THE FIELD NATURALIST

Quarterly Bulletin of the Trinidad and Tobago Field Naturalists' Club

October – December 2013 Issue No: 4/2013

ARIMA VALLEY BIOBLITZ 2013

Saturday 21st - Sunday 22nd September

GENERAL REPORT

by Mike G. Rutherford

The Arima Valley BioBlitz took place from noon on Saturday 21st to noon on Sunday 22nd September 2013. This was the second Bioblitz held in Trinidad with the first one happening in November 2012 in Tucker Valley. After the great reception that this event received it had to be repeated, after much thought it was decided that the Arima Valley was an ideal site.

(continued from page 3)

Collared Velvet Worm, *Macroperipatus torquatus*. One of the most intriguing finds during the event *Photo: F. Abdool*

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

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October - December 2013

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This year's event was based at the Asa Wright Nature Centre (AWNC) which is nestled deep in the forest on the southern slopes of Trinidad's Northern Range mountains. It was organised by the University of the West Indies Zoology Museum (UWIZM) with help from the TTFNC, the AWNC and staff and students from UWI.

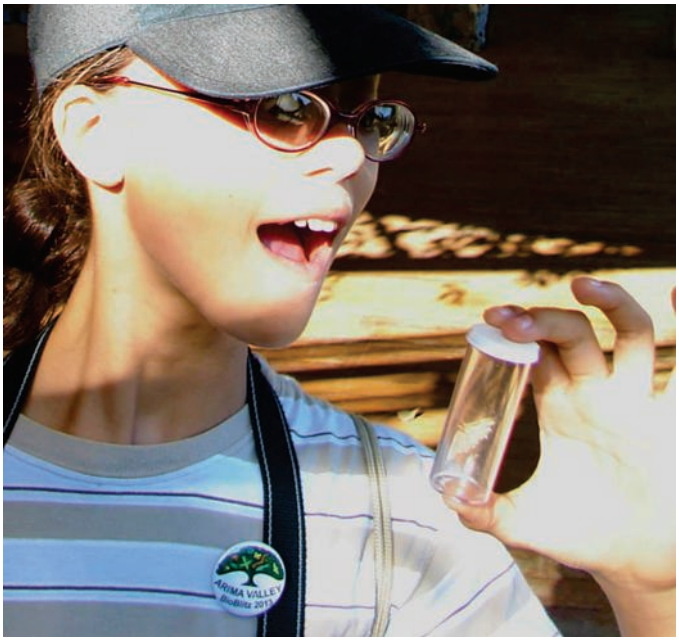
Sign at the entrance to AWNC
Photo: A. Williams

Almost one hundred experts and volunteers gathered together on the Saturday morning at the AWNC Mango Room, which was to be the base of operations for the event. After a short briefing the different groups split up and headed out to record and collect anything and everything that crawled, flew, slithered, hopped, grew and lived in the Arima Valley.

The birds were surveyed by members of the TTFNC Birding Group along with other volunteers (see report on p10). The mammal survey was split into a bat group (see report on p 8) and two teams using motion activated camera traps. One group set up cameras at Morne Bleu (see report on p 20) whilst the other group set their cameras around Simla and AWNC. People also saw agouti, armadillo, manicou, squirrels and mice during their walks resulting in a total of 17 species of mammals overall.

The reptiles and amphibians were surveyed by a group led by John Murphy, a research fellow from the Field Museum, Chicago, U.S.A. and aided by members of the Trinidad Serpentarium amongst others (see report on p 6). The fish and other freshwater organisms were surveyed by a group from UWI (see report on p 14) and they had the record of finding the smallest species for the BioBlitz as they identified microscopic diatoms in their sampling.

The huge variety of invertebrates found in the Arima Valley was surveyed by both individuals and teams of experts looking at smaller taxonomic groups. Spiders and opiliones (see report on p 23), scorpions (see report on p 25), social insects (see report on p 24), butterflies and moths (see report on p 17) and molluscs (see report on p 19) were all looked for specifically whilst many of the members of other groups collected a wide variety of millipedes, beetles, bugs, crickets and other insects during their surveying and brought them back for identification. My favourite specimen was the velvet worm collected on the AWNC driveway; this fascinating creature can shot glue out of its antennae and looks like a worm with legs. In total over 240 species of invertebrates were found.



Sydney Christopher brings in a moth for identification.
Photo: V. Blanchard

The fungi were surveyed by a team of amateur volunteers taking photographs of specimens (see report on p 16) and the plants were surveyed by a team from UWI and members of the TTFNC Botany Group who sampled all over the valley (see report on p 21).

Members of all teams worked late into the night either carrying on surveying or staying at the base camp to identify what they had found. On Sunday morning people were up before dawn and heading out again. From 7am the first members of the public started to arrive to take part in guided walks along the AWNC trails. These walks were led by the AWNC guides and education and conservation officers. Over 80 people participated and they were shown some of the collecting methods that had been used as well as getting a chance to talk to some of the experts. They then came up to the basecamp where there were many animals on temporary display in tanks. They got a close up look at a variety of snakes, lizards, insects, fish and spiders that had been found during the last 24 hours. There was also a display by Mark Charran from Fisheries Division showing some of the invasive species found in the streams and rivers of Trinidad whilst members of the Environmental Management Authority (EMA) Youth Ambassadors gave out free gifts to the visitors.

It was great to see such a varied turnout with young and old, locals and visitors all getting something out of the event.

The total number of species was announced not long after noon; Mike Rutherford gave the breakdown of the different animal species found whilst Aidan Farrell from UWI told everyone about the plants and Zoe Rutherford wrote up the numbers. The tally in the end was 139 vertebrates, 247 invertebrates, 30 fungi, 7 diatoms and 317 plants making a total of 740 species found in Arima Valley during the BioBlitz. This number may change as there were many insect and plant specimens collected during the event but not positively identified and as photographs come in from the many volunteers unrecorded species may be discovered.

