SKY VET REPORT
JUNE 2016 TO SEPTEMBER 2016

SKY VET QUARTERLY OVERVIEW

During June - September 2016 the DSWT/KWS Sky Vet program was called to handle **16 wildlife cases** several of which were supported by the DSWT helicopter or outsourced helicopters in the Mara and Meru regions to help with elephant darting operations as well as search and monitoring operations using the DSWT's fixed-wing aircrafts.

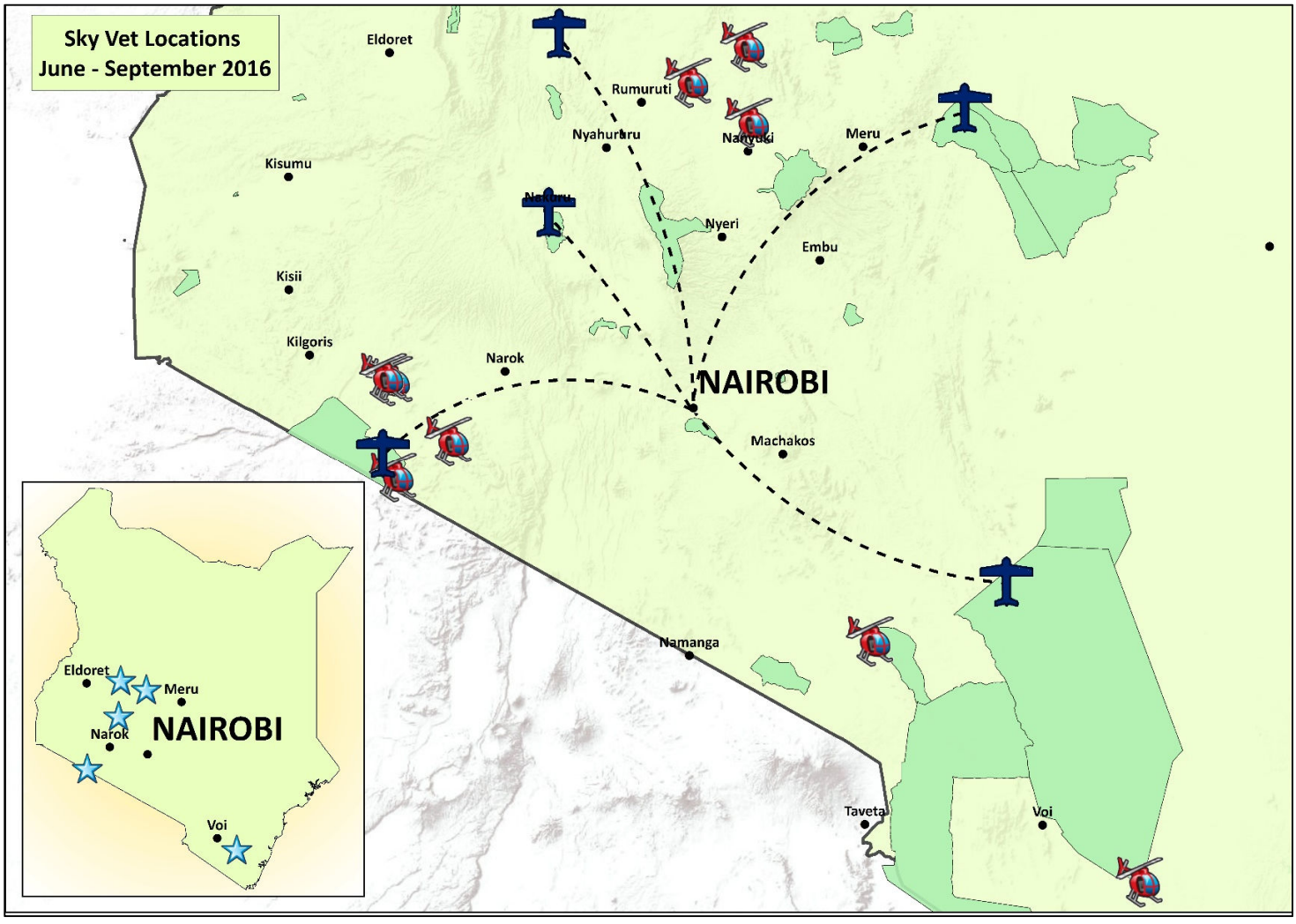
Of all the cases attended there were **13 elephant** cases including 4 spear cases, 1 snare case, 4 poisoned arrow cases, 1 case with a gunshot wound plus 2 natural causes and a rescue of an adult elephant stuck in a well.

