



## Black fungus gnats (Diptera: Sciaridae) of Queensland, Australia. Part II. Genus *Pseudolycoriella* Menzel & Mohrig, 1998

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### Abstract

In this second part on the black fungus gnats of Queensland, Australia, nine species are described as new for science. These are: *Pseudolycoriella angustoaantennata* sp. n., *Psl. breviradiata* sp. n., *Psl. consectaria* sp. n., *Psl. fuscovenosa* sp. n., *Psl. globostylata* sp. n., *Psl. notanda* sp. n., *Psl. paucispinata* sp. n., *Psl. securo* sp. n. and *Psl. unispinata* sp. n. The following three species are new for Australia: *Psl. bisulca* Vilkamaa, Hippa & Mohrig, 2012, known from New Caledonia; *Psl. snellingi* Mohrig, 2013, reported from Papua New Guinea and *Psl. horribilis* (Edwards, 1931), described from Sumatra. All species are illustrated and keyed.

**Key words:** *Pseudolycoriella*, new species, Australia, Queensland

### Introduction

In the Australasian region the genus *Pseudolycoriella* known to date comprises 35 species from New Zealand (Mohrig & Jaschhof 1999; Köhler & Mohrig 2016; Köhler 2019), 13 species from New Caledonia (Vilkamaa *et al.* 2012), 22 species from Papua New Guinea (Mohrig 2013), and six species from Australia (Broadley *et al.* 2016; Mohrig *et al.* 2016; Mohrig *et al.* 2018). In the wider Oceania region two species are recorded from the Hawaiian Islands, one from the Galápagos Islands (Mohrig *et al.* 2019) and three from Micronesia (Steffan 1969; Broadley *et al.* 2019). The genus is well known from the Palaearctic region (Menzel & Mohrig 2000), North America (Mohrig *et al.* 2013; Mohrig & Kauschke 2019), Central America and Caribbean Islands (Mohrig 2003; Mohrig *et al.* 2004), as well as the Afrotropical region (Rudzinski 2003; Menzel & Smith 2017).

The main characteristic of the genus is a long subapical whip-lash hair on the gonostylus (rarely there are two or more whip-lash hairs, or the whip-lash hair is shorter, or missing altogether). In most species this characteristic is combined with toothed tarsal claws (sometimes with strong teeth), 4 long marginal bristles on the scutellum, a bare postpronotum, no macrotrichia on the posterior wing veins (with the exception of *Psl. macrotrichata* Mohrig from Papua New Guinea) and flagellomeres having a rough surface. The palpus is 3-segmented, mostly with a long and narrow basal segment which has more than one bristle and no sensory pit. The halteres are short, and the spurs on the middle and hind tibiae are equal in size. The bristle patch at the apex of the fore tibia is mostly semicircular (horseshoe-like and bordered), in some species more comb-like and without a border. The tegmen is variable in shape, mostly simple, in some species with a semicircular apical structure or it is strikingly longer than wide. The aedeagus can differ in length and sometimes can have a large basal furca (see Fig. 4C in Broadley *et al.* 2016).

### Materials and methods

This taxonomic study is based on material from North Queensland. The sciarids were mainly selected from Malaise

traps run in two different areas near Port Douglas and Kuranda (collected by James Seymour, James Cook University, Cairns, in 1997) or collected by sweep net by the lead author near Cairns and in the Tablelands in 2000. Localities, embedding procedures and the illustration technique were described in detail in the first part of this series (Mohrig *et al.* 2017).

The terminology used herein follows Mohrig & Menzel (2009) and Mohrig *et al.* (2013), morphological structures refer to those explained and illustrated in Broadley *et al.* (2016). The holotypes of species described as new are stored in the Australian National Insect Collection, CSIRO, Canberra, Australia (ANIC); some paratypes and comparative species are stored in the Private Collection of Werner Mohrig, Puddemin, Germany (PWMP), the Private Collection of Adam Broadley, Melbourne (PABM: Department of Agriculture, corner of Grants & Centre Roads, Melbourne Airport, Victoria 3045, Australia), or in the Private Collection of Kai Heller, Heikendorf, Germany (PKHH).

Scale bars in the figures refer to the size of the hypopygium.

**Abbreviations:** l/w-index = length/width of the 4<sup>th</sup> flagellomere; c/w = ratio of C and w within the space between R<sub>4+5</sub> and M<sub>1</sub>; x/y = wing vein bm/ and wing vein r-m.

## Genus *Pseudolykoriella* Menzel & Mohrig, 1998

Type species: *Sciara bruckii* Winnertz, 1867 [Winnertz (1867): 38–39].

Literature: Menzel & Mohrig (1998); Mohrig & Jaschhof (1999); Menzel & Mohrig (2000); Mohrig (2003); Rudzinski (2003); Mohrig *et al.* (2004); Vilkamaa *et al.* (2012); Mohrig *et al.* (2013); Köhler & Mohrig (2016); Mohrig & Kauschke (2019); Köhler (2019).

### Provisional key to species of *Pseudolykoriella* from Queensland

- 1 Gonostylus with a tooth-like subapical protuberance ..... *Psl. horribilis* (Edwards), (Fig. 7)
- Gonostylus without a tooth-like subapical structure ..... 2
- 2 Gonostylus with one subapical spine only ..... *Psl. unispinata* sp. n. (Fig. 13)
- Gonostylus with more than one subapical spine ..... 3
- 3 Gonostylus with 2 subapical spines ..... 4
- Gonostylus with more than 2 subapical spines ..... 9
- 4 Gonostylus slender, with two rather long and curved subapical spines; tegmen simple but with a semicircular apical structure ..... *Psl. bisulca* Vilkamaa, Hippa & Mohrig (Fig. 2)
- Gonostylus of different shape; gonostylus is more bulbous in cases where the two subapical spines are weakly curved; tegmen without a semicircular apical structure ..... 5
- 5 Gonostylus slender, not bulbous ..... 6
- Gonostylus compact, mostly distinctly bulbous or rounded on the outside ..... 7
- 6 Whiplash hair rather short, nearly as long as or slightly longer than the spines; aedeagus long; claws with fine teeth ..... *Psl. paucispinata* sp. n. (Fig. 9)
- Whiplash hair twice as long as spines; aedeagus short; tarsal claws with very strong teeth ..... *Psl. securo* sp. n. (Fig. 10)
- 7 Gonostylus with two short apical spines and a rather short whiplash hair, below the whiplash hair are a few longer bristles (as long as the spines); tegmen as long as wide, weakly pointed; 4<sup>th</sup> flagellomere with l/w index of 2.6, hairs longer than the width of the basal node; apex of the fore tibia with a patch of bristles and with a horseshoe-like border ..... *Psl. fuscovenosa* sp. n. (Fig. 5)
- Gonostylus with two rather long apical spines and a long whiplash hair; nearly bare below the whiplash hair; tegmen simple, wider than long, apically nearly straight; 4<sup>th</sup> flagellomere with l/w index shorter than 2.6; apex of fore tibia with a simple row of bristles ..... 8
- 8 Flagellomeres very short, with short necks; macroseta on the ventral apex of gonocoxites of regular length ..... *Psl. angustantennata* sp. n. (Fig. 1)
- Flagellomeres with l/w index of 2.0, with distinct necks; macroseta on the ventral apex of gonocoxites very long ..... *Psl. breviradiata* sp. n. (Fig. 3)
- 9 Gonostylus short and thick, with 4 close-set apical spines ..... *Psl. globostylata* sp. n. (Fig. 6)
- Gonostylus elongate, with three apical spines or 4–5 single spines in the distal third ..... 10
- 10 Gonostylus with 3 close-set apical spines ..... 11
- Gonostylus with 4–5 fairly separate spines in the distal third ..... 12
- 11 Gonostylus with 2–3 whiplash hairs, flagellomeres with bicoloured necks; apex of fore tibia with a row-like patch of bristles.

- ..... *Psl. skusei* Mohrig, Kauschke & Broadley (Fig. 11)
- Gonostylus with only one short whiplash hair; necks of flagellomeres not bicoloured; apex of fore tibia with a patch of hyaline bristles and a horseshoe-like border ..... *Psl. consecraria* sp. n. (Fig. 4)
- 12 Gonostylus with 5 spines in the distal third; whiplash hair reduced; tegmen large and unusually long; apex of the fore tibia with a simple irregular row of bristles ..... *Psl. snellingi* Mohrig (Fig. 12)
- Gonostylus with 4 spines in the distal third; whiplash hair well developed; tegmen simple, wider than long; apex of the fore tibia with a patch of hyaline bristles and a horseshoe-like border ..... *Psl. notanda* sp. n. (Fig. 8)

