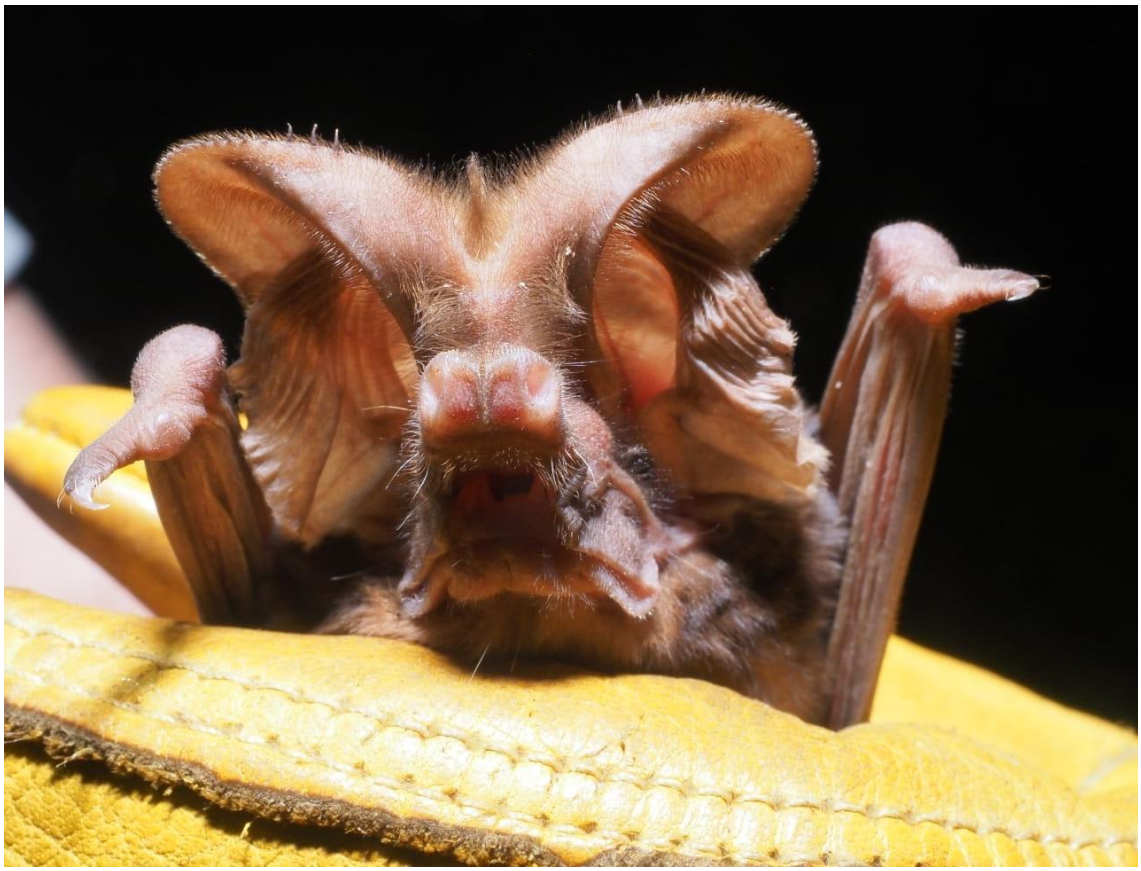
Monthly Report

March 2025



Large-eared free-tailed bat (*Otomops martiensseni*)

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Habitat Disturbance on Bat Populations

By Felix Tuff, ABC PhD Student

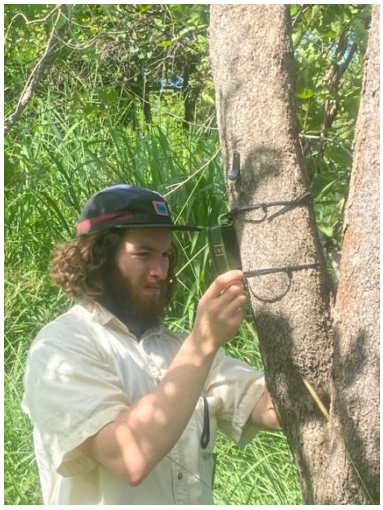

Figure 1. PhD Student Felix Tuff setting up one of the acoustic detectors.

The ABC team visited the wonderful Kuti Wildlife Reserve from March 17th to March 20th 2025 to complete bat surveys in and around the reserve.

