# THE FIELD NATURALIST

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

**October – December 2019** **Issue No: 4/2019**


# TABAQUITE BIOBLITZ 2019

## Saturday 2nd - Sunday 3rd November

## GENERAL REPORT

*by Renoir Auguste*

The eight annual Bioblitz took place in central Trinidad, with Tabaquite as the central location. The base camp for this year's event was the Tabaquite Secondary School (TSS). Once again, the Bioblitzers mostly comprised members of the TTFNC, staff and students from The University of the West Indies (UWI) and other nature lovers. The main hall of the TSS was turned into a biodiversity display and identification zone with microscopes, books and laptops, and tables covered in specimens. This year we also continued the use of iNaturalist to record and identify as many species as we could and interestingly a photo by one of the Bioblitzers

*(continued on page 3)*

**Thoas Swallowtail.** *Photo by: N. Bridglal*

## Inside This Issue



**Editor's note :**
Many thanks to all who contributed and assisted with articles and photographs.

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## October - December 2019

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(Nandani) made it as the iNaturalist observation of the day! The record was chosen from photos from all around the world!

Some folks made it over on Friday 1st November while the rest mostly came on Saturday 2nd. As per usual, a briefing for the surveying teams began around 11am. At noon, participants headed off in different directions to start the 24 hours of searching which lasted until noon on Sunday 3rd. The main area for surveying was a 10km wide circle which stretched from Navet Dam in the east to Brasso Venado in the west.

Members of the mammal group, led by Laura Baboolal of the TTFNC, laid the early ground work for surveys in the area. With assistance from Ryan Mohammed, Dan Jaggernauth and Renoir Auguste, they set up camera traps prior to the Bioblitz to hopefully photograph some elusive mammals that would normally not be seen during a rapid survey. Mist nets were set up during the Bioblitz with the aim of identifying what bat species were in the area. A full list of species can be seen in the mammal group report on page 6.

The reptile and amphibian team was organized by me, TTFNC president, and Rainer Deo took lead in overseeing surveys along with Saiyaad Ali of the Serpentarium. Surveys were done during the day and night, with nocturnal surveys being peak time. Some of the species within the area can be seen on page 8 in the amphibian and reptile group report.

The birding group was led by TTFNC members Dr.

**Some of the Bioblitzers at base camp.** *Photo by: S. Manchouck*

Mark Hulme, and Elizabeth Seebaran. The group consisted of experienced birders and enthusiastic students who were able to benefit from knowledge-transfer and bird identification. Some of the bird highlights are mentioned in page 10 of the report.

The aquatic team, led by Ryan Mohammed from UWI, focused on freshwater organisms in rivers, streams and ditches. Highlights from the aquatic group are on page 12.

Dr. Mike Oatham and Linton Arneaud from UWI led the plant surveys along with Doreen Oatham, and Shane Ballah. Dr. Oatham and Linton focused on vascular plants while Shane focused on the non-vascular plants such as mosses and liverworts. The plant species observed was indicative of the area as noted from the plant group report on page 14.

Rakesh Bhukal and his team looked for several small groups of insects, spiders, scorpions and other terrestrial invertebrates. More details on other invertebrates found in the area is summarized in the terrestrial invertebrate group report on page 18.

Jeffrey Wong Sang once again led the fungus (mushroom) group with a summary of some of the mushrooms seen and photographed on page 19.

Just after 1pm on Sunday the total number of species found was announced: 12 mammals, 17 frogs, 30 reptiles, 124 birds, 128 invertebrates, 12 fishes, and 328 plants, 30 fungi, for a grand estimated total of 681!

As usual with the Bioblitz the final tally of species for each group can change after the event as records are more closely scrutinized, collected specimens are identified and mistakes are corrected. Some of the totals in the group reports may therefore be different as highlighted in the group reports.

The Bioblitz organizers would like to thank their main sponsors this year which was the Trinidad and Tobago Field Naturalists' Club. Thanks also to the Bermudez Biscuit Company for their donation of Wheat Crisps and Dixee crackers, much

