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Inside this issue:

Above: Adult female Angolan free-tailed bat (*Mops condylurus* (A. Smith 1833)) caught at Mlawula Nature Reserve, Swaziland, 4 February 2006.

Download sites for ABCN:

www.Africanbats.org

http://flyingfur.typepad.com/abcn/abcn.html

Notes from the Editor:

For two years African Bat Conservation News has not had a permanent home on the world wide web. Valerie Craig and the flying fur website have been kind enough to support the newsletter, and we hope that this will continue into the future, especially as a back-up. Things are about to change with the registration of the domain name Africanbats.org and the establishment of a website (still under construction when going to press) that will allow individuals to subscribe/unsubscribe to ABCN. The website will also be used to facilitate access to tools and resources relating to African bats (e.g. interactive identification keys and species distribution maps presented as downloadable shape files with associated information on voucher specimens used in the plotting of the distribution). Software tools will be used to record various statistics on the use of the website, to gauge the impact of ABCN around the world. From correspondence it would appear many of the users and readers of ABCN are not from Africa, and work on bats elsewhere in the world. If this is the case alternative means, other than the world wide web, might be investigated for the disseminate of African bat related resources and tools within African.

It is encouraging that two organizations involved with research on bats in Africa (All Out and Durban Natural Science Museum) have endorsed the newsletter (see new logos above under the newsletter name). The All Out Africa Research Unit, based in Swaziland and working under the guidance of Dr Ara Monadjem (University of Swaziland) uses volunteers to assist with research activities in Swaziland (see Research & Conservation article on pg 2) and Mozambique. At the Durban Natural Science Museum, the Mammalogist, Dr Peter Taylor, has many and varied bat research interests, most recently working with Dr Steve Goodman on Malagasy-African free-tailed bats and co-supervising eight related masters projects, and with Dr Paul Bates (Harrison Institute) setting up an Asian-African bat taxonomy network. Dr Taylor has also authored a book on South African bats, and was involved in the establishment of the first bat group in South Africa (Durban Bat Interest Group now called Bats KZN). It is hoped that short articles and reports on the activities of these organizations will become a regular feature in the newsletter.

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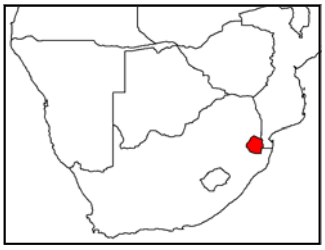
RESEARCH AND CONSERVATION

BATS RESEARCH IN SWAZILAND

By: April Reside, All Out Africa Research Unit, Department of Biological Sciences, University of Swaziland, Private Bag 4, Kwaluseni, Swaziland. E-mail: ara@uniswacc.uniswa.sz .



Above: April Reside

Bats have been a main focus of Ara Monadjem's research team in conjunction with the conservation organisation All Out (www.all-out.org). The projects include ongoing work on the Common Slit-faced Bat (*Nycteris thebaica*), a community study and collecting echolocation call recordings for a bat call library.

The *Nycteris* work is in two parts, firstly looking at recruitment, survival and roost fidelity of individuals in a population that inhabits road culverts in and around Mlawula Nature Reserve (see "Research on survival and movements of the Common Slit-faced bat (*Nycteris thebaica*) in north-eastern Swaziland" ABCN 1). This work has been ongoing for 8 years and some interesting patterns of sex differences in recapture has emerged. The other *Nycteris* work is a behavioural study looking at home range, day- and night-roost use and foraging with the use of radio telemetry. Eleven individuals have been radio tracked over a period of six months. Roosts have included warthog burrows, artificial structures and caves. Most individuals appear loyal to a small foraging area, but may use a number of roosts.

The community study is examining the importance of riparian areas for bat activity, by comparing riparian sites to the neighbouring savanna. Ground nets, canopy nets and a harp trap are set for half-nights in a standard design. The riparian sites have greater species richness and greater levels of bat activity than the savanna. Most noticeably, one species of fruit bat (suborder Megachiroptera) Wahlberg's Epauletted Fruit Bat (*Epomophorus wahlbergi*), is frequently encountered in the riparian sites but rarely in the savanna. There also seems to be a seasonal difference in bat activity, with the summer and autumn months showing greater levels of activity than those of winter and spring. This is also true of invertebrate activity, though based only on the bycatch in the nets!

Above: Ara Monadjem

Echolocation calls have been collected using an Anabat detector to create a call library.

Above: View into Mlawula Nature Reserve.

Above: Grant Daniels, one of the volunteers from All Out.

This library will be used to identify calls detected from free-flying individuals so that non-invasive bat surveys can be conducted.

Such a survey would be used in conjunction with the current netting studies, and be especially useful for detecting the presence and activity levels of high flying species that are rarely caught under the canopy. For species with constant frequency calls both hand-held and release calls have been taken, while only release calls have been taken for individuals with frequency-modulated calls.

The work has been conducted with international volunteers from All Out Projects. In addition to the volunteers, All Out Projects also provide logistical and financial support to the research. The bat work is ongoing and we welcome any interested parties to join us in the field here in Swaziland.

Above: Common Slit-faced bat (*Nycteris thebaica*).

