

Timings of hibernation and breeding of Ethiopian Hedgehogs, *Paraechinus aethiopicus*, in Qatar

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Abstract. Daily activity patterns of Ethiopian Hedgehogs (*Paraechinus aethiopicus*) were monitored during the winter months between November and March in Qatar under the natural light/temperature condition. The hedgehogs were strongly nocturnal with the activity peak occurring around midnight. The hedgehogs entered hibernation lasting for approximately one and half months between January and February. The hibernation was probably triggered by low ambient temperature, and the threshold mean minimum ambient temperature of the month appeared to be c. 13°C. Breeding activity started in March just after the hedgehogs came out of hibernation, and aggressive behaviours, which had not been observed during the previous months, also appeared in March.

Key words. Erinaceidae, Insectivora, Mammalia, Arabia, Middle East.

Introduction

Three species of hedgehogs have been recorded in the Arabian Peninsula – Long-eared Hedgehog (*Hemiechinus auritus* Gmelin, 1770), Brandt's Hedgehog (*Paraechinus hypomelas* Brandt, 1836), and Ethiopian Hedgehog (*P. aethiopicus* Ehrenberg, 1832) (HARRISON & BATES 1991, GILLESPIE 2006). So far only the Ethiopian Hedgehog has been confirmed to occur in Qatar although it may be possible that Long-eared Hedgehog occurs as well (BATES s.a., GILLESPIE 2006). In Qatar, hedgehogs may not be one of the most familiar animals, but local people have been fully aware of its existence, and known to use its spiny skin as a "suckling-preventer" attached to the calf's nose (GILLESPIE 2006).

While the hedgehog is one of the most well-studied mammals in Europe (MACDONALD 2001), few studies have been conducted on hedgehogs in the Middle East, especially for their behavior and ecology. Almost nothing is known concerning the behaviour and ecology of hedgehogs in Qatar. Although hedgehogs are nocturnal in general (MACDONALD 2001), no work has been carried out to investigate if they are nocturnal in Qatar. Also, hedgehogs appear to hibernate even in the Arabian Peninsula where winter is milder than those in the most parts of Europe (BATES s.a., GILLESPIE 2006), and yet it is not known if they enter hibernation in Qatar. A study carried out in Israel reports that desert-adapted hedgehogs of the genus *Hemiechinus*, kept outdoor, enter hibernation when mean minimum ambient temperature (MMAT) of a month-long period reaches approximately 11°C regardless of the availability of food and water, whilst they remains active when MMAT is c. 13°C (DEM'EL & SCHWARZ 1984). As the lowest monthly MMAT in Doha is c. 13.1°C in January (CIVIL AVIATION AUTHORITY 2002) it is possible that hedgehogs do not hibernate in Qatar. Similarly, although it is said that the most breeding activities of hedgehogs may occur in May and