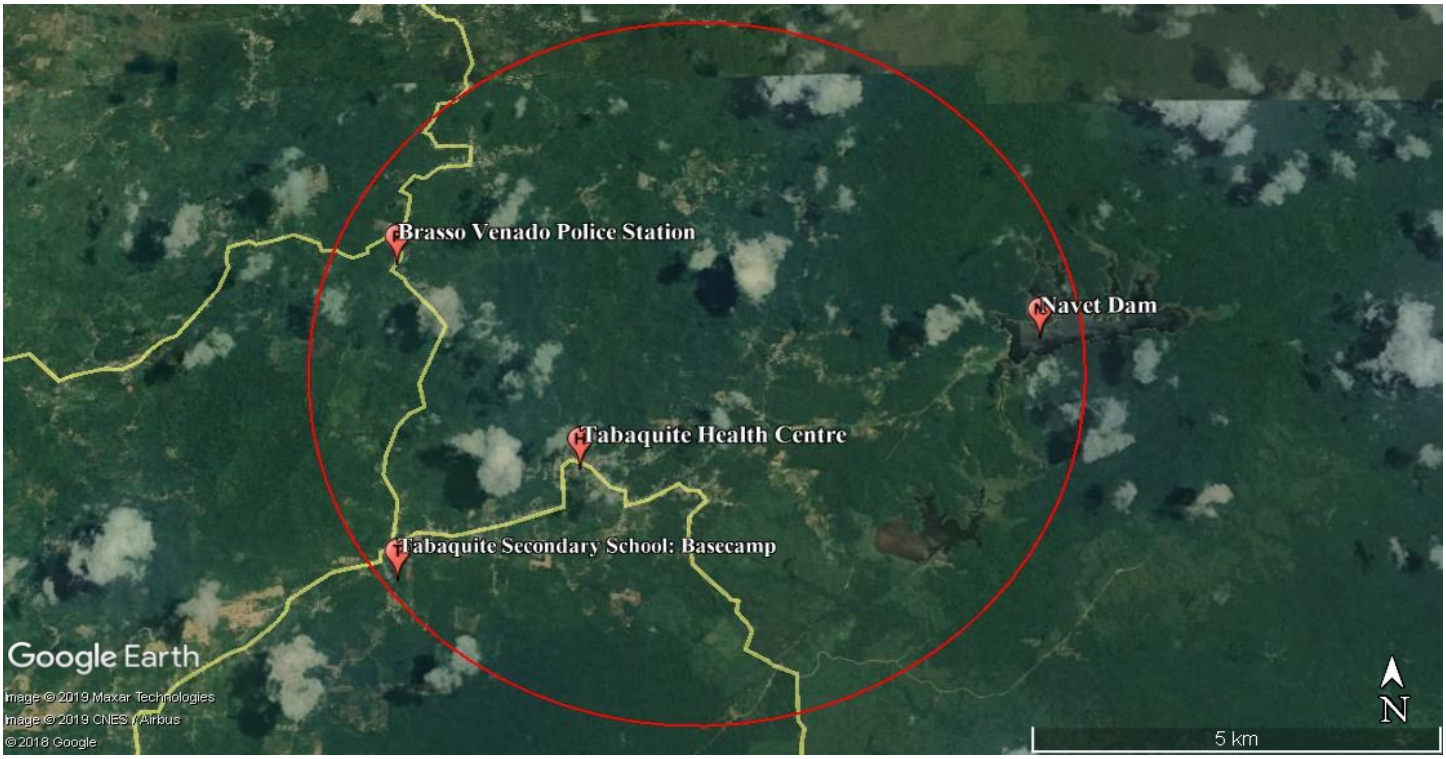

**Dan and Renoir presenting journals to Ms. Boodram, school principal.**
*Photo by: S. Warren-Gittens*

**Visitors at the base camp.**
*Photo by: S. Warren-Gittens*

**Dan's display at the base camp.**
*Photo by: S. Warren-Gittens*

appreciated by the hungry Bioblitzers. Thanks to those that came out to help with the outreach, including but not limited to Asa Wright Nature Centre, Food and Agriculture of the United Nations (FAO), Central Pathfinders, Serpentarium. Special thanks to the staff of the Tabaquite Secondary School for welcoming the Bioblitz with such open arms and facilitating us, especially the principal Ms. Boodram. Thank you for all involved for ensuring Bioblitz continues and can be shared with all!


**Base camp entrance.**
*Photo by: S. Warren-Gittens*




**10 km radius study area for Tabaquite Bioblitz.**
*Source: Google Earth*

# MAMMAL GROUP REPORT

*by Laura Baboolal*

The mammal group, as done in the past, set up camera traps before the Bioblitz weekend in order to capture images of any mammal species that inhabit the area.

On the weekend of the Bioblitz we had lots of volunteers and naturalists eager to survey the area. The mammal group becomes active at night when the bats are out. The mammal group set up five ground nets at two locations, two nets at the top of Knolly's Tunnel and three along Motta Street. Volunteers checked the nets at half hour intervals. When bats were caught in the nets, they were carefully removed and taken to the processing station where data was taken, and bat species identified. The bats were released right after being processed. We were very fortunate to have conditions that were suitable for a successful night of mist netting bats as compared to the previous year. Some of the bat species found include Common long-tongued bat (*Glossophaga soricina*),

