THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

January – March 2013 **Issue No: 1/2013**

Field Trip Report, August 25 - 26, 2012

Grand Tacaribe

Report by Kathryn Christopher (12 years old)

Our unforgettable trip began in the launching bay at a humble fishing centre in Blanchisseuse. Here, we were witness to the amazing packing skills of our boatman, Cleave, and his seafaring friend. They miraculously managed to fit our many, many bags into their small fishing vessel, yet still have room for the nine of us hikers. The trip by sea was a mere half hour or so and the morning sun's rays shone kindly on us, except during a brief encounter with a squall. As we neared our destination, we were escorted by an entourage of 9 Brown Pelicans (*Pelecanus occidentalis)* and a

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Mother and daughter Vicki Blanchard and Kathryn Christopher enjoying coconut water at Grand Tacaribe

Photo: Dan Jaggernauth

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Editor's note

Many thanks to all who contributed and assisted with articles and photographs.


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January - March 2013

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Eddison Baptiste, Rupert Mends (assistant editor),

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Eddison Baptiste, Elisha Tikasingh, Palaash Narase, Reginald Potter

Contributing writers
Chennile Khan, Christopher Starr, Hans Boos, Kathryn Christopher, Matt Kelly, Hans Boos, Reg Potter

Photographs
Dan Jaggernauth, Eddison Baptiste, Matt Kelly, Vicki Blanchard

Design and Layout
Eddison Baptiste

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Website: http://www.ttfnc.org

Postal: **The Secretary, TTFNC, c/o P.O. Box 642, Port-of-Spain, Trinidad and Tobago**

Email: admin@ttfnc.org

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single magnificent frigatebird (*Fregata magnificens)*.

Immediately upon arrival, we began our search for suitable camping areas to claim as our own for the night. A few of us came upon a beautiful hideaway close to a river with several small waterfalls. We reported our discovery to the others whom we had left behind but 4 persons decided to settle for a nearby sandy abode. The rest of us, however, were glad to make the extra lug and brave the sand-fly-ridden walk to our newfound 'paradise', as Dan Jaggernauth called it. This eastern side of the beach also had the added attraction of large areas of sand covered with trailing expanses of yellow and pink flowers known as Beach Morning Glory (*Ipomoea pes-caprae)*.

The rest of the day was free for exploration and, as soon as I had pitched my tent, I headed straight for a little rock islet that turned out to be a paradise for crabs and sea -grape trees. Unfortunately their delicious fruits were too green to snack on. Instead, Dan produced a large coconut, filled with cool coconut water and lots of delicious coconut jelly. My mother, Vicki, and I then decided to investigate a rocky peninsula at the western end of the beach. The climb had its challenging moments but it was well worth the stunning view on the other side.

Upon our reluctant return to the sandy shoreline, we were greeted with Selwyn Gomes' exciting report of his sighting of a "Spanish dancer" (*Hexabranchus sanguineus*). I

Beach Morning Glory, *Ipomoea pes-caprae*

Photo: Vicki Blanchard

just had to see this out-of-this-world creature for myself, so we both borrowed snorkeling gear and dove into the deep blue in the name of underwater photography. Unfortunately, the mystical creature had had enough of curious snorkellers and the falling tide, and was nowhere in sight. Disappointed, we began our swim back to shore. A huge school of tiny bait fish took us by surprise, however, and refused to leave us alone until we had given them an audience.

Dan's delicious, steaming hot dhal and rice, flavoured with a bouquet garni of lemon grass, was a welcome feast after a quick dip under the cascades of the nearby crayfish-riddled river. Observing the dampness of the evening, Dan told us that if one ever needed to build a fire in such weather it is easier done by cutting a hole in the hollow stem of the bamboo which would provide a protected and dry refuge for a flame, a trick he had learnt from his mother.

A little while after my late lunch/early dinner, I had the pleasure of becoming closely acquainted with a ¾", brownish-grey jumping frog; Humboldt's Toad *(Rhinella humboldti)* that made quite at home in the palm of my hand.

As the setting sun was pulled across the sky in a chariot driven by a flock of parrots, we became curious about the congregation of quite a few turkey vultures in one area of the beach. Upon our approach, and urged by the chastising of Kay Hinkson, they flew off but only after devouring a cache of turtle hatchlings. We were lucky enough, however, to witness the journey of the surviving 29 hatchlings who hurtled down the beach and into the great ocean.

An evening of indeterminate weather was punctuated by a double rainbow, of which the "paparazzi" took full advantage, and we finished the day gazing at some star—or was it a plane—through gathering clouds and lighting fireworks. Our walk back to our tents yielded the unmistakable scent of 'wild animal', perhaps porcupine, suggested Dan.

Most of us fell asleep in the late hours of the night to the sound of cicadas, occasional streaks of lightning parting the sky, and the roll of distant thunder.

