



THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

January – March 2020

Issue No: I/2020



General Club Trip, 26 January 2020 ALONG THE TRAINLINE AT THE ARIPO SAVANNAS



by Charlene Maria Woo Ling and Linton Arneaud



Naturalists gather along the Old Railway Line, several metres from the eastern entrance (Guaico Village) before venturing into the Marsh Forest ecosystem. *Photos courtesy the authors*

A group of newbies, Charlene Woo Ling, Dr. David Pieper and his wife Dr. Barbara Pieper attended their first field trip with the Trinidad and Tobago Field Naturalists' Club (TTFNC). They met with Linton Arneaud, Dan Jaggernaut, Christopher Starr (Chris) and the rest of the group - 11 persons in total. At 7:25 am, the group proceeded through the Guaico basketball court along the southern

boundary of the Aripo Savannas [Strict Nature Reserve] Environmentally Sensitive Area (ASESA) (GPS coordinates [Naparima Datum]: start- Latitude 0701777, longitude 1171680; end- Latitude 0699676, longitude 1171306). Along the way members got to know one another; David and Barbara were invited to Trinidad to conduct some

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Editors' note :

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

Disclaimer :

The views expressed in this bulletin are those of the respective authors and do not necessarily reflect the opinion and views of the Trinidad and Tobago Field Naturalists' Club

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Trinidad and Tobago Field Naturalists' Club*

January – March 2020

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The Trinidad and Tobago Field Naturalists' Club
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WELCOME NEW MEMBERS!



The club warmly welcomes the following new members:

David Piper
Sinead Stewart
Allyson Weekes
Saara Mohammed
Jelton Mentore
Darlene Peters

Jonathon Ali
Charlene Maria Woo Ling
Stephen Babb
Richard Sebro
Briana Beharry
Kasey Gordon

Jillian Karan
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Richard Anthony Belcon
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(cont'd from page 1)

workshops in the medical field and they wanted to explore the terrain as they both love nature. Charlene also started to explain some of the reasons why she joined the TTFNC. She said, "People tend to look at me strangely when I tell them I am interested in nature because of agriculture!" To many these two are incompatible and contrary, especially since conventional farmers use all possible "...cides" to kill insects, wildlife, fungus, weeds aka 'bush' etc....the very same living things that naturalists enthusiastically examine in admiration. Although Charlene's background is in Computer Science/Management, she loves nature and has been researching and practising ways of growing food without synthetic chemicals (this wartime technology of chemical weapons was introduced in the agriculture field for "agro protection" after World War II— read "Kiss the Ground" by Josh Tickell for details).

Last year Charlene attended a practical workshop on Syntropic Agroforestry in Curaçao. The workshop focused on developing agriculture by working with nature and not battling against it. Multiple crops, trees, flowers and herbal plants can, therefore, be grown within a community in a very short space of time without harming the environment. Principles such as "feeding the soil" and "balancing the ecosystem" are effective techniques against diseases and insect attacks which require less irrigation and fertilizers as the system produces its own. The Syntropic system not only observes nature's forest but emulates it at a much faster rate to allow constant reaping of crops and fruits without harming or eradicating the environment. Agriculture and nature are not opposites. They complement each other beautifully. Those who are interested in seeing how it works can see the proof in the regenerated land in the following video <https://agendagotsch.com/en/our-videos/>. Mahatma Gandhi once said, "We

don't need mass production, but we need production by the masses". If more families, communities and farmers know how to grow their own food without chemicals, we will have a huge reduction on foreign imports, healthy and nutritious food and also help to regenerate our land for many future generations to come.

Looking for the "moriche palms and open savannas" in the marsh forests of the Aripo Savannas.

Most people associate the Aripo Savannas with open savanna vegetation and moriche palms (*Mauritia flexuosa* L.f (Arecaceae). However, Linton reminded members of the group that they should not get confused with this misconception. He stated that the Aripo Savannas [Strict Nature Reserve] Environmental Sensitive Areas (ASESA) or Aripo Savannas, as commonly referred to, is a mosaic of open vegetation ecosystems surrounded by palm marsh islands and marsh forests covering a triangular area of approximately 18 km², of which, open savannas account for approximately 15% or 2.67 km². Linton indicated that the group was a long way from the open savannas and moriche palms and that we were in a unique forest type which Beard (1946) classified as a 'marsh community'. Tree roots within marsh forests can easily be identified by the following characteristics:

- Elbow roots or knee roots – root sticks above ground at right angles
- Prop roots or stilt roots – the roots prop the tree
- Buttress roots – thick roots that anchor the tree steady
- Pneumatophores or aerial root – roots that grow higher up the stem to allow the tree to breathe under waterlogged conditions.



Some useful tree characteristics that can be used to identify a Marsh Forest: (A) Most trees exist close to a water body and are inundated (flooded) during most part of the wet-season; (B) While walking through the forest, a person can easily trip on elbow roots; (C) Prop roots are present on shrubs and smaller tree species; (D) Buttress roots can extend metres away from the tree; persons easily trip on these roots also, (E) Pneumatophores are not as common as the other characteristics in tree species in the ASES, however, they are present in most palm species.