**Mammal group prepping**
*Photo by: L. Baboolal*


**Ocelot.**
*Photo by: Camera Trap*

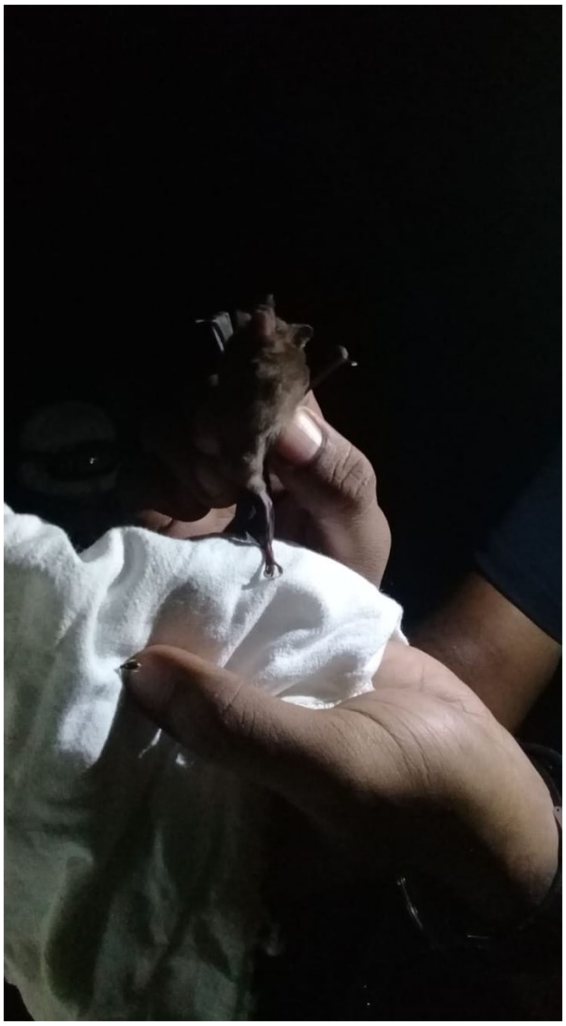
Gervais's fruit-eating bat (*Artibeus cinereus*), and Common moustached bat (*Pteronotus parnellii*). There was a total of 7 bat species identified for the night.

On the final day of the Bioblitz, the camera traps were retrieved and the photos were processed. We were able to capture photos of various species including agouti and the only wild cat in Trinidad, the ocelot! Also, the bird group was pleasantly surprised to see a tayra cross their path while surveying. There was a total of 12 mammal species found for the 2019 Tabaquite Bioblitz.

There was also a mammal group display and activities for the visitors on Sunday. The mammal group had an increase in volunteer sign ups for this year's 2019 Bioblitz at Tabaquite! Thank you to all volunteers!

**Rondell with a rescued agouti.**
*Photo by: L. Baboolal*


**Trinibats banner.**
*Photo by: L. Baboolal*



**Bat being identified.**
*Photo by: P. Poon Chong*

# AMPHIBIAN AND REPTILE GROUP REPORT

*by Rainer Deo*

This year's Herpetology group set off with intentions on surpassing the herpetofauna counts from the past seven annual events. Recons were carried out one and two weeks prior to the Bioblitz weekend. A farming area nestled within the dense forests and only a few metres away from the Navet reservoir seemed to be the most promising location and was the group's main focus area despite there being clear signs of heavy use of agricultural pesticides and herbicides. Some core members of the group arrived at the base camp at approximately quarter to eleven on Friday night and after settling in, headed to the farmlands. Rain fell throughout the day and the calls of several species of frogs and toads, including *Rhinella beebei* (Beebe's toad), *Engystomops pustulosus* (Tungara frog) and *Elachistocleis ovalis* (Common narrow-mouthed frog), were heard as soon as we exited the vehicles. Entering the forest, the subtle calls of *Phyllomedusa trinitatis* (Trinidad leaf-nesting frog) were heard and several specimens were spotted. The first species of snake for the night was no other than the quite obvious *Bothrops cf atrox* (Mapepire balsain), which was found in a clearing next to the farmer's crops. It proved to be quite a healthy female specimen, measuring at approximately three and a half feet in total length and without any visible parasites that are typically found on snakes. Following the first find, a total of four other snakes were found that night which included a *Chironius cf carinatus* (Yellow machete), *Oxybelis cf aeneus* (Brown vine snake), *Leptodeira annulata ashmeadi* (Cat-eyed snake) and

**High woods snake** *Photo by: R. Deo*

*Helicops angulatus* (Brown banded water snake), and Renoir Auguste spotted a spot-nosed gecko.
During the next day, surveying slowed down significantly for the herp group. That however did not stop other groups from encountering any herpetofauna. An *Epicrates maurus* (Columbian Rainbow Boa) was brought in by the leader of the Invertebrates group, Rakesh Bhukal, and one of the highlights for this year, an *Erythrolamprus zweifeli* (High woods snake) was brought in by the youngest participant, Saifudeen Muhammad. Close to four in the evening, the group headed out in search for the *Mannophryne trinitatis* (Trinidad stream frog), A species with sparse populations in the Central ranges and one that was only heard at higher elevations.

**Spot-nosed gecko** *Photo by: R. Auguste*

such as the recording of a *Kentropyx striata* (Striped Rain lizard), found by Serpentarium member Taariq Ali, and a juvenile *Micrurus diutius* (Trinidad Ribbon coral snake) found by the head of the Serpentarium, Saiyaad Ali.


