

SPA Assists with the Oryx Reintroduction in Chad

by Gavin Livingston, Program Manager, Source Population Alliance



2016 release herd of scimitar-horned oryx, *Oryx dammah*. Gavin Livingston

"The Scimitar-horned Oryx Reintroduction Program is the fruit of a meticulous process of research, planning and consultation. Under the leadership of the Environment Agency Abu Dhabi (EAD) and Sahara Conservation Fund (SCF), a major stakeholder meeting was held in Chad in 2012, followed by program and budget planning at EAD in Abu Dhabi later the same year.

After feasibility studies were carried out by EAD, SCF and Zoological Society of London in 2013, it was decided to focus the project on Chad's Ouadi Rimé-Ouadi Achim Game Reserve, a vast protected area set up in the 1960s specifically for the conservation of oryx and other desert species. This 77,360 km² protected area is one of the largest in the world and harbors some of the last remaining viable populations of Dama and Dorcas gazelles.

With the signing of project agreements between EAD and the Government of Chad, and EAD and SCF in 2014, work began on building a basecamp and pre-release pens in the reserve, and the selection of oryx from the nascent World Herd in Abu Dhabi for transport to Chad.

In March 2016, 25 oryx were flown to Chad and transferred to the pre-release pens for acclimatization. In August that year, they were released into the reserve, the first scimitar-horned oryx to be reintroduced since they were declared Extinct-in-the-Wild by IUCN in 2000.

Following three further shipments of oryx from Abu Dhabi, and three releases, there are 138 adult oryx in the wild, and 43 calves born in Chad. Over the coming years, the goal is to build up a viable, free-ranging and self-sustaining population of at least 500 animals, and in the longer term, have the oryx removed from the Extinct-in-the-Wild category and reassigned to a lower level of threat."

Sahara Conservation Fund
www.saharaconservation.org

Oryx Release Project Background - SPA's Involvement

The Source Population Alliance (SPA) has been involved with this project through our program participants since before SPA was formalized as a conservation program. Fossil Rim Wildlife Center and the Smithsonian Conservation Biology Institute have contributed to this project in a variety of ways including providing expertise, studies on the effect of the GPS tracking collars on the oryx, and on-the-ground support in Chad. SPA Executive Committee member, Larry Johnson of Safari Enterprises, was responsible for assembling the group of 42 scimitar-horned oryx that were sent to Abu Dhabi in 2015 to provide new genetics to the 'World Herd'. The 'World Herd' is the group of animals in Abu Dhabi that serve as a source for the reintroduction project in Chad.

Last year, in 2017, Source Population Alliance and Sahara Conservation Fund created a formal relationship through the signing of an MoU. Both organizations are working to combine our collective strengths to maximize our conservation impact for Sahelo-Saharan species.

In July of 2018, representatives from, amongst others, Fossil Rim Wildlife Center, the Smithsonian Conservation Biology Institute, White Oak Conservation, and the Source Population Alliance traveled to Chad to assist with collaring the next group of oryx slated for release into their native range.

The Trip

On July 9, 2018, our group began the long journey to the Republic of Chad to help Sahara Conservation Fund place GPS tracking collars on Scimitar-horned Oryx for the release project. Adam Eyres, Director of Animal Care, Fossil Rim Wildlife Center and White Oak's Antelope Conservation Fellow; Dr. Julie Swenson, Associate Veterinarian, Fossil Rim Wildlife Center; and I went on this trip. The 70+ oryx we helped collar on this mission flew over from Abu Dhabi in three shipments this past February, and have been acclimating to the area in pre-release pens.

The options for flying to Chad from Europe are limited, and there are only 3 flights a week to the capital city of N'Djamena. This presented a challenge when we encountered our first in a series of delays that almost had us missing our connecting flights. All told, on the way to Chad we had 8 delays and 3 new planes assigned to us, and ended up arriving in Chad about 6 hours later than anticipated. The late arrival was not a major issue, but none of us traveling from Texas got there with our luggage, which included our camping gear. Ultimately 5 of our 6 bags arrived two days later, and my last bag showed up at the end of the trip.

