

BATS of the Kruger National Park

by John Kinghorn Jnr.

When people travel to the Kruger National Park they mostly go for the bigger animals, the big five or even birds but they always tend to overlook our gorgeous little mammals which play a huge role in keeping a balance in the eco systems within Kruger. The lowveld is home to ±50 species of Bats of which roughly 46 can be found in the Kruger National Park thus giving you no excuse to try your luck at finding these little guys when you do go there!

In this series I will be “travelling” through the park, camp by camp, outlining the species which occur in the various camps as well as where your best chances of finding them are. We will start off in the middle section of the park covering Satara, Olifants and Letaba Rest Camps. This middle section of the park is a mixture of Mopane woodland and Savanna with various water sources around (the main two rivers being the Olifants and the Letaba) thus providing homes to various species of bats, the most common being the following:

- Angolan Free-tailed bat
- Little Free-tailed bat
- Wahlberg’s Epauletted Fruit bat
- Peters’s Epauletted Fruit bat
- Sundevall’s Leaf-nosed bat
- Mauritian Tomb bat
- Yellow Bellied House bat
- Banana bat



Chaerephon pumilus – Little free-tailed bat
Photo: Trevor Morgan

There are a host of various other species which occur in the area as well but we will focus on the species you are most likely to find or encounter.

Letaba Rest Camp:

Letaba is undoubtedly best known for its bat houses. The camp originally had 12 bat houses which were set up to encourage bats to move out of the thatch accommodation; however this simply brought in the Angolan Free-tailed bats which now currently reside in their thousands in every one of the 11 bat houses which still stand.

Unfortunately the houses are falling to pieces due to lack of maintenance and there has already been one colony collapse and bats had to be rehabilitated by FreeMe.

Having said this, recent efforts to erect new houses have been implemented. Letaba still remains one of the most bat rich camps in the entire park.

Angolan Free-tailed bats (*Mops condylurus*) occupy the bat houses and Little Free-tailed bats (*Chaerephon pumilus*) occupy some of the accommodation that hasn't been bat proofed. Yellow Bellied House bat (*Scotophilus dinganii*) can also be found in the thatch

accommodation between the thatch and the wooden poles as in the photo below. Banana bats (*Neoromicia nanus*) can be found in the dead leaves of the palm trees in C circle and can be found in one or two other palms around the camp, particularly towards the luxury tents.

Mauritian Tomb bats (*Taphozous mauritanus*) can also be found on the camp's palm trees in summer and Wahlberg's and Peters's Epauletted Fruit bats (*Epomophorus wahlbergi* and *Epomophorus crypturus*) can be found hanging under the thatch at

the back of the restaurant and under the palm tree leaves at the back of the restaurant (however these bats can only be differentiated by the amount of palatal ridges behind the last molar and handling of bats in Kruger is prohibited thus one cannot confirm which species you are looking at). So in total one can find 7 species of bats fairly easily within this camp which is roughly 14% of the lowveld's bat species, a good tally for one rest camp, especially considering observations are done without catching any bats.



Scotophilus dinganii - Yellow Bellied House bat
Photo: John Kinghorn Jnr



Rhinolophus darlingi - Darling's Horseshoe bat
Photo: John Kinghorn Jnr

Olifants Rest Camp

Olifants is situated on top of a hill along the Olifants River. It provides some awesome Riverine forest and is one of the best places in the park to search for Pels Fishing Owl, however once again, the bats have been overlooked.

Olifants is home to mostly Free-tailed bats (Angolan and Little) and these two species can be found roosting together in mixed roosts or singly in the majority of the thatch accommodation. Olifants has started bat proofing their accommodation now but our furry little friends still manage to find their way in. The best place in the camp to view these free-tails is to stand by the side of restaurant at night and watch them drop from their roost. If you are struggling to find them just use your sense of smell....it will lead you.

Other species in the camp include a Darling's Horseshoe bat (*Rhinolophus darlingi*) roost at Lebombo Guest House (I must just state- this is the first time the roost is being revealed to the public so if you do wish to visit the roost please do not stay for long, after 10-15 seconds of watching them they already start to get very agitated, it is best to leave them be.)