**Cat-eyed snake predating on treefrog**
*Photo by: A. Fifi*

As night neared, the group rallied in its twenty-four members for the night survey at the same location. Yet again another Mapepire balsain was seen in almost the exact location as the specimen from the night before but was relocated into the forest by Hukaymah Ali. Due to the dry weather, the night didn't prove as productive as the previous and species that were already recorded were found, including a *Tantilla melanocephala* (Black-headed snake). An extraordinary looking High woods snake was brought in by the Invertebrates group the following day and immediately became the top highlight for the event alongside the other highlights


**Leaf-nesting frog**
*Photo by: A. Fifi*

# BIRD GROUP REPORT

*by Mark Hulme*

Thanks to the efforts of nearly 30 volunteers, the bird group at the Tabaquite Bioblitz recorded an incredible 126 bird species! A total only previously bettered at the Icacos Bioblitz, indicating what a special part of Trinidad this is, especially considering some of the other amazing places the TT Bioblitz has visited over the years.

Following a number of reconnaissance trips potential birding sites and routes were identified taking in forest, disturbed forest, plantations, farmland, towns and freshwater habitats. The bird team split into different groups and birded separately across these different habitats, in an attempt to cover the greatest area in the limited time available. In addition, a group led by Carl Fitzjames and Darshan Narang set mist nets to capture and release birds in an attempt to record species that are more difficult to detect by other methods. A remote audio acoustic device was also deployed in a forest edge cocoa plantation to pick up vocalizing species, which the birding groups may not have recorded and to better survey those vocalizing late at night. This spreading of survey effort and the use of a variety of methods really helped to increase the species list.

As would be expected the intact forest habitats, in particular near Brasso Venado and around the

**Pygmy owl** *Photo by: J. Foster*

**Turquoise tanager**
*Photo by: J. Foster*

Navet Reservoir, were some of the most productive, with a good variety of forest birds seen. Some notable examples include Little Tinamou, Black Hawk-eagle (which has been seen regularly in central Trinidad recently), Grey-headed Kite, Blue-headed Parrot, Squirrel Cuckoo, Green-backed Trogon, Channel-billed Toucan, Crimson-crested Woodpecker, Streaked Xenops, White-bearded and Golden-headed Manakins, Blue Dacnis, Sooty Grassquit, the migrant Northern Waterthrush and the resident Golden-crowned Warbler. Many birds were also seen in some of the more disturbed plantations and roadside forested habitat such as Grey-lined Hawk, White-necked Jacobin, Lineated Woodpecker, Cocoa Woodcreeper, Euler's Flycatcher, Black-tailed Tityra, Rufous-browed Peppershrike, Long-billed Gnatwren, Silver-beaked Tanager and Trinidad Euphonia. The farmland habitats yielded some more open-country species such as Cattle Egret, Southern Lapwing, Smooth-billed Ani, Blue-black Grassquit and Giant Cowbird.

Freshwater habitats are always interesting as many specialist bird species are normally only found close to water. Within the 5km Bioblitz radius some of these species included Anhinga (or "snake bird" for its long thin neck), Osprey, Purple Gallinule, Wattled Jacana, Solitary Sandpiper, Pied Water-tyrant, White-headed Marsh Tyrant and White-

winged Swallow. At certain times of year there are likely to be more migrant waterbirds present than we saw during this Bioblitz, particularly on the large water bodies.

Nocturnal species were not ignored and those who carried on birding after night fell were rewarded with Spectacled Owl, Mottled Owl, Ferruginous Pygmy-owl (the call of which is often used by birders to attract other bird species to the potential threat!), Common Pauraque (a type of nightjar) and White-tailed Nightjar. The remote audio recorder also picked up songs of the Tropical Screech-owl, which would otherwise have been missed off the list. The mistneters successfully caught and safely released (the welfare of the birds always being the top priority) a good selection of species including Streaked Flycatcher, White-lined Tanagers and the beautiful Rufous-tailed Jacamar.

Finally, the towns and villages in the area were well-worth visiting for such familiar species as Great Kiskadee, Spectacled Thrush, Yellow Oriole, Ruddy Ground Dove, Short-tailed Swift, Copper-rumped Hummingbird, Grey-breasted Martin, Blue-grey Tanager and Shiny Cowbird. In fact the Bioblitz base, the Tabaquite Secondary School, was particularly productive with nesting Yellow-rumped Caciques, the migratory Yellow Warbler, a hunting Peregrine falcon, a pair of Pearl Kites and many other birds present. The Bioblitz is a short 'snap-shot' of biodiversity taken over 24 hours and it is likely that other migrant warblers will be present in Tabaquite at other times of year, further boosting the likely number of species using the area. With Trinidad and Tobago's amazing biodiversity, birding in your own back yard can be a fascinating experience, wherever you live!

