



**KENYA
WILDLIFE
SERVICE**



SKY VET REPORT

February ~ April 2014

FROM THE DAVID SHELDRIK WILDLIFE TRUST
SKY VETS INITIATIVE

info@dswt.org

www.sheldrickwildlifetrust.org

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FEBRUARY 2014 - APRIL 2014



SKY VET QUARTERLY OVERVIEW

The months of February to April 2014 saw the DSWT/KWS Sky Vet program deployed to 7 cases, within the Tsavo Conservation Area the Masai Mara, the Shimba Hills and Lamu District. This reporting period showed a decline in cases treated by Sky Vets throughout Kenya but also showing that many cases reported were able to be attended by the resident mobile veterinary units operated by the DSWT and KWS.

Four elephant cases were treated, one for a poisoned arrow wound, one for significant bullet wounds, one for a snare, and one under natural circumstances. All cases were operated on; two given a healthy prognosis of recovery and two were given a guarded prognosis due to the severity of their wounds. Sadly a couple of weeks after the treatment of the female elephant with bullet wounds she had to be euthanized as her injuries were too severe to heal.

The other three cases tended to during this three month reporting period were all lions. All cases were suspected as being caused by natural circumstances whilst all cases have also been given a good prognosis for recovery.



Locations: The Sky Vet program has deployed KWS vets to the following locations during this reporting period



CASE 1: FEBRUARY 20TH 2014

TSAVO EAST - ITHUMBA

WOUNDED ELEPHANT

Species African Elephant
Age Adult

Sex Male

**INTRODUCTION**

The Ithumba area of Tsavo East is home to orphans raised by the David Sheldrick Wildlife Trust, and there are a number of bachelor bulls which includes “Mshale”, who was treated earlier in the month. While searching for Mshale for a repeat treatment, another elephant bull was spotted with an injury to the leg which had hanging tissues. The vet team rushed in by helicopter under the SkyVet initiative and easily found the elephant bull in the area with several others.

CHEMICAL IMMOBILIZATION

The bull was immobilized by darting from the air, which made it a simple task. 18mgs of Etorphine propelled from a Dan Inject dart system was used. The elephant was herded by the chopper towards the road for easy access by the ground team. The bull fell on a sternal position that isn't good as it interferes with breathing. He was finally pulled around with the assistance of a tractor.

PHYSICAL EXAMINATION AND DIAGNOSIS

The lateral side of the hind limb near the knee joint was wounded with protruding dead muscles tissues. An opening was made at the most ventral part of the wounded site. The dead tissues were pulled out, an arrow head was removed and the hollowed wound was then cleaned with water mixed with hydrogen peroxide, doused with tincture of Iodine and sprayed with Oxytetracycline spray. A final coat of green clay was applied to the wound.

Long acting antibiotics and Dexamethasone were administered parenterally. After the operation was completed the ground team were given time to move back before the reversal drugs were administered. The bull woke up after a Diprenorphine intravenous injection was administered. He has been given a good prognosis.



