



THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

July– September 2023

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GENERAL CLUB REPORT, 25-27 AUGUST, 2023 THE LAST ANNUAL CAMP AT GRAND TACARIBE?

by Kris Sookdeo



Mouth of the Madamas River. Photos by Kris Sookdeo.

For many years the Club has opted to overnight at Grand Tacaribe for its August field trip, and 2023 was no different with 11 members coming out for the two-night camp.

We departed the fishing depot at Blanchisseuse around 9:30am on Friday morning in two boats for the 30-minute journey, landing at the sheltered cove

at the western end of Grand Tacaribe, which is considered the safest disembarkation point. This is some distance from the small stream that provides the only accessible source of potable flowing water in the bay (apart from the spring feeding the estate owner's small cabin), and so members are faced with the annual challenge of where to camp. Open

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



WELCOME NEW MEMBERS!



The club warmly welcomes the following new members:

Kiel Groos

Bertram Manhin

Sharlisha Tulah

Gail Fuller Huggins



A pair of French angelfish seen while snorkelling at Grand Tacaribe.

(Continued from page 1)

areas suitable for camping are available nearer the boat landing but you will need to walk to the stream to get water or take a freshwater bath. (Dan Jaggernaut tells me he has been camping at this stream for the past 40 years). This dilemma has been further compounded in recent years, as the stream is now almost entirely blocked by rocks and fallen trees following various storms. The result was four separate campsites strung out along the coast.

(Management Note: Camping and/or lighting of fires on the open sand is not allowed due to the potential impact on nesting turtles).

Rather than brave the roasting sun (this is just prior to hot spell event in September 2023), Selwyn Gomes and I opted to go snorkelling in the cove right away. Snorkelling is one of the benefits of Grand Tacaribe and I am always pleasantly surprised by the diversity of life that exists here. There were the usual suspects like the footballer fish, *Abudefduf taurus*, several species of damselfish,



Approach to Madamas Bay.

wrasses, parrotfishes and gobies as well as a pair of French angelfish, *Pomacanthus paru*. Notably there seemed to be more porkfish than usual and there was a large porcupine fish, *Diodon hystrix*. Selwyn reported seeing a turtle which was probably a hawksbill.

The rest of my day was spent setting up camp, exploring the coastline and snorkelling. Later in the afternoon I setup my light trap along the trail to Madamas. Unfortunately, I discovered that my main 'white' bulb had broken while packing for the trip leaving me with two small black UV bulbs. This was disappointing, as Grand Tacaribe has always been very rewarding for light trapping and the white bulb was important for attracting moths. Nonetheless, I did the best I could, turned the lights on and left for the evening. Later that night a few of us returned to check the trap but the results were fairly disappointing. A few hatchling leatherbacks, *Dermochelys coriacea*, were seen emerging that night as we walked the beach to go lime by one of the camps. Many more tracks of emerging hatchlings were seen the following morning but only tracks of one laying adult.

On Saturday, six of us (Dan, Chrisalene Dedier, Ivan, Stevland, Mizrah and myself) set off for

Madamas. The walk took us about 1 hour and 20 minutes along the mostly clear trail (except for a tree fall about half way in, that required blazing a short detour). Along the way we spotted one small fer de lance, *Bothrops atrox*. The presence of fruit trees-- several large mango trees along the entire trail, breadfruit, pomegranate, primrose and a cluster of cocoa trees (near what is referred to as "Saigon Hill")--is all that remains of the agricultural estates of the area. Close to Madamas, the foundation of a small estate house can also be found among the red ixora bushes now growing wild.

The final approach to Madamas is always spectacular with a lovely view of the entire bay. Deer meat, *Centropogon cornutus*, grew profusely here along with the bromeliad, *Pitcairnia integrifolia*. On the sand, leatherback turtle tracks were evident, but the shifting river course at Madamas no doubt claims many eggs. The river was equally spectacular and we spent close to two hours relaxing in the cool waters. I regretted not bringing my snorkel as it would have been interesting to explore this freshwater environment. Several freshwater tolerant marine fishes were seen including some large mullet. There was a large tent, pitched at the eastern end of the beach amid the



Some of the moths seen that night.

tree line, that seemed to be fairly permanent. It was speculated to be perhaps that of a former member of the Earth people community but we never knew for sure.

The walk back to camp was uneventful. It was discovered that phone/mobile data service was available on the trail just above Grand Tacaribe, which is useful to note for the future in case of an emergency. Back at Grand Tacaribe, we did some more snorkelling and Ivan experimented with setting up his prototype mollusc trap using a dead fish.

That night I also set the light trap up again directly behind our campsite and, funny enough, it yielded much better results despite being closer to the sea.

On our final night, we all gathered in one camp to relax and consume the remaining food and drink. Selwyn noted that this was the first time he recalled everyone on a Grand Tacaribe trip coming together in one camp like this. This prompted discussion on the pros and cons of camping at Grand Tacaribe and the possibility of changing the location of the August overnight to another location. All were receptive to considering other locations. Paria, Grande Riviere, Petit Tacaribe and other locations were discussed (Dave, the boat captain, would later indicate that a safe Madamas landing could be

attempted but it would all depend on the state of the shoreline on the day and could not be guaranteed far in advance). Management will reach out to members to solicit ideas on this and other locations for trips in 2024.

Sunday morning involved more relaxing and breaking camp for the return trip, with the boats arriving promptly at 12:00pm. With that, we said our goodbyes for what may potentially be the last TTFNC camp at Grand Tacaribe for some time.



Virgin orchid, *Diacrium bicornutum*.



General Club Trip Report, 24 September 2023

PT. GOURDE

by Kris Sookdeo



The Pt. Gourde trail. Photos by Kris Sookdeo

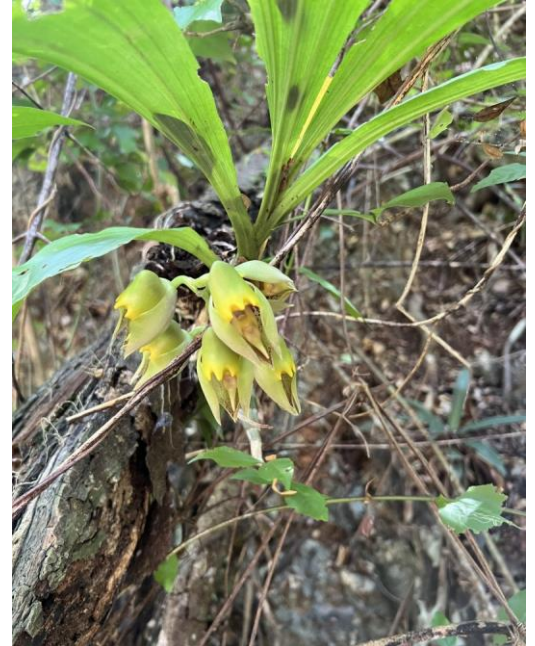
The Club's field trip for September was initially carded for Tamana Valley but this was changed to a shorter walk at Pt. Gourde due to unusually hot weather. The Trinidad and Tobago Meteorological Service had issued a hot spell warning, with temperatures near 34°C, or higher, expected for the remainder of the month. Nineteen persons turned up for the walk that morning, jointly led by Feroze Omardeen and me. We were also lucky to have Winston Boodoo with us to speak to the geology of the area.

