

Monthly Report

May 2017



Attack

6/17/2016 1:54 AM ID:4

CRM Staff



Dr Emma Stone
Founder/Director



Godwin Zimba
Community
Engagement Officer



Robert Davis
Senior Research
Assistant (KNP)



Kelsey Green
Research Assistant
(KNP)



Maddie Melton
Research Assistant
(Lilongwe)



Dr Katrina Fernandez
Senior Research Assistant
(NNP)



Alex Kahler
Research Assistant
(NNP)

www.carnioresearchmalawi.org
www.facebook.com/CarnivoreResearchMalawi

CRM is a project of UK Charity Conservation Research Africa
www.conservationresearchafrica.org
Registered Charity Number 1170640

Contents

Nyika National Park Research Camp	4-7
New hyaena den found	4
Leopard kills jackal	4
Welcome Masters students	4
Goodbye Sem	4
Camera trap findings	5
Opportunistic carnivore sightings	6
Large mammal and spotlighting transects	7
Scat collection summary	7
Kasungu National Park Research Camp	8-11
Leopard sightings in	8
Wild dog report	8
Leopard scat collection	8
Opportunistic carnivore sightings	9
Camera trap findings	9
Scat transect summary	10
Scat collection summary	10
Large mammal and spotlighting transect	11
Lilongwe Research Station	12-14
The urban clan expands	12
Kumbali Lodge research	13
Carnivore sightings	14
Camera trap findings	14
Appendix I - Mammals of NNP, KNP and Lilongwe City	16

CRM findings—Nyika field station

New hyaena den found

The team managed to locate an active Hyaena (*Crocuta crocuta*) den earlier this month. Cameras were set at the den but failed to get any pictures. We will continue to monitor this den for activity over the next few months.

Leopard kills a jackal

A Side-striped Jackal (*Canis adustus*) carcass was found near Chelinda camp early on the morning of May 27th (figure 1). After insecticide treatment it was clear that the jackal had been killed by a leopard (*Panthera pardus*). The team measured the carcass and harvested hair samples for our scat analysis reference collection. Some hair follicles have been extracted for DNA analysis. The carcass was then used as bait for camera trapping hyaenas. We are looking forward to the camera trap data from the bait site.



Figure 1. CRM staff member, Alex Kahler, investigating jackal carcass.

Welcome Masters students

This month, we welcomed four Masters students who will be conducting their research projects at our Nyika field station. Eleanor Darbey is a masters student at Oxford Brookes University and is assessing the distribution and abundance of Samango monkeys (*Cercopithecus mitis*) in small forest patches found throughout the Park. Three students from Nottingham Trent University, Fleur Visser, Beth Byrne, and Katherine Gibson, arrived at the end of the month. They will be focusing on carnivore diet analysis, carnivore and ungulate distribution assessments using camera trapping. We are all excited to see their results.

Goodbye Sem

This month we said goodbye to Sem Meys a volunteer who started on the project in April and left us at the end of May. We would like to thank him for all his input and help particularly with his interest in birds and honey badgers (*Mellivora capensis*). We managed to observe and list 30 species of birds in Nyika. While Sem was here, he helped with transects and data recording as well as carnivore scat analysis.

Camera trap findings for May 2017

Eight camera traps were active at nine different locations (Figure 2; Appendix I) during May, mainly along major roads and trails monitoring carnivore activity. A total of 105 trap nights were recorded yielding six carnivore images. These included one leopard, identified as NNP3, at the TNM tower (Figure 3), as well as a serval (*Leptailurus serval*). The remaining four images were of serval (Figure 3) on camera located near the airstrip (Figure 2).

