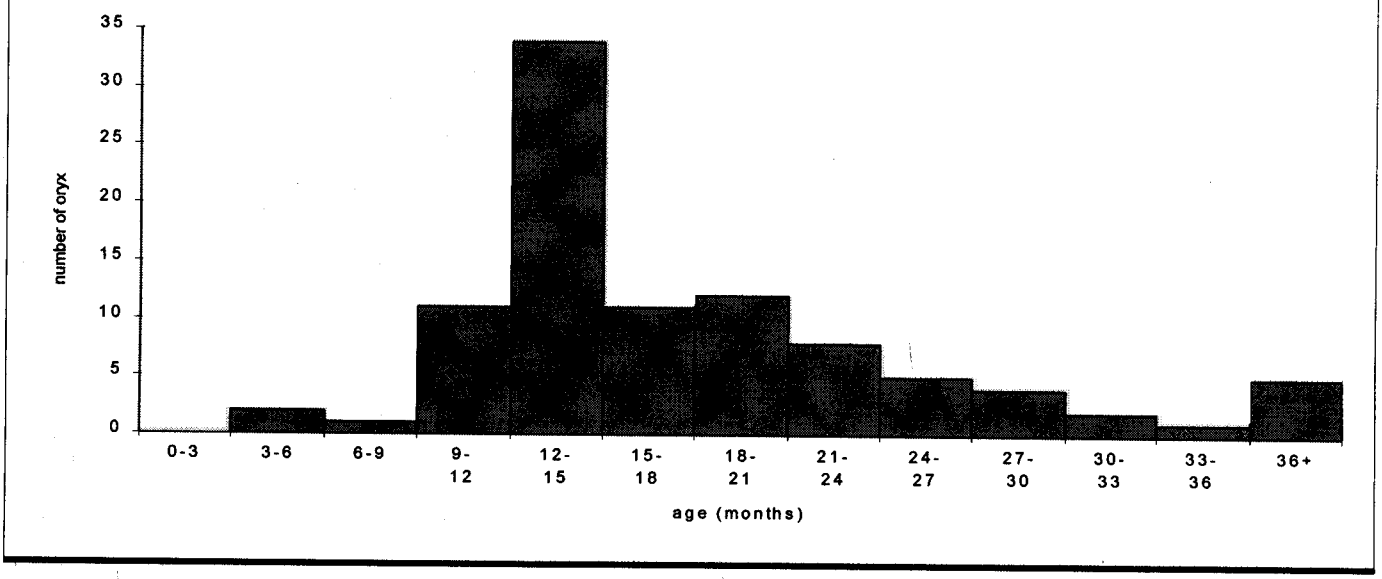
Arabian oryx *Oryx leucoryx* reintroductions in Saudi Arabia: update

For the fourth consecutive year Arabian oryx *Oryx leucoryx* have been translocated from the National Wildlife Research Center [1] (NWRC) in Taif, into the 'Uruq Bani Ma'arid protected area. This reserve lies at the south-western edge of the Rub' al-Khali desert, also known as the "Empty Quarter". By March 1997, the reserve was supporting an estimated population of 110 Arabian oryx (RE-INTRODUCTION NEWS 14).Two shipments totalling 17 animals (10 females and 7 males) were completed on the 9th and 31st of March 1998. The white antelopes were restrained in four crates in groups ranging from three to six animals, and were transported by air and road for a trip lasting approximately 7 hours. Animals were aged between 12 to 36 months old. Of these 17 animals, 14 (4.10) have been fitted with numbered collars only and 3 (3.0) have been given radio-collars. The first group was assembled approximately 1 year before transportation as they had been mother-reared together. The second group was formed 2 months before the translocation to create social cohesion among animals with a large range of ages. All the oryx were pen-trained 1 month prior to the transportation to reduce stress. In the 'Uruq Bani Ma'arid protected area, the oryx were kept in well-vegetated 4 ha pre-release enclosures for around 1 month, provided with dry hay, dry alfalfa and water *ad libitum*. From the day after release, supplementary food and water were no longer provided.

Since 1995, when the first releases took place in the "Empty Quarter", 100 oryx (47.53) have been translocated without any deaths linked to the transport. Ninety two of these animals were captive-born (NWRC Taif) and eight came from the Mahazat as-Sayd protected area. Ages of the translocated oryx ranged between three months to six years at their arrival (figure 1). Eight (7.1) deaths among reintroduced animals have been recorded in the reserve since the first arrivals. Of these, six (6.0) are thought to have been the result of fights between males. The causes of the two other deaths (1.1) are unknown. By the end of April 1998, the population of wild ranging oryx was estimated to number 155 animals (Wacher, pers. comm.). Dr. Tim Wacher from the King Khaled Wildlife Research Center [2] (KKWRC) is monitoring reintroduced wild populations of Idmi gazelle *Gazella gazella*, Rheem gazelle *Gazella subgutturosa* and Arabian oryx in 'Uruq Bani Ma'arid. Most of the oryx have remained within 100 kms of the release site. However, some oryx have been located 300 kms to the south-east, probably investigating interesting pastures. We could expect further colonisation of the "Empty Quarter" in the near future. Aerial and ground surveys will be reorganized soon to cover a larger part of the desert.