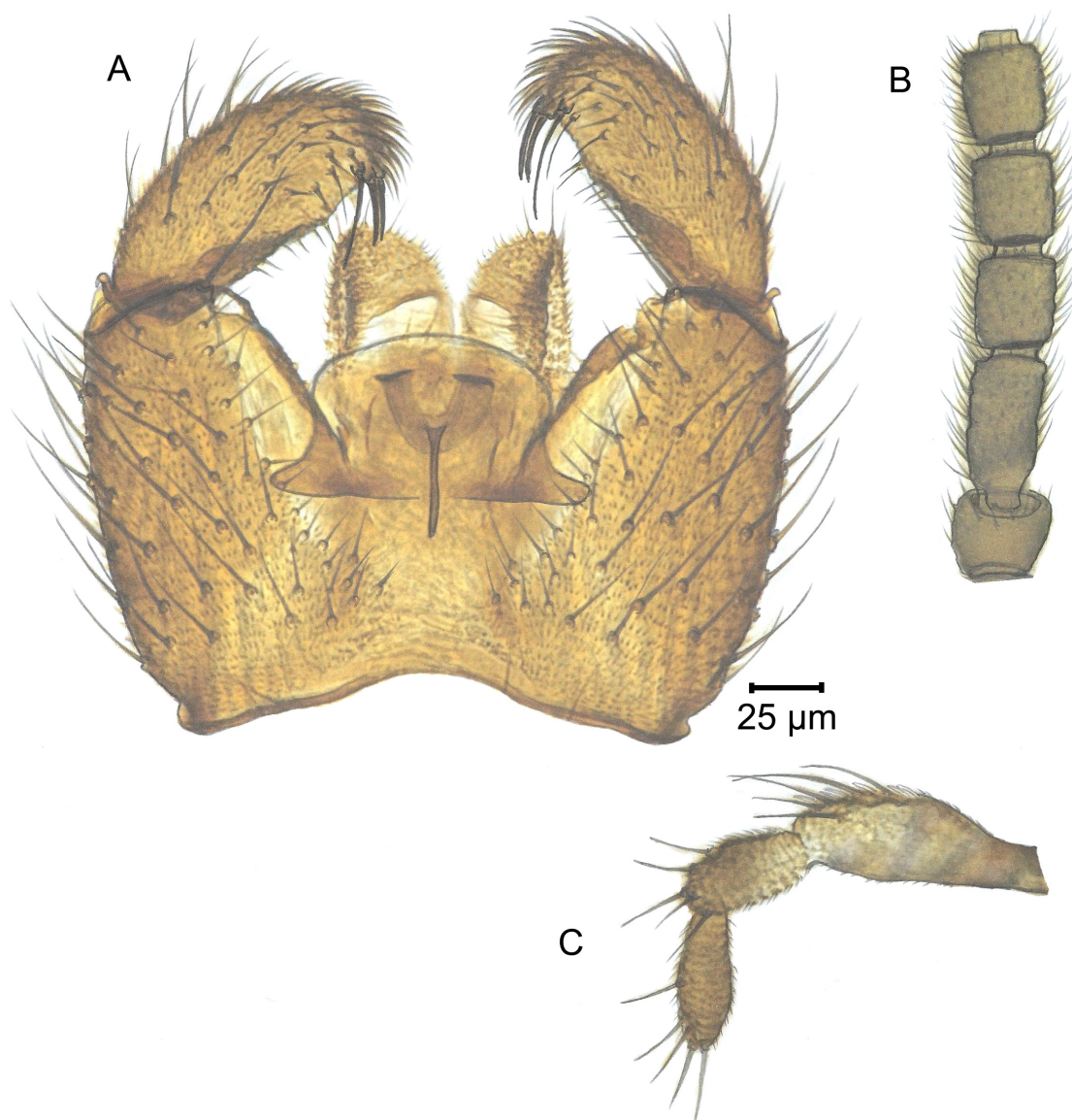
## Species descriptions

### *Pseudolycoriella angustoantennata* sp. n.

(Fig. 1 A–C)

**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 13.xi.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.



**FIGURE 1.** *Pseudolycoriella angustoantennata* sp. n. A. Hypopygium; B. Basal segments of antennae: scape, pedicel and flagellomeres 1–4; C. Palpus.

**Description.** Male. **Head:** Ovoid, mouth parts weakly elongate; eye bridge 4 facets wide; antennae short, brown; 4<sup>th</sup> flagellomere with l/w index of 1.2, with short neck, surface somewhat rough, some fine sensilla inserted in deeper pits, hairs as long as half of the diameter of the basal node; palpus 3-segmented; basal segment with 5–6 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with short dorsocentral and a few stronger lateral hairs; scutellum with 2 longer posterior hairs; postpronotum bare. Wings pale, with distinct veins;  $R_1 = 2/3 R$ ;  $R_5$  with dorsal macrotrichia only;  $C = 3/4 w$ ;  $y = x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Halteres short, with darkened knobs; legs brownish; fore tibiae at the inner apex with a row-like patch of bristles, not bordered; spurs of middle and hind tibiae of the same size, brownish, as long as the diameter of the tibia apex; claws finely toothed. **Abdomen:** Tergal and sternal hairs sparse and moderately short; hypopygium brown, gonocoxites ventrally and along the inner ventral margins with short sparse hairs; gonostylus elongate and ovoid, apically broad rounded, with two rather long spines of the same size and a longer whip-lash hair; tegmen wider than long, apically rounded; aedeagus rather long, with large basal furca. Body length: 2.2 mm.

**Comments.** The species is similar to *Psl. fuscovenosa* sp. n. and *Psl. cavatica* (Skuse, 1888). It differs from the first species mainly by having longer apical spines on the gonostylus and much shorter antennal flagellomeres. Like *Psl. cavatica* it has similar short flagellomeres but differs in the shape of the gonostylus, by having longer apical spines, a less sclerotized tegmen and a longer aedeagus. The species belongs to the *Psl. longicostalis* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).

### *Pseudolycoriella bisulca* Vilkamaa, Hippa & Mohrig, 2012

(Fig. 2)

*Pseudolycoriella bisulca* Vilkamaa, Hippa & Mohrig, 2012 [Vilkamaa *et al.* (2012): 3–6, fig. 2 A–G].

**Material.** 3 males, 8.viii.1997, 3 males, 29.vi.1997, Australia, North East Queensland, Mt Lewis, 37 km WSW of Port Douglas 16°35'S 145°16'E, rain forest, Malaise trap, leg. J. Seymour, 1 slide dated 8.viii.1997 in PABM, all others in PWMP.

**Comments.** The species is characterized by the narrow gonostylus, flattened on the inner side, with two long and somewhat curved apical spines, tegmen as long as wide, with a weak semicircular structure, the fore tibia at the inner apex with a distinct irregular row-like patch of bristles and a semicircular border. The specimens from Queensland are identical to *Psl. bisulca* from New Caledonia. It belongs to the *Psl. bruckii* group sensu Menzel & Mohrig (2000).

**Distribution.** Australia (Queensland); New Caledonia. **New record for Australia.**

### *Pseudolycoriella breviradiata* sp. n.

(Fig. 3 A–B)

**Type locality:** Australia, Queensland, Black Mountain Road near Kuranda, 33 km WNW of Cairns.

**Holotype:** Male, 8.viii.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

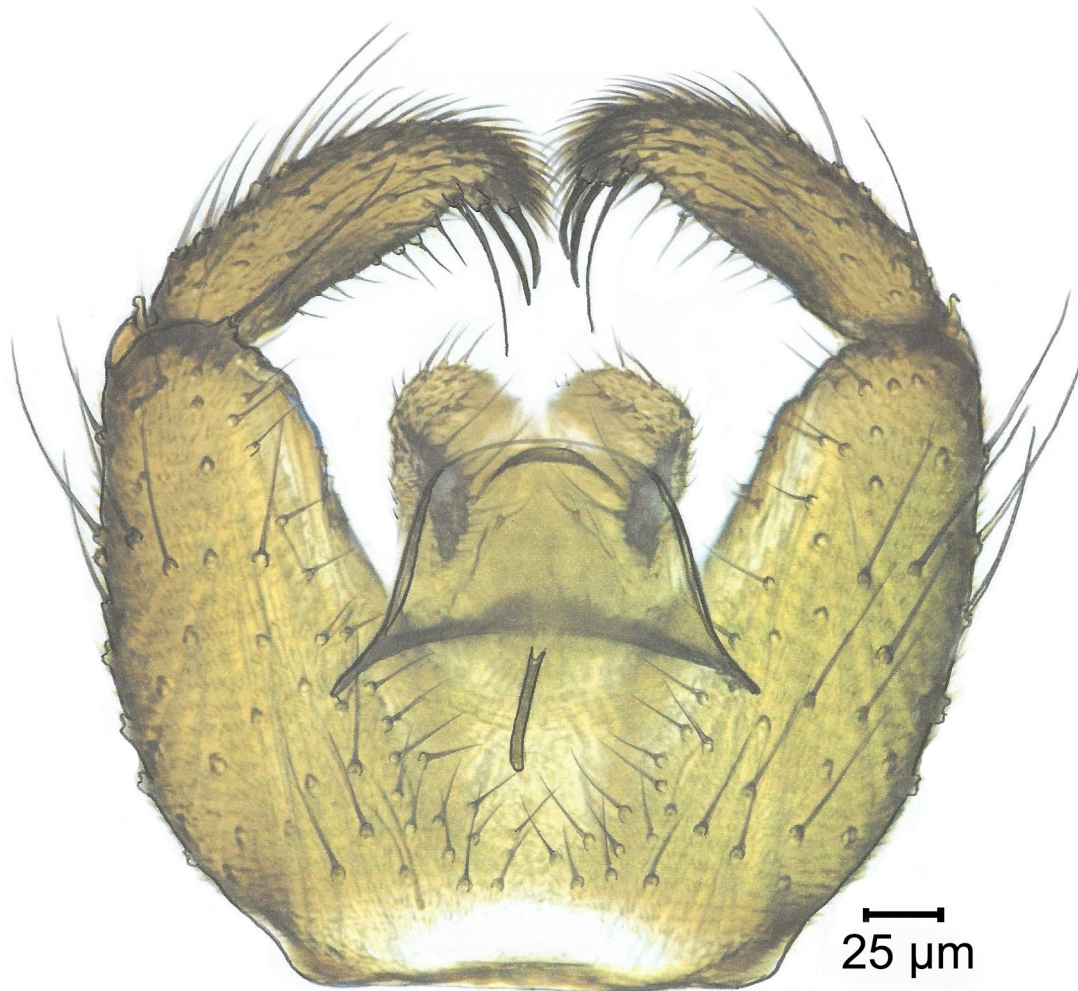
**Paratypes:** 1 male, same data, in PABM; 1 male, 29.vi.1997, same locality, leg. J. Seymour, in PWMP.

