

Title: Increasing local community awareness to enhance protection of the birds in the Santchou wildlife reserve, West Region of Cameroon

Project manager

The project will be led by Dr. Norbert Tchamadeu Ngameni, (E-mail: norbert.ngameni@univ-dschang.org). I hold a PhD in Applied Ecology and Wildlife Management. I have more than 10 years of experience in avian ecology and conservation-oriented research in Cameroon. I can identify many bird species in Cameroon by sight and by sound, and have taken part in several conservation programs around the country. For example, I participated in a study based on raising awareness of people living around Mount Cameroon on the importance of protecting wildlife (Socio-economic impacts of protected areas on people living close to the mount Cameroon national park. I was also a co-investigator of the project “Saving the last individuals of the Endangered Bates’s weaver, *Ploceus batesi*, in the Congo basin forest and updating its conservation status funded by ABC”. I am a trained field ecologist with skills in bird census techniques (point counts and mist netting) and the using of camera traps. I understand local mentalities very well. I have been trained in some software like R statistical for data analysis, QGIS for mapping, EndNote for references computation, and Google Earth Engine (GEE) for Remote sensing data. Then I feel ready and exciting to implement this project.

Implementing institution or organization

Agriculture and Bio-conservation Organization for
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Purpose

At the end of the project, the following outputs will be obtained:

- A detailed report (in hard and electronic copies) with a map of bird’s occurrences.
- At least one workshop organised at the premises of the Conservator’s office to train the local people on bird identification techniques.
- A local field guide to the common birds of area in the local language.
- This project will provide information on birds occur in the Santchou wildlife reserve for the right conservation action to be taken by the Conservator’s office.
- This project will also contribute to update the conservation status of these birds, and gain the compliance of the local communities by increasing their knowledge of local birds.

Description and Methods

Created by decree N° 262 of 29 July 1947, the Santchou Wildlife Reserve covers an administrative surface area of 7,000 ha according to the Cameroon Ministry of Forestry and Wildlife (MINFOF). The main objective of the creation of this reserve in 1947 was to protect/conservate the dwarf elephants and dwarf buffaloes which are now extinct because of human pressures and interferences, and a variety of endemic bird species of over 161 species that are currently present within the reserve and had suffered less threat from human presence. The reserve is also a home for a variety of monkeys and other fauna amongst which are: Gabon Viper, Python, sitatunga, Guilb herbaceous, bush pigs, porcupines, monitor lizard which are currently being threatened. According to Birdlife International (2015), the vegetation of the Santchou Wildlife Reserve is a mixture of Sterculiaceae and Ulmaceae,

dominated semi-deciduous forest, shrubby savanna, sub-montane forest, periodically inundated swamp-forest and grassland and forest species include *Mitragyna ciliata*, *Lophira alata*, *Khaya ivorensis*, *Milicia* (Chlorophora) *excelsa*, *Mansonina altissima*, *Terminalia* spp., *Klainedoxa gabonensis*, *Prunus africana* and a few emergent *Polyscias fulva*. Some 161 species have so far been recorded from the Reserve, including the restricted-range *Hirundo fuliginosa*. The Santchou Wildlife Reserve is said to be one amongst the two Important Birds and Biodiversity Areas (IBAs) in Cameroon where the Guinea–Congo Forests biome species, *Phyllanthus Atripennis* prevails.

The wildlife reserve is located at latitude 10°0'0" North and longitude 5° 12'00" East with seven village communities living within the Reserve and two others in the Buffer zone, Balé and Ngang. The population of several endangered species within protected areas in Cameroon are fast declining due to anthropogenic interferences (poaching, encroaching farmlands, deforestation, bush fires and grazing related activities) or better still to the migration of species linked to visual effects of humans or intruders and habitat destruction. As such, continuous update information on the status of the populations of these species and their habitat is essential for the design of effective conservation strategies within protected areas.

We will estimate densities of birds using four methods to maximize detection of birds in the dense forest and estimate densities precisely. These are point counts, mist netting, random walks and camera trap.

(i) Mist netting:

Within the Santchou wildlife reserve, the study plot (25 km²) will be divided into ten sections of 2.5 km² each, and within each section we will mount 20-mist nets (12 m, 16 x 16 mm mesh; Ecotone, Poland). Nets will be opened at 06:00 am and closed at 06:00 pm for three consecutive days. All birds caught will be identified with the help of a field guide (Birds of Western Africa by Nik Borrow & Ron Demey, 2014).

(ii) Point counts:

Following mist netting within each section, point counts will follow with 10 census points within each section. Walking about and counting birds has the appeal of simplicity with the possibility to cover more ground in a fixed time (Bibby *et al.*, 2000). The distance between neighbouring points will be 200 m (Bibby *et al.*, 2000; Djomo Nana *et al.*, 2014). Two visits will be conducted at each census point, recording all birds (both visually and acoustically) within a 50 m radius for 10 minutes. All visits will be performed during morning hours (between 06:00 and 10:00), changing the order of points visited to factor out the effect of daytime.

(iii) Random walks:

Following the visits of census points, we will undertake random walks after 10:00 am along established trails and tracked with the tracking function of a GPS. Trails will be walked at a constant pace of about 2 km/h with every sighting marked as a waypoint. All birds seen and heard will be identified while taking photos and sound recordings as much as possible.

(iv) Camera trapping:

Camera traps have become a critical field tool to address ecological and conservation-oriented questions as regards monitoring of population trends over time. We therefore decided to include a survey with camera traps to increase our chances of finding the species. We will set two camera trap units along each trail at a height of about 1.5 m above ground. The distance between neighbouring cameras will be at least 500. We will leave the cameras in the field for 30 days.

(vii) Outreach campaign:

An awareness campaign will be organized in 2 target villages (Boyong and Balé) to teach students of the primary school the ecological role of birds, why they should care, and also to start the production of a field guide to the common birds of area in the local language. This will make the local people develop bird identification skills to serve as guides for the many birders who visit the area. A quiz will be organized at the end and prizes (books, pencils, school bags, and t-shirts with the logo of Cape Cod Bird Club) given to the 3 best students per class. An environmental club will be organized in each school where the best students will be recruited as ambassadors of rare and endangered birds.

Timetable

June – July 2022: Securing research permit; travel to field site; liaising with local authorities

July – August 2022: Field data collection (mist netting, point counts, random walks, camera trapping)

August 2022: Outreach campaign

September 2022: follow-up of camera traps and preparation of reports and local field guide

September 2022: Reporting to Cape Cod Bird Club

Budget

Description of budget item in priority order	Unit cost	Number	Total
Cost for research permit application	\$100	01	\$100
Fuel for truck to transport researchers + field gear to field site and back	\$10/day	10	\$100
Feeding and accommodation for 2 people	\$5/day	60	\$300
Per diem for 1 Field guide	\$5/day	60	\$300
Awareness campaign- hiring of premises, flyers, banner, refreshments, etc	Lump sum	01	\$150
Report production – hard and electronic copies	\$25/copy	01	\$25
Production of local field guide	\$25/copy	01	\$25
Grand Total			\$1.000

Matching funds or resources

We already have more than 100 camera trap units at the ABOYERD. We also have survey materials such as mist nets, writing materials (pack), GPS receiver, binoculars and digital camera.

Continuity

As follow-up, the camera traps will be left in the field at the end of the project for the next six months, changing batteries after every 2 months. This will enable to have more detailed information on the species inhabiting this area.