, The Journal of the Field Naturalists' Club of Trinidad and Tobago. He sets the tone of his review by stating that few people bother to read prefaces to books wherein he feels that the reasons for the writing the book should be given, and then goes on to say that the author of the book under review waited until page 219 to state his reason for undertaking the work. It seems that Dr. Quesnel, himself, fell prey to this very habit of not reading the early pages of books, for in the Introduction on page 6, is the following: "It is my hope that this book, with photographs of each snake species (most in color) found on Trinidad and Tobago will inform people about every aspect of the life history, zoology and folklore of these animals."

On page 7, "[A]nd I hope [for] a halt to the killing of one kind of animal because of unreasoning fear on the part of another." And on page 34, "I hope that with this book, the often heard excuse for killing snakes—'I didn't know if it was poisonous'—will be less frequently heard. I hope also to inspire a younger crop of men and women to find out more about our beautiful snake fauna, to unravel the remaining mysteries, and illuminate the dark corners of ignorance." Again on page 36, "[B]ut it is hoped that with this book the tendency to misidentify the innocuous with the potentially dangerous will be addressed and perhaps someday halt the slaughter of the snakes of Trinidad and Tobago." All these points were raised within the first fifty pages. So the statement on page 219, at the virtual end of the book, is not the first time the intent of the book is iterated, but is merely a repetition of the intent clearly stated in the beginning.

Bemoaned too, is the fact that laying and hatching dates and times of eggs for one species were not included when they were available. However, many personal records of the feeding intake and sloughing times of many species were also omitted. I considered that this information was more suitable for a scientific paper rather than a general work on the snakes. Similarly, identification keys using scale counts were omitted because they are almost incomprehensible to the average reader. Dr. Quesnel well knows, due to the great variability of tropical snakes, keys are not the only and reliable answer to the accurate identification of snake. To use the keys, often one has to have the dead, or cooperative, specimen in the hand, to have good eyes, or a microscope, and not to have the aversion, that most people do have, to handling a snake, dead or alive. It was also considered that these identification keys had recently been published in John Murphy's Book "The Amphibians and Reptiles of Trinidad and Tobago," and in Michael Emsley's "Snakes and Trinidad and Tobago" (1977), so any professional herpetologist would have had ready access to this form of identification.

If the publishers had allowed more than the prescribed 48 colour and 50 black and white photos there would have been a photo for each and every colour and size variation to aid identification. However the photos chosen showed the median look of each species with a few aberrations allowed in where they were absolutely necessary. Had I also been aware of the use of Vitamin C on snakebite I certainly would have included it in the section. Dr. Quesnel had known I was writing the book for years, so I am surprised he did not bring the relevant papers to my attention in time for inclusion.

Javier Valverde (unknown to me), in the European Magazine "Reptilia" for April 2002 made one of the few observations that even I, after numerous re-readings of the book, did not pick up. He noted that the text on the inside cover jacket-flap claimed that the book described "more than sixty" species. Of course, anyone who has delved into the meat of the book will realize that there are only forty-seven snakes on the twin islands, (three on Tobago not found on Trinidad) and not "more than sixty." If there is ever a reprint, I shall inform the publishers of this error. He laments the lack of topography or habitat photographs and as dearly as I would have liked to include such valuable data in the book, the restraints on illustrations demanded by the publishers, ruled out this luxury. He was clearly taken by the chapter on snakebite and comments. He says, "The part about venoms is excellent." The balance of Valverde's review is fairly standard.

The next review that I was aware of appeared in a publication called *E-STREAMS* by Judy Buys, of the National Wetlands Research Center Library, 2003. Her review is a standard for the genre, neither criticizing nor praising too heavily, and she gives a good reason for everyone to go out and purchase the book. She too notes that there is no key to identification; her one other criticism is that there would seem to be a small audience for a book that is confined to the snake fauna to such a small region of the world. However, this might apply to any publication about a small area, but does not negate it value or usefulness.

Brian A. Crother, from South Eastern Louisiana University, wrote a review published in the prestigious journal *Copeia* in 2002, and was laudatory in his praise except in one case. He stated that the author seemed to be unaware of a paper by Dunn and Bailey (1939) that would have added to the accuracy of the section on *Erythrolamprus*. It would seem that Crother did not check the bibliography carefully, for on page 237 in the Bibliography is the "missing" paper, fully quoted, in support of the reference to it on page 92.

In 2002, the *Quarterly Review of Biology* published a review by one of the foremost herpetologists in the world, Janis Roze, who did most of his research in and publishing on the snakes of nearby Venezuela. I have most of Roze's papers and books on the snakes of Venezuela and quoted from them extensively in my book. However, he either mistook or misstated the generic name for the endemic Tobagonian snake *Erythrolamprus ocellatus*, calling it *Oxyrhopus ocellatus.* Maybe he is in possession of some taxonomic review of the genus of which I am unaware. He too regrets the lack of keys and mentions spelling errors. (I have these little bugbears of publishing all in a list; if there is a reprinting or a paperback version I will attempt to have them all corrected.)

An anonymous writer on a website called KINGSNAKE.COM, was embarrassingly florid in praise of the book. He or she covered all the usual bases and compares the writing style to that of Raymond Ditmars and concludes by saying that the book was written beautifully, a description I would hardly have used myself!

