

MARA CHEETAH PROJECT



KENYA WILDLIFE TRUST

Quarterly Report

1 December 2014 – 31 March 2015

Contents:

- 🐾 General update
- 🐾 Research
- 🐾 Community projects
- 🐾 Meetings and conferences
- 🐾 Team members
- 🐾 Tony Lapham Predator Hub
- 🐾 Visitors
- 🐾 Project merchandise
- 🐾 Future plans

This report was compiled by Femke Broekhuis (Project Director) and Michael Kaelo (Chief Community Officer)

General update

This report will cover a four month period between 1st December 2014 and 31st March 2015. The reason for this is that we have decided to shift the reporting period so that the quarterly reports fall within the same reporting period as some of our funders.

Within this quarter we have expanded the field-based research as we have now officially been given permission by the Kenya Wildlife Service to collect biological samples so quite a lot of time has been spent on developing protocols and purchasing the equipment needed to conduct this research. We have also carried out some great community projects including the continuation of the poisoning campaign and the completion of the Predator film which we have been working on together with the Mara Lion Project.

While logistically it has been a bit more difficult this quarter due to the heavy rains, we are excited that the rains have finally arrived, settling some of the dust and bringing with it plenty of wildebeest.

Research

Monitoring

In addition to several litters being born we also recorded the death of 3 adult cheetahs – one female and two males.

On the 5th and 6th of December 2014 we recorded a male leopard feeding on a cheetah that it had dragged up a tree in the Southern section of the Maasai Mara National Reserve, Kenya (Fig. 1). While it is not certain that the leopard killed the cheetah, circumstantial evidence suggests that this was likely. Based on the unique pelagic spot pattern of the partially intact cheetah (Caro & Durant 1991) we were able to establish that the cheetah was a known individual (an adult female born in August 2003). The leopard found feeding on the cheetah was a big, healthy looking male and spent two full days feeding on the cheetah until the carcass was entirely consumed.

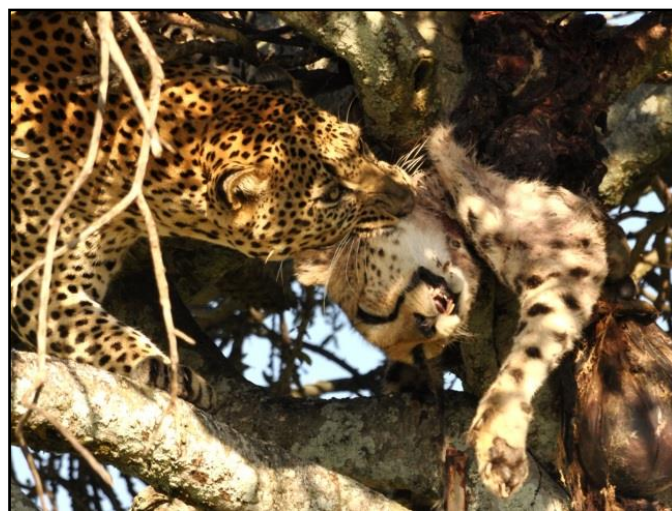


Figure 1: A male leopard entirely consumed a female cheetah in the Maasai Mara Game Reserve.

In February 2015, two related males that were part of a collation died. They were estimated to be born in October 2012 and both dispersed from their mother in February 2014. Since then they have frequently been seen near the Sand River but recently moved up towards Mara North Conservancy. Both males were seen by tourists on the 14th February, both with swellings on the left sides of their necks. The first male died on the 18th February 2015 and the second male on 19th February. Dr. Limo and the KWS veterinary team conducted a post-mortem examination of the second cheetah and results indicate that both cheetahs died as a result of an infectious viral disease. Samples were taken and are now waiting to be analysed. If you see or hear of any cheetahs that are looking unwell or behaving strangely please let us know as soon as possible (phone: 0701158737, email: info@maracheetahs.org).

Lab-based research

We are excited to announce that we have officially been given permission by KWS to collect biological samples (tissue, blood, bone, faeces etc.) from cheetahs. These samples will be used for various research projects including genetics and disease monitoring. All samples will be analysed at the KWS laboratory in Nairobi and analyses will be carried out in collaboration with Smithsonian Institute.