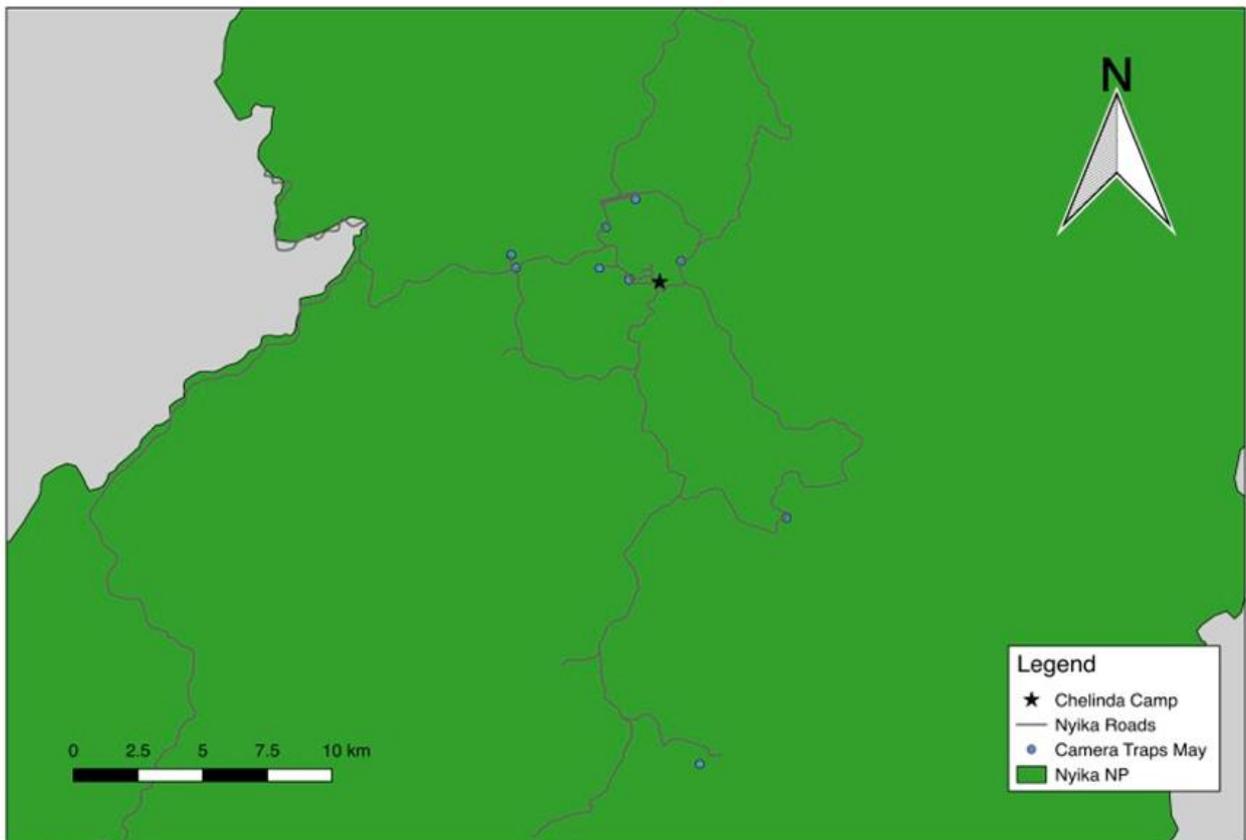


Figure 2. Camera trap locations for May 2017 in Nyika National Park.

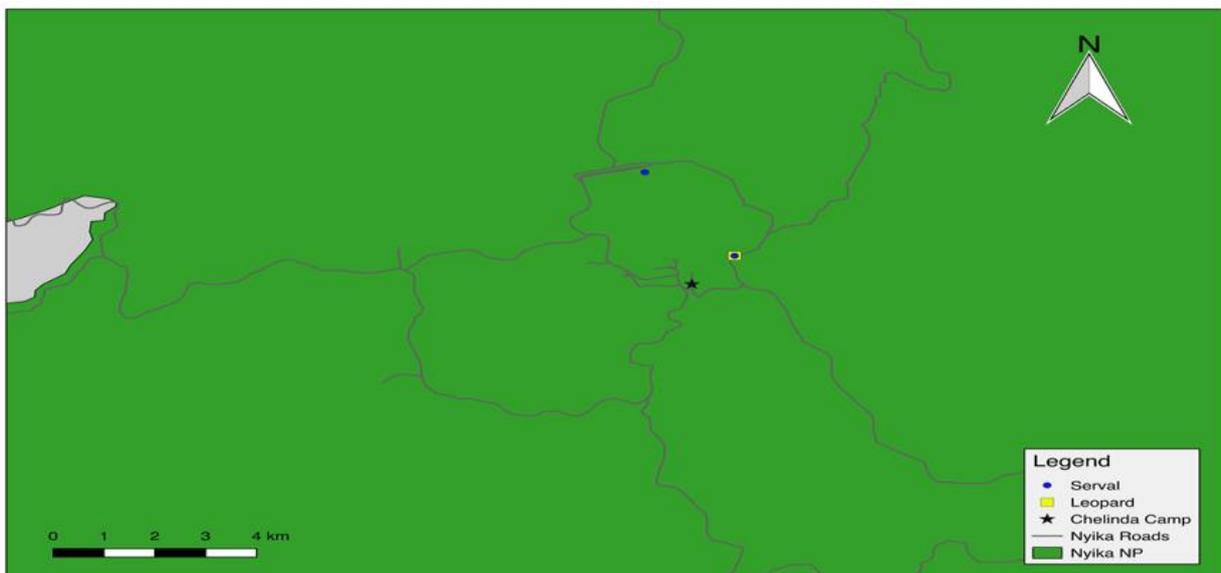


Figure 3. Camera trap carnivore sightings for May 2017 in Nyika National Park.

Opportunistic carnivore sightings for May 2017.

In May we had live sightings of a leopard, two separate sightings of side-striped jackal and two separate sightings of serval (Appendix II).

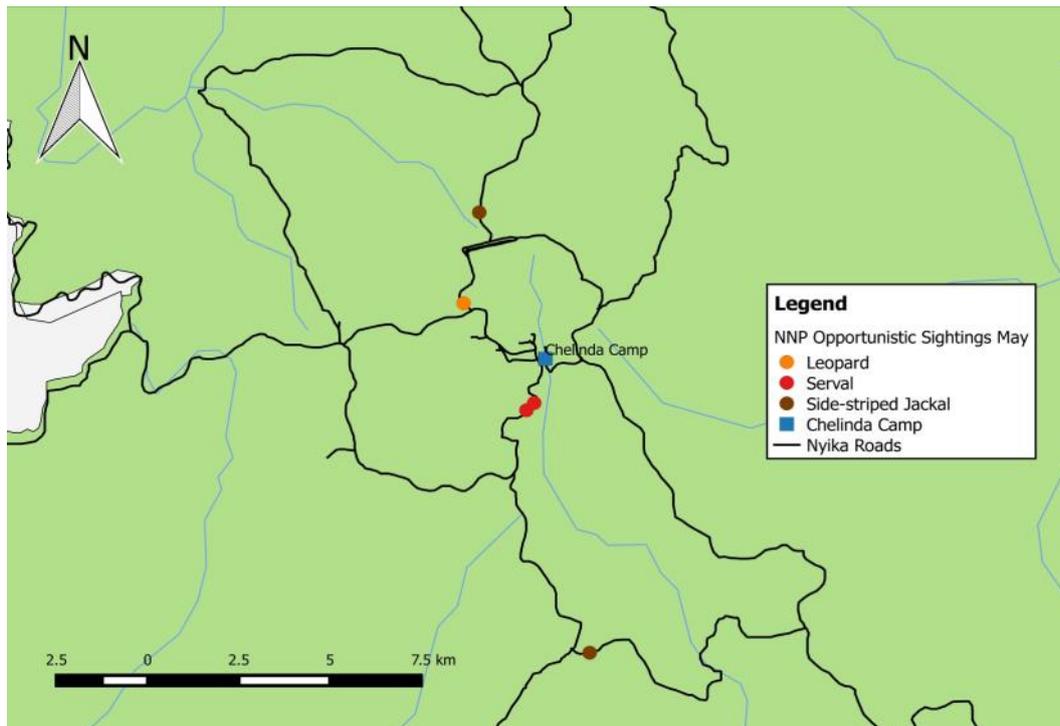


Figure 4. Large mammal transects in Nyika National Park during May 2017.