I woke in the early hours of the morning and decided to take a stroll down the beach with mum. To the eastern end we discovered several tracks along the beach. Dan, the only other human afoot, appeared and informed us that he was sure there was a major nesting last night and that we had just missed an adult, hawksbill probably, returning to the sea. Excited, we walked the entire distance of the beach counting fresh adult turtle and hatch-

Humboldt's Toad,
Rhinella humboldti
at home in Kathryn's palm

Photo: Vicki Blanchard

ling tracks. Whilst counting, we noted that one hawksbill had even wandered up past the sand and had flattened an area amongst the vegetation. Based on the tracks, we accounted for 10 adult hawksbill turtles, 2 adult leatherbacks and a total of 270 hatchlings in all! There were 4 recently hatched nests; the hatchlings per nest were 65, 54, 50 and 101, respectively. (We *triple*-checked that last nest to make sure)!

The only species that came anywhere near the turtle in number was the turkey vulture with 25 representatives. The most energetic and visible had to be the 6 sandpipers caught frolicking in the receding waves. Of note was the remains of the breast plate of an apparently slaughtered turtle that was found on the beach. Another chunk of 'plate' was also found on Madamas Beach.

The most intriguing discovery, however, was the trail of a four-legged creature that moved with feet one after the other in very close pairs. No tail tracks were evident. The distance between the tracks was about 6 inches. Each paw was about 1.5 to 2 inches in length which included claw-like indentations to the front. It seemed to be hunting the sand crabs and had also, by evidence of its tracks and leftovers, made a meal of a hatchling or two. Almost half of the beach was covered in these tracks that meandered between the tree line and water's edge. Quite a distance to cover so it may have been possible that he or she had company.

We returned to the campsite for a good helping of Dan's lemon grass tea and breakfast. Not long after ten o'clock, the second group of hikers, Esperanza Luengo and family, arrived and we set off on our little excursion to Madamas Beach. The path was muddy from the rain on the previous night, and at times a bit steep, but generally clear and obvious.

Curious tracks found on Madamas Beach

Photo: Vicki Blanchard

The haunting remains of a vanished agricultural community, that existed when cocoa was king, lingered around us on the trail to Madamas. The remnants of a small house, pillars and front steps, lay tucked away to the side of our path. Amongst its ruins, and scattered in the general vicinity, were evidence of 'domestic' plants like ixoras. Interspersed along the trail were yam, breadfruit and lemon trees.

We encountered wild chataigne and several towering stands of heliconias in full bloom. Hog plums (*Spondias mombin*) and cocoa served as light snacks along the way. Special appearances were made by a 200-year-old balata tree and the 'Mountain Cabbage' palm (*Euterpe precatoria*). The biggest hit however, was the inedible sandbox (*Hura crepitans)* and a similar tree with three-seeded fruit (perhaps a rubber tree) whose nuts exploded over our heads like oversized popcorn. Along the beach, Nipa palm fruits,

(right)

Mountain Cabbage palms, *Euterpe precatoria*

Photo: Vicki Blanchard

Grand Tacaribe

Photo: Vicki Blanchard

right:

Dry sandbox fruit,
Euterpe precatoria

left:

Dry rubber tree seed pod,
Heavea brasiliensis

bottom right:

Shelf mushroom, A fungus belonging to the genus *Ganoderma* growing on a dead tree trunk

Photos: Vicki Blanchard

which are usually found on Toco beaches, flowering firecracker plants, almond trees and a flowering *Philodendron*.

We also had our fair share of encounters with fauna; a huge blue butterfly, an owl butterfly (*Caligo eurilochus*), the sound of a woodcreeper (*Sittasomus griseicapillus*) and the traces of five hawksbill turtle nestings on the Madamas beach.

After a refreshing dip in the cool, wide river and a fast-paced return hike, in order to catch the boat, we were all dismantling our overnight shelters and heading for the western end of Grand Tacarib beach. With all our camping and hiking gear, we felt, at times, like the pack donkeys that would have been led on the same path we had just hiked along.

One last swim and we were off. Forget roller coasters and theme parks, if you want some real excitement in your trips, the person you will want to contact is our boatman, Cleave! We were taken on a thrilling, unforgettable, jaw-cracking ride over huge swells and through the narrow spaces between rocky islets. The final act was some amazing, precise, one-point reversing that would have made James Bond jealous. In the end, we parted friends with memories that are bound to last a lifetime and resolutions to return.

Madamas beach

Photo: Vicki Blanchard

Field Trip Report, Sunday October 14, 2012

Tour of Constance coconut estate in Icacos

Report by Reg Potter

As expected, it was a long drive down to Icacos, even when I made only one wrong turn in Cedros village. The drive there was scenic however especially after passing Cedros where the road passed through endless plantations of tall coconuts, all seeming to be about 40-50 feet high, except where these gave way to open swamp lagoon in one area. And it was a glorious sunny day to add to the beauty. We arrived at Constance estate at about 09.15 am and met the rest of the group that had spent the night there in tents or had driven down independently.

Phillipe Agostini, the owner of St. Andrew's and Constance estates came out to meet us and direct the tour, starting with a talk on coconut farming. What better place to learn about coconuts than these two historic estates totaling approximately 1800 acres between them, lying on the southwest tip of

Reg Potter balancing on a mangrove tree at the edge of an open lagoon at the edge of Constance coconut estate

Photo: Eddison Baptiste

Trinidad and just southwest of the equally famous San Quentin and Columba estates which total approximately 2400 acres.

