Journal of Biological Studies https://onlinejbs.com/ ISSN 2209-2560

#### Review

# **Review to the last ecological niche modelling studies on Iranian herpetofauna and their importance for species conservation**

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Received 1 March 2019; Accepted 4 March 2019; Published online 30 March 2019

Amphibians and reptiles are faced to global warming challenge (Malcolm et al., 2006). Climate change is the result of global warming that certainly will be affected on the niche shifts of animals, especially those directly dependent on temperature and moisture (Chen et al., 2011). During recent years, many studies were done on the effects of climate change on species niche shifts and habitat suitability of herps (Sinervo et al., 2010; Hosseinian Yousefkhani et al., 2013; Urban et al., 2013; Oraie et al., 2014; Hosseinian Yousefkhani et al., 2016; Hosseinian Yousefkhani et al., 2017; Rounaghi and Hosseinian Yousefkhani, 2018). Based on these studies, herps are sensitive to climate change and environmental conditions (Gibbons et al., 2000; Sinervo et al., 2010).

Many of reptiles and amphibian species were distributed outside of protected areas and then need more consideration by conservation biologists on the world. They can increase the public awareness about importance of these animals on their life. During recent years, Western Asia has experienced high dryness from last 50 years ago (Dore, 2005) and many reptile and amphibians faced to extinction risk. Iran is located in western Asia and crossed different zoogeographical realms (Afrotropical-Oriental-Palearctic) (Anderson, 1968), and this situation makes it most diverse in reptiles (Smid et al., 2014). Recent ecological studies confirmed that precipitation and temperature in summer and winter are most important climate variables on reptile's species distribution. Because of climate change, their distribution range will be shifted to suitable areas, but some of these species are relict and has limited distribution range and then they are faced mostly to extinct risk. Many endemic reptiles' species in Iran has unstable conditions and their population's size is reducing.

In this short note, I personally want to write for world herpetology community that Iranian reptiles and amphibians need more considerations from conservation biologist to protect them and try to awareness local people about their importance in Ecosystem chain. Many of the Iranian herps are not listed in IUCN Red List or has Data Deficient (DD) status, then here I suggest to all conservation biologists to publish their information regarding habitat of all herp species in Iran.

At final part, there are many methods to predict the future distribution range of all herp species in Iran and do a conservation management project by involving department of environment (DOE). DOE has different categorized area as Wildlife refuge, Protected area, National park and etc., and then by conservation management they can change their areas by Review to the last ecological niche modelling studies on Iranian herpetofauna.. Yousefkhani, 2019

change in animals range due to climate change. This is important for wildlife in all countries, but I hope in recent future this occurs on the world.

#### Acknowledgements

I would like to thank the anonymous reviewers for their valuable comments and suggestions to improve the quality of the paper.

### **Conflicts of Interest**

The author declares that he has no conflicts of interest.

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