PROJECT UPDATE - MARCH 2021

Distribution and Conservation Status of Medium and Large Mammals in Residual Forests of South-Eastern Region of Côte d'Ivoire

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I/ EXECUTIVE SUMMARY

The project focuses on mammals present in residual forests of south-eastern Côte d'Ivoire. The region is part of the Upper-Guinean Biodiversity hotspot but is largely unknown and information about the current status of numerous species is lacking. The goal is to update distribution and conservation status of mammals and identify the drivers of deforestation and wildlife depletion. Results of this study will permit to develop a rational conservation strategy of biodiversity in the region.

II/ PROJECT PROGRESS

Funds for the project were received in August 2020, but activities of the project really started in December 2020. The activities carried out between December 2020 and March 2021, are explained in the following paragraphs.

1. Camera traps sessions

We first begun during the dry season between December 2020 and March 2021. The first site was the Ehotile Islands National Park, where we set up 29 camera traps lasting 21 days (December 2020 to January 2021). After this, we set up 13 camera traps in the Soumié Classified Forest (SCF) for 21 days too (January to February 2021). When we finally received the 25 Bushnell Core Low Glow Camera Trap (16 CT buy with the Rufford Fund and 9 with the CSRS Fund), we put them in the third site that is the Comoé 1 Classified Forest (C1CF). We used here 17 CT and not 19 as previewed because two points where in cultural zones and we do not have the authorization and the assurance that nobody will steal or damage it. After 21 days (February to March 2021), we uninstalled the devices of C1CF and we put 26 CT in the N'ganda N'ganda Classified Forest (NNCF) and not 27 as previewed because one of the points was too close to a town and in an open trash area where the risk to be stolen is hight. They were maintained in the field since 20 March i.e. 21 days.

The table below is a summary of the number of camera traps that were laid on different study sites and the distance between each device. The number of CT and the distance are different from the submit protocol because of the number of devices available and the lack of time due to the delay to received devices and the need to have results rapidly for my thesis of PhD.

Table 1: Resume about camera traps

Study Site	Period	Number of CT planned	Number of CT laid	Distance between CT
EINP	December 2020 – January 2021	29	29	depend of island, between 300m and 500m
Soumié CF	January-February 2021	13	13	1 km
Comoé1 CF	February-March 2021	19	17	1 km
N'ganda N'ganda CF	March 2021 – In progress	27	26	2 km
Total		**88**	**85**	
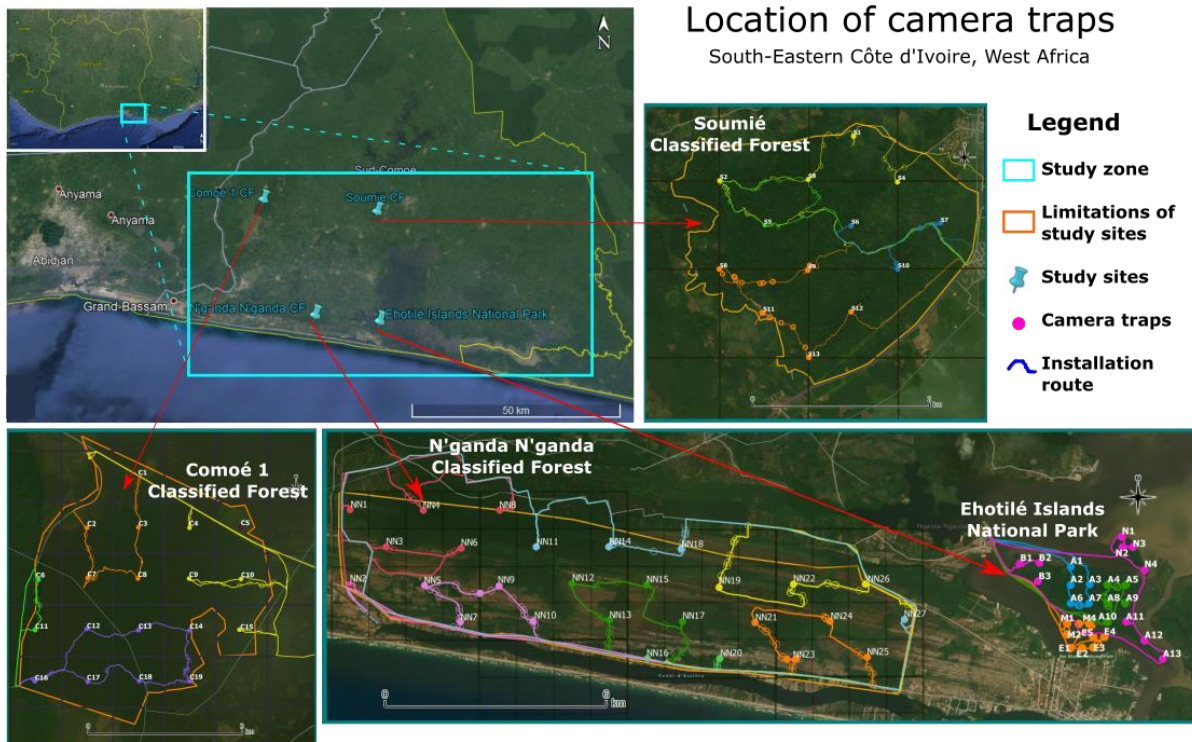
Figure 1 : Distribution of camera trap installation sites in the different study area