Initial impressions were that the estate buildings were rather run down since many buildings and water tanks are now idle and have not been demolished. Dead trees were plentiful appearing as headless trunks standing among those that have survived. Also the well known coastal erosion has removed large areas on which coconuts and buildings previously stood. The signs of this were evident while deposition further down and actually onto the 'tip' of Trinidad, has increased the land available on the edge of the St Andrew's estate.

Phillipe explained that production was greatly reduced largely from the effects of the 'red mites' and 'red ring' disease, plus some damage from the grubs of the rhinoceros beetle. Before the arrival of the invasive alien 'red mites' from Asia his estates produced 100,000 nuts per week, but production was now down to 10,000 nuts per week as a result of trees dying and labour shortages. Although he claimed the mites are controllable with frequent applications of soapy water mixed with a little vegetable oil and possibly some 'miteicide' acaricide, the cost of spraying, especially on tall trees is virtually prohibitive. Red Ring disease is well known to coconut producers, being a pest for as long as coconuts have been produced. It is caused by a nematode which is transported by the palm weevil *Rhynchophorus palmarum* and enters a young tree through scars on the trunk, leaf stumps or any wound caused accidentally by brush cutting equipment. This nematode causes a red ring visible in the stump of a felled tree. There is no cure, so trees that appear infected must be felled and cleared. His observation was that tall trees past a certain age do not seem to get infected, but replants may suffer losses of up to 75%. Trapping of the host weevil is possible using plastic sweet drink bottles and a variety of baits.

These pests plus the fact that a tree takes about 4 – 6 years to reach fruiting age, and dry nuts are not harvested until a year after the flowers bloom, makes the business of farming quite difficult, requiring continuous replanting. In the future he is dreading the arrival of another alien invasive disease known as "Lethal Yellow" that has already arrived in Antigua and will almost certainly make its way to Trinidad.

The government has provided negligible assistance despite many public utterances of bringing 'experts' from abroad to find a solution to the problem, which Phillipe felt must be the introduction of a natural predator.
He explained that coconuts grow best in plenty of sunlight and those that start their life in shadier areas forever produce less nuts. Thus an area has to be completely cleared of dead trees and survivors before new trees are planted out from nurseries. Also, mixed cropping is limited for at least a year until the young trees have gained enough height. Trees are planted about 25 feet apart and in straight lines to facilitate maintenance with tractors.

We toured the coconut milk plant which produces flavouring extracted 'milk', that is chilled down to -20^{0}C, and delivered to ice cream makers as a way of extracting higher

value from coconuts than via copra. The equipment is housed in a concrete shed in a sectioned, closed, sterilized area and the process consists of two lightly chlorinated washes followed by grinding, squeezing, collecting and chilling. Only prime, selected coconut meat is used. The milk (an emulsion of coconut oil and water) is produced in three runs weekly.

Bags of husked nuts and bunches of large plantains were also seen in the shed, but outside of the sterilized area.

Also seen in another shed were the fired driers that turn out the more traditional product, copra, that is delivered to Coconut Growers Association in Port of Spain where it is used for producing cooking oil and making soap.

We then took to the cars and drove to an area where mixed crops are being tried, grown under coconuts. There, in an area fenced against feral cattle, we were shown healthy cocoa, plantain, lime and lemon trees, all growing below tall coconuts that seemed to have suffered fewer losses to mites than those located in other areas. On the track to this orchard we passed replanted fields of coconuts with about a year's growth. This entire peninsula area is barely a few feet above sea level and evidence of the wet swamp was clearly seen as water-filled depressions with levels just below the dry land we walked on. Nevertheless Phillipe assured us that they are still very dependent on rain, and crop yields fall dramatically about a year after a particularly dry season.

Phillipe then left us to explore the mangrove swamp to which he directed us along an estate road heading roughly north which brought us near the edge. Several of us walked the last few hundred feet through the coconuts to the swamp that was largely dry enough to walk on, except for some ditches with standing water. This eventually brought us to the edge of an open lagoon with the mangroves extending a few feet into the water that was about 3 feet in depth. We saw no signs of bird life and while clambering in these mangroves to get a picture I dropped my camera into the swamp. Although I managed to retrieve it, it was quite ruined.

From the swamp we had arranged to see the St Andrew's estate on our way out since the road back took us through it. Here, under the guidance of the estate manager, Allan (surname unknown), we saw the coconut splitting machine that replaces this previously manual task. A small mound had been made abutting a silo filled with dry coconuts. The tractor having gathered nuts from the field climbs the mound and empties its cargo into the silo. At the base a sluice-like door controls the flow of nuts onto an inclined conveyor that elevates the nuts above the splitter. This splitter, locally made by the previous estate owner, consists of three vertically-planed sharpened discs mounted on separate shafts at an angle of 120^0 to each other so that the sharpened edges converge leaving a gap of only about 1 inch in the centre. One man stands on a platform and manually orientates each nut, brought up to him by the conveyor, so it enters the knives by gravity, which then split the nut and husk into 3 segments. These cut pieces fall into a trolley basket which then is pushed manually along rails where the husks and copra-bearing shells are

separated, the copra is extracted by 5 women who sit beside the rails, and the husks are thrown onto an adjacent area. The husks are left to rot, are burnt to reduce volume, and the potassium-rich ash returned to the fields as fertilizer. Other estates use tractor-operated equivalents of this splitter which results in the husks decomposing in the fields where they originated so that burning is not needed, but the associated workforce must move together with the tractor in the fields.