**Description.** Male. **Head:** Ovoid, mouth parts weakly elongate; eye bridge 3 facets wide; antennae brown; 4<sup>th</sup> flagellomere with a l/w index of 1.8 and a rather long neck, surface of flagellomere somewhat rough, some sensilla inserted in deeper pits, hairs as long as the diameter of the basal node; palpus 3-segmented; basal segment with 5–6 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with short dorsocentral and a few more robust lateral hairs; scutellum with 2 longer posterior hairs; postpronotum bare. Wing pale, with distinct veins;  $R_1 = 2/3 R$ ;  $R_5$  with dorsal macrotrichia only;  $C = 3/4 w$ ;  $y = x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs brownish; fore tibiae at the inner apex with a distinct row-like patch of bristles, not bordered; spurs of middle and hind tibiae of the same size, yellowish, as long as the diameter of the apex; claws finely toothed. **Abdomen:** Tergal and sternal hairs moderately long and sparse; hypopygium brown, gonocoxites ventrally and on the inner ventral margin with rather short and sparse hairs; gonostylus elongate and

rather broad, apically rounded and with two rather long spines of unequal size and a long whip-lash hair; tegmen wider than long, apically rounded; aedeagus rather long, with a large basal furca. Body length: 2.2 mm.

**Comments.** The species is similar to *Ps. angustoantennata* **sp. n.** It differs mainly by possessing longer flagellomeres and two unequal apical spines on the gonostylus. It belongs to the *Ps. longicostalis* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).



**FIGURE 2.** *Pseudolycoriella bisulca* Vilkamaa, Hippa & Mohrig. Hypopygium.

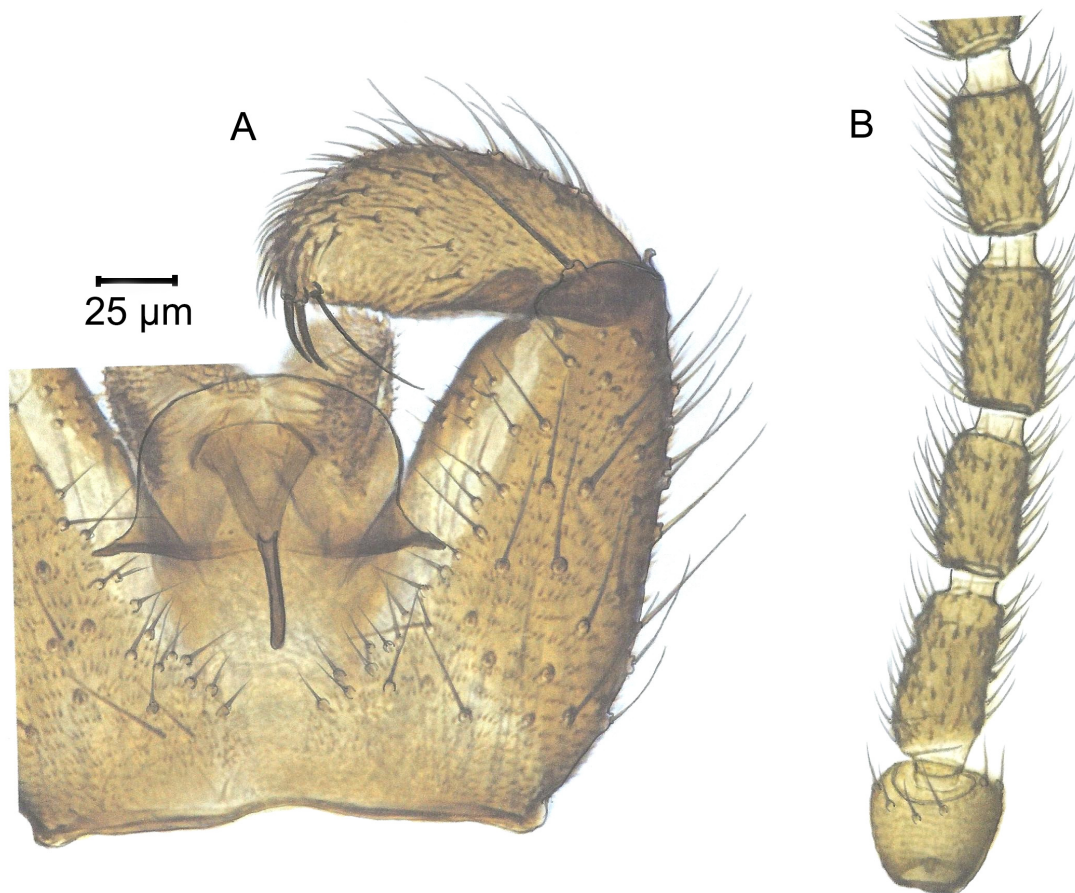
***Pseudolycoriella consectaria* sp. n.**

(Fig. 4 A–C)

**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 8.viii.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Paratypes:** 1 male, 13.vi.1997, same locality, leg. J. Seymour, in PABM; 1 male, 29.vi.1997, same locality, leg. J. Seymour, in PWMP.

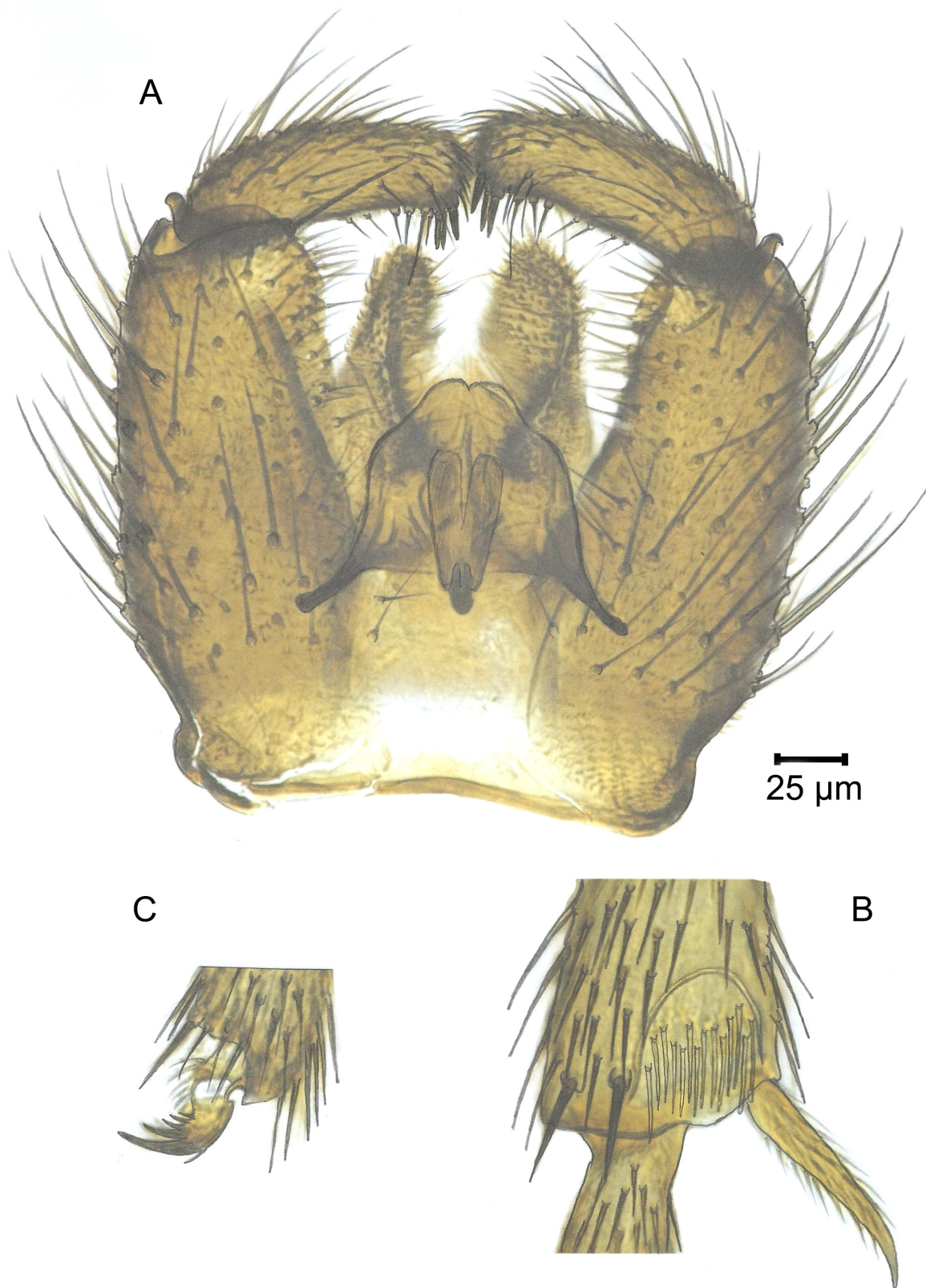


**FIGURE 3.** *Pseudolycoriella breviradiata* sp. n. A. Hypopygium (right side); B. Basal segments of antennae: pedicel and flagellomeres 1–4.

**Description.** Male. **Head:** Ovoid, mouth parts somewhat elongate; eye bridge 4 facets wide; antennae brown; 4<sup>th</sup> flagellomere with a l/w index of 2.0, with rather short neck, surface somewhat rough, hairs as long as half of the diameter of the basal node; palpus 3-segmented; basal segment with 2 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with three darker stripes, short dorsocentral and a few more robust lateral hairs; scutellum with 4 longer marginal hairs; postpronotum bare. Wing brownish, with distinct veins;  $R_1 = 3/4 R$ ;  $R_5$  with ventral macrotrichia in the distal third;  $C = 2/3 w$ ;  $y = x$ , with 1–2 macrotrichia; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs yellowish; fore tibiae at the inner apex with a distinct row-like patch of bristles and a semicircular border; spurs of middle and hind tibiae of same size, brownish and as long as the diameter of the apex; claws dorsally and ventrally toothed. **Abdomen:** Tergal and sternal hairs moderately long and dense; hypopygium brown, ventrally bare, the inner ventral margin of gonocoxites with rather long hairs; gonostylus elongate, narrow, apically rounded, with three short spines of the same size and a short whip-lash hair; tegmen longer than wide, pyramid-like; aedeagus short and strong. Body length: 2.5 mm.

**Comments.** The species is characterized by having a narrow gonostylus with 3 short spines and strongly toothed claws. It belongs to the *Psl. triacanthula* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).



