

MARA PREDATOR CONSERVATION PROGRAMME



QUARTER
2 REPORT | 2021

KWT
KENYA WILDLIFE TRUST

EXECUTIVE SUMMARY

The second quarter of 2021 was overshadowed by the death of one of Mara's most iconic male lions, Scarface. We continue to get interesting collar movement data and we have been able to monitor parts of the National Reserve and the Mara Conservancies.

The famous coalition of five male cheetahs has come to an end after one male left. A wild dog female has likely given birth and we are trying to find the active den. We have new students who will be looking at how domestic animals affect cheetah behaviour.

During this period, the MPCP community team piloted the installation of 300 predator deterrent lights in the Mara to help curb human predator conflicts. MPCP also distributed boma reinforcement materials to 16 homesteads to help reduce livestock predation, conducted an anti-poison campaign recording and distributed T-shirts with an anti-poisoning message.

To combat the spread of rabies, MPCP carried out a dog vaccination and deworming exercise. Through its outreach and education programmes, MPCP organized an art competition in 9 schools and also printed and distributed the first ever Wildlife clubs' bulletin highlighting the key successes of the clubs.

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Lion updates

R.I.P Scarface

RESEARCH UPDATE



Photo © Kasaine Sankan



Scarface in 2017 © MPCP

On the 11th of June, the Mara lost one of its most iconic male lions. Estimated to be born in 2007, Scarface was part of a famous coalition who were named the Four Musketeers by Jonathan and Angela Scott, the ambassadors of the Mara Predator Conservation Programme.

The story of the Musketeers began in 2011. No one really knows for certainty into which pride the four youngsters were born and from

which area of the Mara they came, but they were certainly looking for a pride to take over. Towards the end of 2011 the four males had already been drawn by the roars coming down from the Musiara Marsh area.

It did not take them long to track, fight and dethrone the two dominant males of the Marsh pride, Clawed & Romeo, banishing them for good from the Marsh area and successfully taking over the pride.

The 4 Musketeers

They became star attractions with the local guides naming the four Musketeers: Hunter, Morani, Sikio and Scarface. Scarface soon stole the show with a distinctive scar above his right eye giving him that charm and ruggedly handsome look, topping it off with an impressive dark mane as he matured.

The Musketeers success didn't stop there and they went on to conquer and take on new territories and prides. Some of the prides they took over and sired many cubs with include the Marsh Pride, the Marsh Breakaways, the Mara River Pride, the Mugoro Pride, the Serena North and Serena North Breakaway Prides, the Rekeru Pride and Rekeru Breakaways Pride and the Lookout Pride. It was during these quests and territorial takeovers and fights that the Musketeers started disappearing one by one. Hunter vanished in August 2019 while Sikio succumbed to injuries from territorial fights in early 2020, leaving Morani and

Scarface, who were still holding onto the Lookout Pride.

The 14 year rule of Scarface coming to an end seemed obvious when he was sighted a long way from the rest of his pride and his coalition partner feeding on a hippo carcass in the company of three younger males, the Sala's Boys, who seemed to tolerate his presence, perhaps owing to the fact he was no threat, being weak and weary as he was. Over the next few days our research team was monitoring him until he drew his last breath. The last remaining member of the Musketeers is Morani who was seen still hanging around the Lookout pride's territory in the Ashnil part of the Reserve.

A detailed description of the magnificent story of Scarface and his coalition partners has been written by Jonathan and Angela Scott and can be read by following this [link](#)



The 4 Musketeers © MPCP

Monitoring Activities

We drove 1,256 km during the second quarter, and our tracks overlaid with our lion and cheetah sightings can be seen on figure 1.

We will be starting this year's intensive monitoring session August 1st and so we will be covering a lot more ground in the months to come.