For this walk, we opted to take the path leading up to the top of the hill rather than the seaside path. It was a clear sunny day and we set off just after 7:00am. We walked at a very measured pace, stopping frequently to point out various plants, animals and rocks of interest.

Some of the dominant tree species in the area we saw included saltfishwood, *Machaerium robiniiifolium*, and naked Indian, *Bursera simaruba*.

There were many invasive giant African snails, *Achatina fulica* along the trail – their activity no doubt limited by the dry weather. Several empty shells/dead snails were also seen. Later on we also saw the native giant South American snail, *Megalobulimus oblongus*. Notable along the trail as well were many vigorous pawpaw trees laden with fruit. Members were irked by the apparent ease with which these pawpaw were thriving in the stony soil while back at home many had difficulty growing pawpaw in their gardens!

Vervain and lantana were also abundant along the edges in exposed areas, attracting several butterflies, in particular the ethilla longwing,



(Left): Paw paw trees growing in abundance with the Monk's head orchid, *Catasetum macrocarpum* pictured on the right.

Heliconius ethilla and the postman (*Melpomene* sp.).

At one such clearing, (an exposed 'fresh' landslide) several pioneer plant species had taken root including the bois flot and the bois canot. Feroze explained that these pioneer species were fast growing, softer wooded trees that were often the first tree species to colonise newly disturbed areas.

We stopped briefly at the first 'bunker' (really more of a storage shed) which dated back to World War 2 when the United States maintained a presence in Chaguaramas. Various pieces of discarded equipment lay strewn about—long since picked apart for whatever items of value or curiosity remained. It is surprising that the entire thing hasn't yet been chopped up by scrap metal dealers. Here we also noted the naturalised terrestrial orchid, *Oeceoclades maculate*.

Also fairly common along the trail was the native sugar apple (*Annona* sp.), the cooper hoop, *Brownea coccinea* with its brilliant red blooms and the native bamboo *Arthrostylydium* sp.

At the top of the hill some members stayed in the relative cool of the forest edge, while a few walked the remaining exposed 30m (100 feet) to the

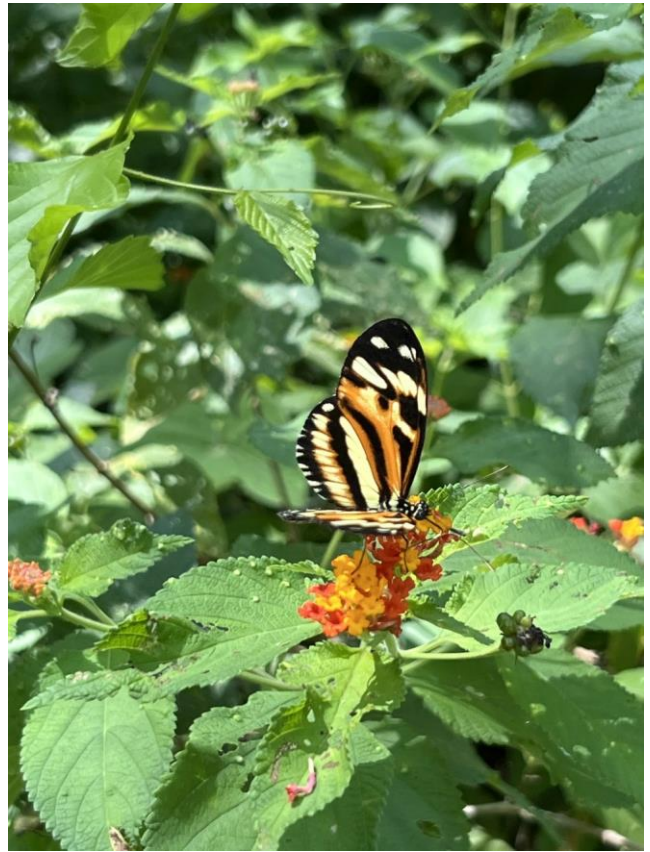
radar installation. The localised butterfly, *Calydna venusta morio* can be found here, typically feeding on the railway daisies growing along the trail.

After a brief rest we began our return walk, members going at their own speed. A single tufted capuchin remained concealed in the branches observing us cautiously. In contrast, a bit further down we observed an unusually photogenic skink basking in the sun.

Closer to the carpark we found the caterpillars of one of the swallowtail butterflies (*Thoas* sp.) feeding on a candle bush (*Piper* sp.). When agitated, these caterpillars protrude their osmeteria which are orange defensive organs looking a bit like a pair of horns or the forked tongue of a snake. Nearby, we also found a lovely monk's head orchid (*Catasetum macrocarpum*) in bloom. I demonstrated the pollination mechanism in which the orchid would attach a sticky pollinium (a cluster of pollen) to the pollinator – typically one of the large euglossine bees that attend these fragrant orchids.

With that, we reached the start of the trail just before 11:00am, ending another successful trip.





Some of the flora and fauna observed on the walk pictured clockwise from top left: Caterpillar of one of the native swallowtail butterflies, *Thoas* sp.; Ethilla longwing, *Heliconius ethilla*; A Greater Windward Skink basking in the sun and the plant Cooper Hoop.



IN SEARCH OF GRAND MATELOT FALLS

by Mario Russell



Grand Matelot Falls. *Photos courtesy Mario Russell*

If your heart races at the thought of chasing waterfalls, consider setting your sights on this gem. It is the first time pictures have ever been posted of this natural wonder. Fondly dubbed by locals as the Grand Matelot Cascades, this natural wonder remains relatively unexplored due to its remote location and rugged surroundings. Even the Matelot villagers themselves seldom venture into this dense forest. The landscape is a tapestry of precipitous islands, bordered by meandering tributaries, and reaching its crescendo is no easy feat. The challenge would be getting to the confluence of the Petite Matelot and Ananas rivers. Picture a landscape akin to a challenging jungle expedition—no well-defined trails, numerous valleys to navigate, and steep ridges to conquer making the task even more challenging.