Travel delays and lost baggage are a pain to be sure but not unexpected when traveling internationally. The issue we had



Clockwise from upper left: Wild scimitar horned oryx, Oryx dammah; West African crowned crane, Balaerica pavonina; white-throated bee-eater, Merops albicollis, on a dead camel; sunset in Chad; dorcas gazelle, Gazelle dorcas; Wadi Achim. Gavin Livingston



Telemetry to find oryx. Adam Eyres



Wild scimitar-horned oryx, *Oryx dammah*. Gavin Livingston

not anticipated was an extreme delay in the GPS tracking collar arrival. The collars were supposed to be in Chad when we arrived, and we learned during our travels there that they would not be there for at least a week. Ultimately, we had to delay our return by a week, and the collars would eventually arrive 2 1/2 days before we were scheduled to leave base camp.

Our group that traveled together for this mission made the journey from the capital to 'Base Camp Oryx' in two groups, with our Fossil Rim-based team leaving a few days late after waiting for our luggage to arrive. The journey from Chad's largest city, N'Djamena, out to the base camp is a two-day affair that takes about 18hrs, with a stop along the way to spend the night in the 2nd largest city, Abéché. The drive from N'Djamena to Abéché is on paved roads, but half of the time is spent driving in side tracks because the pot holes are so large you could break a truck axle in them. The final leg of the trip out to 'Base Camp Oryx' in the Ouadi Rimé-Ouadi Achim Game Reserve is six hours of extremely rough travel on desert track.

One major benefit of experiencing a delay in the arrival of the GPS collars, and our work being put on hold was that we had more time to spend on game drives and oryx monitoring. Our group was lucky enough to see an amazing array of local wildlife. The bird diversity was very strong, including multiple sightings of three bustard species: Nubian bustard, *Neotis nuba*; Arabian bustard, *Ardeotis arabs*, Denham's bustard, *Neotis denhami*; marabou stork, *Leptoptilos crumenifer*; Abdims's stork, *Ciconia addimii*; northern red-billed hornbill, *Tockus erythrorhynchus*; white-throated bee-eater, *Merops albicollis*; sacred ibis, *Threskiornis aethiopicus*; Rüppell's vulture, *Gyps rueppelli*; West African crowned crane, *Balaerica pavonina* and

more. For carnivores, there were sightings of striped hyena, *Hyaena hyaena*; Rüppell's fox, *Vulpes rueppellii*; and fennec fox, *Vulpes zerda*. For me, the real stars of the show were the ungulates: Dorcas gazelle, *Gazelle dorcas*; dama gazelle, *Nanger dama*; and wild scimitar-horned oryx, *Oryx dammah*. Getting the opportunity to see the dama gazelle out in the wild was an unexpected surprise. IUCN estimates there are only about 100 damas left in the wild, with at least 20 or so in this reserve. We were fortunate enough to see four individual males on this trip.

We made a trek for a couple of days farther north into the reserve to visit a wildlife hotspot in the Wadi Achim and Wadi Karma. Wadis are very similar to an arroyo in the southwest United States and are essentially riverbeds that fill up seasonally and provide water, food, and a reprieve from the heat for wildlife. Thirty years ago, before civil war had wiped out the addax and oryx in this area, it was not uncommon to see herds of 25-50 addax and oryx in these wadis, along with ostrich, dama gazelle, and warthogs. While most of the animals are gone, this habitat is still largely intact, and it is the hope that in the near future oryx will roam this far north and be joined by addax and dama gazelle as well.

While many aspects of this journey to collar oryx was memorable, there was nothing more moving than seeing scimitar-horned oryx roaming back in their native range. Having a special fondness for scimitar horned oryx, setting eyes on them in their range country after being extinct in the wild was one of the most amazing things I have ever witnessed. The fact that these oryx are once again in the desert and thriving, is a living breathing testament to why the conservation breeding



Radio collaring process - Chute system. Gavin Livingston



"TAMER". Gavin Livingston



Collaring oryx. Gavin Livingston

work of ranches, conservation breeding centers, and zoos matters so much for the survival of many species.