It seemed that the previous history of these being two separately owned estates accounted for the splitter and copra drier/ coconut milk equipment being in different locations, thus requiring transportation between the two sites.

This ended the formal part of the trip which had proved most interesting. Coconut farming once formed a significant part of the economies of West Indian islands but has declined to the point where only this area and the Cocal remain active in Trinidad. All other estates appear to produce mainly husked nuts as a casual crop, or drinking nuts. This tour together with trip to the San Antonio cocoa estate earlier in the year featured two struggling remainders from our agricultural past.

Most of the party had already left for Port of Spain and several more then departed leaving only a small group of three cars. We who remained returned to the Icacos junction and instead of turning left back to town travelled straight onward to some delightful, almost uninhabited, coastline that has not changed in many years, where we had lunch. The view to the east down the empty beach along the south coast extended all the way to Erin and beyond. The low-lying coast of Venezuela seemed only a stone's throw away. After lunch we headed back to town taking in some sightseeing at Columbus Bay with its historic Los Gallos rocks (painted by Cazabon), the Cedros customs post/police station, and Aripero at the edge of the Rousillac swamp where we observed the original Darwent oil well drilled in 1866 (the first oil well in Trinidad), now in a housing development with surface oil seeps still in evidence. Arrival back at home was about 5.30pm making it a very long day of driving, but as always, a delight to have seen the remote Icacos area again.

Below Columbus Bay - *photos: Eddison*

Field Trip Report, Saturday February 16th, 2013

TTFNC Bug Trip to Arena Forest Reserve

Report by Matt Kelly

Six bug enthusiasts arrived at the North entrance of the Arena Forest Reserve on Cumuto-Tumpuna Road for a look at the insect communities of the 1546 hectare (over 3800 acre) reserve.

According the welcome sign there, constructed by the Forestry Division, we were about to experience "Evergreen Seasonal Forest", with an annual rainfall of around 200 – 300 cm. The sign also told us that "Arena" is an Amerindian word for "Place of Sand", and this was also the site of "one of the

members of the Bug Group on Morne Catherine

frontL-R: Shane Ballah, Dan Jaggernauth

back L-R: Paula Smith, Christopher Starr, Rakesh Bhukal, Matt Kelly

bloodiest encounters recorded between the Amerindians and the Spaniards in 1699."

As we made our way into the forest on some very fine and well kept trails, we encountered the fineleaf tree (*Pentaclethra macroloba*), which was the predominant tree here. Dan Jaggernauth showed us the "sea coconut" palm (*Manicaria saccifera*) with its ping pong ball-sized seeds, which, when cut open, have the taste of miniature coconuts. We also came upon the large wooden thimble seed caps under the guatecare tree (pronounced "water-care") (*Eschweilera subglandulosa*). Another tree we encountered was the matchwood (*Shefflera morototoni*).

It wasn't long into the forest that we encountered bugs. Christopher Starr pointed out (but not too close) one of Trinidad's only arboreal ant, *Anochetus emarginatus*, which makes its home out of shredded leaf litter, and is related to the infamous tock-tock ant with its mighty sting. A large tarantula hawk wasp (*Pepsis sp*.) stopped close by to check the area for potential prey. Starr and Hook list 13 species of *Pepsis* in T&T. It paralyzes large spiders with one of the world's most powerful stings, lays its eggs on its prey, and when its young hatch on the still-living spider, the larva will feast on fresh meat.

Christopher pointed out 3 types of termites along the way; *Microcerotermes arboreus, Nasutitermes corniger, and Termes hispaniolae*. All three of these species build a nest which

Dan Jaggernauth shows us the fruit of the "Sea Coconut" Palm (*Manicaria saccifera*)

Termites nest at base of tree

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***Anochetus emarginatus*nest**
Trinidad's only arboreal ant

Anochetus emarginatus
nest made shredded leaf litter

Nasutitermes corniger
One of three types of Termites seen

Page 16, pic 1 : **paper wasp hive, of *Polybia striata***

Page 17, pic 2 : **Ground itch bush, *Irlbachia alata* produces a secretion that attracts ants**

Page 16, pic 3 : **Ants are attracted to the flower walls "extrafloral nectarines" of *Irlbachia alata***

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3

TTFNC Bug Trip to Arena Forest Reserve
(Continued from page 14)

starts at the base of a tree at ground level, and works its way up the trunk of the tree, until after many years of constant building and adding, it may present an imposing structure much taller than a man. In 2003, Scheffrahn, Starr (et. all) noted there are 55 termite species in T&T.

We searched many buttress notches, looking for spiders and other insects. We found many, including the golden-orb silk weaver (*Nephila clavipes*), one of the most widely distributed orb-weavers in the tropics. We encountered a pair of small dung beetles (a.k.a "kaka rollers") rolling their load. We found the large black ant, *Pachycondyla crassinoda*, Trinidad's largest ant, *that feeds on termites, especially the corniger, among other things.*

For me, it was difficult not to search for birds, as the forest was alive with them. I tried to keep my focus on the bugs. Soon after we entered the forest, we came upon a large and active lek of White-bearded Manakins, and a little farther along, we encountered another active lek of about 8 – 12 Green Hermit hummingbirds. Among other birds I identified were; Rock Pigeon, Ruddy Ground-Dove, Green-backed Trogon, Collared Trogon, Channel-billed Toucan, Orange-winged Parrot, Plain-brown Woodcreeper, Cocoa Woodcreeper, Great Kiskadee, Rufous-breasted Wren, Spectacled Thrush, Silver-beaked Tanager, Blue-gray Tanager, Palm Tanager, Bananaquit, Yellow-rumped Cacique, and Crested Oropendola . If only my birding ear was better, I could have added plenty more.

