

Project Update: December 2021

Current status

About 80% of field surveys are finished. Conservation campaigns are still ongoing. However, we began surveys late in the end of March 2020. There were complicated procedures to withdraw money from the institution account. When the project began, the Covid-19 pandemic also affected the country whereby most activities stopped for several months. Gatherings were banned. Even after the ban local villagers were not willing to interact with people from cities.

Data collection

I, together with my team (Figures 1-3), have surveyed Ntakata forest, Lubalisi and Mnyangwa in the Greater-Mahale Ecosystem (Masito-Ugalla Ecosystem) (March-December 2020) and the Ufipa Escarpment, Chala Forest (March-December 2020) and Mbuzi Forest (January-December 2021) on the Ufipa plateau. During the surveys, two teams of three people each simultaneously searched for ashy monkeys using trails. When a group was encountered, the number of individuals, sex and age composition, sighting distances to the group, GPS position and bearing from the observer to the group were recorded (adapted with modification from Peres, 1999). When we encountered a group, we followed it for 10 to 30 minutes to ensure that all individuals were counted (e.g., Chapman *et al.*, 1988). Mean group size was obtained by dividing the total number of individuals from all groups by the number of groups. Encounter rates of groups were computed by dividing number of groups per total distance walked.



Figure 1: Arrival of a research team in the Ntakata forest in the Masito-Ugalla Ecosystem during the wet season, March 2020 (Principal investigator at the far-left corner, Mr M. Julius Kibaja, seated).



Figure 2: The Principal investigator (right) with an experienced field guide in one of Ashy monkey searches along trails inside the Ntakata forest in the Masito-Ugalla Ecosystem.



Figure 3: Expedition of my research team towards the Chala Hill Forest on the Ufipa Plateau during the dry season.

Preliminary results of red colobus

A total of 337.6 km was walked in the study area, representing the Masito-Ugalla Ecosystem (or Greater Mahale Ecosystem-GME). In the Masito Ugalla Ecosystem/Greater Mahale Ecosystem, a large number of groups was found in the gallery forest compared to woodland vegetation types regardless of seasons. Seasonality seemed to affect sightings of monkeys in the Ufipa Escarpment as very few groups were encountered during the long rain season. The presence of a large number of groups in the Ufipa Escarpment may be due to population compression,

as a result of loss of suitable patches adjacent the escarpment. Only two groups were found in the Chala Forest and one group in the Mbuluzi Forest despite intensive seasonal repeat surveys (Table 1 and 2). Rampant forest conversion in the Mbuluzi Forest attributes the drastic decline of numbers since my first survey funded by Rufford Small Research Grant, 2017. Detailed information will be produced in the subsequent update report.

Table 1: Summary of number of groups and mean group sizes of red colobus encountered in different study sites within the study area (GME-Greater Mahale Ecosystem/Masito-Ugalla Ecosystem).

SURVEY SITES	SEASON	
GME_NTAKATA FOREST	WET SEASON	DRY SEASON
Mean group size	46.9	35.8
Number of groups	8	13
SE of Mean	7.97	6.392
Range	8 to 75	18 to 90
Encounter rates of groups/km	0.381	0.619
GME_LUBALISI FOREST WOODLAND MOSAIC		
Mean group size	36.2	27
Number of groups	6	7
SE of Mean	7.387	2.895
Range	20 to 70	20 to 40
Encounter rates of groups/km	0.375	0.438
GME_MNYANGWA FOREST WOODLAND MOSAIC		
Mean group size	41.7	19
Number of groups	3	2
SE of Mean	5.301	1
Range	23 to 72	18 to 20
Encounter rates of groups/km	0.048	0.032
UFIPA ESCARPMENT		
Mean group size	55.2	55.4
Number of groups	6	21
SE of Mean	12.893	6.462
Range	4 to 90	5 to 102
Encounter rates of groups/km	0.104	0.363
CHALA FOREST		
Mean group size	44.5	43.5
Number of groups	2	2
SE of Mean	16.5	12.5
Range	28 to 61	31 to 56
Total population size	89	87

MBUZI FOREST

Mean group size	6	3
Number of groups	1	1
SE of Mean	0	0
Range	6	3
Total population size.	6	3

Data for modelling habitat suitability

We have collected at 120 GPS locations for groups across the landscape (Masito-Ugalla Ecosystem, forests on the Ufipa Plateau, Gombe and Mahale Mountains National Park). I am still compiling these types of data for variable extraction. In collaboration with distribution modeling expert, variables based on the GPS locations are being extracted.