**FIGURE 4.** *Pseudolycoriella consectaria* sp. n. A. Hypopygium; B. Apex of fore tibia; C. Tarsal claw.

***Pseudolycoriella fuscovenosa* sp. n.**

(Fig. 5 A–C)

**Type locality:** Australia, Queensland, Palm Cove, near Cairns.

**Holotype:** Male, 3.vii.2000, mangrove forest along the coastline, caught by sweep net, leg. W. Mohrig, in ANIC.

**Paratypes:** 2 males, 8.viii.1997, Black Mountain Road near Kuranda, 33 km WNW of Cairns, in PWMP; 1 male, 29.viii.1997, same locality, in PWMP; 2 males, 4.iv.1997, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E, rain forest, Malaise trap, leg. J. Seymour, 1 in PABM, 1 in PKHH.

**Description.** Male. **Head:** Ovoid, mouth parts somewhat elongate; eye bridge 3 facets wide; antennae brown; 4<sup>th</sup> flagellomere with a l/w index of 2.2, with short neck, surface somewhat rough, hairs as long as the diameter of the basal node; palpus 3-segmented; basal segment with 6–7 bristles and a patch of short sensilla. **Thorax:** Dark brown; central parts of scutum darkened, with short dorsocentral and 2–3 stronger lateral hairs; scutellum with 4 longer marginal hairs; postpronotum bare. Wing brownish, all veins darkened;  $R_1 = 2/3 R$ ;  $R_5$  with dorsal macrotrichia only;  $C = 3/4 w$ ;  $y$  shorter than  $x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs brownish; fore tibiae at the inner apex with a distinct patch of bristles and a semicircular border; spurs of middle and hind tibiae of the same size, brownish and longer than the diameter of the apex; claws strongly toothed. **Abdomen:** Tergal and sternal hairs moderately short and sparse; hypopygium brown, ventrally and on the inner ventral margin of gonocoxites with short sparse hairs; gonostylus elongate, apically rounded, with two short spines of the same size and a longer whip-lash hair; tegmen as wide as long, apically rounded; aedeagus rather short, with a large basal furca. Body length: 2.5 mm.

**Comments.** The species is characterized by the apically rounded gonostylus with two short spines and a longer whip-lash hair. It belongs to the *Psl. bruckii* group sensu Menzel & Mohrig (2000).

**Distribution.** Australia (Queensland).

***Pseudolycoriella globostylata* sp. n.**

(Fig. 6 A–B)

**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 13.vi.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Description.** Male. **Head:** Ovoid, mouth parts somewhat elongate; eye bridge 3 facets wide; antenna brown; 4<sup>th</sup> flagellomere with a l/w index of 1.6, with a rather short neck, surface somewhat rough, hairs shorter than the diameter of the basal node; palpus 3-segmented; basal segment with 2–3 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with three darker stripes, short dorsocentral and a few more robust lateral hairs; scutellum with 4 longer marginal hairs; postpronotum bare. Wing brownish, with distinct veins;  $R_1$  as long as  $R$ ;  $R_5$  without ventral macrotrichia;  $C$  longer than  $w$ ;  $y = x$ , bare; Cu-stem longer than  $x$ ; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs brownish; fore tibiae at the inner apex without a distinct patch of bristles, spurs of middle and hind tibiae of the same size, brownish and as long as the diameter of the apex; claws strongly toothed with a strong tooth at the inner side and a fine one at the dorsal side. **Abdomen:** Tergal and sternal hairs fine and sparse; hypopygium brown, ventrally bare, the inner ventral margin of gonocoxites with short hairs; gonostylus short and thick, apically rounded, with 4 short spines of the same size; tegmen large, as long as wide; aedeagus rather short and robust. Body length: 2.2 mm.

**Comments.** The species is characterized by a thick gonostylus with 4 short spines and strongly toothed tarsal claws. It belongs to the *Psl. triacanthula* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).

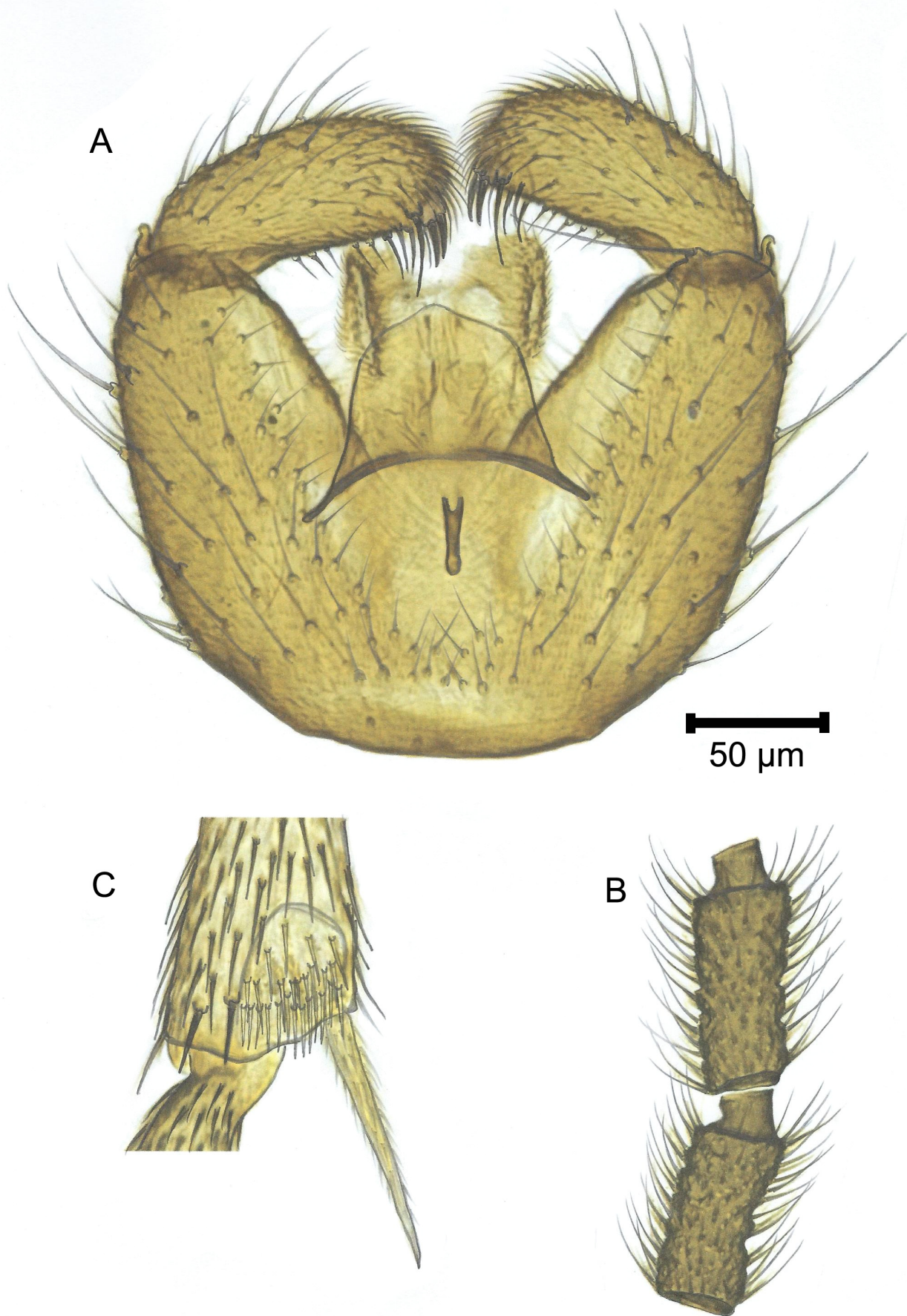
***Pseudolycoriella horribilis* (Edwards, 1931)**

(Fig. 7 A–B)

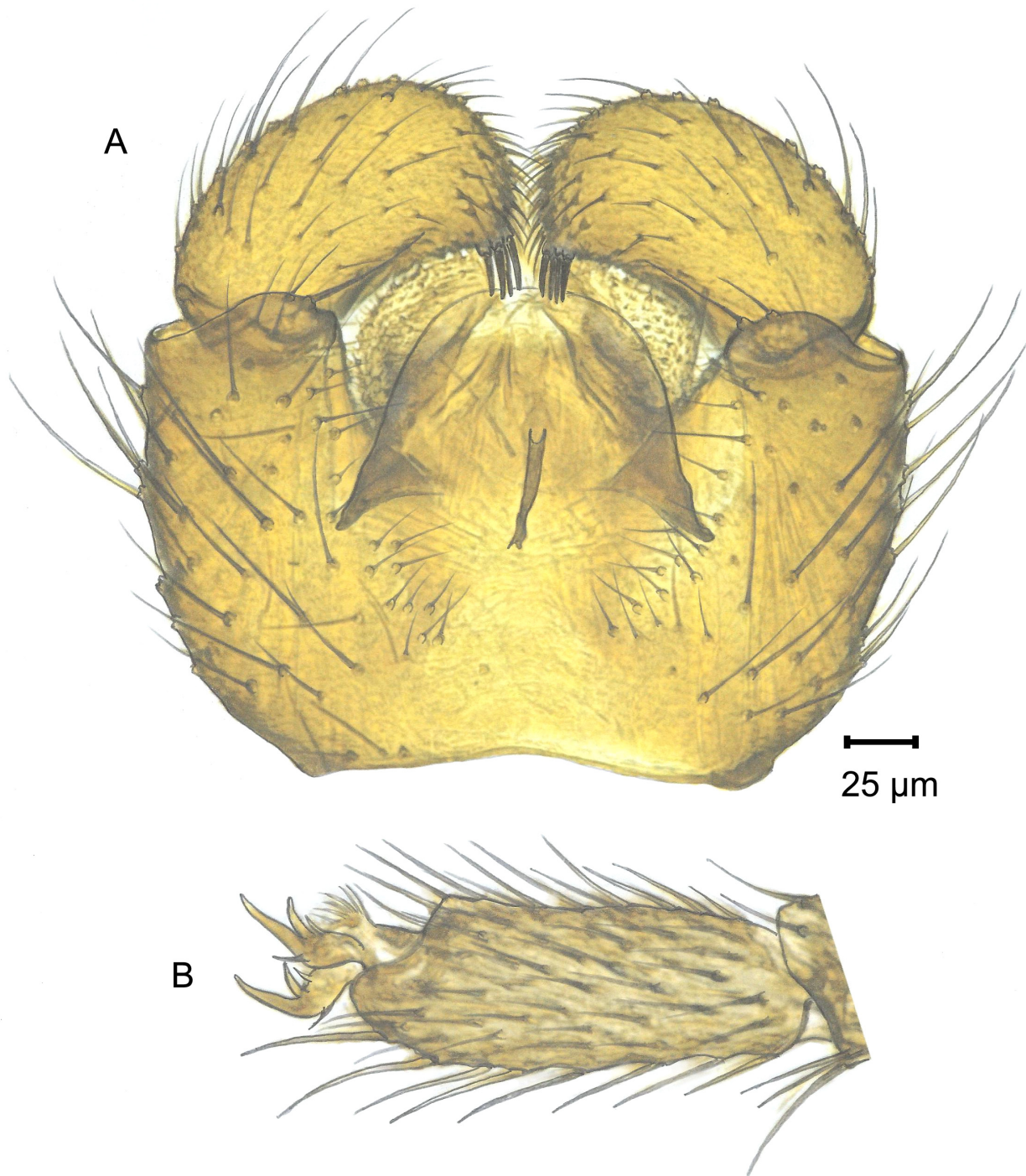
*Sciara horribilis* Edwards, 1931 [Edwards (1931): 274–275, fig. 10].