During our time in Chad, we saw five or six separate herds of oryx on our monitoring runs. These herds were comprised groups as large as 25 animals down to smaller herds of five or six, plus individual bulls. The first herd we saw comprised 18 animals from the original 2016 release. All of the 2016 animals have had their GPS collars drop off at this point, but fortunately an animal from the 2017 release has joined them, allowing the monitoring team to be able to track them. This group is the 'wildest' of all the released animals and has never ventured back to the base camp. These oryx had wild born and bred calves with them, and one of the cows has had her second calf since being released. In total, during our monitoring trips into the desert we saw at least 75 individual oryx, with many repeat sightings of herds as well.

The tracking of the oryx every day for monitoring purposes was a fascinating affair. In order to preserve the maximum amount of battery life on the collars, they only relay the animal's location to the satellite every 12 hours. While this data is incredibly beneficial for overall monitoring, it only gives you a starting point for physically locating the animals. To locate the collared animals, the monitoring truck drives to their last known location and then uses a VHF antenna to try and pick up the frequency given off by the animal's collars. Generally speaking this method worked quite well and with the exception of one time, we always located the oryx we were tracking.

After what seemed like an eternity of waiting, the GPS collars finally arrived in N'Djamena on the evening of July 19th. On July 20th, the collars were flown by charter flight to Abéché and driven the final leg of the trip to base camp. Immediately upon the collars arriving at 8:00pm that night, everyone in camp worked together, forming an assembly line, to get the collars prepped for deployment. Each of the more than 70 collars had to be programmed, magnets removed to activate the batteries, measured and marked for size, and antennas checked.

We all woke up at 4:30 a.m. so we could get to the oryx holding pens at first light. We had all of the gear hauled down and everything set up to have the first oryx in the drop floor TAMER chute by 5:50am. We were fortunate enough to have a very experienced team in place to work the chute and the animals, so the process went pretty smoothly. The entire process would take about five minutes per animal from start to finish. We would begin by pushing the oryx into the chute and

dropping the floor. The person on each side holding the head would secure the horns and put on the blindfold so we could put hoses on the ends of the horns. Then the two people on the back of the chute would help hold the animal down while collaring was underway.

For the actual collaring process, we would measure the oryx's neck to fit the correct collar, change out ear tags, measure and photograph their bite, securely fit the GPS collar. Then Dr. Swenson would check the animal's overall health and the fit of the collar, and we would let them out of the chute.

The first morning on July 21st, we ran 25 animals through the TAMER, stopping at 9:30am because of the heat. We went back out at 4:30pm to resume collaring, but a sandstorm blew which slowed down the process considerably. We only managed to run 13 animals through the chute and get 5 calves tagged that evening.

The next morning on July 22nd, we were under considerable pressure to get the mission completed as we were leaving base camp in 24hrs to catch our local flight back to N'Djamena. Fortunately, we ran like a well-oiled machine that day and had our first animal in the chute at 5:15am. We got all of the remaining 40 oryx collared and ready for release by 9:40am. The mission was a success! Now the oryx will wait a couple of weeks in the holding pastures to adjust to wearing their collars, and they will be released into the unfenced reserve as soon as enough rain has fallen.

Overall, the trip was a tremendous achievement of our goals and of international teamwork. We were able to complete the job we went there to do - collaring over 70 Scimitar-horned Oryx for release back into their native range. As a bonus we were able to see some amazing sights and incredible wildlife along the way.

I cannot stress enough just how important conservation projects like this are. Without groups like the Sahara Conservation Fund and the Environment Agency Abu Dhabi, the scimitar-horned oryx would not be roaming the desert of Chad right now. This is why we dedicate our lives to working with animals, breeding them, and educating the public - for opportunities like this. Human-managed breeding programs are one of the most important and underappreciated components of conservation. Without a strong ex situ population of scimitar-horned oryx around the world, this effort would not have been possible. 🐐



Leaving the chute. John Newby



Oryx after collaring. Gavin Livingston
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