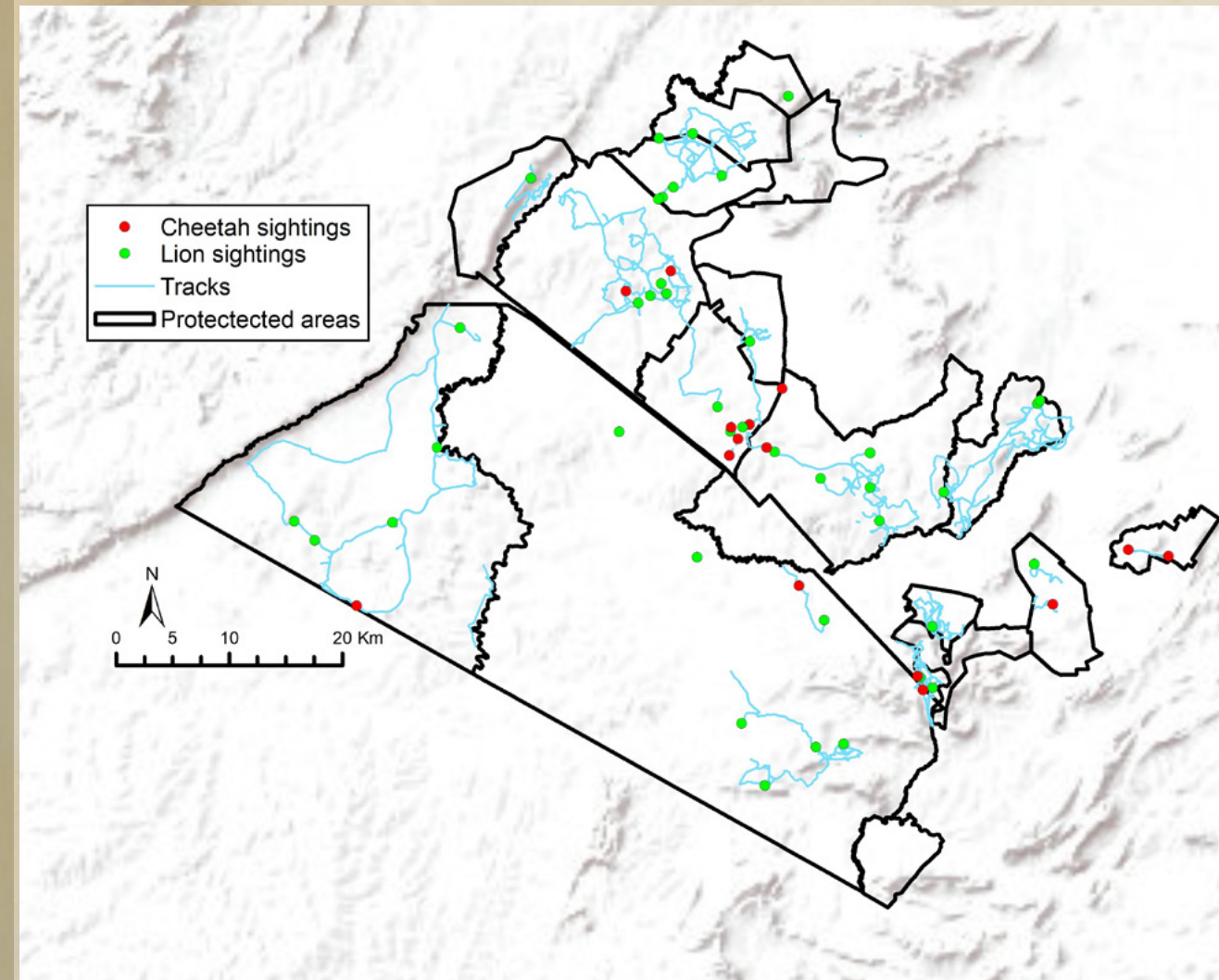


Figure 1. This map shows tracks driven, lion and cheetah sightings for the reporting period.

Collaring Updates

During the last quarter, data for three of the collared lions have shown noteworthy movements and thus have been chosen for this report.

Olololo/Angama pride

This pride continues to leave the Mara Triangle to utilise Olosukut Conservancy, figure 2. It seems they have followed the Mara River north towards Karen Blixen Camp but staying on the western side of the river.

They have also ventured to the western area of Olusukut, overlapping a fair deal of human settlements. The grass there is kept low by livestock which attracts lion's natural prey, and this is one of the drivers for the pride's movements. However, settlements also means high livestock abundance, which can be tempting of hungry lions, making them prone to conflicts.

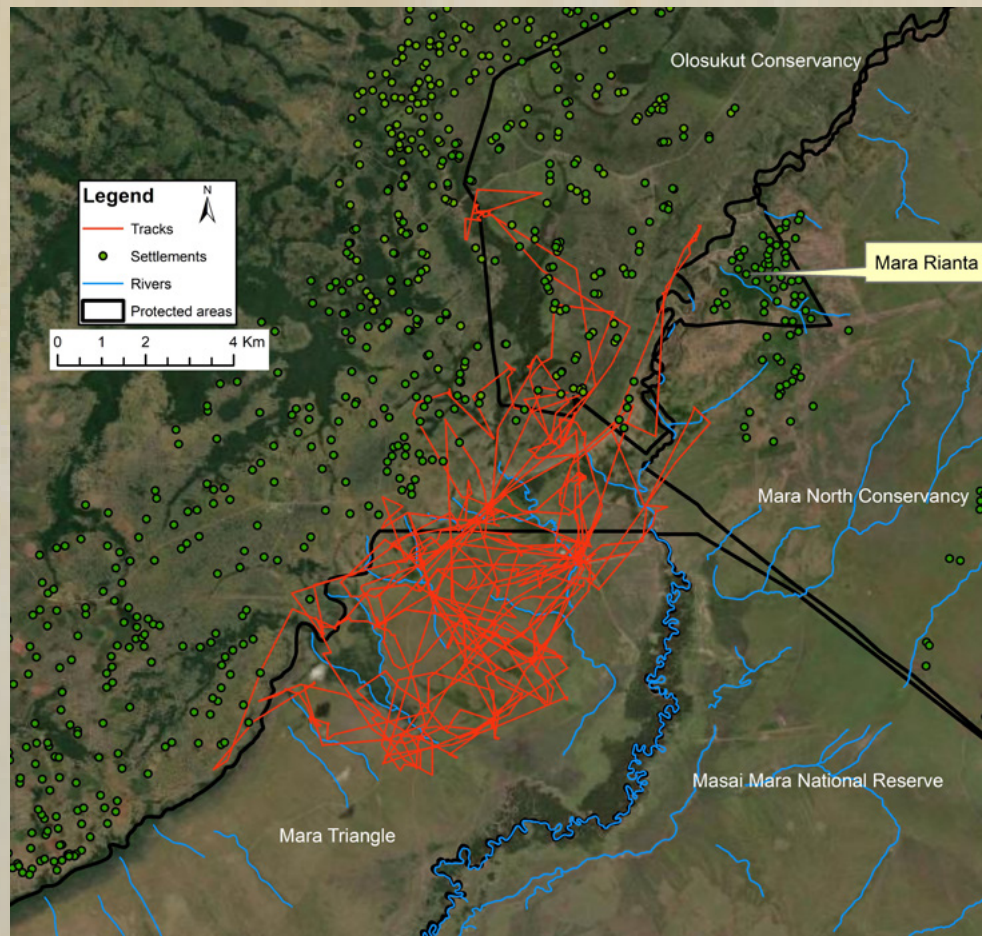


Figure 2. The Olololo prides' tracks during this years' second quarter. Notice how far north the track goes.

