

Kasigau Corridor

Aerial Surveillance Report



December 2016 - February 2017

By Keith Hellyer

QUARTERLY REPORT



1. Summary

The Kasigau Wildlife Corridor is located between Tsavo East and Tsavo West National Parks and covers 200 square kilometers. The 14 group ranches that collectively make up this corridor provide an important habitat and dispersal area for wildlife between these two protected areas. There are approximately 11,000 elephants in the Tsavo ecosystem and roughly 2,000 of them that rely on the corridor as part of their movements in search for water between the two national parks.

Aerial surveillance is one of the most effective means of reducing wildlife crime, and is needed now more than ever in an effort to curb elephant poaching. Our daily aerial patrols are a vital tool in the effective prevention of elephant poaching, whilst increasing security overall and providing essential data needed to protect such expansive areas of land. Furthermore, aerial support also helps in identifying other illegal activities from the air, such as illegal charcoal burning, trespassing, illegal grazers and logging, which poses a great threat to the Kasigau Corridor and the future of the environment.



Above: Elephants drinking at Chui dam on Rukinga Ranch

2. Flight Information

Flight data

Total hours flown 113.1

Approx Distance covered 10,336 km

Fuel used 2,192 L

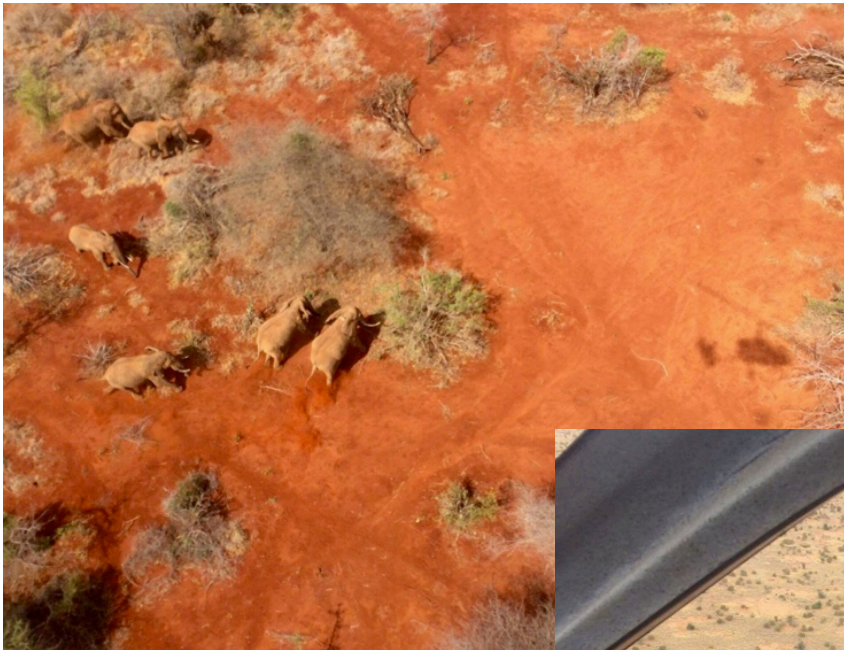


Above: Gyrocopter having an eye in the sky to keep rangers safe

3. Collared Elephants

“Rukinga” the STE collared bull crossed the Mombasa highway and SGR from Rukinga Wildlife Sanctuary to Tsavo East at the end of November. Since then, he has remained inside the park. This quarter, the only collared elephant within the Kasigau Corridor Project area is a KWS collared bull that has previously been seen frequently with Rukinga.

Since late December, the aerial team has noted an increase in cattle in the areas surrounding the railway underpasses and culverts along the SGR. This is due to cattle illegally entering Tsavo East National Park. This would have caused some barriers for other elephants wanting to continue their migration routes. On the STE phone application, “Ndara” has been seen inside Tsavo East very close to the crossing point opposite Rukinga Wildlife Sanctuary, possibly waiting for a chance to cross from Tsavo East to the ranches. When flying to look into what was happening in the areas where “Ndara” was trying to cross, cattle were found adjacent to the underpasses. The aerial team has undertaken several cattle counts inside Tsavo East National Park, requested by KWS. Information on and coordinates of the cattle herds located were then passed on to KWS for action by their ground teams.



