



## Re-introduction of Arabian Oryx into the Dubai Desert Conservation Reserve, Dubai, UAE

Greg Simkins  
Conservation Manager, Dubai Desert Conservation Reserve,  
P. O. Box 7631, Dubai, UAE

### **INTRODUCTION**

Arabian Oryx is one of four Oryx species, all of which are adapted to arid and semiarid environments, locally known as Al Maha (Arabic) the Arabian Oryx was first described as *Oryx leucoryx* (Pallas, 1777). Endemic to the Arabian Peninsula, the Arabian Oryx's historically range was across Oman, Saudi Arabia, Jordan, United Arab Emirates, Yemen, Kuwait and Iraq. They are the largest of the antelopes in the region and are extremely well adapted to the extremely arid environment. The Arabian Oryx is culturally significant and is revered for its beauty, common in poetry and as a woman's name, Maha. Arabian Oryx has been classified as Endangered on the IUCN Red List since 1986 but was already "Very rare and believed to be decreasing in numbers" (Scott) in 1965 and since 1975 it has been listed on Appendix 1 of CITES.

The Dubai Desert Conservation Reserve (DDCR) is an area of 225 km<sup>2</sup> situated in the South eastern corner of the emirate of Dubai in the UAE (24° 49.5'N; 55° 40.5'E). The area is characterized by sand dunes interspersed with gravel plains. The area has been protected in two phases; the Al Maha Reserve (AMR) of 27km<sup>2</sup> was protected in 1999 and subsequently in 2003 the DDCR was protected bring the total area to 225km<sup>2</sup>. The AMR has had no grazing from domestic stock since 1999 and a vegetation survey showed a significant increase in both diversity and abundance of plant species, suggesting a level of overgrazing is present in the area.





## **GOALS**

- Goal 1: Reintroduce a viable, breeding population of Arabian Oryx in the DDCR
- Goal 2: Improve the biodiversity of the DDCR through effective 'eco-system management'. Reintroductions of Arabian Oryx and gazelle may not negatively impact other species of plant or animal.
- Goal 3: Provide an opportunity for visitors to the Dubai Desert Conservation Reserve to observe Arabian Oryx in their natural, desert habitat and to do so in a sustainable manner.

## **SUCCESS INDICATORS**

- Indicator 1: A healthy breeding population in the Al Maha Reserve within the first three years.
- Indicator 2: A viable population of Arabian Oryx, not reliant on supplementary feeding, within the DDCR.
- Indicator 3: An environmentally and economically sustainable tourism operation within the DDCR which provides regular sightings of Arabian Oryx for all visitors.



## **PROJECT SUMMARY**

The re-introduction of Arabian Oryx into the DDCR had two distinct phases. Firstly the reintroduction of Oryx into the Al Maha Reserve (1999 -2003). And secondly the reintroduction into the Dubai Desert Conservation Reserve (2003 – present). In 1999 a protected area (27km<sup>2</sup>) was established in conjunction with a small luxury hotel (Al Maha Desert Resort), the reintroduction of Arabian Oryx and Arabian Gazelle into the protected area was part of the strategy to provide guest of the hotel with an experience of the desert and all its indigenous plant and



animal species. In February 1999 the first group of 38 individuals, donated from a private, royal collection was released into the Al Maha Reserve (AMR) from the pre-release boma. A further 79 individuals, from the USA were released directly into the reserve in November 1999. In order to encourage the stated aims of having a breeding population and of increasing the biodiversity of the reserve, supplementary feed, artificial shelter and water was provided.

Supplementary feed was provided at five feed stations on different locations to encourage natural herd size (+/- 20). These feed stations were moved on average every six weeks to prevent isolated areas of overgrazing and a build up of parasites that is inevitable in areas of animal concentration. A vegetation survey conducted soon after the proclamation of the DDCR in 2003 showed that both the diversity and the abundance of plant species had increased within the AMR, at the same time the Arabian Oryx herd had bred successfully increased to 194. The Al Maha Resort was running as a successful hotel and won the Conde' Nast award as best resort in Africa and the Middle East in 2001, while fully supporting the conservation work financially.

The second phase of the reintroduction started in 2003 with the establishment of the DDCR (225km<sup>2</sup>). Procedures were put in place to reduce the impact on the environment through reducing the grazing pressure of domestic stock and reduce the occurrences of off-road driving. At the time of establishment 17 different tour operators did unregulated dune driving in the area, through a selection process this was reduced to only four who now operate within the rules and regulations of the reserve and only drive on specific routes. This has ensured that the environment is able to recover and that wildlife now has 'safe areas' in which to move away from vehicles. At the end of 2003 and in March 2004 established herds of 17 and 24 respectively were translocated into separate locations in the northern area of the reserve. The first release was largely unsuccessful as the herd made it way back to the AMR, situated in the center of the DDCR. The second translocation was more successful with a herd of approximately 10 individuals staying in the north, some returning to the AMR and some moving into the southern area of the reserve. A further release in April 2005 was done by moving one of the feeding stations from the AMR into the DDCR. The separation of the AMR and the DDCR is now more permeable allowing Oryx to move freely between the two areas and this has led to the natural formation of free ranging herds of Oryx. As of May 2008 approximately 270 Arabian Oryx occur within the DDCR of which approximately 50 are independent of supplementary feed or artificial shelters.

Monitoring of the Arabian Oryx occurs through observation and more recently GPS collars, data is still be collected and analysis to be done on home range, movement between feed stations and time spent away from feed stations.

#### **MAJOR DIFFICULTIES FACED**

- Genetic composition of original founder (donated) stock was unknown due to the lack of records of the captive stock.



- Reintroduction into a degraded environment meant that extended management and support through supplementary feeding needed to be in place to ensure the long term success of the reintroduction.
- The education of local farmers and tour operators on environmentally sustainable practices.

### **MAJOR LESSONS LEARNED**

- The condition of the environment, in particular vegetation, into which Arabian
- Oryx are released directly affects their behavior and dispersion patterns. This has been shown both seasonally, more individuals at feed stations in the summer months and overall, as the environment has improved through protection and better practices dispersion has increased.
- The system of an 'extended soft release' where Oryx have the opportunity of supplementary food has worked well in the DDCR as it was already an overgrazed environment. This has allowed the vegetation to improve with Oryx present leading to sustainable self sufficient herds.
- As it is a fenced reserve management of the reintroduction of Arabian Oryx will be continuous, in particular through the establishment of carrying capacities for the DDCR.

### **SUCCESS OF PROJECT**

Highly Successful	Successful	Partially Successful	Failure
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- Arabian Oryx are well established within the DDCR, breeding continues to be successful and self sustaining herds although small do now occur within the reserve.
- The reintroduction has not impacted of the biodiversity of the DDCR. In fact there has been and continues to be an improvement in flora and fauna within the reserve.
- Over 200,000 people visited the DDCR in 2007 through good practice and education of tour operators this is being done in a sustainable manner.

