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HORSE PATROL TEAM
FINAL REPORT
January 2014 – December 2016

Mounted Horse Patrol Anti-Poaching Unit for Mount Kenya

1. Names of Investigators, Affiliation & Contact Info

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2. Conservation Needs

The Mount Kenya Trust (MKT) was established in 2000 following a detailed United Nations Environmental Programme¹ report concluding that the *"Mount Kenya's forests are under extreme threat from human induced illegal activities such as extensive poaching of wildlife, devastating logging of indigenous tree species, charcoal production, over-grazing, and large scale growing of marijuana."*

Mount Kenya straddles the equator, almost 200km north-east of Nairobi. Standing at 5199m it is Africa's second highest mountain after Kilimanjaro and one of three locations left in Africa where glaciers remain. The UNESCO World Heritage Site describes the mountain *'with its rugged glacier-clad summits and forested middle slopes, Mount Kenya is one of the most impressive landscapes in East Africa. The evolution and ecology of its afro-alpine flora also provide an outstanding example of ecological processes.'*

Today the MKT undertakes its work across several thematic areas, including but not limited to anti-poaching and illegal activity reduction, human wildlife conflict mitigation and habitat connectivity projects, environmental education and community health projects. The vision of the Trust is to protect the integrity of the Mt Kenya ecosystem for the welfare of all who depend on it - **by driving collaborative action for the sustainable management of Mt Kenya's biodiversity and natural resources** through partnership with government, communities and civil society.

Horse Patrol Team

The Horse Patrol Team (HPT) was set up to enhance manpower on Mount Kenya due to restrictions on the Kenya Wildlife Service (KWS), who do not have sufficient rangers to effectively secure and monitor the large expanse of mountain area (around 2100km²).

¹ http://www.unep.org/dewa/Portals/67/pdf/Mt_Kenya.pdf

Wildlife habitat must be protected to ensure a healthy and genetically robust population and only by protecting the remaining safe sites for elephants to live naturally and in the wild will this be retained. The HPT operations are designed to improve security and biodiversity protection within the project area. Practical applications such as regular, routine and sustained patrols like those carried out by HPT secure areas of the forest and moorland from poaching and illegal activities.

3. Summary of Goals and Objectives

Since 2012, the overarching goal of the HPT has been:

To enhance the capacity of law enforcement personnel to decrease the level of poaching and other illegal activities mainly but not limited to the high altitude areas of the northern section of Mount Kenya's Protected Area Ecosystem.

Along with law enforcement, the objectives are:

- To decrease the prevalence of illegal activity, in particular elephant and bush meat poaching in the northern areas of Mt Kenya National Reserve.
- To work collaboratively with the KWS and Kenya Forest Service (KFS) to extend the area of surveillance into Meru and Sirimon which have seen a marked increase in habitat and wildlife destruction in high altitude zones.
- To increase awareness and conservation education within the communities living in and around Mt Kenya Park.
- To improve the links with the Community Forest Associations to reduce response times for illegal incidents, improve intelligence gathering and information sharing.

The HPT is the only community mounted ranger team in Kenya. It is comprised of six men and nine Ethiopian ponies based on the edge of the Mount Kenya National Reserve on Kisima Farm, Timau.

The community rangers are recruited as individuals who have often been unemployed or subsistence farmers trying to sustain a living from small plots that cannot sustain their families. Once employed as rangers they are seen as respected members of the community who can support their families and encourage other community members to make a living without turning to illegal activity within the forest. This is especially prevalent with young, unemployed men. Furthermore, communities often find it easier to inform our community teams about illegal activity as they are known and trusted; informing the government agencies is more difficult and seen as a greater betrayal.

4. Activities that differ from original proposal

Since January 2016, the team have been using the the Spatial Monitoring And Reporting Tool (SMART). This computer software package is designed to provide data outputs on wildlife and security issues for protected area managers thus allowing improvements in anti-poaching efforts, overall law enforcement and ranger effectiveness through the features it provides. This has greatly improved our data collection and monitoring of the teams.

