

Short Communication

A New Record of the Sand Cat, *Felis margarita*, from Al-Dahek Reserve in the Eastern Desert, Jordan

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Received: May 20, 2024; Revised: June 1, 2024; Accepted: June 8, 2024

The Sand Cat (*Felis margarita*) is a small-sized desert felid weighing two to three kg. Sand Cats have a broad head with large eyes, low-set ears, and short limbs. The tail, which can account for about half of the head-body length or 28-38cm (Ghadirian *et al.*, 2016), features two or three rings and a black tip. Sand Cats have dense hair and pads on the soles of their feet that protect against the intense heat and coldness of their habitat, as well as aiding in movement across the Sand. (Smithsonian's National Zoo and Biology Institute, 2020). It is found in Sand deserts and gravel deserts ranging from the north of Africa to Asia, with the Arabian Peninsula as its central distribution area (Sausman, 1997). It is well adapted to living in arid areas and where temperature changes are extreme ranging from 0C° to 58C° (Sausman, 1997). The Sand Cat is a nocturnal, spending the days in shallow burrows or under vegetation (Ahmad *et al.*, 2016). Its preferred prey consists of small rodents, reptiles and insects. (Abbadi, 1991; Bunnian *et al.*, 1998; Cunningham, 2002).

The Sand Cat was recorded for the first time in Jordan by Mountfort (1965) in Wadi Rum during the second Jordan international expedition. It was reported again in Wadi Rum after finding a skull (Hemmer, 1978) which confirmed its first record in Wadi Rum. Bunaian *et al.*, (1998; 2001) have recorded the Sand Cat in the Eastern Desert three times, two of which occurred by observation and the third was conducted using a trap near Mansheyat Al-Ghiath. Later, the Sand Cat was recorded near Al Safa Dam (Hamidan and Al-Gheyyath, 2017).

Throughout the survey in Al-Dahek Protected area in the Eastern Desert (31.6767 N 34.98483 E), the Sand Cat was photographed

on the 28th of February 2024 at 9:48 p.m. using a camera trap in an area dominant with *Soda rosmarinous* and *Anabasis articulata* (Figure 1). This record was confirmed after three months on the 16th of May 2024 in the same loCation providing evidence of the presence of the Sand Cat in this region. The first record of the Sand Cat in Al-Dahek Reserve expands the distribution map of this species in Jordan.

The Sand Cat is one of the common types of carnivores in the Eastern Desert in Jordan; many carnivores have been recorded in the Al-Dahek PA, such as the Wolf, *Canis lupus*, the Sand Fox, *Vulpes rueppelli*, the Red Fox, *Vulpes vulpes*, the Striped Hyaena, *Hyaena hyaena* and Caracal, *Caracal caracal*. (Amr, 2012).

According to the classifications of the IUCN red list, the Sand Cat is considered a least concern species in the world and is listed as a critically endangered species in Jordan according to the National Red data book of mammals in Jordan (Eid *et al.*, 2020). Also, the Sand Cat is listed in Appendix II of the CITES. The Sand Cat can be considered as a key species for Al-Dahek PA, which gives the reserve greater importance and increases the need for more programs to monitor this species and others as well in the region.

The assumption made by Eid *et al.* in their published article in 2022 that the Sand Cat is inevitably facing extinction has not fully considered the recent positive developments in conservation efforts. The establishment of new protected areas in Burqu' and Al Dahek has demonstrated promising outcomes, as evidenced by the recording of new Sand Cat populations within these PAs. These findings suggest that the creation and effective management of protected habitats can

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significantly bolster the survival prospects of the Sand Cat by providing safe habitats that minimize human disturbances and habitat encroachment. These PAs can counteract some of the adverse effects predicted by climate change scenarios. This progress highlights the critical role of proactive conservation measures and indicates that the populations of the Sand Cat can be improved which creates a renewed era for its continued existence. Therefore, the assumption of the Sand Cat's inevitable extinction should be reconsidered in light of these conservation successes and the high level of uncertainty provided by climate change scenarios in the arid areas. Finally, satellite tracking research will be of a high advantage to understand and determine the population size of the Sand Cat in Al Dahek PA, its home range, breeding, and behavior. More importantly, it can help draft a science-based conservation plan to save this species.

The Dahek PA is considered an extension

of the Hammadah vegetation patterns in the Eastern Desert, and according to the records in Dahek PA and Burqu PA, the Sand Cat might be found between the two PAs. This requires further studies in the Eastern Desert region and necessitates the installation of tracking devices using satellites to identify the expected places to record this species. Including this record, the distribution of the Sand Cat in Jordan expands to three PA as shown in the figure below (Figure 2).

