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Winter thermoregulation of free-ranging Ethiopian hedgehogs (*Paraechinus aethiopicus*) in Qatar

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ABSTRACT

Biologists focus on thermoregulation of desert mammals in terms of how they minimise heat gain during hotter months, and put less effort on how they maximise heat gain during cooler months. Heat gain may contribute to energy savings of desert mammals during cooler period when the ambient temperature in desert is substantially lower than their body temperatures. We investigated the thermoregulation in free-ranging Ethiopian hedgehogs, *Paraechinus aethiopicus*, during winter using radio-telemetry in Qatar. Temperatures detected by the tag attached to hedgehogs were significantly higher than ambient temperatures throughout the day, and the difference was more extreme during the mid-day. We also observed several hedgehogs basking with their radio-tags exposed to direct sunlight. It is possible that basking is beneficial for the hedgehog's winter thermoregulation in the desert where plenty of solar radiation is available.

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