

Accepted Manuscript

Title: Phylogenetic signals in scale shape in Caucasian rock lizards (*Darevskia* species) “Your article is registered as a regular item and is being processed for inclusion in a regular issue of the journal. If this is NOT correct and your article belongs to a Special Issue/Collection please contact p.r@elsevier.com immediately prior to returning your corrections.”



Authors: Mariam Gabelaia, Dominique Adriaens, David Tarkhnishvili

PII: S0044-5231(17)30026-8
DOI: <http://dx.doi.org/doi:10.1016/j.jcz.2017.04.004>
Reference: JCZ 25464

To appear in:

Received date: 17-11-2016
Revised date: 19-2-2017
Accepted date: 11-4-2017

Please cite this article as: <http://dx.doi.org/>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Phylogenetic signals in scale shape in Caucasian rock lizards (*Darevskia* species)**Mariam Gabelaia^{a,b}, Dominique Adriaens^a, David Tarkhnishvili^b**^a Department of Biology, Ghent University, K.L. Ledeganckstraat 35, Gent, 9000, Belgium^b School of Natural Sciences and Engineering, Ilia State University, Kakutsa Cholokashvili Ave 3/5, Tbilisi, 0162, Georgia

mariam.gabelaia.1@iliauni.edu.ge

Dominique.Adriaens@ugent.be

david_tarkhnishvili@iliauni.edu.ge

Corresponding author: Mariam Gabelaia, mariam.gabelaia.1@iliauni.edu.ge

Abstract

The genus *Darevskia* comprises over 20 species of small-bodied lizards, mainly occurring in the Caucasus Mountain Region. They show differences in body size, scalation and coloration, however, fully diagnostic characters that could separate the species with a high confidence level are still lacking. The early phylogenetic hypothesis of this group was based on ‘traditional’ analysis of morphology, based on multiple body and head measurements and scalation traits. Later, a molecular phylogeny of the genus rejected some of the proposed topology based on morphological traits. In this paper, we used quantitative morphological data (outline-based shape data) to test phylogenetic similarities, as proposed by these earlier hypotheses. We analyzed the pileus shape and the anal area of more than 200 individuals, representing six species of *Darevskia*, using outline based elliptic Fourier analysis. The analysis did confirm a clustering of the individuals and species (using UPGMA) from the same mitochondrial DNA clade. Hence, the phylogenetic affinity of the major clades in *Darevskia* could be identified using both molecular methods and outline analysis, whereas a traditional quantitative morphological analysis could not.

Keywords: Fourier analysis; geometric morphometrics; outline analysis; phylogenetically informative traits; pileus; scalation.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات