



Newsletter of the Gauteng and Northern Regions Bat Interest Group

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Editor: Trevor Morgan

THE SERENDIPITY ECO TRAILS OUTINGS

March 2017 & January 2018

By Julio Balona

As a site for a bat outing I was slightly suspicious of Serendipity Trails because it is geared up for both nature and off-road enthusiasts, and I wondered if the two could co-exist.

In my worst anxieties I envisioned a Mad Max movie: battalions of quad bikes, scramblers and 4x4s swarming all around us menacingly as we tried to remove desperate bats from our nets.

It wasn't even remotely so.

The owner has been careful to separate the areas for either activity and it was all rather pleasant - I seldom heard or saw any kinds of noisy machines or people.

Or perhaps when we visited there were simply not many off-roaders around...

The first weekend in March 2017 we focused on the woodland and savannah area around the stream flowing along the length of the main camping area. The usual bushveld LBJs presented themselves: **Cape serotines (*Neoromicia capensis*)**, **Rusty pipistrelles (*Pipistrellus rusticus*)** and **Zulu serotines (*Neoromicia zuluensis*)**. And of course, several **African yellow bats (*Scotophilus dinganii*)**. Plus, a single **epauletted fruit bat (*Epomophorus*)**, probably *E. wahlbergi* but it was not possible to specify with any confidence because it was a juvenile.



Cape serotine



Rusty pipistrelle



Zulu serotine



African yellow bat



Epauletted fruit bat

So, nothing unusual. I could instead say nothing particularly interesting, but I prefer not to use such a phrase since even the common and widespread Cape serotine is interesting (just why is it so common and widespread?). Let us rather say, nothing new or what one would not expect in this area. Actually, more curious was the absence of African pipistrelles (*Pipistrellus hesperidus*) which is a typical inhabitant of riverine woodland. Although, to be honest, the identification of LBJs can be so devilishly difficult that there is a chance we missed it amongst the many furry brown beasts we processed.

Additional notable no-shows were the cave bats. A wooded stream surrounded by kloofs would normally be the best place to find them, but we did not. And I did not even get any cave bat calls.

So, it looked like were none in the area, which did not seem likely.

On our next trip in January 2018, we decided to try a different site, the secluded kloof at Tierkloof Camp where cave dwellers would surely be resident. This time the rains had been shy and there was no water in the stream bed that lined the valley. Instead there was a single pond barely 2.5 metres in diameter in the heart of the kloof, surrounded by rocky masses all around. Here we placed our harp trap. The area was fairly congested with trees so that I could imagine that only something as agile as a Hipposiderid or Rhinolophid would forage there.

And indeed I was right: we captured a **Sundevall's leaf-nosed bat (*Hipposideros caffer*)** and a **Bushveld horseshoe bat (*Rhinolophus simulator*)**.

Inspection of the site later revealed that there were a number of small caves within the rocky surrounds where these bats were probably roosting.



Sundevall's leaf-nosed bat



Bushveld horseshoe bat

Apart from the cave types, there were rather few other bats flying around this site. We therefore decided to set up our traps and nets at the woodland next to stream by the main camping area, where we surveyed on our previous trip. Once again, the same assortment of bats presented themselves, but this time rather more epauletted fruit bats due to the presence of a large fruiting fig tree.

Chairman's Report for 2016 to 2017

GNOR BIG was established in 1994 and is now **twenty-three years** old.

The year reviewed

In August we gave a talk to a decent sized **Probus** group of about fifty people. The next month saw our first ever bat walk held at the **Modderfontein Reserve** which also had about fifty people in attendance. Both events were arranged through Pat van Nierop and we will likely do another bat walk there this year.

October was a busy month starting with a Pretoria Botanical Gardens bat walk (113 people) which is ever popular, and then a talk to a group of 'Lego League' pupils from a school in Centurion. These kids had made bats into a project whereby they obtained a lot of information from our website, built bat houses and eventually gave an enlightening talk to the parents. Before this, we gave them our bat walk presentation and then they gave us the talk they would repeat for the parents later that evening. Thus, we were not only able to directly help some of our youth to appreciate bats, but they became ambassadors for the cause too.



Lego League presenting on bats

The month was rounded off with a return outing to the Anglo Platinum owned **Der Brochen** site near Steelpoort. It is an under-studied area with interesting fauna and flora, including a good variety of bats. Unfortunately, the plan is to mine much of it in future.. ☹



There were no events in November, a summer month we usually don't waste. We did in fact have an outing planned, but this was cancelled for reasons I cannot recall.