Satara Rest Camp

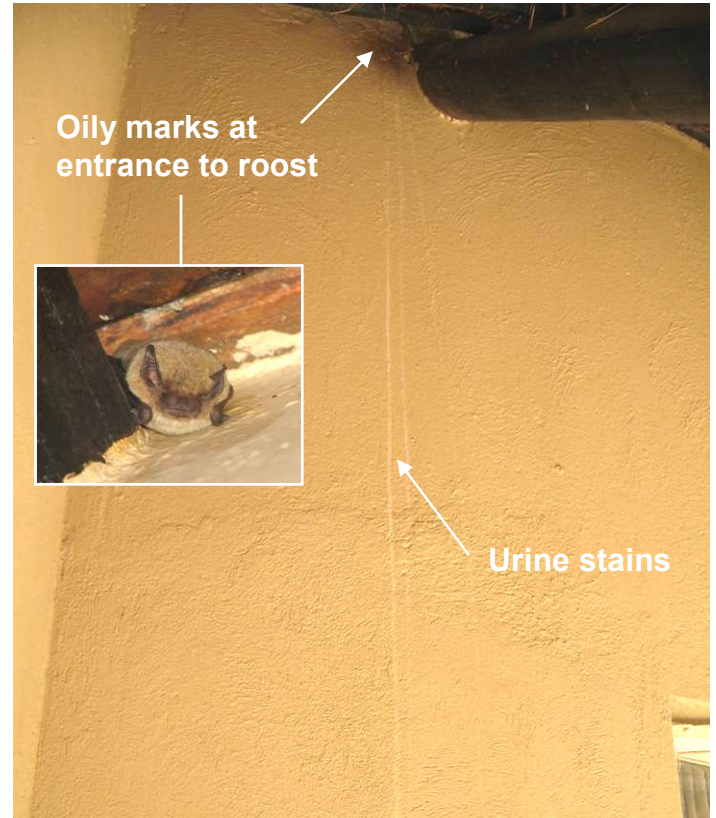
Satara is a very difficult camp with regards to trying to find bats however there have been one or two nice records from the area and the South of the park starting from Satara.

The camp itself is home to Wahlberg's and Peters's Epauletted Fruit bats as well as Yellow Bellied House bat, Mauritian Tomb bat and some sporadic records of Sundevall's Leaf-nosed bat (*Hipposideros caffer*). The usual free-tailed bat species (Angolan and Little) also make an appearance in the thatch accommodation.

The S100 dirt road, just south of Satara, has also produced Egyptian Slit-faced bat (*Nycteris thebaica*) in one of the drainage pipes. It was flushed out due to the heavy rain and roosted on a low hanging branch as it awaited the decline in water levels.

How do you find bats in Kruger?

Finding bats in Kruger is in fact very easy if you know the signs. The most prominent signs are droppings below the roost site as well as urine and oil stains at the entrance of the roost. Photographs depicting both of these are below. Other signs include smell in the case of free-tails. These create a fairly pungent odour when roosting together and are also very noisy, "moaning" at one another throughout the day.



Bat News

by Julio Balona

Cane toad photographed eating bat

Ranger Yufani Olaya snapped this photograph of a cane toad eating a free-tail bat in the Cerros de Amotape National Park, Peru, where he works: <http://www.livescience.com/39917-cane-toad-eats-bat.html>



There is such a thing as a free (tail) lunch..



Bat tower to be rebuilt

In Florida, USA, nearly a hundred years ago, someone had the imagination to build not just a bat house, but a grand bat tower. In 1979 though, some mentally malfunctioning individual burnt it down. Now the plan is to build a replica which could house about 600 000 bats: <http://tbo.com/northeast-tampa/temple-terrace-to-unveil-other-potential-sites-for-bat-tower-20130711/>



Bats & Disease

MERS-CoV (Middle East Respiratory Syndrome Coronavirus)

As some of you will know, a new variant of the dangerous SARS virus emerged in Saudi Arabia around September 2012. So far several dozen people have died.

