

Small Mammal Survey Report

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Introduction

From December 2001 to March 2002, a baseline survey on small mammals was carried out by the A Rocha team in the area surrounding the Aammiq Marsh. Previous to this, little work had been done on small mammals in the area. The primary aim of this initial survey was to establish whether there were species existing in the area which had not been previously recorded. Secondary aims included gaining further understanding of habitat preference and species distribution. Findings from this survey were included in the "Mammals of the Aammiq" booklet produced by the A Rocha team. This booklet contains information on the status, habitat, distribution, and habits of all mammals recorded in the Aammiq area thus far. A species list is included in the appendix.

Materials and Method

Small mammals, as defined by this survey, were animals that could be caught in a Longworth trap. The opening to the traps was roughly 6cm wide by 5cm high. Five traps were used during this survey. Three habitats were surveyed, and each habitat trapped roughly three times each. The habitats were as follows:

- 1) Stables - grassy woodland full of bramble and scrub bordering the nearby stables to the south
- 2) Aammiq Marsh - grassy fields bordering farmland and reed marsh (all traps placed were within 200 meters of the main road)
- 3) Qalat el Mudiq - just above the marsh, a rocky hillside covered with short grass and scattered low-growing oak and thorny shrub

The traps were baited with various cereals and mixed nuts. Each trap was filled with dry grass to ensure the trapped animal would stay warm overnight. Traps were placed randomly in each habitat, set just before sunset, and then checked the next morning.

Trapped animals were identified and released, or taken away to be measured if their identity was unknown. The following measurements were taken in mm:

Body Length - from tip of nose to base of tail

Tail - from base of tail to tip of tail excluding terminal pencil

Hind foot - from longest toe to back of foot excluding toenails

Forearm - from tip of finger to elbow joint

Ear - from tip of ear to lower opening of ear

For measurement and identification purposes it was necessary to humanely euthanize a small number of the mammals captured. Measurements were then taken to determine species. The Mammals of Arabia (Bates and Harrison, 1991) was used as the primary guide for identification purposes.

Results

A total of four different species were trapped during the survey. Of the four, two species were new to the list of mammal species recorded in the Aammiq area. The species caught are as follows:

Table 1: Species and numbers trapped

	House Mouse <i>Mus musculus</i>	Lesser White-toothed Shrew <i>Crocidura suaveolens</i>	Tristram's Jird <i>Meriones tristrami</i>	Broad-toothed Field Mouse <i>Apodemus mystacinus</i>
Stables	1	3		
Marsh	3	1	1	
Qalat el Modiq			1	1
Total	4	4	2	1

Discussion

The Tristram's jird and broad-toothed field mouse were new to the species list of the Aammiq area. A total of two Tristram's jirds were caught during the survey. Jirds are in the family of gerbils and are most often associated with desert habitats.

The first jird was caught in the Aammiq Marsh. The trap was placed just above the bank of a ditch bordered by a farmer's field. The ditch was lined with various herbs and bramble. There was a system of small burrows in the area and the burrows appeared to be interlinked. The holes were slightly larger than those used by nearby Levant voles *Microtus socialis*. The second jird was caught at Qalat el Mudiq. The trap was placed in a rocky area surrounded by short green grass and low spiny shrubs with nearby oak trees. Again there was an extensive burrow system in the area of the trap.

Only one broad-toothed field mouse was caught during the survey. It was found at Qalat el Mudiq and the trap was placed in a rocky area with low-lying oak. Upon release, this individual quickly found shelter in a hole under a large rock, which was quite possibly its own burrow.

The main aim of the survey was to establish new species in the area and to this end the survey was successful. The survey was also helpful in establishing

which species are found where and what habitats were preferred. With this said there is room for much more work to be done with small mammals. More baseline surveys are necessary in habitats that weren't covered by the first survey, such as orchards and cultivated fields. It is expected that more small mammal species will be found in the area of Aammiq, especially species of mouse and shrew.

Apart from these baseline surveys, systematic surveys would be helpful in establishing population densities. A key species worthy of more study is the Levant vole, which was surprisingly not caught during the survey. This vole may potentially be a keynote species as it is closely tied to the Aammiq Marsh, is a key prey species for a number of different mammals and raptors, and appears to be the most numerous mammal found in the area.

There has also been little to no study of bats in the Aammiq area, and any type of survey of this group would be extremely valuable. It should also be noted that little work has been done on the larger mammals in the area. Knowledge of the larger species comes almost exclusively from individual sightings. There has been a remarkable recent sighting of the common otter *Lutra lutra seistanica* in the Aammiq Marsh. Much consideration should be taken on how the future management of the marsh could benefit this species and encourage it to reestablish in the area.

Conclusion

The four-month small mammals survey was successful in establishing two new species, Tristram's jird and broad-toothed field mouse, for the list of mammals in Aammiq. It is clear, however, that much more can be done in the area of small mammal studies. Baseline surveys in other habitats should continue to be carried out to establish new species. A key species to consider for further study is the Levant Vole, and a study on bats and further study on the larger mammals is also recommended.

References

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Kingdon J. (1990) *Arabian Mammals: A Natural History*. The Government Press, Bahrain.

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Appendix

Mammals Species List for the Aammiq Region

Insectivores

Eastern Hedgehog *Erinaceus concolor*
Lesser White-toothed Shrew *Crocidura suaveolens*

Bats

Common Pipistrelle *Pipistrellus pipistrellus*

Hares

Cape Hare *Lepus capensis syriacus*

Rodents

Persian Squirrel *Sciurus anomalus syriacus*
Indian Porcupine *Histrix indica*
Lesser Mole Rat *Spalax leucodon*
Broad-toothed Field Mouse *Apodemus mystacinus*
Black Rat *Rattus rattus*
House Mouse *Mus musculus*
Tristram's Jird *Meriones tristrami*
Levant Vole *Microtus guentheri*

Carnivores

Wolf *Canis lupis*
Red Fox *Vulpes vulpes*
Stone Martin *Martes foina syriaca*
Badger *Meles meles canescens*
Common Otter *Lutra lutra seistanica*
Wild Cat *Felis sylvestris tristrami*
Swamp Cat *Felis chaus*

Hoofed Mammals

Mountain Gazelle *Gazella gazella gazella*
Wild Boar *Sus scrofa lybicus*