

# Restoration of the endangered Arabian Oryx *Oryx leucoryx*, Pallas 1766 in Saudi Arabia: lessons learnt from the twenty years of re-introduction in arid fenced and unfenced protected areas

(Mammalia: Artiodactyla)

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**Abstract.** In Saudi Arabia, a conservation and restoration programme for Oryx *Oryx leucoryx*, Pallas, 1766 was started in 1989 by the Saudi Wildlife Commission (formerly the National Commission for Wildlife Conservation and Development). Concurrent conservation programmes were launched for the protection of large areas within the former range of the Arabian Oryx, and captive breeding at the National Wildlife Research Center (NWRC). Together, these have enabled the restoration of wild self-sustaining populations of Arabian Oryx in Saudi Arabia using animals from the 'World Herd' to improve their genetic variability. The success of the oryx conservation programme is described here together with the constraints faced in the arid environments and the consequent lessons learnt. As rainfall has a strong influence on the presence of annual plants, it is the single most important factor in the production of grazing. Poor rainfall had a major detrimental impact on forage in the re-introduction sites from 1999 to 2008 and mortality of oryx was higher during this period. As oryx historically moved over great distances in response to rain, the fence around one site, the Mahazat as-Sayd Protected Area, prevents natural movements of animals and artificially concentrates ungulate populations into seasonally unfavourable habitat. We propose some management strategies to minimize mortalities in the wild, and assesses post-release monitoring and adoption of various estimation techniques to assess oryx populations in both the fenced and free-ranging areas. As poaching is still a problem, strict law enforcement and a public-awareness programme to inform citizens of the biological and historical significance of the Arabian Oryx is recommended.

**Key words.** Arabian Oryx, reintroduction success, drought related mortalities of ungulates, species management strategy, Saudi Arabia.

## Introduction

The Arabian Oryx (*Oryx leucoryx*, Pallas 1766) or White Oryx in English and *Al Maha / Al Wudehi* in Arabic, is the smallest member of the genus *Oryx*, and is native to desert and steppe areas of the Arabian Peninsula. In the early 1800s Arabian Oryx were found in the Sinai, lower Palestine, Transjordan, much of Iraq, and most of the Arabian Peninsula. During the 19th and early 20th centuries, the range of the Arabian Oryx was pushed back towards Saudi Arabia, and by 1914 there were only a few survivors outside that country (STANLEY-PRICE 1989). There were a few reports of Arabian Oryx in Jordan into the 1930s, but by the mid-1930s the only remaining populations were in the Nafud Desert in the northwest of Saudi Arabia and the Rub' al Khali in the south (TALBOT 1960), and in southern Oman. In