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The Australian Byrrhinae (Coleoptera: Byrrhidae) with descriptions of new genera and species

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Abstract

The generic classification of the Australian Byrrhinae is revised and the following new genera are described: *Notolioon* **gen. n.**, *Nothochaetes* **gen. n.**, *Idiothrix* **gen. n.**, *Akidomorychus* **gen. n.**, *Brachybyrrhulus* **gen. n.** and *Pseudomorychus* **gen. n.** A key is provided for the genera of Australian Byrrhidae. The following new combinations are proposed: *Notolioon atronitens* (Lea 1920) **comb. n.**, *N. bryophagus* (Lea 1907) **comb. n.**, *N. carissimus* (Lea 1907) **comb. n.**, *N. dives* (Lea 1907) **comb. n.**, *N. gemmatus* (Lea 1920) **comb. n.**, *N. globosus* (Wilson 1921) **comb. n.**, *N. griffithi* (Lea 1907) **comb. n.**, *N. maculatipes* (Lea 1920) **comb. n.**, *N. multicolor* (Lea 1907) **comb. n.**, *N. nodipennis* (Lea 1920) **comb. n.**, *N. simplicicornis* (Lea 1907) **comb. n.**, *N. viridinitens* (Lea 1920) **comb. n.**, *Nothochaetes fasciculatus* (Lea 1920) **comb. n.**, *Idiothrix carinataiceps* (Lea 1920) **comb. n.**, *Akidomorychus comatus* (Oke 1932) **comb. n.**, *A. polychromus* (Lea 1920) **comb. n.**, *A. raucus* (Blackburn 1891) **comb. n.**, *A. venustus* (Wilson 1921) **comb. n.**, *Brachybyrrhulus discicollis* (Lea 1920) **comb. n.**, *Pseudomorychus torrensensis* (Blackburn 1889) **comb. n.**, *P. mixtus* (Lea 1907) **comb. n.** The following new species are described: *Notolioon cardamine* **sp. n.**, *Nothochaetes howensis* **sp. n.** and *Brachybyrrhulus malleecola* **sp. n.**

Key words: Byrrhidae, Byrrhinae, *Notolioon*, *Nothochaetes*, *Idiothrix*, *Akidomorychus*, *Brachybyrrhulus*, *Pseudomorychus*, Australia

Introduction

Byrrhidae is primarily an amphipolar family containing about 450 described species. Although the Northern Hemisphere fauna is relatively well known (Paulus 1979; Pütz *et al.* 1995; Johnson 2002; Pütz 2000; Jaeger & Pütz 2003; Pütz 2007), that of the Southern Hemisphere is badly in need of a generic revision. Except for the work of Watt (1971) on the Byrrhidae of Auckland and other islands south of New Zealand, knowledge of the Notogean byrrhid fauna is based primarily on works of the late 19th and early 20th centuries by Blackburn (1889, 1891, 1903), Lea (1907, 1920), Broun (1880, 1881, 1886, 1893a, 1893b, 1904, 1907, 1909, 1910, 1914) and others. Most Australian Syncalyptinae were properly placed by Lea (1920) in the endemic genus *Microchaetes* Hope, which also includes a few New Zealand species, incorrectly placed by Redtenbacher (1868) and Broun (1880, 1893b, 1904, 1910) in the Palearctic genus *Curimus* Erichson, and undescribed Chilean species (*J. Solveticens in litt.*). Most Australian Byrrhinae were placed by Lea (1920) in the Palaeartic genus *Pedilophorus* Steffahn, the one exception being *Byrrhus torrensensis* Blackburn (1889), which was placed in the Palaeartic genus *Morychus* Erichson. The present paper is an attempt to provide a generic framework for all described Australian Byrrhinae and a few new byrrhine species, but a complete revision of the Australian Byrrhidae is in preparation, along with revisions of other Notogean faunas by two of the authors (OJ and AP).

Materials and methods

Most of the terms used in morphological descriptions are based on Lawrence *et al.* (2011, 2012). Total length is

- apex (Fig. 7D); metaventre without curved postcoxal lines (Fig. 7A); parameres diverging and rounded at apex (Figs 7B, 12B); gonostyli heavily sclerotised, curved and spur-like (Fig. 7C). *Akidomorychus* **gen. n.**
- Protibia not or only slightly expanded, its outer edge armed with fewer spine-like setae, mostly near apex (Figs 8A, 9C–D); metaventre with curved postcoxal lines (Figs 8A, 9C); parameres not diverging and acute at apex (Fig. 12G); gonostyli more lightly sclerotised and cylindrical, not spur-like 6
6. Antennae 10-segmented (Figs 8B–C); body short and broad, less than 1.45 times as long as wide (Figs 8E–F); tarsomere 4 not or only slightly shorter than 3 and ventral lobe on tarsomere 3 either very short or absent (Fig. 8A); hind wings absent *Brachybyrrhulus* **gen. n.**
- Antenna 11-segmented; body more elongate, more than 1.45 times as long as wide (Figs 9A, E); tarsomere 4 distinctly shorter than 3, which bears a distinct ventral membranous lobe (Figs 9C–D); hind wings present; *Pseudomorychus* **gen. n.**

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