Translocating elephants to the DRC

We are very proud to inform you about an epic translocation! In a joint operation between Wildlife Vets Namibia, Parc de la Vallée de la N'Sele and Mount Etjo we translocated elephants from Namibia into a reserve in the Democratic Republic of

Congo (DRC). You might ask why? Well, in this information letter we tell you all about it!

From Namibia...

The elephants we translocated to the DRC originate from the Mount Etjo reserve, Namibia. The late Jan Oelofse, world renown conservationist, established this 36 000 ha private game reserve (one of the first in Namibia). The Oelofse family remains committed to conservation and manages the reserve, currently home to over 10 000 head of African plains game, based on best conservation practices.

These elephants were introduced into the Mount Etjo reserve in 4 groups of animals originating from 3 gene pools. This resulted in a genetically diverse founder population. With a possible annual elephant population growth of up to 4-6% a year, the current elephant population on the reserve has now outgrown the reserves capacity to sustain viable populations of all the game species. The severe and persistent drought over the last few years puts additional strain on the habitat. This is however not just a problem at Mount Etjo, large parts of southern Africa suffer more and more of very dry situations in recent years.

Nature's engineers

Elephants are capable of doing extensive habitat modification. Moderate elephant influence is beneficial to the habitat since the thinning out of overly dense bush, opens up space for new vegetation growth and improves the habitat for other animals. Elephants have a relatively inefficient digestive process, necessitating them to consume around 250 - 400 kg of plant material daily. Elephants are mixed feeders, eating predominantly grasses when green and lush (raining season) and browse (leaves, fruit, branches and bark of trees and shrubs) in the dry season. Needless to say, this high nutritional demand puts a considerable strain on a habitat.

With an overpopulation of elephants in a reserve, their beneficial effects on a habitat can rapidly turn into severe habitat degradation. Woodland will turn into grassland, valuable tree species are lost and overall biodiversity for an area declines (Figure 1).

Figure 1 Elephants have the ability to significantly modify a habitat in a positive way, by opening up an area (Picture on the left © Chris Harvey/ardea.com). However, when there are too many elephants, they can have a negative effect, and habitat could be destroyed (Picture on the right © Peter Steyn/ardea.com).









The Mount Etjo's elephant population has outgrown the habitat capacity (esp. in view of recent years of severe drought). This necessitated the Oelofse family to take decisive management steps...

Too many engineers, what now?

Quite a difficult question to answer ... what to do with the excess elephants? The possible options are limited to culling, catching and translocating the excess animals, or embarking on an extensive birth control programme with the elephants. The latter option, however, is expensive and only helps to prevent further growth of the existing herd, and does not take care of the excess animals currently on the reserve. Keep in mind that, following a devastating drought in an arid region, it takes years of good rains (that are in no way guaranteed) for habitat recovery to take place and even then, recovery will only be complete if the animal population has been reduced sufficiently to allow plant recovery.

Culling was not an option for the Mount Etjo management team, leaving capture and translocation as the only acceptable management option. Since being a proud elephant owner comes with many challenges (a specially electrified fence, sufficiently big and suitable area to keep the animals in and an effective anti-poaching unit to mention a few) it proved to be impossible to find reserves in Namibia willing to take on this burden under the current drought conditions. The Namibian national parks are also dealing with an over-population of elephants and are thus also not a viable option to receive more.

In 2017 we from Wildlife Vets Namibia started a big translocation project in the DRC, where we translocated African game species to a new nature reserve in the DRC; Parc de la Vallée de la N'Sele. We believed this reserve was the perfect solution for the elephants!

...to the DRC

Parc de la Vallée de la N'Sele is a beautiful and unspoiled area of around 20,000 hectares. Back in 2017, before we brought any animals, we did an extensive habitat- and species analysis. We advised on e.g. fencing, infrastructure and all means necessary to have in place when starting a reserve. The reserve-team worked tremendously hard and created an amazing place. Besides some bushbuck and (Asian) water buffalo, there was no wildlife left. We translocated around 1200 head of game in the last two years, and the reserve is currently home to a wide variety of species such as impala, nyala, lechwe, waterbuck, sable, zebra, buffalo, wildebeest, eland, giraffe and even rhino (Figure 2)!



Figure 2 From left to right: waterbuck, zebra, impala and white rhinos

The reserve is characterized by undulating hills and lower lying open grass plains, trans-sected by densely forested stream- and river beds. Since this area has been devoid of wildlife for a long time, some areas are massively overgrown with various bush and shrub species and would greatly benefit from the presence of a natural habitat engineer, like the elephant (Figure 3)!