There was suspicion that the reservoir for this disease is bats and indeed a similar virus was found in European pipistrelles. Then faecal samples from South African bats were analyzed and a bat resembling a Zulu serotine (*Neoromicia zuluensis*) was found to be carrying a virus rather closely related to MERS: http://wwwnc.cdc.gov/eid/article/19/10/13-0946_article.htm

Finally, in August 2013, screening of faecal samples from bats in the area of the one of the first victims, found a 100% match in an Egyptian tomb bat (*Taphozous perforatus*):

<http://www.cidrap.umn.edu/news-perspective/2013/08/mers-cov-found-bat-hunt-other-sources-goes>

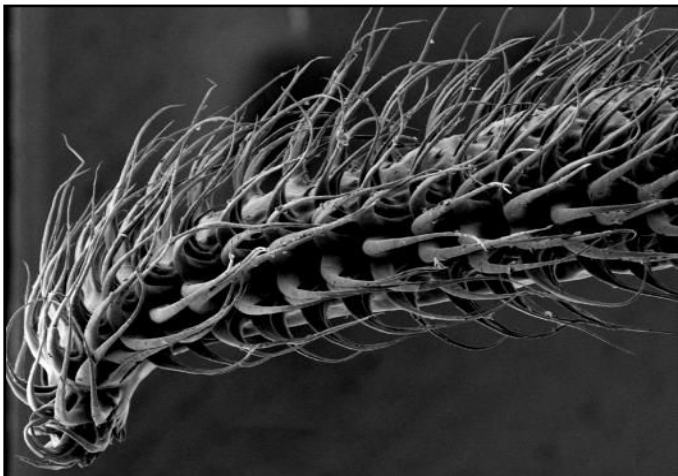
The discovery of this 'smoking gun' is clearly important in saving people's lives. However, it is worrying how often bats are being implicated in the transmission of potentially fatal diseases these days. To a public already fearful of rabies, these additional diseases will not improve the relationship between people and bats.

From the view of bat workers, the news is a sober reminder that rabies is not the only disease of which to be concerned and even a species such as the humble and ubiquitous Cape serotine (*N. capensis*) could be carrying a lethal virus.

Interesting new research

Bats with mops for tongues

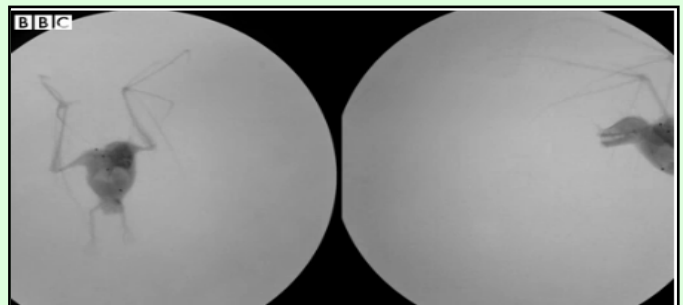
For the first time, using high speed cameras, a researcher at Brown University in the USA has clarified how Pallas's long-tongued bat (*Glossophaga soricina*) manages to slurp nectar. Its tongue has numerous filaments, much like a mop, which engorge with blood, much like a mammal penis, allowing it to absorb the liquid. Read more and watch the fantastic video at: <http://www.popsci.com/science/article/2013-05/weird-hairy-thing-bat-tongue>



The tongue of *Glossophaga soricina* under electron microscope.

X-ray vision of bats in flight

Also from Brown University, an amazing X-ray video of a fruit bat in flight, revealing the benefit of flexible triceps and biceps: <http://www.bbc.co.uk/news/science-environment-23187407>



Chairman's Report for 2012 to 2013

The year reviewed

So finally we are of legal drinking age. GNoRBIG has now been in existence for eighteen years, including the initial period when we were still the Gauteng Bat Interest Group (GBIG).

Last year's activities are listed at right:

Discussion points:

- Our August 2012 trip to the Doornfontein and Monate private nature reserves was rather eventful. Firstly, we had our first confirmed case of a Rabies related virus (Duvenhage) in a bat.

This was a wake up call for us and served as a reminder that although dangerous diseases in bats are quite rare (as we keep informing the public), they do occur and we as bat workers are at a higher risk than others. Fortunately we were alert to the possibility and acted correctly when the signs were evident. We also followed all the right precautionary procedures once the infection was confirmed in the bat: anyone that might have handled the bat was quickly informed and went for post-exposure treatment. And those that had some contact with the bat had all been vaccinated against Rabies.

