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Two new species of *Molophilus* CURTIS from Australia (Diptera, Limoniidae)

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A b s t r a c t : Two new Australian species of *Molophilus* are here described: *Molophilus* (*Molophilus*) *drepanon* nov.sp. from New South Wales and *Molophilus* (*Molophilus*) *mediolobatus* nov.sp. from Queensland. *Molophilus* (*Molophilus*) *drepanon* nov.sp. belongs in the in the *Molophilus* (*Molophilus*) *plagiatus* group of THEISCHINGER (1988a), while *Molophilus* (*Molophilus*) *mediolobatus* nov.sp. belongs in the *Molophilus* (*Molophilus*) *gracilis* group of THEISCHINGER (1988a).

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

Introduction

Australia boasts more species of *Molophilus* crane fly than any other country or continent with over 300 species (OOSTERBROEK 2019), all of which are probably endemic, and several unique subgenera. THEISCHINGER (1988a, 1988b, 1992) reviewed the Australian species of *Molophilus* with descriptions of additional species having been added since (THEISCHINGER 1994, 1996, 1999, 2000, 2012, 2017, BILLINGHAM & THEISCHINGER 2018a, 2018b, 2019). THEISCHINGER (1992) also established three species groups for the subgenus *Molophilus* (*Molophilus*) and provided a key for distinguishing the species groups. The present paper further adds to the knowledge of the Australian fauna by describing two newly discovered species and elevating the total number of known Australian *Molophilus* species to 318.

Materials and Methods

Specimens were collected by sweeping a hand net through vegetation and then preserved in 100% ethanol. As a result of this preservation, the coloration of the specimens may have changed from the natural state. For the illustration of the male genitalia (hypopygium) the specimens were cleared in KOH and displayed in glycerol. Descriptive terminology is in accord with MCALPINE (1981). Type specimens have been deposited in the Australian Museum Entomology collection (AM) and the collection of the Queensland Museum (QM).

Systematics

Molophilus (*Molophilus*) *drepanon* nov.sp. (Figs 1-5)

T y p e m a t e r i a l : Holotype ♂: New South Wales, Werrikimbe National Park, Tributary of Cobcrofts Creek off Mesa Trail (31.230°S, 152.164°E), 17-i-2018, Keith Bayless; AM (K380822).

D e s c r i p t i o n

Male

H e a d (Fig. 1) : Greyish brown, with pale yellow areas at the margins of the orbit; palpus blackish brown. Antenna yellowish brown.

T h o r a x (Figs 2-3): Pronotum, prescutum, scutum, scutellum and mediotergite deep brown. All pleural sclerites deep brown. Forecoxa deep brown, mid and hind coxa brownish yellow, trochanters and proximal 1/4 of femora brownish yellow, distal 3/4 darkening to brown, tibiae and tarsi darkening to greyish brown.

W i n g : Pale grey tinged with yellow, veins yellowish brown. Halter with stem and knob yellowish brown.

A b d o m e n : Greyish brown with hypopygium paler yellowish brown.

G e n i t a l i a (Figs 4-5): Hypopygium with dorsal lobe of segment 9 moderately long and very wide. Gonocoxite with dorsal and medial lobe small and ventral lobe well-developed, apically armed with rather slim hook-shaped, medially directed beak. Gonostyli originating quite some distance from each other; inner gonostylus long with basal 2/3 to 3/4 straight, parallel sided and with apical 1/4 to 1/3 almost perpendicularly bowed laterally, conical and apically pointed; outer gonostylus rather straight, forked into a longer lateral and a shorter medial branch. Aedeagus moderately thin, largely straight and conical; parameres fused with tip narrowly rounded.