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SCIENTIFIC CONTRIBUTIONS

African Bat Conservation News publishes brief notes concerning the biology of bats, new geographical distributions (preferably at least 100 km from the nearest previously published record), sparsely annotated species lists resulting from local surveys including roost counts and echolocation and sonograms of bat species occurring on the African continent and adjacent regions, including the Arabian peninsula, Madagascar, and other surrounding islands in the Indian and Atlantic oceans.

PHOTOGRAPHIC RECORD OF A MAURITIAN TOMB BAT TAPHOZOUS MAURITIANUS E. GEOFFROY SAINT-HILAIRE, 1818 (EMBALLONURIDAE) FROM MOGALE CITY (GAUTENG, SOUTH AFRICA)

By: Stephan Du Toit, Environmental Law & Auditing, Mogale City Local Municipality, P.O. Box 94, Krugersdorp, 1740, South Africa: Email: stephant@mogalecity.gov.za.

Keywords: *Taphozous mauritianus*, distribution, Gauteng, grassland biome.

A sheath tailed bat (Emballonuridae Gervais, 1856) (Figures 1 and 2) was caught by the author at Coronation Park office complex, Mogale City (previously known as Krugersdorp), Gauteng, South Africa (S26.10527; E27.78169 (WGS84)), on 8 December 2005 at 09h25. The individual was found roosting against the wall under the roof overlay (see Figure 3). The individual was a very agile climber, moving rapidly along the face brick walls before it was caught. After being caught the individual was photographed and then released at the same place it was caught. Unfortunately, the sex and external measurements (e.g. forearm length and mass) of the individual were not recorded. When released the bat flew off in an easterly direction towards a dense stand of Blue Gum trees (*Eucalyptus* sp.) about 80 m away, at which point the author lost sight of it. The author has worked in the Krugersdorp / Magaliesburg area since August 1994 and has never before observed this species in the area.

Three species of Sheath tailed bats (Emballonuridae) are known to occur within the southern African subregion (TAYLOR 2000, SKINNER and CHIMIMBA 2005): the African sheath-tailed bat, *Coleura afra* (Peters, 1852); the Mauritian tomb bat, *Taphozous mauritianus* E. Geoffroy-Saint-Hilaire, 1818; and the Egyptian tomb bat, *T. perforatus* E. Geoffroy Saint-Hilaire, 1818). The individual caught was identified as the Mauritian tomb bat (*T. mauritianus*), as it had a pure white belly (Figure 2) and off white wing membranes (Figures 1 and 2). Whereas, the Egyptian tomb bat (*T. perforatus*) has under parts that "…are lighter than the upper parts, the throat and neck brown, the remainder light brown washed with ashy-grey, with some white hairs on the lower belly" (SKINNER and CHIMIMBA 2005) and "..outer two-thirds of the wing membranes are white, the inner third blackish" (SKINNER and

Figure 1: Dorsal surface view of a Mauritian tomb bat (*T. mauritianus*) found at an office complex in Mogale City, Gauteng, South Africa (S26.10527; E27.78169, showing the off white wing membranes.

Figure 2: White belly that distinguished this individual as a Mauritian tomb bat (*T. mauritianus*) .

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CHIMIMBA 2005). And, the African sheath-tailed bat (*Coleura afra*) are "brown in colour, the under parts slightly lighter than the upper parts, the wing membranes a translucent light brown" (SKINNER and CHIMIMBA 2005).

Specimen records in the mammal collection of the Transvaal Museum (TM) (see Appendix 1) indicate *Taphazous mauritianus* has been recorded from four other localities in the Gauteng province, and two other localities in close proximity to Gauteng, in North West and Mpumalanga Provinces (Figure 4). SKINNER and CHIMIMBA (2005) indicate that *T. mauritianus* are associated predominantly with open savanna woodland. The present record places the species 35 km within the grassland biome (RUTHERFORD and WESTFORD 1994). At present there is no evidence to suggest that this species has taken up any long term roost sites within the grassland biome, and is most likely that the individual caught was a vagrant, but further investigation is needed to rule this out.

Figure 3: Author capturing a Mauritian tomb bat (*T. mauritianus)* from its roost site against the wall under a roof overlay.

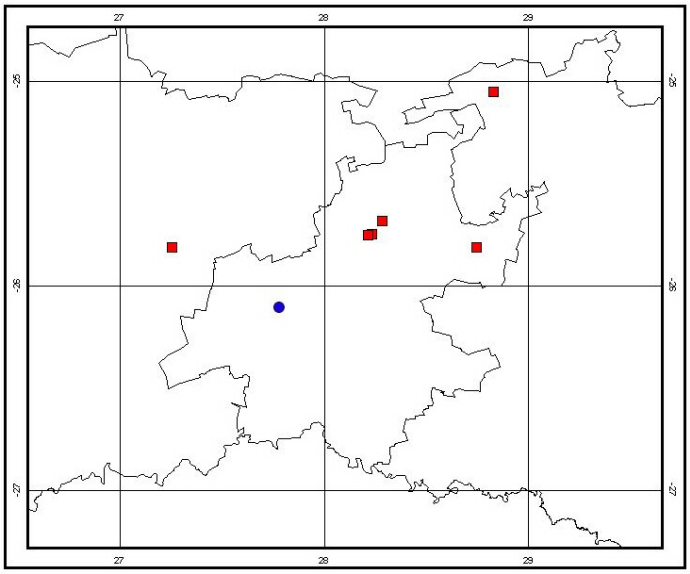

Figure 4: Distribution of *Taphozous mauritianus* in Gauteng, North West and Mpumalanga Provinces. = previously known museum records (see Appendix 1), = the new locality reported in this article.