Because of danger to bat workers we distributed a 'press release' explaining what happened and the signs that made us suspicious. By sharing this information we avoided any false rumours about the incident, reminded many of those at risk not to be complacent and indicated possible danger signs to look for. Furthermore, if it prevents any deaths it will have a significant bat conservation impact since just one incident would create negative publicity for our bats and undo years of work educating the public.

The second notable aspect of this outing was rather more positive in that we discovered that the old mine tunnels at Monate are excellent sites for bats. We recorded nine species which would make this roost one of the richest in the country. Amongst them the Critically Endangered *Clootis percivali*, which is an important find for conservation of this species.

- We were fortunate to be given an opportunity to do weekend bat survey at Borakalo National Park. As far as I know this is the first bat work that has been done in the park and now there are six species on their mammal list through our work.
- There were only about ten people in the audience for our talk at the Hoogland Hydro Spa near Hennops River. However the next day we had some luck when we took them to a cave with about three thousand *Miniopterus natalensis* and managed to capture one that was wearing a band. We later found out that it had been banded by our very own Werner Marais twenty kilometers away at Irene Cave about a year before.
- We returned to Thabaphaswa private nature reserve after our first visit there seven years ago. This time we had better equipment and were more experienced, adding several species to the list including *Rhinolophus smithersi*.

We also gave a talk to an enthusiastic and interested group of locals.

Activities for 2012/2013

| | | |
|--------|---|---|
| Aug 12 | : | Talk Pta North Bird Club Doornfontein & Monate |
| Sep 12 | : | Talk ladies group |
| Oct 12 | : | Borakalalo N. P. Talk Hoogland Hydro Spa |
| Nov 12 | : | Bat Walk JHB Zoo |
| Dec 12 | : | Thabaphaswa 1 + Talk |
| Jan 13 | : | Bat Walk Kloofendal Nature Reserve |
| Feb 13 | : | Thabaphaswa 2 |
| Mar 13 | : | Bat Walk Pretoria Botanical Gardens |
| Apr 13 | : | Rockydrift |
| May 13 | : | - |
| Jun 13 | : | - |
| Jul 13 | : | AGM |

- Our bat walk at the Pretoria Botanical Gardens was surely our biggest ever with an attendance of about 220 people.
- The outing to Rockydrift nature reserve near Machadodorp yielded only four species but this was expected as this is not a particularly rich area for bats. We choose destinations like this sometimes as a result of our philosophy of trying to survey areas where no work has been done before in order to help fill in the gaps in the distribution maps.



So overall, the impression is that it has been a standard productive year for GNoRBIG.

For a more precise, quantitative assessment of GNoRBIG's performance over 2012/2013, it is useful to compare some figures with those of previous years. The table below gives an annual breakdown of the various events held since 2009. For each, an estimate has been made of the number of people reached as public education is our primary function.

| 2009/2010 | 2010/2011 | 2011/2012 | 2012/2013 |
|----------------|-------------|-------------|-------------|
| 5 Talks | 8 Talks | 5 Talks | 4 Talks |
| 100 | 200 | 145 | 90 |
| 4 Bat Walks | 4 Bat Walks | 4 Bat Walks | 3 Bat Walks |
| 275 | 210 | 185 | 310 |
| 4 Outings | 6 Outings | 5 Outings | 5 Outings |
| 1 Bat Workshop | | | |
| 25 | | | |
| <hr/> 400 | <hr/> 410 | <hr/> 330 | <hr/> 400 |

This year we only gave four talks, whereas we have previously given at least five. In last year's Chairman's Report I explained that we never advertise to give talks, otherwise we would not be able to keep up with the demand. So all the talks we do are through invitation. However it seems that for the first time such an approach was insufficient.

We also fell short on our bat walks by doing three instead of the usual four. Fortunately due to the massive turnout at the Pretoria Botanical Gardens, the total number of people educated in 2012/2013 still tallied about four hundred which compares favourably with previous years.

Our two other main activities have been the supply of free advice to the public, and the compilation of newsletters. In terms of the former, there is nothing in particular that stood out this year. In producing newsletters, we once again only managed two versus the requisite four which is actually a challenge to achieve every year. However our newsletters continue to be of high quality. They are informative and very professionally done thanks to the talents of our Newsletter Editor, Trevor Morgan.

Our most important communication medium, our well managed website, continues to do good work although it is due for some revision.

