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***Molophilus (Molophilus) johnmartini* nov.sp. from the
Blue Mountains in New South Wales, Australia
(Diptera: Limoniidae)**

Günther THEISCHINGER

A b s t r a c t : *Molophilus (Molophilus) johnmartini* nov.sp. is described from New South Wales, Australia. The new species is compared with its possibly closest ally *Molophilus gracilis* SKUSE. Three more species of the same species group, *M. (M.) pictor* ALEXANDER, *M. (M.) ruficollis* SKUSE and *M. (M.) scaber* ALEXANDER, were found to coexist at the same site and in the same habitat as the new species.

K e y w o r d s : Limoniidae, *Molophilus*, new species, Australia.

Introduction

The unexpected discovery in spring 2016 of an undescribed stonefly species along Govett's Leap Brook, a small mountain stream near Blackheath in the Blue Mountains, New South Wales, Australia (THEISCHINGER 2017), was the reason to visit this locality/habitat again in autumn 2017 (April 26th and 29th), hoping to find an autumn fauna/species of Plecoptera. This turned out to be unsuccessful. However, while sweeping bank vegetation, four species of *Molophilus* that belong to the same species group were netted from ferns along the stream. These species are listed below, and one of them is described as new. The new species is illustrated and its affinities are discussed.

Material and methods

The material discussed here is housed at the Australian Museum, Sydney (AM). The descriptive terminology follows THEISCHINGER (1992).

Abbreviations used:

- dl = dorsal lobe of gonocoxite;
- ig = inner gonostylus;
- ml = mesal lobe of gonocoxite;
- og = outer gonostylus;
- vl = ventral lobe of gonocoxite;
- vll = ventro-lateral lobe of gonocoxite.

Systematics

Molophilus johnmartini nov.sp. (Figs 1-3, 5, 6)

Type material: Holotype ♂: Australia, New South Wales, Blue Mountains N. P., Govett's Leap Brook (33.640711°S/150.30612°E, 967 m), 26-29.iv.2017, G. Theischinger; sweep (Australian Museum). 1 ♀ (identified by supposition): same data and depository as holotype.

Description:

Male (Figs 1-3)

Head. Largely greyish brown; palps and antennae yellowish to pale greyish brown.

Thorax. Yellowish to pale greyish brown. Legs with coxae, trochanters and most of femora and tibiae pale greyish yellow, merging into pale greyish brown in apical 1/5 to 1/4 of femora and tibiae; tarsi and claws medium to dark greyish brown.

Wings. Hyaline, largely very slightly suffused with greyish yellow, somewhat stronger suffused with pale brownish grey along cross-veins. Halteres yellowish white.

Abdomen. Pale to dark greyish brown.

Genitalia (Figs 1-3). Largely brownish yellow to yellowish brown. Tergite 9 rather simple and narrow. Gonocoxite with dorsal lobe (dl) black, moderately long, very thin, strongly but evenly curved ventrally, mesal lobe (ml) simple and plump and about as long as ventral lobe; ventro-lateral lobe (vll) small and subtriangular, ventral lobe (vl) lightly sclerotized, narrow but apically not pointed. Inner gonostylus (ig) a slim brown rod with dorsally directed apical hook. Outer gonostylus (og) widely bifid with thin, evenly curved and pointed inner branch and thin-stemmed outer branch with bird-head-like apex. Aedeagus thin; parameres simple, oval.

Dimensions. Wing length 4.5 mm.

Female (identified by supposition)

Head. Brown to brownish black; palps and antennae greyish to brownish yellow.

Thorax. Yellowish to pale greyish brown. Legs much as in male but with apical darkening in femora and tibiae less distinct.