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Appendix 1

SOUTH AFRICA: GAUTENG: Bronkhorstspruit (25°49'S 28°45'E) - TM 17502; Pretoria, Hatfield, Hatfield Primary School (25°44'46"S 28°14'21"E) - TM 13104, TM 13117, TM 13436; Pretoria, Derdepoort (ca. 25°40'50"S 28°17'20"E) - TM 12446, TM 13444, TM 13445; Pretoria, Lynnwood (25°45'S 28°13'E) - TM 41636. MPUMALANGA: near Roosenekal, Luipershoek (25°03'S 28°50'E) - TM 41432. NORTH-WEST: 19 km S Rustenberg, Farm: Olifantspoort 328 (syn. Retiefkloof) (25o48'S 27o15'E) - TM 19531.

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THE FIRST OBSERVATION OF *MYZOPODA SP.* (MYZOPODIDAE) ROOSTING IN WESTERN MADAGASCAR

By: Amyot F. Kofoky[1, 2], Daudet Andriafidison[1,2], Hanta Julie Razafimanahaka[1, 3], Roseline L. Rampilamanana[2] and Richard K. B. Jenkins[1, 4]

[1]Madagasikara Voakajy, B.P. 5181, Antananarivo (101), Madagascar. Email ramanavy@wanadoo.mg
[2]Département de Biologie Animale, Faculté des Sciences, Université d'Antananarivo, B.P. 906, Antananarivo (101), Madagascar.
[3]Département Eaux et Forêts, Ecole Supérieure des Sciences Agronomiques, Université d'Antananarivo, B.P. 175, Antananarivo (101), Madagascar. [4]School of Biological Sciences, University of Aberdeen, Aberdeen AB24 2TZ, UK

Email address: amyot320@yahoo.fr (AFK)

Key words: *Myzopoda*, roost, cave, western Madagascar

Myzopodidae is an endemic family to Madagascar and is currently considered to be monospecific (SCHLIEMANN and GOODMAN 2003). *Myzopoda aurita* (MILNE-EDWARDS and GRANDIDIER, 1878) is a long-eared microchiropteran with distinctive adhesive suckers on the thumb and sole (SCHLIEMANN and MAAS, 1978). This species was formerly listed as 'vulnerable' because of habitat loss (HUTSON *et al*. 2001), but in the 2005 Global Mammal Assessment workshop in Antananarivo, Madagascar, it was provisionally classed as 'least concern' because of its reported association with degraded habitats and unpublished accounts of high local population abundance. It is known to occur in the eastern side of the island, at elevations up to 900 m. Individuals have been captured in relatively intact humid and littoral forests, agricultural areas, and near marsh habitats. An observation in 1947 (reported in SCHLIEMANN and MAAS, 1978) of an individual inside an uncoiled leaf of the Traveler's tree (*Ravenala madagascariensis*, Family Strelitziaceae) and observations by GÖPFERT and WASSERTHAL (1995) of a captive bat roosting head up on such leaves are the only published accounts of its roosting ecology and have been used to infer a close association with broad-leaved plants (SCHLIEMANN and GOODMAN 2003). We report here on the first known roosting site of *Myzopoda* sp. in western Madagascar, which in this case was in a cave. The taxonomic status of this population is currently under review (GOODMAN, *et al.*, submitted); hence, we refer to it as "*Myzopoda* sp." herein.

On 13 October 2004 our team surveyed Andriabe Cave in the Parc National de Namoroka, Province de Mahajanga, western Madagascar (16° 24' 30.6'' S, 045° 18' 39.5'' E, 5 km south of Namoroka village). The habitat surrounding the cave site is dry deciduous forest resting on exposed limestone and dominated by karst habitat. The cave contains several different chambers and has a total length of 30 m, width of 15 m, and average height of 18 m (Figure 1). At 12h00 a colony of four *Myzopoda* sp. was found roosting 15 m from the