Left: KWS collared elephant



Right: Cattle spotted and coordinates taken

4. Elephants and other Wildlife

Towards the end of last quarter, the Kasigau Corridor was experiencing a prolonged dry season, with some welcome rain arriving in November and December to fill much-needed watering holes and dams within the project. After the brief rains turned the area green, we are now slipping back into a worrying dry season. The rains caused a temporary displacement of the elephant herds throughout the area, but they have returned to their high concentrations in certain areas since the rains stopped.

Other wildlife data

Maps of all elephant concentrations

See Appendix 1 for map of elephant concentrations

General elephant movements and concentrations

Elephants had previously been concentrating on Rukinga during the dry season, drinking from a trough with water pumped by Wildlife Works. When the rains started, they moved to the new water points on LMD and Northern Taita ranch. The elephants that had been concentrated on Mgeno ranch during the dry season then moved to the community areas around the Sagalla hills after the first rains. At this point, having aircraft was essential to keep track of the movements of these herds and where to position rangers, as well as to help warn community members for both human and elephant safety. As areas have dried up again, elephant populations have returned to where they were at the start of the quarter. The majority of elephant locations in February have been consistent, with concentrations in the northern ranches, with pockets around dams in southern Taita and Wananchi Ranch.

Other interesting wildlife sightings

There has been a highly diverse range of wildlife spotted during this quarter. On one very special flight, the aerial team spotted 33 individuals of Grevy zebra. This is the most ever seen in a single patrol, and adds to the Biodiversity teams assessment of X individuals expected to be in the region. For all Grevy sightings, please see Appendix 2.

The aerial team has also sporadically seen ardwolf, melanistic servals and striped hyena. More recently, two lionesses have been seen on Rukinga with at least 4 young cubs, originally spotted by the aerial team and recently verified on the ground. On February 22nd, while doing a charcoal patrol around Sagalla ranch, the aerial team spotted a wild dog resting under a tree next to a den with what looked like 4 pups. The pups went into the den fairly quickly, however the adult wild dog was very relaxed with the gyrocopter overhead. Later that day, a camera trap was placed near the den, which showed there were 3 adults and 6 pups. See Appendix 3 for picture.

Elephant carcasses found

In December two elephant carcasses were found, with cause of death due to drought related issues. Despite the rains they may have been too weak to survive.

Gunshots have become more frequent this quarter with four incidents, with our aerial team responding to all cases. At the end of December, a poacher was shot and killed on Amaka ranch while transporting ivory with several armed associates. The carcass from which the tusks originated was later found on Taita ranch covered with branches.

After responding to gunshots in February on the Taita/Kambanga boundary, it was deemed that the aerial team disturbed the poachers of an elephant by being above the scene straight away. Rangers on the ground followed the tracks of the suspected poachers until they exited the project on Mombasa highway. A week later a bull was found dying on Rukinga, almost 30km away from where the shots originated. The bull died in the night from his wounds caused by multiple AK-47 rounds, which entered his head, tusks, neck and front legs, breaking one of them. The tusks were recovered, but this was a horrific end to the bull's life.

Large mammal carcasses

In December tourists located a giraffe carcass on Taita ranch, which had been butchered for its meat. Aerial patrols in January also located a giraffe butchered for meat on LMD ranch, along with a Kudu dead in a snare on the same patrol. In January again, two giraffes were shot and killed by an armed gang on Kasigau ranch.

Other security incidents

No snares were found in December. In January 11 snares were recovered, with a further 29 snares found in February.

