



The taxonomic status of some spiny-backed treefrogs, genus *Osteocephalus* (Amphibia: Anura: Hylidae)

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Abstract

A reassessment of some Amazonian spiny-backed treefrogs (*Osteocephalus*) either considered to be junior synonyms or not associated yet with *Osteocephalus* reveals that *O. cabrerai* (Cochran and Goin, 1970) from lowland Colombia and Peru is distinct from a frog previously used to revalidate the species, that *O. festae* (Peracca, 1904) is a valid species from the foothills of the Andes in Ecuador, and that *Hyla inframaculata* Boulenger, 1882, from the lower Amazon in Brazil, is a member of this genus. The oldest available name for *O. elkejungingerae* (Henle, 1981) from the Andean foothills in Peru is *O. mimeticus* (Melin, 1941). Another Melin (1941) species, *Hyla vilarsi* from the Rio Negro watershed in Brazil, is also an *Osteocephalus* revalidated from the synonymies of several other frogs.

Key words: Amazonia, Amphibia, Anura, Brazil, Colombia, Ecuador, Hylidae, *Osteocephalus*, *Osteocephalus cabrerai*, *Osteocephalus elkejungingerae*, *Osteocephalus festae* nov. comb., *Osteocephalus inframaculatus* nov. comb., *Osteocephalus mimeticus*, *Osteocephalus vilarsi* nov. comb., Peru, revalidation, taxonomy

Introduction

The Neotropical hylid genus *Osteocephalus* is presently comprised of 21 species distributed in Amazonia and on the Guiana Shield (Frost 2009). The last review (Trueb and Duellman 1971) was published almost 40 years ago. Several species were named subsequently (Henle 1981, Martins and Cardoso 1987, Jungfer and Schiesari 1995, Ron and Pramuk 1999, Jungfer *et al.* 2000, Jungfer and Lehr 2001, Smith and Noonan 2001, Jungfer and Hödl 2002, Lynch 2002, MacCulloch and Lathrop 2005, Moravec *et al.* 2009), two were transferred to *Osteocephalus* from *Hyla* (Lynch 2006, Wiens *et al.* 2006), one transferred from *Osteocephalus* to the new genus *Itapotihyla* (Faivovich *et al.* 2005), and two species were resurrected from the synonymies of other *Osteocephalus* species (Duellman and Mendelson 1995). But still the genus is far from being well understood on an alpha taxonomic level. This hampers studies of the phylogeny of the genus. Recently, Moravec *et al.* (2009) have shown that misidentifications have had effects on a phylogenetic tree with respect to the relationships among *Osteocephalus* (Faivovich *et al.* 2005). Due to their overall similarity in adult frogs of the same sex, but also because of sexual dimorphisms and considerable ontogenetic change within species, many are difficult to identify, especially when they are only known as preserved specimens, one sex, or one age class (Trueb and Duellman 1971, Jungfer and Hödl 2002).

During the last few years I have accumulated life history data and undescribed species. Several species in various museum collections also await description. Before adding more new species it is necessary to address the taxonomic status of some frogs that are currently considered to be junior synonyms of other species or have not yet been assigned to the genus *Osteocephalus* at all. Comparisons and, where necessary, detailed descriptions are provided of five species in this study. Three of them belong to the *Osteocephalus buckleyi* complex (within a more inclusive *O. buckleyi* group; Jungfer *et al.*, in prep.): frogs camouflaged in shades of brown, gray, and green, with dermal appendages such as toe fringes or tubercles and also tubercles on tarsus,