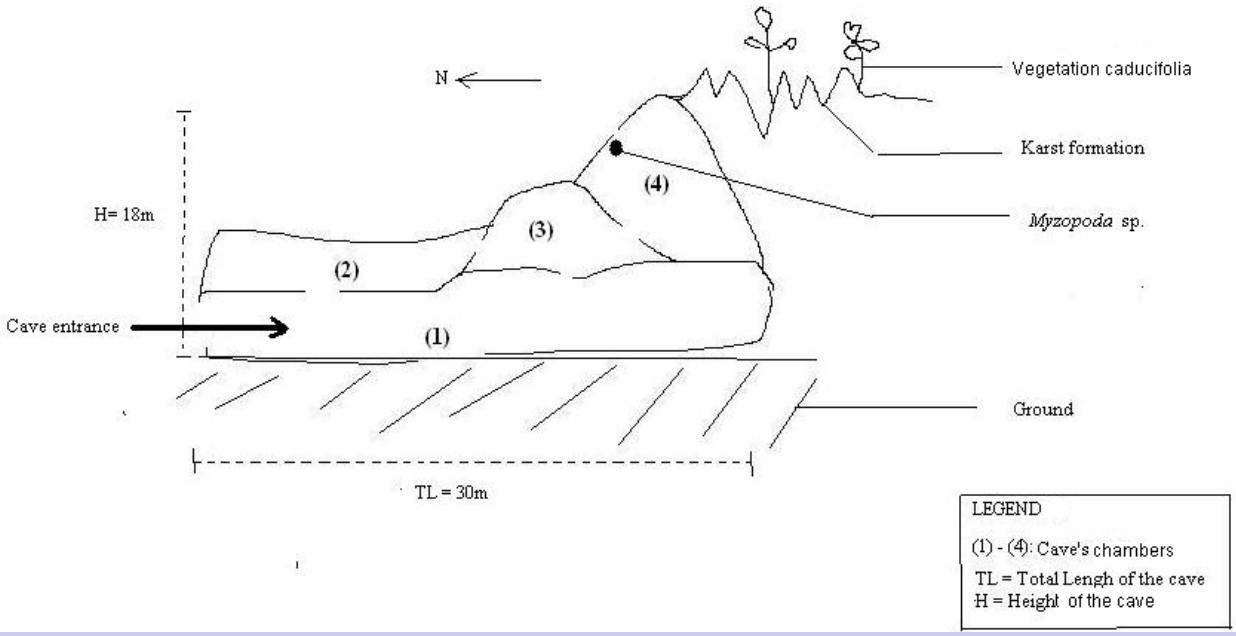

Figure 1: Sketch map of Andriabe Cave and placement of the *Myzopoda* roost.

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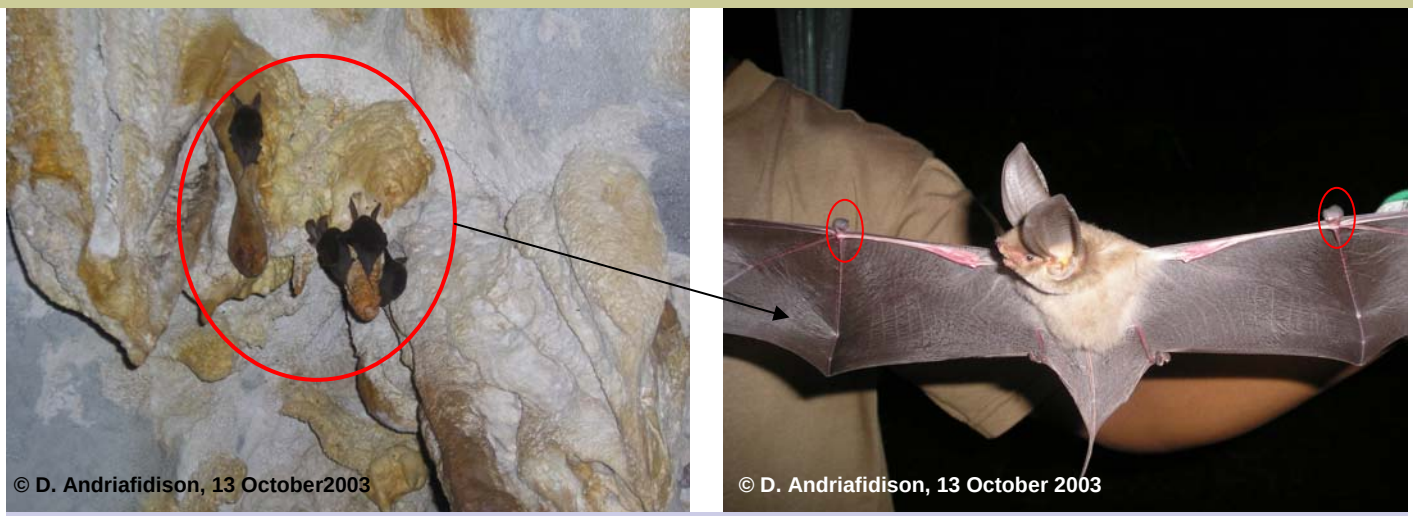

Figure 2: Left – Four individuals of *Myzopoda* sp. roosting in a cave. Right - *Myzopoda* sp. showing the wing suckers.

ground in a dark part of the cave, about 20 m from the entrance, and were easily approached without provoking disturbance. They were first located at a distance of 6 m from the observer and all were roosting in a vertical position against the cave wall, with their heads up (Figure 2). It was our impression that the bats at this point had not been distressed by our presence and they were in their natural roosting positions. On closer approach, the animals started to vertically climb the rock face, but it was not possible to determine the extent to which the claws or sucker-pads were being used. Subsequently, all four bats were captured with a hand net and consisted of three females (two with large mammae) and a male with large descended testes. Two individuals were collected as voucher specimens (an adult female RBJ 203 and an adult male RBJ 204) as allowed by the permit issued by the Ministre de l' Environnement, Eaux et Forêt (Permit # 139, 5/7/04), which were deposited in the collections of the Department of Animal Biology, University of Antananarivo, Madagascar.