2



Of course this was not a quick decision; having elephants is a huge responsibility. All in all, we spend over a year planning, having meetings, consulting other experts and writing up an elephant management plan for this reserve.

After evaluating all the info and expert opinions, we believed this reserve is well suited for elephants for several reasons:

- Savannah elephants once used to occur in the grassland areas of the DRC.
- Abundance of water and food
- The dense (overgrown) areas in the reserve would greatly benefit by elephants:
 - Dense vegetation will be opened up, thereby creating more suitable habitat for other species



Figure 3 The reserve has an amazing and varied landscape. Some areas are very dense with bushes and tall grasses.

- More grasslands will be created, reverting the area more or less back to how it once used to be
- The savannah elephant is extremely adaptable; they occur in areas ranging from deserts to miombo woodlands.
- The particular elephants we took are used to tourists and vehicles.
- The elephant population of Mount Etjo consist of elephants originating from three unrelated populations and are thus form a genetically diverse founder population.
- Most of Namibia, including Mount Etjo, is essentially free of the most important infectious animal diseases (e.g foot-and-mouth, TB, brucellosis etc.).
- The reserve is made 'elephant-proof', with the right type of fencing, monitoring system, rangers and an APU.

Our plan is to start off with a founder population of around 15 elephants, which is far below the parks ecological carrying capacity for elephant. Starting off with a smaller population will allow for proper monitoring of both the elephants adaptation to the new environment as well as their impact on the latter, without them putting too much pressure on the reserve for the next decades. To maintain a long-term genetic viability, unrelated elephants (bulls) will eventually be introduced.

You can imagine that moving elephants from an arid, drought ridden reserve in Namibia to a lush reserve in the DRC is an exciting, but very challenging project!



3



Considerations before the translocation

Mode of transportation

One of the biggest challenges we had to face was the translocation itself. How do we get elephants from Namibia to the DRC? Because of the distance, partially poor road conditions and the logistic nightmare of two border crossings (Namibia-Angola-DRC) road transport was not an option.

Translocating the elephants by plane would be ideal, but size and space limitations would only allow us to take juvenile animals. Because elephants have incredibly strong family ties, we believe it is unethical to break up these families by taking the youngsters away. In addition, experience gained in South Africa over many years has taught us that translocated juvenile elephants, in the absence of mature elephants, often end up as problem animals. These elephants (especially the young bulls) often start to cause amok; killing rhinos, attacking people, breaking fences, raiding crops etc. We therefore only wanted to bring small family herds; a matriarch with another cow(s), their offspring and an older and younger bull. Adult elephants, with a shoulder height of over 2,5 meters, would not fit in the plane ③

The only option left was to translocate them by sea. This mode of transport allows us to take lots of food and water along and properly care for the animals in transit. With the exception of the rhinos, we have translocated all the other game by ship and have obtained good results. The ship is about 4-5 days on sea, but the ocean is usually calm and the temperatures are nice. The last 6-9 hours of ship transport is 240 km up the mighty Congo river to the port of Matadi where the animals will be loaded onto low-bed trucks for the final stretch of +/- 400 km transport by road to the reserve.

Weather

An elephant capture and translocation operation is timed to ensure (as far as possible) cool temperatures and that the animals are in optimal physical condition. Moving elephants in the rainy season was not advisable due to the warmer temperatures and the high risk of trucks getting stuck in mud, during either the capture or transportation.

Elephant crates

To transport the elephants, we used the special elephant crates from the Erindi Private Game Reserve (Figure 4). These crates were specially designed to transport elephants, and have been used and specially converted to translocate the massive elephants from Khaudum NP to Erindi. Before the DRC elephant translocation, we inspected the crates and requested the Erindi team to make some minor alterations to the crates to make them as safe and comfortable as possible for the animals.



Figure 4 Two of the four elephant crates from Erindi



Which elephants to take?

As we said before, elephants have strong family bonds and related females tend to stay together for life, helping and protecting each other. The Mount Etjo team know their elephants well, and spend the last couple of months observing them extra carefully. They chose two small cohesive family units, consisting of a matriarch, older cows and their offspring.

Of course, there should be some handsome guys as well! We will translocate mature bulls who will be able to mate with the cows, and will keep the young bulls translocated with the breeding herds in place. Eventually new elephants (at least bulls) should be introduced, to maintain proper genetics (and thus to prevent inbreeding).

Other

Many many other considerations had to be made before transporting the elephants, too many to mention here... Some of them: how to give food and water for the elephants during transportation, how to clean the crates during transportation, would the trucks with crates fit under all bridges/power lines in Namibia and Kinshasa, how to monitor the elephants in the DRC? Etcetera, etcetera... All in all a big logistic operation!