Oloolaimutia pride

This pride, also known as the Sopa pride, has been venturing into the Serengeti National Park, figure 3, probably due to the wildebeest migration slowly approaching the Reserve boundary. We were not aware that this area was part of the pride's home range, and so

this is new information to us. The pride has otherwise shown extensive movements within a relatively brief (three months) period, and as mentioned before, this is largely due to prey scarcity.

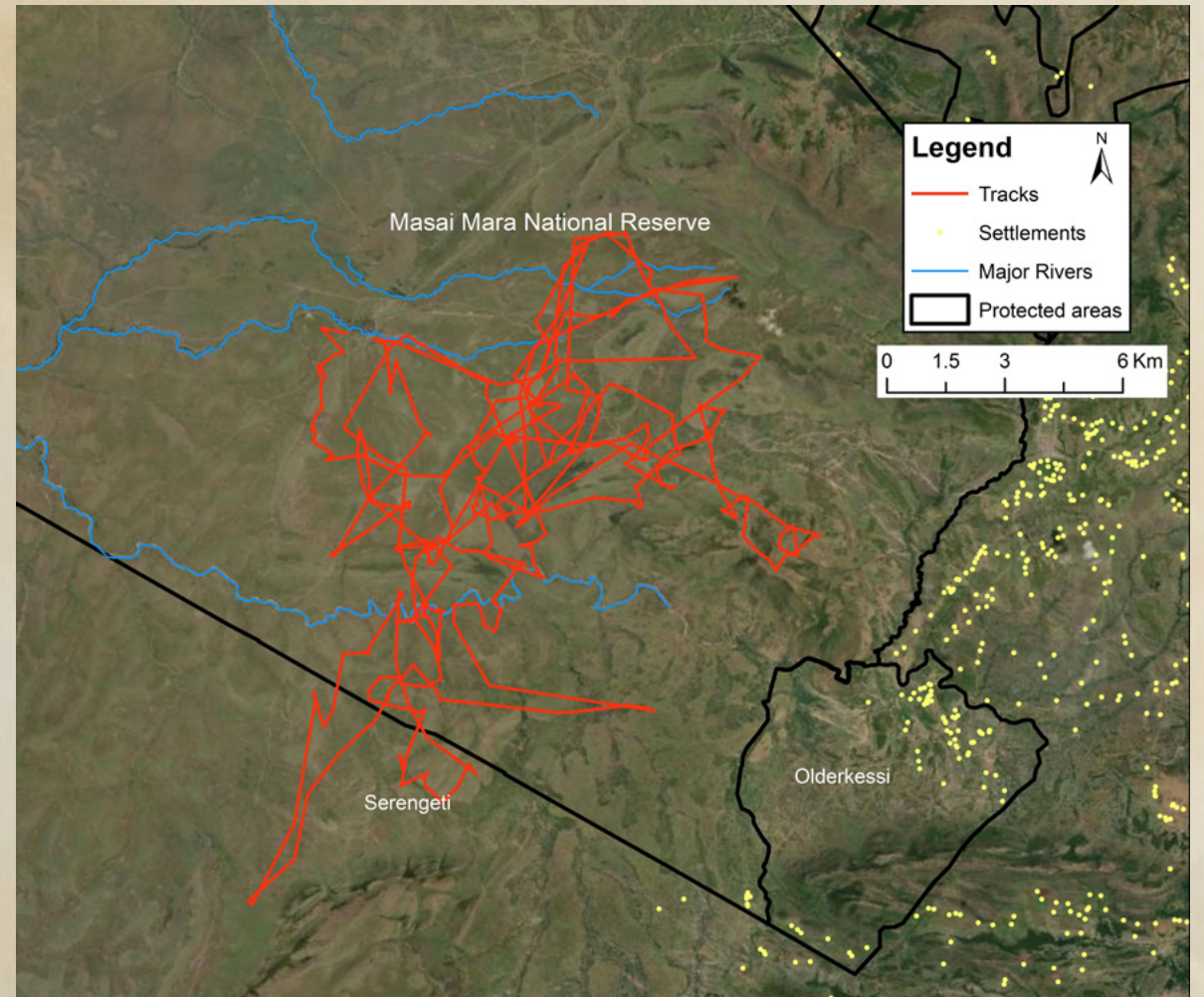


Figure 3. Tracks showing the Oloolaimutia pride's movements. The pride has crossed over to Tanzania during this quarter

Black Rock dispersing males

The Black Rock boys have been covering large distances as seen on the map, figure 4, mostly because of following Buffalo herds and trying to look for new females, while still trying to stay close to their mothers.

The young males ventured into the Lookout area, which is currently under the control of Spikey and Enkuroto's, and this resulted in an injury for one of the Black Rock males. His brothers, including the collared individual, retreated to the east as shown on the map. The injured male recovered well and the five boys are back together again.