The BioBlitz was once again generously sponsored by First Citizens who gave money to the TTFNC to run the event, this paid for transport, security, food, banners, trail cameras and badges. Thanks also go to the University of the West Indies Department of Life Sciences for the use of collecting equipment and vehicles and to AWNC for allowing the event to be held at the centre and to their staff who helped to make sure the whole event ran very smoothly. Mode Alive supplied some freebies for the volunteers including bags and refillable water bottles.

Above: **The velvet worm, was an outstanding escape artist, we stood amazed as this "Houdini" squeezed through barriers much thinner than its body. The display case had to be replaced with one with even thinner slits. The worm was released at the end of the event but only after being photographed many times!**

Photo: E. Baptiste

Big thanks also to Eileen Rutherford who took charge of the catering and made sure that all the volunteers had snacks and drinks throughout the event, a roti for dinner on Saturday and a packed breakfast to take out into the field on the Sunday morning.

Many people were already asking about where the next BioBlitz will take place but no decision has yet been made, however possibilities include Toco, Nariva or somewhere in Tobago!

For more information about the Bioblitz see the Facebook page 'Arima Valley Bioblitz 2013' or visit the UWI page at http://sta.uwi.edu/fst/lifesciences/BioBlitzHome.asp.

Above: **Bird spotting on the world famous veranda at AWNC**
Photo: A. Williams

Above: **Mike Rutherford reads out the final tally at the end of the event with help from Aidan Farrell and Zoe Rutherford**
Photo: E. Rutherford

Right: **The basecamp in the Mango Room at AWNC**
Photo: M. Rutherford

REPTILE AND AMPHIBIAN GROUP REPORT

by John C. Murphy

Looking for amphibians and reptiles in the Arima Valley is always a learning experience and a reminder that we don't know as much as we think we do about biodiversity. In the 2013 Bioblitz we found nine frog species, 11 lizard species, and 12 snake species. We had three teams of three or more people who rotated locations between Morne Bleu Ridge, the Asa Wright Nature Centre, and Simla. The returns were very good considering the limitation of time. Surveying was done by walking trails, looking around buildings and observing anything relevant in both daylight and by torchlight. Some specimens were collected for closer identification and display at the basecamp.

The highlights included Simla producing a juvenile machete savane, *Chironius carinatus*; and a Mole's gecko, *Sphaerodactylus molei* - Trinidad's smallest lizard. At Asa Wright the coffee snakes, *Ninia atrata*, were active the night of the Bioblitz and at least 10 specimens were observed; as well as a large ratonel, *Pseudoboa neuwiedii*. The giant treefrog, *Hypsiboas boans* was heard vocalizing while the nighttime Reptile group was exploring the trails and driveway at AWNC. Morne Blue produced relatively few specimens - but two snakes were of interest - a juvenile long tailed machete, *Chironius septentrionalis* was found crawling about a half meter off the ground,; and Klauber's thread snake, *Epictia tenella* was found climbing a tree towards a termite nest, it was more than a meter off the ground - and this is probably the first observation of it climbing. Perhaps most surprising was only one mapepire balsain, *Bothrops* cf. *asper*, was found during the Bioblitz, by another group - although members of the herpetology team observed one the night before the Bioblitz started.

We would like to thank the participants in the herpetology group: Saiyaad Ali, Tom Anton, Renoir Auguste, Stacy Ballyram, Darius Baldeo, Edmund Charles, Mark Charran, Anthony Jaboolal, Romano MacFarlane, Jason-Marc Mohammed, Sara Murphy, John Murphy, Graham White, Anna Bandoo and Mike Rutherford.

Mapepire Balsain,
Bothrops cf. asper
Photo: F. Abdool

Long Tailed Machete,
Chironus septentrionalis
Photo: N. Noriega

Right: ***Mannophryne trinitatis*** is a common frog, endemic to Trinidad. Their peep, peep, peep call is often the background sound throughout the day around any small stream. Females lay up to 12 eggs, not in water but in a small moist crevice or between leaves. After about three weeks the male carries the tadpoles on his back to a small stream where they continue their development.

Right: Female ***Flectonotus fitzgeraldi*** carry around the eggs in a pouch on her back, presumably placed there by some clever juggling by the male. The eggs hatch as tadpoles at an advanced stage of development and are deposited onto a leaf axial pond. Metamorphosis occurs about five days later.

Photos and text: G. White

Bottom Right: **John Murphy talking to the public and volunteers at base camp.**

Photo: M. Rutherford

Below: **Tegu, *Tupinambis sp.***

Photo: G. Williams

BAT GROUP REPORT

by Luke Rostant

The bat survey group sampled using two methods; looking for bats in roosts and capturing bats in mist nets and a harp trap. During the afternoon of Saturday September 21st the group spread out and looked in old buildings around the Asa Wright property to identify which species might be present. In some of the older abandoned buildings, we found Seba's Short-tailed fruit bat, *Carollia perspicillata.* This is a generalist frugivore, and is important in fruit and seed dissemination. At about 4pm, the group scouted sites to set up a harp trap from the Department of Life Sciences, UWI and 2 mist nets measuring 12m x 2.5m which were kindly loaned from Trinibats (www.trinibats.com). It was decided to locate these in close proximity to one another along the Discovery Trail on the Asa Wright property. The harp trap and nets were deployed at about 6pm, and were closed at about 10pm. At the William Beebe Tropical Research Station, one 12m x 2.5m net was again deployed at about 5am for about half an hour.

Over the course of the night and early morning trapping, 53 bats were captured belonging to 11 species. What follows are short descriptions of each bat species in terms of their ecology.