An extensive bat survey of western Madagascar found no *Myzopoda* sp. roosting inside caves (GOODMAN *et al*. 2005). Furthermore, members of this genus were not found on a previous visit to the Andriabe Cave on 26-27 September 2003 (F. RATRIMOMANARIVO pers. comm.). On the basis of these new observations, it is clear that more information is required on the roosting ecology of *Myzopoda*. The presence of a *Myzopoda* in the western Parc National d'Ankarafantsika (GOODMAN *et al*. 2005), a deciduous forest without caves or exposed rock outcrops, suggests that western individuals are not restricted to cave roost sites and may share certain roosting preferences with the eastern *M. aurita.*

ACKNOWLEDGEMENTS

For funding our fieldwork, we are grateful to the Darwin Initiative, Rufford Small Grants, and the Conservation, Food and Health Foundation. For issuing permits for this research we thank the Ministre de l' Environnement, Eaux et Forêt and Association Nationale pour la Gestion des Aires Protégées. Thanks also to the Parc National de Namoroka's management staff. We are also grateful to Steven Goodman and Paul Racey for comments on the manuscript, and the former for taxonomic advice.

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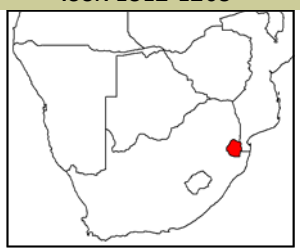
LONGEVITY AND MOVEMENT OF THE COMMON SLIT-FACED BAT *NYCTERIS THEBAICA*



By: Ara Monadjem, All Out Africa Research Unit, Department of Biological Sciences, University of Swaziland, Private Bag 4, Kwaluseni, Swaziland. E-mail: ara@uniswacc.uniswa.sz .

The common slit-faced bat *Nycteris thebaica* E. Geoffroy Saint-Hilaire, 1818 is widespread in Africa where it is associated with savanna habitats (SKINNER and SMITHERS 1990; TAYLOR 2000). The species is gregarious and may roost in colonies of up to hundreds of individuals. In Swaziland, *Nycteris thebaica* occupies a variety of day roosts such as road culverts, antbear burrows and caves (MONADJEM 1998). A population of this species has been studied in north-eastern Swaziland (MONADJEM 2001; 2004; in press) where 1413 individuals have been banded between 1998 and 2006. This paper reports on interesting longevity and movement information on *Nycteris thebaica* that has come to light as a result of this banding study.

Individual G5635 was banded on 5th October 1998, whilst individuals G5798 and G5799 were banded on 6th December 1999; all as adults. The first individual would have been born, at the latest, in December 1997 while the other two would have been born, at the latest, in December 1998. All three were recaptured on 20th January 2006, making them at least 8 and 7 years old, respectively. This is the highest longevity reported for this species, but is not surprising as earlier observations indicated that 23% of individuals had survived at least 5 years (MONADJEM in press). This still falls short of the African longevity record of *Miniopterus schreibersii natalensis* which has been shown to survive at least 13 years in South Africa (VAN DER MERWE 1989). However, long-term studies in northern temperate regions have shown five species of bats to survive over 30 years of age (WILKINSON and SOUTH 2002); including *Myotis brandti, Myotis lucifugus, Myotis blythii, Rhinolophus ferrumequinum* and *Plecotus auritus*. The current world longevity record for a wild bat is a 38 year old *Myotis brandti* in Siberia (KHRITANKOV and OVODOV 2001).

On 13th October 2003 a pregnant female was banded with the ring number DM0934 in a culvert at Mlawula Nature Reserve. This individual was reported dead on 4th July 2005 at Sandleni near Hlatikulu by a member of the public (M. Ogg), 107 km to the south-west of where it was originally banded (Fig. 1).

This observation is interesting because *Nycteris thebaica* is not known to migrate or to perform any regular long-distance movements. Since this individual was banded as a pregnant adult at Mlawula, this movement cannot be explained by post-natal dispersal. Bat numbers vary greatly with season (A. Monadjem, unpublished data), suggesting that some movement is taking place to and from the Mlawula roost site. Whether this is in the form of irregular and random movements, or migration is not known but further banding studies may shed light on this.

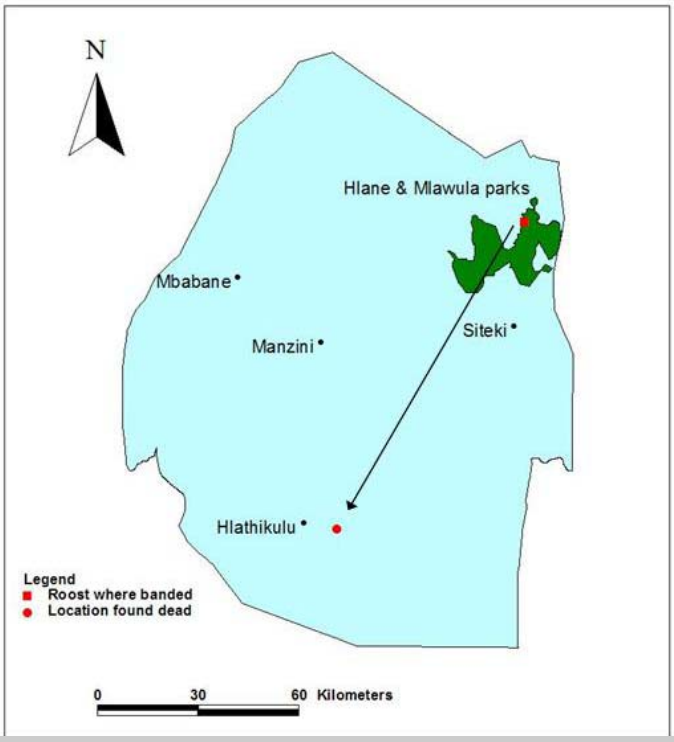


Figure 1: Map of Swaziland showing movement of the *Nycteris thebaica* individual DM0934, which was banded at Mlawula and recovered dead near Hlathikulu.