We paused to examine a plant which Shane Ballah is particularly interested in. We found many later on our trip. Looking in the TTFNC Guide to Flowers of Trinidad and Tobago, the plant appears to be in there, and identified as "Tabaquillia" or *Chelonanthus alatus*. Kenny also shows a plant which resembles this one, which he identifies as "Ground Itch Bush" or *Irlbachia alata*. Kenny goes on to state that this is a common roadside plant, which may flower for many months. Also, according to Kenny, ants are attracted to the flower walls. In a web search of the two species named above, *Irlbachia alata* seemed to me to be the relevant plant we were looking at.

Shane has been studying the relationship of a mystery ant to this plant. The plant appears to host extrafloral nectaries on the base of the flowers and flower buds, that can be clearly seen in the photo. The same plant also appears to have some other type of extrafloral nectary, or additional growth, that apparently attracts the ants. Growing on the base of the leaf stems, instead of a nectar station, as in many extrafloral nectaries, this plant appears to have a ridge-type growth or membrane, which the ants will appear to readily eat, maybe even sooner than the extrafloral nectaries on the base of the flowers and buds. I purposely disturbed a plant where several ants appeared to be feeding to test their defense reaction. In all cases, the ants did not defend the plant but fled. This symbiotic relation is a new mystery waiting to be unraveled.

We walked the trail network to Barker Trace, then along Balata Branch Road till we

reached Cumuto-Tumpuna Road and walked back our vehicles. Along the way, we encountered a large social paper wasp hive, which Christopher later identified as *Polybia striata*. We walked through a mora forest, and a palm forest on the way out. We saw a beautiful King Shoemaker butterfly (*Prepona demophon*), that was too wary to be photographed, a chirping arboreal grasshopper, and many nice wildflowers.

During our time in the Arena Forest Reserve, we passed six hunters on our trek, one with a 12 gauge shotgun, who said he was shooting with "heavy load." The others may have had dogs, as I heard hunting dogs in the not-too-far distance. I asked each hunter what he was looking for. All of them said, "Deer."

All in all, we had a lovely day, and we saw a lot of nature, confirming the TTFNC Motto, "*Natura Maxime Miranda in Minimis*" (Nature is most remarkable in the least). I would recommend the Arena Forest Reserve as a beautiful and peaceful place to observe nature. 

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Field Trip Report, Sunday November 27, 2011

Rampanalgas/Balandra Waterfall

Report by Chennile Khan

The usual early start on Sunday morning, at around 6:15, approximately thirteen vehicles assembled outside the south gate of UWI. Upon having a brief introduction by the leader, Dan Jaggernauth, and Selwyn's ensuring that all participants had received a field naturalist's calendar for 2012, we departed at around 6:47 to our destination, the Balandra/ Rampanalgas Waterfall. This waterfall is a two level waterfall since it consists of both an upper pool and a lower one. At the lower level the water forms a small deep pool that is suitable for swimming, while the upper level consists of a shallower pool suitable for bathing only.

After following Dan for about an hour and a half, we arrived at the starting point of the hike at 8:20 am. Everyone secured their vehicles on the gravel road near to an empty area of land in which there were many sheep. Dan advised the participants that the hike was not a long one and that we would be encountering a lot of different varieties of plants. While giving a briefing to the group assembled on the road, Dan pointed out to us the corn bird nest that was located on one of the adjacent trees. The occupants of these birds' nests are usually the crested oropendola, *Psarocolius decumanus*.

As we began our journey to the waterfall we first encountered the *Virola Surinamensis*, commonly known as the wild nutmeg tree. The fruit of this tree provides a food source for the pawi bird. More familiarly known as the piping guan, *Pipile pipile,* the pawi is an arboreal bird that is currently one of the endangered species of birds in Trinidad. Continuing on our journey, we came across the balisier, *Heliconia psittacorum*. These flowers are tropical flowers and are often visited by hummingbirds. Adjacent to the heliconia were also cut logs indicating logging activity; it was, however, difficult to determine whether the logging was legal or illegal.

Advancing on our journey once again we discovered seaside grape tree, *Coccoloba uvifera.*. These are evergreen trees with very large, broad leaves whose flowers are produced in spikes; the fruit are edible in certain members of this family. Proceeding along the gravel road again, the group came across juniper trees, *Genipa americana*. The fruit of this tree is a berry and is rounded and brown much like the sapodilla, *Manilkara zapota*. These fruits are edible and they are much used to manufacture drinks, jellies, preserves and syrups when they are soft and overripe.