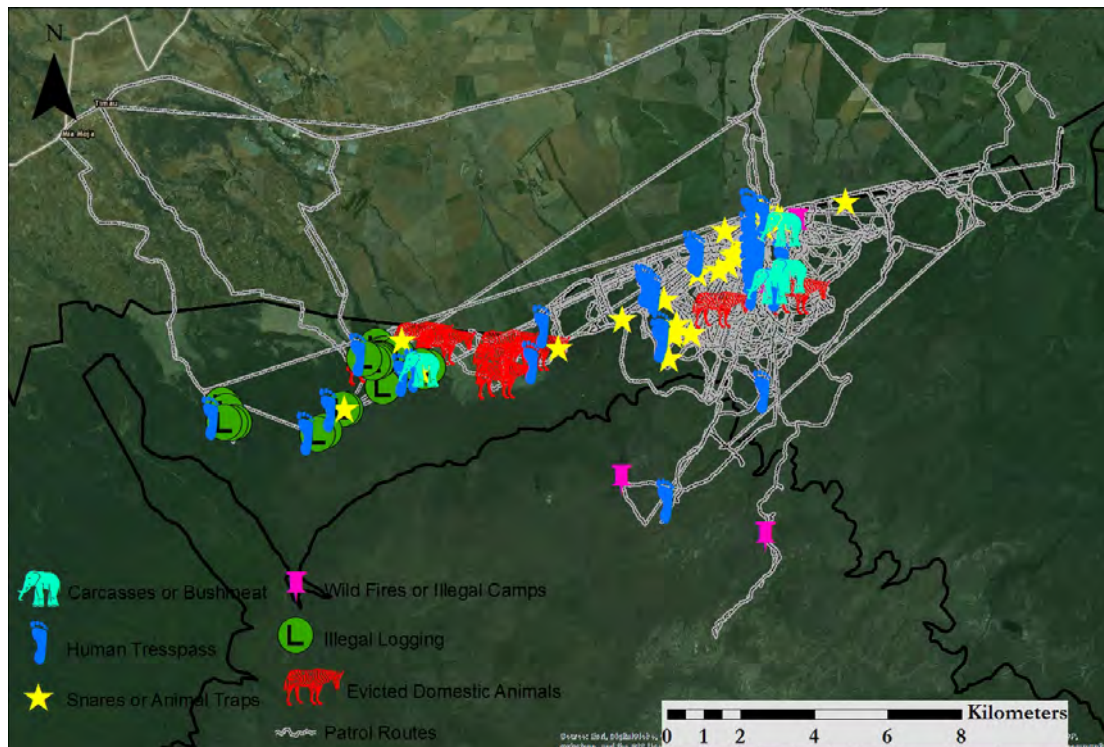
The data collection system is based around the app 'Cyber Tracker'. Data is collected onto a GPS enabled smart phone or tablet so all patrol data and efforts are

automatically geo-referenced. This data is then uploaded monthly onto a central database which can be automatically analysed through in-program designed reporting tools.

SMART makes it possible to collect, store, communicate and evaluate data on wildlife data, patrol efforts (e.g. time spent on patrols, areas visited and distances covered), patrol effectiveness (e.g. snares removed, arrests made) and threat-levels within a protected area (e.g. hotspots of illegal activity).

5. Major findings and accomplishments to date

The HPT were involved in camping patrols and fire response throughout the 2016 year, mainly around the northern region of Mount Kenya. The team have been focusing their routine patrols in the following areas: School of Adventure, Three Brothers Hill area, Milima Ngaita area, Emburi area, Solo Camp, Mbaro Crater including joint patrols with the Marania Wildlife Guards in Lower Imenti, Kithinthina, Muccheene and Mawingu.



Map 1: Location of illegal incidents found by the team between January – December 2016.

