Zootaxa 3612 (1): 001–085
www.mapress.com/zootaxa/

Monograph

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3612.1.1
http://zoobank.org/urn:lsid:zoobank.org:pub:FEE56A44-B572-4A95-BC11-2FA9D1187AF8

ZOOTAXA

3612

Revision of the species of *Jaliscoa* Bouček within a review of the identity, relationships and membership of *Jaliscoa*, *Catolaccus* Thomson, *Eurydinoteloides* Girault, *Lyrcus* Walker and *Trimeromicrus* Gahan (Hymenoptera: Pteromalidae)

GARY A. P. GIBSON

Agriculture and Agri-Food Canada, Canadian National Collection of Insects, Arachnids and Nematodes, K. W. Neatby Bldg., 960 Carling Avenue, Ottawa, Ontario, Canada, K1A 0C6. E-mail: Gary.Gibson@agr.gc.ca

Magnolia Press
Auckland, New Zealand

Accepted by M. Buffington: 4 Dec. 2012; published: 5 Feb. 2013

GARY A. P. GIBSON

Revision of the species of *Jaliscoa* Bouček within a review of the identity, relationships and membership of *Jaliscoa, Catolaccus* Thomson, *Eurydinoteloides* Girault, *Lyrcus* Walker and *Trimeromicrus* Gahan (Hymenoptera: Pteromalidae)

(*Zootaxa* 3612)

85 pp.; 30 cm.

5 Feb 2013

ISBN 978-1-77557-102-5 (paperback)

ISBN 978-1-77557-103-2 (Online edition)

FIRST PUBLISHED IN 2013 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

http://www.mapress.com/zootaxa/

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

Table of contents

Abstract

The limits of *Lyrcus* Walker (1842), *Catolaccus* Thomson (1878), *Eurydinoteloides* Girault (1913a), *Trimeromicrus* Gahan (1914), and *Jaliscoa* Bouček (1993) are re-evaluated and redefined to better reflect observed distribution of morphological features. Nine of 13 New World species of *Catolaccus* are transferred to other genera and photographs of the primary type specimens are given to assist future recognition. New features are provided to assist identification of the remaining four Nearctic species of *Catolaccus* and these are compared to European species, with the observation that *C. kansensis* (Girault 1917c) could be a junior synonym of *C. crassiceps* (Masi 1911). *Trimeromicrus* is removed from synonymy under *Lyrcus* for the single species *T. maculatus* Gahan (1914) **rev. comb.** Newly synonymized under *Lyrcus* is the Australasian genus *Neocylus* Bouček (1988) **n. syn.** Ten species are newly transferred to *Lyrcus—L. nigraeneus* (Girault 1915) **n. comb.** (from *Neocylus*), *L. helice* (Walker 1843) **n. comb.** and *L. cyaneus* (Girault 1911) **n. comb.** (from *Catolaccus*), and *L. albiclavus* (Girault 1917c) **n. comb.**, *L. capitis* (Burks 1955) **n. comb.**, *L. chalcis* (Burks 1955) **n. comb.**, *L. coeliodis* (Ashmead 1896) **n. comb.**, *L. deuterus* (Crawford 1911) **n. comb.**, *L. nigroaeneus* (Ashmead 1894a) **n. comb.** and *L. rosaecolis* (Burks 1955) **n. comb.** (from *Zatropis* Crawford 1908). *Catolaccus pallipes* Ashmead (1894b) is newly transferred to *Pteromalus* Swederus (1795) as *Pteromalus pallipes* (Ashmead) **n. comb.** and *Catolaccus fragariae* Rohwer (1934) to *Lariophagus* Crawford (1909) as *Lariophagus fragariae* (Rohwer) **n. comb.** Nine species are newly transferred to *Eurydinoteloides—E. tepicensis* (Ashmead 1895) **n. comb.** (from *Catolaccus*), *E. dymnus* (Walker 1847) **n. comb.**, *E. hermeas* (Walker 1847) **n. comb.**, *E. incerta* (Ashmead 1893) **n. comb.**, *E. orontas* (Walker 1847) **n. comb.**, *E. perdubia* (Girault 1916) **n. comb.**, *E. platensis* (De Santis *in* De Santis *et al.* 1979) **n. comb.** and *E. timaea* (Walker 1847) **n. comb.** (from *Lyrcus*), and *E. eudubia* (Özdikmen 2011) **n. comb.** (from *Spintherus* Thomson 1878). Four species are newly transferred to *Jaliscoa—J. grandis* (Burks 1954) **n. comb.** and *J. hunteri* (Crawford 1908) **n. comb.** (from *Catolaccus*), and *J. townsendi* (Crawford 1912) **n. comb.** and *J. vulgaris* (Ashmead 1894b) **n. comb.** (from *Pteromalus*). The species of *Jaliscoa* are revised to include *J. nudipennis* Bouček 1993, *J. bouceki* **n. sp.**, *J. hunteri* and *J. vulgaris.* Re-established in synonymy under *J. hunteri* is *J. townsendi* **n. comb.** One new species of *Pteromalus*, *P. grisselli* **n. sp.**, is described as an egg predator in the egg sacs of *Dictyna coloradensi* Chamberlin (Araneae: Dictynidae) and compared to

Catolaccus species and other pteromalids that are predators of spider eggs. Lectotypes are designated for *Pteromalus helice* Walker (1843), *Catolaccus pallipes* Ashmead (1894b) and *Catolaccus vulgaris* Ashmead (1894b). Diagnoses are given to differentiate *Catolaccus*, *Eurydinoteloides*, *Jaliscoa*, *Lyrcus* and *Trimeromicrus* from each other, and more extensive descriptions given to help differentiate these genera from other Pteromalinae. Morphological features are illustrated through macrophotography and scanning electron photomicrography.

