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A new genus and species of Bruchinae, with a key to the genera from Australia (Coleoptera: Chrysomelidae)

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Abstract

A new genus of Bruchinae, *Buburra* Reid & Beatson, is erected for a single new species, *B. jeanae* Reid & Beatson. *Buburra* is endemic to Australia where it is known from a single site at high altitude in Victoria. The hostplant is unknown. *Buburra* is placed in the tribe Pachymerini. A key is provided for identification of the 12 genera of Bruchinae in Australia, including *Caryotrypes* Decelle, 1968, recorded from Australia for the first time. Five Australian species described in *Bruchus* Linneus, 1767, are newly transferred to *Bruchidius* Schilsky, 1905: *Bruchidius diversipes* (Lea, 1899) **comb. nov.**; *B. maestus* (Lea, 1899) **comb. nov.**; *B. oodnadattae* (Blackburn, 1900) **comb. nov.**; *B. persimulans* (Blackburn, 1900) **comb. nov.**; *B. quornensis* (Blackburn, 1900) **comb. nov.** A checklist is provided for the species of Bruchinae in Australia.

Key words: seed beetle, morphology, taxonomy, biocontrol, pest species

Introduction

The subfamily Bruchinae is of moderate size worldwide, with at least 1700 species (Johnson, Southgate & Delobel 2004), and most of its species feed on leguminous seeds as larvae (Southgate 1979; Borowiec 1987). It should therefore be diverse in Australia, where there are more than 2300 species of Fabaceae, including Mimosoideae and Caesalpinoideae (Orchard 1999). However, the Australian bruchine fauna is depauperate, with only 12 described native species (Udagiri & Wadhi 1989; Anton 2000; Appendix A) and a further 30–40 native species represented in collections (*pers. obs.*, CAMR).

Worldwide, there are six tribes of Bruchinae, three monotypic and restricted to central Asia (Rhaebini), central South America (Eubaptini) and the temperate Holarctic (Kytorhinini) (Southgate 1979; Borowiec 1987; Kergoat *et al.* 2008; Delobel & Lagalov 2009). In Australia, three tribes have been recorded: Amblycerini, Bruchini and Pachymerini. The easily distinguished Amblycerini (Borowiec 1987) are represented by a single genus and two species. Bruchini dominate in numbers of genera and species, as they do elsewhere. No native Pachymerini are recorded from Australia, but one was introduced accidentally a long time ago and is well-established in the tropics (Brooks 1969; Delobel, Sembène, Fédière & Roguet 2003). We have seen a single specimen of a second genus from the far north coast. Pachymerini feed primarily on palms in South America and on tropical legumes and pandanus in Africa and southern Asia (Nilsson & Johnson 1993; Anton 1999a).

Therefore the senior author was surprised to collect a short series of a pachymerine from 1450m up a mountain in Victoria, far from the tropics (36°S), in November, 2010 (Fig. 1). First consideration was that this was a biocontrol agent introduced by one of the weed control agencies in Australia. Bruchines are at the forefront of weed control in Australia as they are commonly host-specific and they attack seeds, reducing the next generation (Julien & Griffiths 1999). The possibility of an introduction was eliminated by the discovery that (i) no pachymerines have been introduced for biocontrol; (ii) the beetles could not be identified to genus using either of the published keys (Borowiec 1987; Nilsson & Johnson 1993). A second trip was made in November, 2011, to the same locality and a few additional specimens obtained.

This beetle is not identifiable to genus in the only key to world genera (Borowiec 1987). From that, it fits Pachymerini and appears to be most similar to *Mimocaryedon* Decelle, 1968, in subtribe Caryedontina, but it does