### Project Update: March 2019

Specific objectives

- Determine the density, abundance and distribution of the Adamawa plateau's avifauna.
- Determine the distribution and preferred habitats of threatened birds of global conservation concern occurring in the area.
- Identify threats on birds and associated habitat, and assess their effects on bird community.
- Raise the level of awareness and knowledge of the local community on the importance of the Adamawa plateau forest and its associated exceptional biodiversity, by sensitising at least 95% of the people living around the site and school lecturers.



Removing bird from mist net by Mahamat

#### Fieldwork

Ornithological surveys have been conducted on the Adamawa Plateau. Birds have been investigated atn three sites (meadow, dry woodland and forest) from October 2018 to February 2019. During this period, mist nests have been used to capture wild birds. Every site has been surveyed over 4 days (3 days to sample and 1 day to sensitise the population) every month and in all, we have done 60 days of survey in the field in 5 months. In the field, eight mist nets have been opened early in the morning and closed at sunset, for a capture time of about 13 h per day (from 0500 to 1800). Mist nets have been visited every 2 hours and captured individuals have been removed from the mist nets and identified in the field using Borrow & Demey (2001) then photographed everyone and to take muscle tissue for future molecular analysis.

## Schedule

# Table 1: schedule of the project

Periods	Target sites	Activities	Status
21/10/18 – 04/11/18	Meadow (07°33.272'N, 013°33.607'E) Dry woodland (07°33.504'N, 013°33.990'E) Forest (07°37.691'N, 013°33.061'E)	Field research (rainy season)	Achieved
10/11/18 – 20/11/18	University of Yaoundé I	Laboratory work	Achieved
24/11/18 – 10/12/18	Meadow Dry woodland (07°33.458'N, 013°33.816'E)	Field research with pre- educational phase (dry season)	Achieved
15/12/18 -	University of Yaoundé I	Laboratory work	Achieved
30/12/18 – 15/01/19	Meadow Dry woodland (07°33.472'N, 013°33.806'E) Forest (07°37.649'N, 013°32.888'E)	Field research with pre- educational phase (dry season)	Achieved
20/01/19 – 31/01/19	University of Yaoundé I	Laboratory work	Achieved
04/02/19 – 20/02/19	Meadow Dry woodland (07°33.367'N, 013°33.706'E) Forest (07°37.749'N, 013°32.988'E)	Field research with pre- educational phase (dry season)	Achieved
22/02/19	First educational workshop	Explanation and swapping with local populations, the important role birds play in an ecosystem	Achieved
26/02/19 – 15/03/19	University of Yaoundé I	Laboratory work	Achieved
20/03/19 – 06/04/19	Others habitats of Adamawa plateau	Field research with educational phase (dry and rainy seasons)	Not yet Achieved
10/04/19 – 20/04/19	University of Yaoundé I		Not yet Achieved
25/04/19 – 11/05/19	Others habitats of Adamawa plateau	Field research with pre- educational phase (dry season)	Not yet Achieved
15/05/19 – 25/05/19	University of Yaoundé I	Laboratory work	Not yet Achieved

30/05/19 – 15/06/19	Others habitats of Adamawa plateau	Field research with pre- educational phase (rainy season)	Not yet Achieved
20/06/19 – 30/07/19	University of Yaoundé I		Not yet Achieved
05/07/19 – 20/07/19	Others habitats of Adamawa plateau	Field research with pre- educational phase (rainy season)	Not yet Achieved
25/07/19 – 06/08/19	University of Yaoundé I	Laboratory work	Not yet Achieved
10/08/19 – 26/08/19	Others habitats of Adamawa plateau	Field research with pre- educational phase (rainy season)	Not yet Achieved
30/08/19 – 10/09/19	University of Yaoundé I	Laboratory work	Not yet Achieved
15/09/19	Second educational workshop		Not yet been done

# Preliminary results

 Table 2: summary number of bird species captured in Adamawa plateau

Taxonomic levels		Indivic captu	Individuals captured per		nbei	Freq perc	
Order	Families	Species	Meadow	Dry woodland	Forest	Total	uency ir ent (%)
Passerine	Estrildidae	Amandava subflava	1	0	0	1	0.69
		Eushistospiza dybowskii	0	0	1	1	0.69
		Estrilda nonnula	0	1	0	1	0.69
		Lagonosticta sanguinodorsalis	0	0	1	1	0.69
	Ploceidae	Euplectes macrourus	2	0	0	2	1.39
		Euplectes gierowii	0	2	0	2	1.39
		Euplectes hordeaceus	0	1	0	1	0.69
		Ploceus sp.	0	6	0	6	4.17
		Ploceus nigricollis	0	1	0	1	0.69
		Ploceus intermedius	0	1	0	1	0.69
	Nectariniidae	Cinnyris chloropigius	0	0	2	2	1.39
		Cinnyris sp.	0	1	0	1	0.69
		Cinnyris venustus	0	1	0	1	0.69
	Pycnonotidae	Eurillas virens	0	0	2	2	1.39
		Chlorocichla sp.	0	1	0	1	0.69
		Atimastillas flavicollis	0	2	1	3	2.08
		Pycnonotus barbatus	4	15	6	25	17.36
		Pyrrhurus scandens	0	0	1	1	0.69