Large mammal and spotlighting transect for May 2017

We say a drop in temperature in May, as climates changed from the wet to dry season. The team has managed to increase the number of LMTs (Figure 5) that covers a significant proportion of the central part of Nyika. In total we conducted 14 LMTs and 13 spotlighting transects (Appendix IV).

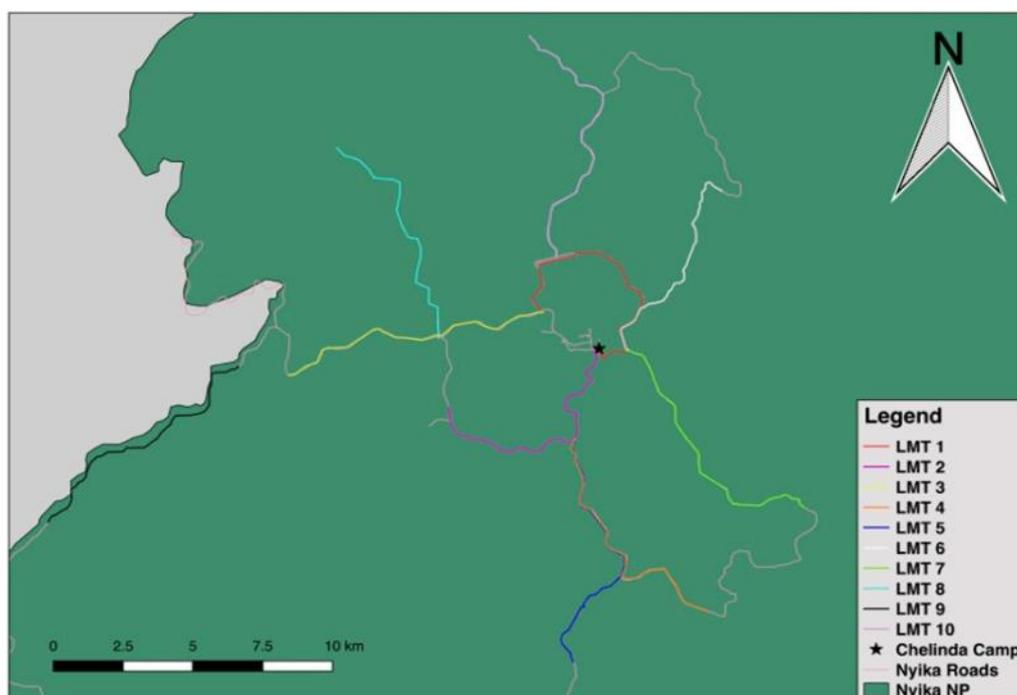


Figure 5. Large mammal transects in Nyika National Park during May 2017.

Scat collection summary for May 2017

This month, as part of CRM's diet analysis study, 30 carnivore scats were collected in Nyika National Park (Figure 6, Appendix III). Four scats were from spotted hyaena, nine from leopard, ten from serval, and two from side-striped jackal. Five of the scats were identified as a cat species but could not be confirmed. The team also found cape-clawless otter (*Aonyx capensis*) scats in three locations increasing the total mammal species recorded in the park to 28 (Appendix IV).

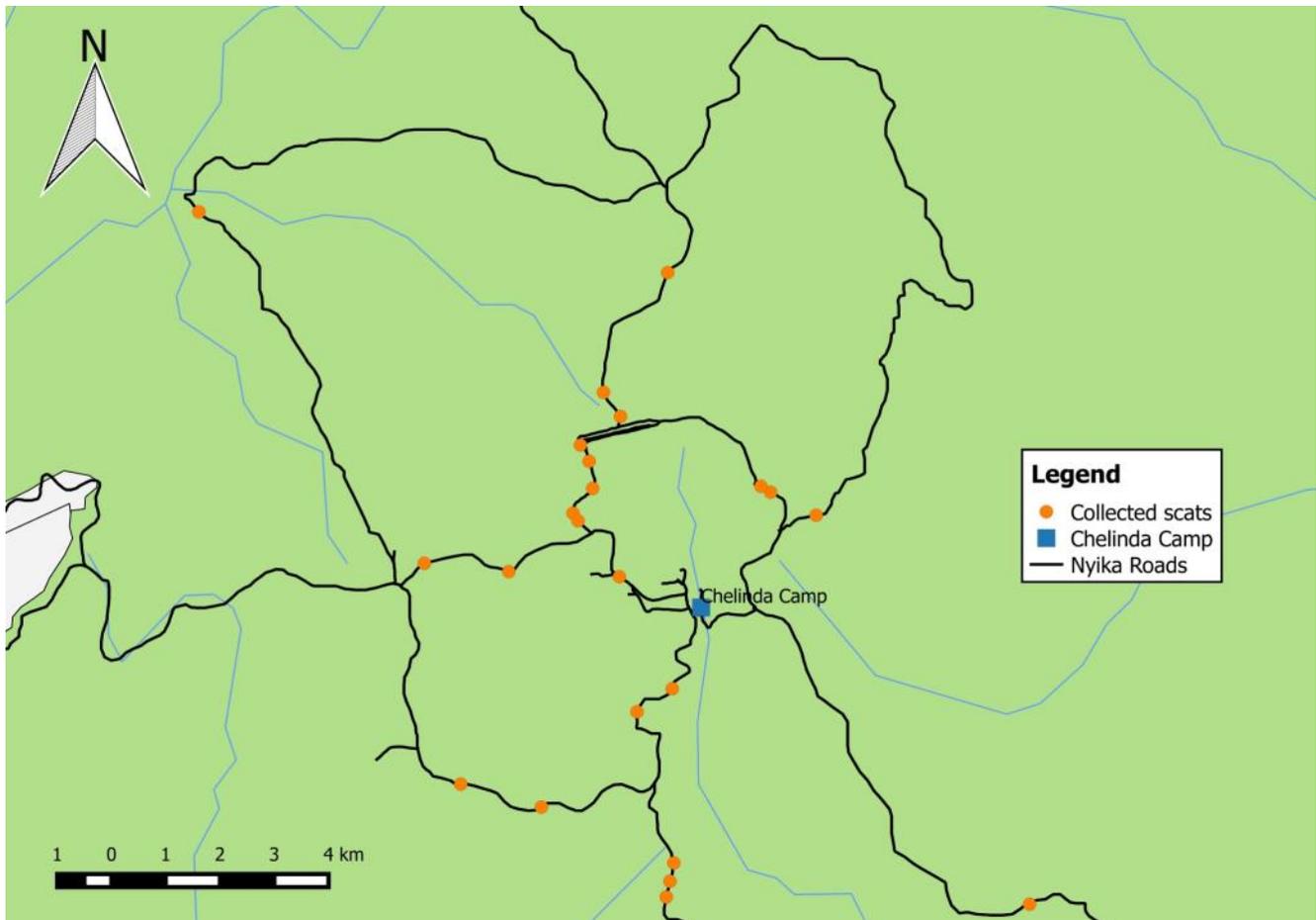


Figure 6. Scat sample locations in Nyika National Park during May 2017.

CRM findings—Kasungu field station

Leopard sightings in Kasungu

The CRM team was extremely lucky to get two sightings of leopard in Kasungu during May. With both sightings happened within four days making it a highlight of the month. The first sighting was extremely close to the CRM field camp, only 200 metres away from where the team tents! The female leopard was spotted walking across the road before disappearing into the bushes (figure 7). The leopard then moved around the CRM camp and could be heard calling from the other side of camp for the rest of the night.



Figure 7. Female leopard seen in KNP on the return from a spotlighting transect.

The second sighting was just after dawn on the way to a large mammal transect. A female leopard was this time seen walking down the main road with what looked like potentially a scrub hare kill in her mouth. Upon seeing the vehicle she quickly made her way off the road and into the long grass. These sightings are encouraging for the team, especially with collaring attempts approaching in June, as it gives us an insight into key areas of leopard activity.

Wild dog report

News has reached us of a potential wild dog (*Lycaon pictus*) sighting in Kasungu from February 2017. A scout has reported to us that he saw a pack of 18 wild dogs north of the Lower Lingadzi river whilst out on patrol. Unfortunately this report has reached us far too late but it is also extremely encouraging and we will be following up any further reports immediately.

We will also soon be placing out our camera traps for leopard surveys in the park and it is hoped these surveys will also provide us with a chance of documenting the presence of lion (*Panthera leo*) and wild dog in the park. Both of these species have been reported in the park in the past two months, however, as of yet there is no evidence to support these records.

Leopard scat collection

Leopard scat collection in KNP has been progressing well this month with fifteen scats collected. This forms an important part of our carnivore diet study whilst also providing us with further evidence of leopard activity in the park and areas of high use by these elusive carnivores (figure 8).



Figure 8. Fresh leopard scat found on the main road.

Opportunistic carnivore sightings for May 2017

Ten opportunistic sightings were recorded in May with spotted hyaena (n = 6 sightings) and leopard (n = 4 sightings) the two carnivore species observed (Figure 9). Of these ten sightings, two of the them were live sightings of carnivores, both leopard, and the other eight were seen on camera traps in KNP (Appendix VII).

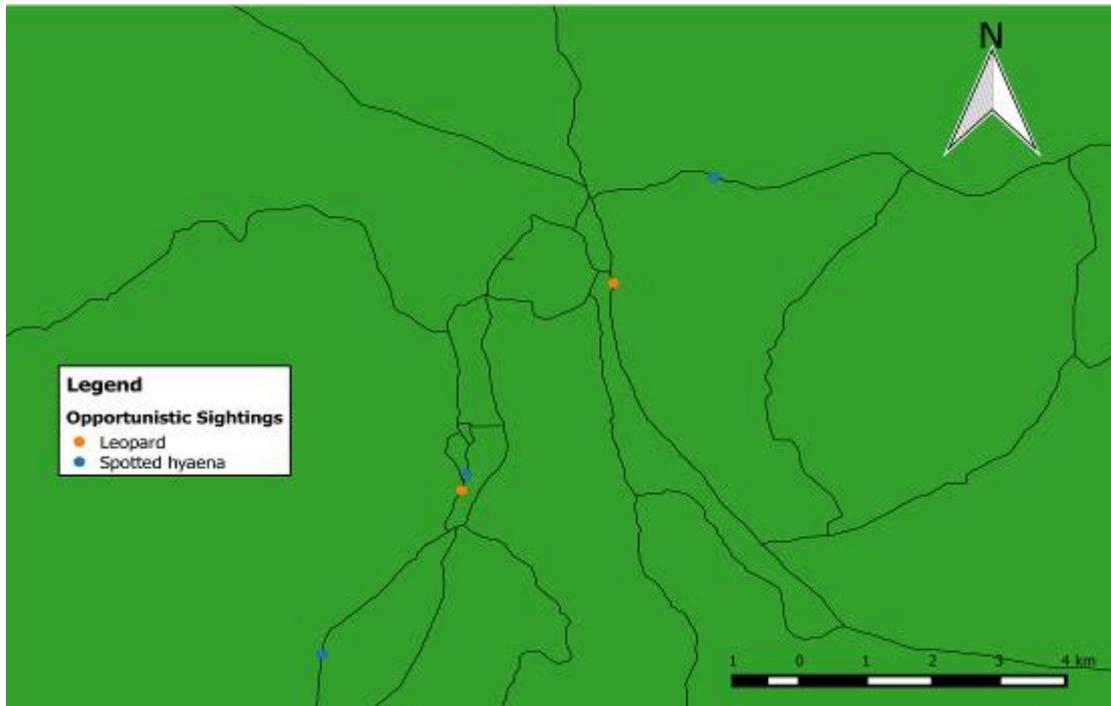


Figure 9. Opportunistic carnivore sightings in Kasungu National Park, May 2017.

Camera trap findings for May 2017

Ten camera traps were set in KNP in May (figure 10). Seven were set on roads in the park and three were set on the Lower Lingadzi river (Appendix VI).

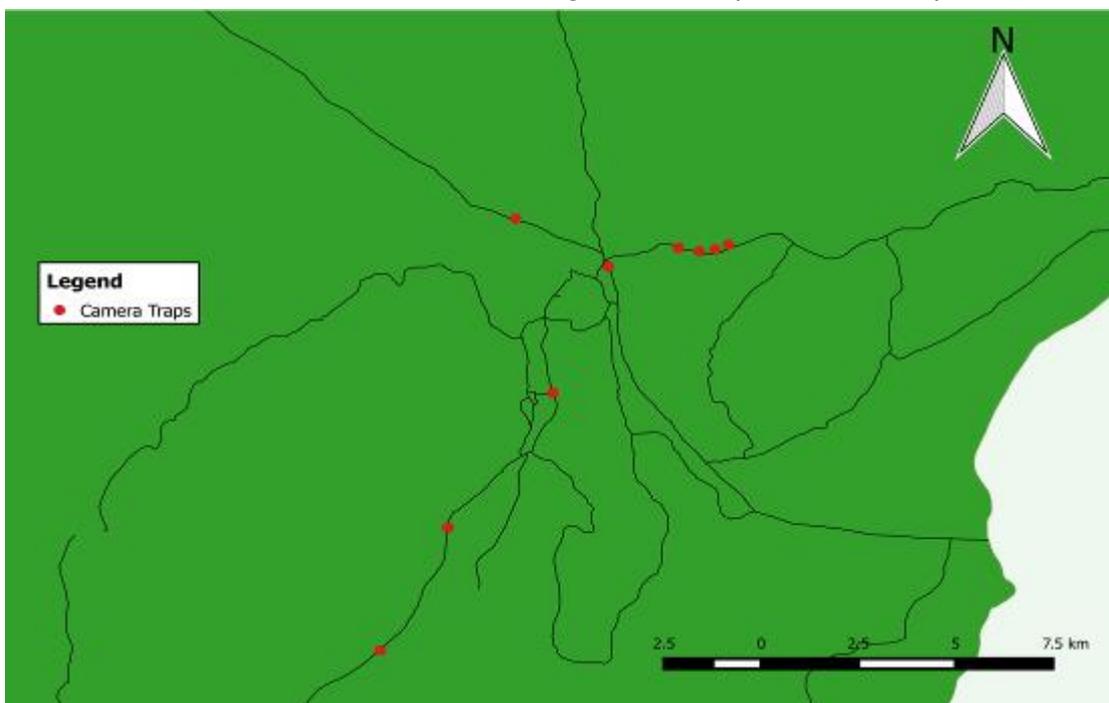


Figure 10. Active camera traps in Kasungu National Park, May 2017.

Scat transect summary for May 2017

Seven walked scat transects were conducted in May (figure 11). These transects resulted in the collection of nine carnivore scats, seven leopard scats and two spotted hyaena (Appendix VIII).

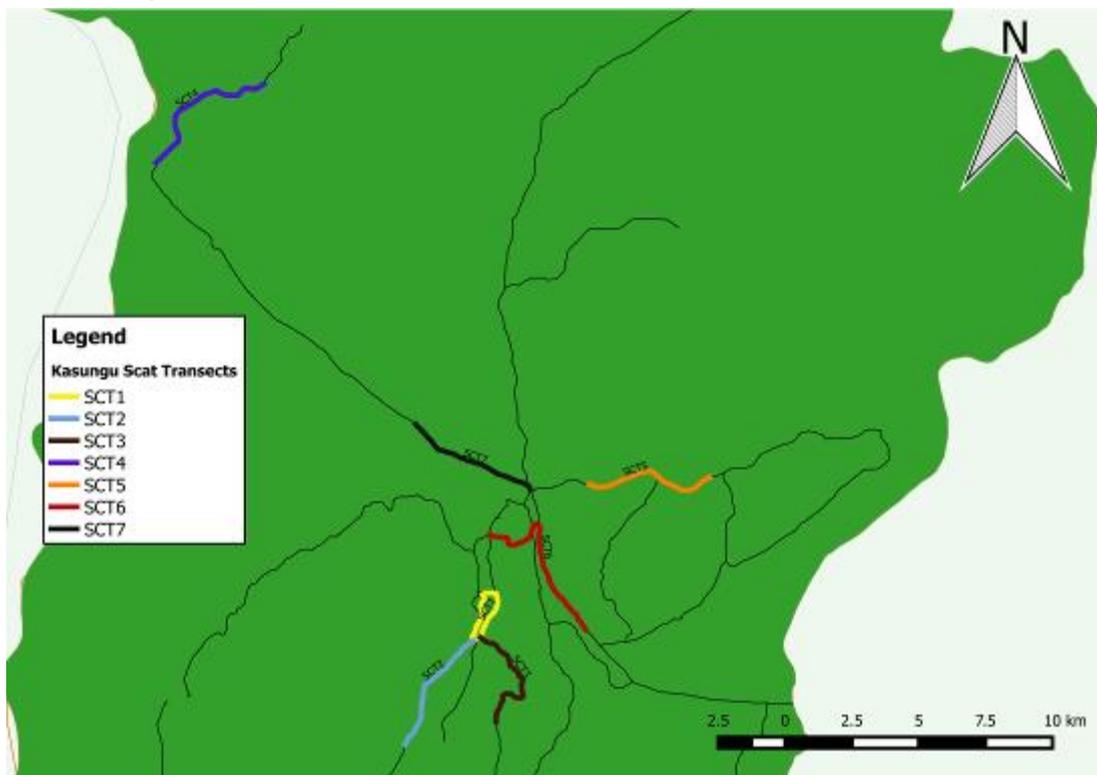


Figure 11. Scat transects conducted in Kasungu National Park, May 2017

Scat collection summary for May 2017

Twenty carnivore scats were collected in May in KNP (figure 12). Fifteen of these were leopard scats and five were spotted hyaena (Appendix IX).