A few highlights from the team:

- Since 2012 when the team was set up, the number of illegal incidents recorded (logging, human shelters, grazing, snaring) peaked in 2014 and began to decline in 2015.
- Between 2014 and 2015, the number of illegal activities including logging, grazing, human shelters and injured animals recorded in the area **fell by over 50 per cent** (168 to 81 incidents)².

² Mount Kenya Trust data

- Response time to fires south of the HPT base, an area well known for fire in the dry season has improved due to the teams presence and easy reach of the area above Embori farm.

Between 2014 and 2015:

- Human shelters discovered reduced from **20 to 5 (three-quarters)** with a reduction of injured animals seen by 67 per cent.
- Increasing number of wildlife are also noted with a **doubling of wildlife sightings** such as elephants, bushbuck and zebra over the time period (530 to 1185 sightings).
- The HPT protect habitats, collect data, monitor and deter human-elephant conflict and implement mitigation measures.

Review 2016

Due to the dry conditions of 2016, there has been much illegal grazing that threatens the carrying capacity of the mountain to provide fodder for livestock. Of the almost 900 livestock found on the moorland and within the forest, over 90 per cent were there illegally without a permit. Fires seen to by the team included 14 ha of moorland that thankfully didn't catch onto the forest. The majority of fires are started carelessly by illegal grazers, honey harvesters or charcoal production. We work with other stakeholders such as KWS, KFS and Rhino Ark, along with the Community Forest Associations, to make sure fires are quickly addressed. With strong winds and dry conditions, fires can quickly become out of control and hectares of forest can be destroyed.

A total of 25 snares were found by the team in the forest with the majority being wire snares targeting larger mammals or string snares targeting mostly antelopes. Almost 85 per cent of the snares were active ready to entrap an animal. Unfortunately, several animal carcasses were found by the team including a bushbuck that was trapped in a snare. Other animals targeted for bushmeat include duikers, warthogs and waterbucks. Approximately 10kg of bushmeat was found by the team.

Elephant carcasses were found by members of MKT patrol teams that live closer to the elephant corridor, around the Imenti area of the forest. Two of these cases were suspected poaching, with tusks missing. All cases were reported to KWS.

Logging continues to be one of the biggest challenges facing the mountain with unrelenting logging for timber production, firewood, fence posts and charcoal production. The HPT found almost 250 cases of firewood bundles, tree stumps, timber planks and fence posts.

6. Conservation Outcomes

Short and long term goals to evaluate the accomplishments of the HPT:

- To decrease the prevalence of illegal activity, in particular elephant and bush meat poaching in the northern areas of Mt Kenya National Reserve **Achieved: destroying snares, arrests, deterrence.**
- To work collaboratively with the KWS and Kenya Forest Service (KFS) to extend the area of surveillance into Meru and Sirimon which have seen a marked

increase in habitat and wildlife destruction in high altitude zones **Achieved: GPS training, SMART, installation of satellite camps to cover greater distances, data collection, firefighting.**

- To increase awareness and conservation education within the communities living in and around Mt Kenya Park **Achieved: HPT visual presence within surrounding community including informer network in collaboration with MKT community education and health care projects.**
- To improve the links with the Community Forest Associations and wildlife NGO's to reduce response times for illegal incidents, improve intelligence gathering and information sharing **Achieved: engaging local scouts, local community conservation sensitization, Rhino Ark Mount Kenya fence teams.**

In the past decade, Maisels et al. (2013) suggest there has been a reduction of around 30 per cent in forest elephant rangeland. It is this area and these habitats, in northern Mount Kenya that the HPT work to protect. Elephants, along with other wildlife, continue to disperse and migrate out of the Park and Reserve using the only safe passageway, that links the landscapes of Mount Kenya to those of the Laikipia-Samburu northlands known as the Mount Kenya Elephant Corridor.