**Streaked flycatcher**
*Photo by: D. Mulchansingh*

**Yellow-rumped cacique** *Photo by: J. Foster*

Many thanks to all who attended and who submitted records on the day and on iNaturalist. In particular thanks to Jerome Foster, Elizabeth Seebaran and Nigel Lallsingh whose help with organization and identification enabled us to achieve this impressive list.

# AQUATIC GROUP REPORT

*by Ryan Mohammed, John Paul Alvarez and Lanya Fanovich*

Bioblitz 2019-Tabaquite had a very dynamic group this year. The expedition started on Friday 1st November as we left UWI St. Augustine. The core team on that day comprised of Dan 'The Man' Jaggernauth (TTFNC), Lanya Fanovich, JohnPaul 'JP' Alvarez and Ryan Mohammed. Our sole mission on then, was to sample one Tabaquite site for JohnPaul's research project on ichthyofaunal assemblages in Trinidad. This gave us the propitious opportunity to use one method of fishing which has not been employed at previous Bioblitz events-electrofishing. Unfortunately, with our journey, heavy rainfall followed and all we could do was prepare the Tabaquite Secondary School to become basecamp for Bioblitz 2019. Later that night, two other integral members of the Aquatic team joined us: Sachin Maharaj and Delezia Singh.

At 11:30am on Saturday morning, the entire Aquatic team assembled including Stephanie Warren-Gittens (TTFNC, and our main social media correspondent), Alan Chan (our chief photographer), Bria De Costa, Shivam Mahadeo, Sweelan Renaud, Lena-Sophie Khur, Helen Keevy, Vaugn-Xavier Jameer, Naved Sahadeo, and Felicia Collins (UWI Bio-Sci) among others. Overall, our group on Saturday 2nd November was 20 persons strong. Sachin brought his cast net and skill in deploying the gear while Delezia took the lead on collecting benthic samples and Lanya opted to be our designated scribe. This also meant our sampling this year employed a wide variety of sampling gear; seining, cast netting, fish trapping and also electrofishing.

Our team loaded the vehicles with gear and we headed out at 12:15 pm with good weather ahead of us for the day, while Dr. Amy Deacon manned the basecamp fort. By 3 pm, we returned to basecamp, having sampled six sites to the east with the cast net and seine net. After a brief lunch, our crew shrunk a bit as some members joined the 'batting', 'herping' or arthropod groups that were going out for a nocturnal patrol. The Serpentarium crew accompanied our remaining team of about ten persons as we sampled sites north of basecamp with the seine and cast net, where we also deployed our fish traps. We returned to basecamp by 10pm and started our identifications of fish, crustacean, molluscs and one report of an aquatic turtle.

With a much smaller aquatic crew, we started the day at 6 am to collect our six fish traps and to sample one site using the electro-fisher. At 11:45am, we returned to basecamp to do our final tallies. We successfully sampled one dragonfly larvae, three aquatic mollusks (*Pomacea glauca, P. urceus* (Black river conch) and *Marisa cornuarietis*), two crustaceans *Poppiana dentata* (Delezia's PhD research species) and *Macrobrachium jelskii* also

**Using electrofisher (left) and landing seine (right)**

*Photos by: A. Chan*


**Some of the aquatic group members**
*Photo courtesy: R. Mohammed*

known locally as, 'jinga') as well as 12 species of fish. Our fish included three Characins locally referred to as sardines *(Astyanax bimaculatus, Roeboides dayi* and *Corynopoma riisei*), two Cichlids, both species commonly referred to as coscorub (*Andinoacara pulcher* and *Cichlasoma taenia*), three catfish species (*Corydoras aeneus* known in the ornamental trade as the Bronze corydoras, *Hypostomus robinii* or 'teta' and *Rhamdia quelen*), one major piscivorous species (*Hoplias malabaricus* or 'guabine'), our most common fish *Poecilia reticulata* known as 'guppies' or 'seven colours' and lastly two very slippery species *Anablepsoides hartii* or 'jumping guabine' and *Synbranchus marmoratus* or 'zangee'. The latter two species have a knack for escaping capture! Our freshwater turtle report was suspected to be *Rhinoclemmys punctularia* which would have been noted by the Herpetology group as well. Our largest specimen was a *H. malabaricus*, 'guabine' which was collected in the fish trap. The lone freshwater prawn, 'jinga' was observed when the electrofishing was being conducted. This would bring our aquatic group's total (3 aquatic arthropods, 3 molluscs and 12 fish) to 18 species from our ten sites sampled.

Special thanks to Lanya, JP and Serpentarium crew who stayed back to help Dan, Linton and myself clean up the school after our results announcement. Also, it would be remiss of me to not thank my excellent aquatic team for another successful Bioblitz!

**Guabine** *Photo by: R. Mohammed*

# PLANT GROUP REPORT

*by Linton Arneaud and Doreen Oatham*


**Some of plant group members**
*Photo by: L. Arneaud*

This year, the "Nosey Botanists" identified a phenomenal total of 328 plant species; of which 310 species were vascular, whereas 18 were non-vascular. This was very surprising at first; given the large expanses of disturbed areas within the studied region. However, diversity was attributed to the extensive assortment of agricultural plants.