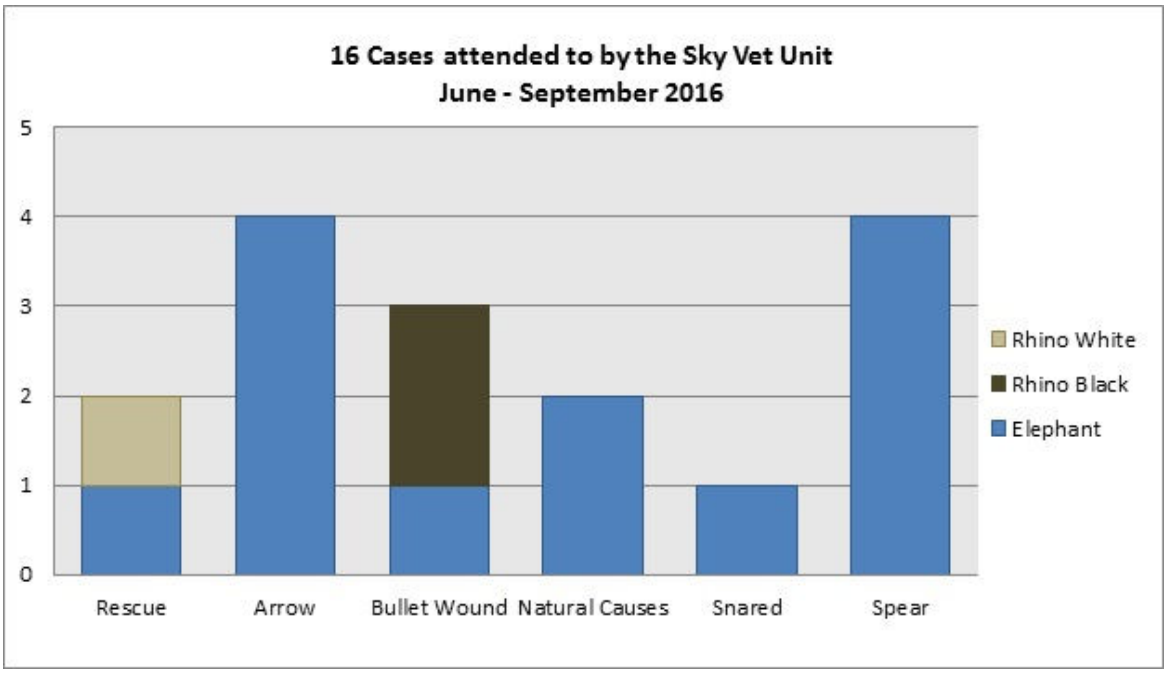
Sky Vet also attended to a rhino with a bullet wound and rescued a white rhino calf after its mother was killed by gunshot.