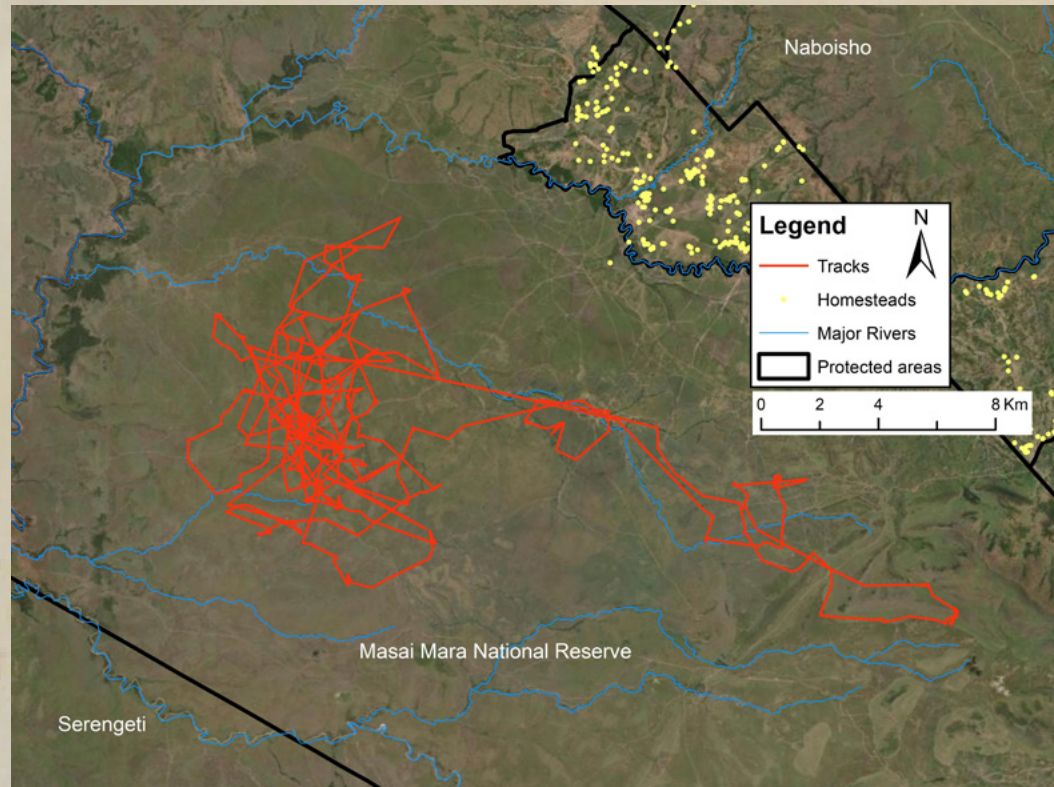


Figure 4. The red track shows the Black Rock collared male's movements. His sudden streak to the east is explained in the text.



Siligi and cub © Saitoti Silantoi

Cheetah Updates

Births & Mortalities

In this quarter we were able to record a total of 14 new cubs from three different females. The females were Kulete who had four cubs in Olare Motorogi Conservancy (OMC), her sister Kweli, who had five cubs, also in OMC and

finally Siligi, brought five cubs out of the lair in the National Reserve. Out of the 14 births we recorded in the last quarter, two cubs died. Kweli lost one cub to Buffaloes while Siligi lost one cub to lions.

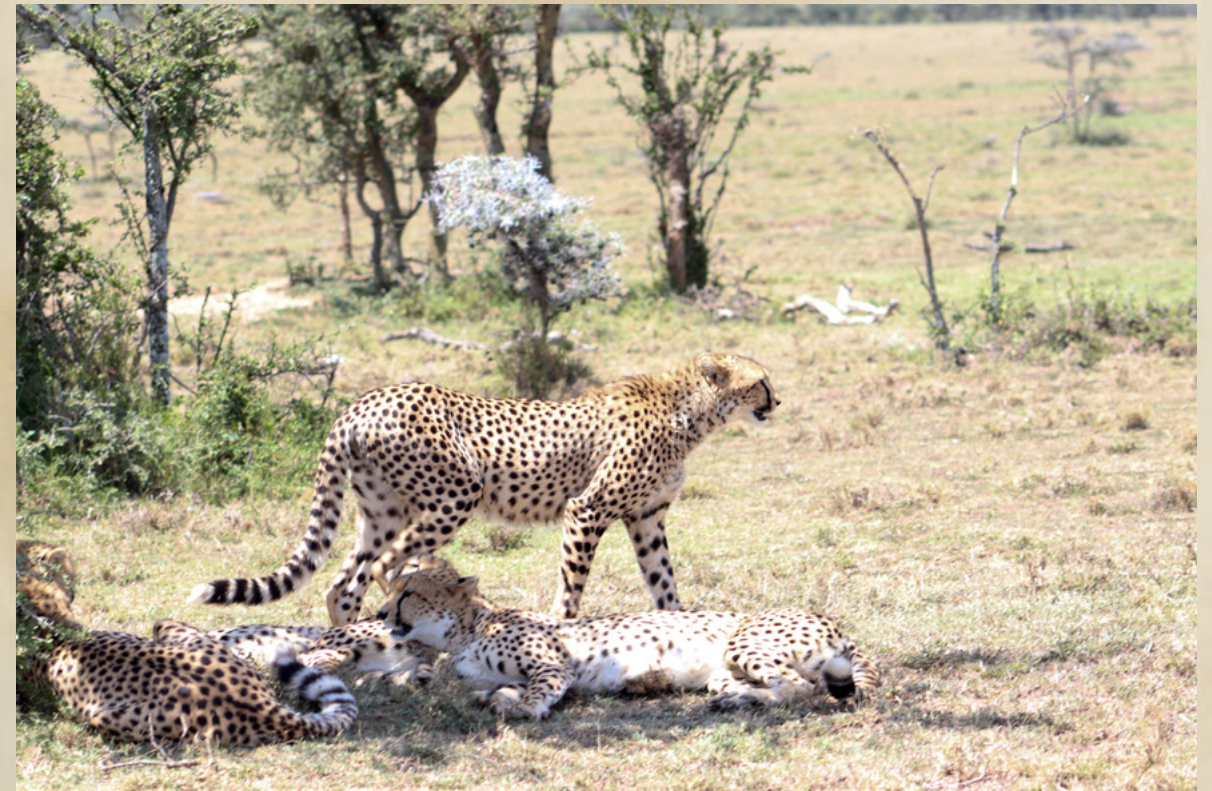


Siligi with her four new cubs.

Dispersal Events

In the last quarter we recorded a total of seven cheetahs who successfully transitioned to independence and dispersed. The seven cheetahs came from three different litters and consisted of three females and four males.