Photos courtesy the authors

Floral Species

Many different families of plants were outlined by Linton who attempted to simplify the process of field identification. For this, he explained the difference between simple and compound leaves. A

simple leaf always has a bud at the base, whereas a compound leaf has no buds at the base of each leaflet. Linton also explained what stipules were — a leaf-like appendage attached to the base of leaves that exudes liquid-like compounds found in plants, such as latex, saps, resins and gums. Linton said that

he does not apologise for plants before providing major characteristics for common families in the ASES. He emphasized that even though most families have major vegetative/reproductive characteristics, there are exceptions to these guidelines. Some major families (and genera) identified during the trip include:

Rubiaceae

- Stipules
- Opposite simple leaves with smooth margins
- Exudate absent
- Examples: Wild Ixora (*Ixora paviflora*); Psychotria (*Psychotria capitata*)



Arecaceae

- No stipules
- Alternate compound reduplicate/induplicate leaves (with smooth margins)
- Mostly unbranched trees
- Examples:



Royal palm (*Roystonea oleracea*) and manac palm (*Euterpe precatoria*)



Melastomataceae

- No stipules
- Leaf veins are almost always checkerboard (Acrodromous)
- Exudate absent
- Examples: Toilet paper bush (*Clidemia hirta*; *Aciotis purpurascens*)



Fabaceae-Caesalpinioideae-Mimoseae (Inga)

- Stipules
- Extra-floral nectary glands
- Winged-rachis
- Examples: Pois doux (*Inga ingoides*; *I. fastuosa*)



Sapotaceae

- Stipules



Some conversational floral/fungal species acknowledged during the field trip: (A) The blue coloured fruit of *Coccocypselum guianensis* (Rubiaceae); (B) Numerous moss, lichen and mushroom species on a fallen log representing a microenvironment; (C) The dried endocarp of cocorite palm (*Attalea maripa*) can be used as a whistle; (D) The nectaries glands and compound leaves of the cashew (*Anacardium occidentale*); (E) Rat tail vervain (*Stachytarpheta cayennensis*) is a shrubby plant with white and pale blue corolla.

Photos courtesy the authors



Various invertebrates observed during the field trip: (A) Larvae exposed from an open honey bee nest; (B&C) Two unknown beetles observed; (D) A leafcutter ant foraging for food; (E) Golden orb weaver spider waits for its prey; (F&G) Dragonflies basking under the sun; (H) Unknown moth trying to hide from naturalists; (I) Sweet oil butterfly momentarily sitting on a leaf & (J) Ant feeding on nectar of *Trimezia martinicensis*. Photos by Stephanie Warren-Gittens

- Alternate (distichous) leaf arrangement with exudate present (usually a white latex)
- Seeds are usually hard and shinny
- Examples: Balata (*Manilkara bidentata*)

Many other plants were spotted, and identified during the botanical walk of the field trip: razor grass (*Scleria bracteata*), stinging nettle (*Urena caracasana*); bois canot (*Cecropia peltata*), manicou fig (*Bromelia plumieri*), cashew (*Anacardium occidentale*) jamoon (*Syzygium cumini*), wild nutmeg (*Virola surinamensis*), hot lips (*Psychotria poeppigiana*), *Coccocypselum guianense* (no common name), inkplant (*Renealmia alpinia*) and vervain (*Stachytarpheta jamaicensis*). The group did not spot any moriche palms during the walk.

Invertebrate Species

Invertebrates, anthropona in particular, account

for the largest animal phylum in the world. However, since these organisms are very skilled at camouflaging themselves, most of them seem invisible to the naked eye, especially within their ecological niche. Early during the walk, the group came upon two mature females of the golden orb weaver (*Nephila clavipes*). Chris noted that the females within this species were probably the largest of our web-building spiders and that the males are tiny (roughly 1/1000th the size of females). One of the webs had two males in it, presumably awaiting a mating opportunity. Chris also noted that the weedy herbaceous plant, ground itch bush (*Irlbachia alata*) was fairly common alongside the trail, and may be a possible site for a Bug Group's study. He further explained that ant species are often found on the plant, possibly due to the glands or nectaries. Chris also took the opportunity to search for the tiny wasp,

Microstigmus theridii, which appears to nest nowhere else except under leaves of pot cover (*Coccoloba latifolia*) plants. Seven colonies of the tiny wasp were recorded while observing sixty *C. latifolia* plants along the trail pathway. The Bug Group recently found a comparable frequency of *M. theridii* in the secondary forest near the Erin Savannas, but the ASESA would be much more accessible to anyone wishing to study the wasp's nesting biology. A large mound of excavated debris by leaf-cutting ants was found metres away from the trail pathway. The group also observed numerous *Attalea maripa* seeds most of which (>90%) showed signs of invertebrate seed predation; possibly by species of the Curculionidae family or “true weevils”. This provides yet another interesting research question—can the few viable drupes germinate on suitable micro-environments away from the parent palm?

Avian Species

While in the marsh forest, ornithologist, Kay Hinkson explained some bird calls —such as the rufous-breasted wren (*Pheugopedius rutilus*), the orange-winged parrot (*Amazona amazonica*) and the green-rumped parrotlets (*Forpus passerinus*)—to members. Furthermore, there was a possible call of a ‘cuckoo’ which could not be recognised by the members.

Upon arrival at the highway construction site, members saw the crested oropendola (*Psarocolius decumanus*) on a dying tree. Some members saw a

few species of hummingbirds, while others heard the rufous-tailed jacamar (*Galbula ruficauda*) and the yellow oriole (*Icterus nigrogularis*). Most members saw a bird that looked like a lineated woodpecker (*Dryocopus lineatus*) on top of another dying tree which was located at the second highway construction site visited. Unfortunately, no usable photographs of birds were taken.

Mammalian Species

As is characteristic of most nature walks, very little to no mammals were spotted, simply because diurnal animals run away and hide from any foreign activity (noise, smell or sight). Fortunately, medium-sized and large-sized mammal hoof tracks can be easily spotted by the eye. The ASESA is known for having high mammal species diversity; however,



(Bottom left) ‘Pausing for the birds’. During a botanical talk done by Linton Arneaud, naturalists paused to listen before recognising different bird vocalisations along the Old Railway Road, ASESA. Photo by Stephanie Warren-Gittens (Right): Suspected hoof tracks of the red brocket deer (*Mazama americana*) next to a stream within the marsh forest ecosystem of the ASESA. Empty cartridges, evidence of hunting, seen while walking along the transect line. Photo courtesy authors



Endemic black-water stream within the marsh forest ecosystem of the ASES. Few fishes were seen in the stream; however, no fishes were visible in the photos taken. The water appeared to be stagnant and looks black in colour due to the slow decomposition of vegetation (some of which release tannins). Additionally, the lack of direct sunlight may contribute to the black colour of the water.

