



## A new polymorphic *Phrynobatrachus* (Amphibia: Anura: Phrynobatrachidae) from western Nigeria

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### Abstract

We describe a new small *Phrynobatrachus* species from western Nigeria, the eastern-most part of the Upper Guinea biodiversity hotspot. The new species exhibits a combination of unique morphological characters and a belly without pattern. Morphologically it is characterised by small size, compact roundish body with a round and short snout, large eyes, absence of an eyelid cornicle, presence of a conspicuous row of warts with pores on the upper mandible, absence of discs on toe and finger tips, well developed webbing, larger warts on forehead and inter-orbital space and a pair of, sometimes indistinct, elongated chevron like ridges on the back. Analysis of mitochondrial 16S rRNA revealed that the new species differs from 33 other West and Central African species of the genus by a minimum distance of 6.6%. Genetically the new species is most similar to *Phrynobatrachus ghanensis*, *P. guineensis* and *P. phyllophilus*, all being endemic to the western part of the Upper Guinea forest zone.

**Key words:** *Phrynobatrachus rainerguentheri* sp. nov., Central Africa, degraded forest, Upper Guinea Forest, West Africa

### Introduction

Although intensive herpetofaunistic investigations in Nigeria started about fifty years ago (i.e. Schiøtz 1963, 1966; see Onadeko & Rödel 2009 and Blackburn 2010 for further citations) the herpetofauna still is far from being completely assessed. Thanks to Schiøtz's (1967) landmark monograph, the treefrogs are comparatively well known. This is quite different for many other anurans, such as the small leaf litter dwelling frogs of the genus *Phrynobatrachus*. A continent-wide study of this genus indicated a variety of undescribed species (Zimkus *et al.* 2010). Frétey (2008) lists 13 *Phrynobatrachus* species for Nigeria, recently two more have been added (Blackburn 2010; Blackburn & Rödel 2011).

In 2009 we published herpetofaunistic data from western Nigeria, including various unexpected species records, among them a *Phrynobatrachus* that we believed to be an undescribed species. However, we refrained from describing it, as we had only few specimens and neither calls nor genetic data available (Onadeko & Rödel 2009). In the meantime, one of us (A.B. Onadeko) revisited the original site of this record several times and finally succeeded in collecting additional specimens from which we could collect further morphological and genetic data. This confirmed our previous judgment that these frogs represent a new species. We herein describe it.

### Material and methods

Measurements were taken according to Rödel & Ernst (2002b) and Rödel *et al.* (2009a), with a dial calliper ( $\pm 0.1$  mm) or with an ocular micrometer in a dissecting microscope ( $\pm 0.1$  mm). Measures are summarised in Table 1. Additionally, we recorded the structure of the dorsal and ventral skin, and the colour pattern. Voucher specimens are deposited at the Museum für Naturkunde, Berlin (ZMB) and the Department of Zoology, University of Lagos