CASE 2: FEBRUARY 27TH 2014

OLARE OROK, MASAI MARA

INJURED LION

Species	Lion	Sex	Male
Age	Adult		

**INTRODUCTION**

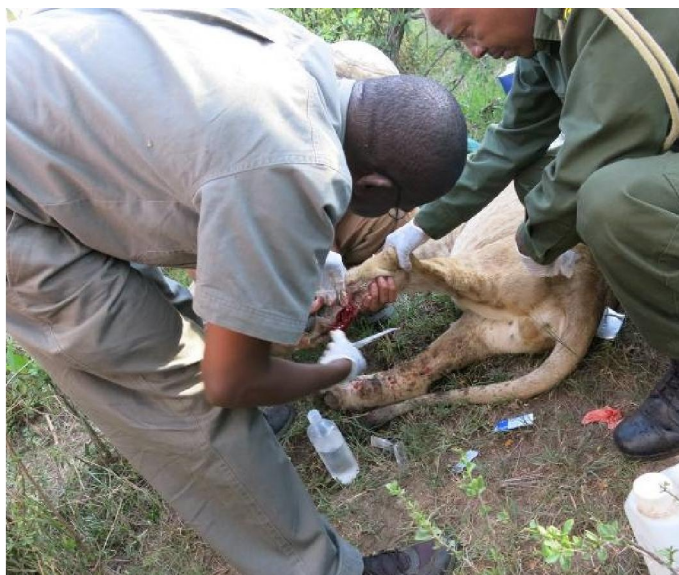
A sub adult male lion had sustained serious injuries. He was a part of the Enkoyanai pride of 12 lions. Olare Orok Conservancy management reported that he needed veterinary medical attention.

IMMOBILIZATION

The team attempted vehicle darting. A 3ml dart was prepared using 250mg of ketamine (Agraket[®] Inj. (10% solution). (Agrar Holland BV) and 5 mg of Medetomidine 4% inj Kyron Laboratories (Pty) Ltd, South Africa). The lion was darted using a Dan - inject[®] rifle (Dan-inject APS, Sellerup Skovej, Denmark). After 9 minutes the lion was fully immobilized, the eyes were blind folded and Opticlox[®] eye ointment (Norbrook Laboratories Ltd (Northern Ireland) was applied to prevent cornea damage. The other members of the pride were driven away and their movement monitored for security reasons.

EXAMINATION AND AFTER CARE

A physical examination was carried out. The lion had good body condition (body condition score of 4). The lion had serious cuts on the left hind leg and right front leg. The wounds were cleaned with water and later lavaged with normal saline. The cuts were sutured using absorbable sutures (chromic cat gut # 2 and Vicryl sutures # 3. The wounds were sutured using sutures laid in a simple interrupted pattern. The wounds were also topically cleaned with tincture of iodine. The wounds were later liberally sprayed with Oxytetracycline spray. The lion was administered 4500mg of Amoxicillin Trihydrate BP injection (Betamox® LA) (Norbrook Laboratories Ltd (Northern Ireland) by intramuscular route and 13.2mg of dexamethasone (Dexa-met® 0.2 inj Chongqing Fantong Animal Pharmaceutical Co Ltd, Chongqing, China).



REVERSAL & PROGNOSIS

After 1 hour, anesthesia was reversed using 15mg of Atipamizole Hcl (Antisedan®0.5% inj. Orion Pharma (Pfizer) Espoo, Finland) administered by intramuscular route. The lion later rejoined his pride. The lion was in a stable health soon after treatment and has good chances of healing and full recovery.

CASE 3: FEBRUARY 28TH 2014

MARA NORTH

Injured Lion cub

Species	Lion	Sex	female
Age	4 month old		

**INTRODUCTION**

A female lion cub had tail injuries and looked poorly and frail. She was in a pride of 3 lions (Mother and 2 other healthy cubs). Richard's Tented Camp Management in the Mara reported that she needed veterinary medical attention.