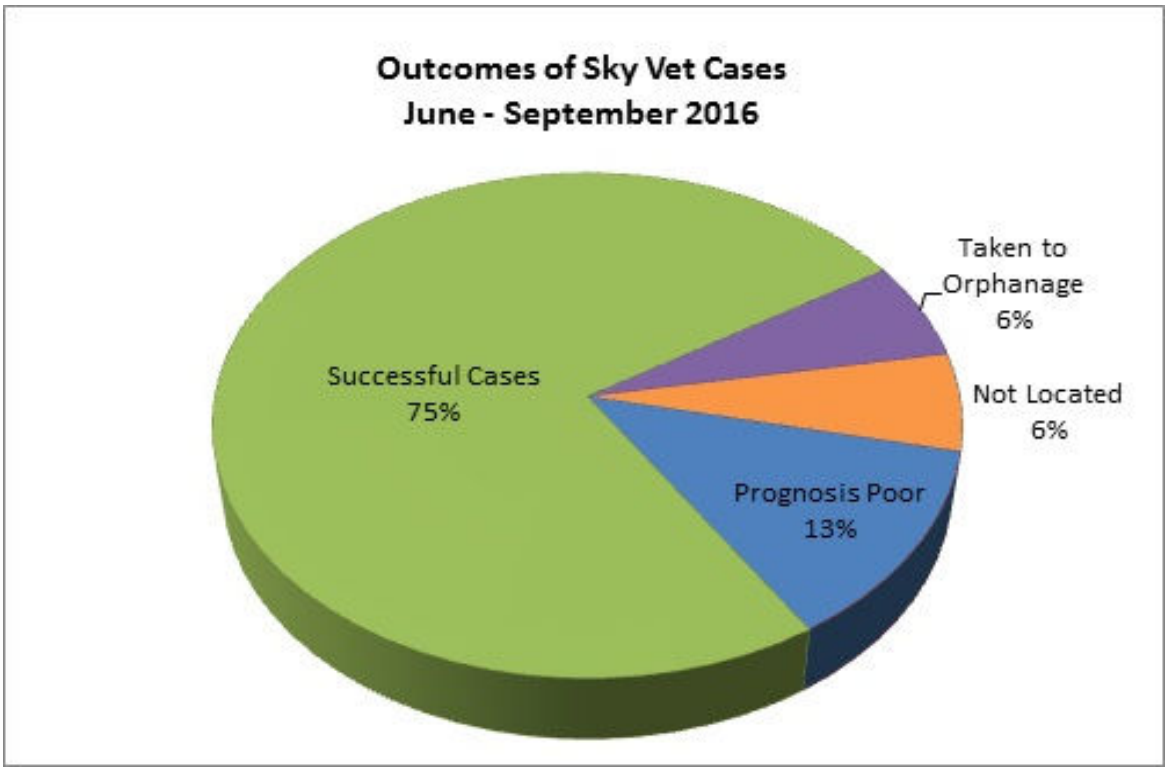
The KWS Veterinary Officers involved in these cases were flown throughout Kenya during this reporting period including cases in Tsavo East, the Chyulu Hills, Laikipia, the Masai Mara, Meru National Park as well as Nakuru and Lake Baringo.

Out of the 16 cases treated, **12 of the cases were given a positive prognosis** whilst 2 of the cases were given a guarded prognosis due to the severity of the elephant and rhino's wounds. Without rapid veterinary response the majority of these cases would have died from their injuries.

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




16 Cases attended to by the Sky Vet Unit
June - September 2016
5
4
3
2
1
0
Rescue
Arrow
Bullet Wound
Natural Causes
Snared
Spear
Rhino White
Rhino Black
Elephant


Outcomes of Sky Vet Cases
June - September 2016
Taken to Orphanage 6%
Not Located 6%
Prognosis Poor 13%
Successful Cases 75%

CASE 1: 1st JUNE 2016

OL DONYO WUAS-CHYULU HILLS | INJURED ELEPHANT

INTRODUCTION

The elephant was spotted by Big Life personnel near Oldonyo Wuas Lodge in the Chyulu Hills. The vet was airlifted from the Shimba Hills where the team was attending to another case.

CHEMICAL IMMOBILIZATION & TREATMENT

The elephant was immobilized using 17 mgs Etorphine Hydrochloride in a 3cc dart topped up using water for the injection. Darting was done using the Dan Inject system and from a DSWT helicopter. The elephant went down in a sitting position after 5 minutes. He was the turned over to access the wound. The trunk was maintained patent using a piece of stick placed across the nostril entrance. The temperature was high hence plenty of water was doused on the elephant to keep the body temperature down. The ears were used as a blindfold.

On physical examination the elephant had a spear wound entering the skin around the trunk area. The wound had been caused by a spear which had fallen off with time. The wound was septic and had pus. The wound was thoroughly cleaned using water and Hydrogen Peroxide. It was then lavaged using tincture of Iodine. Topical antibiotic cream and green clay was then applied into the wound to facilitate healing and avoid infection. The elephant was then injected with 100 ml Betamox L.A and 50 ml flunixine meglumine at different sites intramuscularly. The entire operation lasted about 40 minutes.

PROGNOSIS

Good.