Photo by Stephanie Warren-Gittens

due to human encroachment, the hunting of these mammals has increased considerably. The group did not actively search for mammal tracks but came across hoof markings that were suspected of belonging to the red brocket deer (*Mazama americana*). Mammal tracks are expected to be clearly seen along the open areas next to the Churchill-Roosevelt Highway extension to Manzanilla Highway construction site.

Freshwater Fish Species, Amphibians and Reptiles

Fish species were not numerous in the streams and puddles along the trail. The group was able to spot only a few small fish in one section of the stream. This does not mean that fish species densities are low; rather, it simply means that our method of observation was not efficient. Adult amphibians were absent, again because naturalists would have scared these creatures away before they had the opportunity to display themselves. Also, most amphibians (and some reptiles such as

tortoises) have a preference to forage in the rain or under cool conditions. The group was able to observe numerous schools of tadpoles in puddles of water bodies along the trail. One member of the group recorded hearing a “splash”, which many perceived to be a caiman (reptile) diving into the water.

Other Notable Observations

Two wooden constructed homes were observed metres away from the old railway line (southern side) in the forest, and over five empty rifle cartridges were spotted along the transect line or trail. This reflects present hunting and squatting statistics within the south-eastern border of the ASES. The group was able to view several dying trees (olivier, fine leaf, manac and guatecare) in the construction vicinity of the Churchill-Roosevelt Highway extension to Manzanilla.





Bug Group Trip, 18 January 2020

ERIN SAVANNAS

By Chris Starr



A member of the Bug Group in the Erin Savanna. Photos courtesy Chris Starr

The trip was undertaken by a tight little group comprising Linton Arneaud, Shane Ballah, Dan Jaggernaut, Ato Menoza, Danielle Morong, Mike Oatham and Chris Starr. Starting out early from the UWI campus, we picked up Danielle along the way and reached the village of Buenos Ayres after a long drive south.

Then, after another long drive over a rough road, we reached our parking place, following which we took a long walk through secondary forest to Savanna 7. Along the way, we passed by and through occasional small patches with elements of savanna vegetation. Members of the group, especially Dan and Shane, did a great deal of botanizing along the way. In particular, Dan drew our attention to two plants with edible fruits, the manicou fig, *Bromelia palmeri* and the palm *Bactris major*. After we had all delectated them, Chris mentioned that it was his first experience with *Bactris major*, which he would now be pleased to add to his 'life list' of "*Fruits I Have Eaten*". Upon

learning that Chris actually had something as silly as a 'life list', the others seemed to lose all respect for him.

Walking through the secondary forest, we checked under leaves of *Coccoloba latifolia* for nests of the tiny wasp *Microstigmus theridii*. On some previous visits above the Caura Valley and in the Arena Forest, we had failed to find any nests in places where they had been reasonably common in years past, which raised the question of whether this particular species was at risk of at least local extinction. However, on this occasion an examination of 36 *Coccoloba* plants turned up five active nests of *Microstigmus theridii*, a promising result.

At the first of these, the group made the following observations: a) the nest is suspended from the underside of a *Coccoloba* leaf, b) its size and form and the fact that it is formed of hairs from the leaf bound together with silk, and c) that agitation of the nest showed that several adult



Microstigmus nest.

wasps were inside. This may not sound like much, but it amounts to the sum of all published biological knowledge of this species. A study of its nesting and social biology could make for a fine graduate thesis.

One curious feature of the secondary forest concerned the higher termites (Termitidae) that were in evidence. Almost all of the apparently active nests that we encountered were of a single species, the widespread *Microcerotermes aboreus*. It was no surprise to find it in abundance, but where were the two other arboreal species that one finds almost everywhere in forest in these islands, *Nasutitermes corniger* and *N. ephratae*? There was nothing in particular about this habitat to suggest why they should be all but absent.

Aside from our successful search for *M. theridii* nests, the group had a deliberate focus on a distinctive higher termite tentatively identified as *Nasutitermes arenarius*. This species from the Erin Savannas, builds mound nests on the soil surface and is known in Trinidad only. Ato collected soil samples from the mound nests and the surrounding surface for chemical comparison, while Chris collected samples of the termites for positive

identification.


We were also on the lookout for a patch of



Nest of *Nasutitermes arenarius* where samples were collected.

Irlbachia alata, which evidently attracts a variety of ants to what must be extrafloral nectaries. We did encounter occasional individual plants, but nothing more than that. This ongoing focus of Bug Group research will have to wait for another trip to another site.

Two vertebrate animals caught our attention. In the forest we came upon the brown vine snake, *Oxybelis aeneus*. There was nothing special about the encounter, but it is always a pleasure to meet this very slender creature. And right in the middle of the village, very near the start of the road leading into the savannas, is a tree with approximately 30 nests of the yellow-rumped cacique, *Cacicus cela*, most of them apparently active with socializing and squabbling birds.

Driving back along the long, rough road we reached Buenos Ayres in the early afternoon just before the sky opened up and treated us to a downpour after a completely dry morning. Plainly, the Bug Group is in a state of grace. 



September 2019
A TALE OF TWO GREBES
by Jerome Foster



A pair of least grebes. *Photos by Jerome Foster*

I've been birdwatching in the farmlands of Orange Grove, Tacarigua, for the past four years, but had never seen any least grebes in the area until I found a pair last year feeding in one of several man made ponds there. In my opinion I had struck gold! Despite the species being fairly uncommon (rather than rare), I've found that up until then in 3+ years of birdwatching I had never spotted them here in Trinidad. When it came time for the field trip – they did not disappoint. It was a fantastic experience for several members of the TTFNC bird group back in August 12, 2018 when we were able to find those grebes with it being a lifer for some.





