

Project Update: April 2018

Data collection

Surveys were conducted from July 2017. Two teams comprising three people each simultaneously searched for ashly monkey using line transects (following Peres, 1999). 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. Because this method can leave out some groups (Ferrari *et al.*, 2010), especially in very large areas, it was complemented with complete counts (*sensu* Davenport *et al.*, 2007). Mean group sizes was obtained by dividing the total number of individuals from all groups by the number of groups. Population size estimates will be obtained by extrapolation from group and individual densities (that will be provided in the final report to Rufford). Faecal samples for DNA analysis were collected and preserved following Ting (2008) and Mbora and McPeck (2011). Collected samples have been kept in fridges at the University of Dar es Salaam, Tanzania.

Ashly red colobus monkeys

The groups of ashly red colobus monkeys found in the surveyed areas in Tanzania varied in mean group size. New sites harbouring Ashly monkeys were also discovered. In the Mbuzi forest area, Rondokazi site is a newly surveyed site where ashly monkeys were not seen (Figure 1). Overall mean group size in Mbuzi forest area was 51.3 and in Masito-Ugalla Ecosystem was 34.4 individuals (Figures 1 and 2). Population size and density figures will be provided in the final report. Intersite variations in group size may be due to differences in land protection status, the extent of human activities (cultivation), and inter-site habitat heterogeneity. Whereas many groups were mostly found in montane forest mosaics (Figure 3), some were found in woodlands.

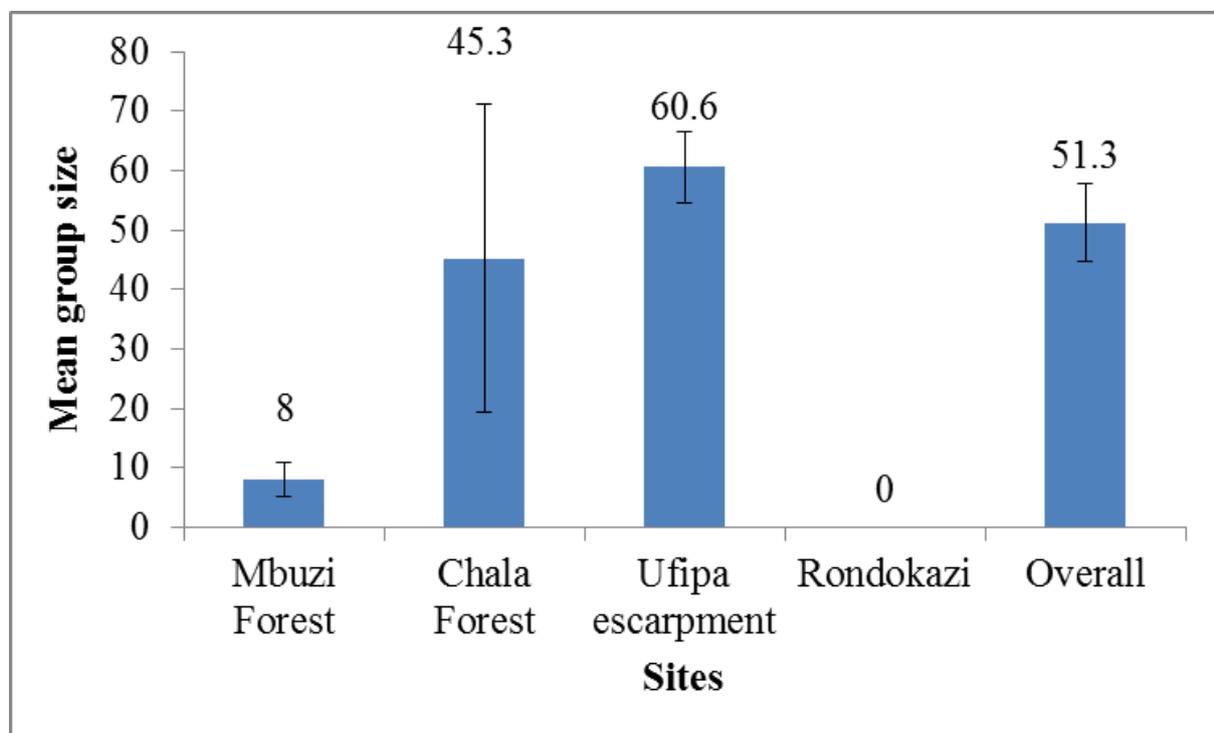


Figure 1: Mean group size of Ashly monkeys in surveyed sites in the Mbuzi forest area (Overall number of groups = 22).