A decade ago, we embarked on our maiden

voyage to uncover this hidden treasure. Our journey led us upstream for miles, where the river's arms forked into multiple tributaries, each concealing the falls in its embrace. One has to know the exact tributary of the falls location. The river can have a different set of challenges. Treacherous rocks, fallen trees, swirling pools, cascading waterfalls, and treacherous gorges were our companions. Experience taught us that the land route, though demanding, was a safer and swifter option.

Just last year, while trekking from Cumaca to Matelot, we found ourselves above the falls. Although we could not see the cascade we could hear its resounding roar echoing through the valley, igniting our curiosity and determination. We looked forward to the day when we could follow the river's call and uncover this hidden spectacle.



The daring team: Samuel Furlonge, Samraj Ramlakan, Michael Sando Nedd, Michael Charlerie, Mario Russell, and the skilled navigator Chris Kelshall.

A daring team of six individuals—Samuel Furlonge, Samraj Ramlakan, Michael Sando Nedd, Michael Charlerie, Mario Russell, and the skilled navigator Chris Kelshall—embarked on this venture. This quest wasn't for the faint-hearted. Armed with GPS and cutting-edge phone apps, we meticulously plotted our course. From Matelot Village, our odyssey commenced at 6:00a.m. charting a path divided into four legs, with an estimated total of six hours to reach our goal:

- Leg 1: The 3-mile (5km) trek through Santa Cruz Forest Trail (1 ½ hrs)
- Leg 2: Descending the ridge to an old camp crossing an unnamed tributary (1 hr)
- Leg 3: Tackling unmarked and precipitous terrain to the confluence (2 hrs)
- Leg 4: Traversing the Ananas River to the falls (1 ½ hrs)

Our journey from the village began by heading

south along the Santa Cruz forest road. Chris adeptly charted a course through the dense forest, guiding us first to a forest camp and, from there, we navigated through intricate and challenging terrain, ultimately descending to the confluence to the point where the Petit Matelot and Ananas rivers converge, a journey spanning approximately 4 hours and 20 minutes.

At this juncture, deliberation ensued regarding the continuation of our expedition. The turbulent, brown waters flowing from the Petit Matelot raised concerns. Yet, just a short distance away, the calm and navigable Ananas River beckoned from the confluence. Choosing to press on, we trekked along the Ananas tributary, a path that ultimately led us to the falls. Our hesitations may have prolonged the journey, culminating in a seven-hour endeavour, but the sight that met our eyes was worth every step.

The Grand Matelot Cascades proudly display three tiers, each with its own enchanting allure, reminiscent of Tobago's Argyle Falls. We explored



Petit Matelot river



(Top): Crossing the river; (bottom) Taking a break at the Petit Matelot river.

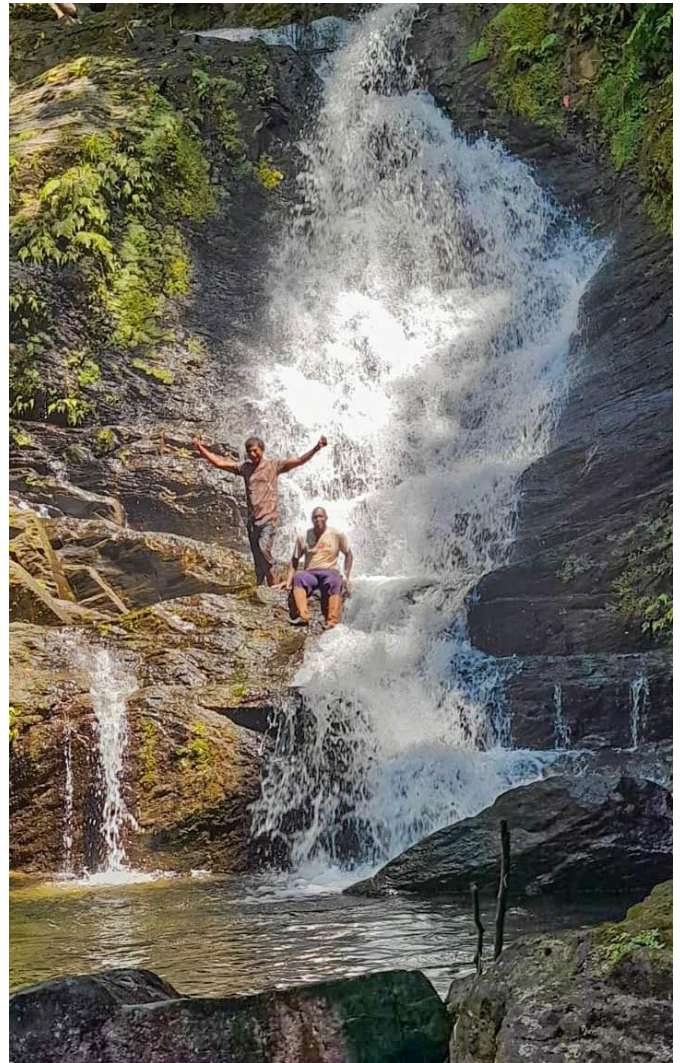
your compass towards the Grand Matelot Cascades—an adventure that promises challenges, awe-inspiring beauty, and memories etched into the very fabric of your soul. 🐛

Trip details:

- Distance 22.86km
- Duration: 13:17:19
- Assent: 1091.53m
- Descent: 1085.31m
- Max Speed: 5.5km/h
- Average speed: 1.7km/h
- Stopped time: 36min 30sec

two levels, discovering tranquil pools fed by four spouts at the base, while the second level required scaling rocks to indulge in its refreshing cascade. The third tier beckoned, an ascent too lofty to conquer within our limited time. Anticipating another six-hour return journey, we chose to bid adieu to this upper realm.

