



A new species of Australian freetail bat *Mormopterus eleryi* sp. nov. (Chiroptera: Molossidae) and a taxonomic reappraisal of *M. norfolkensis* (Gray)

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Abstract

The species-level taxonomy of Australian *Mormopterus* has a long history of uncertainty. In this paper we review in detail the historic problems associated with determining the relationship between the *norfolkensis* holotype (allegedly from Norfolk Island) and forms occurring on mainland Australia. Using external and cranial characters, we establish that the holotype is conspecific with mainland specimens and we provide a redescription of the species. We also describe a new species, *Mormopterus eleryi* sp. nov. from central Australia. Updated allozyme profiles (a total of 40 putative loci) show that *M. norfolkensis* and *M. eleryi* sp. nov. diverge from one another at an average of 49% fixed differences and each diverge from the ‘*planiceps-beccarii-loriae*’ complex at an average of 48% and 45% fixed differences respectively. While both species are readily diagnosable by external and cranial features, they are especially distinctive in the morphology of the upper molars and glans penis. Echolocation call profiles as recorded by ANABAT bat detectors also show both species to have unique search phase calls compared to other Australian *Mormopterus* species. Both *M norfolkensis* and *M. eleryi* sp. nov. are known from less than 30 museum specimens each.

Key words: taxonomy, morphology, allozymes, Australia, echolocation