Project Update: June 2016

Our fieldwork took place in late April to early May 2016 - April 26th to 08th May). This year, security at Beni and Bunia (two cities that give access to Mt Hoyo from Goma by plane) is challenging. The killing is taking place even where soldiers are located. This has led ICCN to only allow us schedule the fieldworks when they feel it secure. That is why it took a bit longer to plan this fieldwork. Since we had to catch-up, we had two teams, one for fieldwork and another for a workshop with local chiefs as well as school representatives (pupils, teachers and principals).

Figure 1. The sign post at the Reserve entry

The team that worked in the forest spent two weeks of sampling either in caves, in the vicinity of caves or far away to draw a comparison between the species occurring in caves and the others that are not cave dwellers. As members of this team, the new staff members such as Jessica were implicated in the fieldwork. She was appointed as a team member by the Chief Warden in the monitoring task. Of the last year's students, Sam Okameli (afteer completion of his honour's degree) volunteered to be part of the team.

The other part of the team has to work with local chiefs and teachers during two separate (two days) workshops.

The aim was to monitor bats, especially the species present this time of the year in caves.
The aims for the workshops were to raise awareness to local chiefs on the importance of bats for the forest and their wellbeing; and discuss with the teachers the ecosystem services using bats as a model.

Figure 2. Setting the net in the forest, near a swamp.

Three researchers were ready for this trip: Prince Kaleme, Jacques Mwanga and Benjamin Ndara. While Prince was prepared for the workshop, the two others had to do the sampling in the forest. Another, Jean Mburunge was given by CRSN because of his experience on public awareness and dealing with this kind of topics.

Three types of habitats were explored in the forest comprising the old secondary forest dominated by species such as *Musanga cecropioides*, *Myrianthus arboreus*, the primary forest with predominance of *Cynometra alexandri*, *Cynometra ankei*, *Diospiros sp.*, *Peptadeniastrum africanum*, *Canarium* sp as well as the swamps, dominated by *Cyperus* sp. The undergrowth in secondary forest was dominated by species such as *Afromomum spp*., *Halopegia* sp. as well as some other tree undergrowth. In many parts of the primary forest, the lower layer of poor as one can see 50 m ahead. But in some parts, the undergrowth is very dense. This is mostly made of Marantaceae (near streams and rivers) or other monocotyledons species.

Activities

1. Continue the training of the new team members
2. Sample bats inside and outside of caves to compile the species list of the area.
3. For the workshop, after a talk, discuss the issues related to conservation and have suggestions that will be taken as outcomes of the workshop.

Methods for fieldwork

Mist Nets were set either in caves, at cave entry or in the forest. The mist nets were opened at 6h00 pm and closed at 10h00 pm.

Figure 3. A cave entry: architecture that can

Individuals were removed from nets and put in collection bags. At the camp, individuals were identified and most of them were released after identification. Some voucher specimens were collected for the ones for which on-site identification was not possible or when we could not confirm it using field guides. For identifications, we used the Field Guide to Mammals of Southern Africa (Stuart and Stuart, 2007) and Monadjem et al. (2010).

Workshop

Before splitting the groups, there was a big meeting where all the groups (stakeholders, the Environment officer, the local chiefs as well as school representatives) were present.

The meeting with stakeholders had to discuss some issues such as the importance of the forest and its diversity, the problems villages are facing with regard to climate change and implication on agriculture and the watersheds. To be represented as attendant from a village, the village had to be in the vicinity of the reserve. The Environment officer participated in all the groups with the Chief Warden and his community conservation officer.

For the schools, some teachers and principals were invited to attend the meeting where they had to work on the same questions as the stakeholders but this time, how to communicate this to the school children.

A sample of two schools was selected where the team had a communication, followed by a discussion to pupils.

Figure 4: Removal of bats from the net (Jessica at the left).

Results

Bats were collected from mist nets. Steps were followed to allow the new team members to be adapted to the work. They were shown the important measurements and features to look at in identifying bats.

We collected a total of 127 bat specimens belonging to 10 species (see table 1). The fruit bats were abundant compared to insectivore bats in individual numbers. But the species number was the same (5:5). The Hammer headed fruit bat (*Hypsignathus monstrosus*) was not recorded this time in our areas as it was not the fruit season. The list of species is presented in the table below.

Bat species recorded

Table 1. List of bat species recorded of which five species of fruit bats and five species of insectivore bats.