The calendar year ended with a **Johannesburg Zoo** bat walk in early December. Although it attracted a mediocre thirty people, the event and the night before bat catching, were filmed by a production company for the Spervuur insert on **SABC 2's 50/50** program.

The show turned out well, but watching it when it aired a month ago, two unhappy thoughts struck me immediately:

- 1) It came across as if I was single-handedly running GNoR BIG, which is complete nonsense. It so happens that the usual team was unable to make that night or simply evaded filming, especially the dedicated Sharron Reynolds and Leon de Kock.
- 2) I really need to lose some weight.



These gripes aside, it was great to be able to reach so many people at once for the promotion of bats. Even for those that only heard about it and did not actually watch, it plants a psychological seed - the awareness that bat appreciation is present in the community, even if only as a minority.

[**www.batsgauteng.org.za**](http://www.batsgauteng.org.za)

The new year started with a January bat walk at **Kloofendal Nature Reserve** with fifty-six people in attendance.

The same month we tried a new outing destination, **Wagendrift Farm** just outside Lydenburg. A decent variety of bats were found and quite a good diversity of bat food too (i.e. moths). As some will know, for me, bat food is almost as interesting as bats..



A warm and wet February brought us to another place we have not been before, the **Grootgeluk Bush Camp** near Mookgopong. About five or six bat species were encountered, which is about typical for an outing. Of particular interest was the capture of a single Little free-tail - although this species is common along the east coast and Lowveld, there are no records for this area. In fact the nearest record is about 150 kilometres east of Groogeluk. One wonders if it has always occurred in this area, or if it is a recent expansion, or was the single bat a vagrant.



Not far from Grootgeluk, is **Serendipity Eco Trails**, the site of March's outing. Another new venue, it is one with a lot of potential, although on this occasion only about four or five bat species were found.



Our final outing for the GNoR BIG year, was a case of leaving the best for last: **Ratho Bush Camp**. Ever since our very successful first visit there in 2014, it is our top destination and we eventually returned in April this year. On both occasions we found about thirteen species over about four days. This time we could add two that were not captured before and the site's bat list now stands at about fifteen species, an extraordinary variety comparable only to Pafuri, amongst the many areas we have visited.



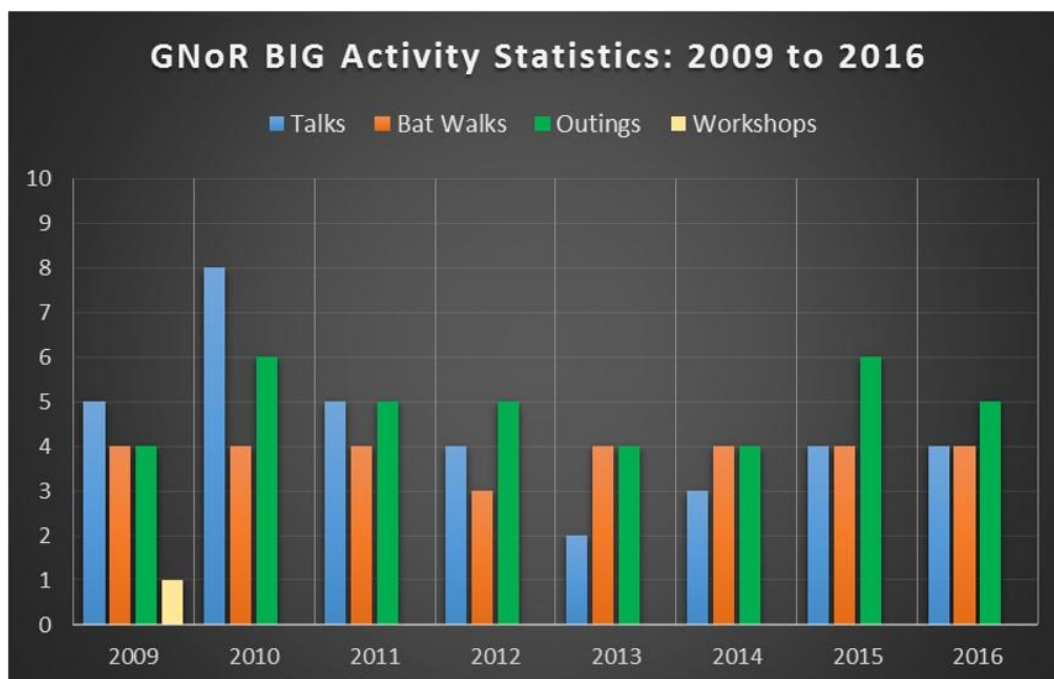
Our normally stagnant May was more active this year with two talks given, one to about twenty people from the **Horticultural Society** and another to a similar sized group from Chartwell.