For all patrol tracks see Appendix 4 and Poaching data sheet see Appendix 5

On a positive note, on a routine aerial patrol, a bull elephant on LMD ranch was found with a large cyst on his right side. We were able to get a message to the KWS veterinarian who arrived by road shortly after reporting. However, the density of the bush made viewing the elephant by vehicle impossible. The aerial team then had to keep visual on the elephant's location so when the DSWT helicopter arrived it could assist the vet quickly for an aerial darting before treatment. The bull has been seen since and is doing well.



Above: Aerial photo of elephant being treated



Above: Ground photo of elephant being treated

In January, the gyrocopter was used for searching for elephants around community farms throughout the project area, with a particular emphasis on Sagalla communities on the Ndara side, and in the Marungu hill community areas. The focus was on marking out where elephants were and potential intrusions, and in some cases the gyrocopter was used to chase elephants out of problem areas. STE Elephants and Bees (E&B) project research student Georgia Troup joined us for a flight and was able to get a bird's eye view of the farms that the E&B project works with. After a difficult few weeks of crop raiding, this enabled Georgia to have a better idea of the lay of the land and lent insight into where and how the elephant herds were entering the farms.



Above: STE Researcher Georgia Troup with the gyro



Above: Elephant Tracks leading into Sagalla community

5. Charcoal

With heavy rains in the start of December, much of the charcoal and illegal logging had disappeared. However as the area dried up this quarter, more and more activity was found. With increasing illegal invasions into Rukinga ranch by Somali cattle and responses by both aircraft and ranger to gunshot reports, many of the logging activities had to wait before being responded to. This makes an accurate count of charcoal found and then destroyed very difficult to calculate. The areas most affected were Kambanga, Bungule, Amaka, Wushumbu and Maungu ranch.

Charcoal data	
Charcoal kilns	21
Log piles	128
	18*
Charcoal bags	Still more to be responded to by ground teams.
Arrests made	January 1 st , one charcoal burner was arrested on Mgeno Ranch.

