

“To be or not to be”, *Lacerta mostoufii* Baloutch, 1976 (Squamata: Lacertidae) in Iran

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The enigmatic *Lacerta mostoufii* was described in 1976 based on a male holotype (MMTT 1582) and two juveniles (Paratypes, MMTT 1583-84); from Dasht-e Lut desert (Anderson, 1999). Shortly after, speculations began about it. First suggestion was that *L. mostoufii* might be described based on the blackened *Darevskia chlorogaster* (Eiselt, 1995). Quaintly one of paratypes (MMTT 1584) which was deposited in the Museum national d'Histoire naturelle (Paris) was re-examined and regarded as a specimen belonging to *L. praticola* (In den Bosch, 1999). As *Lacerta mostoufii* was never seen again since its description, it was regarded as a nomen dubium (Ahmadzadeh et al., 2013) and subsequently retracted from the list of the Iranian lizard fauna (Šmid et al., 2014).

All the comments and interpretations on the occurrence of *Lacerta mostoufii* are subjective. However, no one has already traveled to the type locality of this lizard, and unfortunately no effort has been done to find it in the disputed area until now. During a herpetological survey on the southern and eastern regions of the Iranian Plateau from June to August 2011, we had a chance to search the type locality and surrounding areas (Fig. 1). Our extensive survey failed to find any specimen belong to the genus *Lacerta* (*sensu lato*) around the Deh salm (31° 11' N, 59° 18' E), 50 km Southwest of Nehbandan, South Khorasan province (the presumed type locality of *Lacerta mostoufii*).

In order to investigate more sophisticatedly, modeling the habitat suitability as a method to test the assumption for the species presence (Phillips et al., 2006) was used. Since *Lacerta mostoufii* was described originally as a closely related species to *Darevskia defilippii*, distributional records of the genus *Darevskia* were obtained from all previous literature (Šmid et al., 2014) and also the type locality of *L. mostoufii*. Environmental layers were downloaded from bioclimate website (www.worldclim.org) in 30 second resolution. The Maximum entropy algorithm used for the suitable habitat prediction with cross validates replicate type, 10 replicate to obtain the best model and 0.2 of regularization multiplier to reach a non-positive affected model.

According to the final map (Fig. 2) which resulted with good AUC = 0.922 ± 0.008 (Area Under Curve), most suitable area for the genus *Darevskia* in Iran is located in northwestern and northern regions along the Elburz Mountains to northeastern regions in Kopet Dagh Mountains. It is clear that the type locality of *Lacerta mostoufii* is situated in an unsuitable region in eastern Iran, so that occurrence probability of a species belonging to the genus *Darevskia* in such a region is almost close to zero.



FIGURE 1. Habitat of *Lacerta mostoufi* in the Deh Salm village, 50 km Southwest of Nehbandan, South Khorasan province, Iran.

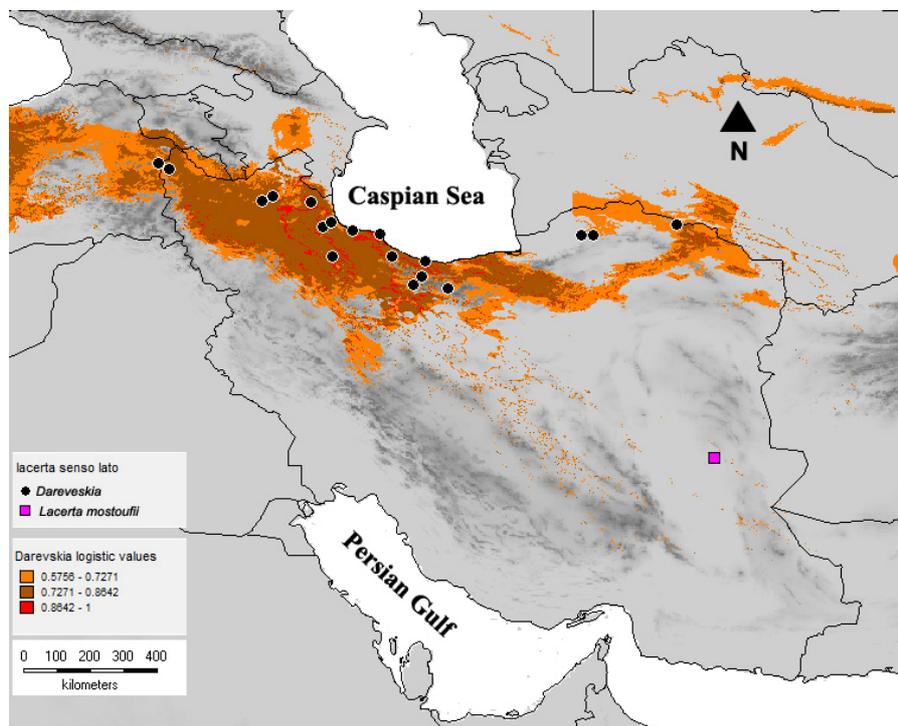


FIGURE 2. Potential distribution of the genus *Dareveskia* in Iran. Colors on the map indicate different suitability values. Black dots represent known records of the genus *Dareveskia* and Pink square represents type locality of *Lacerta mostoufi*.

Finally, according to the data come from of our field work and modeling the habitat suitability, it could be resulted that *Lacerta mostoufii* is not a real biological entity and, most likely, its description was based on material originated from different parts of Iran that was mixed-up by Baloutch with collections from Dasht-e Lut (Baloutch, 1976 & Anderson, 1999). Ultimately, the best decision is to remove *Lacerta mostoufii* from the Iranian lizard fauna.

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