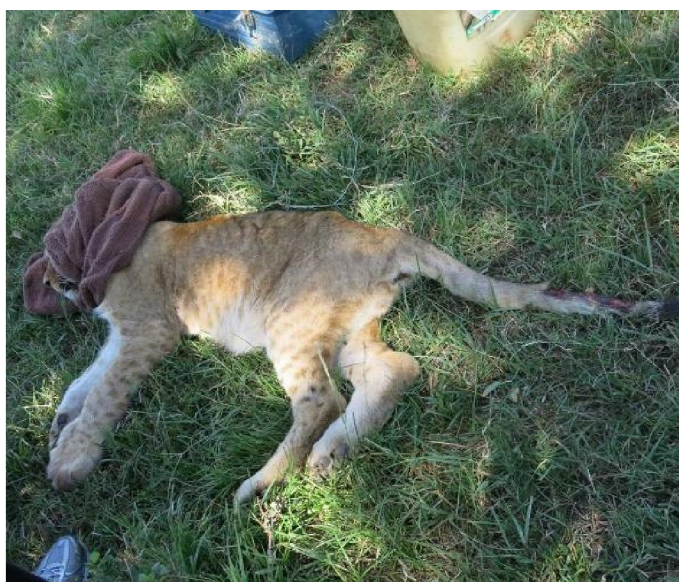
CHEMICAL IMMOBILIZATION AND EXAMINATION

The team carried out vehicle darting. A 3ml dart was prepared using 180mg of ketamine (Agraket[®] Inj. (10% solution). (Agrar Holland BV) and 3mg of Medetomidine 4% inj Kyron Laboratories (Pty) Ltd, South Africa). The lion cub was darted using a Dan- inject[®] rifle (Dan-inject APS, Sellerup Skowej, Denmark). After 8 minutes the lion cub was fully immobilized. The other members of the pride (Mother & 2 other cubs) walked away and while their movement was monitored for security reasons, we quickly picked up the immobilized cub and transported her in a Land rover vehicle to shade at a safe

distance. The eyes were blind folded and Opticlox® eye ointment (Norbrook Laboratories Ltd (Northern Ireland) applied to prevent cornea damage.

TREATMENT

A physical examination was carried out. The lion cub had a poor body condition (body condition score of 2). The lion cub had sustained injuries on the tail and lost some blood. The tail wound was cleaned with water and normal saline. The dead tissues were excised off. The wound was also topically cleaned with tincture of iodine. The wound was later liberally sprayed with Oxytetracycline spray. The lion was administered 1500mg of Amoxicillin Trihydrate BP injection (Betamox® LA) (Norbrook Laboratories Ltd (Northern Ireland) by intramuscular route and 10.56mg of dexamethasone (Dexa-met® 0.2 inj Chongqing Fantong Animal Pharmaceutical Co Ltd, Chongqing, China). The lion was also administered 2ml of Ivermectin by subcutaneous route.



REVERSAL & PROGNOSIS

After 1 hour, anesthesia was reversed using 15mg of Atipamizole Hcl (Antisedan®0.5% inj. Orion Pharma (Pfizer) Espoo, Finland) administered by intramuscular route. The lion cub was later rejoined with her pride (Mother and 2 other cubs) in a nearby bush. The lion cub was in a stable health soon after treatment and has good chances of healing and full recovery.

CASE 4: MARCH 31ST 2014**KIPINI CONSERVANCY****SNARED ELEPHANT**

Species Elephant
Age Juvenile

Sex Male

**INTRODUCTION**

A call was received from a Kenya Forest Service (KFS) officer at Kipini Conservancy in Lamu County who had located a young bull elephant with a severe snare around its leg and requested veterinary assistance. After verifying that the KWS team still had the elephant in sight, and after confirming the location and other logistics, early on the 31st March the DSWT Cessna 185 was airborne heading to Voi to pick the Trust funded KWS vet, Dr. Poghon, his equipment and his assistant.

EXAMINATION AND TREATMENT

The elephant's wound was caused by a nylon rope that had plunged deeply into the young calf's ankle. After being cut and removed the wound was cleaned by the veterinary assistant, followed by a treatment of hydrogen peroxide, iodine, and antiseptic spray. Finally the wound was packed with green clay. Meanwhile Dr. Poghon had been administering long lasting antibiotics and monitoring the elephants breathing.

REVIVAL & PROGNOSIS

Thirty minutes passed and the job was efficiently done and the young calf was revived. He lay there for a minute and then attempted to rise. His body weight bearing down on his damaged front leg as he struggled to stand. He rested a while and tried again, struggling against the pain as he put pressure on his ankle. After three attempts he slowly rose and stood a while to gather his bearings. Slowly he hobbled off into the palm shade.