Patrick T. Gregory of the University of Victoria found the book to be a good reading companion during a long flight, noting an incorrectly numbered illustration. Gregory criticized the use of the term

"ovoviviparous" as being "archaic", and the writing as "dense" in places. Well, some people think it is "beautiful", and some "dense"; opinions on quality of writing are generally very subjective. He also rejected the use of "parotid" rather than "parotoid" for the poisonous gland on the toad *Bufo marinus*. That one really made me scratch my head, for I had always used "parotid," and assumed it was correct. So I looked it up, and to my surprise, both are correct and have been used in many papers and books.

I would like to thank Dr Adrian Hailey of the University of the West Indies for supplying some of the following information on the use of the word "parotid/parotoid" for the glands in reptiles and amphibians. The root of the word means "near the ear."

Henderson's Dictionary of Biological Terms (10th Edition, UK.) defines them separately.

1. Parotid- paired salivary glands opening in the mouth of some mammals.
2. Parotoid- glands on the side of the head in some amphibians.

(plus Paratoid- double row of poison glands along the back of some salamanders.)

A dictionary of zoology and one on medical terms (both UK) both had parotid defined as above, but nothing on parotoid. Chambers Dictionary of Science and Technology (UK) had only parotid, but with both definitions above,

Peter's Dictionary of Herpetology(1964,USA) has:-

1. Parotoid for the anuran skin gland and
2. Parotid for a salivary gland in snakes but with the secondary meaning of the anuran skin gland.

The following has been some usages through the years:-

1. Parotoid- Gadow, (1901. UK) Cambridge Natural History. p. 38.
2. Parotoid, but spelt paratoid on p. 120.- Noble, (1931, reprint 1955 USA) Biology of the Amphibia.
3. Parotoid-Rose, (1950,SA) Reptiles and Amphibians of Southern Africa. p. 10.
4. Parotid- Moore, (Ed.)(1964, USA) Physiology of the Amphibia. p. 403.
5. Parotoid- Smith, (1973, UK) The British Amphibians and Reptiles. p. 75.
6. Parotoid- Beebee, (1983,UK) The Natterjack Toad. p. 43.
7. Parotoid- Frazer, (1983,UK) Reptiles and Amphibians in Britain. p. 28.

"Parotoid" has also been used by Lynn & Grant (1940), Dickerson (1969), Tyler (1976), Halliday &Adler (1986), Cochran (1961), and many others in the papers of the *Catalogue of Amphibians and Reptiles*, and "parotid" has been used by Mattison (1987), Boos & Quesnel (1968), Echternact (1977), Kenny (1969) and Murphy (1997). (The use of "paratoid" by Powell & Pregill [1991] and others may be a typographical error.)

But the world authority on words, the *Oxford English Dictionary*, has the following.

1. *Parotoid*, "Applied to certain glands of the skin forming warty excrescences near the ears in some batrachians, as toads."
2. *Parotid*, "Situated beside or near the ear, applied especially to a lobulated, recemose gland, situated one on each side, etc."

Thus it would seem that the use of either word would be understood by any professional herpetologist or herpetologically inclined reader.

I, however, cannot be other than subjective about a work that took me more than thirty years to research and photograph and about seven years to put on paper. If I succeed in saving one snake from being killed by my efforts it will have been worth it.

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FIELD TRIP REPORTS

Waterloo Wetlands - March 27th 2005
John Lum Young

The March field trip was led by Graham White, ornithologist, who was intimately familiar with the Cacandee Sluice/Bernard Trace circuit and the Proposed Brickfield Shore Birds Sanctuary. We trekked along the southern bank of the Cunupia River towards the Cacandee Sluice Gate at the convergence of the Cunupia and Madame Espagnole Rivers.

The sluice was built to keep the sea water out of the fresh water system. The sluice would be lowered to block the river when the tide rose and be raised when the tide fell. In the mid-80s the sluice was repaired and the embankment we followed had been paved to facilitate motor access to the sluice. There was also a car park and Visitors' Centre together with proper quarters for the operators on duty. Sadly this project had to be abandoned around 1987 during the severe economic downturn and austerity period at that time. Since then the mangrove has reclaimed the area and only some isolated walls from the operators' quarters and the concrete support for the sluice stand out from the surrounding forest. We observed Red Mangrove (*Rhizophora mangle*) with its characteristic stilt roots, Black Mangrove (*Avicennia germinans*) with its vertical pneumatophores that protrude from the water and the White Mangrove (*Laguncularia racemosa*) with numerous pneumatophores surrounding the trunk.

The beginning of the walk was heart wrenching. Van loads of rubbish were dumped along the road. As we went further plastic, the scourge of modern T&T, littered everywhere. What made it even worse; this was a popular place for birdwatching tourists. Just imagine their impression of Trinidadians. Along the trail the vine *Posadaea sphaerocarpa* CUCURBITACEAE family was in flower and fruit. The plant can be best described as "wild passion fruit" and is common in the Swamp. In the shallow canal south of the trail schools of Tilapia could be seen. A Spectacled Caiman (*Caiman crocodilus*) retreated into the water on hearing our approach.

