

**On the Ecology of the Desert Sand Boa
Eryx miliaris (Reptilia, Boidae) in Kalmykia**

Leonid A. Neymark, <https://orcid.org/0000-0002-8899-2248>; Leonid.neymark@gmail.com

*A. N. Severtsov Institute of Ecology and Evolution, Russian Academy of Sciences
33 Leninsky Prosp., Moscow 119071, Russia*

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The paper contains data on the inhabitation, abundance and temperature selectiveness of the desert sand boa in Kalmykia. Bioclimatic variables influencing its range are also analyzed by modeling with the Maxent software. Two models were used in our analysis, built on 19 standard bioclimatic variables and on a shortlist after the removal of correlated variables. The body temperature of the desert sand boa varied from 12 to 33°C. Its population level stays rather high in Kalmykia, up to two specimen per ha on sand hills of the Chernozemelskiy district. The sand boa range in Kalmykia has not changed much as compared with the data gathered by V. A. Kireyev and M. K. Zhdokova in the 1970s and 2000s, respectively. Taking into account changes in the semidesert biotope distribution, in particular, the significant reduction of the area of blown sands during this period, this could evidence a higher biotopical plasticity of the species as it was commonly thought and a stronger dependence of its distribution on climatic factors than on the amount of sand dunes. This hypothesis is confirmed by some desert sand boa occurrence in steppe regions which are several tens of kilometers far from the nearest sand dunes. According to the Maxent modeling, the best climatic conditions for this species are in the Laganskiy district and the southern part of the Chernozemelskiy district of Kalmykia, which coincides with the areas mostly inhabited by sand boas. By the modeling results, the winter precipitation and the temperature of the warmest quarter of the year most strongly influenced its distribution.

Keywords: *Eryx miliaris*, Maxent, ecology, areal, Kalmykia.

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