



# THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

October– December 2023

Issue No: 4/2023



## BIOBLITZ BACK IN ACTION AT BUCCOO

by Stephanie Warren-Gittens



**Members of the snorkel group look on during the glass-bottom boat ride to the Buccoo Reef. Photo by swgittens28**

After three years of exploring and discovering our 'backyard diversity', we were finally able to have a physical Bioblitz! There was no better location that could be chosen this year for the return than south-western Tobago for the Buccoo Bioblitz 2023. This was especially true for the Aquatic Marine group and also considering that the last Bioblitz held in Tobago was some eight years prior, in 2015, in Charlotteville.

It was particularly interesting to see what species

exist in this region, as a built up area that also encompasses key marine areas such as the Buccoo Reef, the only marine protected area in the country, as well as other areas of interest including Mt. Irvine and Kilgywn Bay. Other survey areas included Back Bay, the mangroves at Magdalena, the Bon Accord sewage ponds, Store Bay, Pigeon Point and Back Bay.

From as early as the Thursday evening, around

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Trinidad and Tobago Field Naturalists' Club

**October – December 2023**  
**Editors**

Laura Baboolal, Stephanie Warren-Gittens  
Associate Editor: Rupert Mends

### Contributing writers

Stephanie Warren-Gittens, Renoir Auguste, Jeffrey Wong Sang.

### Photographs

Renoir J. Auguste, Ryan Mannette, Amy Deacon, Jeffrey Wong Sang, Nandani Bridglal, Jerome Foster, Saifudeen Muhammad, Rainer Deo, Bryan Ramdeen, \*(iNaturalist usernames have been given): ryanmannette, rainernd, saifudeen\_muhammad, swgittens28, jwongsang, nandani\_bridglal, figtsree, brystrange, jmoulton44, drjay, giselleragoo, everett54, lintonarneaud, saarahevelyn, duanekenny, markhulme, magichin, kellykingon and merrylst.

### Design and Layout

Amy Deacon and Eddison Baptiste

### Management Committee 2023/2024

President .....	Kris Sookdeo	749-9638
Vice-President .....	Linton Arneaud	743-5651
Treasurer.....	Selwyn Gomes	624-8017
Secretary .....	Elizabeth Seebaran	710-6978
Assist-Secretary .....	Laura Baboolal	705-8716
Committee Members ...	Dan Jaggernauth	
	Jeffrey Wong Sang	330-4418
	Chrisalene Dedier	368-0851
	Chantal Leotaud	297-4359

## Contact us!

Email: [admin@ttfnc.org](mailto:admin@ttfnc.org)

Website: [www.ttfnc.org](http://www.ttfnc.org)

Facebook: [www.facebook.com/ttfieldnaturalistsclub](https://www.facebook.com/ttfieldnaturalistsclub)

Instagram [ttfnc](https://www.instagram.com/ttfnc)

YouTube: [Trinidad & Tobago Field Naturalists' Club - YouTube](https://www.youtube.com/Trinidad%20%26%20Tobago%20Field%20Naturalists%27%20Club)

Twitter: [@ttfnc](https://twitter.com/ttfnc)

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

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The 2023 Buccoo Bioblitz  
partnership organisations



### 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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**The 5km radius survey area for Buccoo Bioblitz 2023, indicated by the areas included in the orange circle. Observations uploaded to the iNaturalist app are also indicated by the various coloured location pins. Courtesy iNaturalist**

*(Continued from page 1)*

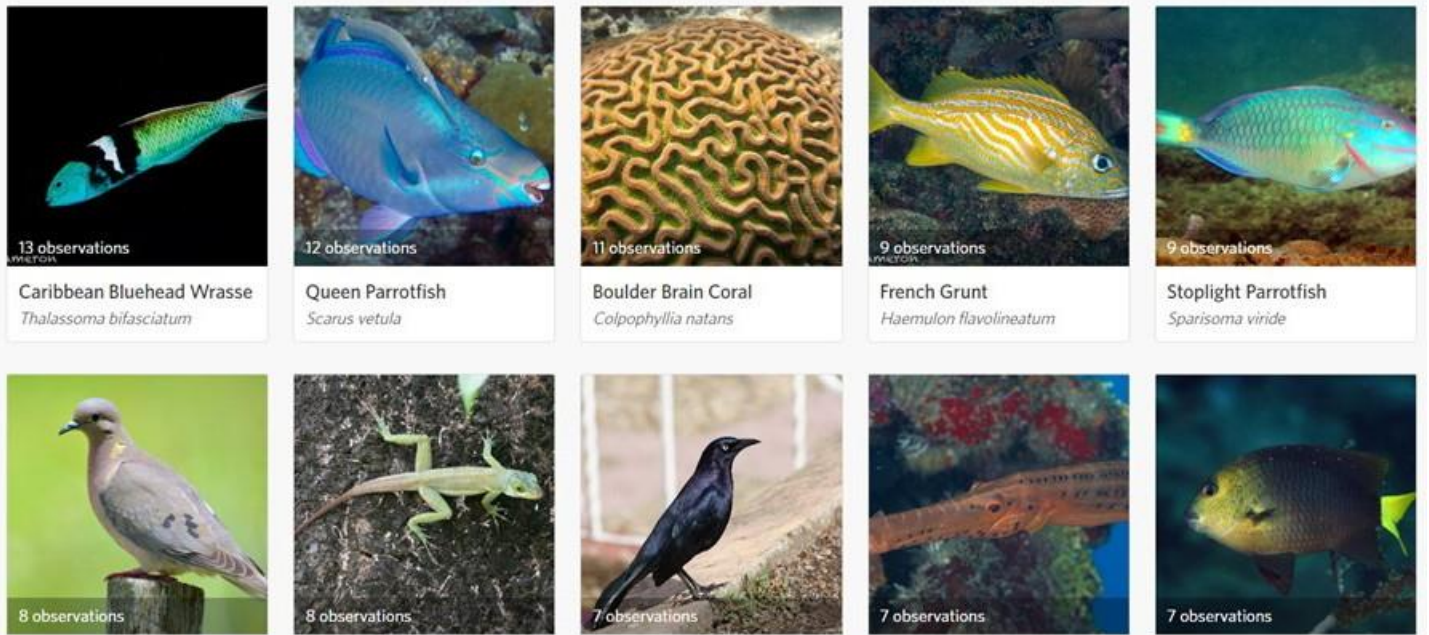
150 Bioblitzers converged on Buccoo on the weekend of June 03 - 04, 2023. Participants came across by plane and boat, as well as locally, with some even getting here on bike! Some Bioblitzers set up camp at basecamp on the grounds of the Buccoo Government Primary School, while others chose to stay at guesthouses in the area and were embraced by the warm hospitality of Buccoo. Mixed weather conditions were experienced, primarily on the Saturday, while the sun blazed in all its glory on the Sunday.