ACKNOWLEDGEMENTS

This is the 4th Communication of the All Out Africa Research Unit (www.all-out.org). Thanks to Mike Ogg and his daughter Bianca for finding and then reporting the dead bat.

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BAT SURVEY IN MONTAGNE DES FRANÇAIS, ANTSIRANANA, NORTHERN MADAGASCAR (6 APRIL - 14 DECEMBER 2005)

By: Janine E. Robinson, Neil C. D'Cruze, Jeffrey S. Dawson, Katie E. Green.
Frontier: The Society for Environmental Exploration, 50 - 53 Rivington Street, London, EC2A 3QP, info@frontier.ac.uk.

Keywords: *Emballonura* nov. sp, *Hipposideros commersoni, Miniopterus gleni, Miniopterus manavi, Myotis goudoti, Pteropus rufus, Rousettus madagascariensis*, *Triaenops auritus,* Montagne des Français.

A total of 29 species of bat have been reported for the dry forest portions of Madagascar, 14 of which are known from the protected areas of Ankarana and Analamera in the extreme north of the island (EGER and MITCHEL 2003; GOODMAN *et al.* 2005a; GOODMAN *et al.* 2005b). We sampled one new location, Montagne des Français, a limestone massif in the northern portion of the Antsiranana Province and confirmed the presence of eight species of bats (two Megachiroptera and six Microchiroptera).

The altitude of Montagne des Français ranges between 100 and 450 masl and is characterised by a mosaic of caves, canyons and corridors. As part of the dry bioclimatic zone defined by CORNET (1974), it is subject to very marked seasonal variation, with a distinct and relatively long dry season followed by a short wet season lasting from December to April. The annual precipitation of this location is most likely higher than that received in the town of Antsiranana, which has a mean of 980 mm (NICOLL and LANGRAND 1989). As a result the vegetation of Montagne des Français is of a distinctly more mesic type than that of its surroundings and is transitional between mid-altitude rainforest and dry deciduous western forest (RAMANAMANJATO *et. al*. 1999). The bats reported on here were captured during surveys of Montagne des Français conducted between 6 April and 14 December 2005 and three sites were surveyed -- site 1 in a dry forest clearing, 12°19.78'S, 49°22.05'E, 145 masl; site 2 in a cave at 12°19.98'S, 49°21.17'E, 150 masl; and site 3 in a cave at 12°19.64'S, 49°20.59'E, 260 masl.

Table 1: Field measurements (mm) and mass (g) of eight bat species, caught at Montagne des Français, Antsiranana Province, Madagascar.

Species	***Forearm***	***Wingspan***	***Mass***
	X (n) Range	*X (n) Range*	*X (n) Range*
Pteropus rufus	-	-	-
Rousettus madagascariensis	*88.8 (4) 66-72*	*301 (1) 301*	*3.9 (1) 3.9*
Emballonura sp	*37.6 (8) 34.5-39*	*231.8 (4) 220-248*	*3 (4) 3-4*
Hipposideros commersoni	*88 (1) 88*	-	-
Triaenops auritus	*51 (1) 51*	-	-
Miniopterus gleni	*47.6 (10) 46-50*	*318.8 (8) 300 - 340*	*12.3 (8) 11-14*
Miniopterus manavi	*36.2 (7) 35-38*	*244.5 (2) 244-245*	*4.25 (2) 3.5-5*
Myotis goudoti	*37.8 (2) 36.5-39*	*254 (2) 252-256*	*5.8 (2) 5.5 - 6*

Above: View of Montagne des Français (Antsiranana, Madagascar, August 2005).

Above: The interior of the cave at Site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, August 2005).

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A combination of mist and long handled hand nets were used to capture bats. Nylon mist nets (12 m long and 4 m high) were set across a small stream within semi-disturbed forest at site 1 and at the entrance of caves at sites 2 and 3. Hand nets were used to capture bats roosting on the trunks of trees and on the ceilings of caves. Each site was visited at least once every two weeks throughout the survey period. Field identifications were made using descriptions in GARBUTT (1999), in conjunction with EGER and MITCHEL (2003). Although specimens were not taken, photographic records were made (held by the first author) and were verified by Dr. S. M. Goodman (Field Museum of Natural History, Chicago). Before being released, mass, wingspan and forearm measurements were recorded from the captured individuals (Table 1).

***Pteropus rufus* Geoffroy 1803**

A small colony of approximately twenty individuals was observed at site 1 in April roosting in the canopy of a large *Ficus* tree over a period of two weeks. This species was not observed during the dry season and appeared absent until early December when individuals were observed flying overhead searching for suitable fruiting trees.

***Rousettus madagascariensis* Grandidier 1928**

Four individuals were captured in mist nets whilst foraging over a stream at site 1. All individuals were netted at approximately 19h00, and this species appeared to be absent from the area during the dry season between May and September. Although this species is known to roost in cave colonies composed of several thousand animals (MACKINNON *et al*. 2003), no individuals were found in such a setting during this survey.

***Emballonura* sp.**

Individuals of *Emballonura* were commonly found roosting in small groups of no more than three individuals in the twilight zone of caves, typically selecting crevices near to main chambers in close proximity to *Miniopterus manavi*, *M. gleni* and *Myotis goudoti*. *Emballonura* were also regularly observed throughout the survey period foraging over small streams in clearings of disturbed forest, but not a single individual was captured. This taxon represents a new species to science of *Emballonura* that has a broad distribution in the dry portions of the island (GOODMAN *et al.* in press).