Many birds were about including the Great Egret (*Casmerodius albus*), Yellow-headed Caracara (*Milvago chimachima*), Scarlet Ibis (*Eudocimus ruber*), Yellow-crowned Heron (*Nyctanassa violacea*), Tricoloured Heron (*Egretta tricolor*), Ringed King Fisher (*Ceryle torquata*) a South American migrant, Yellow-chinned Spinetail (*Certhiaxis cinnamomea*) seen in pairs, Pied Water-Tyrant (*Fluvicola pica*), Snowy Egret (*Egretta thula*), Bicoloured Conebill (*Conirostrum bicolor*), Carib Gackle (*Quiscalus lugubris*), Little Blue Heron (*Egretta caerulea*), Greater Yellowlegs (*Tringa melanoleuca*), Wattled Jacana (*Jacana jacana*). An Osprey (*Pandion haliaetus*), with a fish in its claws, took off from the water returning to its perch. This bird will normally soar at a relatively great height before plummeting into the water to grab the fish by the "neck". We heard the screech of the Black-collared Hawk (*Busarellus nigricollis*) and the sound of the Clapper Rail (*Rallus longirostris*) also called Mangrove Hen. The Cormorant (*Phalacrocorax brasiliensis*) was also spotted. This large aquatic bird with a body of length of 2 to 3 ft can chase

fish underwater. In the East fishermen keep the Cormorant on a leash and have the bird dive for fish. A tight collar around the bird's neck prevents it from swallowing the catch.

At the Proposed Brickfield Shore Birds Sanctuary we learn of the efforts of the Brickfield Village Council to convert the old shrimp farm and an adjacent 20 acres into a nature reserve. The proposed reserve lies along the coast at the south-western end of the Caroni Swamp. It was low tide and the extensive mud flat was thick with the migratory Laughing Gulls (*Larus atricilla*). Graham indicated that this was one of their main wintering areas. Next was a quick stop at Orange Field to witness some Phagwa celebrations and this ended the morning's activities.

Tobago – April 29-May 1, 2005
Jo-Anne Nina Sewlal

Twenty members made the trip to Tobago on the fast ferry, "The Cat" with a capacity for 800 passengers and 250 vehicles. We were honoured to be accompanied by stalwart Dr. Victor Quesnel, his first outing to the sister isle with the Club. The first half of Saturday's itinerary was Tobago Plantations where we would join NGOs CFCA (Caribbean Forest Conservation Association) and Environment Tobago.

From Charlotteville we travelled along the base of Pigeon Hill where we saw many landslips from the last rainy season. At Speyside Lookout Dan Jaggernauth sampled the edible fruit of the Carat palm (*Sabal mauritiiformis*), not naturally found in Tobago (Comeau et al 2003). The fruit when ripe has a jelly-like flesh similar to *Desmoncus orthacanthos* except that the fruit of *S. mauritiiformis* is red and *D. orthacanthos* is black. Black sage (*Cordia curassavica*) was planted at the base of the Carat palms. Also observed was Yellow Poui (*Tabebuia serratifolia*). After Speyside it was to King's Bay in Delaford. The surrounding hillsides were prolific with Balisier (*Heliconia* sp.). Delaford has a tradition of holding a village party where large quantities of wild meat were consumed. Interestingly this party is held when the hunting season is closed.

At Tobago Plantations we noted two man-made lakes which beautify the area and provide water for the golf course. Avid bird watcher Clayton Hull drew our attention to the fish eating *Anhinga anhinga*, or "snake bird". They are so named for the resemblance their head bears to that of a snake when it is raised out of the water while swimming (Raffaele et al. 1998).

Lystra Wallace of Angostura, Project Coordinator and guide for the day, explained that Tobago Plantations is the management body for the entire estate. The Tobago Hilton is located on land owned by Vanguard Limited but the hotel is managed by the Hilton Corporation.

Our first stop was the wooden boardwalk (701m long) that facilitated guided tours through the mangrove. Some mangrove-friendly considerations discussed include maintaining a width of 1m so as not to encroach on the mangrove and cutting the edges of the boardwalk to go around the trunks of the mangrove rather than cutting the trees. Between the stilt roots of the Red Mangrove (*Rhizophora mangle*) we saw spiders of the family Tetragnathidae.

During the tour we saw the Magnificent Frigate Bird (*Fregata magnificens*) used in the past as homing pigeons by Polynesians to bring messages of sailors' safe arrival on distant islands (Barlowe 1993). Murray Guppy reported a Southern Lapwing (*Vanellus chilensis*). ffrench (1991) notes this species' presence on the island as rare, however its numbers have been steadily increasing (G. White and C. Rooks pers. comm.). Other birds seen on the trip were the Yellow-bellied flycatcher (*Empidonax flaviventris*), Blue-crowned Motmot (*Momotus momota*) Cocrico (*Ortalis ruficauda*), Laughing Gull (*Larus atricilla*) and Brown Pelican (*Pelecanus occidentalis*).