On the Sunday, interested visitors, students and other members of the public interacted with the outreach team at basecamp—Raquel Wheeler, Amy Deacon and Nandani Bridglal—as well as the assistance of Aliya Hosein and Dan Jaggernauth, along with displays from First Citizens Bank, SpeSeas, Education Resources Information Center (ERIC), BirdsCaribbean, Mushrooms of Trinidad and Tobago, Ivan Hinkson’s seashell display, the

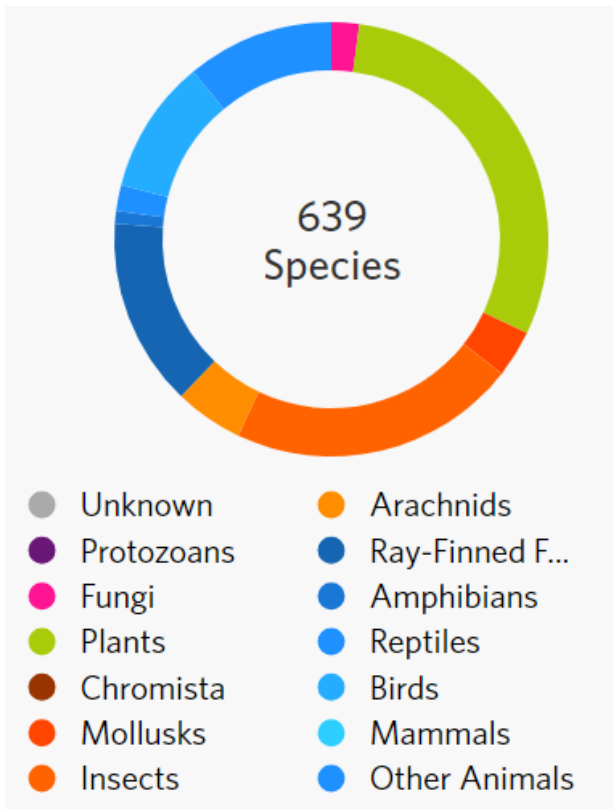
Biodiversity and Ecosystem Services Network (BES-Net), Corbin’s Local Wildlife and the Buccoo Reef Trust.

As Bioblitz 2023 wrapped up at noon on Sunday, the race was on to compile the species lists from all the surveys over the 24-hour period from all groups. Then at 1:00pm, with the assistance of very eager junior helpers, the various results were announced. Due to the tremendous effort by all involved, a total of over 700 species were announced at the end of the event (this total was later revised to 899 species)—a mere snapshot of what can be found in this area.





Top 10 species uploaded to the iNaturalist ‘Buccoo Bioblitz 2023’ project. *Compilation courtesy iNaturalist*



The group species breakdown is as follows:

- Plants—246 species
- Mammals—17 species
- Birds—78 species
- Amphibians—8 species
- Reptiles—25 species
- Insects— 192 species
- Arachnids—45 species
- Millipedes—3 species
- Isopods— 2 species
- Fishes—119 species
- Molluscs— 38 species
- Crustaceans—23 species
- Other marine invertebrates—67 species
- Alga—4 species
- Fungi 35—species

**Species breakdown as per photos uploaded to iNaturalist only (as at January 03, 2024). Visual observations encountered on the field and not photographed, which would have also contributed to the overall species count, are not included in this count.** *Chart generated by iNaturalist*



**This photo of a shortnose batfish, taken during the Buccoo Bioblitz, was selected as iNaturalist's photo of the day. Photo by Ryan Mannette**

Although we returned to a physical event this year, a blended approach was taken in logging the observations, with photo observations encouraged to be uploaded to the iNaturalist project 'Buccoo Bioblitz 2023'. One species of interest included the shortnose batfish, *Ogcocephalus nasutus*, which incidentally was also selected as the iNaturalist observation of the day, for the photo uploaded by ryanmannette.

Also of noteworthy importance is the encounter with the lesser dark-spotted thin-toed frog, *Adenomera*, during the 2023 Bioblitz—a new frog record for Tobago! An initial observation of this frog was made in the Pigeon Point area; a further assessment by another contributor revealed they were observed in Tobago at additional sites, further expanding their distribution on the island. This observation has been documented in the journal *Reptiles & Amphibians* in the article 'Caribbean Island Hopping: Community Science Reveals the First report, Establishment, and Range Expansion of the Lesser Dark-spotted Thin-toed frog (*Adenomera cf. hylaedactyla*) on Tobago' by Auguste et al (2023).

What continues to be one of the highlights of these Bioblitz events is the coming together of a diverse



**The lesser dark-spotted thin-toed frog (*Adenomera cf. hylaedactyla*) observed on June 03 2023 on Tobago. Photo by Renoir J. Auguste.**

group of individuals working toward a common goal. Scientists, students, naturalists and interested members of the public working together in the name of community science and increasing knowledge of our biodiversity.