Also found along the path was *Scleria secans*, also known as razor grass belonging to the Cyperaceae family. These sedges usually cut when pulled against the skin. Also found on the way was *Desmoncus smoncus* belonging to a family of climbing palms. The stems of these are used for the weaving of baskets and sieves. Near to the palm was also a bunch of *Mimosa pudica* also commonly called the sen-

sitive plant. These are perennial herbs in which the compound leaves fold inwards and droop whenever they are touched or shaken. They usually reopen after a few minutes so they can continue to act as a toy for us.

Proceeding again, our group came across a large matchwood tree, *Schcfflera morototoni*. We also came across a large tree with Palicourea flowers. These trees have very fine leaves and are usually used for timber. As we made our way forward again along the pathway, our group came across cocorite palm trees, *Maximiliana caribaea.* The fruits of these trees are very sweet and are much preferred by squirrels.

Our group also made a wonderful discovery when we came across the mandevilla serta flower. Dan notified us that the flower was edible and insisted that I try it. Though hesitant at first, eventually I tried it eating the petal of the flower which tasted exactly like pomerac, *Syzygium malaccense*. These vibrant flowers are red and yellow and beautify the floor of the tree when they fall. Another amazing discovery we encountered was another variety of the heliconia flower, the *Heliconia balisier*. In Trinidad this flower is a political symbol; its bracts may be used for floral decorations. Our last finding before we arrived at the upper level of the Balandra/ Rampanalgas waterfall was the serrette fruit also known as the *Byrsonima spicata.* Serrette is in the same family as the Barbados cherry and produces a useful timber used for tanning. The serrette fruit is edible with a sweet and sour taste and can be used for making jam and jellies.

Finally we arrived at the actual waterfall. It was a bit difficult to get to the pool as the pathway was very slippery. Dan had managed to tie a rope along the way up to the fall in order to help the participants reach the pool so that they could have enjoyed the cold, relaxing water. Most participants ventured into the pool and, in my opinion, the waterfall was amazing. It was extremely cold at first but after acclimatizing to its temperature the water was very soothing. Some of the participants also took a dive into the lower pool which was of a greater depth. After everyone relaxed and had lunch, we proceeded on our way back along the initial pathway that we had taken. After a short time we were back again on the gravel road where our vehicles were parked. After changing from our wet clothes into more comfortable ones, we all departed, going in our separate directions. I must say that it was indeed a very educational and interesting hike. Though it was short I had a lot of fun while learning about plant species. I impatiently await the upcoming hikes and I am sure all the participants feel the same way.

Trinidad and Tobago Field Naturalists' Club
Lecture to monthly meeting of 8th November 2012

JACK SPANIARDS IN THE SCHEME OF THINGS

Christopher K. Starr
Dep't of Life Sciences
University of the West Indies
ckstarr@gmail.com

Polistes is a worldwide genus of about 200 known species of independent-founding social wasps, known in the West Indies as "Jack Spaniards". They are characterized by small colonies on exposed, single-comb nests. As in all aculeate hymenoptera, only the female has a stinger. Members of the New World genus *Mischocyttarus* resemble *Polistes* in these and other features and are sometimes known by the same common name.

Jack Spaniards are quite generalized in most physical and behavioural aspects, the outstanding exception being their conspicuous threat displays if the colony is menaced. A given species will tend to have a characteristic array and sequence of threats. This leads to the question of whether there is a significant difference between those individuals that ultimately attack if pressed beyond mere threats and those that are just bluffing. A study of *P. lanio* in Trinidad shows that bluffers tend to go through their sequence of threats a little faster than attackers, and that they commonly utilize an additional display (wing flutter) that attackers do not.

Polistes have been a favoured group for studies aimed at understanding the origin of sociality in insects. The critical question arises in that stage of the nesting cycle where the queen's first adult daughters emerge. In *Polistes*, unlike in solitary wasps, these remain on the nest as helpers of their mother, rather than departing to nest on their own. Despite decades of study, there is not yet any firm consensus on how or why this evolutionary transition took place.

A much less discussed question is why no *Polistes* population, as far as we know, has reverted to solitary life. We know it cannot be due to any absolute evolutionary obstacle, since the queen carries out all the tasks of a solitary wasp prior to the emergence of her first daughters. Is there, then, some universal advantage to sociality in *Polistes*, so that natural selection cannot favour a return to solitary nesting? The answer is not known. However, the observation *P. fuscatus* continues to be social right up to the northern limit of the genus's range in eastern North America suggests that there is such an advantage.

The Naturalists' Club's Bug Group is studying the colony-level life tables of *P. lanio* and *M. rotundicollis* in Nariva, with a view to contributing to the answer of this question, among others. Present indications are that colony mortality is exceptionally high in the founding stage, before the queen is aided by workers, then becoming much lower as colo-

nies grow and mature at an accelerated pace. This is consistent with the hypothesis that daughters who remain on the nest as workers are making an investment that will pay off much better than if they left to nest on their own. 

