



Original Contribution

**SURVEY OF LIZARD FAUNA OF MIRABAD OF SHAH-REZA,
ISFAHAN PROVINCE, IRAN**

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ABSTRACT

This study was done in Mirabad of Shah-Reza in May 2009. The objective of this project was collecting and identifying lizards' diversity of this region from different habitat types. The survey revealed a total of 6 lizard species. With considerable walking during day and night 14 specimens belonging to 4 families were collected. The identified species of region are as following: Two species (*Laudakia nupta*, *Trapelus agilis*) from Agamidae; *Mesalina watsonana* belonging to Lacertidae; *Varanus griseus* from Varanidae; *Agamura persica* from Gekkonidae.

Key words: Lizard, Fauna, Conservation, Shah-Reza, Iran.

INTRODUCTION

Iran lies in the Palearctic zoogeographical realm bordering the Oriental and African ones (Coad and Vilenkin, 2004), so of considerable interest in this respect and considered as a center for the origin of many species. The wide ranges of geographical and geological conditions coupled with the climatologically diverse environments provide this enormous diversity. General information about the herpetofauna of Iran has been provided by Anderson (1), Tuck (2), Latifi (3), Balouch and Kami (4). Furthermore, a handbook of amphibians and reptiles of the Middle East has been published by Anderson (5) and an updated checklist to the lizards of Iran was provided by Firouz (6). Despite these publications, the lizards of Iran are still poorly-known and infrequently collected. Studies on the lizards of Isfahan province are also very limited. The aim of this study is to determine in detail the lizard fauna and their habitat features in Mirabad of Shah-Reza, Isfahan

province, which is of particular significance considering the unique geography and vegetation of the region. Moreover, this study will collect baseline population data for future management.

MATERIALS AND METHODS

The study was conducted at the semi desert plain with sparse vegetation (2200 ha), 15kms south of Shahreza city, Iran (31°56'-31°43'N and 51°53'-52°02'E) in May 2009. The climate is semi-arid and seasonal. Mean annual precipitation is about 110 mm and rainfall occurs primarily in the winter months. Temperature is different in day and night and season-to-season with mean monthly minima -17.4°C and maxima 38.0°C. All of the samples were caught by hand. Locality data and their habitat features were recorded for all species encountered during the study. Specimens were identified with Anderson (6) using morphometric measurements, coloration and pholidosis features. In the area, there is the Iranian jerboa (*Allactaga firouzi*), one of the rarest rodent species in the world that has been reported exclusively from this area (7, 8) and the predators such as common fox (*Vulpes vulpes*) and jackal (*Canis aureus*).

RESULTS

A total of 14 samples were collected in the study area, comprising 5 species in 4 families. The species composition is given in **Table 1**.

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Table 1. Lizard species collected from the study area.

Family	Species
Agamidae	<i>Laudakia nupta</i> (Di Filippi, 1843)
Gekkonidae	<i>Trapelus agilis</i> (Oliver, 1807)
Lacertidae	<i>Agamura persica</i> (Dumeril, 1865)
Varanidae	<i>Mesalina watsonana</i> (Stoliczka, 1872)
	<i>Varanus griseus</i> (Daudin, 1803)

Family: Agamidae

Laudakia nupta (De Filippi, 1843)

Laudakia nupta is a species of the southern and western periphery of the Iranian plateau that occurs primarily in the outer parts of the plateau (6).

This species was found in edge rocks and big rocks in the sun taking that once feel threatened his head several times up and down quickly made and then the crack rock or rock that is sitting on it crawls.

Trapelus agilis (Olivier, 1807)

Trapelus agilis can be seen in grasslands and salt fields. High power is enough to camouflage this species. Sometimes at a distance of less than 50 cm, it is difficult to detect. (Fig. 1).



A) *Varanus griseus*



B) *Laudakia*



C) *Mesalina watsonana*



D) *Agamura persica*



E) *Trapelus agilis*

Figure 1. (A, B, C, D, E). Total species observed during the survey.