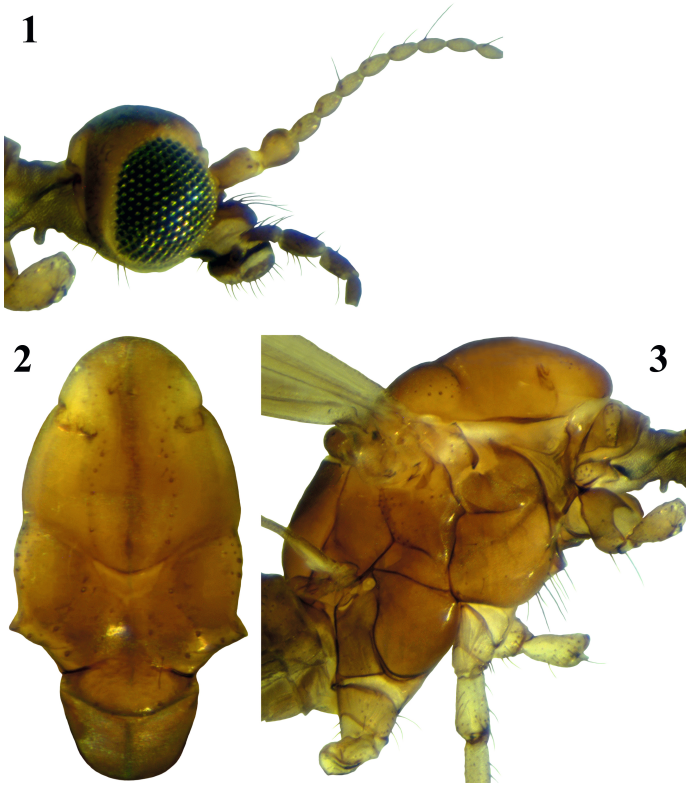
D i m e n s i o n s : Wing length 3.7 mm; body length 3.2 mm.

Female unknown.

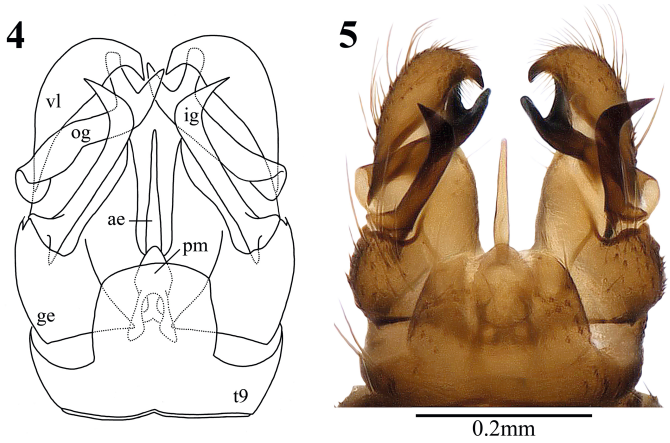
E t y m o l o g y : Drepanon (=Greek for sickle) refers to the shape of the inner gonostylus of the male; the noun is used in apposition to the generic name.

Discussion

Fused parameres and a prominent apically beaked ventral lobe of the gonocoxite place *M.* (*M.*) *drepanon* nov.sp. as a member of the *M.* (*M.*) *plagiatus* group of THEISCHINGER (1988a). It appears most similar to *M.* (*M.*) *hollowayi* THEISCHINGER, 1988, known from the Eungella area in north-eastern Queensland. The male of *M.* (*M.*) *drepanon* nov.sp. can be readily distinguished from that of *M.* (*M.*) *hollowayi* by its distinctly bowed, versus an evenly curved, inner gonostylus.



Figs 1-3: *Molophilus* (*Molophilus*) *drepanon* nov.sp., male: (**1**) head and antenna, lateral; (**2**) thorax, dorsal; (**3**) thorax, lateral.



Figs 4-5: *Molophilus* (*Molophilus*) *drepanon* nov.sp., male hypopygium, ventral view. Abbreviations as used in fig. 4: ae, aedeagus; ge, gonocoxite; ig, inner gonostylus; og, outer gonostylus; pm, parameres; t9, tergite 9; vl, ventral lobe.

***Molophilus* (*Molophilus*) *mediolobatus* nov.sp. (Figs 6-9)**

T y p e m a t e r i a l : Holotype ♂: Queensland, Mt Lewis National Park, Tributary of Mitchell River off Mt Lewis Rd (16.557°S, 145.276°E), 27-x-2017, R. StClair & D. Cartwright; QM (T245907).

D e s c r i p t i o n

Male

H e a d (Fig. 6): Greyish brown, vertex paler yellowish brown. Palpus brownish. Antenna pale yellow.

T h o r a x (Fig. 6): Pronotum, prescutum and scutum pale golden yellow, the posterior margins of scutal lobes paler whitish yellow. Scutellum and mediotergite largely pale golden yellow, base of mediotergite with darker brownish area. Cervical sclerite and pleurites pale greyish yellow. Coxae, trochanters, femora and tibiae pale whitish yellow, tarsi greyish brown.

W i n g : With pale grey tinge, veins pale yellowish brown. Halter with stem pale whitish yellow, knob white.

A b d o m e n : All segments pale greyish yellow, the hypopygium golden yellow.