The Bioblitz events are jointly held by the Trinidad and Tobago Field Naturalists' Club, together with



the Department of Life Sciences, the University of the West Indies, St. Augustine. As usual, Bioblitz would not be possible without the support of new and continuing essential pillars to ensure success of this year's event. This year we were joined by community partner organisations such as the Buccoo Reef Trust and Speseas. Special thanks to First Citizens for providing funding, as well as to the UWI Credit Union. Thanks to Barry Lovelace and Darren Henry of the Division of Food Security, Natural Resources, the Environment and Sustainable Development, Tobago House of Assembly, for providing vital input, resources and the necessary permit approvals, such as assistance with the Buccoo Reef snorkel survey for the marine group on the Saturday. The Magdalena Grand Beach and Golf Resort, along with Golden Grove Plantations, must also be thanked for granting special permission to access habitats over the weekend.

Thanks as well to the virtual iNaturalist community who participate from areas far and wide, outside of these shores, in identifying organisms uploaded. This year, alongside the regular branded Bioblitz badges, biodegradable badges were available, which were

sponsored by Trinbago Eco-Environment Consulting (TEeC) and, as such, thanks go out to them as well.

Special thanks also to the Buccoo Government Primary School's Principal, Ms. Smith-Rochford, as well as the Ministry of Education, for allowing us use of the school to host Bioblitz 2023. It would be remiss of me to not include the Bioblitz 2023 committee for all their hard work in the months leading up to the weekend of, and following, the event. Last but not least, what is Bioblitz without the participants, YOU Bioblitzers, for coming out year after year, to search high and low, far and wide, day into night, to look for the species and contributing to increased knowledge of our country's biodiversity. 🐞

#### References:

Auguste, R., Auguste, N. Maingot, M., Pandey, D.R.W, Muhammad, S. 2023. 'Caribbean Island Hopping: Community Science Reveals the First report, establishment, and Range expansion of the Lesser Dark-spotted Thin-toed frog (*Adenomera cf. hylaedactyla*). Reptiles & Amphibians. <https://journals.ku.edu/reptilesandamphibians/article/>



(Left): Bioblitz Committee Member and TTFNC Vice-President presents the Vice Principal of the Buccoo Government Primary School with the book 'Bats of Trinidad and Tobago'. Photo by Amy Deacon  
(Right): Dan Jaggernaut, alongside Jeffrey Wong Sang, makes a presentation of some of the TTFNC guides to the Principal of the Buccoo Government Primary School. Photo by Jeffrey Wong Sang





**Basecamp photos clockwise from top left:**  
**Students of the Buccoo Government Primary School**  
**view the Mushrooms of Trinidad and Tobago display at**  
**basecamp;**  
**Looking at the reptile display.;**  
**Taking a virtual dive with SpeSeas;**  
**A visitor looks at some of the TTFNC posters on**  
**display;**  
**Members of the plant group with specimen samples;**  
**Jeffrey having some fun with his new ‘friend’ and ERIC**  
**conducting a session with Bioblitzers and visitors.**  
*Photos by Amy Deacon and Jeffrey Wong Sang*





**Participants of the Buccoo Bioblitz 2023 pose for a photo at the end of the event.**  
*Photo courtesy Amy Deacon.*



**Group leaders and committee members: Back: Jeffrey Wong Sang, Nandani Bridglal, Raquel Wheeler, Laura Baboolal, Renoir Auguste, Linton Arneaud, Virmal Arjoonsingh, Rakesh Bhukal, Ryan Mohammed, Kelly Mannette, Shanda Elbourne; Front: Ryan Mannette, Dan Jaggernaut, Amy Deacon, Darren Henry. (missing from photo Stephanie Warren-Gittens).** *Photo by Nandani Bridglal.*

**The TTFNC and the Bioblitz organisers thank you Bioblitzers for partnering with us for the Buccoo Bioblitz 2023!**

Bioblitz Trinidad and Tobago 2023 Committee:

Amy Deacon, Kelly Mannette, Laura Baboolal, Linton Arneaud, Nandani Bridglal, Raquel Wheeler, Renoir Auguste, Ryan Mannette, Ryan Mohammed and Stephanie Warren-Gittens.





## AMPHIBIAN & REPTILE GROUP REPORT

by Renoir Auguste



**Grenadian tree anole (*Anolis richardii*).** Photo by Jerome Foster

Herping in southwest Tobago! That was the mission of the amphibian and reptile (herpetofauna) enthusiasts at this year's Bioblitz: the first in-person event in three years. The herpetology group searched within the 5km radius for frogs, lizards, snakes, caimans, and nesting sea turtles. How many species will we be able to find?

Searches during the day involved scanning the ground, vegetation, and leaf litter for diurnal reptiles like lizards and snakes. A handful of snakes was seen and brought back to base camp for display, including the tree boa (*Corallus ruschenbergerii*). This was the most abundantly observed snake during this year's Bioblitz, with at least five individuals observed during the 24 hours. Beachrunner lizards (*Cnemidophorus lemniscatus*) were seen in abundance on the beach near base camp, along with the Grenadian tree anole (*Anolis richardii*). The Tobago endemic gecko (*Gonatodes ocellatus*) was also observed near Mt. Irvine/Black Rock.

At night, searches for local herpetofauna continued. These involved walking along trails, scanning the vegetation and ground for movement, and carefully (with red light) walking along the beach for nesting sea turtles. Some of the main areas searched for nocturnal herpetofauna included Buccoo beach, Friendship, and Mt. Irvine/Black Rock, among others. Tracks of nesting sea turtles made by leatherback turtles (*Dermochelys coriacea*) and hawksbill turtles (*Eretmochelys imbricata*) were seen. Although previous editions have recorded sea turtles before (see Toco Bioblitz report), this year's Bioblitz was the first that fell within peak nesting season (for leatherback turtles). Sea turtles are threatened with extinction, and data on where they nest is crucial for their conservation management.

