



A new small *Arthroleptis* (Amphibia: Anura: Arthroleptidae) from the Liberian part of Mount Nimba, West Africa

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Abstract

A new small West African *Arthroleptis* from the rainforest at the south-eastern tip of Mount Nimba, Liberia is described. The new species differs from all known congeners by the combination of a unique color pattern, a rounded canthal region and a completely smooth skin. The comparison of 592 base pairs of the mitochondrial 16S rRNA from the new species with *Arthroleptis* samples from all over West Africa, revealed genetic distances between 13.4–17.9%. From the morphologically similar *A. aureoli* the new species differed by 17.9%. Future research may reveal the necessity to establish a new genus for this peculiar new frog.

Key words: *Arthroleptis langeri* sp. nov., rainforest, Mount Nimba, Liberia

Introduction

The genus *Arthroleptis* Smith, 1849 is a member of the family Arthroleptidae, endemic to Sub-Saharan Africa. The species of this family occur in a variety of habitats, but most species live in forest habitats. *Arthroleptis* is a taxonomically difficult genus with potentially many distinct, but morphologically similar species (Rödel 2000; Rödel & Bangoura 2004). Currently 38 species are recognized (Frétey 2008; Blackburn 2009b; Blackburn *et al.* 2009; Frost 2009). From West Africa various species have been described (summarized in Rödel & Bangoura 2004). Unfortunately, the morphological variation within species often exceeds the variation between species. Hence, morphological characters useful for species determinations are often lacking, and whereas genetic and acoustic characters clearly indicate the existence of distinct, partly even syntopic species, it is not possible to assign many of the available names to the various populations (Rödel & Bangoura 2004). Consequently, most researchers have restricted recent *Arthroleptis* descriptions to clearly discernible, large members of the genus (Grandison 1983; Poynton 2003b; Ernst *et al.* 2008; Blackburn *et al.* 2009; Poynton *et al.* 2009). During a recent survey on Mount Nimba in north-eastern Liberia we discovered a frog, at first glance not assignable to a described West African species. A closer examination revealed that it is a member of the genus *Arthroleptis*, as defined right now; however, distinctly differing from all other described species. We herein present and describe this new small species.

Material and methods

Measurements were taken with a dial caliper (± 0.1 mm) and a dissecting microscope (Leica MZ 95). We recorded snout-urostyle-length (SUL), head width measured directly behind the eyes (HW), femur length