



Discovery of the genus *Plethodontohyla* (Anura: Microhylidae) in dry western Madagascar: description of a new species and biogeographic implications

FRANK GLAW^{1,5}, JÖRN KÖHLER², PARFAIT BORA³, NIRHY H. C. RABIBISOA³,
OLGA RAMILJAONA³ & MIGUEL VENCES⁴

¹Zoologische Staatssammlung, Münchhausenstr. 21, 81247 München, Germany. E-mail: Frank.Glaw@zsm.mwn.de

²Department of Natural History - Zoology, Hessisches Landesmuseum Darmstadt, Friedensplatz 1, 64283 Darmstadt, Germany. E-mail: j.koehler@hlmd.de

³Université d'Antananarivo, Département de Biologie Animale, Madagascar. E-mail: parfaitbr@yahoo.fr; nhcrabibisoa@yahoo.fr; olga@univ-antananarivo.mg

⁴Division of Evolutionary Biology, Zoological Institute, Technical University of Braunschweig, Spielmannstr. 8, 38106 Braunschweig, Germany. E-mail: m.vences@tu-bs.de

⁵Corresponding author

Abstract

The cophyline anuran genus *Plethodontohyla* is considered to be restricted to humid eastern and central Madagascar. Recent surveys of the herpetofauna in the karstic limestone massif "Tsingy de Bemaraha" revealed a distinctive new species which constitutes the first record of this genus in central-western Madagascar. *Plethodontohyla fonetana* sp. nov. is characterized by large size (snout-vent length up to 65 mm in females), enlarged fingertips, sinuous dorsal folds, and a reticulated dorsal coloration. It is probably closely related to the other *Plethodontohyla* species with enlarged fingertips. The discovery of the new species suggests the existence of forest corridor between the eastern rainforest stretch and the relatively dry Tsingy de Bemaraha massif during a period of more humid climate. A continuous strip of gallery forest along a river running from the central high plateau to the west might have been sufficient to allow dispersal to the Bemaraha plateau.

Key words: Amphibia, Anura, Microhylidae, *Plethodontohyla*, new species, Madagascar, biogeography

Introduction

Cophyline microhylids currently comprise seven genera with 43 described species (Andreone *et al.* 2005b; Glaw & Vences 2007). Next to the endemic Malagasy-Comoroan family Mantellidae with 12 genera and about 165 species (Glaw & Vences 2006; Glaw *et al.* 2006) they represent the second largest amphibian radiation in Madagascar. Many new cophyline species have already been discovered, but still await their description. Thus far, cophyline frogs are considered to be largely restricted to rainforest environments or moist high-altitude habitats of the east and the central high plateau, whereas they are unknown from the arid western regions of the island (Blommers-Schlösser & Blanc 1991; Glaw & Vences 1994). The only published record of a cophyline species from a deciduous dry forest refers to a small *Stumpffia* species in the Ankarafantsika reserve (Blommers-Schlösser & Blanc 1991; Ramanamanjato & Rabibisoa 2002). During recent fieldwork in central western Madagascar, we discovered a distinctive new *Plethodontohyla* in the Tsingy de Bemaraha National Park. In this paper we describe this new species and discuss the biogeographical implications of its discovery.