Artibeus cinereus (Gervais's fruit eating bat): These

Removing a bat from a mist net. L to R: Amy Deacon, Rachel Campbell, Rondell Hamilton, Mark Hulme *Photo: M. Rutherford*

bats roost in small colonies of a few individuals under leaves which they cut to form tents. They are important fruit and seed dispersers.

Artibeus jamaicensis (Jamaican fruit eating bat): These bats are quite common, and feed on a variety of foods, including fruit, nectar and pollen. They often roost under palm leaves or in the dark foliage of shade trees.

Artibeus lituratus (Great fruit eating bat): As the name implies, these are large fruit eating bats, with distinct facial stripes. They have similar habits to *A. jamaicensis* both in terms of feeding and roosting.

Carollia perspicillata (Seba's short-tailed bat): This is the same species which was found roosting in some of the abandoned buildings on the Asa Wright and William Beebe Research station properties.

Glossophaga soricina (Common long tongued bat): A common nectivore found in Trinidad, this species is found roosting in caves, hollow trees, under bridges and culverts, and is sometimes found in old buildings. As a nectivore, this species has an important role in plant pollination.

Micronycteris minuta (Tiny big eared bat): This is a small insectivore with large ears. The species has been found in hollow trees and in caves.

Myotis keaysi (Hairy legged myotis): This is a very small insectivore that can be found in caves, hollow trees, under bridges and in the roofs of buildings.

Phyllostomus hastatus (Greater spear nosed bat): This is a very large and strong bat found in caves and hollow trees, as well as unused buildings. The species is omnivorous, feeding on insects, small vertebrate, fruits, flowers, nectar and pollen.

Pteronotus parnellii (Common mustached bat): These are medium sized bats with enlarged lips as the name implies. They roost in caves and hollow trees, and feed on a variety of insects.

Saccopteryx bilineata (Greater white lined bat): These are small insectivorous bats which roost in cavities formed by buttress roots of large trees, as well as the interior and exterior of buildings. Unlike most bat species, they cling onto vertical rather than horizontal surfaces.

Harp trap set up along a trail. The bats hit the strands of fishing line and then fall unharmed into the trough at the bottom.

Photo: M. Hulme

Uroderma bilobatum (Common tent making bat): These bats are medium sized with distinct facial stripes, as well as a back stripe. They have similar habits to *A. cinereus*, roosting on the underside of leaves it has modified to form a tent. It feeds mainly on fruit, but also feeds on pollen, nectar and insects.

For more information on these and other species of bats found in Trinidad and Tobago, please visit www.trinibats.com

Thank you to the following participants: Luke Rostant, Alësha Naranjit, Frazer Higgins, Rachel Campbell, Rondell Hamilton, Lauren Ali, Christian Persad, Arianne Ali, Alex Sansom, Mark Hulme and Jinella De Ramos.

Left: **Gervais's fruit eating bat, *Artibeus cinereus***

Right: **Seba's short-tailed bat, *Carollia perspicillata***

Left: **Tiny big eared bat, *Micronycteris minuta***

Right: **Tent-making bat, *Uroderma bilobatum***

Left: **Greater spear nosed bat, *Phyllostomas hastatus***

Right: **Greater white lined bat, *Saccopteryx bilineata***

Photos: M. Hulme

BIRD GROUP REPORT

by Sanjiv Parasram

The bird group in the 2nd BioBlitz included mainly members of the Trinidad and Tobago Field Naturalists Club (TTFNC), staff of the Asa Wright Nature Centre (AWNC) and other independent bird enthusiasts. These included: Faraaz Abdool, Renoir Auguste, Kernita & Dane Bailey, Stacey Ballyram, Mark Charran, Paul & Sydney Christopher, Vicki Blanchard, Vishnu Debie, Mark Hulme, Kerrie & Alësha Naranjit, Feroze, Stephanie & Zara Omardeen, Sanjiv Parasram, Alex Sansom, Caleb Walker, Ann & Gerard Williams, Clayton Hull, Bernadette Harris, Stuart & Joy Millar, Aliya Hosein and Nicole Vella-Geldart.

Observations were made with the aid of optical equipment such as binoculars, spotting scopes and cameras (point-and-shoot and DLSRs). Birds which were heard but not seen were still recorded as pre-

Some members of the Bird Group L to R: Faraaz Abdool, Denise Etienne, Gerard Williams, Caleb Walker, Vicki Blanchard and Paul Christopher. *Photo: A. Williams*

sent. Generally, at least 2 observers had to see or hear the bird for it to be seen unless a suitable picture was taken to clinch the identification.

The groups first met on the famous veranda overlooking the Arima valley and spent about an hour there recording species until 1pm. The most notable sighting here was a Variegated Flycatcher whilst the close up view of a Green Hermit at the feeders was a treat. Green and Purple Honeycreepers, Bananaquits, Copper-rumped Hummingbirds, White-lined/Palm Tanagers were present in their usual abundance. A female Tufted Coquette was a nice find as well.

Around 1pm, two birding groups went down the trails at Asa Wright and 1 group took to the driveway.

Perhaps due to the hot afternoon sun, there were not any major surprises but some of the more uncommon birds recorded included Euler's Flycatcher and Red-crowned Ant-tanager. The ever elusive Little Tinamou called in the distance as well as a Black-faced Ant-thrush. This initial afternoon foray lasted until about 4pm.

