



Patterns of morphological and genetic variation in the *Mentocrex kioloides* complex (Aves: Gruiformes: Rallidae) from Madagascar, with the description of a new species

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Abstract

We examine patterns of morphological and molecular genetic differentiation in the endemic *Mentocrex kioloides* complex of Madagascar. This forest-dwelling rail (often placed in *Canirallus*) is known from two subspecies: *M. k. kioloides*, which occurs in the island's humid central and eastern forests; and *M. k. berliozii*, which occurs in the transitional dry deciduous-humid forests of the northwest. Two new specimens (an adult and a downy young) recently became available from limestone karst areas of the lowland central west, the adult of which is notably different in size and plumage coloration, as well as showing considerable genetic divergence, from the two recognized subspecies of *M. kioloides*. The central west animals are herein named as a species new to science, *Mentocrex beankaensis*, **sp. nov.**

Key words: Madagascar Wood Rail, Beanka Massif, *tsingy* forest

Résumé

Les différences morphologiques et génétiques entre les individus appartenant au complexe *Mentocrex kioloides*, endémique de Madagascar ont été examinées. Cette espèce forestière de râle était jadis séparée en deux sous-espèces: *M. k. kioloides* se rencontrant dans les forêts humides du Centre et de l'Est et *M. k. berliozii* dans la forêt de transition entre la forêt sèche caducifoliée et la forêt humide du Nord-ouest. De nouveaux spécimens, provenant des zones karstiques des plaines du Centre-ouest devenus récemment disponibles, montrent des différences de taille et de coloration du plumage. En outre, ils se distinguent par une divergence génétique considérable par rapport aux deux sous-espèces connues de *M. kioloides*. Les individus du Centre-ouest sont ici désignés comme une nouvelle espèce pour la science, *Mentocrex beankaensis*, **sp. nov.**

Introduction

The past few decades have seen considerable advances in knowledge of the highly endemic avifauna of Madagascar (Goodman & Hawkins 2008). Systematic advances include resolution of certain higher-level taxonomic questions and, to a lesser extent, refinements at the species level (Johnson *et al.* 2000; Cibois *et al.* 2001; Kirchman *et al.* 2001; Sorensen & Payne 2005). Numerous questions remain concerning intra-specific relationships of endemic taxa, and only a few studies using molecular genetics have examined patterns of geographic variation (e.g. Goodman *et al.* 2001; Goodman & Weigt 2002; Fuchs *et al.* 2007).

The Madagascar Wood Rail, *Mentocrex kioloides* (Pucheran) is a relatively poorly known endemic Malagasy forest-dwelling species. The nominate form of this highly secretive terrestrial bird is widely distributed across the