

CHANGES IN THE DISTRIBUTION, ABUNDANCE AND STATUS OF ARABIAN SAND GAZELLE (*GAZELLA SUBGUTTUROSA MARICA*) IN SAUDI ARABIA: A REVIEW

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Introduction

Since WWII motorised hunting and motorised water and artificial fodder supply for domestic stock have increased the range and numbers of domestic stock and consequently the competition for food with gazelle. Although reem were once widespread and even abundant throughout Saudi Arabia their future was already debated by Wilfred Thesiger during his epic trek through the Empty Quarter in Saudi Arabia in 1947-48. A dramatic decrease during the 1970's and 1980's was noted in the wild with the most recent total population estimated to be fewer than 10 000 individuals and estimates for Saudi Arabia ranging between 2650 and 3050 animals in four populations (Al-Khunfah, Harrat al-Harrah, Mahazat as-Sayd and Uruq Bani Ma'arid (IUCN 2008).

Materials and methods

Data on various survey results from 1989 for four Protected Areas were collected through a literature search and unpublished census reports. Due to the various techniques used and/or applied over the years by various surveyors no attempt was made to describe all of these.

Results

Currently the distribution of reem in Saudi Arabia still includes the original wild stocks at Al-Khunfah, Harrat al-Harrah and the reintroduced populations in Mahazat as-Sayd and Uruq Bani Ma'arid. In addition there is an extensive array of captive groups. The most recent estimates of reem from Al-Khunfah are 21 individuals observed during November 2005. Only 1 individual was sighted during 10 flying hours during March 2005 and none observed during 21.5 flying hours during November 2005 in Harrat al-Harrah. The estimated figures for Uruq Bani Ma'arid and Mahazat as-Sayd are 380 and 500-650, respectively. Captive breeding populations have 700 animals while military areas have an estimated 200-300. Estimates from private collections are difficult to ascertain due to the lack of access, but may be 2000-5000 animals.

Discussion

Reem outside Protected Areas are almost certainly extinct in Saudi Arabia aside from reports of individuals occasionally encountered in the south eastern Rub Al Khali. The numbers in Harrat al-Harrah and Al-Khunfah have decreased alarmingly, and are currently perceived to be virtually extinct. The reintroduced populations in Mahazat As-Sayd and Uruq Bani Ma'arid persist although numbers fluctuate according to local environmental conditions. Little importance is placed on responsible management of the large numbers of reem in private collections thus decreasing their usefulness as a 'national herd' or for future reintroduction purposes.



Fig 1. *G. s. marica* mortalities due to drought in the Mahazat as-Sayd PA (©P Cunningham).

After the establishment of Al-Khunfah in 1988 the reem numbers remained relatively constant between 200 and 400 until the mid-late 1990's when competition for food with free ranging domestic stock was suggested as the main limiting factor. Further declines have occurred since 1995 when 150 reem were still estimated to be present and are mainly due to increased uncontrolled hunting. In Harrat al-Harrah reem increased after protection in the late 1980's with 1000 estimated during the mid-late 1990's. By 2002 an estimated 240-500 remained, but by 2005 numbers had declined dramatically. In Mahazat as-Sayd, reem have increased exponentially during good rainfall years with mass mortalities observed during periods of drought and the most recent extrapolations varying between 500-650. In Uruq Bani Ma'arid the numbers have remained relatively stable in the 300's with the Rub Al Khali expected to act as a sink for animals moving out of the core protected area.

The main reasons for the decrease of reem populations in Harrat al-Harrah and Al-Khunfah (excessive uncontrolled hunting and competition with domestic stock) should be urgently addressed to encourage the survival of the remaining pockets of gazelle or face a revision of the international status if this downward trend is not urgently addressed. Restocking would only succeed if the problems of uncontrolled hunting and competition with domestic stock is reduced and/or eliminated.

References

IUCN 2008. The IUCN Red List of Threatened Species. IUCN, Gland, Switzerland. A pdf including full list of references is available on request.

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Fig 2. Female *G. s. marica* from Mahazat as-Sayd PA (©P Cunningham).