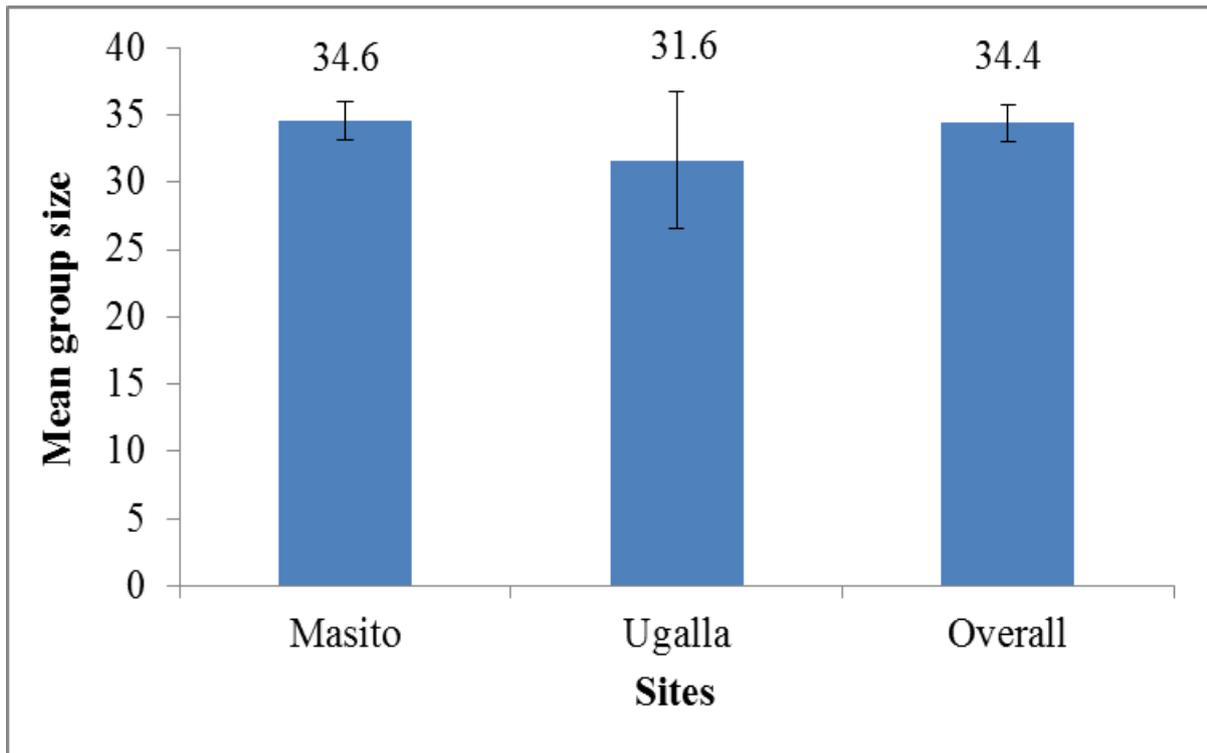


Figure 2: Mean group size of Ashy monkeys the Masito-Ugalla Ecosystem (Overall number of groups = more than 100).



Figure 3: Ashy monkeys in a forest fragment in Mbuzi Forest area on the Ufipa plateau.

Faecal samples

Ashy monkeys produce pellet-like faeces (Figure 4). Four to seven faecal pellets found within a radius of 1.5 m and thus assumed to be from the same individual were kept in one container. Nearly 500 faecal samples have been collected from all sites in the Mbuzi forest area (100 samples) and Masito-Ugalla Ecosystem (400 samples). Samples have been kept in fridge at a -20 degrees centigrade at the University of Dar es Salaam.



Figure 4: Faecal pellets deposited by Ashy monkeys in a particular site in the Mbuzi forest area.

Conservation threats

Influx of livestock keepers and bushfires are a common problem in all the study sites. In the Mbuzi forest area, a variety of human signs were observed, with the leading one being tree cutting (Table 1) followed by forest conversion into farms is common. Plots of marijuana (*Cannabis sativa*), which are illegal in Tanzania, were found in the Ufipa escarpment (Figure 5).

In the Masito-Ugalla Ecosystem the major human signs were sawing, farming, and poaching as the leading activities (Figures 6 and 7). The ecosystem has recently been invaded by cattle herders from other regions of Tanzania. Poaching is common in the entire ecosystem, though more severe in the proximity of village lands. Poaching is intensified by the presence of past refugee villages hosting people from Burundi, situated at the centre of this ecosystem. Uncontrolled bushfires are also common. Beekeeping is the only environmentally friendly activity in the area (Figure 6). Details of threats in the Masito-Ugalla Ecosystem will be presented in the forthcoming report.



Figure 5: Plots of marijuana in one site of Mbuzi forest area (Principal investigator, M. J. Kibaja).

Table 1: Frequency and encounter rates of human signs in the Mbuzi Forest Area.