The frogs came out at night, with eight species seen and/or heard calling, including the Tungara frog (*Engystomops pustulosus*) and emerald-eyed tree frog (*Boana platanera*).



**Top to bottom:**

**Multi-coloured lizard (*Polychrus audoboni*).** Photo by Saifudeen Muhammad.

**Milky tree frog (*Trachycephalus typhonius*).** Photo by Rainer Deo.

**Emerald-eyed tree frog (*Boana platanera*).** Photo by Renoir Auguste

Perhaps the key finding from this year's Bioblitz was a frog that had yet to be formally reported for Tobago! (\*see page 5 for more details). Once again, Bioblitz has provided novel information on the herpetofauna of Trinidad and Tobago, further highlighting the importance of the annual event.



**(Top): Cascabel (*Corallus ruschenbergii*) and (bottom): Boa constrictor.** Photos by Saifudeen Muhammad

Overall, it was a very good Bioblitz for herping, with thirty-three species recorded, including eight frog species, two sea turtle species, twelve lizard species, ten snake species, and one caiman species!

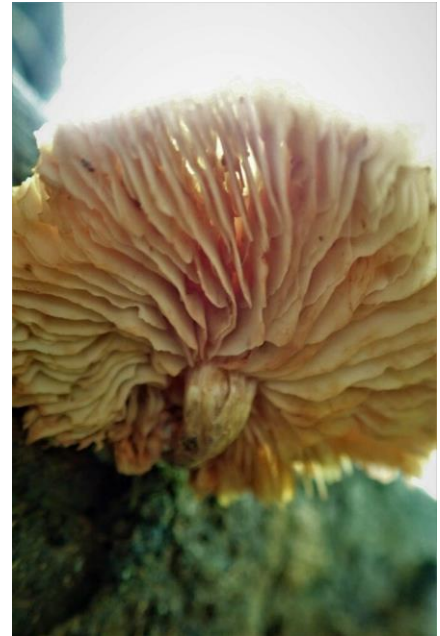
Special thanks to all who made it happen. The core Herpetology team for this year was the following: Saifudeen Muhammad (co-leader), Sana Muhammad, Anees Muhammad, Aaron Wheeler, Marie-Elise Maingot, Sachin Maraj, Rainer Deo, Vaughn-Xavier Jameer, Nicole Auguste, and Renoir Auguste (leader/coordinator). 🐍





## FUNGI GROUP REPORT

by Jeffrey Wong Sang



(Left): Pleated Inkcap (*Parasola plicatilis*) and (right): Basidiomycete Fungi. Photos by jwongsang

The decision to come across to Tobago a few days before the actual Bioblitz to scout the areas of potential where fungi might be found, and to also visit a few personal places, was one that I had had on my bucket list for some time.

I took a chance and opted to stay at a guesthouse within walking distance of the basecamp. I led the fungi group comprising residents Leslie K, Raquel Wheeler and her son, junior naturalist, ten year old Liam, John Luke Nagassar and Sapphire Ramsoomair who came across from south Trinidad. In the end, Raquel was not able to join us on Bioblitz days, because of her other pressing duties at the basecamp for the Bioblitz committee, but her invaluable advice and help in accompanying me on my road trips to show me the perimeter areas and potential fungi hot spots made doing the Bioblitz so much easier.

Owing to the 5km radius around basecamp, it was obvious that this would be a heavy marine-based Bioblitz, challenging the other groups to dig deeper than usual also. Fungi display was set up at about 10:00am, Saturday 3rd June, followed by a briefing at 11:00am for the 12:00pm start to

proceedings. After the group briefing, we headed out in two vehicles.

We had decided that the best plan of action was to give our attention to the main forested area within the marked radius, Grafton Estate, with its three main trails. We first detoured to the old Sanctuary Villas site but this was not productive. Rain also made its first appearance since the 12pm start. We split the group up to cover more ground at the Grafton site where they feed the birds daily. John Luke and Sapphire took one trail and Leslie, Liam and I did another, meeting back at the vehicles about an hour and a half later. Very productive trails for both parties, and I left John Luke and Sapphire to do the last trail, whilst Leslie, Liam and I checked Friendship estate, Canoe Bay and Golden Grove Road with limited success. We rendezvoused back at basecamp about 5:00pm. I checked Bon Accord Lagoon area and Buccoo Bay last day to the end.



(Top L-R): Two specimens belonging to **Class Agaricomycetes**. Photos by *jwongsang*  
 (Bottom L-R): Aldercaps of the **Genus Naucoria**. Photo by *jwongsang* and orange fungi growing on a trunk.  
 Photo by *figtree*

John Luke and Sapphire camped at basecamp and returned home on the first ferry on Sunday. I opted to move solo to cover Buccoo Point, by Healing With Horses compound, Golden Grove Road, Canaan, Kilgwyn swamp area, and the boardwalk by Petit Trou lagoon in Magdalena. Was surprised that with all that horse poo, no fungi were present. Got a few specimens at the boardwalk, but that was all the luck I would have before returning to basecamp to do some outreach for the many visitors coming to the basecamp.

All in all, I got a lot more fungi, considering the dry period pre-bioblitz in Tobago, and was happy with the periodic rains that graced Buccoo and environs. 🐞



**Genus Hexagonia**. Photo by *everett54*





## BIRD GROUP REPORT

by Amy Deacon, Stephanie Warren-Gittens, Elizabeth Seebaran and Jerome Foster




**A flock of royal tern (*Thalasseus maximus*) caught midflight.** Photo by jwongsang

Over this year's Bioblitz weekend, a total of 78 species were reported within the survey period, by the over 20 members of the bird group team. Unlike the past three years of the 'virtual' Bioblitzes, which relied solely on photo observations uploaded to iNaturalist, this year as in the 'pre-pandemic' events, surveys consisted of other established methods such as audio observations via mounted audio recorders, as well as mist net stations, where bird banding was done. It is important to note that all birds captured were released. Bird surveys also continued into the night for encounters of nocturnal species such as common potoo.