2. Training of students and agents on field

Before the first session of camera traps, we asked to agents of the ivorian office of parks and reserves (*Office Ivoirien des Parcs et Réserves*, OIPR) and of the society for forest development (*Société de Développement des Forêts*, Sodefor), to complete a formular online about their knowledge in data collecting tools, and on presence of mammals in the

different sites. Just some on them have already used a camera trap but do not really know the methodology.

The training and the setting of camera traps were carried out simultaneously. For the OIPR agents, it was in the EINP in December 2020, and two agents were formed to know how to use camera traps and how to do a better installation. For the Sodefor agents, the training was in the Comoé1 Classified Forest and in the N'ganda N'ganda Classified Forest, where two agents were formed. At the same time, I asked to master's students to come with me on the field to help me. Four students were trained between the four study sites. Sometimes, we asked to someone from a riparian village to come with us to help and at this occasion, I formed them about why we use camera trap, how it works, and I sensitized them to do not steal it or to do not show the location to others.

3. Difficulties

To begin the project, we had to buy camera traps and it took lot of time, due to some administrative problems, devices are not available in Côte d'Ivoire and we had to buy it in a store from USA. Due to the COVID-19 pandemic the suppliers took some delay to send the order. The camera traps came in February 2021, with 16 devices from the Rufford Funds and 9 from the CSRS Funds. To avoid wasting too much time, I asked other researchers to lend me some camera traps until the order come. My devices arrived in February 2021. The model that was ultimately chosen was Bushnell Core Low Glow.

III/ Upcoming project activities

Data collected during the dry season is almost done. We will continue the installation of camera traps until July-August 2021. That will consider the rainy season. At the same time, we will continue to analyse photos and videos already collected and we will compare those results with those obtained with the linear transect and Recce methods.

The table 2, presents the logical framework of the project.

Table 2: Project overall objective

Project results	Indicators	Target/baseline	Progress	Source of verification	Outputs	Activities
Project overall objective:						
R.1 A quasi-exhaustive inventory of mammals in the area with the support of images	**IND.1.1 Number of camera traps laid simultaneously**	Target: total of 20 CTs installed simultaneously	Between 13 and 29 CTs installed simultaneously, depend on study site	GPS Points per area, map	O.1.1 The distribution of the mammals and to identify their ecological preferences	A.1.1.1 Install of camera traps on the four sites
	IND.1.2 Total number of points where the devices could be placed on a site compared to the initial points of the grid	Target: Soumié CF 15 CT Comoé 1 CF: 24 CT N'ganda N'ganda CF: 21 CT EINP: 29 CT (Assoko: 13 CT, Balouaté : 4 CT, Niamoin : 4CT, Méa : 3 CT, Elouamé : 5CT)	Soumié CF: 13 CT Comoé 1 CF: 17 CT N'ganda N'ganda CF: 27 CT EINP: 29 CT (Assoko: 13 CT, Balouaté: 3 CT, Niamoin: 4 CT, Méa: 4CT, Elouamé: 5 CT)	GPS Points per area		A.1.2.1 Create a cartographic representation of the camera traps location
	IND.1.3 Number of weeks when camera traps are layed per study area	Target: six weeks per area	In progress: Three weeks for the Soumié CF, Comoé 1 CF and EINP. Now CT are in N'ganda N'ganda CF for six weeks	Activity reports, map		A.1.3.1 Planning the schedule of camera traps
	IND.1.4 Number of pictures that can be used for all the points where the devices have been installed	Target: To have at least one exploitable image per day (on 89 points), so approximately 3 780 images	In progress	Results of images of camera traps	O.1.2 A photographic database of mammals of the South-eastern Côte d'Ivoire	A.1.4.1 Create a collection of images based on camera traps
						A.1.4.2 Select the best images for the photographic database
	IND.1.5 Number of mammal species identified with each method	Target: more species identified with camera trap than linear transect method	In progress	Results of images of camera traps	O.1.3 A quasi-exhaustive inventory of mammals in the area with the support of images	A.1.5.1 Inventory of mammals describe in reports evaluating the presence of mammals
						A.1.5.2 Analyse data collected with Recce and linear transect method
		Baseline: Number with linear transect and Recce method and old reports	In progress	First results of my PhD, old reports		A.1.5.3 Analyse images of camera traps