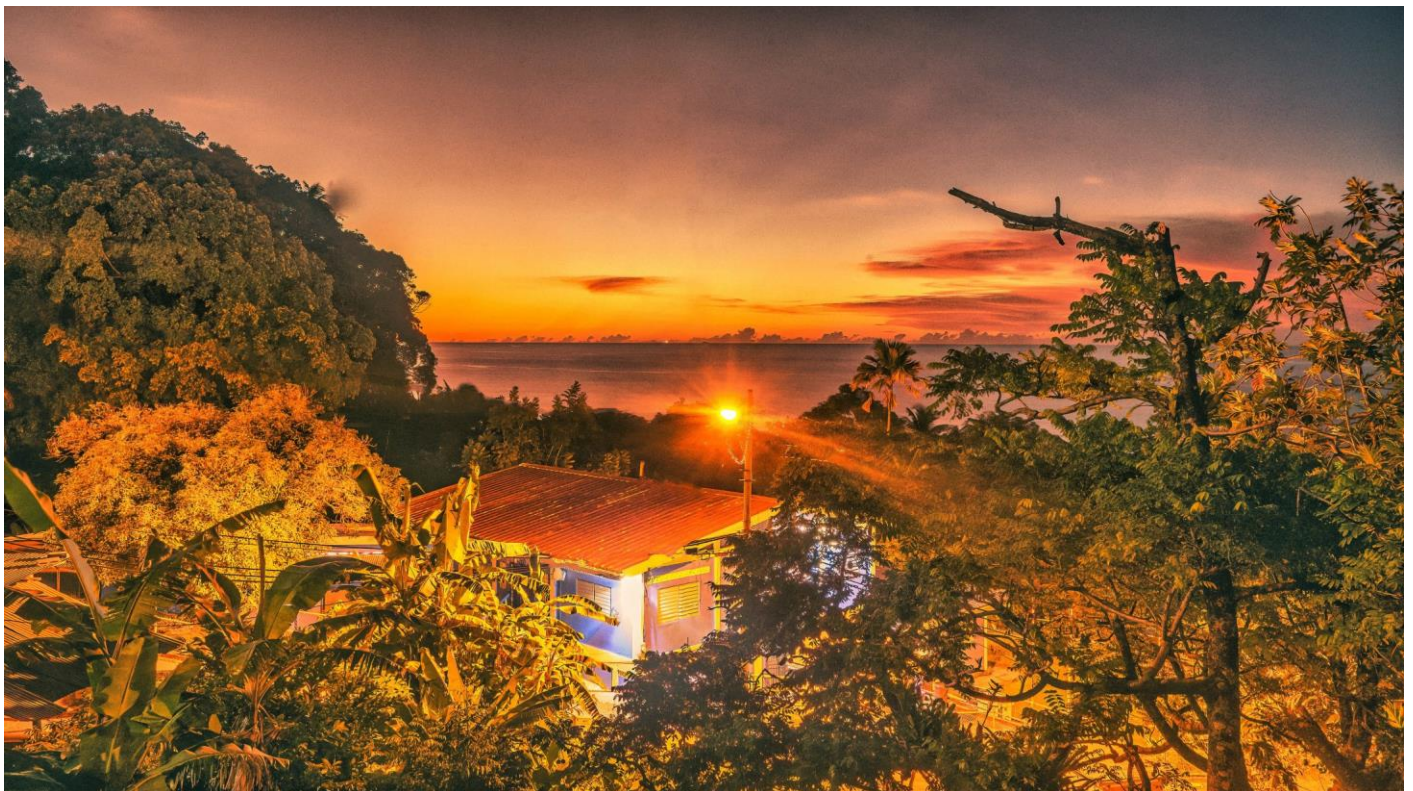
On Google Maps, the region is designated as the 'Heather-Dawn Herrera Nature Reserve'. The river's origin traces back to the Zeno and east of the Zeno watershed, at an elevation of 2042 feet (622.4m). Amidst our exploration, the graceful presence of a buck graced the river's edge, a fleeting yet beautiful encounter. So, if your heart yearns for the thrill of uncovering nature's hidden gems, set



(Top left): Climbing the rocks; (top right) Level 2 of the Grand Matelot Falls; (bottom) Enjoying the Petit Matelot river



(Top): Petit Matelot river; (bottom) Matelot at sunset.





'Naturalist-In' Series
IN THE WET
 by Christopher K. Starr



Review of:

William Laurance 2000. *Stinging Trees and Wait-a-Whiles: Confessions of a Rainforest Biologist*. Chicago: Univ. Chicago Press 196 pages.

[56th in a series on "naturalist-in" books; see www.ckstarr.net/reviews_of_naturalist.htm]

As noted at least once before, naturalist-in literature is mainly an anglophone genre. Australia, one of the places settled by English speakers far from Britain, is home to a very rich and distinctive biota. As expected, it has given rise to much naturalist-in writing. My computer bibliography of such books references 15 from that part of the world, including the subject of review No. 9 in this series. It is time for another, this one from quite a different area.

We think of the island-continent of Australia as an arid place, which most of it is. However, five million years ago rain forest covered most of it. The forest has been in retreat ever since and hangs on now only in the wettest areas, mainly in the northeast of the state of Queensland. Rain forest today accounts of less than 1% of Australia's land area. It is not just long-term climatic change that has been reducing it, as logging continues apace, a contentious public issue.

William Laurance spent a year and a half in the rain forests of northern Queensland doing research toward his PhD. His main attention was to a narrow band skirting the northeast coast of the island. One reason for choosing Australia, rather than Latin America, for this project was of the most mundane character: he could only speak English. It is rather amusing, then, that he later went on to work in Brazil.

The book has 21 chapters and a postscript. The latter is mostly clutter that has little to do with the main themes. There are many photos of sites, people and other mammals.

The research was conducted in the Atherton Tableland, an area that was originally rain forest, but where only fragments now remain. The Atherton Tableland counts as a biodiversity hotspot, with many relict species. Many of the forest fragments of the Atherton Tableland had been isolated for more than 50 years. This is in contrast to most of the world's rain-forest fragments, which are quite recent. Laurance spoke with an Aborigine known as Old Harry—the last living speaker of his dialect—about what the local rain forest was like before the European presence. Old Harry mentioned some animals that are no longer present and some others that have become very rare.



Common brushtail possum (*Trichosurus vulpecula*) . Photo courtesy WikiCommons



Musky rat kangaroo. *Photo courtesy Wiki Commons / Joseph C Boone*

The area has a great deal of seasonal fluctuation in temperature and especially rainfall. In the wet season moisture penetrates everything and makes it easier for people to contract infections and skin problems. Heavy rain can turn small streams into furious torrents, making field work that much more difficult.

Laurance's study area was around the small (pop. 320) town of Millaa Millaa. As a sign of the town's cultural backwardness, it had just one pub but two churches. He got a dog, bought a truck, and rented a spacious house.