Literature: Menzel & Mohrig (2000): 479–480, fig. 440, 441.





**FIGURE 5.** *Pseudolycoriella fuscovenosa* sp. n. A. Hypopygium; B. Flagellomeres 4–5; C. Apex of fore tibia.



**FIGURE 6.** *Pseudolycoriella globostylata* sp. n. A. Hypopygium; B. Tarsal claw.

**Material:** 1 male, 2 females, 29.vi.1997; 2 males, 1 female, 8.viii.1997, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E, rain forest, Malaise trap, leg. J. Seymour, 1 male dated 8.viii.1997 in PABM, all others in PWMP.

**Comments.** This large species is characterized by a tooth-like subapical protuberance on the gonostylus, considered as a unique morphological structure within the genus. It belongs to the *Psl. horribilis* group sensu Menzel & Mohrig (2000).

**Distribution.** Australia (Queensland); India; Indonesia (Sumatra); Myanmar; Nepal. **New record for Australia.**

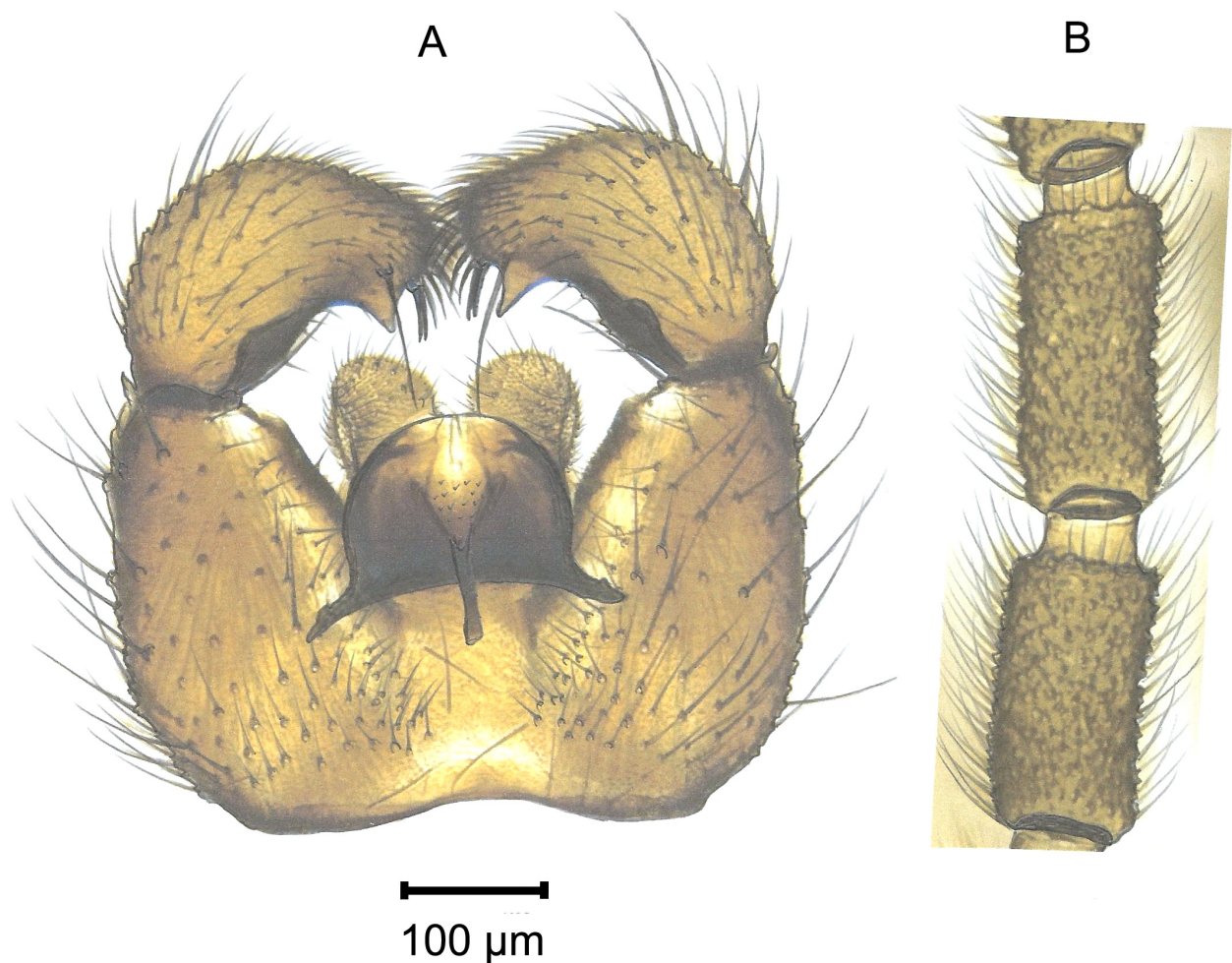


FIGURE 7. *Pseudolycoriella horribilis* (Edwards). A. Hypopygium; B. Flagellomeres 4–5.

***Pseudolycoriella notanda* sp. n.**

(Fig. 8 A–C)

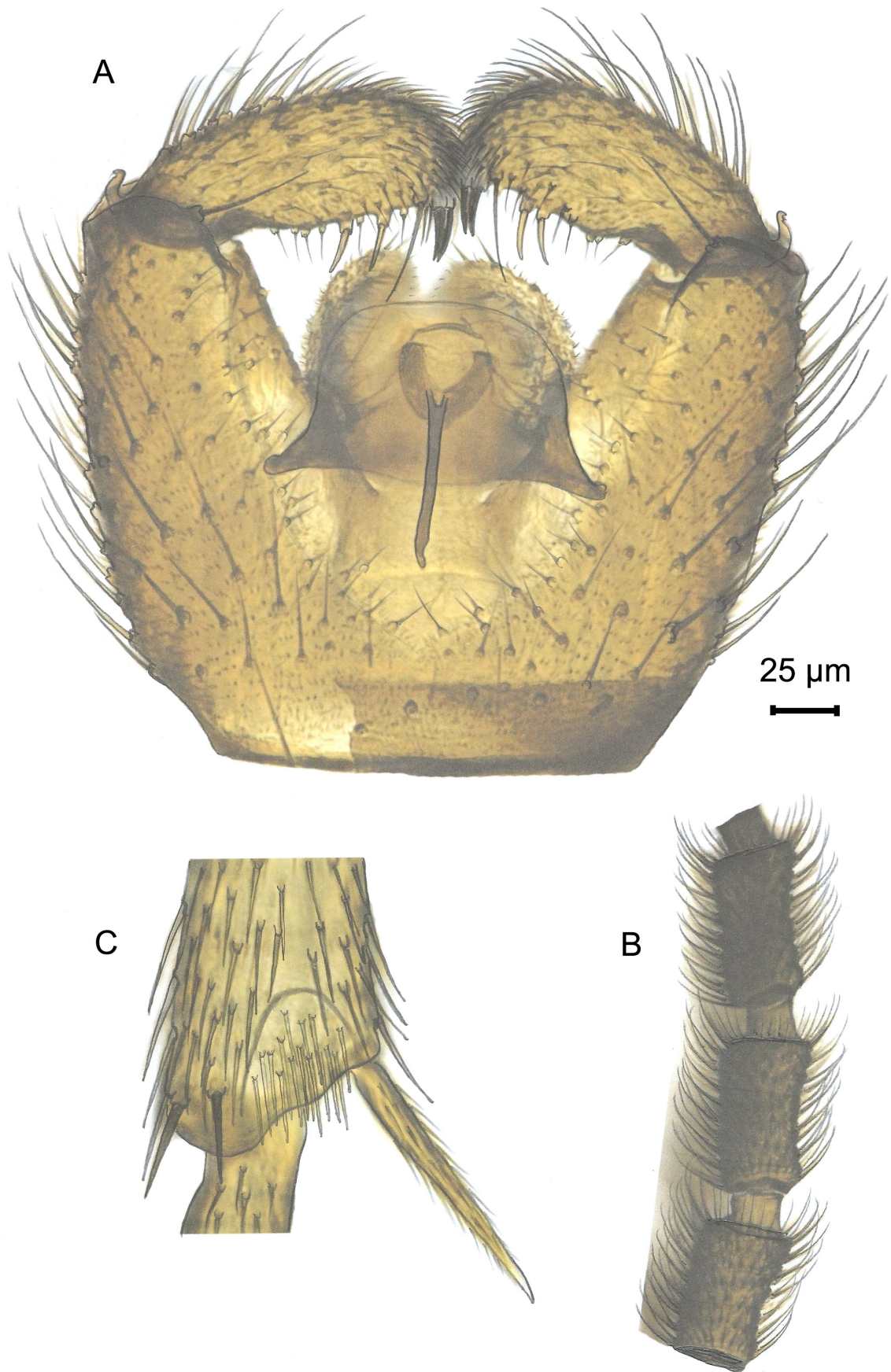
**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 8.viii.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Description.** Male. **Head:** Round, mouth parts not elongate; eye bridge 4 facets wide; antenna brown; 4<sup>th</sup> flagellomere with a l/w index of 2.0, with rather long neck, surface somewhat rough, hairs very dense and as long as the diameter of the basal node; palpus 3-segmented; basal segment with 6–7 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with short dorsocentral and a few stronger lateral hairs; scutellum with many short marginal hairs; postpronotum bare. Wing brownish, with distinct veins;  $R_1 = 3/4 R$ ;  $R_5$  without ventral macrotrichia;  $C = 2/3 w$ ;  $y = x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs brownish; fore tibiae at the inner apex with a distinct patch of bristles and a semicircular border; spurs of middle and hind tibiae of the same size, brownish, longer than the diameter of the apex; claws rather strongly toothed. **Abdomen:** Tergal and sternal hairs moderately short and sparse; hypopygium brown, ventral base broad and v-shaped, the inner ventral margin of gonocoxites with short sparse hairs; gonostylus rather broad, apically rounded, with 2 short spines of the same size and 2 separate spines near the middle of the inner side and a long fine whip-lash hair; tegmen wide, apically rounded; aedeagus long and robust. Body length: 3 mm.