Above: Sheath tailed bat, *Emballonura* sp. Caught in August 2005 whilst roosting at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, August 2005).

***Hipposideros commersoni* (E. Geoffroy, 1813)**

This species was encountered only once in April and was captured using a hand net from the trunk of a large tree at a height of approximately 3 m. In accordance with prior observations (PETERSON *et al.* 1995; RUSS and BENNETT 1999), this individual was seen moving its head from side to side and appeared to be using the tree as a night roost from which to hunt. The individual was repeatedly captured in the same position on three consecutive nights. Although this species has been regularly found roosting in large numbers in the nearby Ankarana Massif (MCHALE 1987) no similar cave association was observed at Montagne des Français.

Above: *Hipposideros commersoni.* Caught in April 2005 whilst roosting on the trunk of a large tree at site 1 in a dry forest clearing (12°19.78'S, 49°22.05'E), Montagne des Français (Antsiranana, Madagascar, August 2005).

***Triaenops auritus* (Grandidier 1912)**

This species appears to be extremely rare within Montagne des Français and was encountered only once in early May. It was captured using a hand net whilst roosting in a cave at site 2.

***Miniopterus gleni* Peterson, Eger and Mitchell, 1995**

Miniopterus gleni was the most commonly encountered species on Montagne des Français and was observed roosting in tight groups of between two and eight individuals throughout the survey period. This species was often found in close association with *Triaenops auritus*, *Miniopterus manavi* and *Myotis goudoti* as described by PETERSON *et al*. (1995). It typically selected small holes in the ceilings of caves at a height of 5 – 10 m. All individuals were captured with a hand net.

Above: *Minopterus gleni.* Caught in October 2005 whilst roosting at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, October 2005).

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Above: *Minopterus gleni.* Caught in August 2005 whilst roosting at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, August 2005)

Above: Individuals of the genus *Miniopterus* roosting in a hole in the ceiling of the cave at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, August 2005).

Above: *Minopterus manavi.* Caught in October 2005 whilst roosting at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, October 2005).

***Miniopterus manavi* Thomas 1906**

Although *Miniopterus manavi* is known to shelter in large roosts of up to 4000 individuals in the Beankorabe region of the Makira Plateau (BAYLISS and HAYES 1999) no similar cave association was observed during this survey. In contrast, our findings confirm the observations of MCHALE (1987) who reported that in the nearby Ankarana Massif individuals are known to roost singly or in small groups during the dry season. The bats observed at Montagne des Français appeared to prefer roosting in small holes in the warmer interior of caves. All captures resulted from hand netting.

***Myotis goudoti* (Smith 1834)**

Lone individuals of *Myotis goudoti* were encountered twice in the cave at site 3. All individuals were captured with a hand net. It is known to occupy roosts with other species, particularly those belonging to the genus Miniopterus (PETERSON *et al.* 1995) and during our survey it was observed in close proximity to *Miniopterus manavi*, *Myotis gleni* and *Emballonura* sp.

Above: Malagasy mouse-eared bat *Myotis goudoti.* Caught in August 2005 whilst roosting at site 3 (12°19.64S, 49°20.59E), Montagne des Français (Antsiranana, Madagascar, August 2005).

SPECIES RICHNESS

A total of eight species (two Megachiroptera and six Microchiroptera) and thirty-four individuals were captured at Montagne des Français during surveys conducted between April and December 2005. Table 2 indicates the number of individuals of each species captured. The local species richness was lower than that of Ankarana and Analamera, and all eight species have been recorded from both of these protected areas (Table 3). Most records were of isolated individuals or small groups in holes in caves. These low numbers are likely to increase during the wet season, as indicated by the large amount of bat faeces present on the floor of the caves. The survey reported on here, should not be considered exhaustive, as it did not compromise a complete calendar year, which encompasses a considerable amount of seasonal variation. However, as the site was previously unsurveyed, the information presented contributes to our knowledge of Malagasy bats.

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Table 2: Number of individuals captured at each site.

Location	Site 1 Forest	Site 2 Cave	Site 3 Cave	Total
Altitude	**145 masl**	**150 masl**	**260 masl**	
Pteropus rufus	-	-	-	**-**
Rousettus madagascariensis	4	-	-	**4**
Emballonura sp	-	4	5	**9**
Hipposideros commersoni	1	-	-	**1**
Triaenops auritus	-	1	-	**1**
Miniopterus gleni	-	1	9	**10**
Miniopterus manavi	-	5	2	**7**
Myotis goudoti	-	-	2	**2**

Table 3: Bat species found at Montagne de Français and surrounding protected areas of Ankarana and Analamera (adapted from Goodman *et al*. 2005). Data- + = present, - = absent, S = sighted.