Over the following weeks the KFS and Kipini Conservancy staff monitored the elephant and have been reporting that the elephant is growing stronger and his wound is healing making his chances of a full recovery very positive whilst having fresh water and food all close by.



CASE 5: APRIL 4TH 2014**MASAI MARA****INJURED LION**

Species
Age

Lion
Adult

Sex

Female

**INTRODUCTION**

This was a 6 year-old lioness with cubs in a pride of about 13 lions; she was spotted near Governors camp, in the area of Masai Mara NR near Musiara Airstrip. The lioness was unable to walk and remained lying down due to an injury to her hind quarters after a fight with a buffalo. The injury had been inflicted early in the morning and a Sky Vet team was immediately deployed and airlifted to the Mara.

EXAMINATION AND TREATMENT

The lioness was captured by darting using 300mgs of ketamine Hcl combined with 4mgs of medetomidine hcl. It took about 6 minutes for the drug to take effect and the lioness was fully anaesthetized. The lioness was put on lateral recumbency and the wound examined. The wound was extensive and involved the soft tissues and the skin. The wound was cleaned using normal saline. The wound was then sutured using 3.0 cat-gut Suture using simple interrupted pattern for the soft muscle tissue. A simple continuous pattern using chromic catgut no 3.0 was used for the skin tissue. Oxytetracycline spray and ointment was applied on the wound. Grey clay was also applied on the wound to hasten healing.

Further treatment involved intramuscular injection of Betamox and dexamethasone. The operation took about 2 hours with 50 mg ketamine top up at 1 hr 20 min and 1 hr 45 min.



REVERSAL

The lioness was revived from anaesthesia using 48 mgs of atipamezole Hcl administered intramuscularly and it rose up after 3 minutes. Soon after revival it was able to join the rest of the pride which were waiting near-by.

PROGNOSIS

The lioness was in a stable health soon after treatment and was given a good prognosis with positive chances of healing and full recovery. The injury affected the soft tissues with no traumatic injury to the bones and internal organs, hence quick healing is expected.



MONITORING & FOLLOW-UP

The lioness was monitored every single day, with updates from Patrick Reynolds from Governors Camp and on the 10th of April, the vets were concerned that the wound was becoming infected. The decision was made to dart Siena and treat her again. She had removed some stitches and there was also some necrotic tissue, fly eggs and maggots in the wound. The vet opened the wound, disinfected and cleaned it before re-suturing. An opening was left for drainage of any pus and she was given more Antibiotics and Anti-parasitic medication.

On the 14th of April, onlookers observed pus coming from Siena's wound and believed it to be infected. Dr Limo and his team were called in and darted her a third time. They found that the sutures were still intact and in fact the pus was coming from the drainage opening which was normal. Dr Limo however used swabs, surgical spirits and disinfectant to make sure the wound was clean before giving her a further antibiotic. It was advised at this point that Siena must not be anesthetized again for at least 10 – 14 days, especially since she had been treated three times in two weeks.

By the 28th April it was decided that a sufficient time period had passed since her last treatment to anesthetize Siena again without risk to her or her cubs. On examination of the wound the vet, Dr Limo, found no pus or signs of infection. In fact the wound was very dry and healing extremely well. The hole in the muscle, which had been the main concern of everyone involved, had in fact healed and was completely closed. There was only a small piece of skin that was hanging down and required two stitches to be held in place. Dr Limo then cleaned the wound with Peroxide, Iodine and Surgical Spirit before spraying it with Antibiotic Spray and applying Green Clay to prevent infection. Siena was then administered Antibiotics intramuscularly and revived.



CASE 6: APRIL 22ND 2014

TSAVO CONSERVATION AREA

INJURED ELEPHANT

Species
Sex

Elephant
Female

Age

Adult

**INTRODUCTION**

This report describes case intervention of one female elephant at Amakah Ranch close to Rukinga Ranch in the Tsavo Conservation area. This elephant had sustained serious gunshot injuries. This case was attended on Sky Vet initiative. This female elephant had survived a brutal gunfire attack by poacher(s) but sustained serious injuries, unfortunately 3 members of the elephant herd/family had been fatally wounded and carcasses were one kilometer way. This poaching incident had happened a month ago. The elephant walked with a lot of difficulty and lived near a water hole/dam.

