

Habitat associations and conservation of *Eremias acutirostris* (Boulenger, 1887) in the Sistan region, Zabol, Iran

¹Seyyed Saeed Hosseinian Yousefkhani, ^{1,2}Hamzeh Oraei, ^{1,3}Azar Khosravani and ^{1,4}Eskandar Rastegar-Pouyani

¹Iranian Plateau Herpetology Research Group (IPHRG), Faculty of Science, Razi University, 6714967346 Kermanshah, IRAN ²Department of Zoology, Faculty of Biology, Tehran University, Tehran, IRAN ³Department of Biology, Faculty of Science, Razi University, 6714967346 Kermanshah, IRAN ⁴Department of Biology, Faculty of Science, Hakim Sabzevari University, Sabzevar, IRAN

Abstract.—During a field survey in the Sistan region of Iran in October 2011, habitat of *Eremias acutirostris* was surveyed and four specimens of the species were collected. We report a locality situated along the road from Zabol to Doost Mohammad, near the town of Bonjar. The fragile habitat, consist of immobile sand dunes, is situated in proximity to an industrial zone, placing this remnant population under threat of pollution and other anthropogenic edge effects. We call the Zabol Environmental Protection Agency to act and insure the species' future in Iran.

Key words. *Eremias acutirostris*, Zabol, sand dune, Doost Mohammad, conservation

Citation: Hosseinian Yousefkhani SS, Hamzeh O, Khosravani A, Rastegar-Pouyani E. 2013. Habitat associations and conservation of *Eremias acutirostris* (Boulenger, 1887) in the Sistan region, Zabol, Iran. *Amphibian & Reptile Conservation* 6(2):31-34(e60).

Introduction

Eremias is a widespread Lacertid genus that is distributed from China to eastern Europe and southward to the Iranian plateau (Anderson 1999; Rastegar-Pouyani et al. 2007). The genus comprises approximately 15 species in Iran. *Eremias acutirostris* (Fig. 1) occurs in Iran, Afghanistan, and Pakistan, and listed as “Least Concern” by the IUCN (Anderson 1999, Rastegar-Pouyani et al. 2008). As a specialist species, *E. acutirostris* requires a suitable habitat, perhaps critical for its survival.

Within the distribution range of the species, its occurrence in Iran is limited to a small area (Zabol region) (Fig. 2). This particular habitat, characterized by vegetated sand dunes, is consumedly degraded by the high human population density in the area; main threats are overgrazing and industrial activities. In this study, we examined the species' habitat preferences and provide suggestions about its conservation, in association to these environmental problems.

Materials and methods

During a three day field survey in the Sistan region of Iran in October 2011, we observed 12 specimens of *E. acutirostris* in the field; four were collected and deposited in the Hakim Sabzevari Zoological Museum (SUHC 1084, 1085, 1086, and 1087). The locality was in an arid area of the Hamoon basin, approximately 20 km W of Bonjar on the road between Zabol and Doost Mohammad (N 31° 05' 15.6”, E 061° 37' 32.8”, elevation 440 m).

Correspondence. Email: mesalina.watsonana@gmail.com

The habitat consisted of immobile sand dunes with large shrubs (*Tamarix* sp. and *Haloxylon* sp.) (Fig. 3). The snake *Echis carinatus* and the gecko *Bunopus tuberculatus* were also observed and collected in the same habitat.

Results and discussion

Reptiles inhabit a diverse array of habitats, but are known to be sensitive to habitat destruction and degradation (Goode et al. 1995). Lizards in the genus *Eremias* inhabit xeric habitats in Iran, which are threatened mainly by grazing and industrial development. Human activity in the study area is evident and an industrial park has recently been constructed along the road between the villages. The construction of the industrial township, with all its accompanying structures, inevitably destroyed some of the fragile habitat. Drought conditions resulting in loss of vegetation have deteriorated the habitat, as shrubs are viable resources for food (via insect attraction) and shelter (refuge from predators) for the lizards. We presume that these recent modifications are negatively affecting the species' population within the area and may possibly lead to extinction of this lizard in Iran, if not restricted and protected.