After a brief rest at the headquarters, one of the groups headed to the highest point in Trinidad accessible by vehicle…the Morne Bleu Tropospheric Scatter Station. Again, birding was a bit slow but a skulking Gray-throated Leaftosser and White-collared Swift overhead were well appreciated. The most exciting find though must have surely been the

Left:
Copper rumped hummingbird, *Amazilia tobaci*

Male (above) and female (right) collared trogons, *Trogon collaris*

All photos on page: S. Parasram

Above : **Hepatic tanager, *Piranga flava* with hawkmoth**

young photogenic Mapepire Balsain which was spotted crossing the road in the twilight.

At night the birders tried their luck tagging along with the herpetology, bat and scorpion groups. A lone Common Potoo atop a bamboo was a welcome sighting from an otherwise quiet night's birding. This was mitigated somewhat by observing the glee of the scorpion and bat groups who obviously fared much better!

A pre-dawn trip back to Morne Bleu to espy any nighthawks that may have been hunting around the floodlights did yield a species of nighthawk but a definitive identification was not possible. After dawn the brilliant juvenile male Hepatic Tanager was the definitive star of the morning along with the ever popular Collared Trogons.

A few members trudged to the Las Lapas ridge trail afterwards and Dusky-capped Flycatcher, Slaty-capped Flycatcher, White-flanked Antwren and an Olive-sided Flycatcher (an uncommon migrant from North America) were the highlights. Whilst there were rather slim pickings at Las Lapas, the ones who stayed for a shorter, more leisurely stroll down the driveway had more reward for their effort. Olive-striped Flycatcher, White-bellied Antbird, Woodcreepers and Plain Antvireo were among the finds here.

As the 24 hour period drew to an end other sightings were revealed such as Stripe-Breasted Spinetail, Blue Dacnis, Forest Elaenia and finally a few raptors: White Hawk, Zone-tailed and Short-tailed Hawk.

In all a decent haul of 88 species was recorded. The entire 24 hour experience was fantastic but the camaraderie in being a part of the larger event and participating in the activities of other groups was perhaps the most memorable aspect of yet another well organised BioBlitz.

Right : **Purple Honeycreepers,** ***Cyanerpes caeruleus*** *Photo: S. Parasram*

Above: **White-chested emerald,** ***Amazilia brevirostris*** *Photo: F. Abdool*

Above: **Golden headed manakin,** ***Pipra erythrocephala*** *Photo: F. Abdool*

FRESHWATER GROUP REPORT

More than just guppies: Arima Valley's freshwater fauna

by Amy Deacon and Ryan Mohammed

The picturesque freshwater streams of the Arima valley are internationally famous as the subject of hundreds of scientific papers about guppy behaviour and evolution. However, the Freshwater Group for the 2013 BioBlitz was more interested in the huge variety of species which share the habitat – from larger guppy-eating fish like the sardines (Characins), to the microscopic rock-bound diatoms on which guppies graze.

Led by Amy Deacon, Ryan Mohammed and Erin Mangal, a full and enthusiastic team sampled seven sites all the way from Verdant Vale, including Simla, Temple Village and sites within the grounds of the AWNC itself. These sites included some deep pools

Ryan Mohammed and Kylash Jodhan using the two person hand seine net with Kerresha Khan waiting to help

Photo: A. Deacon

Right: **A broad-winged damselfly, *Hetaerina occisa* alongside a stream near Verdant Vale.**

Photo: A. Deacon

as well as shallow riffles.

Using two-person hand seine nets we recorded a total of six species of fish, including the spectacular zangee (*Synbranchus marmoratus*) and an unusually large sardine (*Astyanax bimaculatus*) Fish pots were also used overnight with limited success due to the shallow depth of the river, but nonetheless yielded Trinidad's two species of teta – 'normal', and 'jumbie' or 'doctor' teta (*Hypostomus robini* and *Ancistrus maracasae*). Despite doubling the total of last year's Tucker valley snapshot, six species is certainly an underestimate of what are actually there. Notable absences included the cichlids, *Crenicichla* sp. and *Andinoacara pulcher*.

Thanks to help from afar from Odonata expert John Michalski in the form of an illustrated list, we were able to identify several species of dragonflies and damselflies relatively easily including the beautiful turquoise eyed *Micrathyria atra* and the red-winged *Hetaerina occisa.*

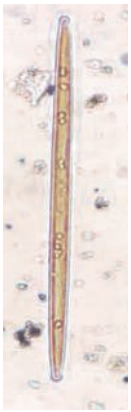
Our efforts to sample Odonata extended to capturing some of the aquatic larvae as well, using a surber sampler. This piece of equipment also allowed us to catch and identify the larval stages of mayflies, caddisflies, stoneflies and various other bottom-dwelling macroinvertebrates. One crustacean species was confirmed - the manicou crab (*Pseudothelphusa garmani garmani*) and several aquatic gastropods including *Pomacea glauca* and *Marisa cornuarietis.*

Back at base camp on Sunday morning, children enjoyed taking part in our 'colour in the guppy' competition, and visitors could view fish in the display tanks. There were also some wriggling aquatic invertebrates to look at under the microscope and posters all about some of the streams' smallest inhabitants - the diatoms. These are tiny photosynthetic creatures encased in intricate glass shells and are normally invisible to the naked eye. However, under the microscope it is possible to admire their beauty and diversity at close range. We identified at least six different species of diatoms in the Arima Valley waterways.

Once again, the Freshwater Group have revealed hidden secrets of Trinidad's streams, opening peoples' eyes to the weird and wonderful creatures that grow, swim and crawl alongside the fish…

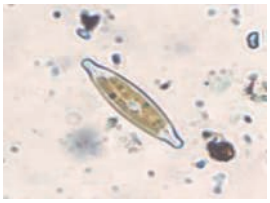
Thanks go to Vieanna Tirbanie, Kerresha Khan, Devan Inderlall, Neema Ramlogan, Alan Chung, Simon Hoadley, Danielle Morong, Justin Julien, Nicholas Sibransingh, Raphael Ramadan, Djevon Lara and Kylash Jodhan.