	Muscicapidae	Cossypha niveicapilla	0	3	4	7	4.86
		Cossypha albicapillus	0	0	3	3	2.08
		Ficedula hypoleuca	0	2	2	4	2.78
		Melaenornis pallidus	0	1	0	1	0.69
	Leiothrichidae	Turdoides plebejus	0	3	0	3	2.08
		Turdoides reinwardtii	0	1	3	4	2.78
	Zosteropidae	Zosterops senegalensis	0	1	0	1	0.69
	Motacillidae	Anthus sp.	0	1	0	1	0.69
		Anthus cervinus	0	1	0	1	0.69
	Turdidae	Turdus pelios	0	11	5	16	11.11
	Platysteiridae	Batis orientalis	0	6	0	6	4.17
	Monarchidae	Terpsiphone viridis	0	0	1	1	0.69
	Malaconotidae	Laniarius aethiopicus	0	5	0	5	3.47
		Laniarius leucorhynchus	0	0	2	2	1.39
		Tchagra senegala	0	2	0	2	1.39
	Indicatoridae	Indicator minor	0	0	1	1	0.69
	Macrosphenidae	Macrosphenus concolor	0	0	2	2	1.39
Non	Alcedinidae	Ceyx pictus	0	0	2	2	1.39
passerine		Halcyon malimbica	0	0	1	1	0.69
	Coliidae	Colius striatus	0	8	0	8	5.56
	Meropidae	Merops bulocki	0	0	1	1	0.69
	Picidae	Dendropicos goertae	0	1	0	1	0.69
	Columbidae	Streptopelia capicola	0	1	0	1	0.69
		Turtur afer	0	5	4	9	6.25
	Lybiidae	Lybius dubius	0	1	0	1	0.69
		Pogoniulus chrysoconus	0	4	0	4	2.78
	Psittacidae	Agapornis sp.	0	1	0	1	0.69
	Accipitridae	Accipiter badius	0	0	1	1	0.69
	Falconidae	Falco vespertinus	0	0	1	1	0.69
Total individuals			7	90	47	144	100
Frequency	in percent (%)		4.86	62.50	32.	100	

### Comments

Several bird species of savannah and forest were identified on Adamawa plateau (Table 2). According to our observations in the field many bird species appear as indicators of the destruction and degradation of woodland savannah and forests by anthropogenic activities conspicuously grazing (Figure 3), agriculture or farmland (Figure 5) and fire (Figure 4). The first results show the following species are most frequent and are considered as indicator species, Pycnonotus barbatus (17.36%), Turdus pelios (11.11%) and Colius striatus (5.56%) (Table 2). Works by Okosodo et al. (2016) reported Pycnonotus barbatus from the secondary forest that provided the highest food source of 69.8%, then the farmland ecosystems 21.12% and developed ecosystem 9.2%. Works by Akinsola & Oluseye (2004) reported similar results that concern Turdus pelios. Additionally, in dry woodland where an important frequency of these species have been observed (62.50%) (Table 2), we have organised workshops with students and local populations to explain the negative impact of threats in the whole ecosystem. We also have asked them to decrease deforestation, pollution and non-target poisoning species, capture for traditional medicine, bushmeat and direct persecution; to decrease illegal poaching wildlife (monkeys, birds, pangolin, elephant etc.) and the use of poisons that are serious threats to the forest and its rich biodiversity (**Figures 12, 13**).

In each site, I have also spent much time to train my local guides to be able to continue with the sensitisation of local people in each their home locality on behalf of conservation of forest ecosystems. Additional, we are planning to initiate monitoring by the local communities in the future a programme developed in consultation with our local guides, the local authorities and national authorities (ministries, NGOs) to reduce threats in the Adamawa plateau. We are preparing to meet these challenges during future educational workshops that we will organise once we have all of our field data collected and analysed.

The Cameroon forest ecosystems, fauna and peach are protected by the law n° 94/01 of January, 20, 1994 and our preliminary data indicate that this law is not effective in practice. However, I have a great determination of overcome at this situation and with my local team to protect and conserve the avifauna and forest ecosystems in my country (Cameroon).



Some images of bird species and threats recorded during our field research

Figure 1. Lybius dubius (Lybiidae). Figure 2. Accipiter badius (Accipitridae)



Figure 3. Grazing in dry woodland savanna from Adamawa plateau. Figure 4. Destruction by fire in forest from Adamawa plateau and Falco vespertinus (Falconidae) sampled



Figure 5. Agricultural land through shifting cultivation in woodland



Figure 6. Cinnyris venustus (Nectariniidae) Figure 7. Macrosphenus concolor (Macrosphenidae)



Figure 8. Agapornis sp. (Psittacidae). Figure 9. Streptopelia capicola (Columbidae)



Figure 10. Eurillas virens (Pycnonotidae). Figure 11. Batis orientalis (Platysteiridae)



Figure 12. Workshop with students and local populations



Figure 13. Workshop with students and local populations