Next stop was Buccoo Estate. We drove down a dirt road lined with Quick Stick (*Gliricidia sepium*) for about 250m, to a pasture, the proposed site of Angostura's resort and spa. The reason for locating it here is that one would be utilising pasture rather than destroying wetlands. A 15-minute walk along a dirt road before the pasture led to No Man's Land, the tip of Sheerbirds Point. This road is lined with Black Mangrove interspersed with other plants, such as Sea Grapes (*Coccoloba uvifera*), Lukenia (*Leucaena leucocephala*), Bois Dorme (*Guazuma ulmifolia*), Honey Wood (*Alchornea triplinervia*) and the Button Mangrove (*Conocarpus erectus*). The latter species is considered a "mangrove associate" (Barlowe 1993),

because of its lack of mangrove features, such as pneumatophores, prop roots, seeds that germinate on the tree, as well as its limited tolerance to salt (Barlowe 1993). Manchineel (*Hippomane mancinella*) whose genus means "horse poison" (Barlowe 1993) was also seen. Minute amounts of this sap can cause severe skin irritations and temporary blindness if it gets into the eyes. The junction between the leaf and the petiole is a raised dot about the size of a pin. This is actually a gland and is used to identify the Manchineel, as it is the only seaside tree with this feature (Barlowe 1993).

At No Man's Land reef tour operators were bringing tourists on shore where they were treated to barbecue and limbo dancing. Angostura allows the tour operators to use the area subject to certain stipulations, such as, no cutting of mangrove or dumping of garbage.

After No Man's Land we visited a sluice at Buccoo. The water from the sluice is heavily contaminated and comes from Mt. Irvine, Montgomery/Bethel and Buccoo Village. During Hurricane Ivan there was heavy flooding so that eutrophication by the sewage to the surroundings formed a natural savannah. The present vegetation would have developed in due course but the sewage acted as a fertilizer and accelerated up the process.

Following a late lunch at Store Bay we took a scenic drive along the coast through Lambeau Village. Turning off from the Windward Road we entered a wide gravel road, which led to Fort Granby. Trees here included Black Jessie (*Pitchecellobium ungus cati*) and Fiddlewood (*Citharexlum spinosum*). We climbed to the top to catch the sunset over Smith Island.

On Sunday Victor related the sighting of six White-tailed Nightjars (*Caprimulgus cayennensis*) though one of his goals was to tape the distinctive song of the Rufous Nightjar (*Camprimulgus rufus*) to verify its presence in Tobago. We stopped at a culvert in Charlotteville to observe what is believed to be a new species of the lizard *Gonatodes*, where it was described in (Seifan et al 2002). Victor saw a light coloured animal but it eluded further observation. Other lizards seen at the cottages we stayed were *Anolis richardi* and *Ameiva ameiva*. We then made our way to Flagstaff Hill where we saw the tree Angeline (*Andira inermis*) whose prominent bunches of small lilac inflorescences were blooming slightly out of season. Flagstaff Hill affords a clear view of some of the small offshore islands around Tobago such as, St. Giles. Included in this cluster of islands was a rock arch commonly known as "London Bridge". It is popular with divers because the current pulls the diver through the arch.

After Flagstaff Hill we made our way to the Bloody Bay Recreation site, which is in the oldest Forest Reserve in the western hemisphere dating back to 1765. On the way we made a detour to a waterfall, where we saw Razor grass (*Scleria secans*) and the fern *Dycrenoptera spectonata*, which usually grows in areas that have experienced fire or landslide. Two species of Melastomes were observed along the trail. Melastomes are easily identified by their peculiar venation consisting of 3 to 7 sections of horizontal veins not necessarily starting from the base of the leaf.

From the Bloody Bay Rec. site there is a clear view of Centre Peak, the highest point in Tobago. Behind this building is Gilpin Trace which is used for bird watching and hiking, and a side trail, which Dan noted leads to a waterfall commonly called "Gold and Silver waterfall" or "Gold and Diamond waterfall". Here Victor noted the presence of what could most likely be the shrub *Psychotria tobagensis* which is not found in Trinidad.

After visiting Bloody Bay Recreational site we were given a brief lesson on identifying two easily confused species of *Clusia*, *C. palmicida* and *C. rosea*. *Clusia palmicida* is typically found inland. It exudes a pale yellow sap and has fruit comprising 12 to 14 segments. *Clusia rosea* is a coastal species with fruit having 5 to 7 segments. Also seen were Royal palm (*Roystonea oleracea*), *Attalea butyracea* and *Prestonea acuminate*; the last is not found in Trinidad.

Close to midday we headed to Parlateuvier and stopped at Chances' Variety Store and Grocery for "parlour food". During our lunch break we made acquaintances with the family's pet spider monkey (*Ateles* sp.) and parrot.

On the way to L'Anse Fourmi we stopped at Bloody Bay and were introduced to fishermen Selwyn Barton and Ian Dally, who told us of their plight since the start of construction on the Bloody Bay Bridge. Last year bulldozers removed bamboo and large trees, such as Immortelle (*Erythrina poeppigiana*), upstream and dumped them in the nearby river. The land was cleared to obtain gravel for constructing the road. Although warned by the fishermen they did not remove the uprooted trees from the river. The passing of Hurricane Ivan last year swept these trees and bamboo out to sea, where they became lodged in the sand near the shore and cause the fishermen's seines (nets) to become entangled and rip. So far NEMA (National

Emergency Management Agency) pulled out some of the trees however those in deeper waters remain rooted in the sand. The locations of these trees have been marked by the fishermen with white buoys. A temporary jetty to accommodate the barges bringing in piles for the bridge is also being constructed in the bay. This churns the sand and the water becomes murky hampering fishing efforts. This only lasts for a day and the fishermen say that it is manageable. The mouth of the nearby river is of great ecological value in that it is where Leatherback (*Dermochelys coriacea*) and Hawksbill (*Eretmochelys imbricata*) turtles lay their eggs. Although Mr Barton knew of no poaching on these shores the disturbance of the area will no doubt affect the turtles' nesting patterns.