Research on the elephant density of Mount Kenya found that there are an estimated 2600 elephants currently living on the mountain (VanLeeuwe, 2016). The study, undertaken by Hilde VanLeeuwe of the World Conservation Society, was a repeat of similar work in 2001. In conclusion, it was found that the elephant population over the past 15 years has remained stable, **a fantastic result in an era of dwindling elephant numbers!** Elephant populations in the region in general consist of the Mount Kenya National Reserve, home to as mentioned previously an estimated 2,600 elephants (Vanleeuwe, 2016); the Laikipia-Samburu population, which is estimated at 6,400 elephants (Ngene *et al.*, 2013) and the Meru population, which is estimated at 270 (Mwangi *et al.*, 2007).

7. Problems

From 2016, the MKT monitoring and evaluation system of the teams changed onto the SMART data collection, making it difficult to compare previous year data, that were written by hand. This situation will improve year on year, with the development of the SMART software and as more patrol data is collected electronically.

Funding is a constant battle for the MKT teams with the HPT only partially funded. We are very grateful for our continual and regular donors who keep our teams active and effective. A ranger team must be sustained to ensure the regular and routine patrols that protect the forest and elephant habitat.

8. Was the project successful?

Elephant poaching and other wildlife mortalities as a result of poaching were reaching alarming rates from 2011, conforming to the trend of elephant mortalities continent wide. Elephant mortality incidents on Mount Kenya escalated, with MKT and KWS statistics indicating over 150 elephants killed during between January 2010 and July 2013 alone. Suspects included various criminal elements in the immediate neighborhood, and organised criminal individuals and groups from Muranga, Isiolo

and Nairobi and beyond. KWS intelligence and contacts within the local community have been key to their successes in arresting suspects and the Trust has supported information gathering directly and via the presence of teams in the know when it comes to the local community. The HPT were set up in 2012 to help identify and tackle hot spots between the Imenti and Sirimon areas of the mountain.

KWS Senior Mt Kenya Warden Simon Gitau notes that elephant poaching has reduced by over 80 per cent since 2014. Furthermore, the success of the project in the region can be shown in the 2016 World Conservation Society study highlighting a stable elephant population on the mountain of approximately 2,600 individuals (mentioned previously), a stable population that was last assessed in 2001.

The work of the HPT is also intertwined with the elephant corridor project which has heightened the attention to elephant conservation in the area.

9. Next Step

Due to a large decrease in poaching/illegal activities around the base, the next step is for the HPT to move out into satellite camps that will extend their patrol area. Semi-permanent bases will be built within the forest with KWS authorisation to ensure the horses are safely stabled for the nights out on patrol and the men can start to patrol further afield within the forest and moorlands.

Funding has been obtained from the 'Mount Kenya Trust 3-peak challenge' and The Rufford Foundation for two new satellite camps one-day ride from their main base and stables. This would mean the team will cover a larger area with a secure base and supplies for men and horses where they can patrol out for 3 to 4 days.

Key activities for the pilot project include the construction of one satellite camp in the Muchene area, which has both indigenous forest and community planting areas making it vulnerable to illegal activity and a possible bottleneck for wildlife movement, and elephant in particular.

The Muchene area is seen as a strategic area in terms of elephant movement. Previous data collected by MKT also shows that the area was an elephant poaching hotspot at the peak of the poaching crisis between 2009 and 2014. Human/wildlife conflict is at crisis levels in the Imenti forest and although the Trust and other stakeholders are addressing these issues elephants are likely to become isolated in the upper Imenti area if the Muchene area is restrictive to them. The project hopes to address this and inform stakeholders further.

The pilot project will take four months to complete with construction and preliminary patrols being led from the base. Once up and running the team patrol routes and movements will be transferred to the new area as they become more confident to move further afield in their patrols.

Once the satellite camp is constructed the HPT will periodically patrol out from the base into the surrounding National Reserve and Park with horses and men.

10. Human Interest Story

PIUS MUTUMA MUNGIRA



AGE? 24 years old

WHERE FROM? Tigania West, Meru.

