

Project Update: January 2014

After the first trip, some ideas were made up and a time was set for the second trip that would mostly be for sampling and work with local peoples to raise awareness to the chiefs and their customary peoples. We planned to come back during the last term (October – December 2013).



Figure 1. Prince Kaleme (left) with a ranger in a cave. Figure 2. Evariste Abulwa getting out of a cave.

But because of information on attacks by Ugandan rebels in the way to the field, we were worried to confirm. After a discussion with the chief warden, a plan was finalised for a 10-day field trip in the last weeks of November 2013.

The trip aimed to do sampling in the forest, collect bats from caves and set mist nets in the forest. The team would also work with the local chiefs in order to sensitise villages. It was difficult to have students as they only started the academic year 2 months previously. It was not the good time for them as they have intensive lectures this time of the year; the best time would be during holidays or a time they need internship or trainings.

Two researchers were ready for this trip: Prince Kaleme and Evariste Abulwa. Ndara had another field trip funded by WWF in a forest to gazette and Jacques Mwangi remained in the laboratory for permanence because there were other activities he had to attend at the same time.

We set for the field trip the last week of November 2013 for 10 days. We met with the chief warden at Beni and after one night, continued until the entry of the reserve. Some items such as alcohol or buckets to keep specimens were purchased at Beni; while for food, a team went to the nearest town (Komanda), 12 km from the road to the Mt Hoyo forest Reserve. After they were back, motorbikes were hired and we went into the ranger's camp, 12 km from the main road.

The plan to meet first the local chiefs was cancelled because of the visit of the President at the District Head Quarter – Bunia (that is 75 km from the reserve HQ). We decided (after discussion with the chief warden and his staff) to focus on biological investigations.

At arrival at the rangers' camp, we settled and afterward, we visited the caves and set up the mist nets for the evening. We only worked on six caves; the seventh was empty. We also were interested by the habitats, mostly near the caves and investigated the vegetation types and the dominant species in the forest. Nets were kept closed until 6.30 pm when it became dark to avoid catching birds. Two mist nets were set up close to cave entry while three others were set in the forest and one at the rangers' temporary camp (which is an abandoned hotel that is to be rehabilitated). The camp will be built at the river at the edge of the reserve.



Figure 3: Sample of trees in the reserve.

The area sampled was an old secondary forest while the other part was primary forest dominated by *Cynometra alexandri*, *Cynometra ankei*, *Diospiros sp.*, *Peptadeniastrum africanum* and *Canarium sp.* The old secondary forest was dominated by species such as *Musanga cecropioides*, *Myrianthus arboreus*, etc. The undergrowth was dominated by species such as *Afromomum spp.* and *Halopegia sp.*

Activities

We decided to have two main activities in the reserve:

1. Sample bats using mist nets.
2. Sample other large mammals in transects.
3. Investigate the state of the habitats.

Methods

To collect the bats, mist nets were set either at cave entry or in the forest. To avoid having too many individuals to handle, the mist nets were opened at 6.30 pm and closed at 10.00 pm. Since the scientific team had only two people, we avoided opening the nets at dawn.

To collect information on other large mammals, two transects were used where evidence of animals was recorded: animal seen, a call or a footprint. The same transects were also used to classify the habitats types. Some local people that worked as trackers were also interviewed to give information on other animals they trap or know exist in the reserve. Additional information was obtained using the Field Guide to Larger Mammals of Africa (Stuart and Stuart, 2007) and the Field Guide to Mammals of Southern Africa (Stuart and Stuart, 2007) with pygmies and discuss if the species exists or not.



Figure 4: bats in mist nets. The chief warden holding the MN to help remove bats. Figure 5. A cave where bats are roosting in the top, some flying.

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

Results

One hundred bats were caught in mist nets and many of them were released after identification and recording of some measurements such as the length of the forearm (FA) and the weight (W) of the animal. These two measurements are the most used in identifications (associated with some morphological features). It was difficult to have all the measurements because of the aggressive characters of the animals after they are caught in the mist nets. A total of six species were recorded of which five were caught in mist nets, and one recorded by the call. Information from pygmies was that some species occur in caves far from the ranger's camp (approximately one days walk).

Bat species recorded

Table 1. List of bat species recorded in Mt Hoyo Forest Reserve

No	English name	Scientific name	observation
01	Hammer-headed fruit bat	<i>Hypsignathus monstrosus</i>	Recorded by the call
02	Angolan soft furred fruit bat	<i>Lissonycterys angolensis</i>	
03	Egyptian roussette	<i>Roussetus aegyptiacus</i>	
04	Woermann's long-tongued fruit bat	<i>Megaloglossus woermanni</i>	
05	Halcyon horseshoe bat	<i>Rhinolophus alcyone</i>	
	Greater long-fingered bat	<i>Miniopterus cf. inflatus</i>	

Other mammals

Twenty-five mammal species were recorded and an additional eight were reported to occur, but we did not have evidence. Small mammals could not be recorded as they require specific trapping techniques to record. We could also not ask any question on them because they are not well known. We were also not able to get appropriate names from local peoples.

Of the mammals recorded, we have the following: okapi, common chimpanzee, blue duiker. Bongo, baboon, red colobus, black and white colobus, red tail monkey, blue monkey and leopard.

Other biodiversity

Some birds were caught into mist nets. Specimens have been given to ornithologists for identification. Others were just identified from calls such as the blue touraco or using the bird field

guides when seen such as the crown eagle, the spotted eagle, and an owl (caught in the mist net and released after identification).

The GPS coordinates were collected, and documented boundaries were made of rivers to the south, the west and the north. The east is a (imaginary) line connecting two rivers. Coordinates have been given to WCS for a provisional (working) map.

Threats



Figure 6. Left: a place where a village is relocating from deep in the forest to close to the road. Right – a village at the road: peoples are enjoying our visit and show their joy hoping things have now improved after about 10 years of rebellion. The lady close to the motorbike is a pygmy. This village is in the reserve.

The main problem is that management is recent and local peoples are not ready to accept its presence. Some villages are in the reserve. After our first trip, the villagers hired some people from cities to come exploit sawmills, but the activity was not sustainable. A tree was sold for \$10. The chief warden took the matter to the district and the Chief District officer called all the chiefs. After interviews, they were put in jail for 2 months. This included the head of the municipality and the four chiefs of villages. After they were released, none was able to get implicated in the same kind of activities and are now ready to collaborate.

Another problem is that peoples come from villages to trap bats in the caves that are used as food. They use sticks or stones to kill bats. According to the rangers, some also use nets but not classical ones.

The intention to chase away the rangers is now off their minds. A NGO is now working with villages to improve their livelihood. Medical doctors are now visiting villages and giving health care for free. This has also changed their perception of the reserve.

Appendix

Photos



Left: The chief warden (Balikwisha) with two rangers recording GPS coordinate after we discussed of the habitat type. Right: An owl caught in the mist net



Left: The River indicating the western limit of the Reserve (at the right, the bridge). Right: The new rangers' camp will be built at the right bank of this river (after crossing the bridge).



Left: The ranger's temporary camp. Right: Bats in the cave.



Left: A pygmy who served as a tracker after we finished the work (holding money on hand). Last day before we left in the morning. Right: Martine Matondo, finishing washing her hands after work. She fixed specimens in formalin in the laboratory after the fieldwork and keep them in the museum.