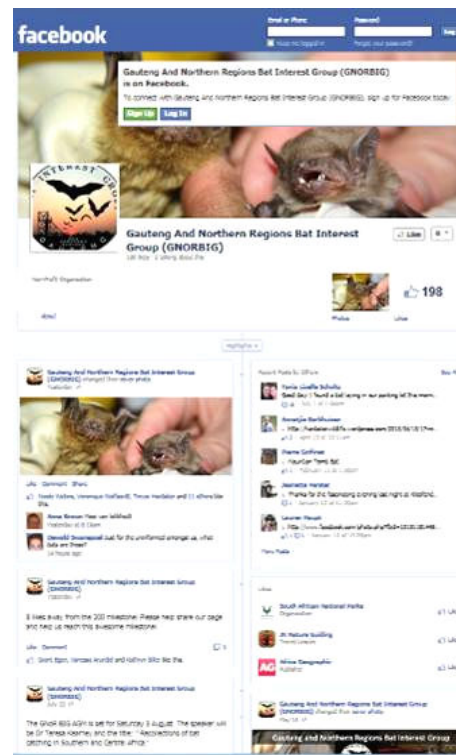
Also an important interface is our Facebook page which was set up about eighteen months ago and is run by John Kinghorn Jnr. who holds the portfolio of Education on the Executive Committee. All our events are advertised on this site and it is working well.

The membership total has remained stable at about fifty people.

Although there is not much that has been problematic this year, it is worth reviewing the two main challenges we usually face, namely outing attendance and the effective distribution of our data.

Although one outing was poorly attended, two others had unusually large groups so that overall this was not an issue.

And in terms of distributing our data in way that can benefit bat conservation, this has actually gone well this time around. Firstly, we made a valuable contribution by sharing information on our Rabies encounter to the wider bat community. Secondly, we supplied Borakalalo National Park with its first bat list. Lastly, in recent years through our work we have discovered *Clootis percivali* at several new locations and I have just submitted a paper describing these findings to a scientific publication. So hopefully within a few months for the first time GNoRBIG's work will be published in a reputable journal.



Future

In the coming year, we will be less passive about opportunities to give talks so that we can make sure we do at least five.

We have booked four bat walks including a second one at Pretoria Botanical Gardens since it is a popular venue.

For our outings we have a good balance of near and far destinations planned.

Coming up we have a day drip to Venterskroon (outside Parys) on the September 24 holiday where there are some nice old mine tunnels. In November we will venture to Masibekela which is a potentially bat rich area near the Swaziland border and is in need of survey work. Due to the distance this one will require at least a day's leave to make it a long weekend unfortunately.

In December there will be an outing in the Olifants River valley outside Witbank. This is another of those areas that have been under studied and although it is not likely to harbour a great variety of bats, it is at least closer to home.

In January we will visit Yzermyn, a farm near Piet Retief where there are good numbers of bats in old mine tunnels and the possibility of catching an interesting species. Accommodation at Yzermyn will be free but there are no facilities whatsoever.

Finally, next year we plan to use the April long weekend for destination further afield where the batting is better. At this stage it will either be to Lekgalameetse Nature Reserve in Limpopo (probably our richest bat cave), or somewhere in the Eastern Cape Transkei area.