HOW LONG? Joined the Trust in August 2012

MOTIVATION: He was motivated by a community awareness outreach that was conducted by the trust near his home.

Pius is the youngest member of the HPT. Beforehand he was working as a store man in a flower farm in Timau. He joined the Trust without any prior knowledge of horses but now rides well and takes his turn to manage the stables.

Like his older team mates, Pius is quick to admit the changes observed in his own self as a result of engagement with the horses and patrols in the forest. He says he is very happy with his work and says he now pays more attention to details. As a result, **“my memory never fails me”** he says.

He says “I remain heavily indebted to the Trust and to our donors”.

Ever since joining the HPT he feels he has gained a lot of conservation experience and his knowledge of the plant and wildlife species in the Mount Kenya area has improved immensely. As a result of his work with the MKT, on his off days and during his leave he spends time educating his family and friends on the importance of caring for and protecting the environment. He says the pride he gains from being able to provide for his family who live 40 km away is comparable to nothing. His family are also very proud of his work and they encourage him to work hard.

FAVOURITE HORSE: Of all the horses, Pius is most comfortable with *Punch* because the horse is not afraid. **“There have been challenges, but I am confident of overcoming as I am still young”** he says.

Having fallen from several horses as a novice he has learnt from his mistakes and he has learnt to deal with the daily challenges of riding in the forest and his confidence grows daily.

STORIES: Pius narrates his narrow escape from an enraged female elephant with a calf; **“the elephant started chasing us to protect her calf, and my horse got spooked which caused me to fall off! Luckily it was just a mock charge and she retreated so I was able to escape to a safe distance.”** He says that at times conducting the patrols is very risky because they often meet with armed loggers and poachers or angry wildlife and they feel defenseless. In spite of this though, he says it’s a risk that he’s willing to take to protect his homeland.

His favorite animal is a zebra because they are friendly and inquisitive. Sometimes they even follow the patrol team! Pius thinks this is because they are trying to figure out what type of animal these strange un-striped Zebras are.

In the three year project period, the Horse Patrol team has reduced illegal activity, strengthened as a team and effectively kept the current reach area free from elephant poaching while significantly reducing the elephant habitat destruction.

Wildlife habitat must be protected to ensure a healthy and genetically robust population and only by protecting the remaining safe sites for elephants to live naturally in the wild will this be retained. The HPT operations are designed to improve security and biodiversity protection within the project area. Practical applications such as regular, routine and sustained patrols like those carried out by HPT secure areas of the forest and moorland from poaching and illegal activities.

The team continue to decrease the prevalence of illegal activity, in particular elephant and bush meat poaching in the northern areas of Mt Kenya through destroying snares, making arrests and deterring illegal activity. The team also very closely collaboratively with the KWS and KFS patrol the Meru and Sirimon areas which had seen a marked increase in habitat and wildlife destruction, including fires, in high altitude zones. New monitoring and reporting through the SMART software.

These successes mean that we are ready to widen the reach of the team's influence. The next step is for the HPT to move out into satellite camps that will extend their patrol area so the men can start to patrol further afield within the forest and moorlands to reach areas that are poorly patrolled and have higher levels of logging and poaching.

Elephant mortality incidents on Mount Kenya escalated, with MKT and KWS statistics indicating over 150 elephants killed during between January 2010 and July 2013 alone. Now this figure has been reduced by 80 per cent (Gitau, 2015).

The results of our team's progress and partnership successes with the KWS and KFS can clearly be seen in the statistics from our patrol reports. For example, **between 2014 and 2015**, human shelters discovered reduced from **20 to 5 (three-quarters)** with a reduction of injured animals seen by 67 per cent and increasing number of wildlife are also noted with a **doubling of wildlife sightings** such as elephants, bushbuck and zebra over the time period (530 to 1185 sightings).

The stability of the elephant population over the past decade and a half, at approximately 2600 individuals, on Mount Kenya as captured in the World Conservation Society 2016 elephant survey also shows the effectiveness of ranger patrol teams on the mountain.