Location	Ankarana	Analamerana	Montagne de Français
Latitude	**12° 53'**	**12° 42'**	**12°19'**
Pteropodidae			
Eidolon dupreanum	+	S	-
Pteropus rufus	S	+	S
Rousettus madagascariensis	+	+	+
Emballonuridae			
Coleura sp.	+	-	-
Emballonura sp.	+	+	+
Hipposideridae			
Hipposideros commersoni	+	+	+
Triaenops auritus	+	+	+
Triaenops rufus	+	+	-
Molossidae			
Chaerephon jobimena	+	-	-
Mormopterus jugularis	+	-	-
Otomops madagascariensis	+	+	-
Vespertilionidae			
Minioptrus gleni	+	+	+
Miniopterus manavi	+	+	+
Myotis goudoti	+	+	+
Total number of species	**14**	**11**	**8**

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RECENT LITERATURE

PUBLISHED PAPERS

GERLACH, J., and TAYLOR, M., 2006. Habitat use, roost characteristics and diet of the Seychelles sheath-tailed bat *Coleura seychellensis*. *Acta Chiropterologica* 8(1): 129-139.

Abstract: The Seychelles sheath-tailed bat Coleura seychellensis is a Critically Endangered species endemic to the Seychelles islands of Mahé and Silhouette, with historical records from Praslin and La Digue islands. Published descriptions exist for only one active roost containing 32 bats. The present study located the species only in coastal boulder field caves with stable cool temperatures and access into palm woodland or marsh habitat. At one roost gaps in the woodland are used for foraging and the natural woodland appears to be important for the conservation of the species primarily as foraging habitat. A second roost on Silhouette island has been located near a large, insect rich marsh habitat. Faecal analysis demonstrated that at this site *C. seychellensis* feeds predominantly on marsh associated Ceratopogonidae (Diptera), in contrast to Curculionidae (Coleoptera) in palm woodland. This dietary plasticity indicates that food is not limiting for this species. The decline in this species may have been caused by habitat alteration caused by invasive plants obstructing roost entrances; conservation of the species requires active habitat management.

MARKOTTER, W., RANDLES, J., RUPPERCHT, C. E., SABETA, C. T., TAYLOR, P. J., WANDELER, A. I., and NEL, L. H., 2006. Lagos bat virus, South Africa. *Emerging Infectious Diseases* 12(3): 504-506.

Abstract: Three more isolates of Lagos bat virus were recently recovered from fruit bats in South Africa after an apparent absence of this virus for 13 years. he sporadic occurrence of cases is likely due to inadequate surveillance programs for lyssavirus infections among bat populations in Africa.

SPECIAL PATHOGENS UNIT., 2006. Rabies. *Communicable Diseases Communique* 5(4): 1.

Abstract: Rabies was confirmed post mortem in a 77 year old man who was scratched by a bat in North West Province. The patient did not seek medical care at the time of the incident and thus no post exposure treatment was given. Duvenhage virus was identified by genetic sequencing. Duvenhage virus was discovered when it caused fatal rabies-like disease in a human bitten by a bat about 200 km north of Johannesburg in 1970, and has twice been isolated from bats in the Limpopo Province and Zimbabwe. Rabies virus proper (lyssavirus 1) has never been isolated from bats outside of North and South America, but the so-called rabies-related viruses (Duvenhage and Lagos Bat, European bat lyssavirus and Australian bat lyssavirus have been encountered respectively in bats in Africa, Europe, and recently in Australia. One of the rabies-related viruses, Mokola virus, occurs in shrews and rodents in Africa, not bats.

Rabies-related viruses in South Africa are extremely rare and only one previous human case has been confirmed in South Africa. Lagos bat virus has been found in fruit bats in KwaZulu-Natal (Pinetown-Durban), but has never been associated with human disease anywhere.

Mokola virus has been isolated from shrews and rodents elsewhere in Africa, and has caused rabies-like disease in cats in KwaZulu-Natal and the Eastern Cape. It is believed to have caused rabies-like disease in humans in Nigeria in the early 1970s shortly after the virus was initially discovered, but no cases of human infection have been recognized subsequently.
Post exposure treatment following a bat exposure would be the same as for other animals. (See Communiqués Vol 5 Nos 1-3, 2006). There are no specific vaccines available against rabies-related viruses, but the cross-protection conferred by rabies vaccine is better against Duvenhage virus than it is against the other rabies-related viruses.

Rabies was confirmed on 3 children from the Vhembe district in Limpopo. All children had experienced category three exposures to infected dogs; two had experienced scratches that drew blood and one child was licked on the face, with likely mucous membrane exposure. None of the children was given post exposure treatment.

To date in 2006, there have been 10 laboratory confirmed cases of human rabies in SA. [complete article]
Notes: National Institute for Communicaticable Diseases
Keywords: Virus.

VAN DER MERWE, M., VAN DER MERWE, N. J., and PENZHORN, B. L., 2006. Aspects of reproduction in the seasonally breeding African yellow bat, *Scotophilus dinganii* (A. Smith, 1833). *African Zoology* 41(1): 67-74.

Abstract: reproductive tracts of females showed that the African yellow bat is a monoestrous species and that insemination, ovulation and fertilization took place during mid to late autumn (April to May). Early embryonic development of normally two embryos (one in each uterine horn) was retarded and implantation delayed until mid-winter (July), when the blastocysts implanted.
Keywords: African yellow bat, delayed implantation, *Scotophilus dinganii*, Vespertilionidae.

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- 37th Annual North American Symposium on Bat Research, tentatively scheduled for Mexico in 2007. [http://www.nasbr.org]
- 14th International Bat Research Conference, Merida, Mexico, Late August 2007. [May coincide with the 37th Annual North American Symposium on Bat Research].
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