Zootaxa 3022: 39–57 (2011)
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

A new leaf tailed gecko species from northern Madagascar with a preliminary assessment of molecular and morphological variability in the *Uroplatus ebenaui* group

FANOMEZANA MIHAJA RATSOAVINA[1,2,3,7], EDWARD E. LOUIS JR.[3,6], ANGELICA CROTTINI[1,4], ROGER-DANIEL RANDRIANIAINA[1,2], FRANK GLAW[5] & MIGUEL VENCES[1]

[1]*Technical University of Braunschweig, Zoological Institute, Mendelssohnstr. 4, 38106 Braunschweig, Germany*
[2]*Département de Biologie Animale, Université d'Antananarivo, BP 906. Antananarivo, 101 Madagascar*
[3]*Center for Conservation Research, Omaha´s Henry Doorly Zoo, 3701 South 10th Street, Omaha, NE 68107, United States*
[4]*CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Campus Agrário de Vairão, R. Padre Armando Quintas, 4485-661 Vairão, Portugal*
[5]*Zoologische Staatssammlung München, Münchhausenstr. 21, 81247 München, Germany*
[6]*Madagascar Biodiversity Partnership, VO Bis A, Manakambahiny, Antananarivo, Madagascar*
[7]*Corresponding author. E-mail: noufam@yahoo.fr*

Abstract

Endemic to Madagascar, the genus *Uroplatus* of the family Gekkonidae consists of 13 nominal species of leaf-tailed geckos. These forest dwelling lizards are famous for their cryptic and odd appearance. We describe a new species of the *Uroplatus ebenaui* group from the Montagne d'Ambre massif in northern Madagascar. *Uroplatus finiavana* **sp. nov.,** is morphologically similar to the sympatric *U. ebenaui* but differs in multiple character state expressions, among which are a longer tail and an unpigmentated oral mucosa. It also can be differentiated from *U. ebenaui* and all other *Uroplatus* species based on a high level of divergence in the mitochondrial ND4 gene and the nuclear C-mos gene, and no instances of haplotype sharing exist in these genes among the analysed species. The new species is relatively abundant at Montagne d'Ambre National Park where at lower elevations (ca. 700 m) it occurs together with *U. ebenaui*, without any signal of genetic admixture. Records of *U. ebenaui* in the mountains and forest blocks of northern Madagascar (especially in the Tsaratanana massif) actually represent other candidate species with distinct morphology and characterized by a high genetic divergence from the described species. Beside the description of the new species we discuss the geographic provenance of the holotypes of the nominal species and synonyms in the *U. ebenaui* group and provide further information on the phylogeny of the *U. ebenaui* species group including the first incorporation of *Uroplatus malama* in a molecular data set.

Key words: *Uroplatus finiavana* **sp. nov.**, *Uroplatus malama*, ND4, C-mos, Gekkonidae, junior synonyms, Montagne d'Ambre, Madagascar

Introduction

Due to its unique biodiversity and the continued decline of its biota as a result of human pressure, Madagascar is recognized to be among those countries with highest conservation priorities (Myers *et al.* 2000). Even so, knowledge of its vertebrate fauna is far from complete, and new vertebrate species have been discovered and described at an unprecedented rate in the last few years (e.g., Yoder & Nowak 2006; Glaw *et al.* 2010). Focusing on the herpetofauna, Madagascar harbors over 660 described species of which more than 95% are endemic to the island (Glaw & Vences 2007). This high species diversity is associated with a high degree of microendemism, and this high percentage of range-restricted species is largely the outcome of a specific combination of climate, topography, vegetation and historical events (Wilmé *et al.* 2006; Schatz 2000). One of the areas exhibiting high microendemism is Montagne d'Ambre, a volcanic massif covered by an extensive mountain forest that rises to an elevation of 1450 m, and forms an isolated rainforest patch surrounded by the otherwise dry habitat of the northern tip of Madagascar.

Accepted by A. Bauer: 1 Aug. 2011; published: 12 Sep. 2011