Mapping of habitat and settlements

In January 2015 we obtained high resolution SPOT5 satellite imagery from the years 2011 and 2013 from ISIS (CNES). This satellite imagery is being used to map the habitat and *manyattas* (settlements) in the Mara.

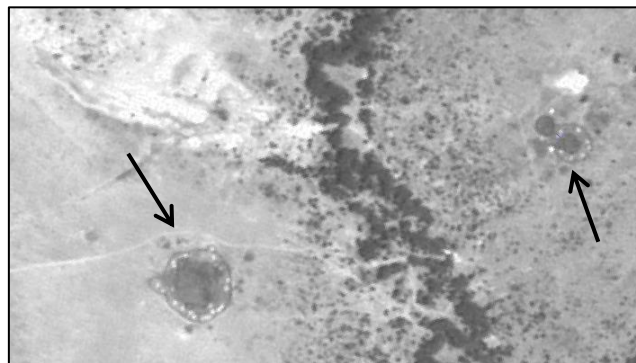


Figure 2: Example of the *manyattas* that can be seen from the SPOT 8 satellite imagery.

The settlement map has been completed and a total of 1635 *manyattas* were mapped, mostly based on the imagery from 2011 (Fig. 2 and Fig. 3). While it is likely that some of these manyattas no longer exist and that new ones have appeared, this map gives us a good indication of where the *manyattas* are. This map will be used for both our community and research projects and will be validated in the coming quarter.

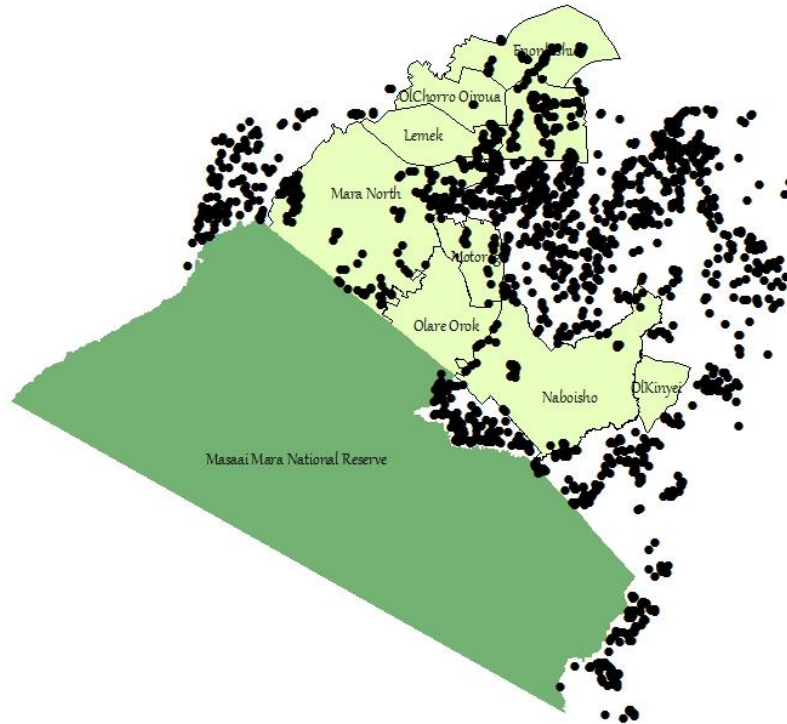


Figure 3: *Manyattas* (black dots) in the Mara mapped using SPOT 5 satellite imagery from 2011.

Human-wildlife conflict

In the last two months we recorded 16 cases of livestock being injured or killed by wild animals (Fig. 4). Most cases involved lions and there were no reported cases of cheetah killing or injuring livestock.