The Freshwater Group



Diatoms under a microscope *Photos: A. Deacon*

Right: ***Gyrosigma sp.***



Above: ***Synedra ulna***

Right: ***Navicula sp.***

FUNGUS GROUP REPORT

by Jeffrey Wong-Sang

Day 1 Saturday

The day dawned bright and sunny. I was excited to be finally joining the Bioblitz as I had missed out on last year's in Tucker Valley. Briefing for all groups was for 11am and there I met Alicia Rigues, someone who shared my passion for our local mushrooms. My wife, Roma, and Eddison Baptiste also joined our small inaugural search and we were ably led by AWNC guide Johanne Ryan.

We hit the trails after the briefing and headed to the paths that were damp and had water sources. Enthusiasm was high as we started to see mushrooms almost immediately, with Alicia and I photographing all fungi that caught our eye.

Nothing escaped our group and we scaled hills, turned over rotted benches and peeped under many decaying stumps. Eddy was reminding us about snakes all the time as Alicia and I threw all caution to the wind in our quest for mushrooms. We stopped for a break when we encountered a bird group looking at the trogons. This was different as we were continuously looking at the ground and now had a chance to look upward into the trees and enjoy another group's perspective.

Our last trail for the day before light started diffusing was the Oil Bird trail. We were advised not to enter the Cave at the end and to go no further than the entrance. It was tempting to sneak a peek but we obeyed instructions and captured what we could on the trail and made the return trek back to base and downloaded our many varied pictures for the day inclusive of flowers, plants and scenery that caught our eye.

Day 2 Sunday

The group reconvened early next morning and after breakfast we hit the trail up at Morne Bleu. We had to drive to this new area, about 10minutes by car from Asa Wright heading in a northerly direction. Alicia stayed back to deal with a battery problem with her camera. From the time we came out of the car at the new location, the temperature change was obvious and even though the sun was again out in its glory, the coolness that we felt was imminent. It was easily several degrees cooler than at Asa Wright. It felt like mushroom conditions.

The trail at this location was through the forest along a ridge and we made good time until Eddy reminded us that we should return to base as the Bioblitz count ended at 12pm.We reluctantly made our way back up the ridge line enjoying the coolness and forest canopy. Alicia came up with the snake group whilst we were now leaving. On our return again I downloaded my pictures and reported to Mike Rutherford that we had roughly 30 species we had seen over the two days for his final tally. Thus ended our first Bioblitz and I look forward to the next and many more to come.

Over the two days, the group observed the regular bracket and cup mushrooms were prevalent on the decaying stumps. Different types were also noted and a few new mushrooms were photographed awaiting identification.

Above: **Cup fungus, *Cookeina sp.***

Photo: A. Rigues

LEPIDOPTERA GROUP REPORT

by Kris Sookdeo

This year's lepidoptera survey, conducted by the team of Kris Sookdeo, Imran Khan and Mark Greener, was more formalized that that of the 2012 BioBlitz and the team approached the challenge of surveying lepidoptera in the Arima Valley by employing some new strategies. The valley was divided into four sites at differing elevations consisting of the AWNC, entry to La Laja Road, Simla and the Textel installation at Morne Bleu. As with the Tucker Valley BioBlitz, a key survey method involved visual surveys for species which were easily observable. This year, additional methods were employed. Eighteen bait traps were setup at the AWNC and Simla before the start of the survey. Traps were baited with ripe fruit to attract the 'fruit and sap suckers' that are difficult to observe otherwise. Another improvement to this year's lepidoptera survey was the inclusion of moths which were surveyed both at an improvised light trap at AWNC and at the light fixtures scattered around the AWNC compound. All moths were photographed on site for later identification.

The first order of business at the start of the survey was to check the bait traps while surveying species

Right: **Fungus Group, L to R: Eddison Baptiste, Alicia Rigues, Jeffrey & Roma Wong-Sang and Johanne Ryan**

photo: M. Rutherford

Left: **Fungus *Oudemansiella canarii* (to be confirmed)** *Photo: J. Wong-Sang*

seen along the way. After checking the traps the team departed for La Laja road. The entry to La Laja was included in the survey at the last moment due to the presence of flowering Eupatorium which is very attractive for butterflies. Of note here was a specimen of *Dysmathia portia*, a very rarely seen butterfly .

Back at AWNC that afternoon, the light trap was setup and the team spilt into two groups with Imran and Mark heading off for Simla while Kris remained at AWNC for the moth survey. The improvised light trap proved to be less effective than expected due to the low UV output of the bulb. The light fixtures at the Centre, on the other hand, did not disappoint and a large number of species were recorded in this manner. For identification, the team relied on the expertise of Matthew J.W. Cock who graciously identified the photographed moths in the weeks that followed the BioBlitz. One notable find was *Semaeopus plumbeostricta* which was possibly only the second documented record of this species in Trinidad. Ironically, it was found at a light in the Centre's Mango Room – the base camp for the BioBlitz!

A brief visit to the Textel station at Morne Bleu with some of the other BioBlitz teams at approximately 11:00pm that night provided a few more species for the list. Back at the Centre, searches of light fixtures continued to turn up new species with the moth surveying effort finally ending at 2:00am the next morning.

Later that morning, visual surveys for butterflies were conducted at Morne Bleu by Kris and at Simla by Imran and Mark. Despite the presence of extensive growths of Eupatorium along the road leading to the Textel installation on Morne Bleu, windy condition at the top of the road limited the activity of butterflies. Some surveying was done at the base of the road before Kris departed for quick survey at La Laja once again. In the meantime, Imran and Mark had concluded their visual and bait trap survey at Simla. Returning to the Centre, the team reunited and had just enough time to check the bait traps and conduct another brief visual survey before the official end of the BioBlitz at 12:00pm. In all, 51 species of butterfly and 45 species of moth were recorded for a total of 96 lepidoptera!