As always, all members of the botanical group were thrilled to explore the diversity of flora species south of the island. We were so excited to cover all environs of Tabaquite; we created teams for each ecosystem. Mike Oatham took persons most interested with natural forests to the Brickfield Animal Sanctuary, whereas Nigel Austin escorted youngsters with interests of exploring the Navet Dam–a freshwater ecosystem along the Navet Lower Dam Access Road. Dan Jaggernauth managed to visit three sites; the disturbed forest along the Navet Small Dam Access Road, and pockets of undisturbed and disturbed forests along the Guaracara Tabaquite Road. Doreen Oatham took the challenged of identifying plants in and around the Base-camp (Tabaquite Secondary School), and Shane Ballah explored favourable habitats within the 5-km$^2$ circular quadrant in search for non-vascular plants.

## Undisturbed Forests (Team Mike)

Many indigenous floral species were recorded during this segment of the botanical walk. Bioblitzers found themselves manoeuvring through many lianas and vines under the cool forest canopy. As expected, many indigenous forest trees were observed. Some of the more memorable ones include; Huntersman's Nut (*Omphalea diandra*), Hatstand tree (*Garcinia humilis*), Kakapol (*Rudgea hostmanniana*), Jamoon (*Syzygium cumini*), Matchstick wood (*Schefflera morototoni*), Yellow poui (*Handroanthus serratifolius*), Angelin (*Andira inermis*) and Wild nutmeg (*Virola surinamensis*).

There were many *Philodendron* sp. (aff. *acutatum*) climbing on forest trees. However, the highlight of Team Oatham was the indigenous Black Pois Doux tree—*Inga acuminata*; which predominates in undisturbed forests. Many members of the group took photographs of a specimen collected. Other plants that could not be identified on the field were taken back to Base-camp to be keyed out using the flora of Trinidad and Tobago and other useful plant identification tools and publications.

## Fresh Water Ecosystems (Team Nigel)

The highlight of this ecosystem was the identification of a Liana, which proved to be very challenging. Apart from acquiring the legal paperwork to enter the Navet Dam, dealing with the security guards at the gate and withstanding the blistering sun during the botanical walk, Team Nigel felt obligated to ID a flowering tree which stood over 50 meters away from the roadside and the reservoir. Team members took pictures using cellular devices, which were of very little use. During the night, other group leaders and team members stayed up late gazing at the photos. Sunday afternoon, after the announcement, Kester Dass and Linton Arneaud (two nosey investigative botanists) regained permission to enter the Navet

**Brickfield animal sanctuary natural forest.** *Photos: by L. Arneaud*

Months after the Bioblitz event, Doreen and Linton managed to put an ID on the specimen as *Entada polystachya* L. (Callingcard Vine) or Manioc La Chapelle as the local folks commonly call it. The liana was only able to be identified after driving back to the Tabaquite district four times. On the first occasion, other sites where the liana existed outside the WASA compound were discovered. On the second occasion, vegetative samples were collected using a pole pruner, and on the third and fourth occasions, site visits were solely based on searching for reproductive specimens. This goes to show the importance of proper sampling and collection methods (in this case, collecting reproductive material). Additionally, it demonstrates just how tedious it can sometimes be to collect and identify certain plant species in difficult and hard to access places. It was just two years ago; this very same species was easily identified (by ourselves) climbing on the top of mangrove trees behind the Columbus Bay beach during the 2017 Icacos Bioblitz in south Trinidad. On that occasion, reproductive specimens were easily available and collected; hence identifying the specimen was achieved without any great effort.

## Disturbed Forest Ecosystems (Team Dan)

There is never a dull moment walking outdoors with Dan; and on this occasion; the 8th Bioblitz (Tabaquite T&T), no exception was made. There was so much excitement in the air for Team Dan; they found themselves visiting a total of three locations within the 5–km$^2$ quadrant, all within five hours. Along the Navet Lower Dam Access Road, a wide variety of plants were observed, and Dan did not hesitate to explain the importance and usefulness of each species. Dan and other team leaders were especially happy to observe enthusiastic young persons taking the initiative during field collection this year. Some plant species recorded at this site include Toporite (*Hernandia Sonora*), Wild Cashima (*Rollinia exsucca*), Cocorite (*Attalea maripa*), Royal Palm (*Roystonea oleracea*), Manac (*Euterpe edulis*), Manac (*Euterpe precatoria*), Mahoe (*Sterculia pruriens*), Fineleaf (*Pentaclethra macrophylla*), Philodendron (*Philodendron fendleri*), Tillandsia (*Tillandsia fasciculata*) and Epidendrum (*Dimerandra stenopetala*). Along the Guaracara Tabaquite Road, the two dominant species were Olivier (*Terminalia* sp.) and Yellow Poui (*Handroanthus serratifolius*). The team was also favoured to see more than two different types of

Cassia species in blossom (*Cassia fistula*, *Cassia fruticosa* and *Cassia* sp.).