**Comments.** The species is characterized by having 4 short spines on the gonostylus, two of them separated near the middle, a long and fine whip-lash hair and very dense hairs on the flagellomeres. It belongs to the *Ps. triacanthula* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).



**FIGURE 8.** *Pseudolycoriella notanda* sp. n. A. Hypopygium; B. Flagellomeres 3–5; C. Apex of fore tibia.

***Pseudolycoriella paucispinata* sp. n.**

(Fig. 9 A–D)

**Type locality:** Australia, Queensland, Black Mountain Road near Kuranda, 33 km WNW of Cairns.

**Holotype:** Male, 28.viii.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Paratypes:** 1 male, 8.viii.1997, locus typicus, in PWMP; 2 males, 8.viii.1997, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E, rain forest, leg. J. Seymour, 1 in PABM, 1 in PWMP.

**Description.** Male. **Head:** Round, mouthparts not elongate; eye bridge 3 facets wide; antenna brown; 4<sup>th</sup> flagellomere with a l/w index of 1.8, with a rather short neck, surface somewhat rough, some sensilla with deep pits, hairs dense and as long as half of the diameter of the basal node; palpus 3-segmented; basal segment with 2–4 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with rather long dorsocentral and a few more robust lateral hairs; scutellum with 4 longer marginal hairs; postpronotum bare. Wing broad and pale, with distinct veins;  $R_1 = 2/3 R$ ;  $R_5$  without ventral macrotrichia;  $C = 2/3 w$ ;  $y = x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs yellowish; fore tibiae at the inner apex with two distinct row-like patches of bristles and a semicircular border; spurs of middle and hind tibiae of the same size, brownish and longer than the diameter of the apex; claws finely toothed. **Abdomen:** Tergal and sternal hairs moderately long and sparse; hypopygium brown, ventral base v-shaped, the inner ventral margin of gonocoxites with short sparse hairs; gonostylus elongate, apically rounded, with 2 short spines of the same size and a short whip-lash hair, shorter than spines; tegmen wide, apically rounded; aedeagus rather long and thin. Body length: 2.2 mm.

**Comments.** The species is very similar to *Psl. paucispina* Mohrig from Papua New Guinea. It differs by having a larger body size and darker colour, dense hairs on the flagellomeres, longer  $R_1$ , broader wings and a distinct semicircular bordered patch of bristles at the apex of the fore tibia. It belongs to the *Psl. longicostalis* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland).

***Pseudolycoriella segura* sp. n.**

(Fig. 10 A–B)

**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 8.viii.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Description.** Male. **Head:** Round, mouth parts short; eye bridge 2 facets wide; antenna brown; 4<sup>th</sup> flagellomere with a l/w index of 2.0, with rather long neck, surface somewhat rough, hairs longer than the diameter of the basal node; palpus 3-segmented; basal segment narrow, with 2–3 bristles and a patch of short sensilla. **Thorax:** Dark brown; central parts of scutum darkened, with rather long dorsocentral and 2–3 stronger lateral hairs; scutellum with 2 longer marginal hairs; postpronotum bare. Wing brownish, with distinct veins;  $R_1 = 2/3 R$ ;  $R_5$  with dorsal macrotrichia only;  $C = 3/4 w$ ;  $y$  shorter than  $x$ , bare; Cu-stem rather short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs yellowish; fore tibiae at the inner apex with a small patch of bristles and a semicircular border; spurs of middle and hind tibiae of the same size, yellowish and longer than the diameter of the apex; claws very strongly toothed. **Abdomen:** Tergal and sternal hairs moderately short and sparse; hypopygium brown, ventrally and on the inner ventral margin of gonocoxites with rather long and sparse hairs; gonostylus elongate and narrow, apically rounded, with two short spines of the same size and a long whip-lash hair; tegmen wider than long and weakly rounded; aedeagus rather short, with large basal furca. Body length: 2.5 mm.

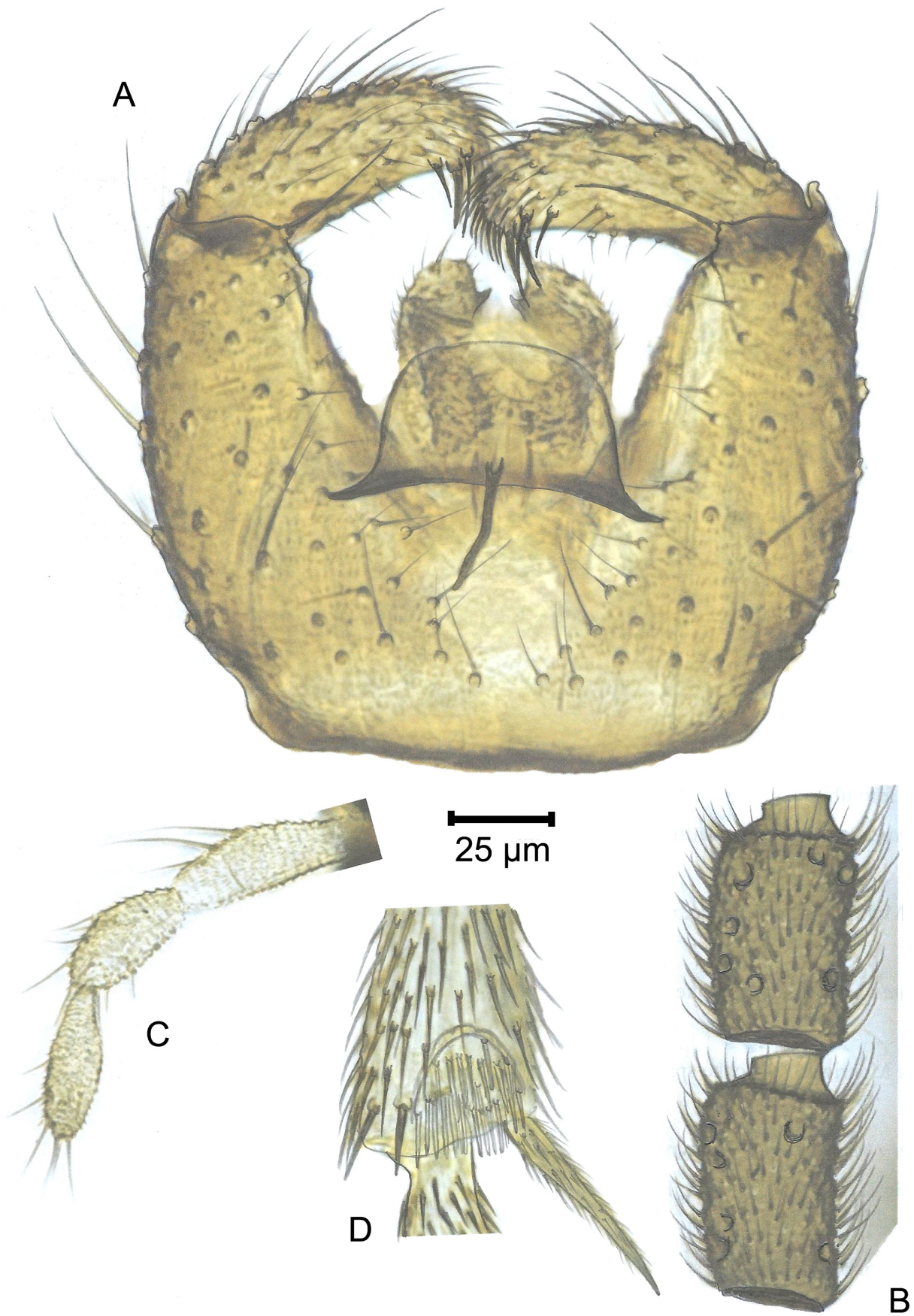
**Comments.** The species is characterized by the narrow gonostylus with two short spines and a longer whip-lash hair. It is similar to *Psl. angust antennata* sp. n. and *Psl. paucispinata* sp. n. It differs from both species by having very strongly toothed claws. It belongs to the *Psl. bruckii* group sensu Menzel & Mohrig (2000).