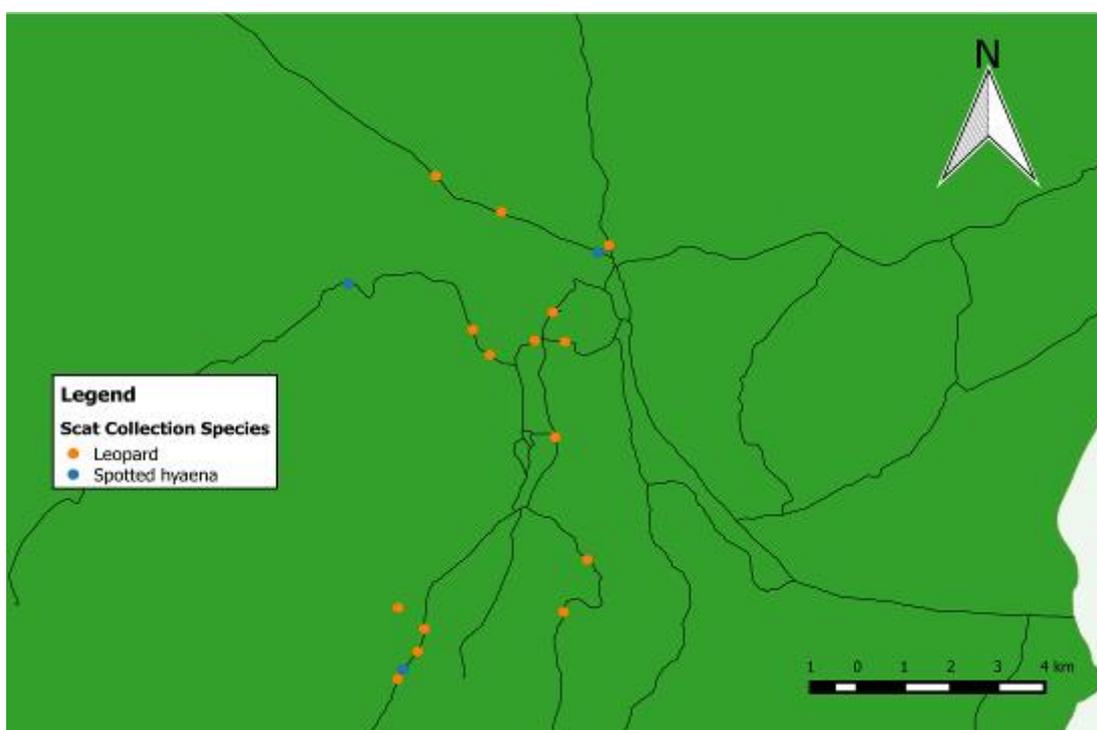


Figure 12. Scat transects conducted in Kasungu National Park, May 2017

Large mammal and spotlighting transects for May 2017

All ten large mammal transects and spotlighting transects were completed in KNP for May 2017 (figure 13). Five different species of large mammal were seen on the large mammal transects. No carnivore species were seen on any of the spotlighting transects (Appendix X).

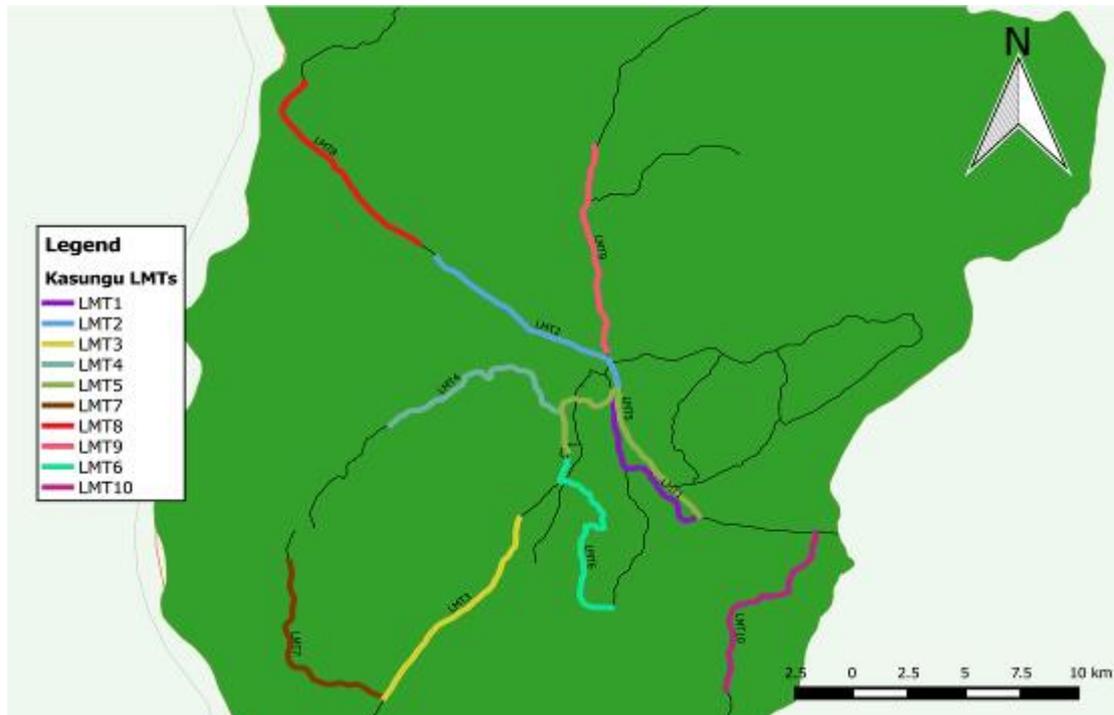


Figure 13. Large mammal transects and spotlighting transects in Kasungu National Park, May 2017.

CRM findings—Lilongwe Field Station

The Urban Clan Expands!

The Lilongwe research team is excited to announce the addition of three hyaena cubs (URBHY14, URBHY15, and URBHY16) to the urban clan! They were most likely born at the end of December as the first images of two cubs we captured on January 19th and 20th. The team last saw one of the cubs on January 26th at urban den 03. After that camera trapping night, URBHY01, the urban clan's dominant female, moved her offspring to a more secure den site with less human activity.