Family: Gekonidae

Agamura persica (Duméril, 1856)

Agamura persica inhabits rocky and stony terrain close to sandy semi-desert, on hill slopes, barren plains. The upper body of *A. persica* is yellow/brown to fairly dark grey. The belly and the lower part of head are light coloured and partially spotted. They are primarily nocturnal but can be found during the day basking at temperatures of about 17.5C (air) and 15.5C (surface) and active at temperatures as high as 44C (surface) (Anderson, 1999). It has a light grey upper body with yellow pigment and differentiated by 5 dark crossbars almost as broad as the interspaces, 9 to 10 on tail and flecked grey belly (6,9) (Fig. 1).

Family: Lacertidae

Mesalina watsonana (Stoliczka, 1872)

Mesalina watsonana mostly common in sand, steppe and desert dweller lizards which are distributed from northern China, Mongolia, Korea, Central and south west Asia to southeastern Europe (10). It is considered the most abundant lizard in the study area. (Fig. 1).

Family: Varanidae

Varanus griseus (Daudin, 1803)

Varanus griseus is an active hunter, sometimes covering 6-8 kilometers in a day, and have also been recorded swimming in the UAE in an attempt to predate on chicks of wading birds (10). Prey is other reptiles, small mammals, birds, insects and carrion. They either dig burrows with their powerful clawed legs or utilise those of other animals and are most active in the morning and late afternoon, avoiding the hottest part of the day. The largest lizard in Iran is considered. Its population in the area is very limited. Generation of these valuable species is faced with serious threat of extinction. It is considered as a vulnerable species according to IUCN criteria. (Fig. 1).

CONCLUSION

Unfortunately this study area enjoys no protection at all. Therefore, we strongly recommend authorities to initiate steps to protect these little known yet important habitats for the lizards and for one of the endemic rodents of Iran *Allactaga firouzi*. Finally, it should also be considered a necessity to regularly assess the ecology,

population status and differences between populations of each species of lizards of Iran to provide a base for their adaptive management. Lizards in many ecosystems considered an important component and their unique ecological values are useful. Biodiversity of lizards of Iran is unknown and limited number of studies has been performed in this field. A special study has not been carried out on lizards of this area and we suggest to continuous protection for species of lizard in Isfahan province further studies to determine their status is necessary

REFERENCES

1. Anderson, S. C, 1996., The turtles, lizards and amphibians of Iran. Ph.D. Thesis. Stanford University. 660pp.
2. Tuck, R. G., Some amphibians and reptiles from Iran. *Bulletin of the Maryland Herpetological Society*, 10:59-65, 1974
3. Latifi, M., The snakes of Iran. Iran Department of The Environment, Tehran, 1984
4. Baloutch, M and H. G. Kami., Amphibians of Iran. Tehran University Publication, Tehran, 1995.
5. Anderson, C. S., The Lizards of Iran. Ithaca, New York: Society for the Study of Amphibians and Reptiles. 1999.
6. Firouz, E, 2000. A Guide to the Fauna of Iran. Iran University Press, Tehran. 491 pp. (In Persian). Coad, B. W. and Vhlenkin, B. Y, 2004. Co-occurrence and zoogeography of the freshwater fishes of Iran. *Zool in the Middle East.*, 31:53-61.
7. Womochel, D. R., A new species of *Allactaga* (Rodentia: Dipodidae) from Iran. *Fieldiana Zool*, 72(5): 65-73, 1978
8. Mohammadi, S. and Naderi, Gh., New report from presence and distribution of *Allactaga firouzi* in Iran. *Journal of Ecology and The Natural Environment*, 2(12):281-283, 2010
9. Khan, M. S., Amphibians and Reptiles of Pakistan. Malabar, Florida: Krieger Publishing, 2006.
10. Rastegar-Pouyani, N. and Nilson, G., A new species of *Lacerta* (Sauria: Lacertidae) from the Zagros Mountain, Isfahan Province, west-central Iran. In: *Proceeding of the California Academy of Science*, ser. 4 50(10): 267-277, 1998