Two particular sightings during this period are of noteworthy mention, as they underscore the importance of Lowlands' ponds in Tobago for wintering or migratory waterbirds; these were

sightings of a female lesser scaup (*Aythya affinis*) and blue wing teal (*Spatula discors*). Another interesting sighting was that of the gray heron, which is a rare but almost annual visitor to T&T's freshwater marshes. Some survey areas included Bon Accord (sewage ponds) and Grafton bird sanctuary.

The bird group was led this year by Elizabeth Seebaran and Jerome Foster, while the other members were Darshan Narang, Alex Sansom, Aliya Hosein, Giselle Ragoonanan, Che Ragoonanan, Kelly Fitzjames, Omega Cassar, Yvonne Maraj, Leanna Hill, Carl Fitzjames, Nadia Ward, Ian Wright, Luanne, Devan Mulchansingh, Shivane Loach, Everette Ramdeo, Nigel Yusuf, Chrisalene Dedier and David Huggins. 



**Clockwise from left: grey heron; Photo by drjayf; least grebe; white-tailed nightjar; white-necked jacobin; Photos by drjayf; and a wattled jacana being examined. Photo by giselleragoo.**





## PLANT GROUP REPORT

by Amy Deacon, Stephanie Warren-Gittens and Linton Arneaud




The members of the plant group back at basecamp after successful weekend of surveying.

Photo by Amy Deacon

Of all the groups that participated in the Buccoo Bioblitz 2023, the plant group, again without fail, had the highest number of species found; though this number was lower compared to other years and previous areas. Although there were no endemic observations, a grand total of 246 species were found. Some interesting observations included the narrow century plant (*Agave angustifolia*), blue trumpet vine (*Thunbergia grandiflora*) devil's backbone (*Euphorbia tithymaloides*) and coral plant (*Jatropha multiflora*), along with sightings in numerous locations of the new (native) record for Tobago—pigeonberry (*Rivina humilis*). All plants encountered were recorded and samples collected for later identification where necessary.

This year, the plant group team consisted of 16 members split up into further groups to ensure a variety of plant habitats were covered. Mike and

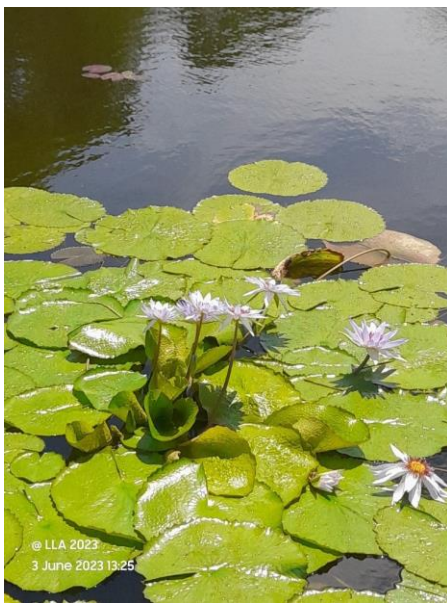
Doreen Oatham led surveys of young/secondary forests, Shane Ballah led the mangrove and other wetland ecosystems surveys; Sarah Evelyn led the survey of disturbed areas, while Linton Arneaud surveyed freshwater, marine and coastal plants. Some of the survey sites included Mt. Irvine and environs, No Man's Land, Bon Accord, Caledonia estate, Grafton Hotel, Crown Point, basecamp, Buccoo Bay, Petit Trou Lagoon and Kilgwyn Bay.

Linton Arneaud led and coordinated the plant group, while the other members comprised: Doreen Jodhan, Mike Oatham, Nandani Bridglal, Dan Jaggernauth, Natalie Boodram, Darren Henry, Shane Ballah, Aidan Farrell, Shivanie Phillip, Sarah Arneaud, Selena Evelyn, Sachin Maraj, Melissa Boodoo and Linarah Arneaud. 





The new (native) record for Tobago, the pigeonberry (*Rivina humilis*). Photo by everett54

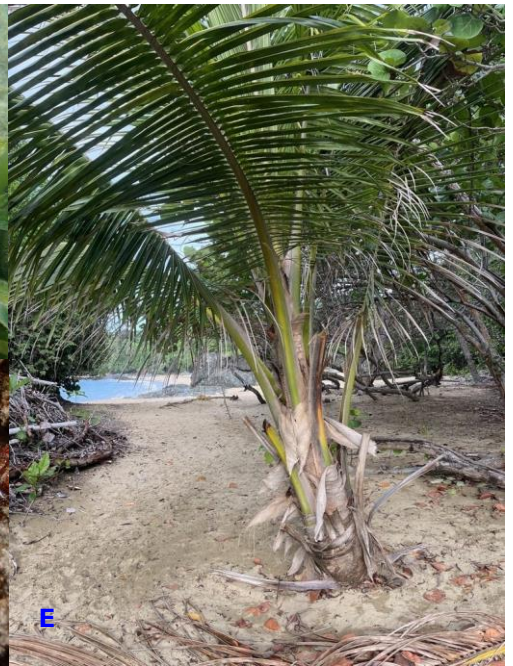


Left to right: Waterlilies (*Nymphaea nouchali*). Photo by lintonarneaud; a towering *Ficus maxima* and a triangle cactus (*Acanthocereus tetragonus*). Photos by duanekenny.