Lepidoptera Group
Photo: A. Rigues

Imran examines a specimen of *Opsiphanes cassia*
Photo: K. Sookdeo

MOLLUSC REPORT

by Mike G. Rutherford

There are not many species of land and freshwater snails in Trinidad but they can be very abundant. The Freshwater Group found four different species in the streams and ponds throughout the valley; these included the invasive and often numerous *Tarebia granifera.*

The first record for a land snail came from another researcher who found a fairly rare *Helicina nemoralis* snail on the trails around AWNC whilst looking for spiders. This little snail is usually only found in higher elevations in forest where it lives up in the trees feeding on algae and lichens.

The most fruitful site during my search was a lump of limestone just below the parking area at Simla. On this single rock I found several species both alive and as empty shells. These included the tiny, delicate *Brachypodella trinitaria* and the endemic *Choanopoma aripensis*, two beautiful little snails that are only really found in limestone areas. I also found a Naesiotus pilosus which was a surprise as I only have records of this snail from the south of Trinidad

The most abundant land snails I came across were in the field down at Temple Village that was used as a public car park during the BioBlitz. As the field had been recently mown there were piles of grass and other debris around and under a sheet of corrugated iron I found hundreds of *Helicina dysoni* which is probably one of the most commonly encountered snails in Trinidad.

Although I didn't see any myself a big leatherleaf slug was photographed by Mark Charran bringing the total number of mollusc species to 17.

Left: **Mike Rutherford looking for snails on a lump of limestone**

Photo: M. Charran

Right: **Clockwise from top left - *Helicina nemoralis, H. dysoni, Austrocyclotus rugatus, Beckianum beckianum, Brachypodella trinitaria, Naesiotus pilosus, Choanopoma aripensis***

Photo: M. Rutherford

CAMERA TRAPPING GROUP REPORT

by Carl Fitzjames and Kelly Warren

Armed with motion censored camera traps from Colorado State University, three residents of Brasso Seco started on the trail from Morne Bleu telecommunication site in search of ideal locations on the southern side of the northern range to set up the cameras and catch pictures of any passing creatures. These small, lightweight cameras can be mounted to trees and left for weeks and will take pictures day or night when triggered by motion in the area. For this year's BioBlitz we headed off the main Morne Bleu trail into less human travelled areas and looked for the trails and tracks that animals leave behind. We placed three cameras in this upper Arima valley location and came back one week later on the BioBlitz Sunday to retrieve the cameras and the data stored inside. Perhaps you can imagine the squeals when we saw pictures of deer and agouti!! It was great to be able to add these mammals to the BioBlitz list and be part of this project to raise awareness about all the treasures our environment holds! The camera trap images are not always clear, the pictures not always the greatest of qualities but these cameras are a way of recording what lives in our forests and sharing the pictures are a way to make these animals real and tangible to those who will never see them in their natural habitats. And for those of us intent on saving these natural habitats, the more people we can get involved and on board the better!

Below:

Red-rumped Agouti,
Dasyprocta leporina
(enhanced/focused in)

Above:

Red Brocket Deer,
Mazama americana
(enhanced/focused in)

Flora Diem - BOTANY GROUP REPORT

by La Daana K. Kanhai, Aidan Farrell and Lester Doodnath

Saturday 21st September 2013 was no ordinary day. It was 'the day'! For our group, it was the start of a 24 hour period dedicated to the identification of a beloved subject matter- plants! For some in our group, plants were the subject of their life's work, while for others they were fundamental to their hobbies of photography or gardening. Ours was a diverse and enthusiastic group comprised of an avid primary schooler, a keen secondary schooler, members of the Trinidad and Tobago Field Naturalists' Club (TTFNC) along with several postgraduate students, demonstrators, instructors, lecturers, and alumni from The University of the West Indies.

On the morning of the day, our group assembled at the base camp (Asa Wright Nature Centre) for an official briefing prior to commencing our surveys. The group was then divided into three sub-groups. The first sub-group led by Doreen Jodhan and plant identification expert Winston Johnson, surveyed the Morne Bleu area. The second sub-group led by Lester Doodnath of the TTFNC, surveyed the trails around the ASA Wright Nature Centre and includes his report here - *This small group of avid naturalists traversed the main trail of the Asa Wright Centre which leads from the in front of verandah, the Discovery Trail. We also observed vegetation along the Jacaranda Trail and we returned along the Chaconia Trail. So we were basically on the Centre's grounds which was a former cocoa-coffee-citrus plantation which has now been partly reclaimed by secondary forest. There have the planting along these trails of numerous local and exotic plants and trees to attract wildlife, particularly birds. Away from the trails there is more natural forest vegetation. Over one hundred plants were identified within three hours. These included vegetation at all levels and forms such as understory, lianas and within the canopy.*

The first plant identified along the Discovery Trail was the native Vervine which is comprised of two species and is a good feeding plant for hummingbirds. In the herb garden we saw many local species used for cooking such as Annato and Spanish Thyme. Going further along this trail the more maintained vegetation changed to taller more natural vegetation with the inclusion of exotic trees such as palms and the screw pine. There was the exotic Jacaranda in a grove along this self named trail and its purple flowers were present on the ground amidst native trees such as the Olivere and Angelin. Along the Chaconia trail we did see our native flower in bloom with an understory of Tirite and Monatgama. So the further we went along the trail the more natural and higher the vegetation became.