The translocation process

The Mount Etjo team spend many days observing and selecting the right family herds, and 23 May it was finally our 'D-Day'. Excited and nervous we started the job! With the help of the Erindi team we captured six elephants; 3 adult cows, 2 heifers and a young bull of about 4 years, all from the same family. All elephants were vaccinated, microchipped and received a vitamin booster. To reduce stress and thus make the trip less hard on them, they received a long-acting tranquillizer, which lasts around 7 days. During the whole capture they were carefully monitored by the vets and assistant. The matriarch was fitted a special GPS/VHF collar, which will help with the monitoring process in their new home. By 13:00 the entire group was captured and loaded into the crates and the elephants were quickly on their way to the harbour of Walvis Bay.



Figure 5 Elephant capture, always a stressful job, but all went well! Photo credits: Annette Oelofse.

The trip to Walvis Bay was uneventful, with us arriving in the harbour at 20:00. The ship the 'El Nino' was ready, and the elephant crates were loaded. Since we did not want the elephants to be cramped in one or two crates during the entire trip, we loaded all four the Erindi-elephant crates on the ship, and opened all the interconnecting doors. This way the elephants could move around in all crates, and thus had much more space to walk around.

Once all the crates were loaded, we fed and gave water to the elephants. At 03:00 am we got the clearance to sail out, and on our way we went!



Wildlife Vets Namibia ➢ P.O. Box 50533 Bachbrecht, Windhoek ☎ +264 (0) 81 128 0350 Wildlife Vets Namibia ♂ www.wildlifevetsnamibia.com

Figure 6 Loading the last elephant crate at Walvis Bay



The next morning we started 'training' the elephants to their new feeding and watering routine. We put the water buckets and feeding troughs outside of the crates and called them. The elephants had to learn to put their trunk out via specially designed ventilation/feeding hatches. They quickly got the hang of it, and we had to be careful that we did not suddenly have a trunk wrapped around our leg when passing by! Elephants are incredibly inquisitive. We fed the elephants grass, lucerne, camel thorn pods, branches and a special game pellet. They loved the pods and branches! Soon they discovered that it was lots of fun to receive water directly squirted into the trunk, and we were rewarded with the occasional shower in return.





Figure 7 Taking care of elephants is a privilege, but also hard work! We fed and watered the elephants several times per day. As we had 4 crates available, we were able to lock the elephants in on one side so we could clean the other side, and vice versa.

The elephants were very calm and took the sea trip very well. They ate and drank well. Just as with the plains game, we noticed that the elephants tolerated the ship rolling at sea very well and appeared to be more comfortable then during the road trip. The weather during the first 2 days was excellent, overcast and cool. When we reached the waters of northern Angola it started to get substantially warmer and more humid.



Figure 8 On the open sea, the elephants could move freely in all four crates

Wildlife Vets Namibia ⊠ P.O. Box 50533 Bachbrecht, Windhoek ☎ +264 (0) 81 128 0350 Wildlife Vets Namibia [⊕] www.wildlifevetsnamibia.com



After 4 days of sailing on the ocean, we reached the mighty Congo river, the last limb of our ship trip. This should have been a joyous occasion, but it also led to horrible discovery! We found a dead elephant cow in the crate with another younger heifer being down in a very awkward position. We believe that the latter fell over the sleeping cow, onto her trunk, resulting in the cow suffocating. By the time we got to them she was already dead. The other elephant struggled unsuccessfully to get up. We had to help her out of the corner and up with the ship's crane. After that she seemed all right. We gave her extra water, and tried to give her extra food to get her strength back, but she did not want to eat. Late afternoon she passed away as well. We cannot say in words how devastated we were... It is such a special experience to take care of these gentle giants, and to see that they learned to trust us in such a short time. So close to offloading and then losing two animals was not how we imagined ending this trip...

Final stretch

At the entrance to the Congo river we had a boat supply us with lots of fresh branches to feed the elephants. After a total of 5,5 days on the ship we reached the Matadi harbour (150 km upstream of the Congo mouth). Just before reaching the harbour we separated the elephants into two per transport crate. In the harbour the two elephant crates were loaded onto flatbeds, and we started the arduous journey to Kinshasa. This was a long trip, but luckily again the weather was in our favour. It was misty and cool until late morning. We stopped a few times to give water and fresh food, which the elephants enjoyed a lot!

We reached Kinshasa around lunch time, which was not optimal, but unavoidable. The reserve had organized a massive police escort to clear the roads for the elephants, and we made it through the city relatively quickly. Not long now before the elephants would be released in their new home! We all, elephants included, were exhausted and cold not wait! The elephants started to become restless, likely because they smelled the fresh green trees and bushes!



