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First records of rodents from the State of Qatar (Mammalia: Rodentia) with a checklist of the mammals of the State

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Abstract

Jaculus jaculus vocator, Rattus n. norvegicus, Gerbillus nanus arabium, and *Meriones c. crassus* are recorded for the first time from the State of Qatar. A checklist of the mammals of the State is provided.

Introduction

Qatar is a peninsula located about midway on the western coast of the Arabian Gulf. It is bordered by the kingdom of Saudi Arabia to the south, the United Arab Emirates (U.A.E.) to the southeast and the island state of Bahrain to the west. The State of Qatar covers 11437 km^2 including more than ten islands. The north-south axis is about 180 km and the east-west axis at its widest point is about 85 km. The land is generally flat except for some low hills and higher ground mainly in the west. The highest elevation in the country is located in the southern part which is about 105 m. The southeastern area is mostly arid with stretches of salty sand flats relieved by sand dunes. Qatar's climate is tropical and conspicuously hot during the summer and moderate to worm during the winter with high percentage of humidity most of the year. Mean monthly temperature for 17 years in Doha ranges between 17.1.–24.5 °C and the annual rainfall averaging (for six years) between 57–90 mm falling mostly in a few short cloudbursts in the winter (Batanouny 1981).

Hardly any mammalian investigation has been carried out in the State of Qatar, and the wild mammals inhabiting the Qatar peninsula are virtually unknown. Only three species of mammals have been recorded previously from this State: A hedgehog, a bat and a cat. Furthermore, a rat, the Fat Jird *Psammomys obesus dianae* Morrison-Scott, 1939 was collected from Qatar but the locality was misplaced in Saudi Arabia (see comments under Checklist).

Mammals are scarce in Qatar. This is due mainly to the soil type, sparse desert vegetation and low level of precepitation. During three trips of one week each in March 1979, February 1980 and 1982 only seven specimens of four species of rodents were obtained. These specimens represent first records of these rodent species for the State of Qatar. Other species of mammals are expected to be present in the State especially in the southern part near the Saudi/U.A.E. border. Dominant plants in the trapping localities were *Ziziphus nummularia* and *Acacia tortilis.*

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Family Dipodidae

Jaculus jaculus vocator Thomas, 1921 – Lesser Jerboa

1921. *Jaculus loftusi vocator* Thomas, Ann. Mag. Nat. Hist., **8:** 441. Type locality: Sohar, Oman.

Material: One road-killed specimen, skin only, sex?, collected on 19 February 1980 at 40 km (by road) southwest of Doha, IAN 783.

Remarks

The collection of the lesser jerboa from southwest of Doha is not surprising as the species is known from several nearby localities in Saudi Arabia as well as Bahrain and the U.A.E. (Harrison 1972). In addition to the specimen collected, I was informed by local people that the jerboa is common in the southern desert region of the Qatar peninsula near the Saudi/U.A.E. border.

Family Muridae

Rattus norvegicus norvegicus (Berkenhout, 1769) – Norway Rat

1769. *Mus norvegicus* Berkenhout, Outlines N. H. Gt. Britain and Ireland, **1:** 5. Type locality: Great Britain.

Material: One skull and skeleton of an adult female obtained on 11 February 1982 at 10 km north of Doha, IAN 869.

Measurements: Cranial measurements, in mm; of IAN 869 are: greatest length 48.6, condylobasal length 46.9, zygomatic breadth 23.6, breadth of braincase 17.1, interorbital constriction 6.8, maxillary toothrow 7.8, mandibular toothrow 7.5, condylar length of mandible 25.7.

Remarks

The closest record of *R. norvegicus* in the Arabian peninsula to Doha is that from Bahrain (Harrison 1972). It was also recorded recently from Dammam and Hofuf in eastern Saudi Arabia (Büttiker and Harrison 1982). However, in spite of being common in ports, this rat has not been recorded elsewhere in the western coast of the Arabian Gulf nor from Oman although a fair amount of collecting activities has been done in these areas (Harrison 1972, 1977).