**Distribution.** Australia (Queensland).

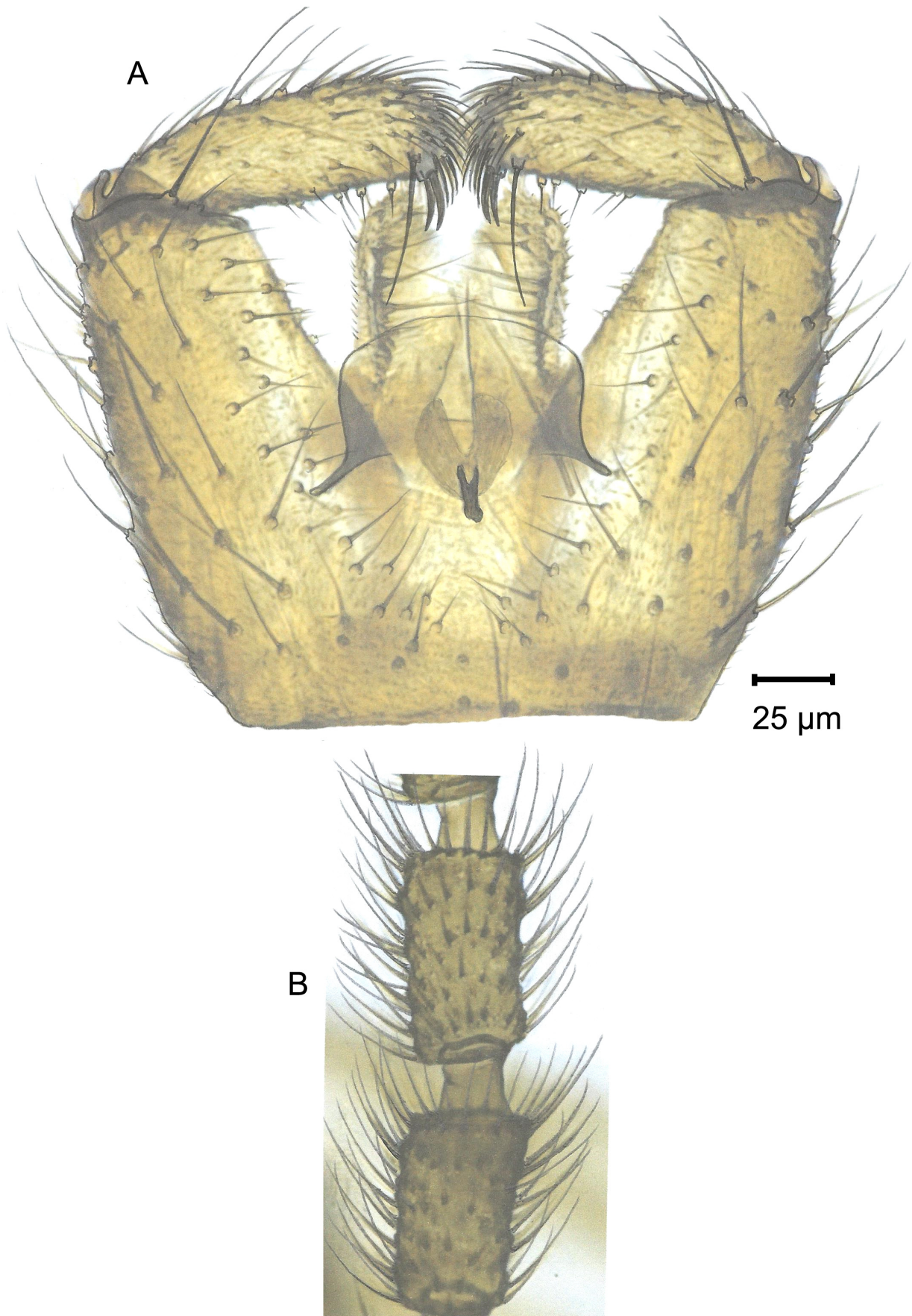
***Pseudolycoriella skusei* Mohrig, Kauschke & Broadley, 2016**

(Fig. 11 A–D)

*Pseudolycoriella skusei* Mohrig, Kauschke & Broadley, 2016 [Mohrig *et al.* (2016): 139–142, fig. 1 a–f].



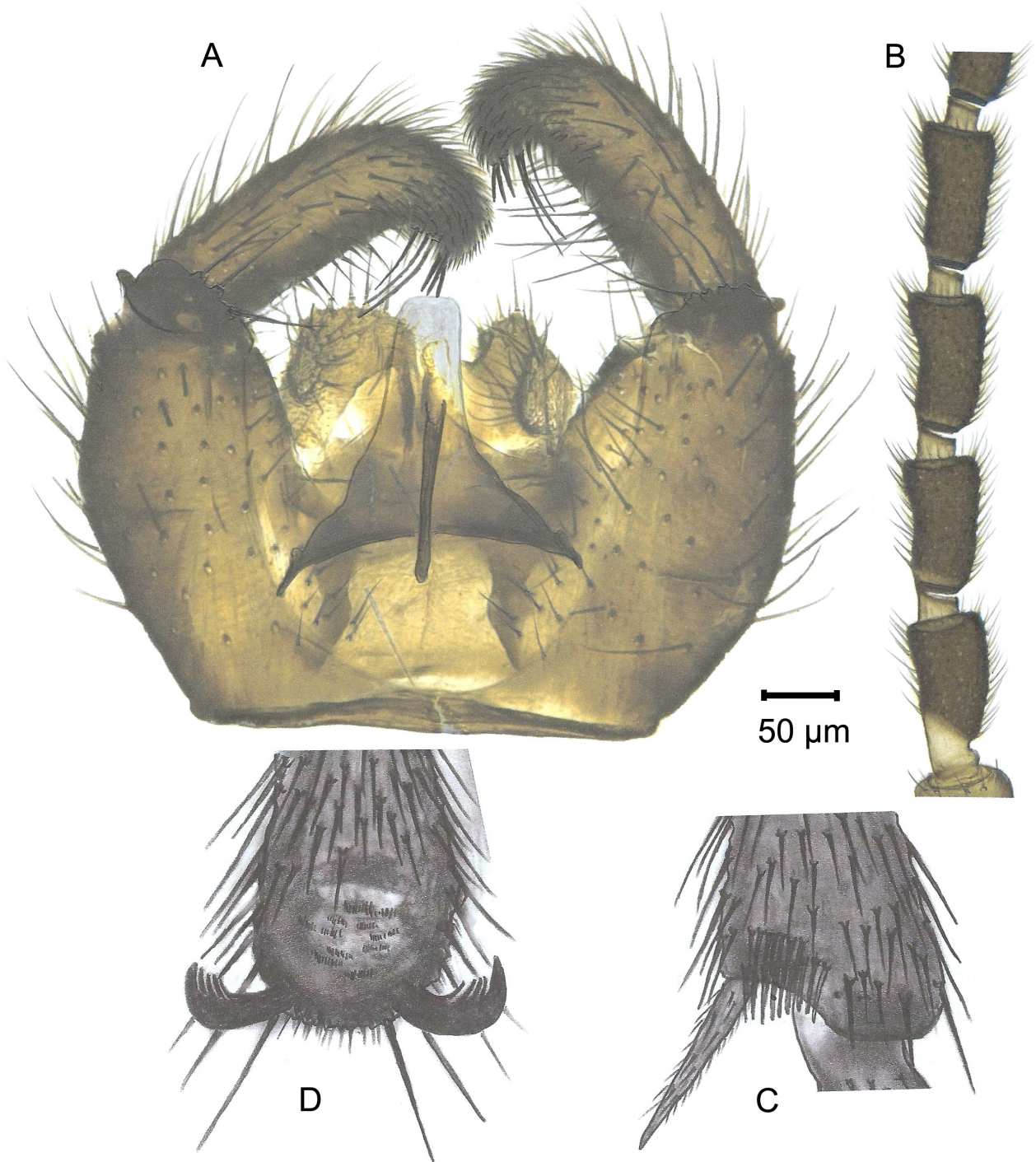
**FIGURE 9.** *Pseudolycoriella paucispinata* sp. n. A. Hypopygium; B. Flagellomeres 3–4; C. Palpus; D. Apex of fore tibia.



**FIGURE 10.** *Pseudolykoriella segura* sp. n. A. Hypopygium; B. Flagellomeres 3–4.

**Comments.** This large species is characterized by a long curved gonostylus with three apical spines and two to three long whip-lash hairs, flagellomeres with bicoloured necks, and strongly toothed claws. It belongs to the *Ps. triacanthula* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland, Norfolk Island).



**FIGURE 11.** *Pseudolycoriella skusei* Mohrig, Kauschke & Broadley. A. Hypopygium; B. Flagellomeres 1–4; C. Apex of fore tibia; D. Tarsal claws.

***Pseudolycoriella snellingi* Mohrig, 2013**

(Fig. 12 A–B)