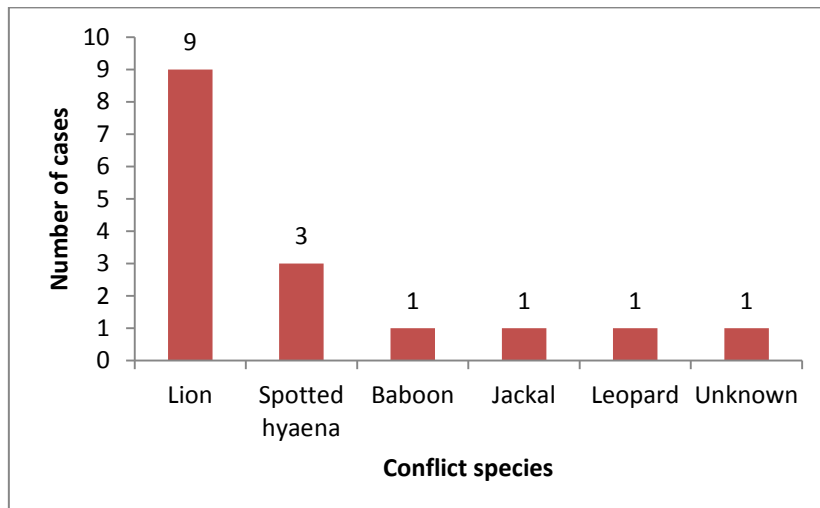


Figure 4: Number of conflict cases recorded between 1st December 2014 and 31st March 2015.

Community projects

Anti-poison campaign

The second anti-poison campaign was held between 9th-18th December 2014, the objective being to discourage the use of poison on wildlife especially predators. This also provided an opportunity to engage with the community through songs, dance and choral chants as well as answering questions they might have about cheetahs and the Mara Cheetah Project. Together with the buffalo dancers we managed to visit six different markets and held two community *barazas*. The markets included: Lemek, Naikarra, Sekenani, Oololaimutia, Olkinyei and Ng'osuani. The *barazas* took place in Enkereri and Olonana villages in Transmara.

Art Competition prize giving

The Predator art competition which took place in Aitong and Talek on 18th and 19th November 2014 was a success and members of the Mara Cheetah Project and the Mara Lion Project selected the best cheetah and lion drawings to be incorporated into a calendar for 2015. In January we held a prize giving ceremony at the Mara Discovery Centre in Aitong where the winners were given a prize and a certificate for their fantastic artwork (Fig. 5). The rest of the participants had a participation



Figure 5: Mr. Jackson Taki of BCF presents a prize to one of the winners from Loigero Primary School (Photo credit: Michael Kaelo)

certificate presented to them to motivate them to continue nurturing their talents. The schools which participated were also given a calendar and a participation certificate.

The objectives of the Prize-giving day were to celebrate and recognize those students who did a good job during the art competition and to come up with a forum where participants from different schools interact with each other and exchange ideas for conservation as they socialize.

Predator proof bomas

Predation is one of the leading causes of conflicts between humans and predators in the Mara ecosystem. It threatens the efforts towards coexistence between the Maasai who live here and the predators. Many studies have suggested that predator proof bomas is one of the solutions to this problem but often these bomas are costly and their sustainability is not very well documented. The possibilities of a cheaper and sustainable predator proof boma motivated us to start a small experiment at the Tony Lapham Predator Hub. The objective of this is to find out if *Camiphora spp* is an effective material for predator proof bomas which could



Figure 6: Naurori's boma made with *Camiphora spp*. (Photo credit: Michael Kaelo)

significantly lower the costs of materials and address environmental concerns associated with some forms of predator proof bomas.

The Mara Cheetah Project Community Team visited two bomas (Naurori boma in Mbitin and Rakwa boma in Enchorro oo sidan) to see how they made their bomas with *Camiphorra spp* and inquired how effective it was (Fig. 6). We then established our own small plantation of *Camiphora spp* to find out how long they take to mature. We planted cuttings of the same and monitored their growth; unfortunately the dry spell is taking a toll on them even though we try to water them regularly.

The Predator Film: Towards community driven solutions for conflicts

The film that has been long in the making finally came to being (Fig. 7). We are currently screening the film (pilot study) in the community to try and source for solutions to human predator conflicts in the ecosystem. So far we have shown the film to two groups. The first group was a test run for the methodologies we are using for the studies while the second group was upon invitation from Naboisho Conservancy camps to show it to Nkoilale Primary school. The mass screenings which will be used to understand perceptions towards predators, identify problems and seek solutions to predation will then follow the pilot studies.

