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Genetic Relationships between Iranian and Armenian *Darevskia raddei* Lizards

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ABSTRACT

Darevskia raddei sensu lato is a complex species of Caucasian rock lizards. It consists of four subspecies: *D. r. raddei*, *D. r. nairensis*, *D. r. vanensis* and *D. r. chaldoranensis,* whose phylogenetic status and relationships are still under discussion. Furthermore, *D. raddei* is the maternal parent of five parthenogenetic species originating through reticular speciation. In the present work, we used microsatellite markers to study *D. raddei* populations from Iran and their phylogenetic relationships with Armenian and Artsakh (Nagorno-Karabakh) populations. Previously, we demonstrated a deep divergence of the *D. raddei* complex inhabiting this territory, not only into the subspecies *D. r. nairensis* and *D. r. raddei*, but also between groups of populations that we named *D. r. raddei* TT and *D. r. raddei* GG. We characterized *D. raddei* samples from six localities in Iran: five representing *D. r. raddei* and one *D. r. chaldoranensis.* Significant genetic similarity was shown between Iranian populations of *D. r. raddei* and the subspecies of *D. r. chaldoranensis.* This analysis suggests that Iranian populations are more closely aligned with the *D. r. raddei* GG group (includes populations from Geghard, Goris, Yeghegnadzor, and Kajaran in Armenia). Lizards from this group are typically smaller and are distinguished by their less green and more pronounced yellow ventral coloration and a subdued dorsal pattern. Therefore, this study provides the first molecular genetic characterization of *D. raddei* lizards from Iran and their proximity with *D. raddei* populations from southern Armenia. This research was supported by Russian Science Foundation Grant No. 25-14-00028.

Keywords: genetic polymorphism, genetic divergence, microsatellite loci, *Darevskia raddei*

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