The surveys during this period were conducted in support of Felix Tuff's PhD research, which is investigating the impacts of habitat disturbance on bat populations by combining ecological and genomic methods. Felix is based at the University of Bath in the UK, and completing his research in partnership with ABC (Figure 1).

This research will identify how bat species diversity and activity are influenced by disturbance, species at particular risk from habitat loss, and landscape features contributing to population and genetic connectivity. Results from this study will be critical in informing landscape management decisions and can provide a basis for reforestation initiatives.

We employed passive acoustic monitoring (PAM) methods, using static bat detectors (Figure 2), to understand bat diversity and activity levels at sites that spanned a habitat disturbance gradient. This comprised four sites, in order of increasing disturbance these were: Kuti Wildlife Reserve, the reserve edge, Maonga, and Katelera. For the genetic component of the study, we caught bats at two locations within the reserve and collected tissue samples.

All detectors successfully recorded for the survey period and are awaiting sound analysis.

We caught a total of 11 bats comprising at least six species including a rare striped leaf-nosed bat (*Macronycteris vittatus*). All bats were successfully processed and released without complication.

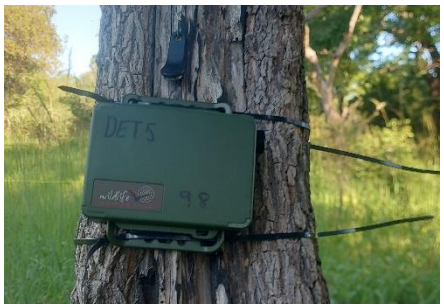

Figure 2. One of the acoustic detectors deployed for monitoring bats activity.

Following analysis, the results of this research will help distinguish habitat features of importance to bat diversity and population connectivity. This

information can be used to guide land management decisions and inform reforestation initiatives.

New Bat Species Recorded for Kuti Wildlife Reserve

By Luisa Auletta, Senior Research Assistant

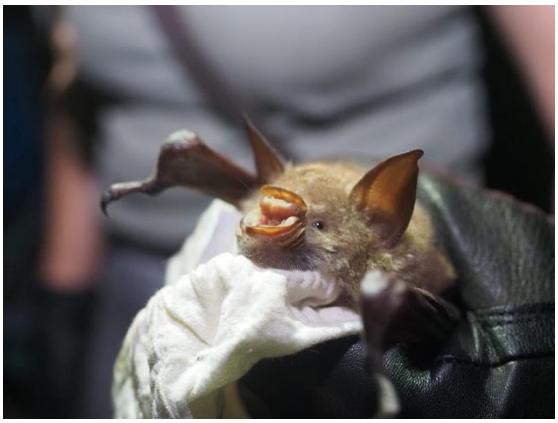

Figure 3. *Macronycteris vittatus*.

The ABC team has had the privilege of working multiple times in the scenic Kuti Wildlife Reserve, a savanna woodland ecosystem renowned for its rich biodiversity and striking landscapes. Each opportunity to return is welcomed with enthusiasm, and the team is always grateful for the continued support of the Kuti management.

In February, the team spent several weeks in the reserve supporting a research project led by student Lewis Absalom, investigating the impact of artificial lighting on bat communities. More recently, the team returned to Kuti for a few days as part of fieldwork for PhD student Felix's project, which focuses on how bat activity is influenced by various forms of disturbance. In addition to deploying acoustic detectors across multiple sites in and around the reserve, this study also involves the trapping of bats for species identification and the collection of biological samples.

It was during the first night of trapping that the team made an exciting discovery: a bat species not previously recorded in the reserve. The individual captured was identified as *Macronycteris vittatus*, a species of roundleaf bat (Figure 3).

Macronycteris vittatus, formerly classified under the genus *Hipposideros*, is listed as Near Threatened on the IUCN Red List. The species is known to inhabit dry forests and savanna habitats, roosting in caves and other sheltered locations. While it is relatively widespread in parts of eastern and southern Africa, it faces increasing pressure from habitat degradation and human disturbance. Its presence in Kuti Wildlife Reserve is a positive indicator of the area's ecological value and reinforces the importance of ongoing conservation and research efforts within protected areas.

We extend our sincere thanks to the Kuti management team for their continued hospitality and for facilitating our research. Their collaboration is

invaluable in helping to document and conserve the bat diversity of this important reserve.

First Bat Surveys for ABC in Ntchisi Forest Reserve!