Figure 10 From left to right: the pilot bringing lots of fresh branches on the Congo river, offloading at Matadi harbour, driving through Kinshasa and the reserve



New home

Finally, the moment we all had been waiting for... releasing the elephants! Before releasing them into the reserve, the elephants were first released into a special pre-release elephant boma. The reasons for this are:

- The elephants could rest and recover from the trip
- We could better observe the elephants to make sure they are okay before the final release
- This might sound a bit nasty, but the boma is also meant to 'teach' the elephants that fences have electricity, and that they should stay away. The only fence that will effectively contain elephants is an electric fence. Since the perimeter fence at Mount Etjo is electrified, the elephants know not to touch them. However, elephants released into a new area are likely to explore the reserve and its fences. Before they do this they need a warning not to tamper with the fences. We certainly don't want to take any chances of them breaking out.

What an amazing sight it was to see the elephants come out of the crates, take a bath and taste in their first free meal! After spending one and a half day in the boma, it was opened to allow the elephants free access to their new 20.000 ha home!



• www.wildlifevetsnamibia.com



Monitoring

In a vast, dense area of 20,000 hectares it is difficult to find the elephants. The matriarchs and the big bulls are therefore fitted with state-of-the-art GPS satellite collars. The collars will take a GPS point every hour, so that the rangers know exactly where the elephants are. Another huge benefit of these collars is that they have a Virtual Fence option. This virtual fence is programmed within the real boundary of the reserve; the reserve manager will receive an early warning whenever elephants cross the virtual fence, and rangers can be deployed to chase the elephants away from the actual boundary fence. In addition, these collars are equipped with mortality, activity and temperature sensors and a VHF beacon. The collars should last about 4 to 6 years.

Research

Besides knowing where the elephants are for both monitoring and tourism reasons, there is great opportunity for researchers. What are the elephant's favourite area(s)? Why? What do they prefer to eat? How do the elephants change the landscape? All interesting questions, and we can learn a lot for future translocations.

Security

A main concern of many people, including us, is how are the elephants kept safe? Sadly, there is no place on Earth where animals are 100% safe (think of the rhino that was poached inside the Paris Zoo!). However, the reserve has taken many precautionary measures to prevent poaching:

- Anti-poaching units
- Strict law enforcement
- Electrified fence, daily fence patrols
- Elephants are fitted with a GPS satellite collar, showing hourly locations
- Rangers monitoring all the wildlife
- Close contact with locals surrounding the reserve; informants are deployed and locals will get a reward when they hear that people intend to poach. Locals were offered jobs to create goodwill; people now work in the restaurant, as security or as a ranger for example.
- Advanced technologies, such as the use of drones.

Conclusion

This is one of the first long distance translocations of a family group of elephants, including a matriarch and another adult cow by sea. We strongly believe that these elephants will greatly benefit from the

translocation. Of course, the translocation was hard on the elephants but we believe some short-term discomfort is a far better outcome than the eventual and unavoidable culling of excess elephant populations. Translocations of wild animals are always stressful and risky, but an essential component of resettling wildlife into new or understocked reserves. With the human population explosion and ever-increasing pressure on nature and conservation areas, we believe it is essential that every effort is made to support credible conservation efforts.



Figure 12 Freedom at last!

9



Figure 13 The elephants certainly seem to enjoy the water and green forage

The first group of elephants in the Parc de la Vallée de la N'Sele look happy and healthy. The first days they kept staying close to the boma, but now they are slowly exploring their new home. It is amazing to see that they spend a lot of time in and around one of the big rivers in the Parc, they truly seem to enjoy the all the water! They also seem very happy with the green grass and bushes, often having their mouth full with lots of green forage. We continue to have close contact with the people in the DRC, and we regularly visit the DRC ourselves to check on the elephants and the other wildlife we translocated there. We will reintroduce the other family soon, and thereafter both the bulls.

Should you have any questions or concerns, do not hesitate to contact us. Please note that we are often in the field with limited internet access, we always try to get back to you asap, but forgive us when we don't email back straight away.

Kind regards,

Dr Ulf Tubbesing (wildlife veterinarian) Wicus Herholdt (logistics manager) Mariska Bijsterbosch (wildlife para-professional)

Email: mariska@wildlifevetsnamibia.com

This translocation was a cooperation of many companies and people, and we thank all those who have participated in this translocation. We would like to thank the following people in particular:

- Parc de la Vallée de la N'Sele
- Mount Etjo
- Erindi Private Game Reserve
- Ministry of Environment and Tourism
- ICCN
- African Shipping SARL
- Ship crew of the El Nino
- Namport Walvis Bay harbour
- Société Congolaise des Transports et Ports (SCTP) Matadi harbour
- Cowboys