This year, in anticipation of revisiting the area in August, I had scouted ahead early and was pleasantly surprised to find the grebes were still resident. On the August 11, 2019 TTFNC trip to Orange Grove, everyone was able to get some of the best views they had seen of this species to date. The birds had moved to a new holding pond made by the farmers. Due to its origin, this pond was easily accessible and many got as close as they have ever been to the species.



In early September, I decided to check back on the resident pair to see how they were doing, and lo and behold, they were gathering nesting material to put the finishing touches on their "residence"!

With the school year starting back it was a busy time but I managed to revisit the pond a few days later and to my surprise not only had the couple laid eggs, but two had already hatched! The proud parents were in the process of trying to coax their



hatchlings into the water, with much calling, while the little ones got used to their new surroundings. Checking back a third time (only a couple days later), I was able to see the little ones were not only alive and well, but had taken their first forays into the wide, wide world – not just on their parents' backs, but by paddling and practising on their own as they got fully into "grebeing".



The proud parents with one of the chicks in tow.

Of course, most of the time they were content to shelter on their parents' backs, with either one parent feeding while the other played cradle, or both parents sharing the load.

I hope this couple succeed in raising these chicks and soon enough we'll have a set of juveniles, who will

eventually grow up to go looking for their own space to expand. It would be lovely if this species can continue to use the ponds in the area, as natural habitats in general have been shrinking due to land use.

TO BE CONTINUED.....





Your
Ideas and Observations
A Quarterly Update

PROBLEM SOLVING WITH A VERY SMALL BRAIN

by Christopher K. Starr



Beside my kitchen sink is a one-gallon plastic container into which I put fruit and vegetable scraps. When this is full, I empty it outside into the big compost barrel that Rakesh Bhukal made for me and for which I thank him very much. Allowed to mix and mature into “manure”, the contents will in time go to nourish the plants. However, I am in no hurry to empty the kitchen container, because it is visited most days by a steady column of bachacs (leafcutter ants, *Atta cephalotes*). These ants cut up much of the plant matter for transport back to their nest, where it will feed the fungi that in turn feed the ants. I should note that I had a deprived cold-temperate childhood and never even seen a bachac until I was 29, so that having the little darlings come marching right into my kitchen is a source of unending wonder.

To learn more about these creatures, see Bert Hólldobler & Ed Wilson’s accessible book. Plate 34 in the book is an illustration of the brain of a worker. The authors don’t specify its volume, but I would say it is roughly 1/1000th the size of a honey bee’s brain, which in turn is around 1/1000th the size of a small songbird’s brain or about about one-millionth the size of our own.

But back to the kitchen. The bachacs especially go for watermelon rinds, but they will take just about any part of our edible fruits and vegetables. Even so, when I was peeling onions one day I was surprised to find them harvesting the very thin, dry, brown pellicle.

With most food sources, the ants cut off a piece roughly the size and shape of their own heads. In order to get out of the kitchen, each ant must go under the bottom-most glass louvre through a gap about 2½ mm high. Normally, this is not a problem, as she simply ducks her head and keeps walking, but the onion-husk fragments were much broad and were held up high. You have seen bachacs carrying leaf fragments in just this way.

How could they possibly get through? I watched the first such ant to see what would happen. She reached the too-short gap, pushed her tall, vertical



The bachac with the onion pellicle. Photos courtesy
Chris. K. Starr

load against it and was stopped, tried again several times and was stopped again, until she finally did something remarkable. She turned her head sideways, so that the harvested fragment was horizontal and moved right through the gap and outside. I watched several more bachacs, and much the same thing happened each time. Never was a fragment simply dropped and abandoned as a lost cause.

This put me in mind of the Sparrow of Ulm (Ulmer Spatz) When the great church at Ulm in southern Germany was being built during the 14th century, so the legend goes, they needed to bring some exceptionally long timbers into the city. The timbers, lying athwart the wagon, moved along without hindrance until they got to the city gate. The gate was wide, but not that wide, and after thinking it over the people figured they would just have to dismantle the gate. Then they happened to notice a sparrow carrying a long straw to add to her nest inside a narrow crevice. She deftly turned the straw lengthways and so was able to get it into the crevice with ease. The workmen let out a collective “Aaaahh” and did the same thing with their timbers. The Sparrow of Ulm is commemorated to this day by a statue on the church’s roof-peak.




The Sparrow of Ulm Statue

Setting aside the question of whether German haulers were really so dense back then, how did the sparrow figure it out? One of the manifestations of the Principle of Parsimony (Occam's Razor) is that one should not attribute to any higher faculty anything that is adequately explained by a lower one. In this case, it is possible that the sparrows of Ulm

are so smart that they can look at a problem and derive the solution through insight, but a much simpler hypothesis is that it was trial-and-error learning (known to some by the euphemism "operant conditioning". On the first trip the sparrow pushed the straw this way and that until she happened upon a workable solution just by trying many options.

And what about the bachacs, with a brain about one-millionth the size of the sparrow's and about one ten-millionth that of the Ulm workmen? Again, it was almost certainly a matter of trial-and-error learning. I am fairly sure that they did learn, because when I went back some hours later for another look I found that many of the ants turned their fragments flat as soon as they reached the louvre. These were almost certainly individuals who had already learned the solution just by trying this and that until something worked.