His research problem was survival of the mammals in rain forest fragments. Using baited live traps and spotlighting with a flashlight, he compared populations in small fragments with those in larger tracts. He also took the opportunity to conduct cafeteria experiments with some captive animals whose diets were poorly known. In this very simple kind of experiment, an array of possible foods is laid out, and it is noted which the animal selects.

This kind of study is necessarily very data-intensive, and clearing trails with his assistant to lay out the trap grids was hard work. Later he recruited volunteers, often two at a time, each for one month, and established a division of labour for the great mass of unavoidable drudgery to make the work go faster. Then he advertised in a youth hostel in Cairns, the capital city of Queensland, after which the group of volunteers grew at times to 10 persons of various nationalities. In time there were more candidates than he could accommodate, so Laurance instituted the requirement that only those willing to stay at least a month could join the project.

The kind of work they faced was not for wimps. In advertising for volunteers, he had neglected to mention the nasty plants and that other scourge of many rain forests, land leeches. Still, those that kept at it proved to be good workers. The book has much about the 42 volunteers' personalities. I assume that he used their real names.

With such a set of young people of diverse background and temperament, Laurance had to act both as team leader and at times as a sort of parent. Even though most of his assistants were volunteers, managing a team of non-scientists required a high level of discipline. This was especially true with respect to collecting and handling data, something that most volunteers had to be taught from the beginning. They were studying the effects of forest disturbance on populations, with a great deal of measurement of parameters: soil characters, forest structure, the abundance of certain key plants, and quantities of fallen fruit (an important source of food for some mammals). It was repetitive, often tedious work.

Keeping a crowd of lively young people out of trouble required a different kind of discipline. In order to avoid disputes with the town's lone policeman, he also had to maintain a strict no-drugs policy. His no-drugs policy applied only to controlled substances. On the night before several of the crew were to leave, everyone got drunk and proceeded to a riotous food fight. It was all good, clean fun, a bonding experience. Even so, it wasn't best for scientific productivity, so after that Laurance tried to instill a policy of sobriety.



Stinging tree (*Dendrocnide moroides*). Photo courtesy N.Teerink

There were also matters of personal safety. Getting lost in the forest would have been both easy and dangerous, so that the crew kept strictly to the trails and carried compasses. Even without getting lost, there were hazards. Some of these came from plants, such as the "stinging tree" (*Dendrocnide moroides*; Urticaceae; actually, an

understorey shrub) whose leaves are covered with venomous spines reminiscent of our own *Cnidocolus urens*. And the wait-a-while is a rattan (climbing palm) with hook-like spines that can be very damaging to the careless.



Jawed leech (*Gnatbobdellida libbata*). Photo courtesy Garigal National Park.

And there are ticks, one kind of which brings about potentially fatal paralysis if not removed in time, as well as those of pesky land leeches attaching to one's innocent limbs. It is understood that in Australia, where most snakes are highly venomous, there will be encounters in the course of field work. Accordingly, Laurance and his crew had plenty of "adventures", but fortunately it is no longer fashionable to include that word in the titles of naturalist-in books. Despite the many adventures and colourful personalities, this is a serious book with a wealth of scientific content. It is not just for entertainment.

Keeping the project on track also required getting along with the locals, especially as some of the field work was on private land. In addition, there was a substantial political component, as conflicting interests were at play. Laurance took the opportunity to give public talks about his research and conservation biology. He spoke in favour of declaring the Queensland rain forests a World Heritage Site, something that would put an end to logging in the area. This was not a lone stance by Laurance, as there already existed groups advocating for it. Tension with some of the locals who depended on logging and farming led to some outright hostility. However, this proposal was not




Map of the wet tropics of Queensland. Photo courtesy Natural World Heritage Sites website.

as sharply contentious as it would likely have been earlier, as the logging industry was already in an unavoidable downturn.

Nonetheless, on the whole local public opinion went clearly against World Heritage designation at the time, and the controversy brought out an ugly vindictiveness in some of the opponents. There were threats against Laurance's group, and he did not regret leaving when the project ended. He ended his stay with a well-attended public meeting at which he presented his research findings and answered questions about the World Heritage proposal. This helped to cool the over-heated public tone around the issue as local people came to realize that World Heritage designation would not spell the economic disaster

predicted by the alarmists and could bring new economic opportunities to the area.

This question entered into national politics as a general election approached. The prime minister, Bob Hawke, standing for re-election as head of the Labor Party, declared his support for World Heritage designation. His opponent, the premier of Queensland, made opposition to it a key part of his platform. Labor prevailed, and the Wet Tropics of Queensland World Heritage Site was established the following year (1988). It is one of 35 such sites in Australia, 12 of them nature sites. 



NATURE IN THE NEWS

Compiled by Kris Sookdeo



JANUARY 2023

Under the Public Sector Investment Programme (PSIP), three million dollars have been set aside to deal with the eradication of the giant African snail (GAS) and other pests. From Monday January 16 to February 2, farmers, community groups and others can collect the GAS and get a reward of \$5 per kilogramme (2.2 pounds) from the Ministry of Agriculture, Land and Fisheries (MALF). People can drop off the invasive species at two sites— County Caroni office at Southern Main Road, Chase Village in Chaguanas or County St George West office at Farm Road, Curepe. There are no limits to the number of snails people can drop off on Mondays, Tuesdays and Thursdays from 8.30 am to 12 pm.

The Moruga 2050 Association for Sustainability plans to develop an arboretum in Moruga which will reintroduce and replant a variety of plant species back into the Moruga Forest. The group recently utilised a grant of TTD\$100,000 which they received from the Digicel Foundation through its EPIC programme to build a tool shed and shade house in the Bois Jean Jean Village, Moruga. The group aims to get more persons involved in agriculture.

The Tobago House of Assembly is collaborating with the Oilfields Workers' Trade Union to develop the Cambleton Estate, Charlotteville, into an environmentally friendly vacation destination. On completion, it is envisaged that the development will comprise 20-25 wooden cottages, nature trails and a facility for research.

396 honorary game wardens have been appointed in Trinidad.

MARCH 2023

Members of the Maracas Bay facilities team, police, officials from the Emperor Valley Zoo, the

Las Cuevas Eco Friendly Association and Udecott officials have rescued a disoriented leatherback turtle which stumbled into the bathroom facility and became trapped.

32 honorary game wardens appointed in Tobago.

The Government has sent out a letter of approval for an aerial survey of quarried lands, to determine which of the lands are being quarried illegally and which are licensed. Previously, the last aerial photography done to identify quarrying lands in Trinidad was in 2014.