Key words: Chalcidoidea, morphology, hosts, distribution

Introduction

Walker (1842) established *Lyrcus* (Hymenoptera: Chalcidoidea: Pteromalidae: Pteromalinae) for a species discovered by Charles Darwin near Valparaiso, Chile, during the second voyage of the Beagle, likely sometime between 24 July and 13 August 1834 (Darwin 1839). Since then, 16 species from the Nearctic region and 5 species from the Neotropical region have been assigned to *Lyrcus* (Noyes 2012). Several of these species were described originally in three other genera, *Zatropis* Crawford (1908), *Oluspa* Cameron (1913), and *Trimeromicrus* Gahan (1914). *Zatropis* was partly characterized by the body having "scattered, appressed, scale-like white hairs" (Crawford 1908: 159), whereas *Oluspa* was partly characterized by being "sparsely covered with distinct thickish white hairs" (Cameron 1913: 129), and *Trimeromicrus* was partly characterized by a unique mesonotal colour pattern but with unmodified setae similar to *Lyrcus*. *Lyrcus* was subsequently considered the senior synonym of *Trimeromicrus* by Heydon and Bouček (1992) and of *Oluspa* and *Zatropis* by Bouček (1993). Under this concept, *Lyrcus* has been considered to be restricted to the New World (Noyes 2012).

Prior to the synonymy of *Zatropis* under *Lyrcus*, Heydon and Bouček (1992: 480) stated that *Zatropis* "is one of the most species-rich genera of Nearctic Pteromalidae" but "despite its species sharing a similar gestalt, there are few autapomorphic characters defining *Zatropis* as a whole". They listed the three most distinctive characteristics of *Zatropis* as 1) a distinct ventral row of admarginal setae on the fore wing, 2) often distinct flattened white setae on the head and mesosoma, and 3) a relatively short propodeum with a usually well-developed median carina and convex but dorsoposteriorly flattened nucha. However, they also noted that *Callitula* Spinola (1811), *Systasis* Walker (1834) and *Eurydinoteloides* Girault (1913a) all have similar admarginal setae, and that a few other pteromaline genera such as *Acaenacis* Girault (1917a) have flattened white setae on the body. They concluded that "more study is needed on the relationship between *Zatropis* and other similar pteromaline genera such as *Mesopolobus* and *Eurydinoteloides* and many similar forms found in the Neotropics". In discussing their key to the Nearctic genera of Chalcidoidea, Bouček and Heydon (1997: 545) later repeated that in "some cases, genera, such as *Lyrcus* or *Chlorocytus* have a certain gestalt that, once learned, enables their ready recognition, but the variation among species is such that a single suite of characters is insufficient for generic classification of all the species". Because of this, they keyed *Lyrcus* three times (couplets 263, 287, 303) in order to differentiate species with two or three anelli, with or without a distinct malar depression, and with or without a distinct costula.

Eurydinoteloides was described by Girault (1913a) for a species from Paraguay that, similar to *Zatropis*, was characterized in part by the flagellum having three anelli and "short white hairs which are scattered and reclining" on the body, plus mandibles with four teeth and the median carina of the propodeum being "crossed at proximal third by a cross-carina joining the lateral ones" (Girault 1913a: 55). Bouček and Heydon (1997) included *Eurydinoteloides* in their key to Nearctic genera within a group of genera delineated in part by three anelli and a distinct costula, and distinguished it from *Lyrcus* primarily by the presence of a distinct malar depression (couplet 286). Bouček (1988) had previously synonymized *Aeronea* Cameron (1913) and *Protolaccus* Burks (1954) under *Eurydinoteloides*. Burks (1954) described *Protolaccus* within a revision of five genera that he included in the *Catolaccus* group of genera, all of which were characterized in part by a malar depression. This group also included *Heterolaccus* Masi sensu Burks (1954) for five New World species. Masi (1937) established *Heterolaccus* for a species from Mauritania with two anelli and Bouček (1961) subsequently transferred its type species to *Pteromalus* Swederus (1795), treating *Heterolaccus* as a subgenus of *Pteromalus*. As a result of the actions of Bouček (1961), De Santis (1979) and Burks (1979), Noyes (2012) included two of the five species that Burks (1954) classified in *Heterolaccus* in *Catolaccus* Thompson (1878), whereas the other three species, which had originally been described in *Catolaccus*, he included in *Pteromalus*. Burks (1954) provided a history of *Catolaccus* and recognized four species from North America north of Mexico. Noyes (2012) listed another five species from