Conservation of *E. acutirostris* and other rare species that may occur in the studied habitat are significantly depended on the decision making of the Department of Environment of the region, and the establishment of protected area(s). We hope that publication of our findings will improve the conservation of this rare species, with its restricted distribution in Iran.

Acknowledgments.—We thank Naser Sanchooli for field assistance in the Zabol region and John D. Willson for editing the manuscript for English. Our special thanks go out to Roy Talbi, for kindly providing helpful comments on the manuscript. We thank Craig Hassapakis for helping to improve parts of the manuscript.

Literature cited

Anderson SC. 1999. *The Lizards of Iran*. Society for the Study of Amphibians and Reptiles, Ithaca, New York, USA. 137 text-figs., distribution maps [unnumbered], 25 col. pls., 442 p.

Goode MJ, Howland JM, Sredl MJ. 1995. *Effects of microhabitat destruction on reptile abundance in*

Sonoran Desert rock outcrops. Nongame and Endangered Wildlife Program Heritage Report. Arizona Game and Fish Department, Phoenix, Arizona, USA. 25 p.

Rastegar-Pouyani N, Johari M, Rastegar-Pouyani E. 2007. *Field Guide to the Reptiles of Iran* (Volume 1: Lizards). Razi University Press, Kermanshah, IRAN. 298 p.

Rastegar-Pouyani N, Kami HG, Rajabizadeh M, Shafiei S, Anderson SC. 2008. Annotated checklist of amphibians and reptiles of Iran. *Iranian Journal of Animal Biosystematics* 4(1):43-66.

Received: 07 December 2012

Accepted: 21 February 2013

Published: 09 July 2013



Figure 1. Adult male *Eremias acutirostris* from the Zabol region, Iran.

Habitat associations and conservation of *Eremias acutirostris*



Figure 2. Map of Iran and the location of limited population (A) of *Eremias acutirostris* in east of Iran.



Figure 3. Habitat of *Eremias acutirostris* along the road from Bonjar to Doost Mohammad, Sistan region, Iran.



Seyyed Saeed Hosseinian Yousefkhani earned his B.Sc. in biological sciences from the Hakim Sabzevari University. He received his M.S. in animal biosystematics from the University of Razi, Kermanshah, where he researched the geographic variation of *Mesalina watsonana* (Sauria: Lacertidae) with morphological characters in Iran. He currently a research colleague in several reptile projects in Iran.



Hamzeh Oraie is a Ph.D. student in the department of zoology at the University of Tehran. He received his B.S. in biological sciences, and M.S. in animal biosystematics both from the University of Razi, Kermanshah. His M.S. research focused on the gecko fauna of Iran. His current research interests include molecular systematics and phylogeny of *Ophisops elegans* (Sauria: Lacertidae) in Iran.



Azar Khosravani earned her B.S. in biological sciences from the University of Zabol. She received her M.S. in animal biosystematics from the University of Razi, Kermanshah, where she researched the geographic variation of *Mesalina watsonana* (Sauria: Lacertidae) in Iran. Currently, she is a Ph.D. student in the department of biology at the University of Razi, Kermanshah. Her current research interests include molecular systematics and phylogeny of the Genus *Bunopus* (Sauria: Gekkonidae) in Iran.



Eskandar Rastegar-Pouyani earned his B.S. in animal science from Tehran University, Iran in 1995 and his M.S. in animal biosystematics from Teacher Training University of Tehran, Iran in 1997, where he studied the herpetofauna of the Semnan Province, northeastern Iran. In 2007 he received his Ph.D. from the University of Heidelberg, Germany under the advisement of Michael Wink and Ulrich Joger. His doctoral dissertation investigated the molecular phylogeny and phylogeography of the genus *Eremias* (Sauria, Lacertidae).