APRIL 2023

The BIOSCAN programme, a first of its kind initiative in Trinidad and Tobago employing DNA barcoding to map local flying insect populations, has been launched. Led locally by the Ministry of Planning and Development through the Environmental Policy and Planning Division, the programme was launched with the setting up of malaise traps at Brazil Secondary School and TCL's (Trinidad Cement Limited) Mayo Quarry Rehabilitation Site. Two more traps will be set up at the Asa Wright Nature Centre and Main Ridge Tobago to cover a diverse range of local environments. The traps will be maintained for a period of two years through partnerships with the private sector, NGOs and students and teachers. Every specimen collected will be identified, photographed and DNA barcoded—widely mapping insect genetic biodiversity for the first time in T&T.

MAY 2023

A young jaguar, almost 33 exotic birds and three caimans were seized from an abandoned campsite in Northwest Trinidad. The animals were found in cages during an exercise on May 31, 2023.



The BIOSCAN team inspects the malaise trap installed at the TCL Mayo Quarry Rehabilitation Site. *Photo as appeared on the Ministry of Planning's website*

parrotlets, eight bullfinches, seven yellow bellied seedeaters, three picoplats, one lappe and three agoutis. All of the animals were taken to the Emperor Valley Zoo.

The Rotary Fellowship of Wildlifers for Conservation (RWFCTT) has set up a Trinidad and Tobago chapter in partnership with the Faculty of Food and Agriculture at The University of the West Indies (UWI). The launch took place at the faculty, St Augustine campus, and marked the beginning of projects aimed at safeguarding wildlife and preserving the sanctity of the neotropical region. 🐛

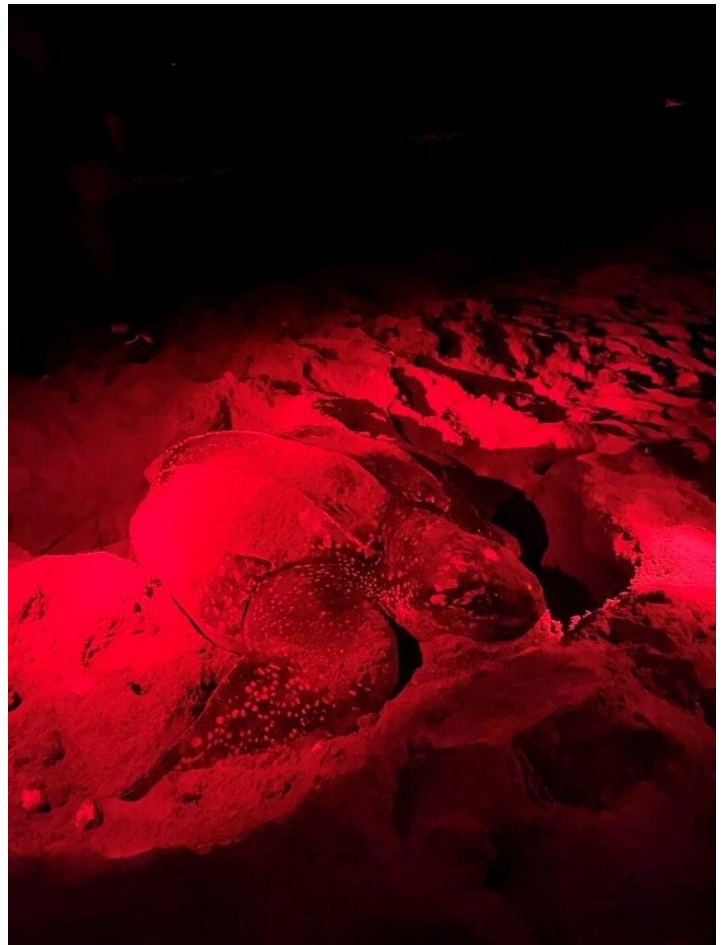
JUNE 2023

A total of 20 turtle-friendly LED lights have been installed along Hosang Street in Grande Riviere. The initiative is part of ongoing efforts by the National Sea Turtle Task Force.

Reports of a jaguar loose in Palo Seco have been dismissed by the MALF following seven days of coordinated efforts amongst several stakeholders, including its Game Warden Unit, the Trinidad and Tobago Police Service, the Emperor Valley Zoo and the Zoological Society, to investigate the claims.

AUGUST 2023

A resident of Longden Street, St Joseph, was charged with four offences after game wardens rescued 33 exotic animals at his home. The animals were discovered after game wardens, accompanied by members of the Trinidad and Tobago Police Service, executed a search warrant. The property owner informed the officers that the animals were his and clarified that he had no permits to have the animals in his possession. Game wardens conducted a domesticity test, and the property owner failed to demonstrate to the satisfaction of the officers that the animals did not wish to go free. The animals that were seized included: one blue and gold macaw, one yellow-crowned parrot, two plumbeous seedeaters (locally known as herito), one large billed seedeater, one double collared Seedeater, five green rumped



A leatherback turtle lays eggs at the Grande Riviere beach under the glare of red, non-disorienting lights. *Photo courtesy the HADCO GROUP (as published on the Newsday newspaper on June 12, 2023)*



Memorial Tribute
**DR ELISHA S. TIKASINGH: LIFE AMONG THE
 PARASITES**



by Nalini Rampersad, Shivanan Seunarine, Jo-Anne Nina Sewlal and
 Christopher K. Starr



**NB: This article originally appeared in the 2014 Living World Journal: "Rampersad, N., Seunarine, S., Sewlal, J.N., and Starr, C.K. 2014. Dr Elisha S. Tikasingh: Life Among the Parasites. Living World, Journal of The Trinidad and Tobago Field Naturalists' Club, 2014, 71-73.*

Dr. Elisha Tikasingh is well known for his work on arboviruses (arthropod-borne viruses). He has described Nariva virus and was a co-describer of Restan virus both viruses were new to science. Dr. Tikasingh's greatest achievement however was the development of antibody reagents used in the identification of arboviruses.

He is also a stalwart member of the Trinidad and Tobago Field Naturalists' Club joining in the mid-1960s. He served in many roles in the Club, including serving as a member of the Management Committee during the 1970s, and as Chairman of the Centenary Celebrations Committee in 1991. He has given lectures at our Club meetings and written

several articles for the Club's Journal. He has been its Editor for 15 years. This biographical article is taken from two interviews conducted in Trinidad in February and May 2014, transcribed by Jo-Anne Sewlal. The full interview is archived at the St. Augustine Campus, The University of the West Indies (U.W.I) and with the Trinidad and Tobago Field Naturalists' Club.