Right: Charcoal burning from air



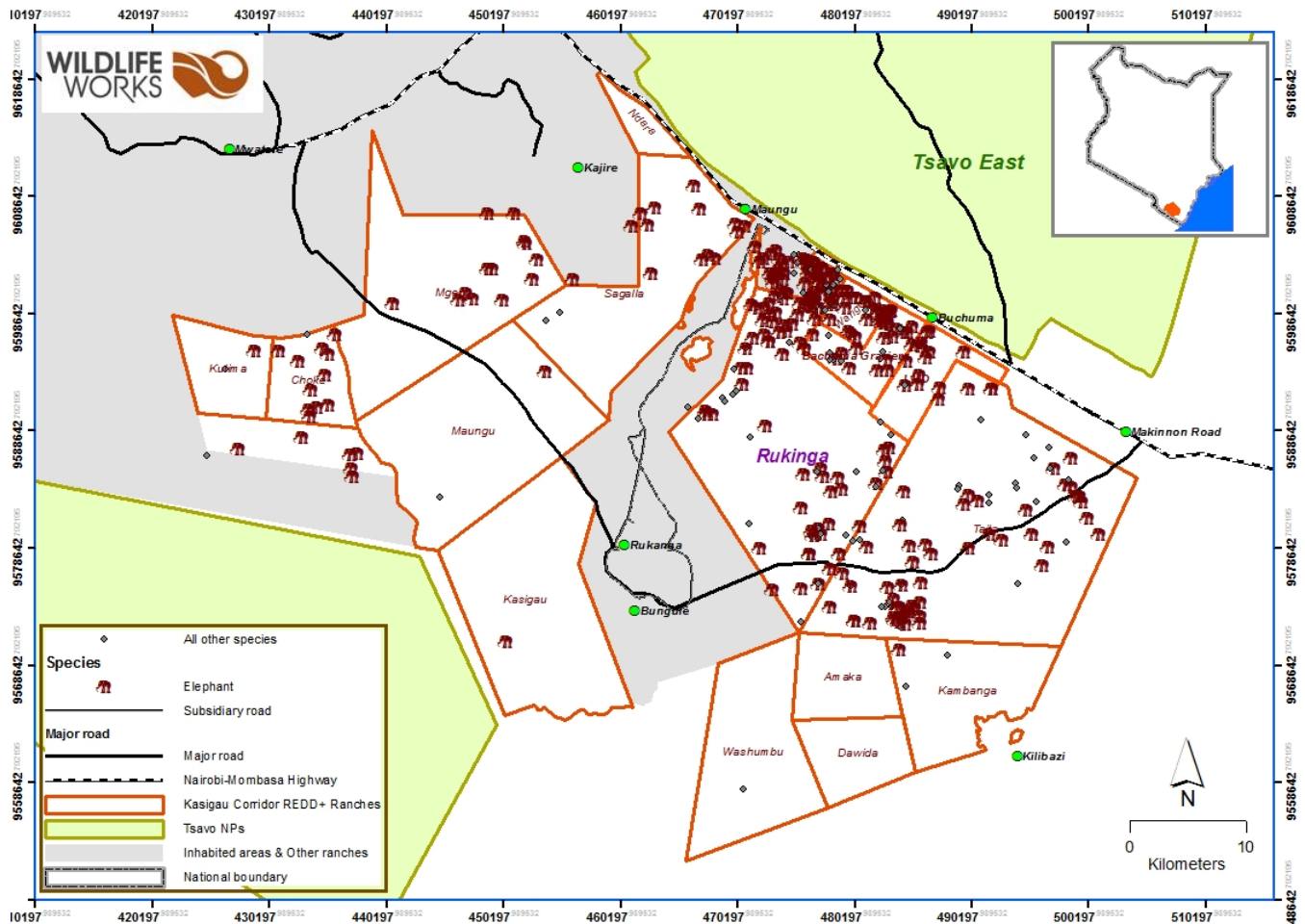
Other items during the quarter

In early December a vibration in the aircraft required urgent maintenance. The rotor head of the gyrocopter had to be sent to South Africa to be serviced and rebuilt before being reinstalled back in Tsavo. This caused us to be grounded for most of December. During that period, we are very grateful to have been assisted in aerial surveillance by the David Sheldrick Wildlife Trust. We would also wish to thank Magni Gyro, Benny's Hardware, Comet Aviation and Auto Gyrotech for the quick assistance in the repairs to keep our aircraft flying.



Left: Flight with DSWT support

Thank you for your support!