The dispersing cheetahs were Kiraposhe's four sub-adults, Kuahidi's son and Entito's two sons. It's always exciting when we are able to follow cubs from birth and see them reach independence after observing some of the challenges that their mothers go through raising them.



Kiraposhe's offspring prior to their dispersal.

Interesting Observations

There has been some really interesting behaviour with cheetah male coalitions over the last quarter in terms of territorial movements. The first group we observed were Mkali & Mwanga, who are two males that usually stay within the Reserve and we had no records of them in the conservancies until recently, where we have been monitoring them in OMC. Their shift in space use is most likely influenced by a lack of prey.

The other group is the famous 5 Musketeers or also commonly known as Tano Bora. They spend most of their time in the Reserve, occasionally spilling into OMC, but never further. This quarter they ventured into Naboisho Conservancy, after an absence of close to four years, trying to find and gain access to females. It was in this conservancy where the five males were first seen together. The Musketeers stayed there for almost two weeks and only four of them went back to the Reserve.

The male who separated from the rest reappeared a week later in the Reserve accompanied by Kuahidi's son, who as mentioned above only recently dispersed from his mother. It will be interesting to see if this new companionship will last or if Dartonian, the separated Musketeer will reunite with the rest.



One of the former 5 Musketeers, Dartonian, with his new coalition partner Kuahidi's son.

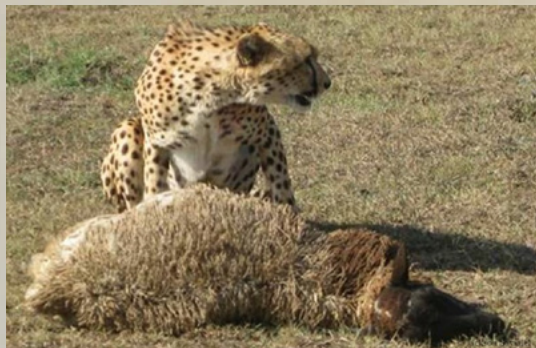
A recent cheetah publication

A scientific article by former MPCP research assistant David Thuo et al. was published in the journal of Zoology. Below is a summary of the study.

Cheetah menu: How much livestock do cheetahs consume in Southern Kenya.

Cheetah populations are declining at a rapid rate. Amongst the main causes of their decline in Africa is attributed to direct persecution due to livestock predation and depletion of their preferred wild prey species. Because

more than 70% of the cheetahs live outside the national parks and reserves, there is always a high likelihood that they will encounter and kill livestock. As a result, retribution by local pastoralists has been on the rise in recent years.



A cheetah preying on a sheep. Image courtesy: Jackson Sayialel

To come up with data driven solutions to this real or perceived threats that cheetahs pose to livestock owners, we collected cheetah faeces in Maasai Mara and Amboseli ecosystems between 2013 and 2017 and analysed the DNA from all faecal samples using a novel technique.

Faeces contain a mixture of DNA from all the organisms consumed by the animal which means by looking at a certain part of this DNA ("DNA barcode") one can identify all the prey items consumed by the individual (in our case cheetahs) a few days prior to defecation.

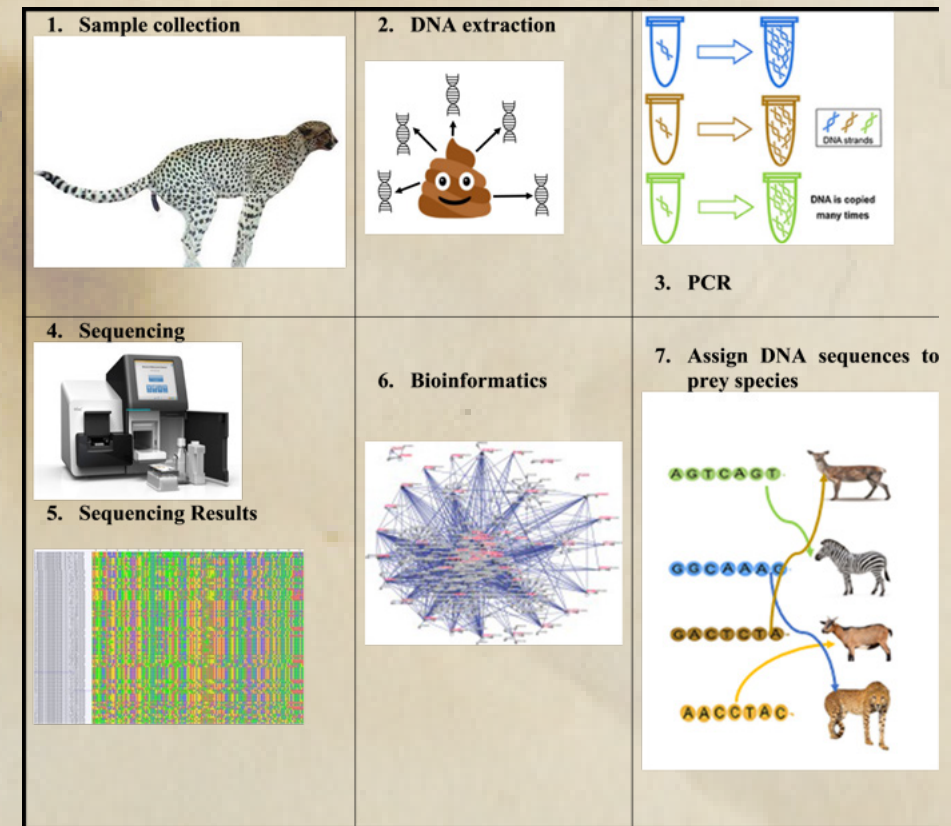


Figure 5. How faecal DNA metabarcoding works.

