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Eastern Australian Land Snail Species Closely Related to *Austrochloritis porteri* (Cox, 1868), with Description of a New Species (Mollusca, Eupulmonata, Camaenidae)

Michael Shea and Frank Köhler

Australian Museum Research Institute,
Australian Museum, 1 William Street, Sydney NSW 2010, Australia

Abstract. The systematic taxonomy of three currently accepted species of *Austrochloritis* Pilsbry, 1891 from central eastern New South Wales (*A. nundinalis* Iredale, 1943, *A. niangala* Shea & Griffiths, 2010, and *A. kaputarensis* Stanisic, 2010) is revised based on comparative morpho-anatomy and mitochondrial phylogenetics. In addition, the status of two undescribed candidate taxa identified as *Austrochloritis* spp. NE3 and SN39, respectively, is assessed. These species and candidate species are closely related to the type species of the genus, *Austrochloritis porteri* (Cox, 1866) from southern Queensland based on a recently published mitochondrial phylogeny.

Comparative analyses of shell and reproductive anatomy revealed that the members of the *A. porteri* clade exhibit a rather similar morphology overall. Based on subtle, yet consistent differences in shell and reproductive features, we consider *A. nundinalis* as an accepted species. The species *A. niangala*, *A. kaputarensis*, and NE3 are considered as synonyms of each other and preference is given to the name *A. niangala* by First Reviewers Choice. The candidate taxon SN39 represents a new species, which is herein described as *Austrochloritis copelandensis* sp. nov.

Introduction

Austrochloritis Pilsbry, 1891 is taxonomically a comparatively diverse, yet morphologically rather homogeneous land snail genus endemic to eastern Australia (e.g., Stanisic *et al*. 2010). *Austrochloritis* species, with a few exceptions, are overall similar externally, having rather small, depressed and 'hairy' shells of dull brown colour. Because of their similar nondescript appearance, most species are currently difficult to identify based on the classification system introduced by Stanisic *et al*. (2010), which relies exclusively on shell characters in combination with the documented or presumed distribution of species. Nearly all species, both currently accepted and unaccepted, are known only from their shells while taxonomically critical information on their comparative anatomy is almost entirely lacking. Exceptionally, we recently described the reproductive anatomy of two species: *Austrochloritis porteri* (Cox, 1866), the type species of the genus, and *A. speculoris* Shea & Griffiths, 2010, a species from the Northern Tablelands of New South Wales (Shea and Köhler 2019).

In addition, we scrutinized the current systematic classification by analysing the differentiation in mitochondrial DNA sequences (Köhler, Criscione, and Shea 2020). This study has revealed widespread incongruence between the current species-level classification and the branching patterns of the mitochondrial trees. Most significantly, we found that many species as currently delineated were non-monophyletic in the phylogenetic trees. This incongruence may be attributed to a wide range

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Corresponding author: Frank Köhler frank.koehler@austmus.gov.au
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