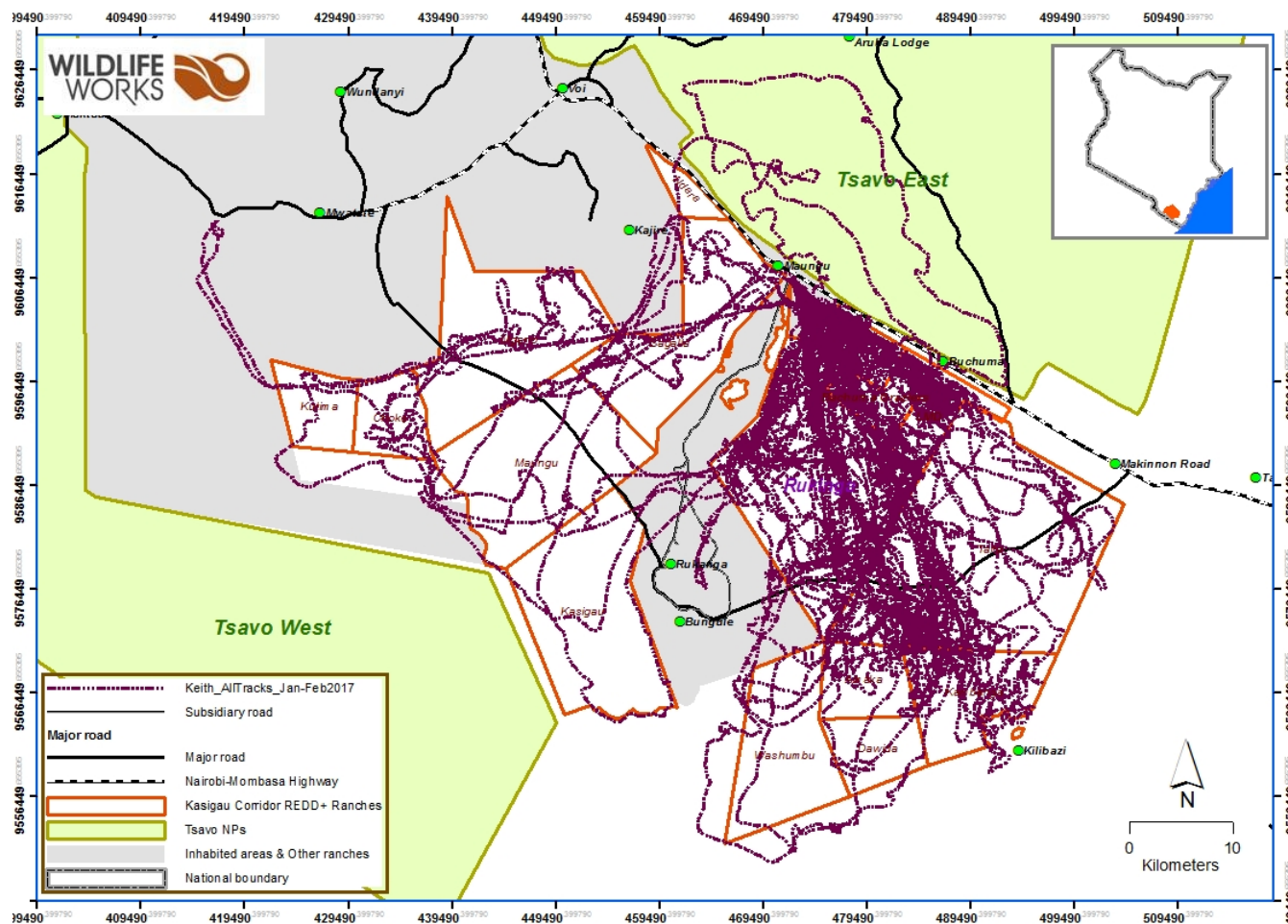


Above: Grevy zebra from air

Appendix 3: Wild Dog spotted from the air on Sagalla



Appendix 4: All patrol tracks December 2016- February 2017



Appendix 5: Poaching Data Sheet and Picture

Date	Sex and Age (if known)	Duration of death	Location	GPS location	Cause of death / Tusk status
15/12/16	Male 25-30 years	Fresh	Rukinga	37M 0477423 UTM 9586145	Unknown, believed to be drought related. Tusks recovered.
30/12/16	Unknown	2-3 months	Rukinga	37M 0479288 UTM 9585450	Unknown, believed to be drought related. Tusks missing.
15/02/17	Female 40-45 years	Fresh related - 10/02/17	Rukinga	37M 0474548 UTM 9592477	Gun shot wounds. 60kg Tusks recovered.
16/02/17	Female 35-40 years	1 month	Taita	37M 0488715 UTM 9577839	Poison arrow. Tusks missing.
20/02/17	Male 20-25 years	1 month	Taita	37M 0485452 UTM 9578034	Unknown. Tusks missing.
7/2/17	Male 30-35 years	3 months related 12. 22.16	Taita	37M 0480016 UTM 9574732	Assumed poaching-related from December. Tusks recovered in December from poacher.



Above: Elephant carcass, Rukinga 15/02/17