The third sub-group led by Mike Oatham, surveyed trails in the vicinity of Temple Village. All sub-groups attempted visual identification of shrubs and trees. In cases where visual identification was not possible, specimens were collected and brought back to the base camp. After surveying for a few hours, sub-groups met at the base camp to collate their findings. Specimens were sub-sorted based on several characteristic features e.g. simple vs compound leaves, appearance of leaf margins, etc, and were later identified with the aid of books and digital identification keys. This process ended around 7 pm and members of our plant group dispersed. Some sought much needed rest while others decided they still had energy and accompanied other groups for nocturnal surveys. On Sunday morning, our group reassembled in the Mango Room at the Asa Wright Nature Centre. A portion of the group remained at the base camp to complete the compilation of results while the other members formed a sub-group that headed to a river-side trail in the Temple Village area for a final surveying event.

When the clock stopped, the Temple Village group had identified 40 species, the Asa Wright group 130 species and the Morne Bleu group 56 species. Added to this were 151 species seen along the road sides and identified using the 'drive-by' method. The lists were rapidly merged to avoid double-counting of species. This revealed that 25 species were found only in Temple Village, 84 only in Asa Wright, 46 only at Morne Bleu, and 74 found only on the roadside. This left 41 species found at a least two loca-

tions and a further 22 undiscerning species, e.g. Deer Meat (*Centrapogon convolutes*), found in three locations. The large proportion of Morne Bleu species that were found only at Morne Bleu was expected given its distinct climate, this included the regal Bronze Pagoda (*Calathea casupito*) and three endemic species *Clusia aripoensis, Macrolobium trinitense,* and *Maytenus monticola*. In contrast, Asa Wright and Temple village were home to many cultivated species that were also found in other locations. Although some plant species were seen in many areas, each site maintained a substantial number of species that were only found in one location, highlighting the value of habitat heterogeneity in maximising biodiversity.

Thanks to Mike, Kahani & Jarah Oatham, Doreen Jodhan, Nigel Austin, Chernell Crooks, Adanna Alexander, Nandani Bridglal, Linton Arneaud, Winston Johnson, Veynu Siewrattan, Sarah Evelyn, Diane Renaud and Reynold Boyce.

Left: **Bronze Pagoda, *Calathea casupito***
by L. Kanhai

Above: **Members of Plant Group sorting through their findings**
Below: **W. Johnson, D. Jodhan and D. Jaggernauth identifying specimens**
Photos: M. Rutherford

Right: **Deer Meat, *Centrapogon convolutes***
by L. Kanhai

ARACHNID REPORT

by Jo-Anne N. Sewlal

Collecting was done in Morne Bleu and along the Discovery and Chaconia trails of the Asa Wright Nature Centre. More challenging trails were not used for sampling as attention would be placed on safely navigating the trail than on observing and collecting specimens. However, this would not have affected results as the vegetation on all the trails belong to the same habitat type.

Spiders were collected primarily using sweep-netting and visual search methods which ensured the rapid collection of species as well as detecting nocturnal species like *Eriophora edax* as they dislodge individuals resting in the vegetation and detect retreats made in the vegetation. All specimens were transferred into a vial of 90% alcohol, sorted and identified using identification keys from the literature. This sampling effort was supplemented by photos and physical specimens collected by other participants of the event.

This year's event yielded 37 species from 16 families. The families were separated into three functional groups; web-builders, plant wanderers and ground wanderers, where each functional group containing species that "potentially compete for jointly limited resources". This classification also provided valuable information with respect to species composition as each group possessed their own preferences for microhabitat and vegetation and would therefore respond differently to habitat changes. Web-builders dominated the species found followed by plant wanderers and then ground wanderers in terms of functional groups. The paucity of ground wanderers could be due to the lack of specialized techniques like pitfall trapping. However, due to the time constraints (24 hours) this method was not possible as traps should be set up and left out for at least three days.

A highlight was the presence of huge dense aggregations of the uloborid *Philiponella republicana*, found along the driveway to Asa Wright and along one of the small streams on the side of the Blanchisseusse Road on the way to Morne Bleu. This species is not uncommon to the area as its presence was noted in 2011 in the vegetation surrounding Simla during a Neotropical Field Course conducted by the University of the West Indies.

Also noted from this event were three species of harvestmen or opilionids: *Santinezia serratotibialis Prionostemma insulare* and *Cynortula* sp. all of which have been previously recorded from the area.

Trinidad Pink Tarantula,
Holothele sanguiniceps
photo: M. Charran

Harvestman,
Santinezia serratotibialis
photo: N. Noriega

SOCIAL INSECTS REPORT

by Christopher K. Starr

Our ambitions were quite modest, largely limited to an extensive nature walk with identification of species that could be found by ordinary search. In particular, we made no attempt to record any but the most conspicuous ants and termites. Except where noted, all species were expected.

Social wasps

Angiopolybia pallens -- ubiquitous in forests in Trinidad.
Metapolybia cingulata -- nesting on buildings; common.
Mischocyttarus alfkenii -- recorded from an old nest, which is distinctive for the species; common.
M. prob. *collarellus* -- three colonies nesting on a building; uncommon. *Polybia rejecta* -- ubiquitous in more open areas in both Trinidad and Tobago, often nesting in association with *Azteca* sp. ants; moderately common.
P. striata -- colony seen by Bob Thomas, with specimens collected; found throughout South America north of the Southern Cone and east of the Andes, but very uncommon in Trinidad, where I have never seen a colony.

Social bees

Lestrimelitta spinosa -- robber that does not forage on its own but pillages other stingless bees; colony on the AWNC administration building for many years now.
Nannotrigona testaceicornis -- tiny stingless bee; widespread in Trinidad, apparently common at AWNC.
Trigona amalthea -- large stingless bee, apparently common at AWNC.