Figure 15. First image of URBHY15 near URB_DEN_06.

sub-adults sleep underground in den holes while adults sleep on the outskirts and bring food back to their young.

As the hyaenas grow, they will begin to venture out of the den more and travel with other adult members to find food, while still nursing from their mother for over a year. On the same night, URBHY02 was seen carrying a fresh duiker (*Sylviacapra grimmia*) kill to the den for the clan; this image was another first for the urban team (figure 17).



Figure 14. First image of URBHY14 near URB_DEN_06.

On May 22nd, camera traps and bait sites (LIL_B18 and LIL_B19) were placed near urban den 05 and urban den 06 due to increased activity at urban den 05 the week before. This set-up proved effective by capturing the cubs moving outside of the den and even carrying food back (figures 14-16). The team was even more surprised when we observed a third cub which hadn't been documented previously. Spotted hyaena juveniles and



Figure 16. First image of URBHY16 near URB_DEN_06.

Each cub develops their unique spot pattern at around three months of age, which will remain the same throughout its life; the only change is the lightness and spreading out of the spots as the individual ages. We are fortunate to get ID images of these three at a young age which will make monitoring the development of each individual easier. The Lilongwe hyaena clan is now up to seven members and will hopefully continue to expand with the addition of these three new members (Appendix XIV).



Figure 17. URBHY02 transporting a recent kill of a common duiker back to URB_DEN_06.

Kumbali Lodge Research

This month, we added a new camera trapping station and bait site (LIL_B20) at Kumbali Lodge, which sits northeast of the city centre and nearby the State House camera trapping station. The location was chosen due to the high density of fixes recorded in the area from the satellite collar on URBHY08. The team conducted some work there previously, but this was the first official data collection. Kumbali is an expansive property with large grasslands and pockets of trees and provides plenty of habitat for multiple species of herbivores and carnivores. The camera was set in a tree island within the grassland on May 23rd for a total of seven trap nights. The camera was checked after three nights



Figure 18. An African Civet investigating bait site LIL_B20. This is one of the first images CRM captured of this species.

and to our delight, the trap captured two carnivore species including a new species for Lilongwe: an African civet (*Civettictis civetta*) (figure 18). In the past, people reported sightings of civets, but the research team has never observed or captured an image of one. We can now confirm that civets are present and obtained multiple images of at least two different individuals. On the 27th, hyaenas were heard whooping loudly by the owners of Kumbali Lodge throughout the night before. The camera trap verified those reports because two hyaenas were seen eating from the bait site. Other species recorded included common duiker, bushpig (*Potamochoerus porcus*), domestic dog (*Canis lupus familiaris*), and the second ever large-spotted genet (*Genetta maculata*). We will continue researching there in the upcoming weeks to uncover more species. CRM would like to thank Kumbali Lodge for their support in allowing to use their property for our research.



Figure 19. Members of a bushpig family perusing the bait site at Kumbali Lodge.

Camera trap findings for May 2017

During May, eight camera trapping surveys were completed, with one camera still deployed (figure 20). New camera trapping locations included Kumbali Lodge and returning to URB_DEN_06 after a month absence (Appendix XII).

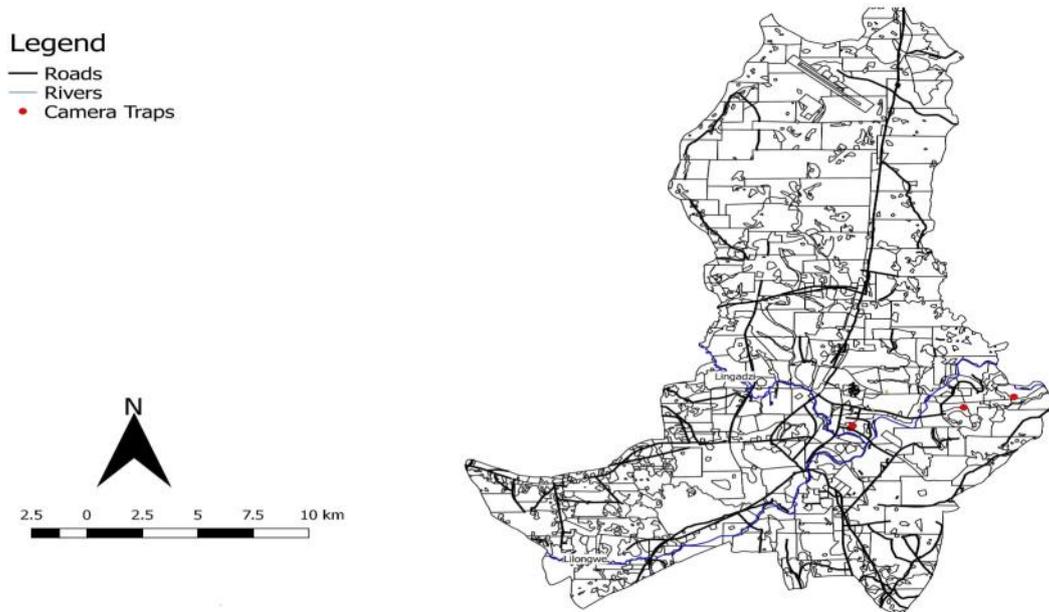


Figure 20. Camera trapping locations for May 2017 in Lilongwe.

Carnivore sightings for May 2017

Opportunistic carnivore sightings for May (figure 21), include both camera trap images and observed (Appendix XIII). Seven spotted hyaenas were seen this month: URBHY01, URBHY02, URBHY03, URBHY08, including three juveniles: URBHY14, URBHY15, URBHY16. One new carnivore species, African civet, was documented increasing our mammal species count for Lilongwe to fifteen (Appendix IV).