Conservation threats

Only about 50% of these types of data are being reported in this section. Livestock grazing and bushfires are a common problem in the entire surveyed study area. A variety of human signs were observed. However, the leading threats differed in the study areas with respect to vegetation types, snare traps were mostly encountered in forested landscapes (Table 3). Generally, the leading human activities were poaching indicated by snare traps in forest vegetation types in the Greater Mahale Ecosystem (0.52 snare traps per km) and Chala Forest (1.13 snare traps per km). In the Ufipa Escarpment, main human activities were tree cutting for charcoal (0.42 charcoal kilns per km), cattle grazing (0.31 cowshed per km) and sawing (0.22 sawing pits and 0.24 tree stumps per km). Beekeeping, the only environmentally friendly activity in the area, was mainly practiced in the Greater Mahale Ecosystem. The final report will present details of the threats besetting the Masito-Ugalla Ecosystem and other sites such as Mbuzi Forest on the Ufipa plateau.

Table 2: Groups of red colobus recorded in various study sites in the study area

Greater Mahale Ecosystem/Masito-Ugalla Ecosystem				Ufipa Plateau							
Ntakata Forest		Lubalisi Forest mosaic woodland		Mnyangwa Gallery		Ufipa Escarpment Woodland		Chala Forest Forest mosaic		Mbuzi Forest Degraded Forest Montane	
Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry
35	30	34	26	72	20	70	70	61	56	6	3
42	40	20	23	23	18	80	65	28	31		
31	20	23	20	30		90	8				
64	30	40	35			37	102				
8	25	30	20			50	5				
50	42	70	40			4	85				
70	20		25				56				
75	90						30				
	79						98				
	23						68				
	18						97				
	30						68				
	18						70				
							71				
							60				
							60				
							33				
							28				
							55				
							29				
							6				

Table 3: Human activities recorded in the study area during the wet seasons (GME_FR = Greater Mahale Ecosystem Forest, GME_WD = Greater Mahale Ecosystem Woodland).

TYPE OF HUMAN ACTIVITY	GME_FR		GME_WD		UFIPA ESCARPMENT		CHALA FOREST	
	F	ER	F	ER	F	ER	F	ER
Agropastoral temporary camps	4	0.10	7	0.11	3	0.05	0	0.00
Beehives	4	0.10	10	0.16	0	0.00	0	0.00
Bush meat drying sites	2	0.05	0	0.00	0	0.00	0	0.00
Cattle	7	0.18	9	0.14	4	0.07	0	0.00
Charcoal kilns	0	0.00	1	0.02	24	0.42	0	0.00
Cleared forest patches	0	0.00	0	0.00	4	0.07	0	0.00
Cowsheds	5	0.13	1	0.02	18	0.31	0	0.00
Farms	2	0.05	11	0.17	0	0.00	0	0.00
Fishermen camps	2	0.05	0	0.00	0	0.00	0	0.00
Human trails	3	0.08	20	0.31	0	0.00	0	0.00
Local honey collection on tree holes	0	0.00	3	0.05	0	0.00	0	0.00
Orchid harvesting	8	0.21	2	0.03	0	0.00	0	0.00
Piles of building poles	0	0.00	2	0.03	2	0.03	0	0.00
Sawing pits	2	0.05	16	0.25	13	0.22	0	0.00
Selectively logged tree stumps	3	0.08	10	0.16	14	0.24	0	0.00
Small holder dam	0	0.00	2	0.03	0	0.00	0	0.00
Snare traps	20	0.52	3	0.05	9	0.16	13	1.13
Timber plank sites	0	0.00	1	0.02	0	0.00	0	0.00
Truck roads	0	0.00	2	0.03	0	0.00	0	0.00
Trucks	0	0.00	3	0.05	0	0.00	0	0.00

Ongoing and pending activities

Data for modelling habitat suitability of the red colobus across the landscape are still being compiled and report for this activity will be released for the next 2 months. Full data for human activities across all the sites will also be included in the impending report. Community conservation campaigns and data analyses for surveys of ashly monkeys will be finalised in January 2022. Reasons of delays are the following. There were complicated procedures to withdraw money from the institution account. When the project immediately began, the Covid-19 pandemic also affected the country, and this paralysed the smooth conduction of almost all activities related to this project for several months. Gatherings were banned for 3 months. After the ban was lifted, it took long time to mobilise the team. Of course, local peoples in most villages covered by this village were not reluctant to interact with people from cities. Thus, this project is still ongoing and will be finalised for about 2 months from now.

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