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A new species of Duttaphrynus (Anura: Bufonidae) from Northeast India

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Abstract

A new species of montane toad *Duttaphrynus* is described from Nagaland state of Northeast India. The new species is diagnosable based on following combination of characters: absence of preorbital, postorbital and orbitotympanic ridges, elongated and broad parotid gland, first finger longer than second and presence of a mid-dorsal line. The tympanum is hidden under a skin fold (in male) or absent (in female). The species is compared with its congers from India and Indo-China. We propose to consider *Duttaphrynus wokhaensis* as junior synonym of *Duttaphrynus melanostictus*.

Key words: Duttaphrynus chandai, Nagaland, New species

Introduction

The genus *Bufo* (Bufonidae) since long has been overlooked by the herpetologists as it includes diverse group of species from different continents and zoogeographic regions. Inger (1972) in order to resolve some of the problems of taxonomy of the species of *Bufo*, recognized and defined seven species groups among *Bufo* of Eurasia. These are the *biporcatus*, *asper*, *melanostictus*, *stomaticus*, *viridis*, *bufo* and *orientalis* groups. The *melanostictus* group is characterized by presence of orbital cranial ridge, vocal sac when present having surrounding muscles with melanophore, and absence of parietal ridge, tarsal ridge and tibia gland (Inger 1972, Dubois and Ohler 1999). Frost *et al.* (2006) opined to partioned *Bufo* into several genera and erected the generic name *Duttaphrynus* for the *Bufo melanostictus* group as defined by various authors (Inger 1972, Frost 1985, Dubois and Ohler 1999). Van Bocxlaer *et al.* (2009) and Biju *et al.* (2010) to restore monophyly of *Duttaphrynus* suggested expansion of *Duttaphrynus* to include the most recent common ancestor of *Bufo melanostictus* (Schneider, 1799) and *Bufo stomaticus* Lütken, 1864, and all of its descendants. Presently *Duttaphrynus* includes 30 nominal species (see Frost 2011). In an inventory of herpetofauna of Nagaland state, north-eastern India (Fig. 1) a new species of Bufonidae was encountered, which showed the characters of *melanostictus* group and is consequently described here as a new species of *Duttaphrynus*.

Materials and methods

Two adult males and four adult females comprise the type series. They were photographed and euthanized. Later they were fixed in formalin and subsequently transferred to 70% ethanol. Sex was determined by probing through a small slit made laterally and directly observing the gonad to determine the state of maturity. The measurements were taken with MitutoyoTM dial vernier callipers (to the nearest 0.1 mm), within 14 months of collection and preservation. The specimens measured were ZSIC A 11453, ZSIC A 11456, ZSIC A 11455, ZSIC A 11454, AVCM A 1044 and AVCM A 0964.

We measured and compared the holotypes of entire series of *Duttaphrynus* erected by Mathew and Sen (2009) and also *D. crocus* and *D. stuarti*. For *D. cyphosus* the translation of original description was used. *D.*

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