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Revision of the genus *Metallesthes* Kraatz and description of *Metallesthes anneliesae*, a new species of Cetoniinae (Coleoptera: Scarabaeidae) from Queensland and New South Wales, Australia

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Abstract

The endemic Australian flower chafer genus *Metallesthes* Kraatz, 1880 (Coleoptera: Scarabaeidae: Cetoniinae) is revised. *Metallesthes anneliesae* Moeseneder & Hutchinson **new species** is described from southern Queensland and New South Wales. *Metallesthes unicolor* (Macleay, 1863) revised **status** is raised from synonymy with *Metallesthes metallescens* (White, 1859). *Metallesthes metallescens* and *Metallesthes unicolor* are redescribed and their holotypes are figured. A specimen bearing a Nonfried type label is designated as the lectotype of *Metallesthes subpilosa* Nonfried, 1891. *Metallesthes subpilosa* **new synonymy** is synonymised with *Pseudoclithria ruficornis* (Westwood, 1874). A key to the species of the genus is provided. Distribution maps are shown and known host plants are listed.

Introduction

Worldwide, the flower chafers (Coleoptera: Scarabaeidae: Cetoniinae—*sensu* Bouchard *et al*., 2011) number approximately 4273 species in 485 genera (Krajcik 2012), while in Australia 140 species are known (110 in Schizorhinini, 13 in Cetoniini, 17 in Valgini) (Calder 2002, Hutchinson & Moeseneder 2013, Moeseneder & Hutchinson 2012, personal observations). The endemic Australian genus *Metallesthes* Kraatz, 1880, which, at this time, includes three species, is broadly distributed across the southern half of the continent. These beetles are unremarkable in appearance, and are uniformly dark, metallic, or shiny black. They exhibit similar pollen and nectar feeding habits to most other Australian cetoniines.

Kraatz (1880) described *Metallesthes* for six species; *Diaphonia metallescens* White, 1859, *Schizorhina* (*Diaphonia*) *rugosa* Schaum, 1848, and *Schizorhina unicolor* Macleay, 1863, which he transferred from *Schizorhina* Kirby, 1825; and *Diaphonia maura* Janson, 1874, *Diaphonia ruficornis* Westwood, 1874, and *Diaphonia lacunosa* Janson, 1874, which he transferred from *Diaphonia* Newman, 1840. Similarities between the first three species had been noted earlier by Thomson (1878) while Janson (1874) had considered the three *Diaphonia* species to be related to *D. metallescens*. Kraatz's (1880) description of *Metallesthes*, however, appears to have been entirely based on female *M. metallescens* specimens and the taxonomic literature that was available to him. His lack of familiarity with the taxa involved was apparent, as he wrote "I am not able to decide whether there are new genera under *Metallesthes* without autopsy of the species" [translated from German by CHM]. A further species, *Metallesthes subpilosa,* was added by Nonfried (1891).

Within a treatment of Australian cetoniines, Lea (1914) reduced *Metallesthes* to two species by transferring *Metallesthes ruficornis, M. maura*, and *M. rugosa* to *Pseudoclithria* van de Poll, 1886, and *M. lacunosa* to *Tapinoschema* Thomson, 1880. He also reduced the status of *M. unicolor* to a variety of *M. metallescens*. Lea's (1914) decision to synonymise *M. unicolor* with *M. metallescens* was entirely based on a comparison between

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Synonymy of *Metallesthes subpilosa*. Nonfried's inclusion of *Metallesthes subpilosa* in the genus *Metallesthes* was doubtful (Nonfried 1891). Lea (1914) also held doubts about *M. subpilosa* and noted that "The description of this species reads as if founded upon an insect similar to *nigrans* and *hirticeps*, and so possibly it should be transferred to *Pseudoclithria*." After inspecting specimens of *P. ruficornis* in the collections AM, PMH, QM, SAM, and MNHUB we determined that the female specimen bearing a Nonfried type label found in the collection of the MNHUB designated herein as the lectotype of *Metallesthes subpilosa* Nonfried, 1891 and the *M. subpilosa* paralectotype specimen were both *Pseudoclithria ruficornis* Westwood, 1874, and therefore we herein synonymise *M. subpilosa* with *P. ruficornis*. While *M. subpilosa* was described from Queensland and New Guinea, *Pseudoclithria ruficornis* is known to occur in Western Australia, South Australia, and Victoria. (a revision of the genus *Pseudoclithria* by CHM and PMH is in preparation and will deal with the species in detail). Another male specimen of *P. ruficornis* exists in the MNHUB, which was deposited in the same tray as the lectotype and paralectotype of *M. subpilosa* at the time when we examined images of it. The collection label is illegible and there is no evidence that Nonfried had seen this specimen.

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