Born in 1927 in the village of St. Julien which is outside of Princes Town, Elisha Tikasingh and his family moved from village to village because of his father's job as a Catechist in the Presbyterian Church. He went to primary school at the Palmyra Canadian Mission (C.M.) School and when it closed, he attended Reform C. M. School. At that time his family was living in Mt. Stewart and the daily trek to school involved a five mile hike to and from school barefooted on the hot asphalt road. After his father's death in 1940, his family moved to San Fernando where he attended Naparima College to do his Senior Cambridge. At that time one had to pay tuition fees to attend secondary school, but his entry into the school was due to the privileges allowed to children of church workers of the Presbyterian Church to attend their secondary schools for free. His mother would not have had the money to pay the tuition fees.

Shortly after the successful completion of the Cambridge School Certificate Examinations in December 1947, he got a job teaching at Fyzabad C.M. School, and taught there for about two years before going off to do his Bachelor's degree at Eastern Nazarene College in Wollaston, Massachusetts, U.S.A, at the suggestion of a friend, who said that one could work and study at this College. He was financially able to leave, thanks to his mother's thrifty nature, who saved his earnings as a teacher. Almost immediately after his arrival in college, he started earning money by washing pots and pans in the school's kitchen. His usual routine involved working in the summer and paying off for

the fall semester, borrowing part of the money for the spring semester, returning to work in the summer to repay the loan of the spring semester and have enough money for the next fall semester.

When he took his first undergraduate course in biology he knew that was his calling as he thoroughly enjoyed the subject. In the final year of his B.Sc. degree he was given a teaching assistant job at the College and was free from manual labour for a change. From there, with a partial scholarship from the Jessie Smith Noyes Foundation, he enrolled at Boston University, where he graduated with his M.A. in biology. He chose the area of parasitology, inspired by a paper he wrote in his undergraduate studies in the life cycle of the hookworms that fascinated him. He was awarded his Ph.D. in zoology in 1960 from Oregon State University specializing in his favourite discipline, parasitology. At Oregon State University, he was made a Teaching Fellow which involved assisting with tutoring undergraduate laboratory courses. The stipend was sufficient to live very, very modestly during the semesters but he still had to find work during the summers. However, his Major Professor, Dr. Ivan Pratt, supervising his Ph.D. research suggested that he spend at least one summer at a marine biological laboratory or inland field station to study invertebrate biology, as many invertebrates are marine based or found in inland lakes and ponds. In order to spend a summer doing further studies he needed to have money. However, his Major Professor was able to arrange a scholarship from the National Science Foundation and he spent two summers at the Friday Harbor Laboratory of the University of Washington where he took courses in Advanced Invertebrate Zoology and Advanced Invertebrate Embryology. During his time there one of his professors, Dr. Dixy Lee Ray, who later went on to become the governor of the state of Washington, he remembers fondly, not only for being an excellent teacher or her annual salmon

barbeque for her students, but she was also responsible for his dissertation topic. During a dredge from a boat in Puget Sound, Washington, a number of animals were brought up including sea cucumbers. Dr. Ray introduced the students to the parasitic gastropod *Entoconcha* found in holothurians. *Entoconcha* was first described from the Mediterranean Sea and the idea that it had such

a wide distribution appealed to Tikasingh. However, during his research he discovered that it was not *Entoconcha*, but something new to science. He ended up describing a new genus and two additional species of endoparasitic gastropods: *Comenenteroxenos parastichopoli* Tikasingh, 1961 and *Thyonicola americana* Tikasingh, 1961. He admits that he was beginning to like marine biology having spent two summers at a marine laboratory.

After graduation in June 1960, he spent the summer in Alaska working on king crabs for the U.S. Fish and Wildlife Service. He returned to Trinidad in October 1960 and was awarded a Rockefeller Foundation Fellowship to study arboviruses at the Trinidad Regional Virus Laboratory (TRVL) which was quite fortunate as they had no post for a parasitologist. He worked there for about a year and a half, after which he was appointed as a lecturer in Microbiology, Faculty of Medicine, U.W.I. (Mona).

During the 1930s and 1940s work on the yellow fever (YF) virus was conducted at the Rockefeller Foundation Laboratory (RFL), New York, and in the field in Latin America, which resulted in the isolation of a number of other unknown viruses. However, not wanting to distract from their research on the yellow fever virus, the other viruses that were isolated were put in deep-freezers by the RFL for later studies. The development of a yellow fever vaccine by Dr. Max Theiler, however, which was used during World War II on soldiers, brought an end to the research on this virus. In the early 1950s, work on the viruses which were in deep-freezers was started, and the Rockefeller Foundation then opened up laboratories in: Johannesburg, South Africa; Poona, India; Belém, Brazil; Cali, Colombia; and Port of Spain, Trinidad. The goal was to study arboviruses in each of the countries in which the laboratories were established. These laboratories also isolated a number of viruses new to science, as well as determined the ecology of some of the viruses.

The Trinidad Regional Virus Laboratory (TRVL) which was the forerunner of CAREC (Caribbean Epidemiology Centre) was established in 1952. It was well known for its research in the area of arboviruses and would attract visiting researchers from all over the world to Trinidad. When Tikasingh started working there in 1960, the

laboratory was already established, and was coming towards the end of the exploratory stage which ended in the mid 1960s. It was also about the same time that the entomologist Dr. Thomas Aitken was due to be transferred to Belém, Brazil. This impending move resulted in Tikasingh understudying him. With this in mind, Tikasingh was put to work studying mosquitoes which are the vectors of arboviruses. The transition from parasitic gastropods to mosquitoes also involved sending him to University of California, Berkeley for a year to study entomology. Here he was offered to do an advanced degree but declined the offer in that he already held a Ph.D. and this visit concerned his job rather than personal advancement.

In 1961 the Rockefeller Foundation transferred the administration of the laboratory to the Department of Microbiology, Faculty of Medicine, U.W.I, Mona, Jamaica, as the medical school in Trinidad did not exist as yet. However, for administrative purposes, the laboratory had to sometimes deal with U.W.I, St. Augustine. Under this arrangement Tikasingh was made a lecturer and the Director, Dr. Leslie Spence, was assigned the post of senior lecturer.

Though Tikasingh is known for his involvement with research at Bush Bush Forest in the Nariva Swamp, located on the eastern side of Trinidad, when he first returned to Trinidad he had no idea where it was located. Not wanting to show his ignorance to senior colleagues, he found out from one of the technicians at the TRVL that the Bush Bush Forest Station was established in September, 1959 by the TRVL. Tikasingh recalled spending many nights in Bush Bush Forest by himself although the caretaker lived a short distance away. One of the most haunting sounds he ever heard at night was the call of the common potoo.