Dan pointed out to the different vegetative phenophases of the Mountain rose (*Brownea coccinea*) found along the rocky slopes next to a distributary of the Guaracara River. Some members were amazed to witness the diversity of fruit plants found in pockets of agricultural landholdings further up the Guaracara Road. Such plants included: Sugar apple (*Annona squamosa*), which was shared amongst fellow Bioblitzers at the Base-camp, Guava (*Psidium guajava*), Balata (*Manilkara bidentata*), Chataigne (*Artocarpus communis)*, Cashew (*Anacardium occidentale*), Coconut (*Cocos nucifera*), Custard apple (*Annona reticulata*), Chalta (*Dillenia indica*), Mango (*Mangifera indica*), Paw-paw (*Carica papaya*), Jamoon (*Syzygium malaccense*), Primrose (*Syzygium jambos*), Sapodilla (*Manilkara zapota*), Soursop (*Annona muricata*), Taminard (*Tamarindus indica*), Chinese tamarind (*Vangueria madagascariensis*), Pommecythere (*Spondias dulcis*), Five fingers (*Averrhoa carambola*), Mandarin (*Citrus reticulata*) and many more.

## Human Ecosystems (Team Doreen)

Gorgeous, yummy, "piddly", challenging are the words to describe plants in human ecosystems. Arguably, some of the more beautiful plants are found in this group as people tend to favour many introduced ornamentals with showy features like the well-known Hibiscus, Ixora, many varieties of Croton and the more recent variety of *Catharanthus roseus*, "Madagascar Periwinkle". Edible species including familiar fruit trees such as Tamarind (*Tamarindus indica*) Portugal (*Citrus x nobilis*), Caimet (*Chrysophyllum cainito*) and Mango (*Mangifera indica*). Crops like Pepper (*Capsicum sativum*), Banana (*Musa* sp.), Bodi (*Vigna unguiculata*), and Christophene (*Sechium edule*), as well as tree crops such as Teak, Mahogany, Cocoa, Coffee and Coconut, add to the diversity.

Human ecosystems with many non-native species are at times taken for granted and even overlooked by researchers focusing on indigenous species. This year's Bioblitz estimates demonstrate that these ecosystems added to the richness of our natural ecosystems and increased diversity. Identifying the flora in these areas has its challenges. Ornamentals are brought down without scientific names, and it is expensive to access proper identification tools. The many varieties and cultivars only make it more difficult.

**Flowering callingcard vine** *Photos by: L. Arneaud*

That said, being able to experience our lesser-known native species around homes and while driving down the roads is a lovely experience. Sightings of the intriguing flowers and fruits of the Sandbox (*Hura crepitans*) along with Apeiba and of course the more familiar ones like Hog Plum and Bios Canot was a treat. Numerous small native species are found on roadsides in lawns for instance- difficult to see and grasses are not the favourite of most people to identify. For these reasons, the estimate for these areas are likely to be lower than actually reported.

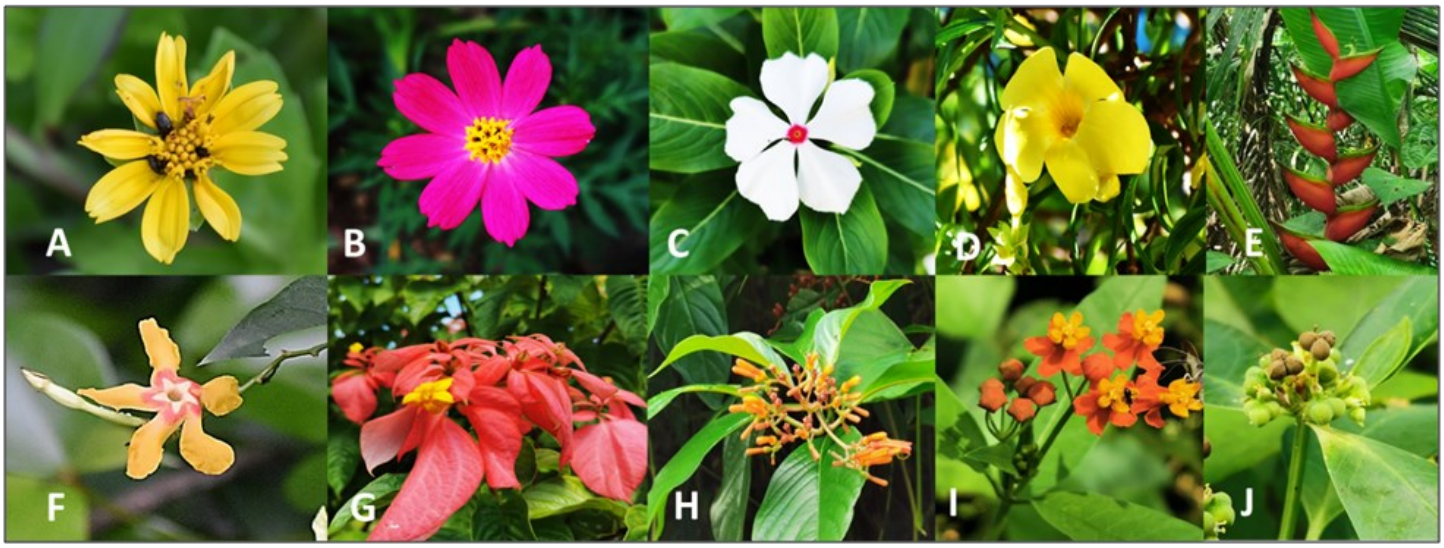
Human ecosystems with fruit trees and crops support many native fauna, birds, reptiles and rodents. These settings allow people, particularly children, to experience nature and play a critical role in understanding the value of us humans co-existing harmoniously with the rest of nature. Additionally, to the other extreme, it can show just how resilient some indigenous trees can be. For example, a Bois Canot and *Ficus* sapling were seen growing on the outer ceiling from one of the school buildings.

