



Trinibats

Field Survey March 2011

By Daniel Hargreaves

Introduction

This trip was organised between Geoffrey Gomes and Daniel Hargreaves and was planned to survey several areas of Trinidad with the aim of identifying key areas in which to focus future efforts. The field notes below are a summary of findings over the 6 days and further detailed information (capture data, measurements, locations) can be requested from Daniel Hargreaves.

14th March 2011

Day 1

In the morning we drove south to Point-a-Pierre Wildfowl Trust where we had fabulous views of three groups of 7, 10 & 13 Proboscis bats (*Rhynchonycteris naso*) roosting around the lake.

Early afternoon we headed by boat to the Monos Island and visited a roost of approximately 200 Greater fishing bats (*Noctilio leporinus*). This was a mixed colony of adult males and females.

We hand netted 2 females and 1 male; one of the females was heavily pregnant. We watched the emergence from the cave and were lucky to see several bats fishing under our feet. The bats spent a lot of time leaving and entering the roost.



Day 2

Whilst loading the mini bus at Alicia's guest house (Port of Spain) we quickly inspected a concrete overhang underneath the road. Three pairs of lesser white lined bats (*Saccopteryx leptura*) were roosting in a semi dark spot. The bats were very flighty when approached but we managed to hand net one female.

We headed North-east to Brasso Seco and the Northern Range, staying in the Brasso Seco renovated cocoa house. In the afternoon we met with our guide for the area Carl Fitzjames. After a short afternoon walk and discussion we decided to split into three mist netting teams:

- A. Brasso Seco Roman Catholic church
- B. Carl's garden/small plantation
- C. The area around the Cocoa house

Carl had indicated that there was a large roost of bats in the church that roosted under the corrugated roof. We set up the triple high system at the back of the church and as soon as sunset arrived we had bats emerging from both sides of the church. We hand netted one bat from the front of the church and caught several in the triple high net. In total we captured 9 Black mastiff bats (*Molossus rufus*) and 5 little mastiff bats (*Molossus molossus*). It was interesting that out of the 14 bats only 3 were female and none of these were pregnant or lactating possibly indicating there were no pregnant females at the roost.

Carl's garden was a mixture of fruit and timber trees bordered by secondary forest. The nets captured 3 species:

- 2 Seba's short tailed bat (*Carollia perspicillata*)
- 2 Hellers broad nosed bat (*Platyrrhinus helleri*)
- 1 Hairy big-eyed bat (*Chiroderma villosum*)

The nets around the Cocoa house were the most successful mainly because we took the decision to net all night which continued to add new species. The nets were positioned in the garden, on the ridge and next to the river. The nets here caught 10 species:

- 11 Seba's short tailed bats (*Carollia perspicillata*)
- 3 Heller's broad nosed bats (*Platyrrhinus helleri*)
- 2 Hairy legged myotis (*Myotis keaysii*)
- 1 Common mustached bats (*Pteronotus parnellii*)
- 2 Pygmy round eared bats (*Lophostoma brasiliense*)
- 1 Common tent making bat (*Uroderma bilobatum*)
- 1 Gervais's fruit eating bat (*Artibeus cinereus*)
- 1 Common long tongued bat (*Glossophaga soricina*)
- 1 Tilda's yellow shouldered bat (*Sturnira tildae*)
- 1 Orange throated bat (*Lampronnycteris brachyotis*)

We caught a wide variety of bats by positioning the nets in different locations. The highlight of the evening amongst the several new species for the trip was the orange throated bat, a very rare bat and the only individual caught on the trip.



Day 3

Carl took the group to walk a trail through the Brasso Seco forest. Although extremely wet we had a great walk finding several bat roosts:

- Roost one was a fallen hollow horizontal log which contained a roost of about 10 common big eared bats (*Micronycteris megalotis*). We successfully hand netted 3 for identification - 2 males and 1 pregnant female.
- The second roost was a hollowed out termite nest on a vertical tree about 2 ½ metres high containing at least 7 Pygmy round eared bats (*Lophostoma brasiliense*).
- The third roost was an overhang in bank where one Thumbless bat (*Furipterus horrens*) was seen and flew immediately. We re-checked the roost on our return and the bat was there but moved as soon as we shone light on it. The morning of the last day we returned armed with a mist net but sadly the bat was not present.