The activities for the year July 2016 to July 2017 are summarised below:

Aug 16	:	Probus talk (50)
Sep 16	:	Bat Walk Modderfontein (50)
Oct 16	:	Bat Walk Pretoria Botanical Gardens (113)
		Lego League talk (8)
		Der Brochen Project area
Nov 16	:	-
Dec 16	:	Bat Walk JHB Zoo (30) & 50 50 Spervuur
Jan 17	:	Bat Walk Kloofendal Nature Reserve (56)
		Wagendrift
Feb 17	:	Grootgeluk
Mar 17	:	Serendipity
Apr 17	:	Ratho
May 17	:	The Horticultural Society talk (21)
		Chartwell talk (20)

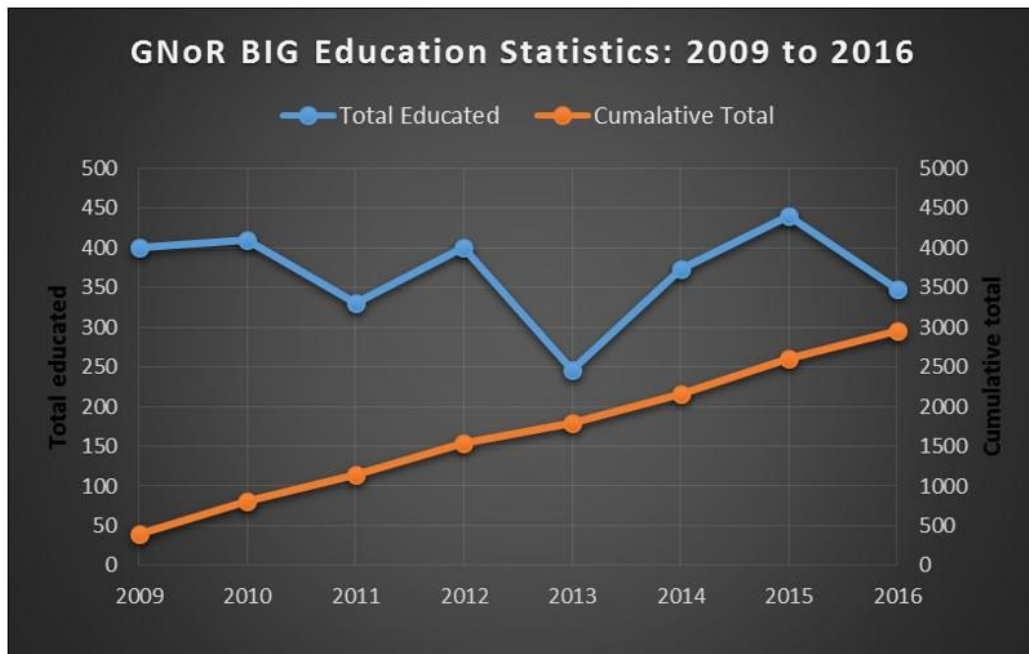
And I must say I was pleasantly surprised to see that we once again had quite a productive year where we averaged at least one event per month and educated many people. This despite my impression that we were a little less organized than previous years, mainly because we only had two committee meetings, when four or more is typical. It seems that with modern communication methods such as email and WhatsApp, together with a well versed and skilled team, quite a lot can be done. That said, I think a bit more face to face time is still in order otherwise certain things due to tend to fall into the cracks after a while.

Our activities for the year are summarised quantitatively in the graph below:



A look at the statistics from previous years shows that the latest compares well with the recent trend and is sustainable. The years 2009 and 2010 I do not believe are good reference points since it seems to me they were from an abnormal period where most likely we were peaking on the enthusiasm of novelty and as a fresh committee. One thing I do note though, is that we have not held a workshop since 2009 and this is often requested by people. The one we held then was quite successful and clearly enjoyed by the participants. Therefore, I think we should try hold another one this year.

And in terms of our primary objective of educating people, the estimated audience numbers are indicated as:



With a total of around 350 people in our audiences this year it is a decent achievement, when compared to previous years. And the cumulative total since 2009 is now around 3000 people.