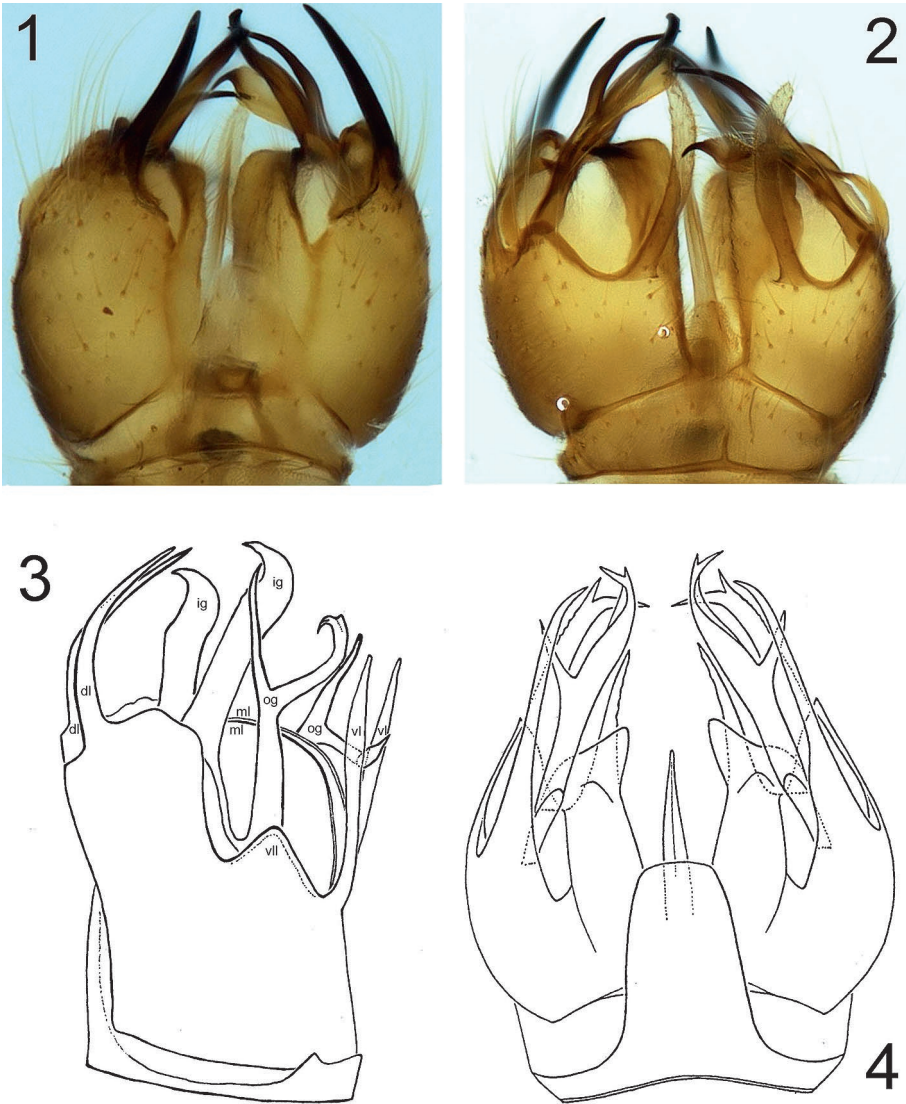
Wings. Much as in male but less distinctly suffused with darker along cross-veins. Halteres yellowish white with pale grey patch on knob.

Abdomen. Much as in male.

Terminalia (Figs 5, 6). Brownish yellow to yellowish brown. Tergite 10 with some parts very pale and membranous, others unusually darkened forming kind of lateral lobes. Ovipositor with cerci markedly shorter than hypogynial valves.

Dimensions. Wing length 5.0 mm.