Around early afternoon we returned to Charlotteville via the L'Anse Fourmi to Charlotteville road. Along the way we saw two easily confused trees, *Muntigia calibura* and *Trema micranthum*. The leaves of both plants are very similar but those of *M. calibura* are hairier. *Trema micranthum* bears tiny red fruit 2mm in diameter, which are very appealing to birds. It is commonly found in disturbed areas in Trinidad (Quesnel and Farrell 2000). *Muntigia calibura* bears fruit measuring 1cm in diameter (Quesnel and Farrell 2000). Also noted were Manjak or Laylay (*Cordia collococca*), Puni (*Pithecellobium jupunba*) which resembles the Saman (*Samanea saman*). However it is distinguished by its pods, which are irregularly cylindrical and are contorted in the Saman (Quesnel and Farrell 2000). Victor noted lots of well-established stands of Bamboo (*Bamboo vulgaris*), indicative that this area has been disturbed for a considerable period of time.

We stopped by the bridge near the Hermitage/Charlotteville Waterfall which is actually two small waterfalls located one on top of each other. Here Victor took the opportunity to look for the lizard *Gonatodes sicila*, which likes wet rocks and caves. We saw Bois flot (*Ochroma pyramidale*) and the vine (*Antigonon* sp.) which has small pink flowers.

No trip to Charlotteville would be complete without a visit to Pirate's Bay. Here some members snorkelled and swam or just relaxed on the sand. Some of the underwater life seen included various corals and fish such as Tarpon (*Tarpon atlanticus*), Angelfish (Pomacanthidae), Sea Urchin (Echinoidea), Bristle Worm (Polychaete), Bluehead Wrasse (*Thalassoma bifasciatum*), Sergeant Major (*Sepioteuthis sepio*) and a Moray eel (Muraenidae). Afterwards we made a final visit to Flagstaff Hill again in the evening to look for lizards. We found a female *Thecadactilus repicauda* at the lookout. They are sit-and-wait predators. Their tails are usually shorter than their body length and have a pattern on the dorsal side comprising of three consecutively place diamond-shaped patches. Males of this species fight often and lose their tails. *Thecadactilus repicauda* camouflage themselves by adopting the colour of their surroundings. We departed at around 7.30pm for our last ride through Tobago. Our return vessel this time was the MV Sonia.

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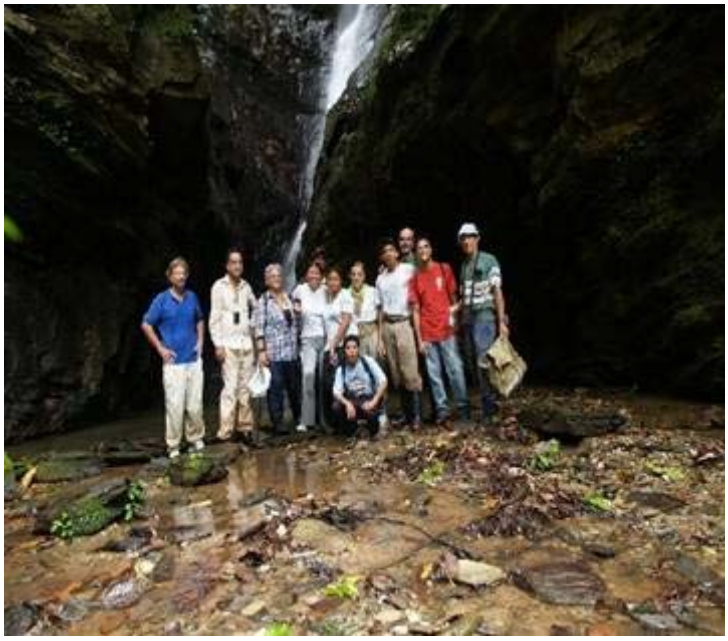
Mystery Trip – May 29th 2005
Paula Smith



Group with Machepure Falls in background
Photo by Knut Dahl Stamnes

Our Annual Mystery Trip, was attended by 13 people. After assembling at UWI for 6:45am we started our journey in pouring rain but the weather improved soon thereafter. We passed through Demerara Road and other familiar spots visited on previous trips, like the National Quarry. We saw vast christophene fields on the steep mountain slopes. We drove past some peculiar looking flowers, white and salmon coloured, shaped like bells, and past the Morne Bleu Tracking Station.

On the drive through the mountains the morning mist gave the atmosphere a mesmerizing feeling of anticipation. Finally the mystery was revealed: a waterfall the Club had never been to in Morne La Croix off the Brasso Seco Road. The trail for sure would be wet and slippery because of the previous showers.

Near the start of the hike, which was downhill, John Lum Young showed us Pois Doux (*Inga* sp.); further down we saw Mal Balata (*Pouteria coriacea*). A tall tree with yellow-orange fruit, it has a hard shell, a thin layer of white jelly-like substance, a brown seed and purple-coloured nut inside.