This of course excludes those reached by the 50/50 show.

Our **membership** number though, is somewhat less impressive at around 36. This does however reflect only those in good standing (paid up) and I expect that if Membership Secretary Erna Balona sends out some timely subscription reminders, the membership should climb to around 50 where it has been stable in the last few years. If not, we have to embark on a membership drive of some sort.

Our **website** continues to function well but renovations are years overdue, frankly something that I have repeatedly failed to arrange.

And the **Facebook** site has gone from semi-stagnation to almost completely stagnant. For this we need to find a custodian that will breathe some life into the site since it can be very useful medium for communicating with large numbers of people.

As has become the standard, we only published two instead of the four **newsletters** we had hoped. But I realised an important reason for this is that we tend to spend a lot of time on it, trying to make it interesting, relevant and up to date, as well as appealing and easy to read. Thus, with the magic touch of the Newsletter Editor Trevor Morgan we produce a quality newsletter, losing some quantity as a consequence.

On the subject of publications, a related matter is the sharing of useful information acquired through GNoR BIG's work, with those who may use it for conservation purposes. Last year we did rather well, publishing a number of articles in the online journal, African Bat Conservation News (ABCN). The intention was that we would continue to do so for some time to come, but it seems that their editors are also struggling to produce four instead of just two journals a year. Thus there have been no new GNoR BIG articles since July 2016. This is a frustrating state of affairs after our good progress, although it is through no fault of our own.

People

As should be clear by now, our continuing success is mainly due to the hard work and skills of our Executive Committee. These ladies and gentlemen have been fundamental to our group and GNoR BIG cannot function without the team.

Unfortunately this year we lose Terrence Scott who has decided that he will never finish his PhD if he remains spread so thinly amongst his many obligations and so has resigned from the committee. Terrence was an important part of the bat walks at the Pretoria Botanical Gardens, but also assisted at other venues as well. His input to the committee was valued, especially when it required the trek from Pretoria to Johannesburg at peak hour traffic times for meetings (something that other committee members Wanda Markotter and Stewart McCulloch continue to do).

He is thus granted an Honourable Discharge for his service ☺

The Executive Committee for 2016-2017:



Other people who must be thanked for their valuable contributions:

Mimi Neumann for creating, managing and maintaining our great website for many years, free of charge. Unfortunately, Mimi is very unwell at the moment and I hope that she is coping well under the burden of ill-health.

Representatives of provincial nature conservation departments - Lihle Dumalisile (Gauteng), and Lientjie Cohen (Mpumalanga), with which we have a good working relationship.

Staff at Pretoria Botanical Gardens and Johannesburg Zoo.

Karin & Steve Spottiswoode and the Friends of Kloofendal.

Pat van Nierop for the opportunities at Modderfontein Reserve.

The non-committee GNoR BIG members that are always so helpful and pleasant to be with at events: Annatjie Barkhuizen and Reinhard with his kids.

Also, to Dawn Cory-Toussaint who through the years has helped our group find great new batting sites.

Thanks to Brian Whiting for once again allowing us to use Winchester Marketing as an excellent AGM venue.

And of course, a great thank you to all the paying members of GNoR BIG that enable the group to achieve a lot and contribute towards the conservation of our bats.