That evening we split into four teams:

- A. A small team investigated reports of donkeys and goats being attacked by vampires.
- B. Nets placed in secondary forest with a dense understory on the ridge above the house.
- C. The triple high net was placed on a open ridge with a small plantation to the front and secondary forest behind.
- D. Nets were placed at the front of the house close to the car park and parallel to the road.

Team A didn't see or catch any vampire bats but one of the donkeys had scars and had been treated with anticoagulants suggesting that vampire bats were present in the area and maybe the full moon deterred them. The nets caught 4 species:

- 2 Greater white lined bats (*Saccopteryx bilineata*)
- 1 Common long tongued bats (*Glossophaga soricina*)
- 1 Gervais's fruit eating bat (*Artibeus cinereus*)
- 4 Seba's short tailed bats (*Carollia perspiciliata*)

Team B caught 6 species in the forest ridge:

- 9 Seba's short tailed bats (*Carollia perspicillata*)
- 1 Common moustached bat (*Pteronotus parnelli*)
- 2 Common tent making bat (*Uroderma bilobatum*)
- 1 Heller's broad nosed bat (*Platyrrhinus helleri*)
- 1 Geoffroy's hairy legged bat (*Anoura geoffroyi*)
- 1 Niceforo's bat (*Trinycteris nicefori*)

Team C were very busy with the triple high on the open ridge and caught 10 species including some of the larger bats.

- 1 Lesser white lined bat (*Saccopteryx leptura*)
- 2 Greater white lined bats (*Saccopteryx bilineata*)
- 1 Gervais's fruit eating bat (*Artibeus cinereus*)
- 6 Hairy big eyed bats (*Chiroderma villosum*)
- 5 Heller's broad nosed bat (*Platyrrhinus helleri*)
- 1 Niceforo's bat (*Trinycteris nicefori*)
- 2 Hairy big eared bats (*Micronycteris hirsuta*)
- 1 Seba's short tailed bats (*Carollia perspicillata*)
- 1 great fruit eating bat (*Artibeus lituratus*)
- 1 Pale spear nosed bat (*Phyllostomus discolor*)

Team D placed two 9m nets parallel to the road with a ridge either side of the road leading to plantation or secondary forest and caught 6 species:

- 1 Lesser white lined bats (*Saccopteryx leptura*)
- 3 Seba's short tailed bats (*Carollia perspicillata*)
- 1 Heller's broad nosed bat (*Platyrrhinus helleri*)
- 1 Tilda's yellow shouldered bat (*Sturnira tildae*)
- 1 Spix's disk winged bat (*Thyroptera tricolor*)
- 1 Common tent making bat (*Uroderma bilobatum*)

The highlight of the evening was the Spix's disk winged bat which was the only one captured on the trip and normally very difficult to catch in mist nets.



Day 4

After waving good bye to two excellent days at Brasso Seco we travelled down the east coast towards Mayaro. After lunch we headed out to Nariva Swamp home to a few mosquitoes and a wide variety of bats. We walked part of the forest trail checking leaves for tent making bats. We were finally awarded great views of 3 Gervais's fruit eating bats (*Artibeus cinereus*) in a 'boat tent' in a heliconia leaf. One flew out early but two remained enabling the group to take some good photographs.



Again we split into three teams along the main forest trail:

- A. Netting at the start of the primary forest near the 'cannonball' tree's
- B. The triple high net positioned in a open clearing next to a 'fork' in the trail
- C. Netted parallel to a stream and along the trail

Team A caught 10 species and had a high diversity of gleaning insectivorous bats:

- 3 Greater white lined bats (*Saccopteryx bilineata*)
- 1 Geoffroys bat (*Anoura geoffroyi*)
- 1 Frosted sac wing bat (*Saccopteryx canescens*) *
- 2 Hairy big eared bats (*Micronycteris hirsuta*)
- 1 Tiny big eared bat (*Micronycteris minuta*)
- 1 Stripe-headed Round-eared bat (*Tonatia saurophila*)
- 1 Greater spear nosed bat (*Phyllostomus hastatus*)
- 2 striped hairy nose bat (*Mimon crenulatum*)
- 1 Seba's short tailed bat (*Carollia perspicillata*)
- 1 Common mustached bat (*Pteronotus parnellii*)



Team B caught 9 species in the triple high net:

- 2 Greater white lined bats (*Saccopteryx bilineata*)
- 2 Lesser white lined bats (*Saccopteryx leptura*)
- 1 Geoffroys bat (*Anoura geoffroyi*)
- 2 Greater spear nosed bats (*Phyllostomus hastatus*)
- 3 Gervais's fruit eating bat (*Artibeus cinereus*)
- 2 Davy's naked backed bats (*Pteronotus davyi*)
- 1 striped hairy nose bat (*Mimon crenulatum*)
- 1 Pygmy round eared bats (*Lophostoma brasiliense*)
- 1 Hairy big eared bats (*Micronycteris hirsuta*)

Team C caught 4 species:

- 1 Little yellow shouldered bat (*Sturnira lilium*)
- 1 Great fruit eating bat (*Artibeus lituratus*)
- 1 Jamaican fruit eating bat (*Artibeus jamaicensis*)
- 1 Davy's naked backed bat (*Pteronotus davyi*)

* The Frosted sac wing bat is possibly a new species for Trinidad; we aimed to take wing punch samples and fur pulls for DNA analysis but sadly the bat died in the hand. The skeleton was sent to Burton Lim at the Royal Ontario Museum in Toronto for identification and tissue DNA analysis for confirmation of species.



Day 5

Started with a walk to the Trinity Hills sanctuary. This area showed great potential and only on a short walk through the forest we found several roosts:

- Roost 1 was a fallen tree with a hollow chamber at the root. Several common big eared bats (*Micronycteris megalotis*) were present.
- This roost was at the base of a large Kapok tree which was growing next to a river with the roots exposed. We found two common big eared bats (*Micronycteris megalotis*) roosting.
- We found many tents in large palmate leaves and disturbed a roost of about 7 Common tent making bats (*Uroderma bilobatum*).

In the afternoon we walked into the Trinity road forest a mixture of plantation and secondary growth forest. Again we found several roosts:

- Roost 1 was a tunnel culvert under the road and contained 2 Common long tongued bats (*Glossophaga soricina*) and 5 Seba's short tailed bats (*Carollia perspicillata*).
- Contained a single common tent making bat (*Uroderma bilobatum*) about 3m high in a palm with a bifid style tent.
- A large strangler fig contained a roost of at least 9 common big eared bats (*Micronycteris megalotis*) inside the hollow strangler about 3m high.
- A fallen tree had created a hollow in the roosts leaving a small overhang where several common big eared bats (*Micronycteris megalotis*) were observed flying out when disturbed by our lights.

In the evening we split two teams between the Trinity Hills Sanctuary and the Trinity road forest.

The Trinity hills sanctuary team caught 2 species:

- 6 Common tent making bat (*Uroderma bilobatum*)
- 1 Tricolored bat (*Glyphonycteris sylvestris*)

In the Trinity road forest we caught 3 species:

- 5 Seba's short tailed bats (*Carollia perspicillata*)
- 1 Riparian myotis bat (*Myotis riparius*)
- 1 Heller's broad nosed bat (*Platyrrhinus helleri*)



On return to our coastal homes we continued netting around the houses and along the road catching 3 species:

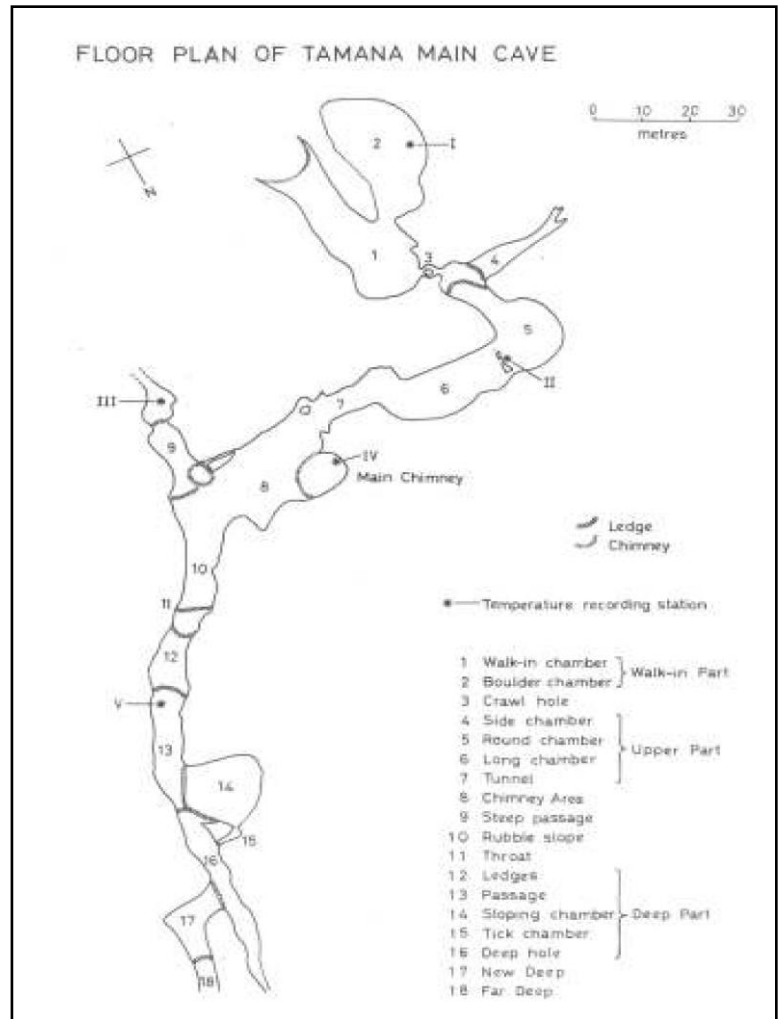
- 4 Seba's short tailed bats (*Carollia perspicillata*)
- 6 Jamaican fruit eating bat (*Artibeus jamaicensis*)
- 2 Common long tongued bats (*Glossophaga soricina*)

Day 6

We trekked to the Tamana Hill bat cave and explored the chambers inside hand netting a few individuals before positioning a harp trap outside.

Inside the walk in chamber (section 1) we found large groups of Geoffroy's bat (*Anoura geoffroyi*); some of these flew into the boulder chamber (sec. 2) which

contained mainly Trinidadian funnel eared bats (*Natalus tumidirostris*) and a few individual Ghost faced bats (*Moormops megalophylla*). We hand netted a few of each species for closer examination. Through the crawl hole to the main chimney (sec. 4, 5, 6 & 7) we found numerous groups of Greater spear-nosed bats (*Phyllostomus hastatus*) in harem groups with males defending a cluster of females. No pups were seen but the females were in late stages of pregnancy; a high percentage of the bats were rung. None of these were captured to avoid disturbance. The steep passage (sec. 9) contained hundreds of Davy's naked backed bats (*Pteronotus davyi*) and common moustached bats (*Pteronotus parnellii*). We didn't have sufficient resources to continue down into the deep part of the cave but we could see various species of mormoopidae roosting in this section.



A mini harp trap was set for a short period at the main chimney we caught a number of *Pteronotus parnellii*, *Pteronotus davyi* and *Moormops megalophylla* and a single capture of a Lesser mustached bat (*Pteronotus pteronotus*). We sat and watched the emergence of natalus and mormoopidae exiting from the main chimney for a couple of hours.

On return to our accommodation in Mayaro we continued to net adjacent to a small pond between the houses and caught a number of bats including a Great fruit eating bat (*Artibeus lituratus*) with a pup that was only a few days old. The

group also found a night roost of Jamaican fruit eating bats (*Artibeus jamaicensis*) in a large palm and we watched for several hours the behaviour as bats brought fruit back to the tree and a male seemed to be licking and scenting the palm throughout the night. By 5am all the bats had left the palm so we presume it was used as a night roost; watching the video there was only one male bat present in the palm but a few different females indicating possible 'guarding' of female bats in night roosts and maybe this is why the male spent the majority of the night 'scenting' the night roost.