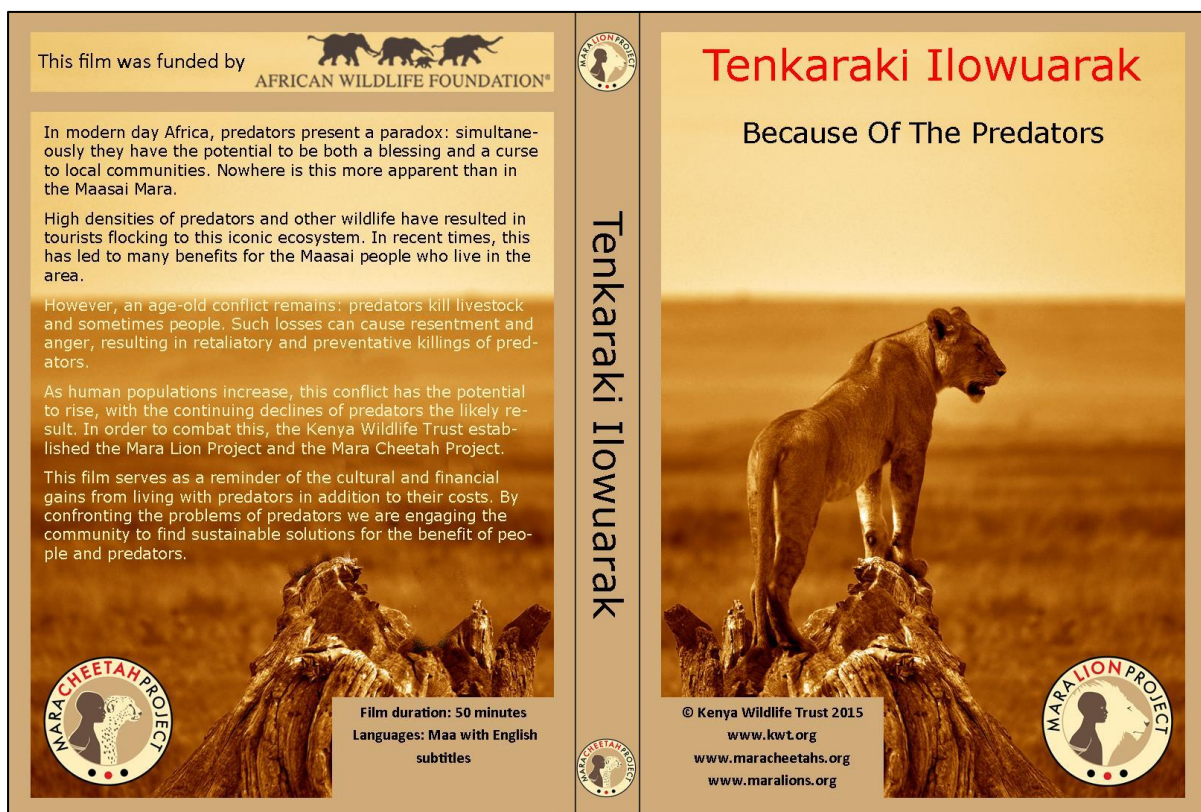


Figure 7: Cover of the film 'Because of the Predators' which was completed in January 2015 and is now being screened for discussion throughout the Mara. The funding for the film was kindly provided by the African Wildlife Foundation.

Human-wildlife conflict questionnaire

In an effort to understand the prevalence of human-wildlife conflict we formulated an interview-based questionnaire that will be used to collect information which will enable us to identify conflict hotspots in the Mara. The outputs will guide conservation efforts and allow us to plan intervention strategies accordingly. The questionnaire addresses things such as livestock husbandry, grazing areas, predator identification by the interviewees and their perception towards predators. It also encompasses questions on the prevalence of conflicts and retaliatory actions directed towards predators. The first pilot study of the questionnaire has been completed and the questionnaire improved based on the results.

🐾 Meetings and conferences

Camera trapping workshop (ZSL)

On the 20th and 21st January 2015, Dr. Raj Amin from the Zoological Society of London (ZSL) gave an interesting workshop on camera trapping at the Kenya Wildlife Service headquarters in Nairobi which was attended by Femke Broekhuis. The course covered various topics from camera trap survey objectives and design, to data management, data preparation and finally data analysis including calculating species abundance and indices all using a useful software created by ZSL. The workshop was well attended by KWS staff and by various Kenyan-based researchers.