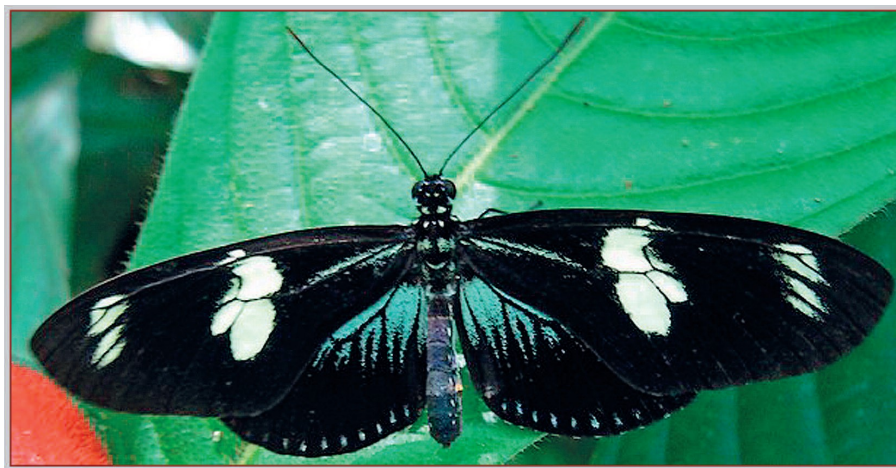
Reference

Hölldobler, B. & E.O. Wilson 2011. The Leafcutter Ants. New York: W.W. Norton 160 pp. QL568 .F7 H577 in the UWI main library. 

Please send us your ideas and observations to admin@ttfnc.org for inclusion in the next Bulletin!




DESCRIPTION OF AN ENDEMIC TRINIDAD SUBSPECIES *by John Morall*



*Heliconius
doris
morralli*.
Photo by Kris
Sookdeo

The description of the endemic Trinidad subspecies, *Heliconius doris morralli* was finally published in the December 2019 edition of Antenor, Tropical Lepidopterology Studies. The description was done by Michael Cast who kindly named the subspecies

morralli after TTFNC Club member John Morall, who supplied him with the Holotype specimen as well as images of other colour forms, now Allotypes and Lectotypes. Kris Sookdeo's photo was used on front cover with his permission. 

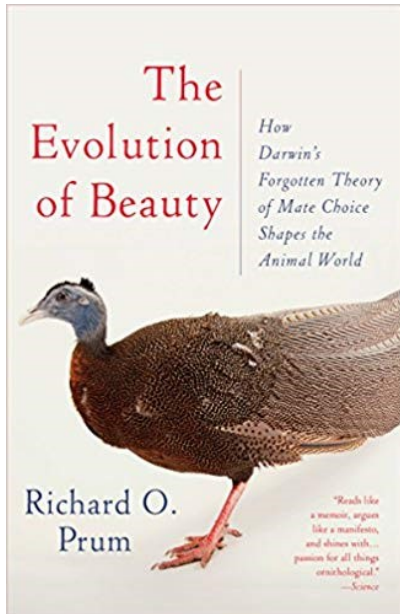
Book Review



RICHARD PRUM'S —THE EVOLUTION OF BEAUTY: HOW DARWIN'S FORGOTTEN THEORY OF MATE CHOICE SHAPES THE ANIMAL WORLD – AND US



by Matt Kelly



We've heard that nature is "red in tooth and claw" to explain the Darwinian concept of "survival of the fittest." This thought had arisen after Darwin's "On the Origin of Species" was published in 1859. This concept brings to mind ideas suggesting a ruthless system of nature, conceived of power, struggle, victory and inevitable death of

the less capable. This was the dominant idea which the book had fostered. But Darwin's second blockbuster, which appeared in 1871, "The Descent of Man, and Selection in Relation to Sex," outlined another powerful nature-shaping force, which was female sexual selection. Darwin's understanding of female choice, which he called, "the taste for the beautiful," has been repressed since more prudish Victorian times, and was also predominately discounted by Alfred Russel Wallace. But the idea resurfaced more powerfully when the women's movement of the 1960's and 1970's began to work its influence into the scientific world.

How to explain beauty? Beauty, has no functional survival benefit, and may even be a survival impediment, like the Peacock's tail. Mate selection based on female choice (sexual selection) has been largely ignored until recent times. Now, with the publication of "The Evolution of Beauty", ornithologist and evolutionary biologist Richard Prum, of Yale University, has re-opened that door. Using mostly avian examples, we are taken on a journey through the intricate mating functions and rituals of several species in the animal kingdom,

especially the birds.

This is a book about sex; how sex shapes and evolves our natural surroundings, and us. Prum shows that in our dynamic and ever-changing natural history, armaments and ornaments are both powerful forces. It is not always the case in nature that the biggest, strongest, most muscular and powerful male will "take" or "win" his mate. Drawing on Prum's first-hand experience with manakins, he shows how female mate choice can mean everything to the lineage of these creatures. Especially in dimorphic species, (where the male and female differ in appearance) it will be the flashiest plumage, the best dancers, and the best singers, selected by the eyes and ears of a female, whose female preference will carry those special males' genes, along with her own, on into the future. It is the pleasure that the female finds in the beauty of her male counterparts which is a (but not the) main driver of evolution. In some examples of the manakin leks, no more than 5% of the males will be chosen for 60% or more of the matings. Sometimes many, even most males in a lek will never successfully mate even once in their entire lifetimes, but continue to hone their song and dance routine. Because of this concept, Prum shows us that nature is also directed by the very powerful concepts that "Beauty Happens" and "Pleasure Happens". These are powerful genetic influences which not only affect the evolutionary trajectory of birds, but of many of the higher animals, including us.

The book brings us into the fascinating world of avian mate selection, focusing heavily on the social signaling of manakins, birds of paradise and bowerbirds. Prum also takes us on tour through the wild and beautiful array of colours and songs in many other species of birds, which are among the most ornate animals on earth, and which even we, as humans, also find beautiful. Prum then delves into the wild and shocking sex lives of ducks, which will leave you astounded. Later in the book, I found the

chapters on human sexuality to be a bit speculative, but extremely interesting.

Critics of Prum will argue strenuously that it is the “overall health and vigour of males” that plays the role in mate selection. They argue that the healthiest and most vigorous males exhibit the best colours, songs and strength and inhabit the most productive territories, and are therefore the best suited to provide for the female and their offspring. Though the overall health and vigour of males is extremely important, and cannot be dismissed, I believe Prum makes his case, and that Darwin (1871) would have agreed that the female is, and has always been, much more important in mate selection than has been previously presumed.