By Luisa Auletta, Senior Research Assistant

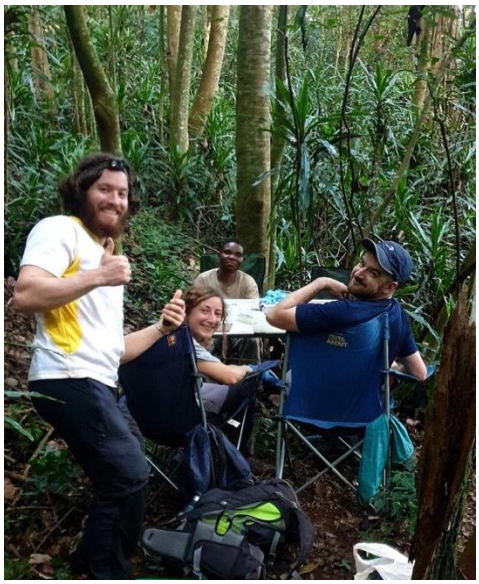

Figure 4. ABC team ready for trapping for the first time in Ntchisi Forest Reserve.

March was an exciting and productive month for the ABC team—not only because of the opportunity to support PhD student Felix with his project on bat disturbance ecology, but also due to the chance to work in several forest reserves across Malawi where the organisation had not previously conducted bat trapping. One of the highlights was a visit to Ntchisi Forest Reserve, a well-preserved rainforest located just a few hours from Lilongwe. It was the first time the current ABC team had the opportunity to work in such a lush and biodiverse environment (Figure 4).

During one of the trapping nights, the team made a fascinating observation: the main road cutting through Ntchisi Forest appears to serve as a corridor for bat movement. Within less than an hour of netting, a notable number of individuals were captured, indicating high bat activity in the area.

Among the species recorded that evening were *Rhinolophus blasii* and *Myonycteris angolensis*—both ecologically significant. However, the most remarkable captures of the night were two individuals of *Otomops martiensseni*, a species none of the team members had previously encountered, and one never before recorded by ABC.

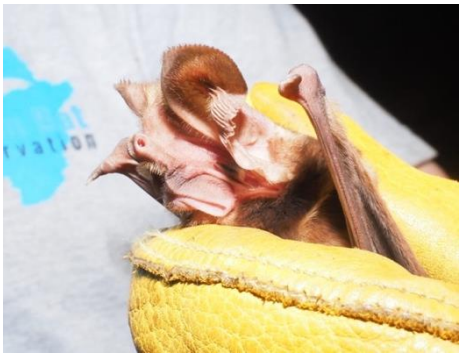

Figure 5. Otomops martiensseni

Otomops martiensseni, commonly known as the large-eared free-tailed bat, belongs to the Molossidae family (Figure 5). It is a high-flying, insectivorous bat typically found in montane and lowland forests, and is known to roost in caves, large trees, and sometimes buildings. According to the IUCN Red List, this species is currently listed as Vulnerable, primarily due to habitat loss and disturbance at its roosting sites. Its detection

in Ntchisi adds valuable information to its known distribution and highlights the ecological importance of this forest reserve as a potential refuge for threatened bat species.

This represents a significant milestone for ABC, marking the first time this species has been recorded in the organisation's history. It also underscores the conservation value of continued bat monitoring in under-surveyed habitats like Ntchisi.

We extend our sincere thanks to the management team of Ntchisi Forest Lodge for their generous hospitality and for facilitating our research in the remarkable setting of the rainforest.

Summary of Work

Bat surveys carried out in March 2025

Date	Type	Site code	Location	Total bats caught	Species caught / encountered
05/03/2025	PhD project	DZ01	Dzalanyama	-	-
13/03/2025	PhD project	LLWKU09	Lilongwe	11	*Epomophorus labiatus*, *Epomophorus wahlbergi*, *Hipposideros* (A), Vesper (A)
18/03/2025	PhD project	KTMI10	Kuti	6	*Macronycteris vittata*, *Nycticeinops schlieffeni*, *Rhinolophus fumigatus*, Vesper (A)
19/03/2025	PhD project	KTMI9	Kuti	6	*Scotophilus dinganii*, Vesper (A)
26/03/2025	PhD project	NT01	Ntchisi	7	*Myonycteris angolensis*, *Rhinolophus blasii*, *Rhinolophus clivosus*
27/03/2025	PhD project	NT01.1	Ntchisi	17	*Myonycteris angolensis*, *Otomops martiensseni*, *Rhinolophus blasii*, *Scotophilus dinganii*, Vesper (A), Vespertilionidae sp.