R2 Improvement of agent's capacities and knowledge of sites managers on mammals	**IND.2.1 Number of agents trained to place camera traps on field**	Target: 2 agents per institutions	2 agents for the OIPR and 2 agents for the SODEFOR were sensibilized and formed to camera trap directly on field	Photos, reports	O.2.1 Agents are qualified to use camera traps	A.2.1.1 Theoritical training about camera traps
						A.2.1.2 Training on field to place camera traps
	IND.2.2 Number of mammal species known by the agents responsible of the study sites	Target: The agents known also the cryptic animals of the area	First web questionnaires were diffuse to agents to know their knowledges about animals.	Before-and-after questionnaires	O.2.2 Agents know species that live in their protected area and can be more efficient in the surveillance and sensibilisation	A.2.2.1 Interview or web questionnaires diffuse to agents
						A.2.2.2 Presentation of result found with camera traps
		Baseline: The agents known the most common species present in the area				A.2.2.3 Posters of mammals in different site create and give to sites managers
R3 Diffusion of result in riparian village	**IND.3.1 Number of village touch by the presentation of the results**	Target: 20 villages		Photos, reports, presence list	O.3.1 Local community is awareness about conservation status of mammals in their region	A.3.1.1 Presentations of result in villages
	IND.3.2 Number of flyers distributed to community about results of the project	Target: 100 flyers		Factures, Photos, reports	O.3.2 Local community better known mammal species that are still present in the region	A.3.2.1 Distribution of flyers in sous-prefecture
						A.3.2.2 Distribution of flyers in village (chief and school)

Photo 1 : Set up and installation of camera traps.

Photo 2 : Uninstallation of camera traps.

Photo 3 : Field training of several master's students on the installation of camera traps

Photo 4 : Field training of OIPR (a) and Sodefor (b) officers.
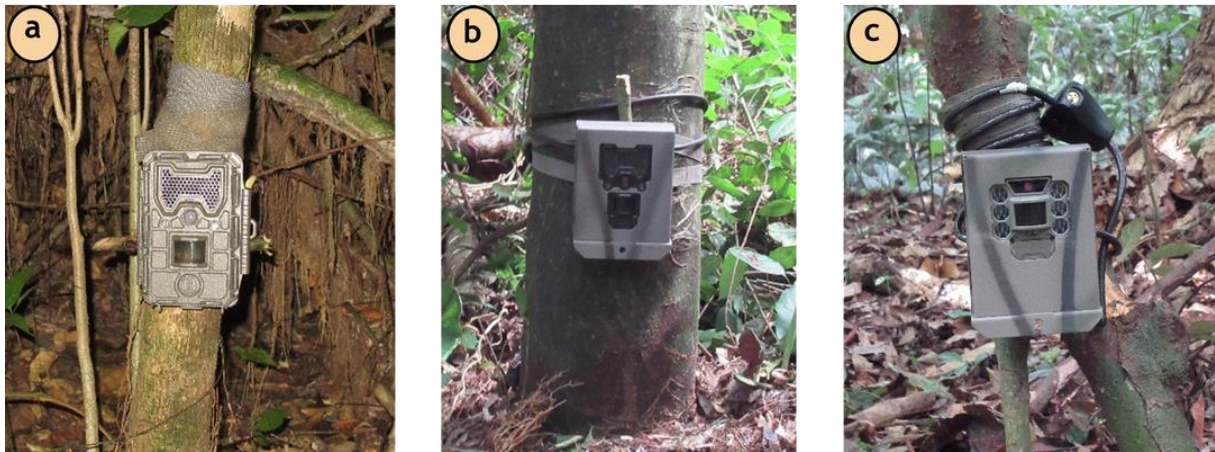
Photo 5 : Camera trap models used between December 2020 and March 2021

Photo 6 : Indices of human presence (crab trap [a], monitor lizard trap [b], dam of mammals traps [c], cutting of wood [d], herd of oxen [e])

Photo 7 : Examples of vegetation observed by camera traps (Savannah [a], Raffia forest [b], Secondary mainland forest [c], Mangrove [d]).

Photo 8 : Example of photos taken by camera traps (Green monkey [a], red river hog [b], pangolin [c], genet [d], poachers with dogs [e], women [f]).