Julio Balona

Aug 2017



Bat News Updates

by Julio Balona

Interesting new research

Survey by stench

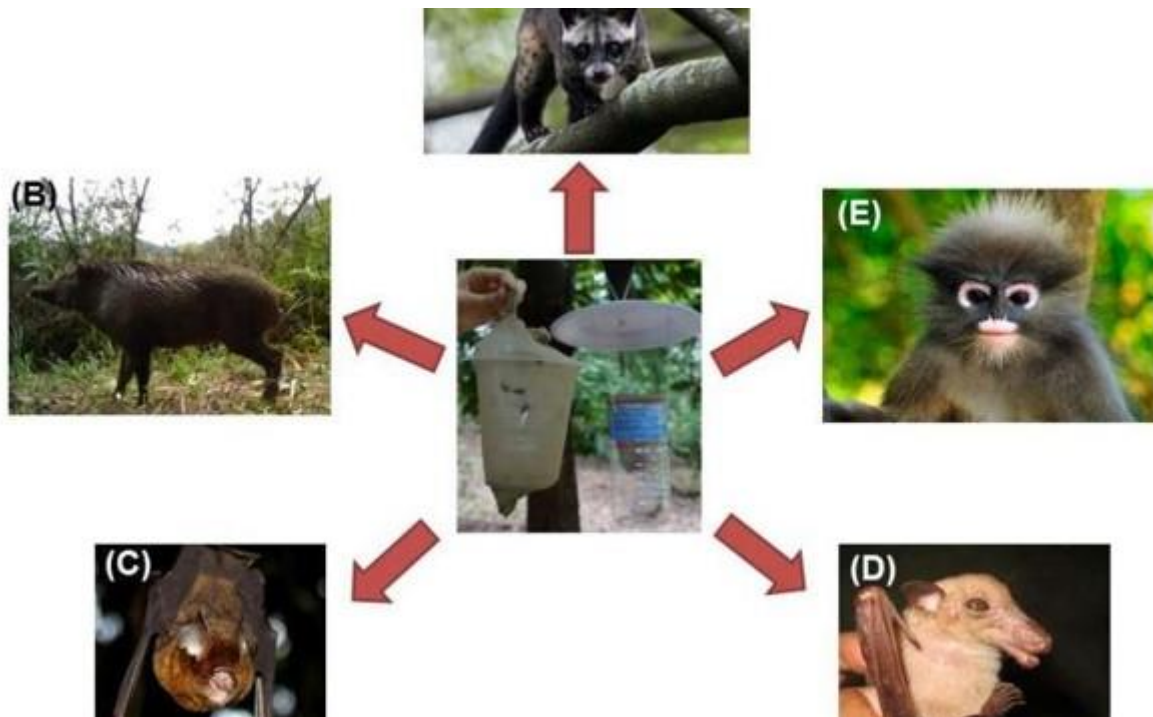
There is a great variety of animal survey methods used by biologists and all have their blind spots. In the bat world for example, mistnets are generally good for vesper and fruit bats but of poor efficacy for the more sophisticated echolocators, for which harp traps are much better suited. But then neither are great for the high flying molossid.

Around 2012 German researchers came up with yet another survey tool: DNA analysis of the gut contents of carrion flies. The principle is that the flies indiscriminately feed on dead animals as well as faeces, located using their extremely keen sense of smell, and are therefore sampling a very wide range of DNA of the local fauna. The flies themselves are caught using baited traps.

The system was tested in Ivory Coast and Madagascar, with good results. More recently, Malaysian scientists further refined the technique.

The latest use of carrion fly surveying took place at the well-known and studied Barro Colorado Island in Panama, specifically targeting mammals. The method actually yielded more species than camera trapping and transects (20 vs. 17 vs. 13, respectively). But a puzzling result was that it missed some abundant species...

The conclusion remains the same: each survey result has its strength and weakness, and a variety of techniques must be utilized to reduce bias.



Blowfly traps (middle) at both Ulu Gombak Forest Reserve and Tembat Forest Reserve detected a total of 11 mammal species, including (A) a common palm civet, (B) a wild boar, (C) a fawn-colored leaf-nosed bat, (D) a long-tongued nectar bat, and (E) a dusky leaf monkey. Credit: (A) Francis Yap, fryap.wordpress.com; (B) own camera trap image at Tembat Forest Reserve; (C) Lim Voon Ching; (D) Khairunnisa Syaripuddin; (E) www.iorise.com.

<https://phys.org/news/2013-01-biologists-carrion-dna-derive-mammalian.html#nRlv>

<https://phys.org/news/2015-12-blowflies-sample-mammal-dna-tool.html>

<https://phys.org/news/2016-06-mammal-dna-guts-blowflies-feasible.html#nRlv>

<https://phys.org/news/2017-07-carrion-flies-survey-tropical-forest.html>

Survey by sanguivore



Starting a hike in Borneo, with my green leech socks.

<https://www.sciencedaily.com/releases/2018/02/180227142103.htm>

Following a similar concept to utilizing blow flies, animal surveys using leeches have also been investigated. This was demonstrated in Vietnam around the same time, and has since been repeated in Bangladesh, Cambodia and China. As anyone who has hiked in the forests of South-East Asia will know, leeches are everywhere on the trails, not just in the water which is the case in most other parts of the world.

Thus, the necessity of wearing of leech socks over your normal socks (basically cloth bags with draw strings tightened over the knee – basically a long bat bag, for which it can substitute). Collection is easy: just stand still: they will arrive shortly.

The other benefit of leeches is that they tend to be indiscriminate, feeding on a range of mammals and also ground-dwelling birds. And one day of collection and subsequent DNA analysis for vertebrates, can yield similar results to months of camera trapping.