| 2013 | | | | | 2014 | | | | | | | |
|--------|-----------|--------------|------------|----------|-----------------------------|----------|----------------|-------|--------------------------|--------------|----|---|
| August | September | October | November | December | January | February | March | April | | | | |
| | | 1 | | | | | | 1 | | | | |
| | | 2 | | | 1 | • | | 2 | | | | |
| 1 | | 3 | | | 2 | | | 3 | | | | |
| 2 | | 4 | 1 | | 3 | | | 4 | | | | |
| 3 | | 5 | • Pta Bot. | 2 | • Masibikela Komatipoort | 1 | Olifants River | 4 | 1 | • Kloofendal | 5 | |
| 4 | 1 | 6 | | 3 | 1 | | | 5 | 2 | | 6 | |
| 5 | 2 | 7 | | 4 | 2 | | | 6 | 3 | | 7 | |
| 6 | • | 3 | | 5 | 3 | • | | 7 | 4 | | 8 | |
| 7 | 4 | 9 | | 6 | 4 | | | 8 | 5 | | 9 | |
| 8 | 5 | • | | 7 | 5 | | | 9 | 6 | | 10 | |
| 9 | 6 | | | 8 | 6 | | | 10 | 7 | | 11 | |
| 10 | 7 | | | 9 | 7 | | | 11 | 8 | | 12 | |
| 11 | 8 | | | 10 | 8 | | | 12 | 9 | | 13 | |
| 12 | 9 | | | 11 | 9 | | | 13 | 10 | | 14 | |
| 13 | 10 | | | 12 | 10 | | | 14 | 11 | | 15 | • |
| 14 | 11 | | | 13 | 11 | | | 15 | 12 | | 16 | |
| 15 | 12 | | | 14 | 12 | | | 16 | • | | 17 | |
| 16 | 13 | | | 15 | 13 | | | 17 | 14 | | 18 | |
| 17 | 14 | | | 16 | 14 | | | 18 | 15 | • | 19 | |
| 18 | 15 | | | 17 | 15 | | | 19 | 16 | • | 20 | |
| 19 | 16 | | | 18 | 16 | | | 20 | 17 | | 21 | |
| 20 | 17 | | | 19 | 17 | • | | 21 | 18 | | 22 | |
| 21 | • | 18 | | 20 | 18 | | | 22 | 19 | | 23 | |
| 22 | 19 | • | | 21 | 19 | | | 23 | 20 | | 24 | |
| 23 | 20 | | | 22 | 20 | | | 24 | 21 | | 25 | |
| 24 | 21 | | | 23 | 21 | | | 25 | 22 | | 26 | • |
| 25 | 22 | | | 24 | 22 | | | 26 | Yzermyn (Piet Retief) | | 27 | • |
| 26 | 23 | | | 25 | 23 | | | 27 | | | 28 | • |
| 27 | 24 | Venterskroon | | 26 | 24 | | | 28 | | | 29 | • |
| 28 | 25 | | | 27 | 25 | | | 29 | | | 30 | |
| 29 | 26 | | | 28 | 26 | | | 30 | • | | 27 | |
| 30 | 27 | | | 29 | 27 | | | 31 | | | 28 | |
| 31 | JHB Zoo | | | 30 | 28 | | | | | | 29 | • |
| | | | | | 29 | | | | | | 30 | • |
| | | | | | 30 | | | | | | 31 | |

People

Every year in my report and AGM address, I try to find different ways to do the same thing which is to express my appreciation for and to emphasize the value of our Executive Committee. By now it should be clear that without the hard work and dedication of these people (all in their spare time), the continued productivity and success of GNoRBIG would not be possible. For this they warrant special recognition and gratitude.

Every year I also point out that a committee that changes little over the years is a good sign, indicating stability and that the team works well together. And I make the same joke that the reason it pleases me so much is that I do not have to change my slide for the chairman's address every year. Well two gentlemen, Stewart McCulloch and Terence Scott, both Masters students in Virology at the University of Pretoria, derailed my laziness this time by joining the committee shortly after the last AGM. Both are a welcome addition and are serving under the portfolio of Sponsorship/Fund Raising. Together with the rest of the committee, an important task this year will be for us to identify a project worthy of financial backing. This is not as easy to do as many would think, largely due to the limited availability of our most important resource – free time.

GNoR BIG Executive Committee



GNoR BIG Executive Committee for 2012/2013

Other people who must be thanked for their worthy contributions:

Mimi Neumann for the saintly work of maintaining and managing our invaluable website free of charge.

Representatives of the various nature conservation departments - Lihle Dumalisile (Gauteng), Stan Rodgers (Limpopo), John Power (North West) and especially Lientjie Cohen (Mpumalanga) – all of whom facilitate the crucial necessity of obtaining batting permits, and assist in other ways.

Staff at Pretoria Botanical Gardens and Johannesburg Zoo.

The energetic Karin Spottiswoode and the Friends of Kloofendal.

The bat scientists, namely Peter Taylor, Ara Monadjem, Teresa Kearney, Leigh Richards and Corrie Schoeman, for their continued support, feedback and exchange of information.

The non-committee GNoR BIG members that are so often willing to help at events and are such enthusiastic participants at our outings. These are the Cory Toussaint family, the Barkhuizen and the Kinghorns.