G e n i t a l i a (Figs 7-9): Hypopygium with dorsal lobe of segment 9 moderately long and wide, apically widely rounded. Gonocoxite massive, with small, flat and broadly rounded dorsal lobe, slim unarmed ventral lobe and very prominent and bulky medial lobe. Gonostyli originating close to each other; inner gonostylus long, slim, almost parallel sided and strongly curved dorsally and medially; outer gonostylus strongly bent medially not far from origin, forking at about level mid-line into two lobes, one thin and slightly clubbed, the other a bit wider and apically obtusely pointed. Aedeagus very thin and largely straight, parameres fused, not prominent.

D i m e n s i o n s : Wing length 3.3 mm; body length 2.8 mm.

Female unknown.

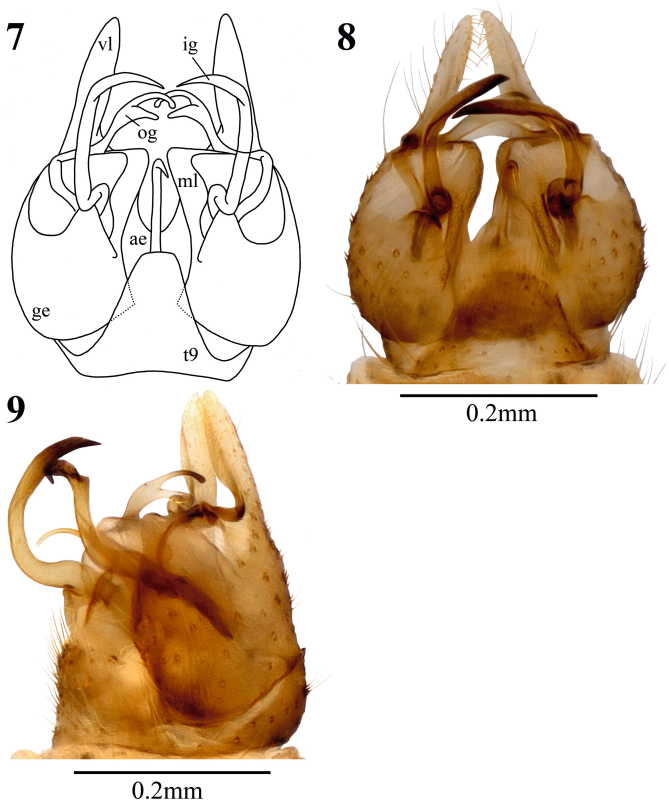
E t y m o l o g y : This species is named with reference to the large size and prominence of the median lobe of the male gonocoxite.

Discussion

The fused parameres and an unbeaked ventral lobe of the gonocoxite place *M.* (*M.*) *mediolobatus* nov.sp. as a member of the *M.* (*M.*) *gracilis* group of THEISCHINGER (1988a). It appears similar to *M.* (*M.*) *opulus* ALEXANDER, 1929 and *M.* (*M.*) *vividus* ALEXANDER, 1931, both known from south-eastern Australia, but particularly so to *M.* (*M.*) *mjobergi* ALEXANDER, 1927, known from tropical Queensland. However, the outer gonostyli are largely running dorsal to the inner gonostyli in these three species versus largely well ventral of the inner gonostyli in *M.* (*M.*) *mediolobatus* nov.sp. *M.* (*M.*) *mjobergi* comes closer to *M.* (*M.*) *mediolobatus* nov.sp. than to *M.* (*M.*) *opulus* and *M.* (*M.*) *vividus* by sharing a prominent medial lobe and a very slim ventral lobe of the gonocoxite. The extremely prominent medial lobe of the gonocoxite together with the long slim lobes of the outer gonostylus appear diagnostic for *M.* (*M.*) *mediolobatus* nov.sp.



Fig. 6: *Molophilus* (*Molophilus*) *mediolobatus* nov.sp., male, head and thorax, lateral view.



Figs 7-9: *Molophilus* (*Molophilus*) *mediolobatus* nov.sp., male hypopygium, (**7-8**) ventral view; (**9**) lateral view. Abbreviations as used in fig. 7: ae, aedeagus; ge, gonocoxite; ig, inner gonostylus; ml, medial lobe; og, outer gonostylus; t9, tergite 9; vl, ventral lobe.

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Zusammenfassung

Zwei neue Arten von australischen Limoniiden, *Molophilus* (*Molophilus*) *drepanon* nov.sp. von New South Wales and *Molophilus* (*Molophilus*) *mediolobatus* nov.sp. von Queensland, werden beschrieben, und ihre verwandtschaftlichen Beziehungen werden diskutiert.

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