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## **Past, Current And Future States Of Green Lizard (*Lacerta viridis*) Populations In Eastern Europe**

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Over the last decades, climate change and various anthropogenic pressures have been reported to have greatest impacts on reptile populations worldwide. Moreover, thermophilic species such as green lizard *Lacerta viridis* (Laurenti, 1768) are protected due to their dramatic population trends specially in Eastern Europe (Appendix II of the Bern Convention, national Red Data Books, etc.). Here we investigated the past, current and future states of this species in Eastern Europe. By studying the morphology of both museum specimens from the 1960s (n = 50) and comparing with modern populations (2012-2017, n=97), we noticed an increase in number of anomalies of head folidosis in the most recent specimens (21.1%). Recent field censuses and observations in our field sites throughout Ukraine also revealed an increase in the occurrence of rare or so-called abnormal morphs - melanized forms, "meridionalis morphotype" (Odesa and Mykolaiv regions) and "leopard morphotype" (Cherkasy region) , with visible signs of viral (Reoviridae) papillomas in the populations of southern Ukraine. Finally, by implementing bioclimatic models based in GIS, Maxent and Wordclim, we could predict a northward shift of the range of the species in Europe up to the Baltic countries by 2050. Consistently, there is already almost a 2-fold decrease in the number of populations in the south of its range (Black Sea region). All these records collected in the recent decades indicate that green lizard populations require creation of local and international conservation programs for the protection of the species.

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