After analysing 84 cheetah faecal samples using faecal DNA metabarcoding, we identified a total of 14 different prey taxa that included birds, wild and domestic mammals. It was surprising that livestock taxa (sheep and goat) occurred at a relatively high frequency (12.8%).

We also identified that season and sex of the cheetah do not influence livestock predation.

While it is difficult to draw a conclusive statement based on our sample size, our findings showed that cheetahs mainly prey on wild animals, but sheep and goat provide a significant alternative food source.

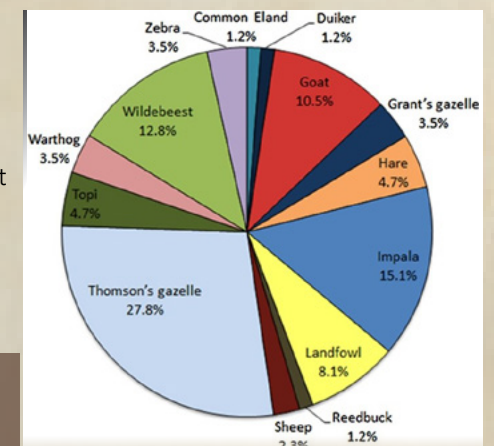


Figure 6. Frequency of occurrence of prey species detected across 84 cheetah faecal samples

Whether this livestock consumption is as a result of cheetahs modifying their foraging behaviour or simply a case of opportunistic predation is a question that should be swiftly investigated as it might have an implication for cheetah-human coexistence and management

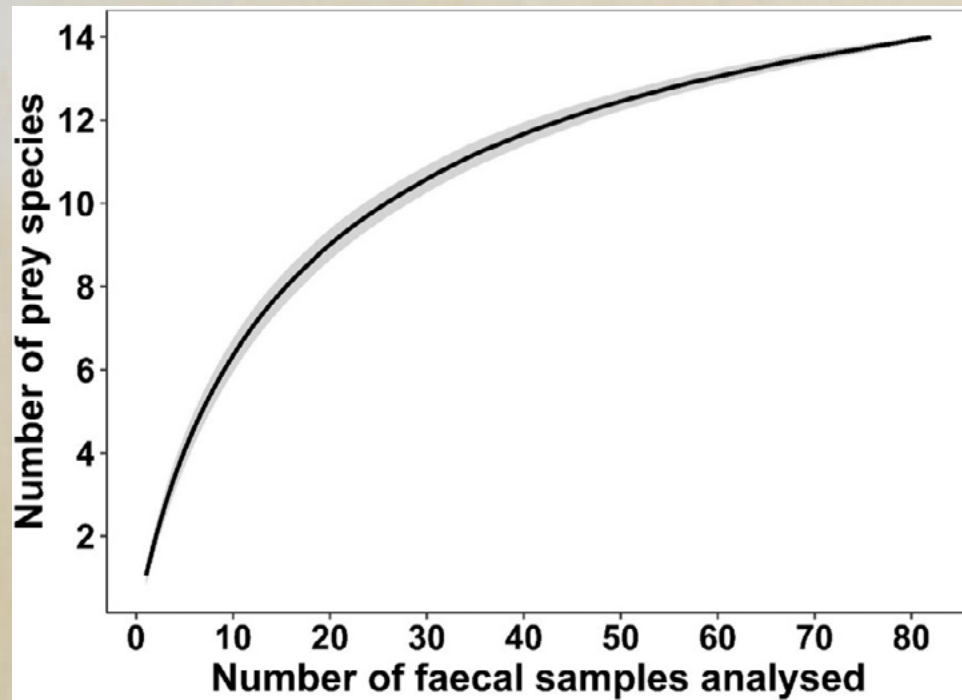


Figure 7. Species accumulation curve showing that the 14 prey species we identified do not represent the complete diet of cheetahs in Southern Kenya

If you would like to read the full paper, please [visit this site](#).

Source: Thuo, David & Broekhuis, Femke & Furlan, Elise & Bertola, Laura & Kamau, Joseph & Gleeson, Dianne. (2020). An insight into the prey spectra and livestock predation by cheetahs in Kenya using faecal DNA metabarcoding. *Zoology*. 143. 10.1016/j.zool.2020.125853

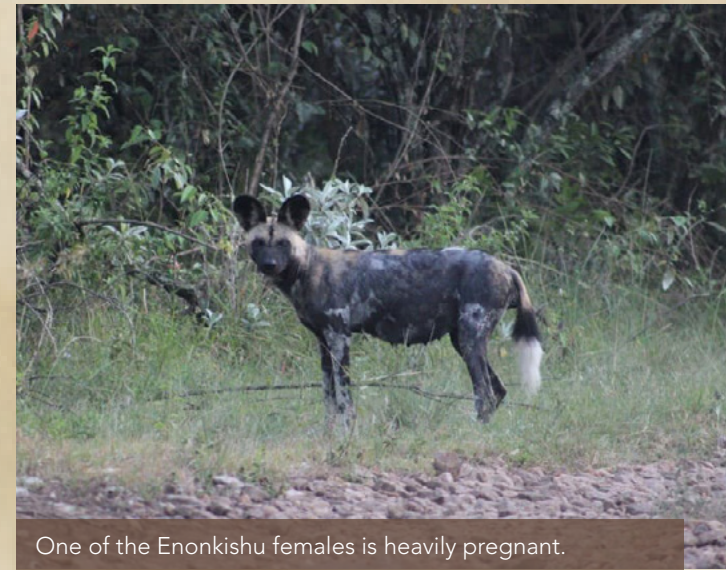
Wild dog Update Sightings

The Enonkishu pack continues to be seen by MPCP, rangers and the community. During one of our sightings, one of the four females was found to be heavily pregnant.

However, there have been no further sightings of her and we have desperately been trying to find an active den.

Towards the end of this quarter, there were sightings of two males who were originally part of the Pardamat pack but are now with the Enonkishu pack.

