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Black fungus gnats (Diptera: Sciaridae) of Queensland, Australia. Part I. Genera *Chaetosciara* Frey, *Corynoptera* Winnertz, *Cratyna* Winnertz, *Epidapus* Haliday, *Keilbachia* Mohrig, *Lobosciara* Steffan, *Phytosciara* Frey and *Scatopsciara* Edwards

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Abstract

This study is the first of a taxonomic series on the Sciaridae of Australia, starting with the sciarid fauna of Queensland. Twelve species described herein are new to science. These are *Chaetosciara recondita* Mohrig & Kauschke **sp. n.**, *Cratyna adulterina* Mohrig & Kauschke **sp. n.**, *Cr. flagriola* Mohrig & Kauschke **sp. n.**, *Cr. flavothoracica* Mohrig & Kauschke **sp. n.**, *Cr. livida* Mohrig & Kauschke **sp. n.**, *Cr. longipeda* Mohrig & Kauschke **sp. n.**, *Cr. pullata* Mohrig & Kauschke **sp. n.**, *Epidapus excelsus* Mohrig & Kauschke **sp. n.**, *Keilbachia adstrictatula* Mohrig & Kauschke **sp. n.**, *Scatopsciara brevicolla* Mohrig & Kauschke **sp. n.**, *Sc. dubiosa* Mohrig & Kauschke **sp. n.**, and *Sc. validovenosa* Mohrig & Kauschke **sp. n.** Seven species are new reports for Australia. These are *Cratyna flagria* Mohrig, *Cr. vera* Mohrig, *Phytosciara bella* Mohrig, *Ph. conturbata* Mohrig, *Ph. pseudoornata* Mohrig and *Corynoptera gladiota* Mohrig, previously described from Papua New Guinea, and *Lobosciara trilobata* Vilkamaa & Hippa, described from Sulawesi.

Key words: *Chaetosciara*, *Corynoptera*, *Cratyna*, *Epidapus*, *Keilbachia*, *Lobosciara*, *Phytosciara, Scatopsciara*, *Diversicratyna*, *Pictosciara*, new species, Australia, Queensland

Introduction

The Sciaridae of Australia have attracted relatively less attention from entomologists compared to other groups of nematoceran flies, except some sciarid pest species that infest cultivated mushrooms and plants (Greenslade & Clift 2004). The first taxonomic work on Australian Sciaridae was published by Skuse nearly 130 years ago, when he described 59 species: 57 as *Sciara,* one as *Trichosia* and one as *Zygoneura* (Skuse 1888; 1890). Schmitz & Mjöberg (1924) described *Austrosciara termitophila* from a dampwood termite nest and Loudon (1978) described a *Lycoriella* pest of mushrooms as new (*L. agarici*); this was subsequently determined to be a synonym of *L. sativae* (Johannsen). The Catalog of the Diptera of the Australasian and Oceanian Regions lists 63 species (mostly as *Sciara*) for Australia/Tasmania, without any generic revision (Steffan 1989).

The Australian sciarid fauna is obviously much richer than presented in the regional literature. Our revision of 27 male types from the Skuse collection revealed that 14 species belonged to the genus *Bradysia* Winnertz, one species to the genus *Corynoptera* Winnertz, four species to the genus *Austrosciara* Schmitz & Mjöberg, two species to the genus *Pseudolycoriella* Menzel & Mohrig, one species to the genus *Pseudozygomma* Mohrig, one species to the genus *Sciara* Meigen and one species to the genus *Scythropochroa* Enderlein (Broadley *et al.* 2016).

Herein we present a regional faunistic study on sciarids of the wet tropics of North-East Queensland and this is one of the first steps in a revisionary work on the Australian Sciaridae.

The rain forest of North Queensland is one of the oldest wet forests in the world and is closely connected to

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comparative biotopes in Papua New Guinea. The sciarid fauna of Papua New Guinea was studied recently by Mohrig (1999, 2004, 2013, 2016), that of New Caledonia by Vilkamaa *et al*. (2011, 2012a, 2012b, 2012c, 2012d, 2014, 2015) as well as by Köhler & Menzel (2013) and that of New Zealand by Mohrig & Jaschhof (1999) and Köhler and Mohrig (2016). These reports can be used as a preliminary framework with which to undertake a comparative analysis concerning respective environments on the Australian mainland. New Guinea acts as a faunistic bridge between the northern Australasian region and Asia on one side (Brunetti 1912; Edwards 1928, 1929, 1931; Menzel & Smith 2009) and to New Caledonia and Oceania on the other (Steffan 1969).

Materials and methods

Localities. The following taxonomic study is based on sciarid material collected from North Queensland. Most were selected from Malaise traps that James Seymour (James Cook University, Cairns) used to sample two different mesophyll vine forest areas near Port Douglas and Kuranda in 1997. The remainder were caught in 2000 by sweep net near Cairns and in the Tablelands by Werner Mohrig. The first sampling area for Malaise traps was Mt Lewis, located 37 km WSW of Port Douglas (16°35´S, 145°16´E) within state forest boundaries adjacent to the Daintree River National Park, with an altitude of about 1200 m. The second area was the Black Mountain Road, off the Kennedy Highway before Kuranda, 28 km from Cairns.

Preparation. The specimens were stored in 70% ethanol and embedded in Canada balsam after dehydration in 96% ethanol (at least 10 min), followed by treatment in beechwood creosote (30 min). From creosote they were then transferred with needles to the middle of a microscope slide. The hypopygium was dissected and transferred separately with the help of a needle into a small drop of Canada balsam, placed next to the body on the slide. Under the control of a stereomicroscope the hypopygium was arranged with the ventral side upwards and covered with a 5 x 5 mm cover slip. After that a larger drop of Canada balsam was put on the body and covered with a 10 x 10 mm cover slip. In some cases one wing was dissected and mounted separately, too.