Ants

Atta cephalotes -- the familiar bachac.
Azteca sp. -- carton-nesting arboreal species, taxonomy uncertain; very common.
Ectatomma ruidum -- common on flower heads and other low vegetation throughout Trinidad.
Eciton hamatum – army ant that preys on the larvae of other social insects

Termites

Nasutitermes corniger,
N. ephratae

Miscellaneous notes on solitary wasps

Trypoxylon albipes is in plentiful evidence through its mud nests on buildings, as expected.

Below: **Nest of the Social Wasp *Angiopolybia pallens***
Photo: M. Rutherford

Above:
Army ants, *Eciton hamatum* on the march *Photo: M. Rutherford*

During the BioBlitz we also took the opportunity to set up two Malaise traps on the AWNC grounds, one in the garden area just below the main building and the other further down hill in forest. They do not work quickly enough to produce results during the BioBlitz itself, but the hope is that over the course of about a year they will yield specimens that will materially increase our knowledge of the insect fauna of the Arima Valley.

For those who don't know, a Malaise trap – named after one of its inventors, Swedish entomologist René Malaise – is a form of intercept trap that is especially effective in collecting flying insects. It is basically a kind of tent made of mosquito netting that utilizes the insect's own behaviour to direct it into the collecting vessel, where it is killed and preserved in alcohol. Malaise traps are almost useless for collecting non-flying insects and are not equally good for all flying groups. They collect plenty of moths, for example, but the alcohol ruins them as specimens. The traps are most effective for four main groups: beetles (Coleoptera), higher flies (Diptera), parasitic wasps and stinging insects (Hymenoptera). A well placed Malaise trap run for a month or more can amass an impressive number and diversity of specimens from these groups and sometimes decent numbers from others.

SCORPION GROUP REPORT

by Rakesh Bhukal

We assembled at the Mango Room of the AWNC at approximately 7pm on Saturday night where checks were made on the various pieces of equipment that were to be used on our upcoming night survey for scorpions. The team initially comprised of eight members but as time approached our scheduled 8pm survey departure time this number quickly doubled as we welcomed several enthusiastic naturalists from other survey groups who wished to join on in our night time survey. A brief demonstration was then given by myself on the proper procedure that should be followed for collection and handling of our intended and venomous specimens that were to be collected.

Upon departure we followed the Adventure Trail that lead away from the AWNC and then diverted to several smaller trails along its length. Scorpions are excellent at camouflaging so ultraviolet (UV 395 nm) flashlights were used along the trail to find these creatures because they fluoresce (glow) when illuminated with this particular frequency of light. Leaf litter and rotting logs along the trail were turned over and illuminated with the uv-lights and any specimens that were found was collected by gently clasping the tail of the scorpion and placing it in an open insect vial that was made to stand upright. The vials were then closed and securely placed into a carrying bag. The trees and other vegetation along the trail were also observed for scorpions because certain species are arboreal (live in trees). At the end of the survey the specimens that were collected was taken back to base camp where they were subsequently identified by use of a dissecting microscope and a number of scorpion identification guides.

The entire survey lasted for four hours and four species were identified: *Tityus discrepans*, *T. trinitatis, T. melanostictus* and *Broteochactas nitidus.*

Scorpion, *Tityus sp.* glowing under UV light.

Photo: F. Abdool

TTFNC 2014 Annual Calendars - now available

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The Trinidad and Tobago Field Naturalists' Club (TTFNC) thanks

First Citizens

For it's generous support of the Club in the form of sponsorship of our Arima Valley BioBlitz 2013 and our 2014 TTFNC Annual Calendar

First Citizens

Public and volunteers at the end of the Arima Valley BioBiltz at the Asa Wright Nature Centre.
All agreed that this year's event was fun and successful and all look forward to the next BioBlitz in 2014.

photo: M. Rutherford

TTFNC QUARTERLY BULLETINS ONLINE LINK :
http://ttfnc.org/photojournals/index.html

Management Notices

New members; Volunteers; Publications

New Members

The Club warmly welcomes the following new members:

Junior members :

Ordinary members : **Alison Ifill, Ashana Hassanali, Chandiha Mannch, Craig Sheldon Ramsundar, Elvis Philip, Janelle Gangoo, Kamal Mahabir, Mark Greener, Richard Lyons, Sunita Maharaj**

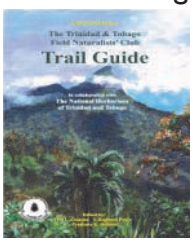
New life members : **Clive Rupnarine**

Family members : **Jeffrey & Roma Wong Sang, Shereen Ali**

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

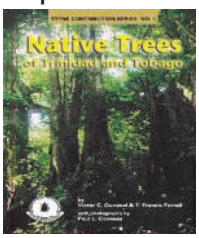
PUBLICATIONS

The following Club publications are available to members and non-members:



The TTFNC Trail Guide

Members : TT$160.00



The Native Trees of T&T 2nd Edition

Members : TT$80.00

Living World Journal 1892-1896 CD

Members : TT$95.00

Living World Journal 2008
Living World Journal back issues
Members price : free

Living World 2012 supplement

Due to limited supply Living World 2012 supplements are $20.00 each.

MISCELLANEOUS

The Greenhall Trust

Started in 2005, in memory of Elizabeth and Arthur Greenhall, dedicated artist and zoologist respectively, the Trust offers financial assistance to aspiring artists and biologists (in the areas of flora and fauna) in Trinidad and Tobago. Full details are available on their website: http://www.greenhallstrust-wi.org/link.htm

Your 2014 Annual Membership Fees are Due:

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

Submission of articles and field trip reports:

1. **All articles must reach the editor by the eighth week of each quarter. Submission deadline for the 1st Quarter 2014 issue is February 26, 2014.**
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 QB2014-1 in the email subject label.**