IMMOBILIZATION

Etorphine Hcl(0.98%) (M99®) (Norvatis South Africa (Pty) Ltd) 18mg, in a 3 ml Dan - inject dart was prepared. Vehicle darting was carried out. Using a Dan inject® dart rifle (Dan-inject APS, Sellerup Skovvej, Denmark) the elephant was darted; she was immobilized after 9 minutes.

EXAMINATION AND TREATMENT

Examination of the elephant showed loss of body condition, the animal had poor body condition (body condition score of 2). Decubitus wounds, several in number, were encountered, whilst the elephant had spent days in a recumbence position. Several penetrating gunshot wounds were also found around the neck area, and one particularly incapacitating the left hind leg.

The hind leg was swollen and she was unable to bear any weight on that leg. The wounds were cleaned with copious amounts of water to remove mud and dirt, and then liberally cleaned with Tincture of iodine. Oxytetracycline spray (Alamycin® spray) (Norbrook Laboratories Ireland) was also applied. The elephant was injected with the following:

- i. Amoxicillin Trihydrate BP 15000mg (Betamox® LA Norbrook Laboratories Ireland) i.m
- ii. Flunixin meglumine 2500mg ((Norbrook Laboratories Ireland)) i.m



REVIVAL & PROGNOSIS

Using 60mg of diprenorphine Hcl (Norvatis South Africa (Pty) Limited) given IV at the ear vein the animal was reversed from anesthesia, (a ¼ of the dose was given i.m). Recovery from anesthesia was smooth and she limped away from the site. Prognosis was guarded and the ground teams continuously monitored her movement after treatment for several weeks. Sadly on the 15th May she had to be euthanized due to an untreatable complete fracture of the left hind limb which was diagnosed after a follow up treatment. Her tusks were removed and handed to the KWS security team.

CASE 7: APRIL 28TH 2014

SHIMBA HILLS, MWALUNGANJE

INJURED ELEPHANT

Species
SexElephant
Female

Age

Adult

**INTRODUCTION**

This report describes an intervention of one female elephant at Mwalunganje Elephant Sanctuary in the Shimba Hills National Reserve, having been reported by management and attended on the Sky Vet initiative. This female elephant had no tusks and is a matriarch in a family of 13 elephants. She was reported to have some wounds on the left hind leg. The team had attempted darting on foot on the 26th April 2014 but the team had no success due to bad terrain and dense forest. The family of the sick elephant was nervous and ran away when the team attempted to approach them.

IMMOBILIZATION

We requested for helicopter support from the Kenya Wildlife Service (KWS) Airwing on 27th April 2014. On 28th April 2014 the KWS helicopter was mobilised to support darting of this sick elephant. Etorphine Hcl (0.98%) (M99®) (Norvatis South Africa (Pty) Ltd) 17mg, in a 3 ml Dan - inject dart was prepared and the elephant was darted and immobilized after 10 minutes.

EXAMINATION AND TREATMENT

The elephant under anesthesia went down a valley to the bottom of a rocky river where she lay down, yet she got trapped dangerously between two rocks. The team landed quickly in the helicopter and after a quick examination a decision was made to reverse the elephant from anesthesia as the 2 wounds located on left hind leg had no foreign bodies and were healing well. The wounds were dry and only a little puss was oozing out. The wounds were not septic, therefore they were not life threatening.



REVIVAL & PROGNOSIS

Using 60mg of diprenorphine Hcl (Norvatis South Africa (Pty) Ltd) given IV at the ear vein the animal was reversed from anesthesia, (a ¼ of the dose was given i.m). Recovery from anesthesia was smooth and she walked away from the site and the team has given her a very good chance of full recovery.