(Left): *Aechmea aquilega*. Photo by everett54; (middle top): stinking passionflower. Photo by magichin; (middle bottom): crown flower (*Calotropis gigantea*). Photo by jwongsang; and right: popping pod. Photo by magichin



Some of the coastal and aquatic plant species observed:  
 (A): Manchineel Photo by sarah evelyn uploaded by lintonarneaud;  
 (B): Sea Grapes (*Caulerpa racemosa*). Photo by lintonarneaud;  
 (C): Turtle Grass (*Thalassia testudinum*). Photo by markhulme;  
 (D): Green Feather Alga (*Caulerpa sertularioides*). Photo by swgittens28  
 and;  
 (E): Coconut palm—common to many coastlines. Photo by duanekenny





## TERRESTRIAL INVERTEBRATES GROUP REPORT




by Amy Deacon, Stephanie Warren-Gittens and Rakesh Bhukal

The 20 individuals of the terrestrial invertebrate group found 242 species, comprising at least 192 insects over this year's Bioblitz. Actual observations during the event, along with compilations from observations uploaded to iNaturalist by Bioblitzers from other groups, were used to determine the final list. Invertebrates are a diverse group, occupying a wide variety of habitats, so it was no surprise that specimens included many such organisms as beetles, bugs, arachnids, crustaceans, myriapods, butterflies, dragonflies, damselflies and worms.

A variety of survey mechanisms were used to find the terrestrial invertebrates which are active day and night and which can be tricky to find, blending in plain sight and hiding in cracks and crevices. Daytime surveys included sweep (and aerial) nets, and visual encounter surveys for organisms that could be seen with the naked eye. Specimens were also collected in vials and brought back to basecamp for further identification by experts and identification guides. Night surveys also involved walking through various habitat types, and actively searching various microhabitats from the ground level straight up to the canopies of trees, this time, however, with the use of handheld, ultraviolet flashlights of wavelength 395 nm so that scorpions could be detected, as they fluoresce or "glow" brightly when they are irradiated. Similar to the daytime surveys, harder to identify species were collected in vials and returned to basecamp for further inspection and identification.

Photographs taken by Rainer Deo and Bryan Ramdeen revealed seven species of moths that had never been recorded in Tobago before: *Macaria carpo*, *Moca aphrodora*, *Melitta cyaneifera*, *Hypena glumalis*, *Coenipeta bibitrix*, *Eulepidotis ezra* and *Goniapteryx Servia*, and with confirmation of the IDs being done by Matthew Cock.

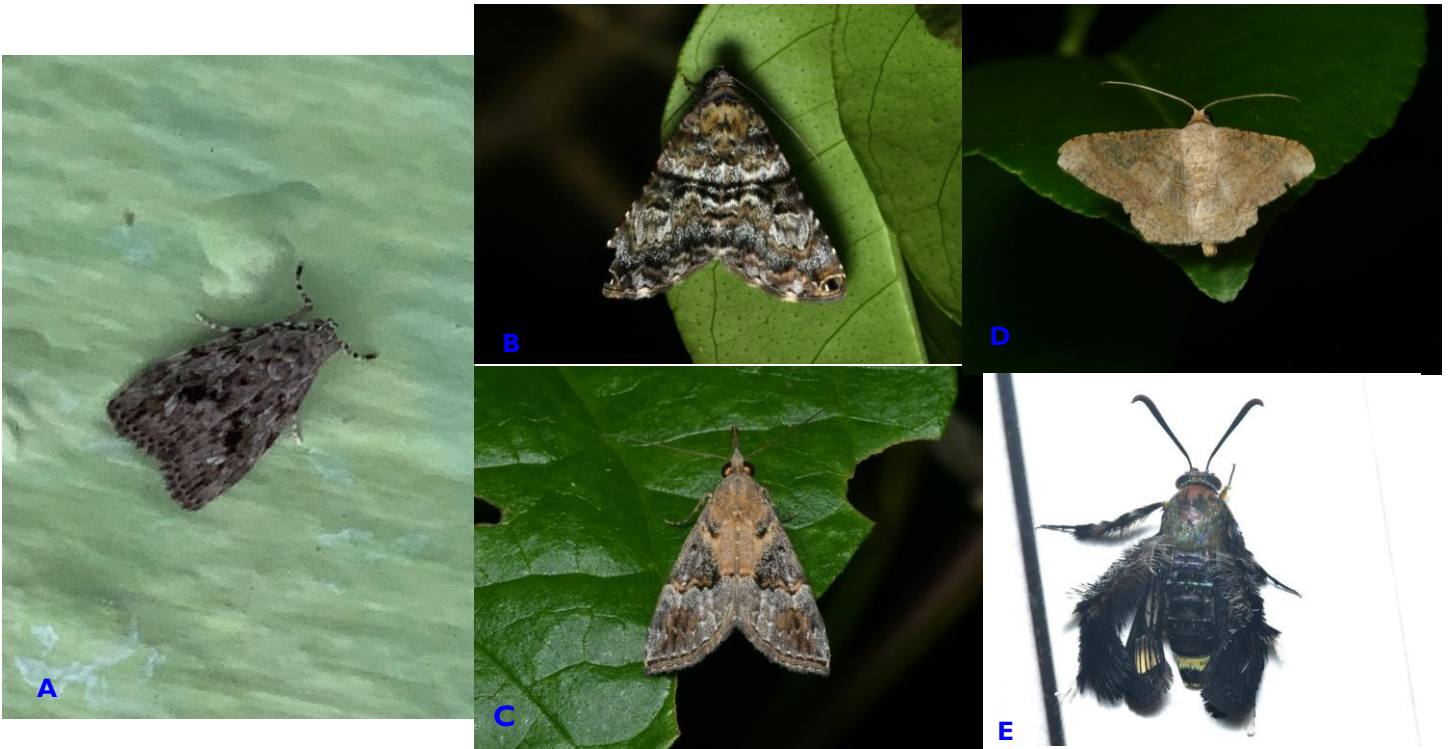
Rakesh Bhukal and Virmal Arjoonsingh led

the invertebrate group, while the other members comprised Allana Singh, Andrew Clarke, Vanessa Nichols, Aaron Wheeler, Rainer Deo, Asa Eslava, Dillon Suepaul, Camille Ramrekha, Bryan Ramdeen, M Chin Sue Min and Gabrielle Fernandes. 