CASE 2: 5TH JUNE 2016

ITHUMBA, TSAVO EAST

INJURED ELEPHANT

INTRODUCTION

The elephant bull was sighted within a herd at a watering point near the Ithumba airstrip. The elephant was in the company of another injured elephant with a fleshy mass hanging from the lateroventral abdominal wall. We managed to treat only one case as the other elephant could not be sighted at the time of treatment.
The elephant bull was in good body condition and in a herd of about five elephants which had separated from a larger group. There were two localized laterally located on the left abdominal wall. The wounds had clear entry points and had fibrinous plugs. Sky Vets from Nairobi were called in to assist with immediate veterinary intervention.

CHEMICAL IMMOBILIZATION & TREATMENT

The elephant bull was effectively immobilized using 18mg Etorphine Hcl. Aerial darting was done using a helicopter and optimum anaesthesia was achieved in about 10 minutes. The animal was roped over to a right lateral recumbency for convenient exposure of the affected abdominal wall. The fibrinous plugs were removed and the wounds were probed for presence of foreign object. An arrow was recovered in the process. Foul smelling purulent discharge was expressed out of the wounds after which the wounds were thoroughly cleaned using copious amount of water, hydrogen peroxide and tincture of iodine.

Green clay was applied for residual antibiotic therapy with concurrent treatment using Oxytetracycline spray to control fly and maggot infestation. Intramuscular injections of 15000 amoxicillin trihydrate (betamox®) and 40mg Colvasone® was injected intramuscularly.

Reversal of anaesthesia was done using 60mg Diprenorphine Hcl injected via the auricular vein. Recovery from anaesthesia was smooth and the elephant walked off with relief from the discomfort.

PROGNOSIS

Favorable after the removal of the arrow head.

CASE 3: 8TH JUNE 2016

OLCHORO-OIROUA, MARA

INJURED ELEPHANT

INTRODUCTION

This massive bull, named Bobo, who was collared three years ago, was seen with an injury on his left rump. He is known to invade crop farms and was reported to have visited farms in the recent past. Mara Elephant Project team called the veterinary unit for help in treating this elephant christened Bobo, and at the same time replace its failing collar. Bobo was alone at the foot of a hill at Olchoro Oiroua conservancy in a thicket. Examination from the air showed he had an injury that required treatment on his left rump. Though calm, he was hesitant to come out of the thicket. His body condition overall was good.

CHEMICAL IMMOBILIZATION & TREATMENT

Restraint was achieved by use of 16mgs etorphine hydrochloride delivered in a 3ml Dan inject dart. Darting was carried out from a helicopter. It took nine minutes for the drugs to take full effect with the elephant assuming sternal recumbence. He was immediately flipped over to lie on his left side in order to avoid compromising respiration.

Examination of the wound revealed it could have caused by an arrow shot a week prior to intervention with the wound becoming septic. Further probing did not reveal any foreign object and the arrow head was thought to have fallen out. The wound was debrided with hydrogen peroxide, wiped with gauze and tincture of iodine was applied. Green clay was then packed to absorb toxins and hasten healing. Replacement of the collar was going on simultaneously with a GSM/Satellite collar being deployed. This elephant received 30000mgs amoxicillin antibiotic and 4000mgs flunixin meglumine anti-inflammatory all intramuscularly. Soundness of the collar was confirmed while the elephant was still under anaesthesia and this will help in monitoring him as he is a habitual crop raider.

PROGNOSIS

Sadly, Bobo was fatally speared two weeks after treatment following another raid on crop farms. He was speared between 20th and 21st June and his fresh carcass was found on the morning of 22nd June 2016 with visible spear wounds on his left flank. Ingesta was seeping through the opening. Subsequent post mortem revealed a penetrating wound caused by a spear that tore his large intestines with severe contamination of the peritoneal cavity. He died of acute peritonitis as a result of this. Stomach contents showed he had recently fed on cereals mainly maize grains and sorghum suggesting that he had visited crop farms, a scenario confirmed by tracks of his collar.

CASE 4: 8TH JUNE 2016

ITHUMBA, TSAVO EAST

INJURED ELEPHANT

INTRODUCTION

The elephant was spotted while searching for a reported injured elephant at the Ithumba stockade by the DSWT pilot. Plans were made to airlift the vet from Amboseli to Ithumba immediately. The wound was serious and necessitated darting and treatment. The elephant was darted from a vehicle.