Biosamples collected March 2025

Date	Survey type	Sample type	Site code	Location	No. samples	From which species
13/03/2025	PhD project	Wing punch	LLWKU09	Lilongwe	11	*Epomophorus labiatus*, *Epomophorus wahlbergi*, *Hipposideros* (A), Vesper (A)
13/03/2025	PhD project	Hair	LLWKU09	Lilongwe	11	*Epomophorus labiatus*, *Epomophorus wahlbergi*, *Hipposideros* (A), Vesper (A)
13/03/2025	PhD project	Faecal	LLWKU09	Lilongwe	2	*Epomophorus wahlbergi*, Vesper (A)
13/03/2025	PhD project	Parasite	LLWKU09	Lilongwe	1	*Epomophorus labiatus*
18/03/2025	PhD project	Wing punch	KTM10	Kuti	5	*Macronycteris vittata*, *Nycticeinops schlieffeni*, *Rhinolophus fumigatus*, Vesper (A)
18/03/2025	PhD project	Hair	KTM10	Kuti	5	*Macronycteris vittata*, *Nycticeinops schlieffeni*, *Rhinolophus fumigatus*, Vesper (A)
19/03/2025	PhD project	Wing punch	KTMI9	Kuti	5	*Scotophilus dinganii*, Vesper (A)
19/03/2025	PhD project	Hair	KTMI9	Kuti	5	*Scotophilus dinganii*, Vesper (A)
19/03/2025	PhD project	Faecal	KTMI9	Kuti	4	Vesper (A)
26/03/2025	PhD project	Wing punch	NT01	Ntchisi	6	*Rhinolophus blasii*
26/03/2025	PhD project	Hair	NT01	Ntchisi	6	*Rhinolophus blasii*
26/03/2025	PhD project	Faecal	NT01	Ntchisi	4	*Rhinolophus blasii*

26/03/2025	PhD project	Parasite	NT01	Ntchisi	4	*Myonycteris angolensis*, *Rhinolophus blasii*
27/03/2025	PhD project	Wing punch	NT01.1	Ntchisi	15	*Myonycteris angolensis*, *Otomops martiensseni*, *Rhinolophus blasii*, *Scotophilus dinganii*, Vesper (A)
27/03/2025	PhD project	Hair	NT01.1	Ntchisi	15	*Myonycteris angolensis*, *Otomops martiensseni*, *Rhinolophus blasii*, *Scotophilus dinganii*, Vesper (A)
27/03/2025	PhD project	Faecal	NT01.1	Ntchisi	8	*Myonycteris angolensis*, *Rhinolophus blasii*, Vesper (A)
27/03/2025	PhD project	Parasite	NT01.1	Ntchisi	5	*Myonycteris angolensis*, *Otomops martiensseni*, *Rhinolophus blasii*

Acoustic samples collected March 2025

Date	Survey type	Site code	Location	Total no. recordings	Species caught / encountered
13/03/2025	PhD project	LLWKU09	Lilongwe	1	*Hipposideros* (A)
18/03/2025	PhD project	KTMI10	Kuti	10	*Macronycteris vittata*, *Nycticeinops schlieffeni*, *Rhinolophus fumigatus*, Vesper (A)
19/03/2025	PhD project	KTMI9	Kuti	5	*Scotophilus dinganii*, Vesper (A)
26/03/2025	PhD project	NT01	Ntchisi	5	*Rhinolophus blasii*, *Rhinolophus clivosus*
27/03/2025	PhD project	NT01.1	Ntchisi	8	*Otomops martiensseni*, *Rhinolophus blasii*, *Scotophilus dinganii*, Vesper (A)

Helpline calls received March 2025

Date	Type	Location	Details
09/03/2025	Phone call	Lilongwe – Likuni	Homeowner was calling to ask whether ABC could exclude the bats in his house.

Total events / leaflets distributed March 2025

Date	Type	Location (incl. district)	Total people	Materials distributed	Outcomes
06/03/2025	PhD project	Dzalanyama Forest Lodge	-	25 leaflets + 10 posters	Visited Dzalanyama Forest Lodge in March whilst undertaking fieldwork for Felix Tuff's PhD project. ABC left leaflets and posters for staff to distribute to guests.