(Top): A young Bioblitzer holds a tetrio sphinx on a stick out in the field. Photo by jwongsang.  
(Bottom): Longhorn crazy ants surround a flat-back millipede. Photo by brystrange





**New moth records for Tobago recorded during the Buccoo Bioblitz 2023 with help from Matthew Cock in identification via iNaturalist (A): *Moca aphrodora*. Photo by brystrange. (B): *Coenipeta bibitrix*; (C) *Hypena glumalis*; (D) *Macaria carpo* and (E ): *Melittia cyaneifera*. Photos by rainernd.**



**(Top row L-R): Yellow-banded polybia wasp. Photo by nandani\_bridglal; zebra cockroach. Photo by rainernd; a short-horned grasshopper. Photo by jmoulton44; and cassius blue. Photo by magichin. (Bottom row L-R): Band-winged dragonlet. Photo by figtree; Genus *Adesmus* and an ornate bella moth. Photos by rainernd**





Some of the crustaceans observed, clockwise from top left: a blue land crab. *Photo by drjayf*; a blackback land crab. *Photo by kellykingon*; a Caribbean land hermit crab. *Photo by everett54*; while some of the molluscs observed included a golden mystery snail. *Photo by jmoulton44* and a giant South American snail. *Photo by rainernd*

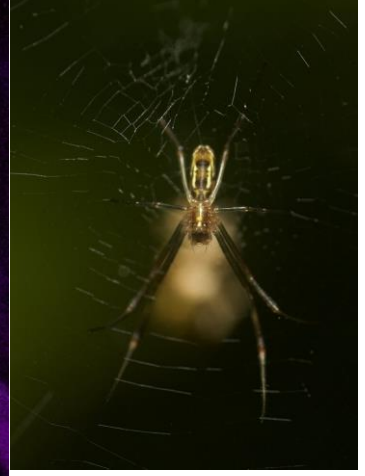


Some members of the Invertebrate group use field guides and other resources to aid in identification of collected specimens at basecamp. *Photo by Amy Deacon*





Invertebrate group shortly before the hunt for scorpions. Photo by Bryan Ramdeen



Some of the arachnids observed:  
**(Left top):** Ground and ant-mimic sac spider. Photo by rainernd;  
**(Left bottom):** Trinidad Dwarf tiger tarantula. Photo by rainernd;  
**(Middle):** a thick-tailed scorpion under UV light; Photo by brystrange and;  
**(Right):** a golden silk spider in its web. Photos by brystrange





# AQUATIC - MARINE AND FRESHWATER GROUP REPORTS



by Amy Deacon, Stephanie Warren-Gittens and Ryan Mannette

## Aquatic freshwater

As many as possible available streams within the 5km radius survey area were sampled for the aquatic freshwater surveys. Three methods were used for this year's sampling: seining; cast netting; and fish traps. Seining and cast netting were used at all aquatic sampling sites, whereas fish traps were used at five sites. Species recorded by the freshwater group included native guppies, zangee, swamp guppies, and introduced tilapia, as well as several freshwater prawns and gastropods. The group also added several species to the marine fishes, molluscs and crustaceans, by sampling brackish and nearshore areas.

The aquatic freshwater group's coordinator

was Ryan S. Mohammed and consisted of members: Vaughn-Xavier Jameer, Sachin Maraj, Ada Eslava, Jacqueline Forbes, Deven Rampersad, Chiang L. Jacob, Matthew De Souza, Julian Molton and Danielle Angulo.



(Top): Bigmouth sleeper (*Gobiomorus dormitor*) and (bottom): Mozambique tilapia (*Oreochromis mossambicus*). Photos by jmoulton44



(Top): Big claw river shrimp (*Macrobrachium carinus*); and (bottom): Nile tilapia (*Oreochromis niloticus*). Photos by jmoulton44





**An Atlantic white-spotted octopus (*Callistoctopus Macropus*) observed during one of the dives.**

*Photo by ryanmannette*

## Aquatic Marine

Volunteers were split into two main groups to conduct the marine surveys: the divers and the snorkellers—the latter group also conducted intertidal surveys. Together the group was able to find 226 species across a variety of taxa: fishes; crustaceans; molluscs; marine plants; algae; and other invertebrates.

Surveys were mainly conducted through visual and photo observations recorded on cameras, such as the Olympus TG6 and Go Pro cameras. Some of these observations were logged on the iNaturalist platform, where external persons helped in identification of the uploaded photos. Identifications were also made using several guides and books such as the 'The Reef Set: Reef Fish, Reef Creature and Reef Coral' by authors by Paul Humann and Ned Deloach.

The diving group conducted both day and night surveys at Kariwak Reef, while surveys at Mt. Irvine and Bo Pez Reefs were conducted during the day only. The snorkellers split into two groups, on the Saturday, to cover the first two areas simultaneously—Swallows Beach and Mt. Irvine—where snorkelling was done for approximately one hour. Both groups rejoined following this, to conduct snorkel surveys on the Buccoo Reef, via a glass bottom boat.

Surveys by the snorkel group on the Sunday varied to cover reefs, shoreline and seagrass areas. Mt. Irvine reef was briefly revisited, while a small group conducted intertidal observations between Swallows Beach and Pigeon Point aided by a low tide. Rocks and coral rubble were overturned, while shallow tidal pools were visually inspected for organisms that may have become trapped. Simultaneously, some other members of the snorkel group ventured to the Bon Accord Lagoon to conduct surveys of seagrasses. A beach seine was also done at Buccoo Bay on the Sunday, assisted by the aquatic freshwater group.

Interesting and notable marine sightings were the following: Atlantic white-spotted octopus (*Callistoctopus Macropus*); a shortnose batfish; a toadfish; unidentified seahorses; a mantis shrimp; and the nudibranch, the lettuce sea slug.