CHEMICAL IMMOBILIZATION & TREATMENT

The elephant was immobilized using 18 mgs Etorphine Hydrochloride in a 3cc dart toped up using water for injection. Darting was done using the Dan Inject system and was done from a vehicle. The elephant went down on dog sitting position after 8 minutes. The trunk was maintained patent using a piece of stick placed across the nostril entrances. The temperature was high hence plenty of water was doused on the elephant to keep the body temperatures low. The ears were used as blindfold.

On physical examination the elephant had an approximately 20 cm diameter wound (approx. 1 month old) on the left flank region. The wound was septic and had necrotic tissue. The wound had been caused by an arrow head which had fallen off with time and caused massive tissue damage. The wound was thoroughly cleaned using water and Hydrogen Peroxide. It was then lavaged using tincture of Iodine. Topical antibiotic cream and green clay was then applied into the wound to facilitate healing and avoid infection. The elephant was then injected with 100 ml Betamox L.A and 50 ml Dexamethasone at different sites intramuscularly. The entire operation lasted about 30 minutes.

PROGNOSIS

Prognosis is good.

CASE 5: 16TH JUNE 2016

LOISABA, LAIKIPIA WEST

TRAPPED ELEPHANT

INTRODUCTION

An elephant was reported to have fallen into a shallow water well and got stuck in Loisaba conservancy. The conservancy requested for support to rescue this elephant. An aircraft provided by the David Sheldrick Wildlife Trust enabled quick response by the veterinary team to save this elephant.

CHEMICAL IMMOBILIZATION & TREATMENT

On arrival we quickly assessed the elephant which showed signs of fatigue and stress. Both hind legs were stuck in the well however, it could move its fore limbs in an attempt to get out. There was an obvious risk of compromised peripheral circulation due to minimal space and massive weight of the elephant with pressure on the blood vessels and nerves in the hind quarters.

We decided to fill the well with soil and rocks using a tractor to reduce its depth and provide traction for the elephant. Ropes were also prepared in case we needed to pull the elephant however; these were not required as the elephant was released 30 minutes later.

PROGNOSIS

Successful operation and the elephant seemed in good health on release from the well

CASE 6: 17TH JUNE 2016

MASAI MARA

INJURED BLACK RHINO

INTRODUCTION

This rhino was seen by the Masai Mara Rhino monitoring team the morning of the 17th, severely limping with fresh blood coming from his left hind leg. He took refuge in a big bush within the Reserve out of sight from everyone. They requested our services to help immobilize and treat him.

Given that this rhino was out of sight from everyone, it was only feasible that helicopter services be sought for search and darting. This was readily availed with Sky Vet and a search ensued. He was finally located not far from the edge of the bush, limping severely on his left hind limb.

CHEMICAL IMMOBILIZATION & TREATMENT

Immobilization was achieved by use of a combination of 4.5mgs etorphine and 80mgs azaperone in a 1.5ml Dan inject dart. Darting was carried out from the air. It took ten minutes for the drugs to take full effect with this rhino assuming sternal recumbence.5mgs butorphanol tartarate was administered intravenously through ear vein to stabilize him before examination and treatment.

Examination revealed a deep bleeding wound on the inner side of his left hind leg about half inch in diameter medio-dorsally directed. There was a crack on the tibio-fibular bone that was evident on palpation via the wound opening. Luckily there was no complete fracture. Probing could not reveal any foreign object but the wound appeared very deep. This was considered to have been caused by a high velocity projectile, possibly a gun shot. There was also a superficial abrasion wound on his left flank which did not appear serious, possibly caused by rubbing on sharp rocks or tree stumps while fleeing.

Treatment involved stopping the bleeding by arresting bleeders, cleaning the wound with clean water and disinfecting it with tincture of iodine. Cloxacillin ointment was infused and the wound was packed with green clay.

As for the abrasion wound, it was rinsed with clean water, wiped dry with gauze swab and tincture of iodine was sprayed on top. Oxytetracycline topical wound spray was then applied.

Additional treatments involved intramuscular administration of 9000mgs amoxicillin antibiotic and 2000mgs flunixin meglumine anti-inflammatory.

PROGNOSIS

A follow-up not long later showed he had improved greatly and managed to move more than two kilometers from where he received treatment. Close monitoring by the rhino team continues with regular updates on his progress.