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A PARAGRAPH NOTED IN PASSING

Christopher K. Starr

Occasionally in natural-history books and traveler's tales, I come upon remarks about Trinidad or Tobago that interest me. The american herpetologist and museum director Thomas Barbour (1884-1946) spent a great deal of time in the West Indies, especially Cuba and the Bahamas, with quick visits to many of the other islands. In his autobiography, Barbour (1943:127) had this one-paragraph comment about a founding member of the Trinidad Field Naturalists' Club and the endemic golden tree frog:

"Our visit to Port-of-Spain, Trinidad, was a great event, for I met then for the first time Fred Urich, with whom I had corresponded for years. Someone had just brought him a living tiny frog of the genus *Amphodus*, hitherto unknown from Trinidad, a lovely little golden-yellow creature, tiny but with eyes like jewels. This is found in bromeliaceous plants in the highest lands of the island, and he generously gave it to me to take back to Cambridge. He was always doing things of this sort. I visited him again several years later in his home outside Port-of-Spain, and was saddened later on when the news came of his death."

The Trinidad Field Naturalists' Club, forerunner of the present Trinidad and Tobago Field Naturalists' Club was founded in 1891 by eight men (Carr 1991-1992). The 1991-1992 issue of the *Living World* has biographical sketches of five of these, but Friedrick William Urich is not among them. Most of the very sparse biographical information about this government entomologist (as far as I know) was published by Carr (1991-1992) and Boos (2001:16-19).

(Continued on page 27)

We Go To Grenada 1975

Feature Serial by Hans Boos
(Part 3b)

Terry sat there, naked except for his jockey-shorts, attempting to pull on his shoes. The details of how or why he got there we never with certainty were able to find out, and I am not sure even he really knew. It involved another darkened room in another house down the hill and across the road from "The Hiltons", a naked reluctant girl, and a one-legged boy-friend who had come looking for her. It went on and on, each fantastic detail of his story more ridiculous and hilarious than the last.

We helped him into his clothes, which lay in a crumpled bundle beside him in the middle of the road, and he said he was going to join the crowd from the house, which, due to the overall black-out, had migrated down to the junction rum-shop. Though we tried to dissuade him, he told us there was nobody left up at "The Hiltons", and he felt he would be better off in the darkness, in a strange country, with his new drinking buddies or "mates" as he now referred to them. He would get back to "The Hiltons," and whatever bed he could find. We arrived at the bar, which was within easy walking distance from the "Hiltons," and we went inside with Terry.

We declined to have anything to drink, that is Julius and I, but Terry somewhat sobered up by whatever his experience in the pitch black house with the equally amorphous girl had been, accepted a glass of the deadly white rum, and when the assembled mass of Grenadians raised their glasses and shouted in unison the name of a well-known Australian cricketer, "Colin Cowdry," Terry too lifted his glass and they all tossed the rum down their collective throats. Glasses were refilled and Terry offered his toast, this time to a West Indian cricketer, "Gary Sobers" — and more glasses were emptied. We snuck out of the lantern-lit bar to the sounds of famous cricketer names, alternately Australian and West Indian, the only language currency that either side could accept and/or understand, names that were bowled or batted, back and forth by Grenadian crowd and Aussie hero, still standing, a white pebble on a black volcanic sand beach. How long he would survive, his single memory for names against the collective consciousness for a sport they all lived and breathed we never found out, for we left him there, the names echoing back and forth, punctuated by loud cheers as each name was commemorated with another drink. "Khanhai!" "Raaaay!" "Locke!" "Raaay!" "Ramadin!" "Ay-yai-yai, raaay!"

We drove down the road away from the bar. It was two in the morning, we had caught no more snakes. We had to get some sleep ourselves, somewhere. Down the western coast road, back towards St Georges for a few miles until, in a lay-by overlooking the sea, and where the sea-breezes blew through open windows of the parked car, we unrolled our pallets of foam rubber over the front and back seats, and fell asleep to the crashing

of the surf below, and the creaking and piping of the ubiquitous and never silent frogs.

Dazzling light from the morning sun over the eastern horizon woke us cramped and chilled. Sunday was dawning, and as we rose from our makeshift beds in the car, people in Sunday clothes were trooping past, prayer books and bibles clutched in their hands. There must have been a church or meeting-hall nearby, and as we busied ourselves in getting organized to go in search of Terry, we were subject to intense stares of curiosity as the people walked by.

As we drove up to "The Hiltons" the first thing we saw was Terry, sitting again almost naked under the stand-pipe in the yard, the water jetting over his bowed head, his hair plastered over his skull like a helmet. He heard the car pull up and he smiled a wry greeting at us. He had slept like a baby and was ready to go on. We gathered up our goods, the back-packs and the bagged snakes, and sought out Doon-Dan or Dr Bones. Doon-Dan, we were told, had gone into the village or town of Sauteurs to attend a parade of some sort that was being staged and no, they had caught no snakes as they had said they were sure to do, and would spend the day making up the deficit and keeping their promise. If we did not find Doon-Dan in Sauteurs, he would meet us at the "Starlight V," that late afternoon in time for sailing. Without fail. We thanked Dr Bones for his hospitality at "The Hiltons" and for the tender care of Terry in our absence. He beamed and invited us back. Any time. Any time at all.