ABC Project Species List

Latin Name	Common Name	Liwonde NP	Lilongwe City	Nyika NP	Vwaza Marsh	Kasungu NP	Kuti WR & Salima	Other
Afronycteris nana	Banana bat	X	X	X	X		X	X
Chaerephon sp.	Free-tailed bats	X	X		X	X	X	X
Chaerephon ansorgei	Ansorge's free-tailed bat	X						
Chaerephon pumilus	Little free-tailed bat	X	X		X	X	X	X
Eidolon helvum	Straw-coloured fruit bat		X					X
Epomophorus crypturus	Peters's epauletted fruit bat	X	X		X	X	X	X
Epomophorus sp.	Epauletted bats	X	X		X	X	X	X
Epomophorus dobsonii	Dobson's epauletted fruit bat		X		X			
Epomophorus labiatus	Little epauletted fruit bat	X	X		X	X	X	X
Epomophorus wahlbergi	Wahlberg's epauletted fruit bat	X	X		X		X	X
Eptesicus hottentotus	Long-tailed serotine	X						
Glauconycteris variegata	Variegated butterfly bat	X	X		X		X	X
Hipposideros sp.	Roundleaf bats	X	X		X	X	X	X
Hipposideros caffer	Sundevall's leaf-nosed bat	X	X		X	X	X	X
Hipposideros ruber	Noack's leaf-nosed bat	X						
Kerivoula lanosa	Lesser woolly bat				X			
Laephotis sp.		X	X		X	X	X	X
Laephotis botswanae	Botswana long-eared bat	X	X		X	X	X	X
Macronycteris gigas	Giant leaf-nosed bat		X					X
Macronycteris vittatus	Striped leaf-nosed bat						X	
Mimetillus thomasi	Thomas's flat headed bat	X			X			
Miniopterus sp.	long-fingered bats	X			X			X
Miniopterus inflatus		X						
Miniopterus natalensis		X						X
Mops sp.	Free-tailed bats	X	X		X	X	X	X
Mops condylurus	Angolan free-tailed bat	X	X		X	X	X	X
Mops niveiventer	White-bellied free-tailed bat	X	X		X			X
Myonycteris angolensis	Angolan Rousette							X
Myopterus whilteyi		X						

Myotis bocagii	Rufous myotis	X	X		X			X
Myotis tricolor	Temminck's myotis	X			X			X
Myotis welwitschii	Welwitsch's myotis	X	X					
Neoromicia sp.*	Pipistrelles	X	X		X	X	X	X
Neoromicia capensis		X	X					
Neoromicia rendalli	Rendall's serotine	X			X			
Neoromicia zuluensis						X		
Nycteris sp.	Slit-faced bats	X	X		X		X	X
Nycteris arge	Bates's slit-faced bat				X			
Nycteris grandis	Large slit-faced bat	X						
Nycteris hispida	Hairy slit-faced bat				X		X	
Nycteris macrotis	Large-eared slit-faced bat	X	X				X	
Nycteris nana		X						
Nycteris thebaica	Egyptian slit faced bat	X	X		X		X	
Nycticeinops schlieffeni	Schlieffen's twighlight bat	X	X		X	X	X	X
Otomops martiensseni	Large-eared free-tailed bat							X
Pipistrellus sp.*	Pipistrelles	X	X	X	X			X
Pipistrellus anchietae			X					
Pipistrellus grandidieri		X						X
Pipistrellus hesperidus		X						
Pipistrellus rueppellii	Ruppell's pipistrelle	X			X		X	
Rhinolophus sp.*	Horseshoe bats	X	X		X	X	X	X
Rhinolophus blasii	Blasius horseshoe bat							X
Rhinolophus clivosus	Geoffroy's horseshoe bat		X					X
Rhinolophus darlingi	Darling's horseshoe bat							X
Rhinolophus fumigatus	Ruppell's horseshoe bat	X	X			X	X	
Rhinolophus hildebrandtii	Hildebrandt's horseshoe bat	X	X		X		X	
Rhinolophus lobatus	Lander's horseshoe bat						X	
Rousettus aegyptiacus	Egyptian rousette	X						
Rousettus lanosus	Hairy rousette			X				
Scotoecus albofuscus	Light-winged lesser house bat	X						
Scotoecus hirundo	Dark-winged lesser house bat	X	X		X		X	X
Scotophilus sp.		X	X		X	X	X	X
Scotophilus dinganii	Yellow-bellied house bat	X	X		X	X	X	X
Scotophilus leucogaster	White-bellied house bat	X	X			X		X
Scotophilus nigrita	Giant yellow house bat	X						

Scotophilus viridis	Green house bat	X	X				X	
Tadarida aegyptica	Egyptian free-tailed bat		X					X
Tadarida ventralis	Giant free-tailed bat							X
Taphozous mauritianus	Mauritian tomb bat	X	X		X	X	X	
Triaenops persicus	Persian trident bat	X	X					X

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