



Multi-locus phylogeny and taxonomic revision of *Uperoleia* toadlets (Anura: Myobatrachidae) from the western arid zone of Australia, with a description of a new species

RENEE A. CATULLO^{1,4}, PAUL DOUGHTY², J. DALE ROBERTS³ & J. SCOTT KEOGH¹

¹Evolution, Ecology & Genetics, Research School of Biology, The Australian National University, Canberra, ACT, 0200 AUSTRALIA

²Department of Terrestrial Zoology, Western Australian Museum, 49 Kew Street, Welshpool WA 6106, AUSTRALIA

³School of Animal Biology M092, University of Western Australia, nedlands, WA 6009, AUSTRALIA

⁴Corresponding author. E-mail: renee.catullo@anu.edu.au

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Abstract

We generated a multi-locus phylogeny to test monophyly and distributional limits in Australian toadlets of the genus *Uperoleia* from the western arid zone of Australia. The molecular data were used in combination with a detailed assessment of morphological variation and some data on call structure to complete a taxonomic revision of the species that occur in this region. Our work reveals the existence of not two but five species in the region. *Uperoleia russelli* is restricted to the Carnarvon and Gascoyne Regions south of the Pilbara. *Uperoleia micromeles* is distributed from the Tanami Desert through the Great Sandy Desert and along the northern edge of the Pilbara. *Uperoleia talpa* was previously believed to be a Fitzroyland region endemic but it is further distributed along Dampierland and into the Roebourne Plain. *Uperoleia glandulosa* is a larger species than previously described as well as a greater habitat generalist, inhabiting the rocky Pilbara region and the sandy region around Port Hedland. We also describe a new species, *U. saxatilis* **sp. nov.**, endemic to the Pilbara craton.

Key words: frog, anuran, Pilbara, Kimberley, geology