PHYLOGEOGRAPHY

Preliminary molecular phylogeography of wide-spread steppe-runner lizard – *Eremias arguta* (Lacertidae) and considerations on its subspecific structure

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Steppe-runner (*Eremias (Ommateremias) arguta*) is one of the most widespread species of the Asian racerunners (genus *Eremias*), inhabiting steppes and semi-deserts of Eastern Europe and Middle Asia from Romania to Western Mongolia and China. Several subspecies were traditionally recognized, however morphological variability is so high that delimitation of these subspecies was always problematic. Here we apply Cytochrome B sequencing (50 samples from all the subspecies, 900 bp partial sequences) together with thorough morphological analysis for reconstruction of species history and reassessing its subspecific structure. The southernmost populations (*E. a. uzbekistanica*) from Uzbekistan both molecularly and morphologically form a clearly separated clade, very different from all other subspecies. Within more northern populations there is a split between populations from Northern Caucasus, Europe and Eastern Kazakhstan (*E. a. deserti*) and Central Kazakhstan populations (*E. a. arguta*). Transcaucasian (*E. a. transcaucasica*) steppe-runners group with Middle Asian populations. Finally, within the nominative subspecies the most basal clade is formed by populations from the Ustyurt plateau, and easternmost samples, assigned as '*E. a. potanini*' are deeply nested within *E. a. arguta* branch. Cytochrome B is a good marker for resolving subspecific structure of *Eremias*. Our data indicate an old split between *E. a. uzbekistanica* and all other taxa, probably coming from the area of Ustyurt plateau. This vicariant event is likely to have been caused by Paratethys regression. We assume that later, from the area of Ustyurt, steppe-runners may have dispersed in three main directions – westwards to Northern Caucasus, south-westwards across the Apsheron-isthmus to Transcaucasia and eastwards to Central Kazakhstan; moving further to the east the clinal variation pattern '*arguta-potanini*' was formed.

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