## Terrestrial Biomes (Team Shane)

Opportunistic sighting of non-vascular plants at the base camp, nature trails and along the various access roads were done. Specimen collections were taken from tree barks, roots, fallen trees, decaying logs, the forest floor, and concrete surfaces. Even though a detail survey was not conducted, most of the specimens collected required cross-referencing with the bryophyte collection at the National Herbarium of Trinidad and Tobago. Terrestrial algae—Trentepohilia were found on numerous tree barks along most trails. Trentepohilia is a member of the green algae group, however, species in this genus are bright-orange to red-brown due to high concentrations of haematochrome (β- Carotene). Additionally, different species of lichens were also observed, most of which could not be identified to a species name. A total of 18 non-vascular plants were recorded; however, this number might change after specimens are keyed out.

## Identification of collected specimen

Even though most members of the group were exhausted from field collections, many sacrificed their sleep in order to identify most of the specimen collected (at least to the Genus level). Team leaders would each interrogate problematic specimen until everyone was happy with the provisional classification. There were enough bananas and citrus fruits to snack on, keeping our energy levels high. Much to our surprise, we collected a total of 328 vascular and non-vascular plant species. There are not many natural forests within the study area; therefore, little species diversity was expected. However, with the high level of agricultural activity within the area, many exotic plant species contributed to such high number (in comparison to other Bioblitz events on the island).




***Flowering plants around Tabaquite Secondary School**. Photos by: L. Anread*

# TERRESTRIAL INVERTEBRATES & FUNGUS GROUP REPORTS *by Renoir Auguste*

The terrestrial invertebrates group was once again lead by Rakesh Bhukal and his dedicated team managed to observe over 100 terrestrial invertebrate species! This is typically a difficult group to identify species for, since it is so diverse, and the Bioblitz team would like to thank all of the volunteers that went out with Rakesh to spot and sort out all the bugs they could find!

The fungus group was once again lead by Jeffrey Wong Sang and along with his dedicated volunteers, they managed to come across 30 species of fungi! Well done to Jeffrey and team as they focus on a group of organisms that are often overlooked yet is vitally important to the ecosystems.

**Wasps**
*Photo by: A. Deacon*

**Purple pinwheel**
*Photo by: D. Baldeo*

**Cockroach** *Photo by: S. Manchouck*

**Snow fungus**
*Photo by: M. Hulme*

**The TTFNC and the Bioblitz organisers thank all of the following organisations for partnering with us for the 2019 Tabaquite Bioblitz and to Bermudez for sponsoring snacks once again**

UNIVERSITY OF THE WEST INDIES ZOOLOGY MUSEUM

THE UNIVERSITY OF THE WEST INDIES

FORESTRY DIVISION Trinidad and Tobago

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## Management Notices

**New members; Volunteers; Publications**

### New Members

The Club warmly welcomes all the new members during the period!

**NOTICE FROM THE EDITORS:** ***Do you have any natural history articles, anecdotes or trip reports that could be published in The Field Naturalist? We welcome contributions from members. Please email your ideas or finished pieces to admin@ttfnc.org. We look forward to hearing from you.***

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

TABAQUITE Bioblitz 2019

For more information about the Tabaquite Bioblitz and previous Trinidad & Tobago Bioblitzes see the webpage:

https://sta.uwi.edu/fst/lifesciences/bioblitz-events-trinidad-tobago

For more photos and posts about the event see the Facebook page:

https://www.facebook.com/TandTBioblitz

**Your 2020 Annual Membership Fees are Due:**
Please view bottom right of the mailing label to check if your subscription has been paid.

**Submission of articles and field trip reports:**

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

2. **Electronic copies can be submitted to the 'Editor' at: admin@ttfnc.org or directly to the editor or any member of Management. Please include the code QB2020 in the email subject label.**