

## **Project Update: September 2015**

Thanks to the RSG for the booster grant that aims to monitor the bat migrations and establish the basis for monitoring the bats caves in different seasons.

To accomplish this, a trip was planned to Mt Hoyo after arrangements with the Chief Warden. This first trip has taken too long because of security in the areas surrounding the reserve. The past few months were characterised by killing and kidnapping in the neighbouring areas, mostly at Beni where we have to pass get to the reserve. The rangers and the ICCN Authorities advised that they monitor the situation and let us go when it is safe.



Figure 1. Bats photographed flying in the cave.

We were told be ready in mid-July 2015.

Depending on duties at the institution, we were allowed to leave on 25th July 2015. Things were as scheduled. We left Lwiro to Goma (by ship - Kaleme and Mwanga). After a night, flew to Beni, and spent another night at Beni to avoid travelling at night; then rented a taxi to Mt Hoyo on 26th July. Since the rangers were waiting for us, they went for shopping (goods that we could not get from Beni such as food). We set for the forest (part of the team). The remaining came the following day because we could not have enough porters for the luggage. The students trained last time were also asked to join the team as they had to collect data for their Honour's projects.

The objective of this trip was to set the basis for monitoring the bat movements and also conduct an interview to local peoples on the use of bats by local peoples and work on a sensitisation plan.

### **Activities**

1. Sample bats using mist nets and identify the species present in caves.
2. Conduct the assessment on the use of bat by local peoples (ethnozoology).

No trapping of other small mammals was planned because of too much work and time constraints. However, some areas of interest for trapping shrews and microhabitats for rodents were investigated for the next field trip.

### **Methods**

To collect the bats, mist nets were set either at cave entry, within caves or in the forest. The mist nets were opened at 6.00 pm and closed at 10.00 pm. The opening at dawn (4.30 – 5.30 am) depended on the number of individuals captured at night.



Figure 2: Students preparing the bamboos to set the mist nets for monitoring species in the forest.

Bats were identified using Field Guide to Mammals of Southern Africa (Stuart and Stuart, 2007) and Monadjem *et al.* (2010).

The assessment on the use of bats by local peoples was conducted by the students as they are from the neighbouring villages and can speak the local languages. At the beginning, we assisted them to correct eventual mistakes.

Before interviewing peoples, meetings were held with the local chiefs to discuss the relevance of the work by the team for them and also discuss the danger they have to hunt bats for food and manipulating them without any protection.



Figure 3. A female *Roussetus angolensis* with a baby and a male of the same species - released after identification.

## Results

Two hundred and thirty six (236) bats were captured belonging to 10 species. Some of the caves did not have many individuals as some have migrated (mostly some insectivore bats). The list is given in the table below.

Of the animals captured, the most abundant were from the species *Lissonycteris lanosus*, *Roussetus aegyptiacus*, *Hipposideros ruber* and *Miniopterus inflatus*. Since the beginning of

the works, the first and the last species have been present in our records. The first is always the most abundant. While the last is sometimes rare, but not absent.

Table 1. List of bat species recorded

No	English name	Scientific name
1	Egyptian roussette	<i>Roussetus aegyptiacus</i>
2	Woermann's long-tongued fruit bat	<i>Megaloglossus woermanni</i>
		<i>Lissonycteris lanosus</i>
3	Greater long-fingered bat	<i>Miniopterus cf inflatus</i>
4		<i>Micropteropus torquata</i>
5		<i>Epomops franqueti</i>
6		<i>Eidolon helvum</i>
7		<i>Hipposideros ruber</i>
8		<i>Hipposideros gigas</i>
9		<i>Rhinolophus ruwenzori</i>
10		<i>Miniopterus inflatus</i>

Bats migrations were observed this time. One species of horseshoe bat was not observe in the caves. Some species seem not to leave the caves such as the *Roussetus angolensis*, *Miniopterus inflatus*, or the *Lyssonycteris angolensis*.

The questionnaire covered a large number of villagers and needs to be used by a student for his honour project. We will give the results after we perform analyses.



Figure 4. A student and a ranger holding a bat after identification. It was released after identification. They are working on monitoring which species is captured this season.



Figure 5. Individual bats captured (1 individual per species) - all subjects to monitoring. The last picture is a set of bags with live bats to identify and take some measurements. All released afterward (unless there is problem of identification for which a specimen is saved for further analyses).

## Threats

There has been reduction of bat hunting. No one was found visiting the caves to hunt the bats because everybody is not far from the caves. However, during a visit at a local market, we found the bats being sold. Since he was speaking local language, they told him that the bats were from caves in the reserve. The student's questionnaire can tell where else they collect the bats and what are the uses of bats in local traditions, apart from it being a traditional menu.

This time, all the villages have left the reserve and kept themselves out of the forest for their security because the army had a battle with rebels in the reserve last year.

Some local chiefs have established their villages outside. It is not possible to tell if they intend to come back or not. However, ICCN accepted to keep these villages in the reserve as the case in Okapi Faunal Reserve to use the same design and cartography for land use planning. However, the local chiefs were worried because of a rebel fraction whose leader has been arrested but that were fighting with the army north of the reserve. However, the reserve managers are sure the situation will not get worse inside the reserve.

## Appendix - Photos



The chief warden (Balikwisha) with two rangers recording GPS coordinate after we discussed of the habitat type.



Jacques Mwanga (with blue jacket) with the students and the rangers after having set a net, waiting for records.



A River, the western limit of the Reserve.



The students and rangers on the way back for closing nets



The students working on bats identification and collecting standard measurements (before releasing the animals) using different guides and books to make sure they can work alone after a while.





Some equipment used to manipulate bats.



Equipment used to weight animals (bats).



A pigmy (MAMBURIKOKO) who served as our tracker has left us. He passed away in June after just a short time of sickness, a month before we came to work. We will always remember him. Our sympathy to his family.



The team at the camp in the forest.



Pictures of the people's hat attended the meeting before the interview in the village.