Overall, I found the book a captivating read. The

book is not overly technical and not difficult to understand. I would recommend it to any person interested in birds, ornithology, evolutionary biology, or just plain interested in the natural world around us. The anecdotes are great.

The book was named a best book of the year by the New York Times Book Review, Smithsonian, and the Wall Street Journal, and was a finalist for the Pulitzer Prize. No doubt, this book will certainly be a great natural history reference to have on your bookshelf.

If you are an online reader, you can download the book in PDF format for free at:

<https://all-med.net/pdf/evolution-of-beauty/> 



Bird Trip Report– 12 January 2020

MORNE BLEU– WASPS ON A BIRDING TRIP

by Matt Kelly



Morne Bleu, lying in the Northern Range, is one of Trinidad’s highest peaks. John Kricher writes: *“The youthful and dynamic Andes Mountains run the western length of South America, extending from Tierra del Fuego at the southern tip of the continent all the way north and east through Venezuela, ending in the gentle northern and central ranges of the island of Trinidad.”*

I had never before thought of the Northern Range as the tail end of the Andes Mountains. It gives me a whole new perspective. Elizabeth Seebaran stated that she did some research on the location of the TSTT station on Morne Bleu and it is not the actual peak. You actually need to hike to the actual peak from the TSTT station, eastwards along the ridge. The top five highest peaks in Trinidad are:

- Cerro del Aripo, 940m
- El Tucuche, 936m
- El Pico Escondido, 930m
- Chaguaramal, 859m (You can actually see this peak on your right looking over the valley from hiking the La Laja trail. The La Laja trail actually goes all the way to the top of the ridge, which can then take you to Cerro del Aripo eastwards.)
- Morne Bleu, 839m

We were up and out long before the crack of dawn. Nicole Gomes drove myself, Dr. Feroze Omardeen and Selwyn Gomes (no relation). We met more participants at the usual rally point at the UWI South entrance just off the Churchill-Roosevelt Highway at 4:30am. We drove the Arima/Blanchisseuse Road in the dark, watching for nightbirds. I saw one common pauraque fly up from the road near the christophene farm. We parked at the base of the Morne Bleu access road, and walked by moonlight to the top. Fourteen of us assembled at the TSTT Station on Morne Bleu by 5:50 am in the dark, fog, wind and light rain, for this propitious trip.

After about 45 minutes of low-volume birding here, we quit this location. We had no luck as we did last year, when three Trinidad piping guans paraded right before us in the roadside trees. Feroze officially deputized Faraaz Abdool as a group leader *de jure*, and we split the group in two. That is why I was unable to get a group photo. One half of the group stayed with Faraaz, birding the Arima/Blanchisseuse Road. Some of their highlights were the yellow-legged thrush and red-rumped woodpecker. The rest of us went on to Lopinot Trace, and down to the “birdy” trema tree. Some of our highlights included: olive-striped flycatcher,

hepatic tanager, and red-crowned ant-tanager. We drove about 20 minutes on down to Morne la Croix. Under the guidance of Feroze, we birded Mammoral Road in the village of Morne la Croix. It is very nice, very remote, and very isolated countryside. The area is very promising and there is a lot more exploring needed to be done here. Some of our highlights included: good views of a green-backed trogon, squirrel cuckoo, and a yellow-olive flycatcher. We left Morne la Croix by 1:45pm.

During my earlier time at Morne Bleu, I found two very interesting insect nests, and one at Lopinot. One of the nests was of a type of weaver ant, which I described in my 2011 article, "Weaver Ants in T&T". Please refer to that article for much more description. Faraaz also found a second one of these weaver ant nests (see photos). Based on my communications with Professor Starr, retired entomologist from UWI, and past communications with the Harvard Museum of Comparative Zoology, I believe these ants are of the genus *Camponotus*, and the species are probably either *Dendromyrmex*, *senex*, or *wheeleri* (or quite possibly a totally new species for Trinidad!). Very little is known about these fascinating ants in Trinidad, and they deserve a lot of further study. I know of at least three other times these ants have been found on this same mountain and in the same general vicinity.

The other nests were those of an unusual hornet or wasp, of which I found one on the Morne Bleu access road, and another apparently abandoned nest of the same species at the head of Lopinot Trace, in a breadfruit tree. These unusual nests were light brown, made of mud, attached to one stout open branch, and have a hive-shaped appearance with a flat bottom, with two entry holes for the wasps (see photos). In consulting Professor Starr with the photos, he responded:

"Those two nests are of the same species, Epipona guerini. It is evidently quite uncommon, as I can only recall having seen one active colony in my almost 30 years here, so it was good luck that you came upon two nests in one day. I wonder if it tends to nest at middle altitudes, rather than in the lowlands. The second nest is evidently abandoned, although probably not very long ago, as it hasn't undergone much disintegration. E. guerini



[Assumed to be] *Camponotus* weaver ant's nest #2 in treetops on Morne Bleu, about 50 metres from Nest #1. Many active ants can be seen on the sides of the nest. Photo by Faraaz Abdool

characteristically nests fairly high up in trees, as your photos suggest."

I had a great day for social insects. I would really wish to return as soon as I am able to conduct more studies on these fascinating ants and wasps. It is always a great day spent with Mother Nature. Overall, between our two groups, we tallied a respectable 70 bird species (*contact author or editors for full list*).