	Human activity	Frequency	Encounters/km
1	Tree cutting	48	0.62
	Sawing pits	10	0.13
	Charcoal kilns	22	0.28
	Trees stumps	14	0.18
	Pole cutting	1	0.01
	Medicinal tree cuts	1	0.01
	2	Livestock keeping	31
Cowsheds	19	0.24	
Livestock keepers' huts	8	0.10	
Cattle herds	4	0.05	
3	Farming	26	0.33
	Farms	25	0.32
	Local irrigation furrow	1	0.01
4	Poaching	18	0.23
	Traps	15	0.19
	Poachers camps	3	0.04
5	Bee keeping	2	0.03
	Beehives	2	0.03

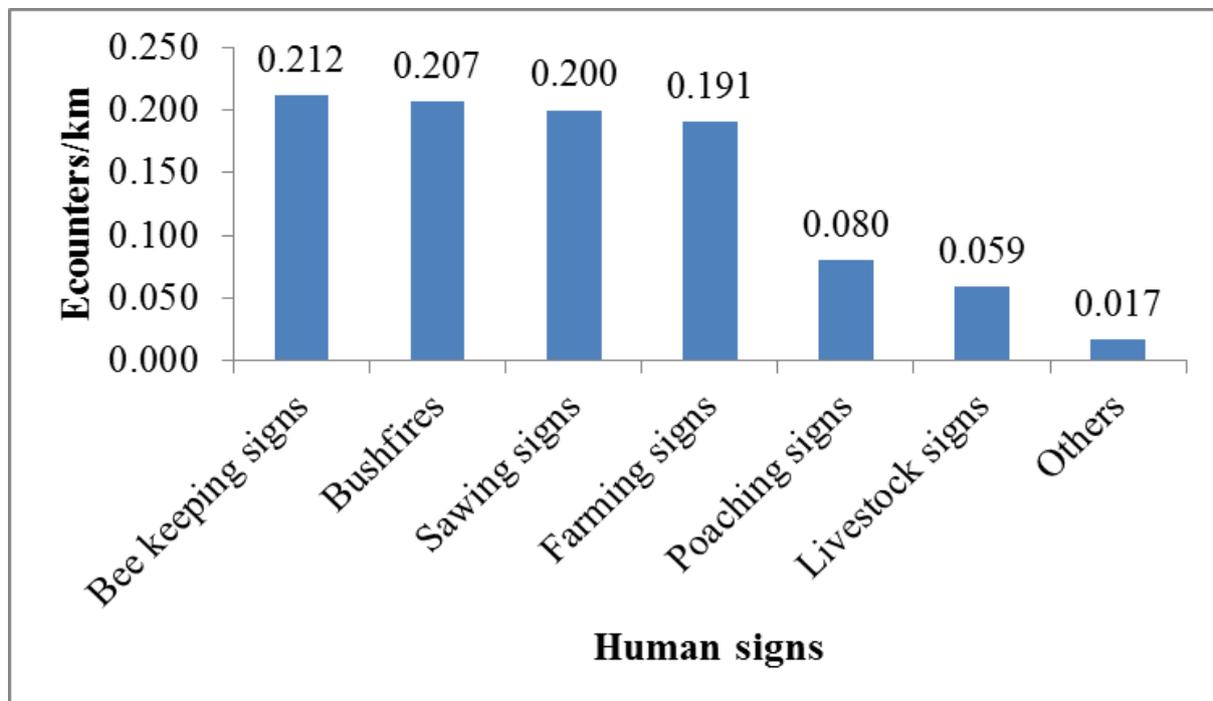


Figure 6: Encounters of human signs per kilometer in the Masito-Ugalla Ecosystem (others = other resource uses, e.g., charcoal kins, firewoods, mushroom, orchid harvesting).



Figure 7: Principal investigator. M. J. Kibaja, displaying sawing equipment in the Masito-Ugalla Ecosystem (owners have fled after seeing us).

Ongoing and pending activities

- Community conservation campaigns started in late February 2018 and will continue until to July 2018 as planned in the proposal to Rufford Foundation.
- Conservation Action Plan. Arrangements are being made this month to begin with the Conservation Action Plan for the ashy monkey and it is expected to be finalised in August 2018.

What is next?

There is still a need for detailed population surveys in the Masito-Ugalla Ecosystem. This is a very large landscape (approximately 20,000 km²) and most of its remote sites are hardly accessible, especially during the rainy season. Despite of outstanding findings (more than 100 groups of ashy monkeys found), monthly line transect surveys for at least 6 or 12 consecutive months are recommended in the main vegetation types if this ecosystem (woodland and gallery forest) in the ecosystem. This will compel me to reapply for an extension grant the moment the research activities I included in my proposal to the Rufford Foundation conclude in July 2018.