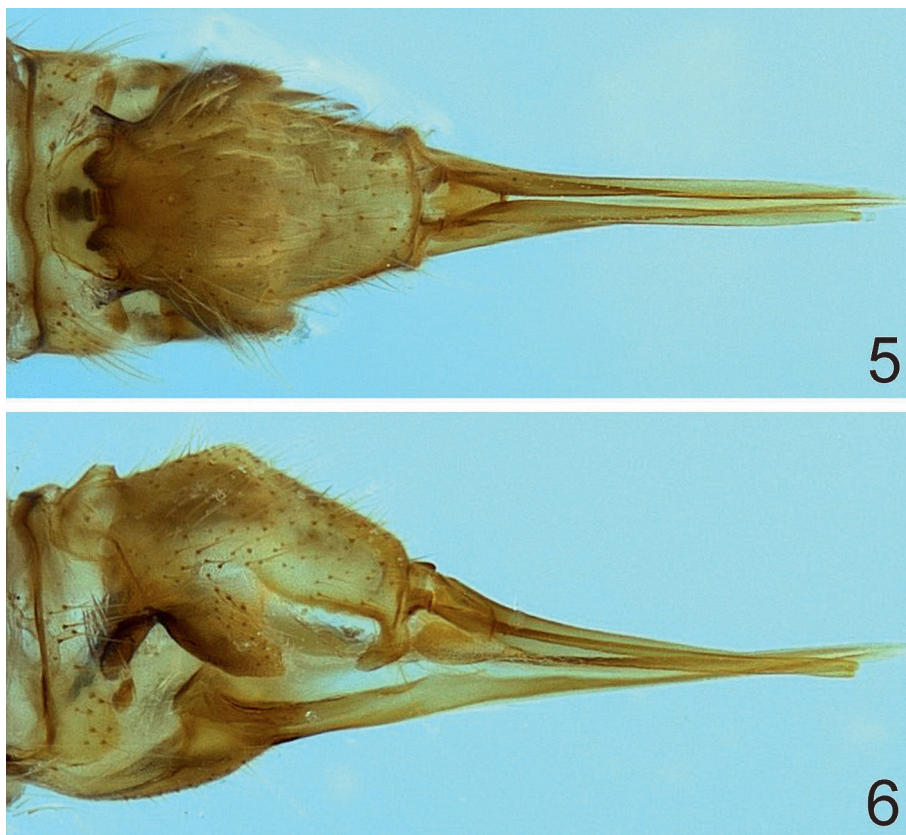
Etymology. The species is dedicated to John Martin, dear friend, great company in the field and great help with photographic illustrations.



Figs 1-4: *Molophilus (Molophilus)* spp., male, genitalia: (1-3) *M. (M.) johnmartini* nov.sp.: (1) dorsal; (2) ventral; (3) lateral; (4) *M. (M.) gracilis* SKUSE, dorsal.

Discussion

In a comprehensive paper of the Australian species of *Molophilus* CURTIS seven subgenera and three species groups within the typical subgenus were recognized and a key to these group taxa was given by THEISCHINGER (1992). More species of *Molophilus* from Australia were described by THEISCHINGER (1994, 1996, 1999, 2000, 2012).



Figs 5-6: *Molophilus (Molophilus) johnmartini* nov.sp., female, terminalia: (5) dorsal; (6) lateral.

Molophilus (M.) johnmartini belongs in the *gracilis* group of the typical subgenus. Of the close to 100 described species of the *M. (Molophilus) gracilis* group only two, *M. gracilis* SKUSE and *M. multispicatus* ALEXANDER appear closely related to *M. johnmartini* nov.sp.

The male of *Molophilus (M.) johnmartini* (Figs 1-3) can be distinguished from both *M. gracilis* SKUSE (Fig. 4) and *M. multispicatus* ALEXANDER by the strongly curved dorsal lobe and the unbranched inner gonostylus and the only lightly sclerotized non-pointed ventral lobe of the gonocoxite vs dorsal lobe of the gonocoxite less strongly curved, inner gonostylus bifid and ventral lobe of the gonocoxite more strongly sclerotized and pointed. Whereas the very long hypopygial valves of the assumed female of *M. (M.) johnmartini* are possible diagnostic for the species, the strange and highly unusual structure of tergite 10 may well be a monstrosity with no significance for taxonomy.

The other three species of the *Molophilus (M.) gracilis* group collected at the same site and in the same habitat as *M. (M.) johnmartini* are *M. (M.) pictor* ALEXANDER, *M. (M.) ruficollis* SKUSE and *M. (M.) scaber* ALEXANDER, all not particularly similar to the new species and easily distinguishable from it in both sexes by banded respectively darker legs.

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Zusammenfassung

In vorliegender Arbeit wird *Molophilus (Molophilus) johnmartini* nov.sp. (Diptera: Limoniidae) von New South Wales, Australien, beschrieben. Die neue Art wird mit ihrer möglicherweise nächsten Verwandten *M. gracilis* SKUSE verglichen.

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