Due to its uniqueness, the project has also increased awareness of poaching and illegal activity on Mount Kenya and it's special importance in the lives of Kenyans. It has raised significantly more awareness to local and international people about the work of the Mount Kenya Trust by drawing in more publicity in the media and through films that have been made, focussing on the work of the Trust.

12. 50 words progress and results

The team's data from manual sheets and latterly our SMART cybertracker data, clearly shows the decline in illegal activity in the area patrolled between 2014 and 2016. The elephant population on Mount Kenya remains stable despite poaching for

ivory and increasingly human-elephant conflict. This correlates with an increased security presence and direct assistance to the KWS intelligence teams.

13. List all organisations associated with the project and role

- Mount Kenya Trust – manage and organise the HPT.
- Kenya Wildlife Service & Kenya Forest Service – provide support and permission to patrol within the forest.
- Kisima Farm – land and logistical support for the team main base.
- North Laikipia Vets – provide at cost or free vet service.

14. Financial report

Budget Item	2014	2015	2016	2014-16
	IEF	IEF	IEF	Other/MKT
Project Personnel	US\$	US\$	US\$	US\$
Ranger salaries	0	0	0	40,033
Northern Sector Supervisor Salary	0	0	0	4,260
Programme Officer Salary Contribution	0	0	0	2,400
Medical Costs	0	368	0	652
Kenyan workman insurance	0	0	0	609
Meals				
Rations for rangers	2,205	0	0	9,953
Horse Feed for 10 Ethiopian ponies (bales, oats and barley)	1,517	2,073	2,526	0
Equipment				
Uniform	616	1,866	1,117	429
Horse equipment	1,502	828	391	0
Services				
Veterinary costs	908	49	472	0
Training of horse and horsemen	467	0	224	649
Fuel	576	2,827	1,909	0
Vehicle Maintenance	0	0	2,796	1,791
Misc				
Equipment for rangers	616	0	233	782
Telephone/data	0	0	332	200
Horse purchase	740	0	0	0
Repairs and maintenance of site	853	580	0	500
Operational Costs - Admin, Accounting, Reporting & Monitoring @15%	0	0	0	10,000
Total	10,000	8,591	10,000	72,258

15. Images



A HPT ranger discovers a large elephant snare.



Elephant spotted in a PELIS *shamba* system



Andrew, the newest member of HPT, being taught how to ride.



A bushmeat snare found by the team



A suni carcass. Cause of death: unknown.



An elephant grazing in the corridor.



A drone shot of elephant walking in the corridor. Credit: Peignor Production.



Fire fighting. Fires are usually started by illegal cattle herders, honey harvesters or charcoal burners.



Early morning shot of a family moving through the corridor into the forest.



Illegal firewood collection by intruders.



A group cross under the A2 Meru highway using the elephant underpass.



A second drone shot of elephant moving through the corridor. Credit: Peignor Productions.

17. Copy of future publications

Mount Kenya Elephant Survey, 2016.

<http://www.mountainpartnership.org/news/news-detail/fi/c/428575/>

Aerial Survey of the destruction of Mount Kenya, 1999. UNEP.

http://www.mountkenyatrust.org/images/Mt_Kenya.pdf

Boots on the Ground documentary

<https://www.youtube.com/watch?v=aKxbjYjV6uk>

Laikipia Wildlife Forum

<http://www.laikipia.org/horses-peaks-mount-kenya-horse-patrol-team/>

Peignor Productions

<https://vimeo.com/179058657>

pass: peignoirprod

French version – whole documentary

<https://vimeo.com/203309863/daf4804ef6>

Mount Kenya documentary

<https://vimeo.com/145503254>

Credit – Rosie Woodcock & Ceci Vargas

18. Social media

Facebook: Mount Kenya Trust

Twitter: @mountkenyatrust

Instagram: Mount Kenya Trust