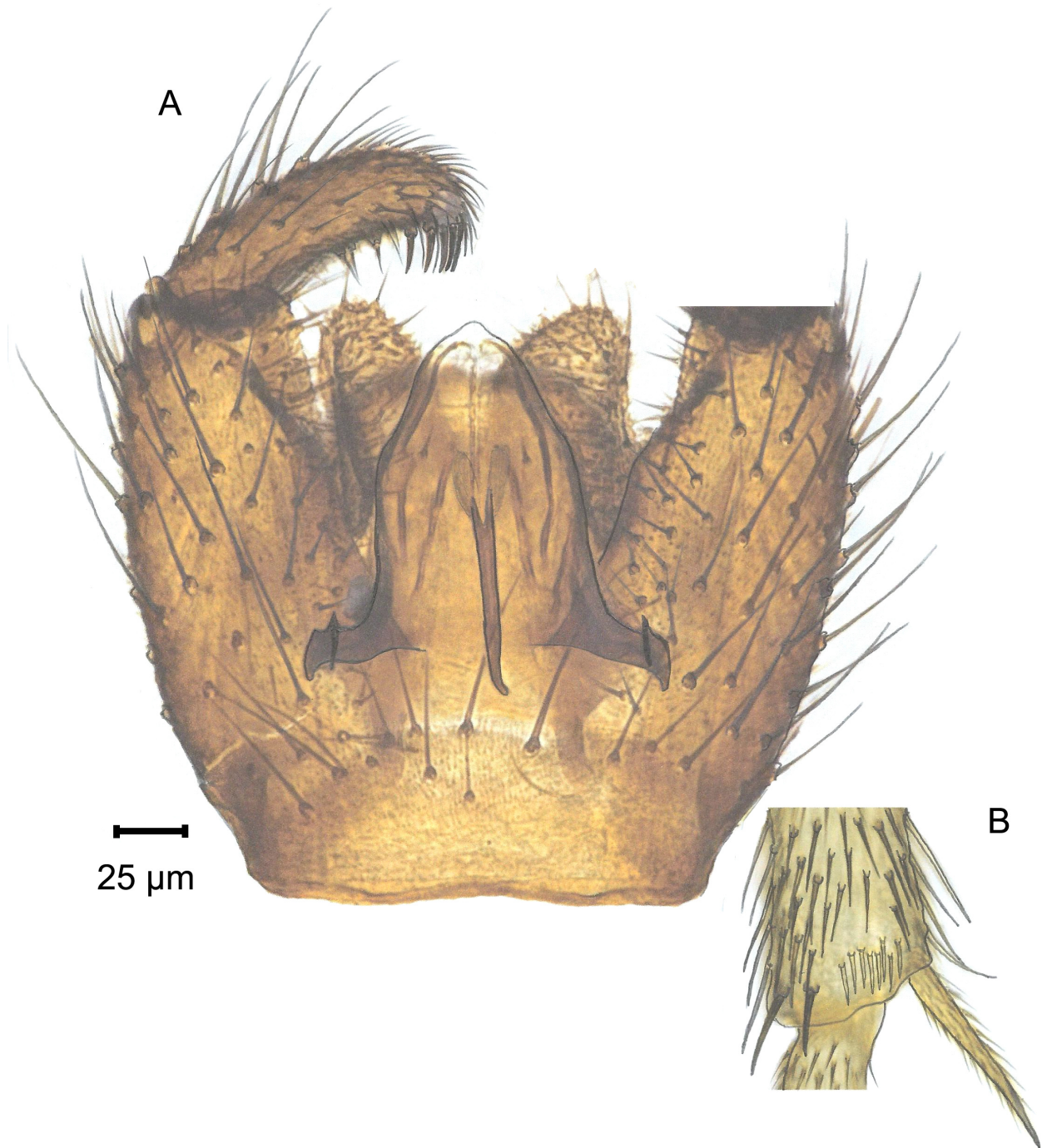
*Pseudolycoriella snellingi* Mohrig 2013 [Mohrig (2013): 156–157, fig. 26 a–f].



**Material.** 2 males, 8.viii.1997, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E, rain forest, Malaise trap, leg. J. Seymour, 1 in PABM, 1 in PWMP; 1 male, 2 females, 13.vi.1997, same locality, leg. Seymour, in PWMP.

**Comments.** The species is characterized by having 4–5 spines on the gonostylus (in the original description only 4 spines are mentioned; this was also illustrated in figure 26 a), a very long tegmen, short flagellomeres with a fine net-like surface sculpture, strongly toothed claws, a short whiplash-hair and a yellow body colour. The specimens from Queensland are identical to *Psl. snellingi* Mohrig from Papua New Guinea in all important characters. It belongs to the *Psl. quadrispinosa* group sensu Mohrig (2013).

**Distribution.** Australia (Queensland); Papua New Guinea. **New record for Australia.**



**FIGURE 12.** *Pseudolykoriella snellingi* Mohrig. A. Hypopygium (left side); B. Apex of fore tibia.

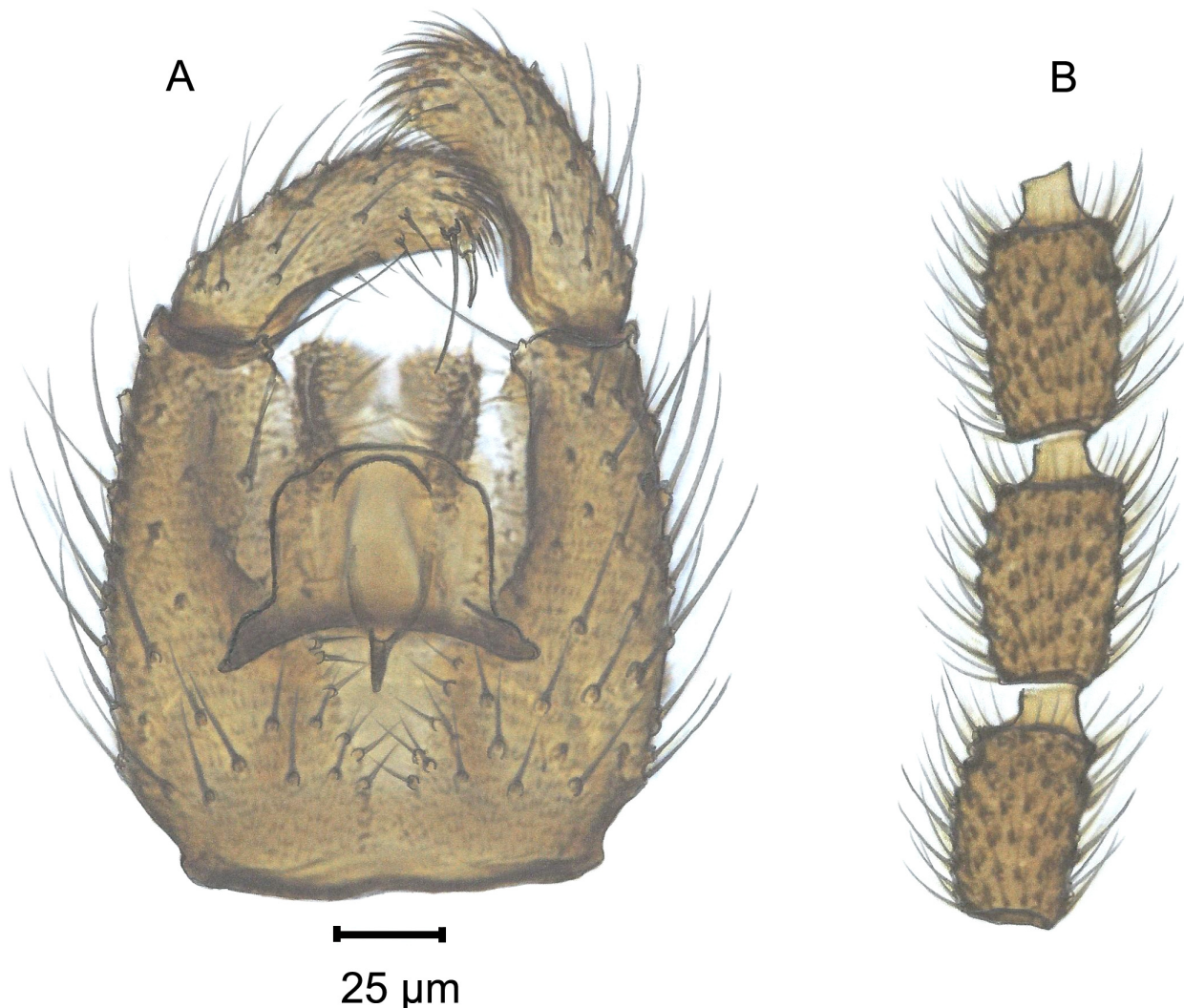
*Pseudolycoriella unispinata* sp. n.

(Fig. 13 A–B)

**Type locality:** Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35'S, 145°16'E.

**Holotype:** Male, 29.vi.1997, rain forest, Malaise trap, leg. J. Seymour, in ANIC.

**Description.** Male. **Head:** Round, mouth parts not elongate; eye bridge 3 facets wide; antenna brown; 4<sup>th</sup> flagellomere with a l/w index of 1.8, with a rather long neck, surface rough, sensilla inserted in deep pits, hairs bristle-like and shorter than the diameter of the basal node; palpus 3-segmented; basal segment with 2–3 bristles and a patch of short sensilla. **Thorax:** Brown; scutum with short dorsocentral and few stronger lateral hairs; scutellum with 2 longer marginal hairs; postpronotum bare. Wings brownish, with distinct veins;  $R_1 = 3/4 R$ ;  $R_5$  without ventral macrotrichia;  $C = 2/3 w$ ;  $y = x$ , bare; Cu-stem short; posterior wing veins without macrotrichia. Haltere short, with darkened knob; legs yellowish; fore tibiae at the inner apex with a distinct row-like patch of bristles and a semicircular border; spurs of middle and hind tibiae of the same size, yellowish and somewhat longer than the diameter of the apex; claws finely toothed. **Abdomen:** Tergal and sternal hairs moderately long and sparse; hypopygium brown, ventral base v-shaped, the inner ventral margin of gonocoxites with short sparse hairs; gonostylus elongate, weakly curved, apically rounded, with only 1 short hyaline spine and a long whip-lash hair; tegmen wide, with an inner semicircular structure; aedeagus short and strong. Body length: 1.6 mm.



**FIGURE 13.** *Pseudolycoriella unispinata* sp. n. A. Hypopygium; B. Flagellomeres 3–5.

**Comments.** The species is characterized by having only one spine on the gonostylus, a wide tegmen with a semicircular structure and rather short flagellomeres with bristle-like hairs, shorter than the diameter of the basal node. It is similar to the Palaearctic species *Ps. unispina* (Mohrig & Krivosheina, 1983) and *Ps. microcteniuni* (Yang & Zhang, 1987) [after Menzel & Smith (2009)]. It differs from both species mainly by possessing a longer spine and a much longer whiplash-hair. It belongs to the *Ps. bruckii* group sensu Menzel & Mohrig (2000).

**Distribution.** Australia (Queensland).

## Species list of *Pseudolycoriella* from Queensland

*angustoantennata* sp. n.

*bisulca* Vilkamaa, Hippa & Mohrig, 2012

*breviradiata* sp. n.

*consectaria* sp. n.

*fuscovenosa* sp. n.

*globostylata* sp. n.

*horribilis* (Edwards, 1931)

*notanda* sp. n.

*paucispinata* sp. n.

*secura* sp. n.

*skusei* Mohrig, Kauschke & Broadley, 2016

*snellingi* Mohrig, 2013

*unispinata* sp. n.

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