This interest in Bush Bush stemmed from the fact that in 1959 the yellow fever virus was isolated from a wood cutter who had visited Bush Bush forest about two weeks before getting the fever. The TRVL suspected that Bush Bush was the "home" of the virus in Trinidad and moved their activities from northeast Trinidad. Previously they had worked in the Rio Grande and Melajo Forests where they had isolated Manzanilla and Oropouche viruses, new to science at that time. In these

forests and Bush Bush, TRVL had isolated 19 viruses new to science.

Although his current work on arboviruses was far from his doctoral research "Endoparasitic gastropods of Puget Sound Holothurians", he thoroughly enjoyed his work and regarded it as fun, getting to go into the forests and swamps catching birds, trapping for mammals, collecting mosquitoes to test for the presence of viruses with his colleagues. But life while working at the TRVL did not involve much socializing outside of work. However, Tikasingh who was not married at the time would meet regularly with Dr Brooke Worth for dinner on weekends.

In his book entitled, "A Naturalist in Trinidad," Dr. Brooke Worth talked about list making, noting the former entomologist Aitken as a truly pathological list maker. However, Tikasingh recalls that it is this personal quality that made him a great collector and which resulted in a good collection of arthropods of medical importance, plants, birds, mammals, amphibian and reptiles. The wild animals were collected to process for virus isolations. However, Tikasingh suggested that intensive collecting of rodents for viruses over a period of time may have been responsible for its population crash in Bush Bush Forest at that time.


In 1968, The Rockefeller Foundation funding to TRVL ended, as they shifted their priorities from arboviruses towards agriculture in the programme called "Towards the Conquest of Hunger." This caused retrenchment of staff as funds were not forthcoming. Then the polio outbreak came to save the day, so to speak. Over the years we had the occasional isolate as the virus was still present in Trinidad. Then in December 1971, Dr. Tikasingh recalled the TRVL made two isolates of the polio virus in one day with more reports in the following days. By this time it was regarded as reaching epidemic levels and the Ministry of Health decided on a nationwide vaccination campaign. Although the government canvassed the population to get vaccinated, which was free of charge, many people opted not to be inoculated. Then in January 1972 when the government announced that Carnival would be postponed for that year, people immediately rushed to be vaccinated!

After the polio epidemic, through the efforts of Dr. Eric Williams, the then Prime Minister of

Trinidad and Tobago, the Pan American Health Organisation (PAHO) and a group of international scientists, a new entity was created, the Caribbean Epidemiology Centre (CAREC) in January 1975. Its mandate automatically broadened to include surveillance of communicable diseases, all viruses and parasitic protozoans. In addition to entomology, Dr Tikasingh started the Parasitology Laboratory. Bacteriology was a new entity. The epidemiology and surveillance of communicable diseases unit was also attached to CAREC.

However, it was the yellow fever outbreak in 1978-79 that started his involvement with the virus. During this period, the reports of monkey deaths in the Guayaguayare forest were attributed to poisoning. After this was reported in the newspaper, Dr. Tikasingh wrote a memo to his boss stating that it should be treated as a yellow fever outbreak until proven otherwise. Yellow fever tends to occur as epizootics every 10-15 years. Because of these deaths, he and his colleagues visited the area and collected mosquitoes from which they isolated the virus. After alerting the Ministry of Health, an immunization programme was started as well as the spraying of insecticides to kill mosquitoes in urban areas.

CAREC has now become the Caribbean Public Health Agency (CARPHA) which is actually a larger institution. CARPHA includes: the old CAREC; the Environmental Health Institute which is in St. Lucia; the Caribbean Health Research Council; the Caribbean Food and Nutrition Institute; and the Food and Drug Laboratory in Jamaica.

Dr Tikasingh retired in December 1987. He has published over 100 scientific articles on arboviruses, parasitology, entomology and natural history in peer reviewed journals. His publications on arboviruses include the book "The Hunt for Caribbean Viruses: A History of the Trinidad Regional Virus Laboratory." He is also the editor of the book "The Natural History of Yellow Fever in Trinidad." His many awards for his research, include recognition as an Icon of Science and Technology of Trinidad and Tobago from the National Institute of Higher Education, Research, Science and Technology. His most recent award was the degree of Doctor of Science (Honoris Causa) from The University of the West Indies, St. Augustine in 2013. 

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The Trinidad and Tobago Field Naturalists' Club offers condolences to the family and friends on the passing of the following Club members:

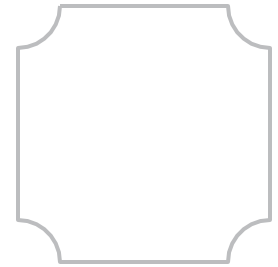
Mr. Peter Dickson (July 19, 2023)
 Dr. Elisha Tikasingh (August 31, 2023)
 Raymond Martinez (October 01, 2023)

May they rest in eternal peace.

MANAGEMENT NOTICES

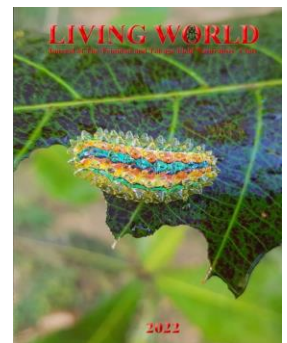
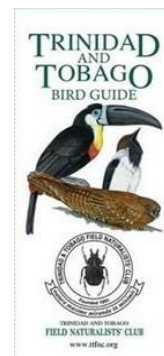
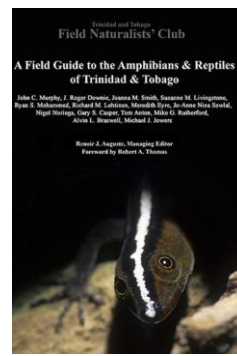
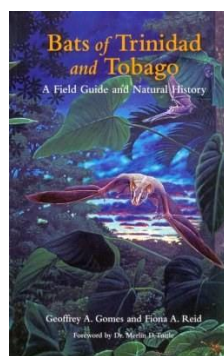
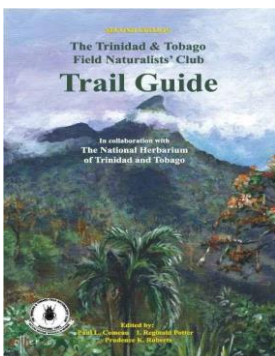
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