

## Larval identities of *Ansonia hanitschi* INGER, 1960 (Amphibia: Bufonidae) and *Polypedates colletti* (BOULENGER, 1890) (Amphibia: Rhacophoridae) from East Malaysia (Borneo)

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**Abstract.** We describe the tadpoles of *Ansonia hanitschi* INGER, 1960 and *Polypedates colletti* (BOULENGER, 1890) from East Malaysia, Borneo. The morphological description is supplemented by photos of living specimens and SEM images of external and internal features. Identification was based on morphological and genetic characters (16S rRNA). The tadpole of *A. hanitschi* is among the largest tadpoles described for the genus *Ansonia* from Borneo. This suctorial-rheophilous tadpole has been collected from fast-flowing rocky streams, in association with foaming currents. The tadpole of *P. colletti* is redescribed due to uncertainties about its identity and lack of photographic evidence in previous descriptions. It is an inhabitant of stagnant waters, living in and on flooded leaf litter accumulations.

Key words. Bufonidae, Rhacophoridae, *Ansonia hanitschi*, *Polypedates colletti*, tadpole description, larva, larval morphology, oral disk.

### Introduction

At present 5,574 anuran species have been described ([www.amphibiaweb.org](http://www.amphibiaweb.org)). New species continue to be discovered from even well-explored regions of the earth, but the inventory and description of larval forms of the known species are far from complete. However, recognition of the larval stages and descriptions of tadpoles are essential for many purposes and research questions, such as surveys, habitat inventories, studies on resource use in habitats, interspecific competition studies, and conservation efforts. Tadpoles are so different anatomically and ecologically from the adult stage that they deserve separate treatment (McDIARMID & ALTIG 1999). Interest in tadpoles has increased in the recent past, and various studies have attempted to summarize regional tadpole faunas (for example, CHOU & LIN 1997, LEONG & CHOU 1999, ANSTIS 2002).

For the island of Borneo, and especially the East Malaysian states of Sabah and Sarawak, ROBERT F. INGER laid a solid foundation for tadpole research in a series of papers, espe-

cially INGER (1966, 1983, 1985, 1992) and INGER et al. (2006). In a recent study (DAS & HAAS 2006), we summarized the literature that provides data on larval identities of Bornean amphibians. According to this survey, approximately 55% of the Bornean amphibian fauna have known larvae; since then, one new description has become available (INGER et al. 2006). Even when descriptions are available, these are often superficial or in abbreviated form, sometimes without drawings, often without images (photographs), preventing unequivocal identification of larvae in the field or laboratory and the reproduction of the former. Furthermore, the descriptions surveyed by DAS & HAAS (2006) were frequently without deposited well-documented voucher specimens, making identities of described tadpoles uncertain. This is especially a problem with old species names that are now considered to contain two or more valid species, e.g., *Leptobrachium montanum* FISCHER, 1885 and *Hylarana signata* (GÜNTHER, 1872) (see MALKMUS et al. 2002, BROWN & GUTTMAN 2002).

The present work describes two larval