CASE 7: 20TH JUNE 2016

OLARRO, MASAI MARA

INJURED ELEPHANT

INTRODUCTION

This young bull, in a group of about two hundred elephants, was seen by Olarro conservancy managers with an injury on his spine. They called the unit for help. The group was reported to have recently moved into the conservancy from Olkinyei area. These elephants had gone to a bushy part at the base of a hill within the conservancy and after two hours of searching, this elephant could not be traced. Helicopter services from Sky Vet were then requested for search and possible darting. This bore fruits as he was finally located within the rest of the elephants in a thicket at the base of the hill. He was seen with a discharging wound about three days old, on top of his spine at the sacral portion.

CHEMICAL IMMOBILIZATION & TREATMENT

Restraint was achieved chemically by use of 10mgs etorphine hydrochloride delivered through a 1.5ml Dan inject dart. Given that this elephant was already agitated, darting was done from a helicopter.

It took twelve minutes for the drugs to take full effect. In the meantime, the elephant was being pushed into the open and prevented from returning to the thicket. He assumed right lateral recumbence.

Examination revealed a spear inflicted wound about three days old on his sacral spine. Fortunately, it did not damage the spinal column but left a big gaping subcutaneous wound. No foreign object was detected as the spear could have since fallen out.

The wound was lavaged with copious amount of water and debrided with hydrogen peroxide. Tincture of iodine was applied for disinfection before being packed with green clay. Additionally, he received 15000mgs amoxicillin antibiotic and 2000mgs flunixin meglumine anti-inflammatory, all intramuscularly.

PROGNOSIS

Good.

CASE 8: 22ND JUNE 2016

SARUNI, MARA NORTH

INJURED ELEPHANT

INTRODUCTION

After the spearing and subsequent death of Bobo the collared male, there were concerns about the status of the other elephants in the area especially those who could possibly have gone to crop farms with Bobo.

After carrying out post mortem examination of Bobo, an aerial recce was conducted to check on the other elephants. A female elephant with two calves was seen with a collar that was expiring with a wound on her nape. This was Ivy, female elephant collared three years ago. The unit decided to immobilise her for closer examination.

CHEMICAL IMMOBILIZATION & TREATMENT

15mgs etorphine hydrochloride was prepared to immobilize Ivy. She became adamant to move further into the bush despite spirited efforts to drive her out and the only viable option was to dart her from the air. She finally gave in to anaesthesia after ten minutes near the edge of the forest. The young ones were driven away to give room for their mother to be attended to. Examination revealed a small wound on her nape which appeared to be caused by abrasion. This was not a serious wound and topical oxytetracycline antibiotic spray was applied with additional 15000mgs amoxicillin antibiotic given intramuscularly. A decision to replace her collar with the one removed from Bobo was also arrived at and carried out.

PROGNOSIS

Good.

CASE 9: 10TH JULY 2016

LOISABA, LAIKIPIA WEST | INJURED ELEPHANT

INTRODUCTION

Scouts from Samburu Trust reported an elephant which showed lameness and a swollen leg in Loisaba Conservancy. The elephant had moved from Ol Maiso Conservancy where it had been reported four weeks prior but could not be tracked for treatment. The DSWT provided a helicopter for immediate response and darting.

CHEMICAL IMMOBILIZATION & TREATMENT

This elephant was immobilized using Etorphine in a dan-inject dart from a helicopter. Down time was eight minutes with the elephant positioned on right lateral recumbence.

Examination showed an infected puncture wound at the distal end of the left forelimb. Cause of the wound was suspected to be gunshot injuries which showed signs of healing. Manipulation of the leg did not show fractures.

The wounds were washed with water and an antiseptic before the necrotic tissue was debrided with Hydrogen peroxide. Povidone iodine was also applied. A systemic antibiotic Betamox trihydrate and anti-inflammatory drug Flinixin meglumine were administered.

PROGNOSIS

This elephant is expected to make a complete recovery soon.

CASE 10: 22ND JULY 2016

KALUKU, TSAVO EAST

INJURED ELEPHANT

INTRODUCTION

An elephant bull was reported injured by DSWT Kaluku team after being spotted by an aerial patrol plane. The vet team rushed to the area to find the bull with another bull and a family of nearly 30 elephants nearby. The Vet team drove to the area and the DSWT helicopter was brought in and helped spot and dart the elephant.