The Paradamt pack that MPCP have been following since 2018 has not been sighted since April. However, as wild dogs conflicts are still being reported, although much less frequently, we expect the pack to still roam around the OI Kinyei part of Pardamat.



One of the Enonkishu females is heavily pregnant.



Two of the former Pardamt pack members who are now part of the Enonkishu pack.

Research students

This quarter we also welcomed two international graduate students. Brian Schuh, a Ph.D. student from The University of Wisconsin-Madison's Carnivore Coexistence Lab, and Camilla Holgersen, a master's student from The University of Southern Denmark.

For the next six months, Brian and Camilla will be conducting a new research project that is investigating how cheetahs behave during and after simulated interactions with domestic animals such as cattle, sheep, goats, local dogs, and livestock guarding dogs. Domestic animals such as these are common throughout the Masai Mara and Africa, however, their impact on cheetahs is still relatively unknown.

This project will help advance our knowledge about how the presence of certain domestic animals might reduce cheetah habitat, disrupt cheetah behavior, or which domestic animals cheetahs might be more likely to hunt. Depending on how each domestic animal type affects cheetahs, we will then be able to produce management recommendations for specific domestic animals that protect cheetahs and reduce livestock predation throughout the Masai Mara.

While this project focuses on cheetahs, it is our hope that the recommendations we produce will also help humans and their domestic animals coexist with other carnivores in the Masai Mara and around the world.

COMMUNITY UPDATE

Human-Predator Conflicts

Predation of livestock still remains a major challenge to pastoralists in the Mara ecosystem. This is more pronounced in areas in close proximity to conservation areas characterized by dense vegetation and hills as they provide good cover for predators during the day. According to data from MPCP's lion ambassadors Programme, in the last year alone (June 2020-April 2021) there were 835 Human-wildlife conflict (HWC) incidents recorded which led to

15,202 livestock (mostly shoats) killed and 3,675 injured. In addition to these the 110 selected conflict bomas in the 10-zone recorded 309 incidents which saw 389 livestock killed and 104 injured. It is such statistics that prompt MPCP to adopt a holistic approach (conflict mitigation strategies and capacity building) in working with communities to reduce conflicts as discussed in details below.

i).Lion lights installation and monitoring

During this period, MPCP installed 300 predator deterrent lights in two conflict hotspots around the Mara (Laila-Ng'osvani and Pardamat hills.

The deterrent lights will help to reduce livestock attacks inside bomas at night and

help contribute to positive perceptions towards predators. MPCP used this opportunity to identify bomas near those with lights (Controls) which will also be monitored to measure the effectiveness of lights as a conflict mitigation tool.



Lion deterrent lights installation in different boma types in the Mara by MPCP (Photo: Dominic Sakat)

ii).Boma reinforcement

According to a survey of bomas conducted by the lion ambassadors in 10 areas across the Mara, there were 1,109 weak bomas (1046 bomas made of branches and 63 made of whistling thorn brush). These materials degrade easily over time and allow predators to easily penetrate the enclosures and kill livestock. MPCP partnered with the local

community and supplied triple twist chain links to 16 bomas in Enooronkon, Endoinyio-Erinka, Rehero and Ngosvani to help reinforce bomas. The beneficiaries were required to transport the chain-links to their bomas and also contribute by paying for labour costs in the reinforcement exercise.



MPCP's staff assist in loading Chain links on a bike at MPCP HQ to be ferried to the beneficiaries. (Photo: Dominic Sakat)

iii). Recycled plastic poles bomas evaluation

The Recycled plastic poles bomas (RPPBs) initiative has been effective at deterring livestock predation in the Mara. During this period, with the help of the lion ambassadors, MPCP conducted a questionnaire survey in 42 homesteads with RPPBs on livestock predation before and after construction. Before the RPPBs, the beneficiaries had lost 115 cattle and

568 shoats in the last year (before bomas) while after the RPPBs only 5 cattle were killed as depicted in Figure 8 below. MPCP will continue to monitor and improve the RPPBs to ensure livestock protection through the adoption of living fences to ensure cattle are not visible to predators hence avoid stampeding.

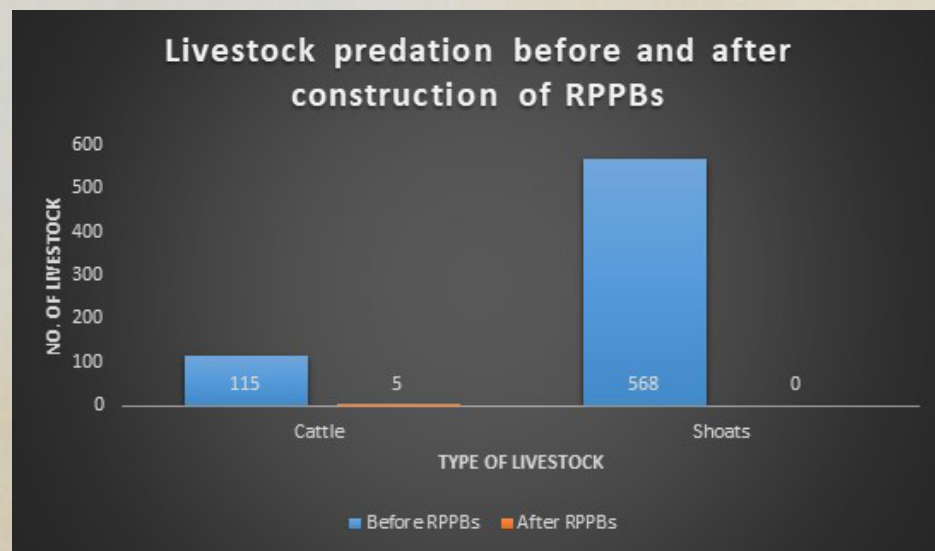


Figure 8: Livestock predation before and after the construction of Recycled plastic poles bomas

Community Outreach Activities

i). Lion ambassadors

MPCP’s lion ambassador programme has been extremely useful as both a conflict mitigation approach as well as engaging community members in conservation of predators in the Mara ecosystem. Some of the achievements so far include: mapping of key resources in their zones e.g. waterpoints, saltlicks and settlements, mitigating human predator conflicts through early warning to herders and working with community members to improve livestock bomas through reinforcement.