The aquatic - marine group was led by coordinators Ryan Mannette\* and Stephanie Warren-Gittens, while members included Sweelan Renaud, Mark Hulme, Michelle Cazabon-Mannette, Kelly Mannette-Camejo, Ava Camejo, Jo-Marie Westmaas, Kelly Kingon, Zayla Kingon, Vaughn Xavier-Jameer, Melissa Boodoo, Lindsay Bell, Kori Puckerin, Zaakirah Britto\*, Ivan Hinkson\*, Kenrick James\*, Nived Sahadeo, Marie Elise Maingot, Susan Sempr, Duane Kenny, Christopher Naranjit\*, Susan Suchit\*.

\*Participated in the SCUBA diving 

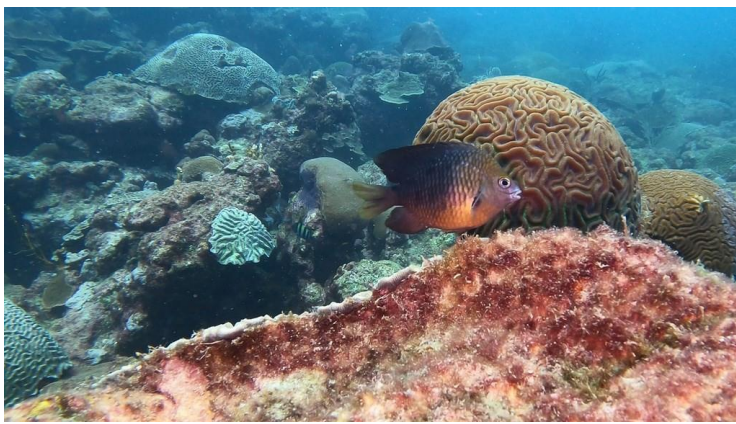




**A snippet of some of the marine organisms encountered on the snorkel and diver surveys – Clockwise from top left: an Atlantic tarpon. Photo by duanekenny; the invasive lionfish; a school of creole wrasse. Photos by ryanmannette; a Guilding's sea star; a solitary jellyfish, a southern stingray.**

**Photos by duanekenny; and a French angelfish. Photo by swgittens28**





**More snippets of some of the marine organisms encountered on the snorkel and diver surveys:.**

**Clockwise from top left:**  
**a bluehead wrasse hangs around a sharptail eel.** *Photo by swgittens28;*  
**a honeycomb cowfish.** *Photo by duanekenny;*  
**a western Atlantic trumpetfish and a cautious spotted porcupinefish;**  
**one of the snorkel group members out in the Buccoo Reef;**  
**a bearded fireworm.** *Photos by swgittens28;*  
**and a threespot damselfish.** *Photo by ryanmannette.*





Some organisms found in the exposed coast along the Pigeon Point coastline during low tide (A): four organisms can be found in this photo— a Gilding sea star-in the top left corner, a rock boring urchin, and a partially hidden brittle star, with two sea cucumbers in the bottom right. (B): marine team member in action taking photos; (C ) the nudibranch—lettuce leaf slug and (D), a mantis shrimp. *Photos by swgittens28*



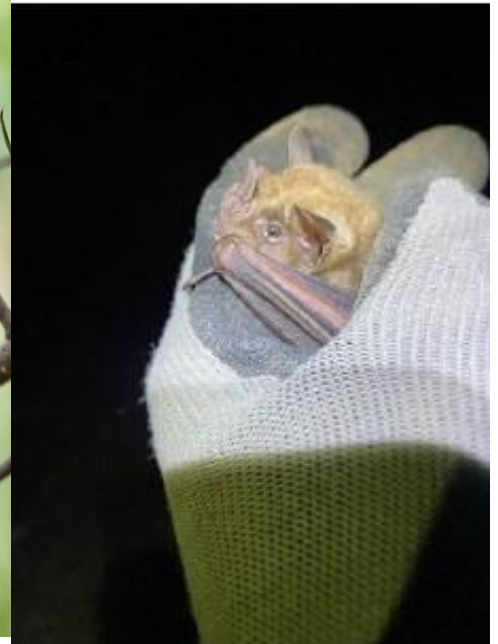
(Left): The dive team. Photo courtesy Sarah Ragbir; and (Right): the snorkel team following completion of the glass bottom boat tour on the Buccoo reef. *Photo by swgittens28*





## MAMMAL GROUP REPORT

by Amy Deacon, Stephanie Warren-Gittens and Laura Baboolal



**(Top L-R): a Redtailed squirrel.** Photo by drjayf, **Bat** Photo by Giselle Ragoonanan.  
**(Bottom L-R): Sheep;** Photo by merrylst. **Cattle against a scenic backdrop.** Photo by jwongsang

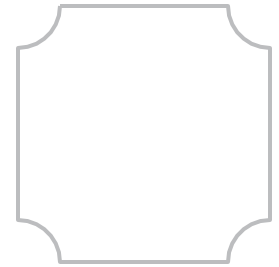
Due to the fact that no camera traps were employed in carrying out this year's surveys, observations were made instead using mist netting bats at night, and through incidental sightings from team members and other groups participants. A grand total of 12 wild mammal species were found by the mammal group; this amounted to 17 species when domesticated mammals, such as cats, dogs, sheep, cattle and horses were included.

While some of the other mammal observations included red-rumped agouti and red-tailed squirrel, most of the species consisted of bats. Bats identified included Seba's short-tailed

bat, Jamaican fruit-eating bat, great fruit-eating bat, little yellow-shouldered bat, greater white-lined bat, little big-eared bat, Gervais's fruit-eating bat and, most excitingly, the greater fishing bat. Survey sites were Buccoo Bay and Grafton, including the abandoned hotel in the area.

The mammal group was led by Laura Baboolal; the other members were: Darshan Narang, Giselle Ragoonanan, Che Ragoonanan, Nadia Ward, Yvonne Maraj, Jo-Marie Westmaas, Nicholas Mohammed, Marie-Elise Maingot, Anesty Tudor, Richard Smith, Shivam Mahadeo, Simone Ganpat, and Nigel Robinson.





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