CHEMICAL IMMOBILIZATION & TREATMENT

The elephant was immobilized using 18 mgs of Etorphine in a dan-inject dart using the dan-inject system from the helicopter. He was darted in the rump and went down after 9 minutes.
There was a penetrating wound on the back that had started to heal. The wound was enlarged and an arrow head retrieved from the injury. The necrotic tissues were cut off and the wound cleaned using water mixed with Hydrogen peroxide and tincture of iodine.

An intravenous administration of 50 cc Dexamethasone Hcl was given through the ear vein and 100 cc of long acting Amoxicillin injected intramuscularly.

PROGNOSIS

Good.

CASE 11: 1ST AUGUST 2016

MASAI MARA

INJURED RHINO

INTRODUCTION

Masai Mara National Reserve management reported that a male black rhino which had been treated by Masai Mara resident veterinarian about one month ago had further deteriorated and needed urgent veterinary medical intervention. A team of 2 veterinarians and one ranger were quickly mobilized from KWS HQs to attend to the case through Sky Vet Initiative.

CHEMICAL IMMOBILIZATION & TREATMENT

On examination we found the rhino had suffered a fracture due to a suspected bullet/projectile on the left hind leg at the knee joint level. The bullet had left a small wound (entry point) on lateral aspect of the leg and a clear pronounced large wound (exit point) on the medial aspect of the leg. The rhino walked with a lot pain and difficulty. He was carrying or sparing the fractured leg. The rhino had drastically lost body condition to 2- 3 body score. The medial aspect bullet exit wound was infected and suppurative.

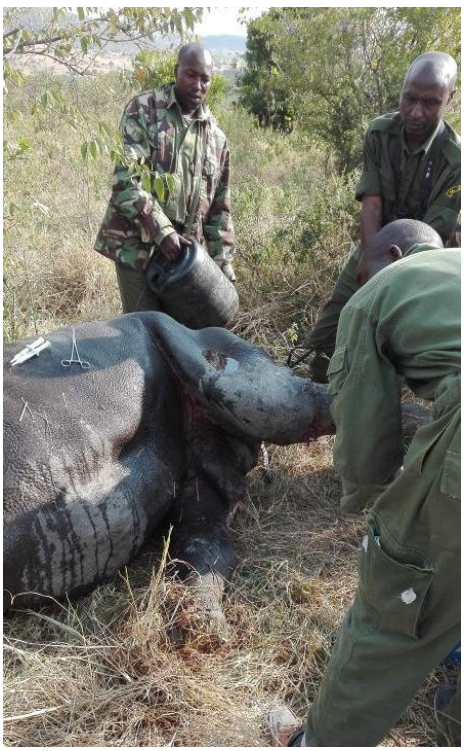
Thorough Cleaning/ disinfection of the wound and liberally spraying with Oxytetracycline spray. Other ancillary treatments carried are:

- Amoxicillin Trihydrate 15000mg (Betamox® LA Norbrook Laboratories (GB) Limited, Northamptonshire, UK) by intramuscular route
- Flunixin meglumine 1000mg (Norbrook Laboratories (GB) Limited, Northamptonshire, UK) by intramuscular route

The rhino was then reversed from anesthesia. Recovery from anesthesia was smooth and the rhino walked away after 2 minutes.

PROGNOSIS

Prognosis of the case in our considered opinion is poor to grave



CASE 12: 11TH AUGUST 2016

OL DONYO WUAS, CHYULU HILLS | INJURED ELEPHANT

INTRODUCTION

The elephant bull was reported to be injured by community rangers from Mbirikani group ranch in the Chyulu Hills after being spotted with a bleeding wound on the left rump. The vet team rushed to the area using DSWT airplane and found the huge bull foraging in a bushy area and required the assistance of the chopper. The DSWT chopper was called in and arrived in time.

CHEMICAL IMMOBILIZATION & TREATMENT

18 mgs of etorphine in a dan inject dart was prepared and loaded into a dart gun. A Helicopter was used to approach and dart the huge bull and keep him from running into thick bush. He was darted at the ramp and went down on the right flank after 10 minutes. There was a fresh deep penetrating wound at the left ramp caused by a spear with a lot of bleeding. The wound was probed and was about 30 cm deep. The wound was flushed using water mixed with hydrogen peroxide and tincture of iodine applied. It was finally packed with green clay.

