

Twenty years of monitoring a re-introduced population of Mountain Gazelles, *Gazella gazella* (Pallas, 1776), in the Ibex Reserve, Saudi Arabia

(Mammalia: Bovidae)

Torsten Wronski, Khalid Alageel, Martin Plath, Mohamed A. Sandouka

Abstract. In order to re-establish a population of Mountain Gazelles (*Gazella gazella*(Pallas, 1776)) in the Tuwayq Mountains, central Saudi Arabia, a re-introduction program was initiated in 1990, with 11 releases between 1990 and 2007. The number of gazelles in the Ibex Reserve initially increased during the 5 years after the first release but then diminished dramatically. After about 10 years the decrease levelled out and the population remained more or less stable at about 0.9-1.9 gazelles / km² (60-80 gazelles) in the two wadi systems into which gazelles were released. This population is likely to remain small due to limited food as a result of droughts and also to competition with livestock, both of which apparently lead to increased dispersal to sites outside the Reserve. This, in turn, results in increasing conflict with humans. Food and shelter availability and the effects on home range size, dispersal behaviour, and population density of the already existent population on further repatriation success, and population establishment are reviewed in more detail. Further releases of Mountain Gazelles into the Ibex Reserve need to be carefully considered. Improved protection of the naturally occurring Mountain Gazelle population is imperative for the survival of this species in Saudi Arabia.

Key words. Arabian Peninsula, dispersal, post-release ecology, re-introduction, antelopes.

Introduction

Historically, the Mountain Gazelle, *Gazella gazella* (Pallas, 1766), occurred across most of the Arabian Peninsula into northern Syria and Turkey, and westwards into the Sinai (GENTRY 1968, DAVIS 1980, KASPAREK 1986, TCHERNOV et al. 1986). VESEY-FITZGERALD (1952) and HARRISON & BATES (1991) reported that its distribution was closely associated with *Acacia* trees, which are predominantly found along the foothills and coastal plains of the Arabian Peninsula. Although probably extirpated from Egypt, Syria, Lebanon and Jordan, occasional sightings are still reported (SALEH 2001, KINGSWOOD & KHAIRALLAH 2001, MASSETI 2004). The current range includes southern Turkey, Israel and the West Bank, Syria (Golan), Iran (Farur Island), Oman, United Arab Emirates, Yemen and Saudi Arabia (KANKILIÇ 2009, IUCN 2011). Mountain Gazelle numbers have decreased dramatically throughout their range in Saudi Arabia since the middle of the 20th century (GHANDOUR 1989, NADER 1989), and the IUCN (2011) currently lists this species as “vulnerable”. There are only limited historical data on original gazelle populations in Saudi Arabia with the Arabian Peninsula always having been an under-studied part of the world.

In Saudi Arabia, natural populations of Mountain Gazelles occur in Al Khunfah, Harrat al Harrah, on the Farasan Islands, and as scattered populations in the western Asir and Hijaz