Other release sites for Arabian oryx are under consideration in the Kingdom. In November 1997, the Mammal Team of the NWRC built an Arabian oryx pre-release enclosure in al-Khunfah protected area in the north of the Kingdom under the patronage of the National Commission for Wildlife Conservation and Development (NCWCD). The successful concept of twin pre-release enclosures and capture pens in the 'Uruq Bani Ma'arid protected area was applied in al-Khunfah protected area and two enclosures of a surface of 3 ha each were built in a well-vegetated wadi bed. On the basis of the captive-breeding experience at the NWRC and the previous releases of Arabian oryx in the "Empty Quarter", fence construction was designed in order to improve the safety of the future free-running oryx. Al-Khunfah was declared a

Figure 1. Age distribution of the Arabian oryx (n=96) at the time of translocation from Taif to Uruq Bani Maarid protected area.



Unloading operation of the mass crates with Arabian oryx at the Wadi Dawasir military airport
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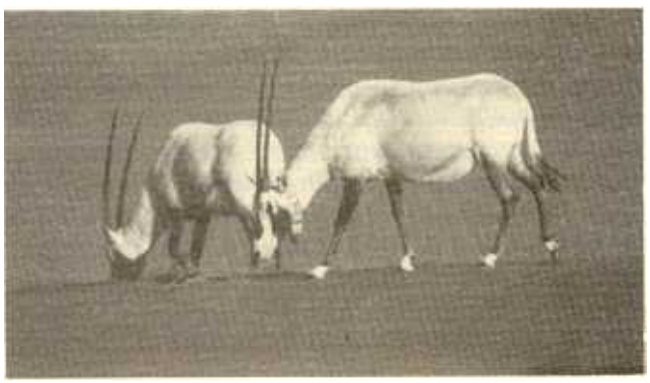
protected area in 1989, and covers 20,450 km^2 of sand and gravel plains with low sandstone hills. It borders the south-western edge of the Great Nafud desert and lies within the historical range of the Arabian oryx. Ranger patrols and light aircraft survey the area daily. However, poaching problems and illegal grazing still need to be controlled. It is hoped that, for the future Arabian oryx reintroduction in al-Khunfah, poaching and grazing problems will receive attention from the highest authorities in the Kingdom.



Oryx in sand dunes in the `Uruq Bani Ma`arid protected area showing one oryx with a radio collar
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[1] The NWRC is responsible for the breeding and reintroduction of endangered species in Saudi Arabia including Arabian oryx *Oryx leucoryx* and houbara bustard *Chlamydotis (undulata) macquenii*, on behalf of the NCWCD in Riyadh. Introduction of red-necked ostrich *Struthio camelus camelus* is also carried out into Mahazat as-Sayd protected area.

[2] The KKWRC is responsible for the breeding and reintroduction of Idmi gazelle *Gazella gazella* and Rheem gazelle *Gazella subgutturosa*, on behalf of the NCWCD.

Contributed by Eric Bedin and Stéphane Ostrowski, National Wildlife Research Center, Taif, Saudi Arabia.

The first five years of Takhi *Equus ferus przewalskii* re-introduction in Mongolia

The contribution below is a summary of a presentation given at the VIIth International Theriological Conference in Acapulco, Mexico September 1997. The data given is for Hustain Nuruu from July 1997 (FRPH, 1996, 1997 and personal comments) and for Takhiin Tal from November 1996 (FRPH, 1996 and personal comments), unless otherwise mentioned.

Five years ago the first takhi *Equus ferus przewalskii* were reintroduced in two separate projects in Mongolia at the following locations: Hustain Nuruu and Takhiin Tal. Hustain Nuruu is situated in a mountain steppe and is embedded in a broader ecosystem restoration project. Takhiin Tal is in a semi desert area, very close to the last range before extinction. This location is chosen with the intention of allowing the spread of harems and offspring into the Gobi B reserve.

Hustain Nuruu is 560 km^2 with 3 isolated acclimatization area's, which are not within hearing and visual distance of each other, and total 40-45 hectares each. Since 1992, 48 animals (15m:33f) have been moved in three shifts during 1992, 1994 and 1996. At least two more trips will be undertaken during 1998 and 2000. The new arrivals initially stay a period of approximately one year in the acclimatization areas before release into the larger unfenced reserve. In Hustain Nuruu there has been no supplementary feeding or watering but one exception was made when one herd was given hay for a few months during winter.

Takhiin Tal consists of five fenced acclimatization areas. There are three 5 hectare pens, one 22 hectare pen and one of 160 hectares. These pens are within visual and acoustic range of each other. Since 1992, 33 animals (13m:20f) have been move in four shifts during 1992, 1993, 1995 and 1996. In Takhiin Tal all five areas are provisioned with hay, pellets and fresh water daily. The animals reacted strongly to the presence of other animals in adjacent enclosures especially the stallions.

Since 1992, the fecundity (theoretical breeding possibility) of mares older than 3 years breeding with a stallion in a given year was 86 in Hustain Nuruu and 33 in Takhiin Tal respectively. The parturition frequency from this data was 42 (49%) in Hustain Nuruu and 8 (24%) in Takhiin Tal. The fertility assuming one year survival of the foal was 23 (27%) in Hustain Nuruu and 5 (15%) in Takhiin Tal. The Hustain Nuruu data shows a very low parturition rate (0.13) in the first year after reintroduction. This is probably due to the high stress associated with transport and adaptation to a new environment. The parturition rate increased to around 0.60 in the following years. The relative young age of the transported mares in Hustain Nuruu (mean age at time of transport 3.9 sd 3.23) could also influence the low parturition rates. There was not