Ten species were recorded, where samples were only collected for the individuals that were not easily identified. But most of the species have already been collected.

No	**Common name**	**Species**	**Habitat**
01	Greater long-fingered Bat	*Miniopterus* cf. *inflatus*	Cave
02	Natal long-fingered Bat	*Miniopterus natalensis*	Cave
03	Angolan soft-furred fruit bat	*Lissonyscerys angolensis*	Cave
04	Giant leaf-nosed bat	*Hipposideros* cf. *gigas*	Forest
05	Noack's leaf-nosed bat	*Hipposideros vitattus*	Cave
06	Hammer headed fruit bat	*Hypsignathus monstrosus*	Forest
07	Egyptian Rousette	*Rousettus aegyptiacus*	Cave and forest
08	Peters's lesser epauletted fruit bat	*Micropteropus pusilus*	Forest

09	Franquet's Epauletted fruit Bat	*Epomops franueti*	Forest
10	Ruwenzori Horseshoe Bat	*Rhinolophus* cf. *ruwenzori*	Forest and cave

At this stage, we intend to see the occurrence of species when we have all the lists made across the year, which can tell the movement of the species in the reserve or caves. This will also allow to present a more complete list of bat species. But for the numbers, fruit bats were most abundant with the species *Lissonyscerys angolensis*, and *Rousettus aegyptiacus* were abundant in records (individual numbers). The species *Micropteropus pusilus* was the least abundant with only two individuals recorded.

Meeting with the stakeholders

This category was made of local chiefs, some notabilities as wells some government officials such as the Environment officer. Ten peoples represented the villages and attended the meeting.

The outcomes of the meeting were the following:

- Each chief has the responsibility to sensitize his members to respect the reserve and the rangers;
- The chief has to invite the responsible of community conservation of the reserve to discuss with the village the importance of the reserve on climate regulation, the importance of bats for pollination, and other ecosystem services;
- Local chiefs were held responsible for any problem arising in his village related to damages (poaching, mining) in the reserve.

For the schools, some guidelines in form of a module were prepared and given to each school that will be used next year to the pupils. A poster is ready printed. But since the pupils are writing the last exams, it will be distributed early next year when the schools open in September.

During the discussion with the pupils, interesting matters were raised. Most of the questions were related to climate change, bats and diseases (zoonoses), bats as food - dangers or delicacy, bats in houses.

After the discussion, it appears that the children were interested and such opportunities need to be given to discover their curiosity and give the right answers at the right time. Some of the conceptions were misleading but when the right answer is given, it helps more than rangers arresting poachers in the forest.

These meetings appear to be a good mean of prevention against poaching in the reserve.

Fieldwork

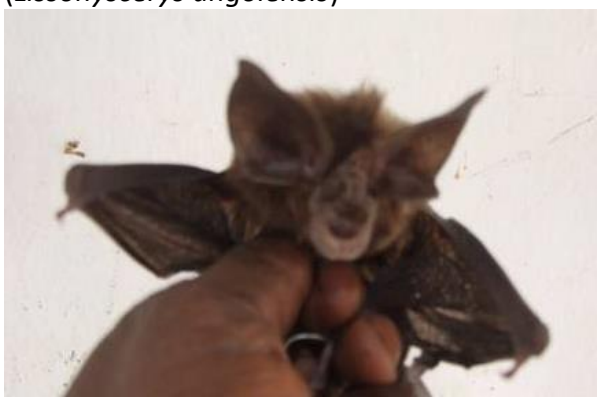
The team after setting up a net with the net at the back. Setting the net in the cave for capture-release of bat.

Inside a cave with bats at the ceiling made of rocks

A river in the reserve

A specimen the Angolan soft-furred fruit bat (*Lissonyscerys angolensis*)

Jacques Mwanga (first left) discussing with the guide.



Specimens of insectivorous bat

Landscape in the forest before the rain.

Workshop

Prince Kaleme during the meeting.

A meeting with teachers and pupils (pupils with blue and white uniform).


The meeting between schools and trainers. The audience is made of teachers, principals and pupils as well as the stakeholders (before splitting into specific groups).

Some photos of the climate day, held in November 2015 (mentioned in the previous report).


Distribution of plants (pupils, teachers and principals) to be planted in their respective schools


Plant nurturing materials given to school principals


Children collecting plants for their schools

Teachers that received some plants and other materials for schools.