This rat is quite abundant in Doha and was encountered at night almost everywhere in the streets and around garbage piles in the city. A number of road killed specimens were seen in Doha and on the highways in the outskirts of the city.

Family Cricetidae

Gerbillus nanus arabium (Thomas, 1918) – Arabian Gerbil

1918. *Dipodillus arabium* Thomas, Ann. Mag. Nat. Hist., **2:** 61. Type locality: Tebuk, North-western (Saudi) Arabia.

Material: Three specimens. A young adult male (skull and skin) collected at 38 km (by road) north of Doha on 20 February 1980, IAN 786; an adult male (skull and skin) collected at 31 km (by road) southwest of Doha on 17 March 1979, IAN 744; a young adult male (skull and skin) collected at 35 km (by road) southwest of Doha on 19 February 1980, IAN 784.

Measurements: External and cranial measurements, in mm, of IAN 786, 744 and 784 are respectively: total length 193, 212, 210; tail length 110, 125, 123; hind foot length 25, 26, 25; ear length 13, 14, 13; head and body length 83, 87, 87; greatest length of skull 27.8, 29.1, 26.5; condylobasal length 24.7, 25.6, 23.1; zygomatic breadth 14.8, 14.7, 14.2; breadth of braincase 14.8, 14.9, 14.4; interorbital breadth 4.5, 4.5, 4.3; maxillary toothrow 4.0, 3.9, 3.7; mandibular toothrow 3.6, 3.5, 3.5; condylar length of mandiable 13.0, 14.0, 12.0.

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Remarks

G. nanus is widely spread in the Arabian peninsula. It is known from Kuwait, Saudi Arabia, U. A. E., Oman, South Yemen (Harrison 1972) and North Yemen (Bahmanyar and Lay 1975). However, it has not been recorded from Qatar. The closest record of *G. n. arabium* in the mainland to those in Qatar is that from Hofuf (Büttiker and Harrison 1982).

All three specimens from Qatar have the antero-superior rim of the external auditory meatus inflated and the bodies of the malleus and incus are not concealed. Also, the tyympanic bullae of both IAN 786 and 784 are projecting beyond the supraoccipital. However, in IAN 744 the tympanic bullae do not project beyond the supraoccipital and this renders this specimen to be closer to *G. mesopotamiae* Harrison, 1972.

Meriones crassus crassus Sundevall, 1842 – Sundevall's Jird

1842. *Meriones crassus* Sundevall, K. svenska Vetensk.-Akad. Handl., 233. Type locality: Fons Moses (Ain Musa), Sinai, Egypt.

Material: Two specimens. One road killed adult, skull broken, sex?, collected on 19 February 1980 at 50 km (by road) southwest of Doha, IAN 782. The other specimen is a juvenile male collected on the same day at 35 km (by road) southwest of Doha, IAN 785.

Remarks

M. crassus is widely distributed in the Arabian peninsula and it is known to occur in Kuwait, Saudi Arabia, the U.A.E. and Oman (Harrison 1972). It has been also reported from Bahrain (Gallagher and Harrison 1975). The closest record of this jird in the mainland to the Qatar peninsula is that from Hofuf first reported by Cheeseman and Hinton (1924) as a new species *(M. ismahelis)*. The Sundevall's Jird seems to be well established in Qatar. An adult was observed for about half an hour late in the afternoon on 20 February 1980 scurrying between bushes at 38 km (by road) north of Doha. An effort to trap the animal failed.

Checklist of the mammals of Qatar

This a tentative list of the mammals of the State of Qatar. Other species, expecially bats and rodents, are most likely to be added to this list as more collecting is done in this country.

ORDER INSECTIVORA

Family Erinaceidae

Paraechinus aethiopicus pectoralis Heuglin, 1861

Several specimens of the Ethiopian Hedgehog were collected from El-Wabarah, 40 km W of Doha, and from other unspecified localities in Qatar (Madkour 1982).

ORDER CHIROPTERA

Family Hipposideridae

Asellia tridens tridens (E. Geoffroy, 1813)

The Trident Leaf-nosed bat was recorded from the vicinity of Doha where seven specimens (6♂♂, 1♀) were collected on 23 April and in May 1963 (Harrison 1964).