Participant list

Organisers

Geoffrey Gomes, Stephenie Gomes (Trinidad) <http://trinibirding.com/index.php>
Daniel Hargreaves (UK) daniel@batdan.co.uk

Participants:

Keith Cohen

Bob Cornes

Sam Dyer

Catherine Greenhough

Jude Hirstwood

Roger Jones

Danielle Linton

Steve Parker

Fiona Parker

Fiona Reid

George Smiley

Derek Smith



Trip Species List

Total list of bat species seen is below we identified a total of 38 species representing all the family groups recorded in Trinidad. We also captured a new species for Trinidad the frosted sac wing bat (*Saccopteryx canescens**).

Family: Emballonuridae / Sac-winged Bats

Proboscis Bat - *Rhynchonycteris naso*

Greater White-lined Bat - *Saccopteryx bilineata*

Lesser White-lined Bat - *Saccopteryx leptura*

Frosted sac wing bat - *Saccopteryx canescens* *

Family: Noctilionidae / Fishing or Bulldog Bats

Greater Fishing Bat - *Noctilio leporinus*

Family: Mormoopidae / Leaf-chinned Bats

Ghost-faced Bat - *Mormoops megalophylla*

Common Mustached Bat - *Pteronotus parnellii*

Lesser Mustached Bat - *Pteronotus personatus*

Davy's Naked-backed Bat - *Pteronotus davyi*

Family: Phyllostomidae / Leaf-nosed Bats

Subfamily: Phyllostominae / Leaf nosed bats

Tiny Big-eared Bat - *Micronycteris minuta*

Hairy Big-eared Bat - *Micronycteris hirsuta*

Common Big-eared Bat - *Micronycteris megalotis*

Orange-throated Bat - *Lampronnycteris brachyotis*

Niceforo's Bat - *Trinycteris nicefori*

Tricolored Bat - *Glyphonycteris sylvestris*

Stripe-headed Round-eared Bat - *Tonatia saurophila*

Pygmy Round-eared Bat - *Lophostoma brasiliense*

Striped Hairy-nosed Bat - *Mimon crenulatum*

Pale Spear-nosed Bat - *Phyllostomus discolor*

Greater Spear-nosed Bat - *Phyllostomus hastatus*

Subfamily: Glossophaginae / nectar feeding bats

Common Long-tongued Bat - *Glossophaga soricina*

Geoffroy's Hairy-legged Bat - *Anoura geoffroyi*

Subfamily: Carollinae / Short-tailed bats

Seba's Short-tailed Bat - *Carollia perspicillata*

Subfamily: Stenodermatinae / Tailless bats

Little Yellow-shouldered Bat - *Sturnira lilium*
Trinidadian Yellow-shouldered Bat - *Sturnira tildae*
Great Fruit-eating Bat - *Artibeus lituratus*
Jamaican Fruit-eating Bat - *Artibeus jamaicensis*
Gervais's Fruit-eating Bat - *Artibeus cinereus*
Common Tent-making Bat - *Uroderma bilobatum*
Heller's Broad-nosed Bat - *Platyrrhinus helleri*
Hairy Big-eyed Bat - *Chiroderma villosum*

Family: Natalidae / Funnel-eared Bats

Trinidadian Funnel-eared Bat - *Natalus tumidirostris*

Family: Furipteridae / Thumbless Bats

Thumbless Bat - *Furipterus horrens*

Family: Thyropteridae / Disk-winged Bats

Spix's Disk-winged Bat - *Thyroptera tricolor*

Family: Vespertilionidae / Plain-nosed Bats

Riparian Myotis - *Myotis riparius*
Hairy-legged Myotis - *Myotis keaysi*

Family: Molossidae / Free-tailed Bats

Black mastiff bat - *Molossus rufus*
Little Mastiff Bat - *Molossus molossus*

*waiting confirmation of ID