An intravenous administration of 50 cc Dexamethasone Hcl was given through the ear vein and 150 cc of long acting Amoxicillin injected intramuscularly. Anaesthesia reversal was done by administration of Diprenorphine Hcl at three times the Etorphine dose. The bull woke, stood up and moved away slowly.

PROGNOSIS

Good.

CASE 13: 16TH AUGUST 2016

MULIKA, LAIKIPIA

SNARED ELEPHANT

INTRODUCTION

This elephant was sighted with a wire snare near Mulika airstrip. The elephant was among a herd of about 70 elephants. The snare was just at the base of the trunk very proximal to the mouth. This animal was in good body condition and the snare had not gone deep through the soft tissue.

CHEMICAL IMMOBILIZATION & TREATMENT

The young bull was effectively immobilized using 12mg Etorphine Hcl. Aerial darting was done using a helicopter and the animal went down in about 5 minutes. The wire snare was then exposed from the soft tissue and cut loose. The wound had no pus or maggots hence thorough cleaning was done using copious amount of water and tincture of iodine. Green clay was applied topically for residual antibiotic therapy and the wound was then sprayed with Oxytetracycline spray to abate fly infestation. Parenteral administration of 15000mg amoxicillin trihydrate (Betamox®) and 40mg Colvasone® was injected intramuscularly.

Reversal of anaesthesia was done using 60mg Diprenorphine Hcl injected via the auricular vein. Recovery from was smooth and the bull walked away with significant relief.

PROGNOSIS

Favourable as the snare was reported in time and had not penetrated deep into the soft tissue. The wound caused was also not septic.

CASE 14: 18TH SEPTEMBER 2016

NAIBUNGA CONSERVANCY

INJURED ELEPHANT

INTRODUCTION

An elephant bull was reported to have shown lameness and swelling of its right forelimb in Naibunga Conservancy with minimal movement over the previous two days. The Meru Mobile Veterinary Unit was called in to assist with support from a helicopter mobilised by the Sky Vet program.

CHEMICAL IMMOBILIZATION & TREATMENT

Immobilization was achieved using Etorphine delivered using the Dan-Inject darting system from a helicopter with the elephant falling on left lateral recumbence after 10 minutes.

Examination showed a swelling of its right carpal and a joint sprain was diagnosed. No other significant findings were seen. Anti-inflammatory drugs and antibiotics were administered intramuscularly. This elephant is expected to recover in the coming days.

Complete reversal from anesthesia was achieved by intravenous administration of Diprenophine Hcl. Two minutes later the elephant was in a standing position.

PROGNOSIS

Prognosis is good.

CASE 15: 28TH SEPTEMBER 2016

LAKE BARINGO

INJURED ELEPHANT

INTRODUCTION

A Sky Vet team was deployed to Lake Baringo in northern Kenya after a report was received concerning an adult elephant in the area with a possible spear wound.

A chartered flight was arranged and KWS Veterinary Officer Fred Olianga and his team were sent on the case. On arrival the team were met by those on the ground and a search began for the injured elephant. Lake Baringo is a remote area and the search continued all day as the elephant had moved far from where it was first sighted.

Sadly, after hours of searching the team had to call off the mission having runout of daylight hours. The team on the ground at Lake Baringo are continuing to search and monitor the area for the elephant.

CASE 16: 30TH SEPTEMBER 2016

NAKURU NATIONAL PARK

WHITE RHINO RESCUE

INTRODUCTION

The Sky Vet team was called to Nakuku to rescue a baby white rhino which had sadly lost its mother through a poaching incident; the calf whilst being alone after its mother was killed was attacked by lions and had significant wounds. A team were deployed from Nairobi to collect the calf and bring it to the Nairobiu Nursery for care.

On arrival in Nakuru the Sky Vet team were taken to the rhino calf. It had been badly mauled by lions after its mother had been shot and killed by poachers. The calf was in a terrible state with multiple injuries whilst its genitals had also been mauled. Dr Fred gave the calf the attention he could onsite before quickly bringing the calf back to Nairobi where further medical intervention could be done. This little calf was given 24/7 care but sadly survived only one day before succumbing to its terrible wounds and the shock of the whole ordeal.