A special vote of appreciation to Brian Whiting for once again allowing us to use Winchester Marketing as an excellent AGM venue.

Finally, thank you to the paying members of GNoR BIG themselves without which our great group would not exist.

Julio Balona
Aug 2013

Gnor Big Treasurers report for the year 2012/2013



Cash on hand as at 30th June 2013: Current account R844.10, Investec Bank R24,364.83 & Call account R1,800.57.
Total income for the year was R1,3955.20 against expenses of R12,624.22. The group generated a net income for the year of R1,330.98 vs a small profit last year of R345.78 – Member Subscriptions were down on the previous year. The bulk of our income once again coming in from our bat walks. A HUGE thank you to the whole committee for their dedication and hard work to achieve this with a special mention to Wanda for the great

success of the Pretoria Bat walk your effort on this is greatly appreciated.

Noticeably there was no income from Bat talks – man power to hold these is sorely needed.

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

New equipment purchased this year was Bat Mist nets amounting to R 2,865.00 which were badly needed

Without our website we would not be able to offer our members or the public the service we do so from me a huge thank you once again to Mimi.



More Bat News

Moths with defensive dirty bits

It has been known for some time that certain moths take varying forms of evasive action when foraging bats are encountered. For example, they may suddenly start flying erratically. Another method is to send out their own ultrasonic clicks which either jam those of the bats or warn them of the moth's unpalatability. New research has demonstrated this behaviour in some hawkmoth species in Borneo, but with the interesting twist that the sounds are emitted by rubbing their genitals against their abdomens:

<http://www.natureworldnews.com/articles/2784/20130703/moths-use-genitals-defend-against-bat-attacks-video.htm>

Bat map

Using thousands of call recordings, researchers in the UK have produced the first detailed, large-scale bat distribution maps of a region. The maps of an area known as the Lake District have revealed much useful information such as previously unknown habitat preferences of the Noctule bat:

<http://www.bbc.co.uk/news/science-environment-23148612>

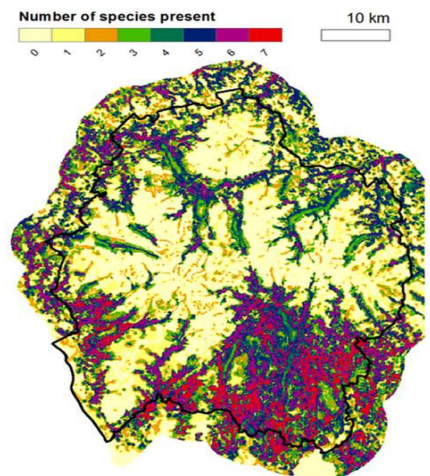
Of course, the basis for the whole project is the accurate identification of bats from their calls alone. This has apparently only become possible in the UK in recent years. Here in Africa, we are still a long way off from such a possibility.

Identifying bats from wing beat frequency

A research group in the UK are looking at identifying bats by monitoring their wing beat frequency in flight using high speed infra red cameras:

<http://phys.org/news/2013-10-vision.html>

Details given are sparse, but the idea is interesting and novel.



Species density map of Lake District, UK.

Harmless garden bird? Think again.....

Although published back in 2009, I only stumbled upon this enlightening paper recently: <http://rsbl.royalsocietypublishing.org/content/6/1/59.full.pdf>

It describes some grisly behaviour of the seemingly harmless Great Tit (*Parus major*). In Hungary, this species hunts for hibernating Pipistrelle bats in crevices, to kill and eat them, during winter when food is scarce.

Note: Should you seek more information on this bird, make sure SafeSearch is on if Googling for 'Great Tits' ...



Wiki Great Tit (*Parus major*).

Not a megaphone but a hearing aid

The Spix's disc-winged bat (*Thyroptera tricolor*) from Costa Rica roosts in cylindrically unfurling leaves in the same way our Banana bats do. Researchers wondered if the conical shape of the leaf tube aids the transmission of sound for a roosting bat calling others. Although they found that there was in fact no real amplification, they discovered that reverse process was improved - roosting bats could hear their flying mates significantly better: <http://www.livescience.com/40429-speak-up-costa-rican-bats-use-leaves-as-hearing-aids.html>

Bats & Wind Turbines

Wind Power Company fined for eagle deaths

On another continent, far far away, known as North America, something approaching environmental justice was meted out. Duke Energy Renewables was fined \$1m for the death of fourteen Golden eagles at their wind turbine sites in Wyoming. And they have now installed radar technology to detect eagles flying nearby: <http://www.earthtechling.com/2013/07/wind-bird-debate-flares-with-new-fatality-figure/>

Seems pigs can fly..but they should watch out for turbine blades.