Acknowledgement

The researchers would like to thank those who provided support to complete this survey, in particular Dr. Nashat Hamidan, (Head of the Conservation Monitoring Center (CMC)), for facilitating the field process and reviewing this manuscript, and Mr. Osama Al-Fayez (Al-Dahek Ranger, RSCN). Also, many thanks go to Mrs. Laya Majid (GIS unit, RSCN).



Figure 1. Sand Cat photographed in Al-Dahek by a camera trap.

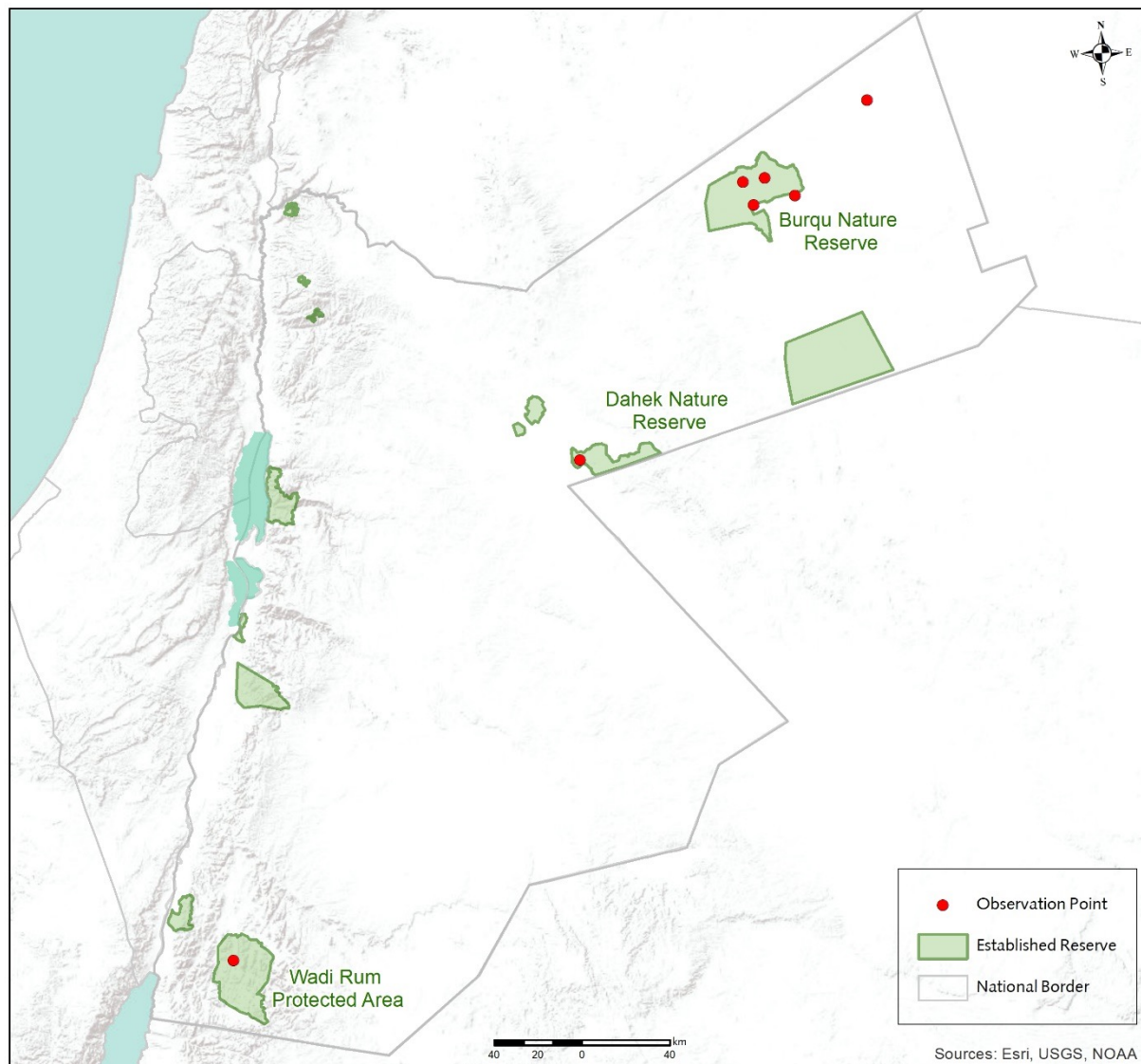


Figure 2. A new distribution of the Sand Cat in Jordan.

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