

Short Communication

Further Records of the Long-eared Hedgehog, *Hemiechinus auritus* (Gmelin, 1770), in Saudi Arabia

Khaled Al Malki, Ahmed Al Obaid, Faisal Shuraim, Ahmad Al Boug and Zuhair S. Amr*

National Centre for Wildlife (NCW), Riyadh, Saudi Arabia.

Received: May 14, 2023; Revised: May 20, 2023; Accepted: May 24, 2023

Abstract: The present note provides additional records for long-eared hedgehog, *Hemiechinus auritus* from Saudi Arabia, increasing its current known distribution range further to the west.

Three species of hedgehogs have been recorded from Saudi Arabia, namely: Brandt's hedgehog, *Paraechinus hypomelas* (Brandt, 1836), distributed in southwest of the country (Nader, 1991), the desert hedgehog, *Paraechinus aethiopicus* (Ehrenberg, 1832), known to occur in most deserts of Saudi Arabia (Harrison and Bates, 1991), and the long-eared hedgehog, *Hemiechinus auritus* (Gmelin, 1770) with very few records from localities along the Eastern Province (Pitcher, 1976; Kock and Nader, 1996).

The long-eared hedgehog, *Hemiechinus auritus* (Gmelin, 1770), is distributed throughout the Eastern Mediterranean region, north of Egypt and Jabal Al Akhadr in Libya to southwest Asia to southwestern Pakistan, eastern Ukraine through Mongolia to China (Wilson and Reeder, 2005). In the Arabian Peninsula, its distribution extends from Kuwait reaching as far Bahrain (Al-Khalili, 1990; Abu Baker *et al.*, 2022).

Very little is known about the distribution of this species in Saudi Arabia. Its presence in Saudi Arabia is based on four localities along the Eastern Province: Abu Hadriyah, Dharan, Safaniyah (Pitcher, 1976), and Ras al Abkhara (Kock and Nader, 1996). Since then, no further records were reported.

On the May 2nd, 2023, the researchers visited Al Majma'h area after receiving a video showing a citizen rescuing a long-eared hedgehog that fell in a well. Al Majma'h

(25° 54' 18.49" N 45° 19' 55.92" E) is a small agricultural town located about 170 NW km of Riyadh (Figure 1). The area is an agricultural land cultivated with watermelons, tomatoes, berries and palm trees. Wells are abundant and are used for irrigating the crops and trees. The soil is hard and compacted with abundance of the Egyptian Spiny-tailed Lizard, *Uromastix aegyptia*, and burrows. Other mammals observed include the desert hedgehog, *Paraechinus aethiopicus*.

A total of ten Sherman traps (10X12X38 cm) baited with peanut butter and oat meals were placed on the farm at noon time and were checked at sunset and in the following morning. One adult female was trapped after sunset. On the next day, one subadult was caught in the field and photographed. One further specimen was seen in Al Mulhem (25° 11' 24.41" N 46° 21' 35.11" E) at the edge of a semi-arid region with abundance of desert shrubs.

Hemiechinus auritus is the smallest species of hedgehogs in Saudi Arabia (Figure 2). It is characterized by the presence of very long and pointed ears as a distinctive feature for this hedgehog. Tips of dorsal spines are white. Base of the scapular spines is black. A gap in the forehead spines is lacking. Face is covered by white hair and little brown hair around the eyes, but without a facial mask. The muzzle has a grey tint. Belly is buff white. 4-5 pairs of mammae are present in the female. Skull is small and delicate. Large tympanic bullae. First upper incisors are pointed forward. Elevated crown of lower second premolar bicuspid (Amr, 2012).

*Corresponding author: amrz@just.edu.jo



Figure 1. Habitat of the long-eared hedgehog at Al Majma'h area.



Figure 2. The long-eared hedgehog, *Hemiechinus auratus*. A. and B. Subadult. C. Female.