The ambassadors have also been key at creating awareness to community members on the importance of predators through household outreaches which helps to reinforce positive attitudes and encourage coexistence. With support from the Lion Recovery Fund (LRF), MPCP will be expanding to cover more areas in the Mara as depicted in figure 9 below.

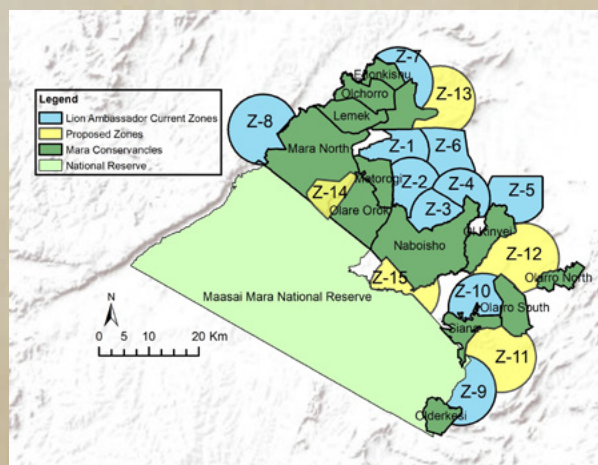


Figure 9: Map of the Lion Ambassadors zones

ii). Anti-poison campaign

Following the outbreak of COVID-19, most community outreach activities were affected by the Government directives that banned all large gatherings. MPCP’s annual anti-poison campaign in markets around the Mara hasn’t been conducted in the last two years. MPCP’s community team found an alternative way to deliver the anti-poison songs in markets without gathering people. MPCP invited all 14 buffalo

dancers and recorded the anti-poison songs and drama. The recorded songs will be played in all major markets in the Mara to ensure community members still receive the message to discourage wildlife poisoning. T-shirts with an Anti-poisoning message were also printed and distributed in these markets to help reinforce the message.



Buffalo dancers donning T-shirts with an anti-poisoning message during the recording of the campaign songs held in Talek. (Photo: Dominic Sakat)

iii). Dog deworming and rabies vaccination

Following the re-appearance of wild dogs and reported cases of rabies in domestic dogs in the Mara, MPCP and other stakeholders (VSF Germany and Enoonkishu conservancy), started vaccinating dogs and cats against the contagious rabies disease in areas bordering conservancies and the reserve. Early this year 1444 dogs and cats were vaccinated in Enoonkishu, Aitong, Lemek, Ng’osuani and Rekero.



Doctors working with VSF Germany vaccinating dogs at Ngila area near Olare Motorogi conservancy during the vaccination and deworming campaign. (Photo: Michael Kaelo)

During this reporting period an additional 1067 dogs and cats were vaccinated and dewormed in areas bordering Olare-Motorogi, Mara North and Naboisho conservancies and the reserve i.e (Pardamat, Enoonkishu, Endoinyo erinka, Ngila, Olare orok, Olkurrot, Chemorut and Enelera).

This exercise not only helps in preventing the spread of rabies from domestic animals to wildlife but also helps to improve the health of dogs which in turn contributes to better livestock protection as dogs guard bomas at night.

Conservation Education Wildlife Club Activities.

During this period, MPCP continued to work closely with the nine wildlife clubs it initiated in schools around Talek, Aitong and Ng’osuani areas to implement planned activities discussed below.

i). Annual Art competition

During this quarter, 231 wildlife club members selected from the nine schools participated in an art competition whose theme was “My favorite animal in its natural environment”. The annual art competition is aimed at giving members an opportunity to nurture their talents and express their perceptions towards wildlife through art.



Wildlife club members from Mara Girls Leadership school in Talek displaying their artwork (Photo: Dominic Sakat)

All the artwork was later collected and judged by MPCP’s staff at our offices in the Mara. During the judgement, our attention was caught by participants from one of our new schools in Ng’osuani where 2 children drew art depicting conflict situations where a lion and an elephant were being speared (Figure 10 and Figure 11 respectively).

This piece of art expresses the situation in that area (and is also supported by data from our lion ambassador Programme depicting the area as a conflict hotspot), MPCP will continue to carry out more outreach to community members, implement conflict mitigation efforts and engage children in the clubs to encourage coexistence.



Figure 10: An artwork depicting a lion speared by a human being in what seems to be a HWC incident following livestock depredation.



Figure 11: An artwork depicting a speared elephant in a poaching incident drawn by a wildlife club member from Ng’osuani primary school.

To motivate the participants, the winners were awarded with prizes where the best one got a Tablet, the second one got a waterproof school bag and an encyclopedia and third and fourth position got a waterproof school bag and artwork materials. All the other best artwork participants were issued with a certificate.

ii). Wildlife Club Bulletin

MPCP designed, printed and distributed 100 copies of a wildlife clubs newsletter called “Wildlife clubs bulletin” to all members in the nine schools. The bulletin highlighted great achievements and stories of the wildlife club

patrons and members from the past. The bulletin will encourage wildlife club members to write articles on their experiences and encounters as club members which also help improve the quality of language written/spoken.



Wildlife club patron and members from ADCAM Primary school in Aitong reading the first edition of the Wildlife club bulletin.



Mara Predator Conservation Programme

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