In Sauteurs we finally located Doon-Dan. He was taking part in, or commanding — we were not sure which — the parade, a motley and ragged group of Boy Scouts, Wolf Cubs, a few khaki-clad cadets, and a policeman or two. A few out-of-tune brass instruments, and a drum or two were tooted and blared, thudded and thumped in an attempt to get the group of boys and men to march, in step, down the street. Amongst them, and ahead of them, ran Doon-Dan, his arms waving, and his voice insistent, that, like the commands he had heard given to marching soldiers and policemen during the Independence parades in Trinidad, the troops here in Sauteurs, should march to his shouted cadence. "Left! Left! Left!" he yelled drunkenly, without the required pause for the right footstep. The confused marchers stumbled into one another, trying to march only with their left feet, to please and to conform with the obviously more knowledgeable and bigger-island-wise Doon-Dan.

It was impossible to bring St John down to earth with what he considered the mundane details of what he had been brought to Grenada to do. He was in command of his own little army, and his troops were doing their best to please him and the real policemen were too amused to interrupt this son-of-the-soil of Grenada from providing entertainment for the gathered Sunday morning crowd of perhaps one hundred inhabitants of Sauteurs and surrounding villages. We managed to collar him for a moment and to tell him we were leaving without him and that he should make his way down to the port in St Georges; and be on time for the sailing of the schooner for he was expected to be at work on Monday morning, in Trinidad. He

assured us that he would be there, that Dr Bones and his cronies would drive him down to the capital to catch the sailing of the "Starlight V."

I had had no time to make any other arrangements to fly back to Trinidad, and I steeled myself to having to make the return trip on the schooner. We left Sauteurs, shaking our collective heads in disbelief at what we had encountered so far, and felt fortunate that we had at least the promise of one monkey, and we did have a bag full of the choicest colours and sizes of the beautiful Grenada sarpints.

But we were badly in need of a bath. Terry had managed to sit under the sputtering standpipe as he soaked his head to dissipate the alcohol from the night before, but Julius and I were feeling the effects of the last two days, and the rising heat in the car in the morning as the sun heated up the day impelled us to search for the river pool that Julius assured us should be somewhere inland on the road back to the capital. We turned inland at a sign that pointed to a waterfall, and after a few miles of winding road that threaded its way between plantations of cocoa, coffee and bananas, we emerged at a crossroad.

Here the road widened, and a paved area off to the side provided parking for any tourist cars, the occupants of which may have been encouraged to take in the mediocre sight of a jungle river pouring over a modest fall and into a basin of brooding greenish-black water. As we drew up and began to get out of the car, we were mobbed by a gaggle of skinny young men who clamoured to be our guides to see the waterfall, which, after all, was already in plain sight. They mistook us for tourists, which I suppose, technically, we were, and were quite dismayed when we laughed off their exhortations in our recognizable Trinidadian accents. They were also adamant that no one but they were traditionally known to swim in the basin, when they saw us take towels out of the back of the car and begin to make our way down the rutted path towards the pool by these men and the waterfall.

Getting to the pool-side, a quick glance at the floating debris on the surface of the water, and the splashing mob of young boys and men churning up the water, and the incessant plummeting jumps from a ledge above the pool of these same men, who began to shout and haggle us to pay to see them jump off the ledge, which they were accustomed to offering to embarrassed and intimidated tourists as a pale imitation of the cliff-divers of Acapulco. With knowing looks of assent we decided we would seek our bath elsewhere, and without hurting any feelings we let the occupants of the pool know that we had been there before (both figuratively and untruthfully) and, in fact, were more interested in whether they had seen any snakes in the area, either the sarpints or, especially, the local "black snake" or "cribo."

Incredulity, as usual, gave way to interest at the offer of a reward for spotting a snake, and word spread rapidly through the twenty or so men in and around the pool. As we began to make our way back up to the car

we were followed by an inquisitive group of younger boys who enquired what we were doing with the snakes if we caught them, and whether we had caught any yet. We assured them that we indeed had, and were proceeding to the car to show them that we had not lied about having some, and that we would pay a reward to get just a few more, when a shout from the side of the car-park of, "Look one!" pulled all eyes to the pointing finger of the wiry teenager standing beneath a spreading young mimosa tree that stretched its slender branches over the car-park, providing a cool, dappled, shady area.

Sure enough, as we gathered below the point he was indicating, we saw the coiled ball of a large, deep-red sarpint. The tree was climbable, and as Julius opted to be the one to go up and to shake it down to one of us, the most vociferous and loud-mouthed of the men who had shown some anger at our refusal to pay to see him leap awkwardly off the ledge into the pool, pushed forward from the now open-mouthed group of his peers.

(to be continued in QB2 2013)

A PARAGRAPH NOTED IN PASSING

(Continued from page 23)

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TTFNC QUARTERLY BULLITENS ONLINE LINK:
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New members; Volunteers; Publications

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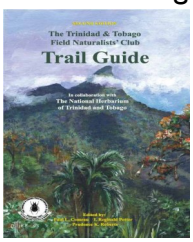

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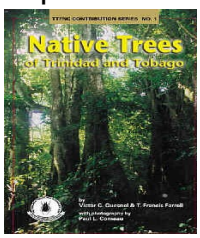

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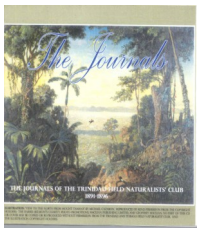

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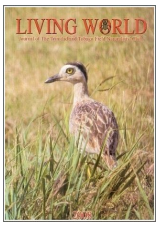

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MISCELLANEOUS

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