



A new beautiful squeaker frog (Arthroleptidae: *Arthroleptis*) from West Africa

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Abstract

A new small *Arthroleptis* from western Guinea, West Africa, is described. The new species differs from all known congeners by the combination of small size and a peculiar red dorsal colour with irregular large black and small white, yellow or blue spots. The ventral side is almost uniform greyish black with a few, small white spots. Males lack hypertrophied third fingers, digital and inguinal spines. Fingers and toe tips are slightly enlarged. The new species differs in its colour pattern, smaller size, broader toe and finger tips, the lack of hypertrophied third fingers and digital spines in males, and a mean of 4.7% in the investigated part of the mitochondrial 16S rRNA gene to *A. aureoli*, which is morphologically and genetically the most similar species. Genetic comparisons of the new species with other available *Arthroleptis* sequences from species found across Africa revealed genetic distances of 16.0–23.4%.

Key words: *Arthroleptis formosus* sp. nov., gallery forest, tree savanna, rocky ground, Upper Guinea, biodiversity hotspot

Introduction

Recently several new species of squeaker frogs, genus *Arthroleptis* Smith, 1849, have been described from various sub-Saharan countries (e.g. Blackburn 2009b; Blackburn 2010). Most of these new species are larger sized members of the genus (> 30 mm SVL; Poynton 2003; Ernst *et al.* 2008; Blackburn *et al.* 2009; Poynton *et al.* 2009). From West Africa various mid-sized *Arthroleptis* species of uncertain taxonomy have been described (see summaries in Frétey 2008; Rödel *et al.* 2009; Blackburn *et al.* 2010). Most of them belong to a complex of species similar to *A. poecilonotus* (see Fig. 6 in Rödel *et al.* 2009), which are, at present, impossible to distinguish on the bases of morphology only (Rödel & Bangoura 2004; Blackburn 2010; compare Poynton & Loader 2008 for a similar East African example). In contrast, a few small (< 25 mm SVL) or even minute (< 20 mm SVL) African species with unique morphological features, i.e. colour patterns, have become known (Schjøtz 1964; Blackburn 2009b; Rödel *et al.* 2009). During a recent survey in the Téliélé region of western Guinea we discovered very colourful, but unknown, small frogs within highly degraded gallery forest and forested savanna. Morphological and genetic examination revealed that they are members of the genus *Arthroleptis* and represent an undescribed species. We herein present and describe this new species.

Material and methods

Vouchers of the new species were collected, anesthetized in a chlorobutanol solution and thereafter preserved in 70% ethanol. Liver samples were taken for genetic analyses and stored in 96% ethanol. One juvenile (ZMB 75487) was completely preserved in 96% ethanol. Eight specimens are kept at the Museum für Naturkunde, Berlin (ZMB),