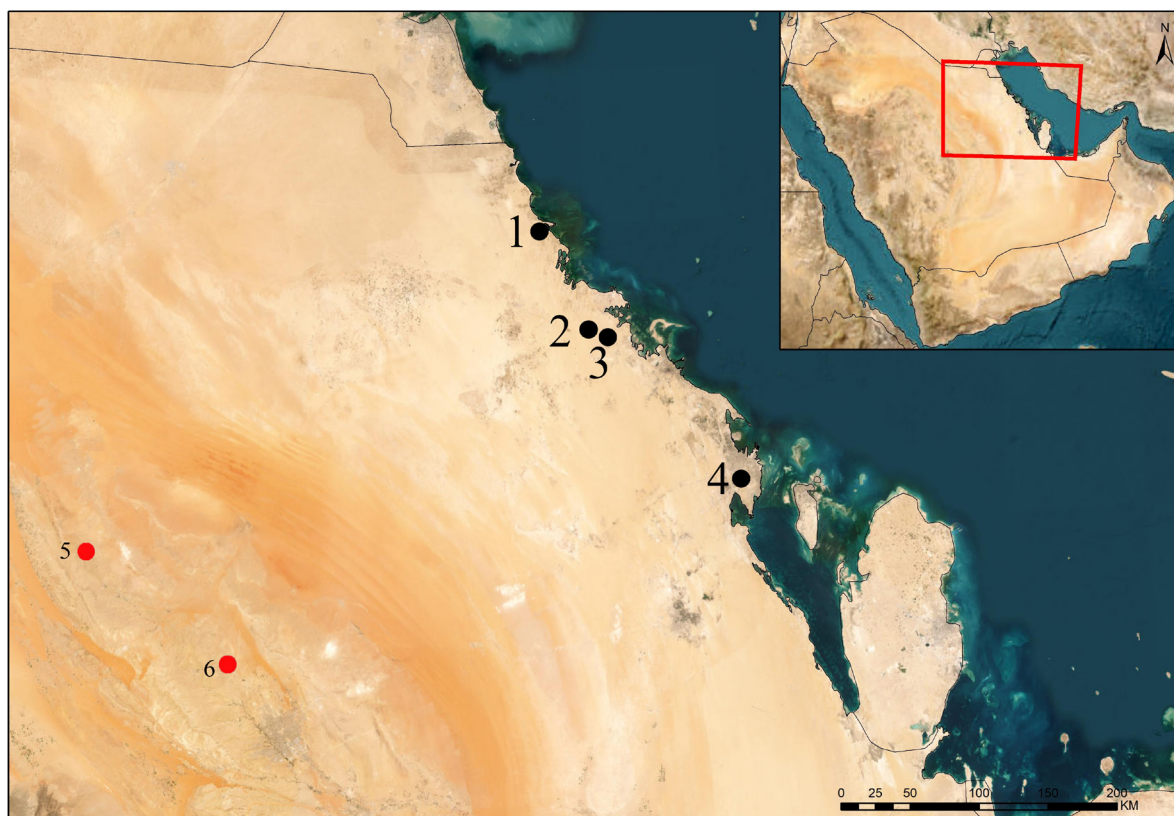


Figure 3. Localities from which *H. auritus* was reported. 1. Abu Hadriyah. 2. Safaniyah. 3. Ras al Abkhara 4. Dharan. 5. Al Majma'h. 6. Al Mulhem.

The present record expands the range of the long-eared hedgehog deep into central Saudi Arabia, about 400 km to the east from the coastal eastern province, suggesting its occurrence along the eastern part of the country between the Arabian Gulf and the Arabian Shield mountains (Figure 3). This record confirms the presence of a viable population almost fifty years after it was recorded by Pitcher (1976). It avoids sand deserts and extreme desertic conditions, contrary to the desert hedgehog, *P. aethiopicus*.

It feeds on various insects, centipedes, and land snails (Schoenfeld and Yom-Tov, 1985). This species digs its burrows or seeks refuge in depressions. In Saudi Arabia, Pitcher (1976) reported that the young are born in March. Remains of a long-eared hedgehog were recovered from owl pellets near al Jubial (Kock and Nader, 1996).

Initial assessment in the national Red List for the mammals of Saudi Arabia classified *H. auritus* as data-deficient, since it was reported from few localities more than fifty years ago. This suggests that further field

studies should be conducted to add additional localities along the Arabian Shield mountains and the eastern part of Saudi Arabia to validate its conservation status. This animal is liked by farmers since it is known to feed on scorpions and other pests such as locusts and land snails in agricultural areas, hence, it should be naturally protected.

Acknowledgements

This work was supported by the National Centre for Wildlife, Riyadh, Saudi Arabia. We wish to thank Mr. Sultan Al Moa'jel for his help during the field work.

References

- Abu Baker, M.A, Alenezi, A.A, Buhadi, Y.A and Amr, Z.S. 2022. **Mammals of the State of Kuwait**. Amman, Jordan: IUCN ROWA and State of Kuwait, Kuwait: Environmental Public Authority. 88 pp.
- Al-Khalili, A.D. 1990. New records and a review of the mammalian fauna of

- the State of Bahrain, Arabian Gulf. *Journal of Arid Environments*, **19**: 95-103.
- Amr, Z. S. 2012. **Mammal of Jordan**. 2nd edition. Al Rai Press. Amman. 308 pp.
- Harrison D.L and Bates P.J.J. 1991. **The Mammals of Arabia**. 2nd Edition. Sevenoaks: Harrison Zoological Museum Publication, 354 pp.
- Kock, D and Nader, I. 1996. Terrestrial mammals of the Jubail Marine Wildlife Sanctuary. **In:** Krupp, F., Abuzinada, A.H. and Nader, I.A.A. (Edits.). **Marine Wildlife Sanctuary for the Arabian Gulf: Environmental Research and Conservation following the 1991 Gulf War Oil Spill**. Pp. 421-437.
- Nader, I.A. 1991. *Paraechinus hypomelas* (Brandt, 1836) in Arabia with notes on the species zoogeography and biology (Mammalia: Insectivora: Erinaceidae). *Fauna of Saudi Arabia*, **12**: 400–410.
- Pitcher, D.A. 1976. The long-eared hedgehog of Arabia. *Journal of the Saudi Arabia Natural History Society*, **16**:22-23.
- Schoenfeld, M. and Yom-Tov, Y. 1985. The biology of two species of hedgehogs, *Erinaceus europaeus concolor* and *Hemiechinus auritus aegyptius*, in Israel. *Mammalia*, **49**:339-355.
- Wilson, D.E and Reeder, D.M. 2005. **Mammal Species of the World. A Taxonomic and Geographic Reference** (3rd Edition). Johns Hopkins University Press, 2142 pp.