Team workshop

At the beginning of the year Femke Broekhuis, together with Dr. Nic Elliot (Project Director of the Mara Lion Project) gave a two-day workshop for the rest of the predator team. The workshop included a refresher on how to use the Cybertracker software, which both projects use to collect all field data, an exercise on spatial capture recapture models used to estimate animal density and abundance and a practical on how to collect faecal samples needed for the planned genetics research.

🐾 Team members

This quarter we have had two new staff members join the predator team.



Francis Sopia was born and raised in Aitong (Maasai Mara) and through his daily interaction with wildlife he developed a passion for conservation. In 2011 he was enrolled in Zetech College to study tour guiding and later joined university of Nairobi in 2012 to study for a Bachelor of Arts degree in Social Sciences (Political Science and Sociology). Francis joined KWT (Mara Lion Project and Mara Cheetah projects) in March 2015 to help with the screening of the Predator Film, among other things. Francis has a keen interest in Community development strategies and in particular those geared towards human-wildlife conflict resolution.



Mugendi Burini is the new project mechanic in charge of keeping all the Mara Cheetah and Lion Project vehicles in tiptop condition. When Mugendi is not working on a vehicle he is often see wandering around helping maintain the Tony Lapham Predator Trust, overseeing the new construction of the staff housing and ensuring that we all have water.

Tony Lapham Predator Hub

We are excited to announce that through a generous donation from both the Delta Trust and the BAND foundation we have started an upgrade of the staff housing for the Mara Cheetah and Mara Lion Project team. If the current heavy rains do not interfere too much, we are hoping that the housing will be completed by the end of April. Once this is done we hope to upgrade the office space which will include a small field laboratory.



Figure 8: New staff housing being built at the Tony Lapham Predator Hub

Visitors

Visit to the Predator Hub by Lewa (US) Board

On 21st March, members of the Lewa (US) Board; Leslie Roach, Secretary (also vice president of Friends of KWT-US) and John Battel, Vice chairman paid a visit to the Tony Lapham Predator Hub. Accompanying them were two members of Kenya Wildlife Trust's Kenya board of trustees (Fig. 9). After presentations the visitors were given the opportunity to ask questions to both the community and research teams allowing the visitors to get a better understanding of what the Mara Cheetah

Project does on a day-to-day basis and our long-term plans. Also attending the presentations was Ken Dyball, manager of Mahali Mzuri camp.



Figure 9: Lewa (US) board visiting the Mara Cheetah and Lion Projects at the Tony Lapham Predator Hub.

Project merchandise

We are often asked about project merchandise so we are excited to announce that Mara Cheetah Project merchandise are now available online through the Kenya Wildlife Trust's online shop:

<http://www.cafepress.com/kenyawildlifetrust/11513186>

Here you will find everything from T-shirts, caps, water bottles and much more. Please feel free to spread the word. If you are a camp manager and keen to stock Mara Cheetah Project merchandise in your shop then please contact us (info@maracheetahs.org).



Figure 10: Examples of some of the project merchandise that are available through the Kenya Wildlife Trust online shop

Future plans

In the next quarter we are planning to:

- Finalise the human-wildlife conflict questionnaire
- Finalise sampling design for the human-wildlife conflict questionnaire and the predator film screenings
- Finalise sample collection protocol in collaboration with Smithsonian Institute and KWS
- Start working on the first scientific publications

Thank you!

We would like to thank everyone who has supported us in this project and we hope your support will continue into the foreseeable future. We have been truly touched by your enthusiasm and passion.

Funding

We are grateful for all of you have thus far given financial support to the project. This quarter we would like to give a special thank you to the BAND foundation for providing funding for us to carry out our proposed lab-based research, the Delta Trust and BAND foundation for providing funding to allow us to upgrade to Tony Lapham Predator Hub and Base Camp Foundation for financially supporting our community work.

Data and photos

We would like to thank the Mara Lion Project for their continued support in the field, numerous guides for reporting cheetah sightings and Rekeru Camp, Naboisho Camp, Mara Bush Houses and Sala's Camp for their support on the ground. A special thank you goes to the guides who are part of the 'Cameras for Conservation' project – thank you for your time and dedication to helping monitor cheetahs in the Mara-Serengeti ecosystem.

Logistic support

We would like thank OI Purkel, the Olare Motorogi Trust and Asilia for their support in running the Tony Lapham Predator Hub and Asilia and Sala's camp for providing support out in the field.

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