John showed us Tirite (*Ischnoisphon* sp.) a small shrub-like plant, the stem of which is used to make baskets. The trail was wide and winding but not very steep. We came across many trees not too many birds. We heard seagulls or cicadas. Other trees seen included *Pouteria guianensis* of the Sapodilla Family and *Hevea brasiliensis* (Rubber) with its white and sticky latex. We spotted a wasp nest - marabunta – which has a hole at the bottom for the wasps to enter.

We saw *Cephaelis tomentosa* about 5 feet tall laden with Hot Lip flowers, which looked like a hundred kisses on a tree. As John informed us of different plants a small brown bat flew overhead. On the slope projecting above the canopy was a Manac Palm (*Euterpe precatoria*) glistening in the morning sunlight. The palm sparkled a majestic silvery colour probably because of the rain dripping from its leaves and the reflection of the sun's rays on its evenly proportioned branches which made it look as if a hand had carefully placed the branches at equal angles (like a silver wand).

We also saw a plant probably related to the Hawaiian Torch. We came across a Y in the trail and went downhill on the right though a narrow, rocky and slippery track leading to a river. There were plantain and cocoa trees on the other bank. For 15 minutes we made our way up the Machepure River over slippery rocks to our destination, the Machepure waterfall.

Many hanging vines and fallen trees obstructed the path. We trekked through the wet slippery vegetation then heard the gushing of the water and soon were in view of the waterfall. A single drop fall about 60 feet in height with a small shallow pool of cold water to cool us down from the walk. A member took pictures of the group after we rested and had lunch. We left the falls at 10:15am. The hike was an overall 1 ½ hr approximately. On the way back closer to the place we started from, John told us of the trail to another fall but there was no true path as it was densely covered and a very narrow one as well.

We came back to the cars at about 11:15am. We rested and changed our clothes and made our way home and that concluded our mystery trip for this year. Who knows where we will end up on the next destination of our annual trip. THAT REMAINS A MYSTERY.

Soho Cave– June 26, 2005
Jo-Anne Nina Sewlal

Departing from UWI south gate at 7.30am we headed east along the Churchill Roosevelt Highway for approximately 22km. We turned north onto Cumuto Road leading to the Heights of Aripo road which we followed for 7.2km until Aripo Village then over a small wooden bridge and up the steep hill and continue for about 4km.

Twenty-nine members went on the trip to visit the Soho cave approximately 2km to the east of the Aripo Main Cave. Soho Cave (686m) is located slightly lower than the Aripo Main Cave (762m). Before the walk Dan Jaggernauth passed around the young fruit of the Mahogany (*Swietenia macrophylla*), which looked like large brown pear-shaped capsules. Mahogany was introduced from Honduras, for its timber. It was also planted as a windbreak around cacao fields (Quesnel and Farrell 2000), which explains its presence in the area. Dan also reminded us that the Club would be celebrating 114 years in existence on 10th July.

The trail is complicated by many small side trails. We referred to a handmade map of the trail that Victor Quesnel had drawn based on the Club's trail guide and his extensive field experience in the area. This cave is one of the locations where *Proctoporus shrevei* commonly called the "luminous lizard" have been collected for study. The males in particular have a series of white spots along their sides which are surrounded by dark rings. The white is very reflective and could suggest luminosity in some conditions (A. Hailey pers. comm.). Our first stop was at a nutmeg tree (*Myristica fragrans*). On the opposite side of the trail was a small pile of limestone rocks which Victor had piled as the first reference point on the trail. In this report I will make mention of some of his reference points. A dead bachac (*Atta cephalotes*) nest on the left was point 5. This colony was active up to three months ago. Point 6 was a large *Ficus yokonensis*, the only *Ficus* species whose leaves have very closely spaced secondary veins. The first limestone boulder that one encounters on the right side of the trail is regarded at Point 7. Point 8 is referred to as "the Portal" because one has to walk through two limestone boulders on either side of the trail. A few metres after this point one passes the entrance to a dry gorge on the left of the trail.

One of the trees seen along the way was Bois canot (*Cercropia peltata*) whose hollow trunk is separated into compartments at nodes along the trunk, similar to bamboo. Ants of the genus *Azteca* often nest in the hollow trunk (Janzen 1973). We saw a few silk cotton trees (*Ceiba petandra*) along the trail. Despite its reputation in this country as a home for evil spirits it was held sacred by the ancient Mayas, who said that from it the first man was born (Hargreaves and Hargreaves 1965). Melastomes were also a common sight along the trail.

After passing a very large silk cotton tree the conversation of the group automatically turned to the local folklore. Murray Guppy gave possible explanations of the existence of some local folklore characters. One such character is the soucouyant (Trinidadian version of vampires), which turn into balls of fire instead of bats. Victor said that this phenomenon could be ignited balls of methane gas from swamps. Murray added that it could be people walking with a flambeau in the night where, at a distance the flame could be mistaken for a ball of fire. Another folklore character discussed was the Lagahoo (Trinidadian version of a werewolf). They would drag and rattle chains as they walked. Murray noted that these were actually pigs who had escaped during the night and the chains around their necks would drag. Chains were used instead of rope because they were reliable and not easily broken.