Bats at sea

A recently released report for the Bureau of Ocean Energy Management in the USA, describes the methodology and results from three years of detecting bats in offshore environments off their north eastern coast, revealing that bats are indeed active offshore:

http://nawindpower.com/e107_plugins/content/content.php?content.11948

This is actually not the first time time offshore bat activity has been documented. Similar findings were reported from a study in southern Scandinavia in 2007:

<https://www.wind-watch.org/documents/bats-and-offshore-wind-turbines-studied-in-southern-scandinavia/>

Other stuff



Foraging bats filmed with thermal camera

The use of technology seems to be dominating bat news lately. Watch new footage of foraging bats over water, filmed with a thermal camera: <http://www.bbc.co.uk/nature/24269057>

The article also describes ten other intriguing wildlife revelations obtained with thermal cameras, including the apparent phenomenon that rabid bats have cooler faces than their uninfected cohorts:

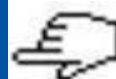
<http://news.nationalgeographic.com/news/2012/12/121219-bats-rabies-temperature-animals-science/>

GNORBIG.website:

www.batsgauteng.org.za

GNORBIG

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Costa Rica bat conference

In August last year, the biggest bat conference ever was held in Costa Rica. There were nearly 650 attendants from about 50 countries. As expected, there was much discussion on current hot topics such as wind turbines and white nose syndrome, but also some novel research and ideas. For instance, the hypothesis that the unusual structure of some bats faces is linked to touch and smell reception. Amongst the delegates was our own Samantha Naidoo who gave a well received talk on the effects of waste water pollution on Banana bats.

http://www.ticotimes.net/More-news/News-Briefs/Costa-Rica-hosts-largest-ever-bat-conference_Sunday-August-18-2013



Bat conference delegates, Richard Laval, center-right, and Bernal Rodriguez, far right, two top bat researchers in Central America. Dr. Corrie Schoeman lurks on the side, probably pondering the preponderance of Phyllostomid bats in South America.... And no, I don't know who the other dude is, but he looks happy.



Sac of sexy stink

The male Greater sac-winged bat (*Saccopteryx bilineata*) of South and Central America, has a terribly unsavoury habit from the human point of view: it fills a pouch (sac) on its wing with a mixture of fluids from its genitals...Then by flapping its wings in front of a female this perfume is emanated and is apparently appealing to her...there is no accounting for taste, is there... <http://www.bbc.com/future/story/20131104-natures-grossest-perfume/1>
The sac itself is a rather unusual appendage and superficially resembles a sea shell:



Wiki Greater sac-winged bat (*Saccopteryx*)



Wiki Strange sac of the Greater sac-winged bat.

The name of the Beast

No. 5

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. 4



Once again, this bat is clearly one of the members of that group that are dastardly difficult to differentiate – the little brown jobs. And this lady is cheekily showing the thumbs down to our efforts to identify her. But therein she has revealed herself: only one of our species has such swollen thumb pads, the **Banana bat (*Neoromicia nana*)**.

Presumably these pads function as some sort of suction cup or perhaps simply a kind of foot that helps them gain purchase in the smooth rolled up banana leaves in which they roost.

Mystery bat No. 5

Can you deduce the name of the beast below?



Its forearm measured 55mm.

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Merchandise

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| <p>Baseball caps R60 each</p> | <p>'Bats' T-shirt with 'Bat Food' on back Black or Navy Blue R90</p> |
| <p>Various 'Bat' T-shirts R80</p> | |
| <p>Sticker R8</p> | <p>Bat jewelry R20</p> |
| | <p>Echoes of the night CD R50</p> |
| <p>'Be kind to bats', Kids T-shirt Black or Navy R55</p> | <p>'Fruit Bat' T-shirt R75</p> |
| | <p>'Gentle Friends' T-shirt Blue or Green R65</p> |