Identity of larval Meristogenys from a single stream in Sabah, Malaysia (Amphibia : Ranidae)

Abstract

A morphological and molecular survey was conducted to examine the association between larvae and adults of Bornean torrent frog Meristogenys from a stream in Mahua, Crocker Range, Sabah, Malaysia. We identified five discrete morphotypes of larvae, which also showed considerable genetic differentiation. Each larval morphotype was associated through DNA sequence comparisons with adult specimens that had been identified morphologically. One morphotype, identified as M. orphnocnemis, was less similar to the larva of this species than to an unidentified larva, both reported previously. Adults of two other larvae were identified as M. amoropalamus and M. kinabaluensis, but the larval morphotypes differed from previous descriptions of these larvae. Adults associated with another morphotype resembled M. whiteheadi, but had longer tibia. This larval morphotype was dissimilar to previous descriptions of the M. whiteheadi larva, but was similar to another unidentified larva previously reported. No adult specimens were associated with the fifth larval morphotype, which matched the larva reported as M. amoropalamus. From these results, we suspect that either some previous studies include misidentifications or several undescribed, cryptic taxa morphologically resemble known adult species, but differ as larvae. © 2007 The Linnean Society of London, Zoological Journal of the Linnean Society, 2007, 151, 173-189. © 2007 The Linnean Society of London.