We saw fruits of two trees. The first was that of *Clusia palmicidia*, where ants appeared to be eating the sticky ariloid surrounding the seed in the centre of the fruit. *Clusia* resembles *Ficus* and is also a strangler. However both genera can be distinguished from each other by the arrangement of their leaves. The second tree was Angeline (*Andira inermis*) which is edible to bats (Quesnel and Farrell 2000), but poisonous to humans. A member of the group noted that it was used to play the game of scooch (Trinidadian version of dodge ball) in his village when he was a

child. We also observed a Caimit or Star Apple (*Chrysophyllum cainito*) however, no fruit were present.

Understory plants seen along the trail included the grass *Pharus latifolia* which has burrs that stick onto your clothing on contact. Victor noted that he had never seen this species growing in clumps. Other understory plants included the shrubs *Brownea latifolia* and *Psychotria uliginosa*. The latter produces a central stalk covered in small red fruit, which turn purple when ripe. Out of the 15 species of *Psychotria*, this species likes moist areas and is found in the Northern Range.

Along the way we saw the bromeliad *Guzmania lingulata* as well as two common species of *Anthurium*; *Anthurium hookerii* and *A. jenmanii*. *Anthurium jenmanii* was often found growing on large limestone rocks at the side of the trail. We were also fortunate to observe the flowers of *A. jenmanii*. These species can be distinguished from each other using two criteria. *Anthurium hookerii* is found growing at high altitudes on tree, while *A. jenmanii* is found on the ground. Also *A. hookerii* has dots on the undersides of its leaves, while in *A. jenmanii* the dots are absent. Also observed were *Heliconia hirsuta*. The yellow inflorescences of *Calathea trinitensis* were abundant along the trail. This is a high altitude plant usually growing above 457m. We also saw the flowers of the understory plant *Evodianthus funifer*, whose stamens resemble thin white noodles.

Along the way we saw columns of army ants (*Echiton burchelli*) cutting across the trail. Other insects observed included a nest of the social wasp *Polybia occidentalis*. Butterflies seen included the Emperor (*Morpho peleides*) and the Tiger (*Tithoriea harmonia*) whose habitats include shaded semi-forested areas and cocoa estates (Stiling 1986). Spiders belonging to the families Salticidae, Pisauridae, Theridiosomatidae, and Tetragnathidae were noted along the trail.

We heard the call of the Bearded Bellbird (*Procnias averano*) and the clicking of the White Bearded Manakin (*Manacus manacus*). After a 3½ hour walk we stopped for lunch at the junction of the trail leading to the cave. Nearby we saw a Wild Chataigne tree (*Pachira insignis*). During lunch we saw the wasp *Angiopolybia pallens*. Victor and Murray were convinced that they were attracted to their sandwiches (particularly meat). Actually they are attracted to sweat and anything salty that would include meat (C.K. Starr pers. comm.). At this spot we saw two large globules of white foam, spittle from hemipteran insects feeding on the tree.

After our lunch break we headed for the cave down a short steep trail. After about 30m downhill we encountered wild tannia (*Xantosoma undipes*). Although we saw some large specimens reaching over a metre in height these plants should not be grasped for support because of their shallow roots. As one nears the end of the trail one is greeted by a huge cavern over 20m in height.

We ventured about 30m into the cave and passed through a narrow passageway into a large cavern. Here we saw the outlines of the oilbirds (*Steatornis caripensis*) against the light coming from an open vent about 12m in the roof of the cavern. Oilbirds also called "Guácharo" or "Diablotin" (ffrench 1991) are quite large with wingspans of over a metre. Although we could not get a clear view, these birds are brown with large hooked bills and long tails, thus resembling nightjars and owls (ffrench 1991). They navigate around the dark cave using sonar, however unlike bats the clicks that they emit echo very loudly off the cave walls and

Stalactites on roof of inner chamber.
Photo by Jo-Anne Sewlal

were almost deafening at times. We continued and entered a smaller cavern through a narrow tunnel. Here we examined mineral deposits termed stalagmites (found on the cave floor) and stalactites (found hanging from the cave roof) up close. Some of the seeds dropped by the oilbirds do germinate in the guano but ultimately die. On the way out we saw some of these lifeless seedlings.

After a quick visit to the vent spotted from inside the cave, some members were fortunate to catch a glimpse of a nesting oilbird. They nest on mounds of the regurgitated remains of fruit in the cave. They have a very long breeding season due to the cold environment of the cave, and the eggs and young mature slowly. Afterwards we made the long journey back to the vehicles.

The following addendum is supplied by Victor C. Quesnel.

> On my way back home I stopped to speak to a Mr. Sebastian Thomas whom I had met once before. He had an estate of 18 acres which is planted mainly in cacao which he says yields well. I described where we had been and asked if he had a name for the cave. He answered "Small Cave". Now this makes sense as a name for a cave that is smaller than the one called Main Cave. It is probably what Snow called Small Cave (Darlington 1995) since he would probably have used the name that locals used. I asked if he knew of other caves. He said he knew a third cave which from his description may be the one we are now calling Carricker's Cave after the description in Carricker (1931). He offered to take me to the caves he knows and to the Dry River near Soho Cave. This I take to be the ravine that runs W-E between the two W-E ridges at the top of the valley. I intend to take him up on his offer. Any other takers?