Sources:

Kelly, Matt, 2011. "Weaver Ants in T&T". *The Field Naturalist; Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club*, January - March 2011, Issue No: 1/2011

(pgs. 8 – 13)

Kricher, John. 2017. *The New Neotropical Companion*, Princeton University Press, 432 pages

Starr, Christopher K. 2020. Personal Communications, Jan. 14 – 16, 2020





Junior Naturalists' Tour– 01 February 2020

MARABELLA NATURE SQUAD NATURE WALK WITH TRINIDAD & TOBAGO FIELD NATURALISTS' CLUB

by Ambika Ramdass



The Marabella Nature Squad posing atop Morne Catherine with TTFNC Management Committee member Dan Jaggernauth on the first Junior Naturalists' Tour. *Photos by Nicholas Mohammed*

A total of 22 students attended the nature walk. Joining the students was Ambika Ramdass, (coordinator of the Marabella Nature Squad Environmental Club) along with a parent of one of the club members. The nature walk was an educational, enjoyable, challenging and rewarding experience. The TTFNC guides were extremely helpful, accommodating questions and disseminating information to the students efficiently. They also assisted and ensured that the students' safety and comfort were prioritized. The students were always engaged and eager to learn more about the various types of trees and plants along the pathway. Although a few students exclaimed that it was a long, tiring walk, they were ecstatic at the prospect of future nature walks. Students generally had positive and favourable experiences from the nature walk. Some expressed views that they expected more views of the seas. The following were some of

the responses/feedback given by students:

"The nature walk we attended was long and exhilarating and the information that the tour guide gave us was new and fun to learn! I'd totally go again if given the chance with people I know" ~ Kion

"We had incredible tour guides and a truly amazing experience. This trip opened my mind to the possibility of fun that one can have in the bush!!!" ~ Angelia

"The Nature Walk was a very exhausting yet an enjoyable experience. We all learned new things and I would certainly love to go again."

"The walk was enjoyable and the view was awe inspiring. I learnt a lot about the local flora and fauna (bats). The walk also allowed for good bonding with my classmates and other members of the Nature



Squad.” ~ Brittany

“The fieldtrip was extraordinary and very adventurous. It was tiring but also fun.” ~ Gabre

“The nature walk was beyond what I expected. It was for sure a tiring walk, but being surrounded by friends as we walked did make it seem a lot shorter. The tour guides were a great help as well. They educated me a lot about different types of plants, trees and insects. The view was breathtaking. I still can’t get over it. It sure did make for great pictures. The entire experience was great and I would surely do it again. I’m glad I got to experience this during my last year of school.” ~ Pierce

“To be honest, the nature walk was pretty cool hands down. It wasn’t tiring or long or boring. The guides that were with us made sure it wasn’t any of such. They really did a great job by letting us experience such amazing plants and especially the spider around the corner by the trees just as you begin ascending the trail. I loved just being in and embracing nature... The cool breeze and shade we got from those plants, trees and bushes. Don’t get me started on the view when we were going up and coming back down the trail. It was breathtaking. That view was IT. I really loved the pictures I got and especially being able to see and hold the huge leaves from the trees. I enjoyed learning a good bit of survival tricks and learning about the different palm trees. I also appreciate the part where I got stung or



bitten and the guides took care of me. Those are really great memories that I enjoyed making. I would really love to go again for sure and experience it all over again and again. I’m overjoyed and ecstatic that I was able to share the first ever field trip of MNS Nature Squad.” ~ Karine

The Marabella Nature Squad of Marabella North Secondary School would like to express their gratitude to the Trinidad and Tobago Field Naturalists’ Club, and especially to our guides Nicholas and Dan for their time and dedication in facilitating us. The experience was informative and enlightening, and our club wishes to further build and foster a relationship—one in which our club members can benefit from your wealth of knowledge and passion. 🐜

January– March 2020

STRATEGIC PLAN UPDATE

by Stephanie Warren-Gittens

Short term Goals

Club Outreach

Dan Jaggernaut led outreach activities as follows:

- Exhibit held on February 6th at Caroni Visitor Centre in conjunction with FAO World Wetlands' Day exhibit.
- On February 29th, Protect and Nurture Environmental Fair at Brazil High School.

Junior Naturalists Tours

These tours officially kicked off in February, with Marabella Secondary School "Marabella Nature Squad" where they explored Morne Catherine on February 1st, 2020. The second tour was held on

February 22nd, this time with students from Presentation College, San Fernando to Point Gourde.

Medium and Long Term Goals

Land acquisition

No further update at this time

A copy of the full strategic plan can be requested by email to admin@ttfnc.org. Constructive comments and suggestions from members of ways to work towards these goals are always welcome.



NATURE IN THE NEWS

A quarterly summary of local environmental news

by Kris Sookdeo



January

1.) An unusually large number of Portuguese man o' war (*Physalia physalis*) washed ashore on Trinidad's east and north coasts during January. Asked for comment by a local newspaper, Dr. Judith Gobin indicated that she "did not recall seeing them in such very large numbers at any one time."

2) According to the president of the Claxton Bay Fishing Association fishermen have been finding several beaks and legs of the brown pelican (*Pelecanus occidentalis*) in their nets while fishing, which appeared to indicate that people are killing the birds. The agriculture minister noted that he was "aware that villagers in the nearby communities spoke to the EMA about the practice of people hunting the pelican in the Christmas period," and that "some residents witnessed people shooting the birds,"


3) A 500-pound female tapir (*Tapirus terrestris*) was spotted wandering in the village of Ramjattan Trace, Penal on 20th January. Game wardens and staff from the Emperor Valley Zoo

were able to locate the animal which was put to sleep with a tranquiliser. The tapir was then taken to the zoo.

4) On 30th January a melon-headed whale (*Peponocephala electra*) beached itself on Maracas Bay. After two failed refloating attempts by the Trinidad and Tobago Marine Mammal Stranding Network (TTMMSN), a decision was taken to euthanize the animal as it had been in distress for more than 11 hours and, on physical examination, it displayed periodic tremors and there was a foul odour to the expired air on exhalation. Following a necropsy, the animal was found to have died from severe parasitic meningitis, which affected multiple areas of the animal's brain. Significant parasitism was also observed to be associated with the urogenital tract, where numerous large parasitic cysts were found to be attached to the reproductive organs. The animal also had multiple stomach ulcers and numerous parasitic nodules of varying sizes throughout the stomach wall. No food was present in the stomach or intestines.