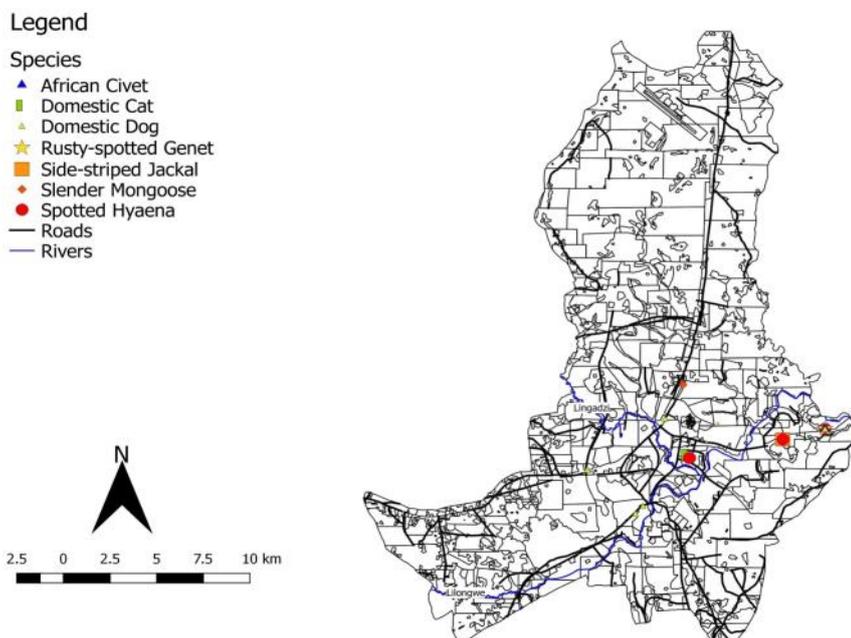
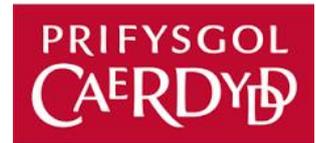


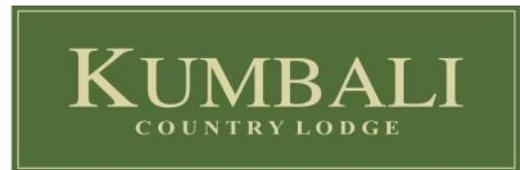
Figure 21. All carnivore sightings for May 2017 in Lilongwe.

CRM Funders and Supporters

CRM would like to thank all our funders and collaborators.



Bringing the wild back to life



Appendix I Mammals of Kasungu National Park, Nyika National Park and Lilongwe City

All mammals seen on transects, camera traps, acoustic surveys or opportunistic surveys. Animals reported by a DNPW Parks staff member or Central African Wilderness Guides and reported to CRM are marked with an asterisk (*).

		Kasungu NP	Nyika NP	Lilongwe City
Artiodactyla				
Bovidae				
	<i>Sylviacapra grimmia</i>	Common duiker	X	X
	<i>Raphicerus sharpei</i>	Sharpe's Grysbok	X	
	<i>Oreotragus oreotragus</i>	Klipspringer	X	
	<i>Redunca arundinum</i>	Common reedbuck	X	
	<i>Neotragus moschatus</i>	Suni	X	
	<i>Kobus vardonii</i>	Puku	X	
	<i>Hippotragus equinus</i>	Roan	X	
	<i>H. niger</i>	Sable	X	
	<i>Aepyceros melampus</i>	Impala	X	
	<i>Tragelaphus scriptus</i>	Bushbuck	X	X
	<i>Alcelaphus buselaphus lichtensteinii</i>	Lichtenstein's hartebeest	X	
	<i>T. srepisceros</i>	Greater Kudu	X	
	<i>Taurotragus oryx</i>	Common Eland*	X	
	<i>Syncerus caffer</i>	African cape buffalo	X	
Suidae				
	<i>Potamochoerus porcus</i>	Bushpig	X	X
	<i>Phacochoerus aethiopicus</i>	Warthog	x	X
Hippopotamidae				
	<i>Hippopotamus amphibius</i>	Hippopotamus		
Perissodactyla				
Equidae				
	<i>Equus quagga</i>	Common zebra	X	X
Proboscidae				
Elephantidae				
	<i>Loxodonta africana</i>	African Elephant	x	X
Carnivora				
Viverridae				
	<i>Gennetta tigrina</i>	Large spotted genet	X	X
	<i>Genetta genetta</i>	Small spotted genet	X	X
	<i>Civettictis civetta</i>	African civet	X	X
	<i>Mungos mungos</i>	Banded mongoose	X	X
	<i>Ichneumia albicauda</i>	White-tailed mongoose	X	X
	<i>Atilax paludinosus</i>	Water mongoose	X	X
	<i>Herpestes sanguinea</i>	Slender mongoose	X	X
	<i>Bdeogale crassicauda</i>	Bushy-tailed mongoose		X
Hyaenidae				
	<i>Crocuta crocuta</i>	Spotted hyaena	X	X
Felidae				
	<i>Leptailurus serval</i>	Serval	X	X
	<i>Felis caracal</i>	Caracal	X	X
	<i>Felis domesticus</i>	Domestic cat		X
	<i>Panthera leo</i>	Lion	X	
	<i>P. pardus</i>	Leopard	X	X
Canidae				
	<i>Lycaon pictus</i>	Wild dog*	X	
	<i>Canis adustus</i>	Side striped jackal	X	X
	<i>Canis lupus familiaris</i>	Domestic dog		X
Mustelidae				
	<i>Aonyx capensis</i>	Cape clawless otter	X	X
	<i>Mellivora capensis</i>	Honey badger	X	X
	<i>Ictonyx striatus</i>	Striped polecat	X	
Primates				
Cercopithecidae				
	<i>Papio cynocephalus</i>	Yellow baboon	X	X
	<i>Cercopithecus aethiops</i>	Vervet monkey	x	X
	<i>Cercopithecus mitis</i>	Blue monkey		X
Galagidae				
	<i>Otolemur crassicaudatus</i>	Greater bushbaby		X
Rodentia				
Hystricidae				
	<i>Hystrix africaeaustralis</i>	Porcupine	X	X
Leporidae				
	<i>Lepus saxatilis</i>	Scrub hare	X	X