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BOOK REVIEW

BUGS AND SNAKES GALORE
Review of:
R.C.H. Sweeney. 1965. *The Scurrying Bush.* New York: Random House 208 pp.
[Second in a series on "naturalist-in" books.]

Charles Sweeney grew up in England and as a young man worked at the British Museum of Natural History. The work interested him, but his eventless life did not, and in 1949 he took a job as an entomologist in what is now Tanzania. He remained in East Africa for many years, working also in Sudan and Malawi. He is the author of a two-volume work on *Animal Life of Malawi* (1970).

In this book, Sweeney makes occasional passing reference to his work as an applied entomologist, but this is peripheral to the real subject, his life as an amateur naturalist in a part of the world that never ceased to fascinate him. The main foci are arthropods and reptiles, but he was very much an all-around naturalist of the Victor Quesnel variety. The main research reported here is on the habits and life cycle of bush-babies, a group of prosimian mammals found throughout much of sub-Saharan Africa.

Aside from the broad, enthusiastic and generally knowledgeable account of East-African wildlife, there are two attractive features of this book that especially caught my attention.

First, Sweeney's treatment of his African assistants is more human and sympathetic than one might expect from someone so embedded in the colonial system. They often accompanied him on his extracurricular jaunts, so that much is said about them. They all have names, and if you think this is inconsequential, look in other colonial-era naturalists' books about Africa. While Sweeney is quite open about their individual foibles -- in his last encounter with one valued assistant, the man was in prison for his part in a drunken brawl -- there is no cross-cultural caricature here. As an example, they spent a great deal of time in the wild, uninhabited Mkulumuzi River gorge, and Sweeney remarks vividly on the varying degrees to which his assistants reluctant or refused to go to particular places because of fear of spirits. However, this is not to say that they are cowardly or foolish, just that they see things differently.

Second, while there is much attention to crocodiles and venomous snakes, and an occasional encounter with a lion, Sweeney does not make a big deal of the dangers involved. Too be sure, there are risks, but these are noted without chest-swelling bravado. At one point he says plainly that a man can handle even a grown Nile crocodile if he knows what he is doing, and then he goes about doing it. It is all part of the working and living conditions of being a naturalist in East Africa, of which this is such an engaging, readable account.

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MANAGEMENT NOTICES

THANK YOU

The Management Committee wishes to extend sincere thanks and appreciation to Miss Calista Pierre and Mr. Rupert Mendes who, in spite of their job demands, produced our Club's quarterly bulletins for the past 5 years. The first bulletin produced under their stewardship was the January-March 1999 Issue which started off with a "new face" being given to the bulletin and which members would agree improved over the years. We thank Calista and Rupert for their commitment to this important project and we look forward to their continuing support and contributions to the work of the TTFNC.

WELCOME ABOARD

Miss Jo-Anne Nina Sewlal and Dr. Christopher Starr will be the new Editorial Team for the quarterly bulletin from this issue. We hope that members will give their support to them to ensure the timely production of our bulletin which, as you know, is now circulated to other organizations which seek to promote and inform the public on environmental issues.

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.

"ORCHIDS – A FESTIVAL OF BLOOMS"

October 1st and 2nd , 2005
Ambassador Hotel, St. James.

Volunteers needed to work our booth re Trinidad and Tobago Orchid Society.

WELCOME NEW MEMBERS!

Hans-Erich Schulz
Mario Russell

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.

SPECIAL THANKS

To **Nora and Jack Jones** for the donations of six publications to our Library.

- Coral Reefs by Eugene H Kaplan
- A Birder's West Indies by Roland H Wauer
- Birds of Venezuela by Rodolphe Meyer de Schauensee and William H Phelps, Jr.
- The Nature of the Islands by Virginia Barlow
- Venezuela La Guia Valentina Quintero 2004/2005
- The Audubon society Encyclopedia of North American Birds by John K Terres
-

We are also grateful them for the following equipment:

- Olympus digital Camera Model no D-520 Zoom and accessories
- Olympus Stylus zoom 140 camera

PUBLICATIONS

- The 2004 issue of the Living World Journal has been published. Please collect your copy at the next monthly meeting.
- 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 revised Trail Guide is due to be published by end-2005.

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

MANAGEMENT NOTICES (cont'd)

TTFNC'S RESPONSIBILITY TO THE NATION'S STEWARDSHIP OF THE ENVIRONMENT

Volunteers needed… on important Environmental Issues. Please let us have your opinion. Extract from the Vice President's article in January-March 2005 Quarterly Bulletin – "Members who have views on this, particularly members willing to contribute their time and skills toward the cause they advocate, should contact the Management Committee and let them know what practical actions they feel should be taken toward this aspect of our club's objectives."

Your 2005 Annual Membership Fees are Due!!
Please view bottom right of the mailing label to check if your subscription has been paid

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)

Submit to any of the following: 1) jo_annesewlal@yahoo.com 2) ttfnc@wow.net.tt, or any member of the Management Committee.

Deadline for submission of articles for the 4th Quarter 2005 issue of the Bulletin is December 1, 2005. Please note that all field trip reports for this quarter must be in by the deadline, with the exception of the November report.