February

5) The bodies of three melon-headed whales also came ashore at La Lune beach, Moruga on 10th February. A pilot whale (*Globicephala* sp.) also beached itself within the same area but was returned to sea by villagers. The Moruga Museum took possession of the three deceased whales which were transported to the museum where necropsies were performed. The TTMSN criticized the

action, warning of the potential health risk and need to adhere to established protocols for performing such necropsies. In response, the curator indicated that the Forestry Division was informed throughout the process and that the museum had performed several necropsies in the past. 



MEMORIAL TRIBUTE: DR. JO-ANNE SEWLAL


by Chris Starr



Jo-Anne N. Sewlal (1979-2020), Arachnologist and Environmentalist

Dr. Sewlal made significant contributions to the knowledge of the diversity of spiders in Trinidad and Tobago. Jo-Anne took delight in field work not only in Trinidad and Tobago but throughout the Lesser Antilles (Anguilla, Antigua, Grenada, Montserrat, Nevis, St Eustatius, St Kitts, St Lucia) and on Great Inagua in the Bahamas.

Jo-Anne's work went beyond research where she edited the bulletins of the Trinidad and Tobago Field Naturalists' Club and Environment Tobago, and she had a regular column in the weekly Tobago News.

Jo-Anne was an active member of the Club and made great strides in the field. 

(The full memorial dedicated to Dr. Jo-Anne N. Sewlal will be published in the Living World Journal.)



Mesabolivar aurantiacus, the main focus of her master's thesis. Photo by John Abbott




CLUB SPONSORSHIP/PHILANTHROPY

by Stephanie Warren-Gittens



The Trinidad and Tobago Field Naturalists' Club sponsored two awards at the University of the West Indies Awards ceremony held on Tuesday 23rd October 2019. These awards were for the best performance in plant specialization and zoology

specialization - the Victor E. Quesnel award & the Dr. Elisa Tikasingh Award, these were awarded to Daynia Fletcher and Naomi Favrod-Coune respectively. 



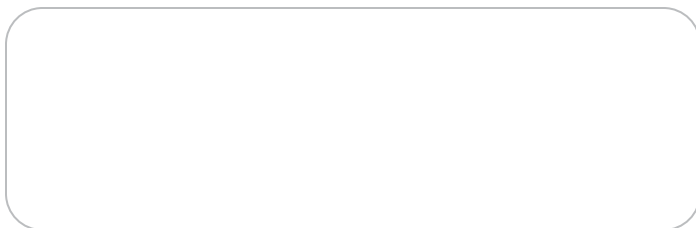
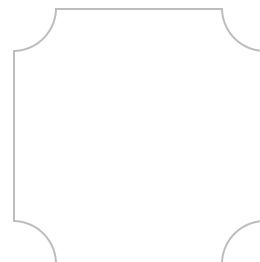
(Top): Dayna Fletcher receiving the Victor E. Quesnel Prize for best performance in the Plant specialisation; (Bottom): Naomi Favrod-Coune receiving the Dr. Elisha Tikasingh Prize for best performance in the Zoology specialization, both prizes were presented by from former TTFNC Secretary Dr. Amy Deacon.

Photos by The Department of Life Sciences, UWI

MANAGEMENT NOTICES

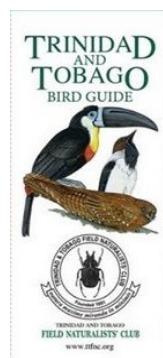
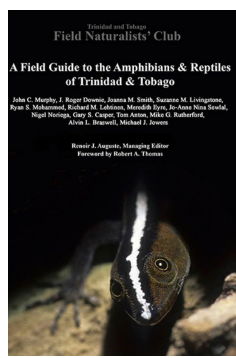
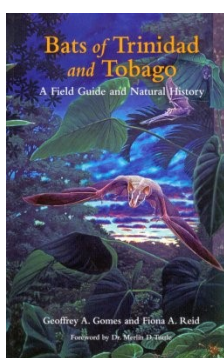
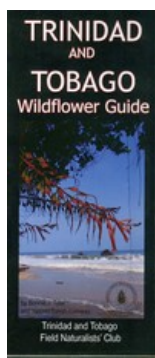
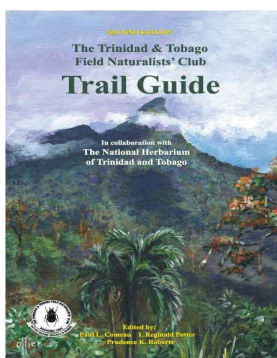
All club trips and physical lectures are on hold until further notice pending return to normalcy in light of COVID-19 and subsequent restrictions, as the health and safety of our Club's members is of paramount importance.

Monthly club lectures will continue by use of the website/app Zoom.



PUBLICATIONS

The following publications are available to members and non-members (*prices shown are those paid when purchasing directly from the Club*):



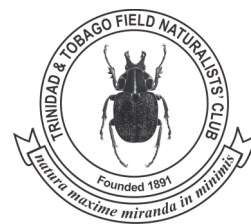
TTFNC Trail Guide (\$150); T&T Wildflower Guide (\$50); Bats of T&T (\$200); Field Guide to Amphibians & Reptiles (\$180); 2019 Living World Journal (\$60); TTFNC Bird Guide (\$50).

MISCELLANEOUS

Your 2020 Annual Membership Fees Are Due:

Please view bottom right of the mailing label to check if your subscription has been paid.

Did you know? It is now possible to renew your membership online!
See www.ttfnc.org/funding for details. You can join the club this way, too.



Do you have an article to submit for the next QB?

Submission of articles and field trip reports:

1. All articles must reach the editors by the eighth week of each quarter.

2. Electronic copies can be submitted to the editors at: admin@ttfnc.org

or directly to the editors or any member of Management. Please include 'QB2020' in the email subject label.