ORDER CARNIVORA

Family Canidae

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Vulpes vulpes arabica Thomas, 1902

Although the Arabian Red Fox has not been collected from the State, is has been seen by local people and reported to me from the southern part near the Saudi border. The Red fox is widespread in Saudi Arabia.

Family Hyaenidae

Hyaena hyaena (Linnaeus, 1758)

Tracks of the Striped Hyaena were reported by Cheesman (1926) from near Jebel Skhul, near Dohat as Salwa in eastern Saudi Arabia near the Qatar border. It is most likely that the hyaena will be recorded in the southern part of the State.

Family Felidae

Felis margarita harrisoni Hemmer, Grubb and Groves, 1976

An adult male of this rare Sand Cat was obtained in the desert of Qatar near the border of Abu Dhabi, U.A.E. which died in capitivity on 28 February 1970 (Harrison 1972).

ORDER LAGOMORPHA

Family Leporidae

Lepus capensis cheesmani Thomas, 1921

This race of the Arabian Hare was described from Dohat as Salwa in eastern Saudi Arabia near the southern border of Qatar. Although it has not been collected, I was informed that it is present in the northeastern and southern parts of the State.

ORDER RODENTIA

The first four species are reported in this paper.

Family Dipodidae

Jaculus jaculus vocator Thomas, 1921

Family Muridae

Rattus norvegicus norvegicus (Berkenhout, 1769)

Family Cricetidae

Gerbillus nanus arabium (Thomas, 1918)

Meriones crassus crassus Sundevall, 1842

Psammomys obesus dianae Morrison-Scott, 1939

An adult female Fat Jird is in the British Museum (Nat. Hist). collection No. 47.533 collected on 27 January 1943 from 24° 30′N – 51° 00′E. This locality was placed by Harrison (1972) in Saudi Arabia. Careful plotting of the locality places it within the present boundaries of the State of Qatar, about 20 km ESE of Salwa, the border town between Saudi Arabia and Qatar.

Zusammenfassung

Erstnachweis von Nagetieren in Katar (Mammalia: Rodentia) mit einer Checkliste der Säuger dieses Staates

Jaculus jaculus vocator, Rattus n. norvegicus, Gerbillus nanus arabium und *Meriones c. crassus* werden erstmal für das Staatsgebiet von Katar belegt. Eine Liste der Säugetiere Katars ist zusammengestellt.

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The predation system seed – squirrel – marten under subarctic conditions

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Abstract

Seed yields of Scots pine *(Pinus sylvestris)* and Norway spruce *(Picea abies)* and populations of the red squirrel *(Sciurus vulgaris)* and pine marten *(Martes martes)* were studied under subarctic conditions in Finnish Forest Lapland in the winters of 1972/73–1980/81. Squirrels occurred in the area throughout, even though the quality and quantity of the seed yields of these conifers varied considerably from winter to winter, being especially poor in that of 1977/78. The "minimum maintenance diet" of the squirrel contained 10–12 % crude protein and 16–17 % crude fat. A good pine seed yield in the winter of 1972/73 and a very good spruce seed yield during the following summer and winter resulted in an increase in the squirrel population, which had then decreased by the next winter. This crash was not followed by any decrease in the local pine marten population, which was fairly stable throughout the period studied, being a generalist in its food intake. It is possible that the pine martens deepened the low in the squirrel population, but this is very difficult to show in figures. Only one kill of a squirrel per 670 km of pine marten track was recorded (over a total distance of 6700 km).

Introduction

The Scots pine *(Pinus sylvestris)* and Norway spruce *(Picea abies)* do not produce good seed yields near their northern limits every year (Numminen 1982; Pulliainen and Lajunen 1984), and this may be reflected in the state of the local red squirrel populations *(Sciurus vulgaris)*, since such seeds are known to constitute the chief food of these mammals (Rajala and Lampio 1963; Pulliainen 1973; Wiltafsky 1978). It has also been suggested that red squirrels may play an important, perhaps even decisive role in the nutrition of pine martens *(Martes martes)* (review in Danilov and Tumanov 1976).

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