Of specific interest, is that they have also managed to extract DNA of a bat (*Hipposideros*), which is not something one would expect due to the tendency of these leeches to be terrestrial.

The scorpion kings

The Pallid Bat (*Antrozus pallidus*) of the arid regions of North America, is a master hunter of a wide range of arthropods, from centipedes to beetles, but sometimes also lizards and rodents.

It is a specialist gleaner, catching its prey on the ground and on foliage, rather than in the air which is more common amongst bats. Hence its predilection for mainly terrestrial creatures.

Of specific interest are its impressive scorpion predation skills. Long suspected of being immune to scorpion stings, this has finally been confirmed by researchers at the University of California.

Using high-speed video, it was clear that when the Pallid Bat attacked the Arizona Bark Scorpion, it was getting stung, but showing no signs of being affected. The scientists went even further by injecting the scorpion venom directly into the bat and amazingly, it was still resistant.



One of our own species the Egyptian slit-faced bat (*Nycteris thebaica*) and probably others in the genus, is a known scorpion hunter. This I can confirm from my own experience in the Kruger National Park from a night roost at my chalet entrance. In the morning I found scorpion stings amongst the usual debris of insect wings and legs. Presumably this bat is also immune to scorpion venom. Also, the Arizona Bark Scorpion is the most venomous in North America but still not as much as some of our own *Parabuthus* species, and I would be curious to know if the Egyptian slit-faced bat feeds on these scorpions.

<https://phys.org/news/2017-08-pallid-unfazed-venom-arizona-bark.html>

Other stuff

The Mexican Fishing Bat

Many bat enthusiasts know of the Greater Bulldog or Fishing bat (*Noctilio leporinus*), which really is a rather magnificent beast. But few are aware of another piscivorous species, the intriguing Mexican Fishing bat. This is actually a kind of *Myotis* (*M. vivesi*) and has the usual long thin tragus. However, its feet are enormous and have long thin claws, an adaption for capturing fish near the water surface. The bat itself is the largest *Myotis* in the New World and occurs only off the coast of Mexico (Baja California).



Unlike other piscivorous bats, its feeds mainly over the ocean. And even more unusual, although it does roost in caves, it will also hide under the piles of rocks resulting from landslides on hills.

Watch this absorbing short video on how a scientist from the USA is tracking this fascinating species and trying to understand its biology:

<https://www.hakaimagazine.com/videos-visuals/mexican-fishing-bats/>





#13

The quiz to test your skills on the identification of southern African bats. The rules are:

- The mystery bat will be from the southern African region as defined by the countries South Africa, Swaziland, Lesotho, Mozambique, Zimbabwe and Namibia.
- It will not be a species that is a rare vagrant to the region (e.g. **Bergman's collared fruit bat**, (*Myonycteris relicta*), although it could be one that is relatively scarce (e.g. **Rüppell's pipistrelle**, *Pipistrellus rueppellii*).
- There may or may not be supplemental information provided (e.g. frequency of bat call, geographical location, forearm size, etc.)

Identification of mystery bat No. 12



Its forearm measured 63mm.

Two aspects are quite obvious with this creature: its protruding tail and its large forward pointing ears.

So clearly it is a molossid (free-tail), of which there are about a dozen species in southern Africa.

To narrow it down to a particular one, we note an additional feature: the fur makes a distinct line or collar at the shoulders. This is found in only two of our species: the **Angolan free-tail** (*Mops condylurus*) and the **Midas free-tail** (*Mops midas*).

The forearm size that has been provided tells us that it is the larger of the two types, a fact that is backed up by the light grey dorsal flecks which are consistent with this species. It is thus a **Midas free-tailed bat** (*Mops midas*).

Can you deduce the name of the beast below?



Location: Free State

Gnor Big Treasurers report for the year 2016/2017

Cash on hand as at 30th June 2017 – Current account R4,457.59 & Call account R25,163.38. Total income for the year was R24,606.22 against expenses of R17,047.48

The club generated a net income for the year of R7,558.74 vs a small profit last year of R3,118.51 – Member Subs increased by R1,024.00 over the previous year. The bulk of our income once again coming in from our bat walks, specifically PTA which is always our best attended venue. A HUGE thank you to the whole committee for their dedication and hard work to achieve this.

Thanks to Trevor, Julio and Erna for the fantastic newsletters and to Erna for the work done on keeping our members updated and ensuring membership fees are received timeously.

GNORBIG Committee

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