Figures. Illustrations were obtained on the basis of multilayer digital images using a Keyence VHX-2000 digital microscope and respective software, including size measurements. Photographs obtained were modified using Adobe Photoshop software. Print details were improved by hand drawing and simultaneous microscopic control (Olympus microscope). After final scanning and corrections using Photoshop software they were finalized for publication. The scale bars in the figures only refer to the male genitalia and the habitus pictures. **Determination**. The terminology used herein follows Menzel & Mohrig (1997) and Mohrig *et al*. (2013). Morphological details are illustrated in Broadley *et al*. (2016) and Menzel & Mohrig (2000). A key to genera of Sciaridae in the Australasian region does not currently exist but keys to genera of the Palaearctic region may be useful [Menzel & Mohrig (1997), in English; Menzel & Mohrig (2000), in German] since most of the Australian species belong to genera that are found in the northern hemisphere.

Holotypes are stored in the Private Collection of Werner Mohrig, Puddemin, Germany (PWMP), some paratypes and specimens for comparison are in the Australian National Insect Collection, Canberra (ANIC) as well as in the Private Collection of Adam Broadley, Melbourne (PABM).

Museums

ANIC	Australian National Insect Collection, CSIRO, Canberra, Australia
PABM	Private Collection of Adam Broadley, Melbourne, Australia
PKHH	Private Collection of Kai Heller, Heikendorf, Germany
PWMP	Private Collection of Werner Mohrig, Puddemin, Germany
SDEI	Senckenberg German Entomological Institute Müncheberg, (Senckenberg Deutsches Entomologisches Institut), Müncheberg, Germany

Abbreviations: l/w-index = length/width of the basal node of 4th flagellomere; c/w = ratio of C and w within the space between R_5 and M_1; x/y = wing vein bM/wing vein r-m.

Results

Genus *Chaetosciara* FREY, 1942

Type species: *Sciara fenestralis* Lengersdorf sensu Frey, 1942 [Notul. Ent. 22: 33] = [*Sciara estlandica* Lengersdorf, 1929].
Literature: Mohrig (1999): 198–200; Menzel & Mohrig (2000): 508–515; Rudzinski (2006): 463–467.

Chaetosciara recondita Mohrig & Kauschke sp. n.

(Fig. 1 A–D)

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

Holotype: Male, 13.vi.1997, Malaise trap, leg. J. Seymour (PWMP).

Description. Male. **Head.** Brown. Eye bridge 4 facets wide. Flagellomeres brown with a net-like surface, dense pale hairs shorter than the width of the basal node, necks whitish; 4th flagellomere with l/w index of 2.0. Palpus rather long, three-segmented; basal segment large, with 6–7 bristles and a patch of long sensillae. **Thorax.** Brown. Scutum with rather short and fine hairs, some lateral hairs longer; scutellum with short hairs and 4 longer marginal bristles. Postpronotum bare. Wing pale, R_1 = 2/3 R, joining C before the M-fork; R_5 in the distal third with ventral macrotrichia; y longer than x and with 1–2 macrotrichia; CuA-stem short; posterior veins without macrotrichia. Haltere short, brownish. Legs yellowish; fore tibiae with a few longer bristles within the ground hair, at the apex with a large and dense patch of pale bristles; spurs of the middle and hind tibiae equal, yellowish and longer than the diameter of the apex. Claws toothless. **Abdomen**. Hypopygium brownish, the intergonocoxal space with a weak membranous lobe that is short and pyramid-like in shape; gonocoxites on ventral apex with a long, strong bristle, the inner ventral margin with rather long hairs; gonostylus shorter than gonocoxites, externally rounded, internally somewhat flattened; apically with 4 (sometimes 5) short dark spines, subapically with a short whiplash-like hair. Tegmen rounded, with an area of fine teeth and a thin finger-like protuberance subapically. Aedeagus rather long and robust. Body length: 3 mm.

Comments. The species is characterized by short and robust flagellomeres with a distinct net-like surface, pale hairs and whitish necks. The hypopygium has a weak membranous intergonocoxal lobe and the gonostylus is ovoid in shape with 4–5 short dark spines at the apex. The tegmen is apically rounded with a thin finger-like structure. A similar species is not known yet.

Distribution. Australia, Queensland.

Genus *Corynoptera* WINNERTZ, 1867

Type species: *Corynoptera perpusilla* Winnertz, 1867: 177; [preocc., nec *Corynoptera perpusilla* (Walker, 1848); = *Corynoptera fatigans* (Johannsen, 1912)].
Literature: Tuomikoski (1960): 42–73; Mohrig & Jaschhof (1999): 44–87; Menzel & Mohrig (2000): 205–260; Hippa *et al.* (2010): 1–197.

Corynoptera gladiota Mohrig, 2004

(Fig. 2 A–C)

Literature: Mohrig (2004): 162, fig. 29 a–c.

Material: 2 males, 2.vii.2000, Australia, Queensland, surroundings of Cairns, Mount Malloy near Kuranda, wet tropics, leg. W. Mohrig (PWMP).

Comments. The species is characterized by flagellomeres with a rough surface and very long bristles, much longer than the diameter of the basal node, a nearly comb-like row of bristles on the apex of the fore tibia, and a gonostylus with 3 short robust apical spines as well as a long spine on a large lobe in the basal half, near the base of the gonostylus. Specimens from Queensland are identical with *C. gladiota* Mohrig from Papua New Guinea

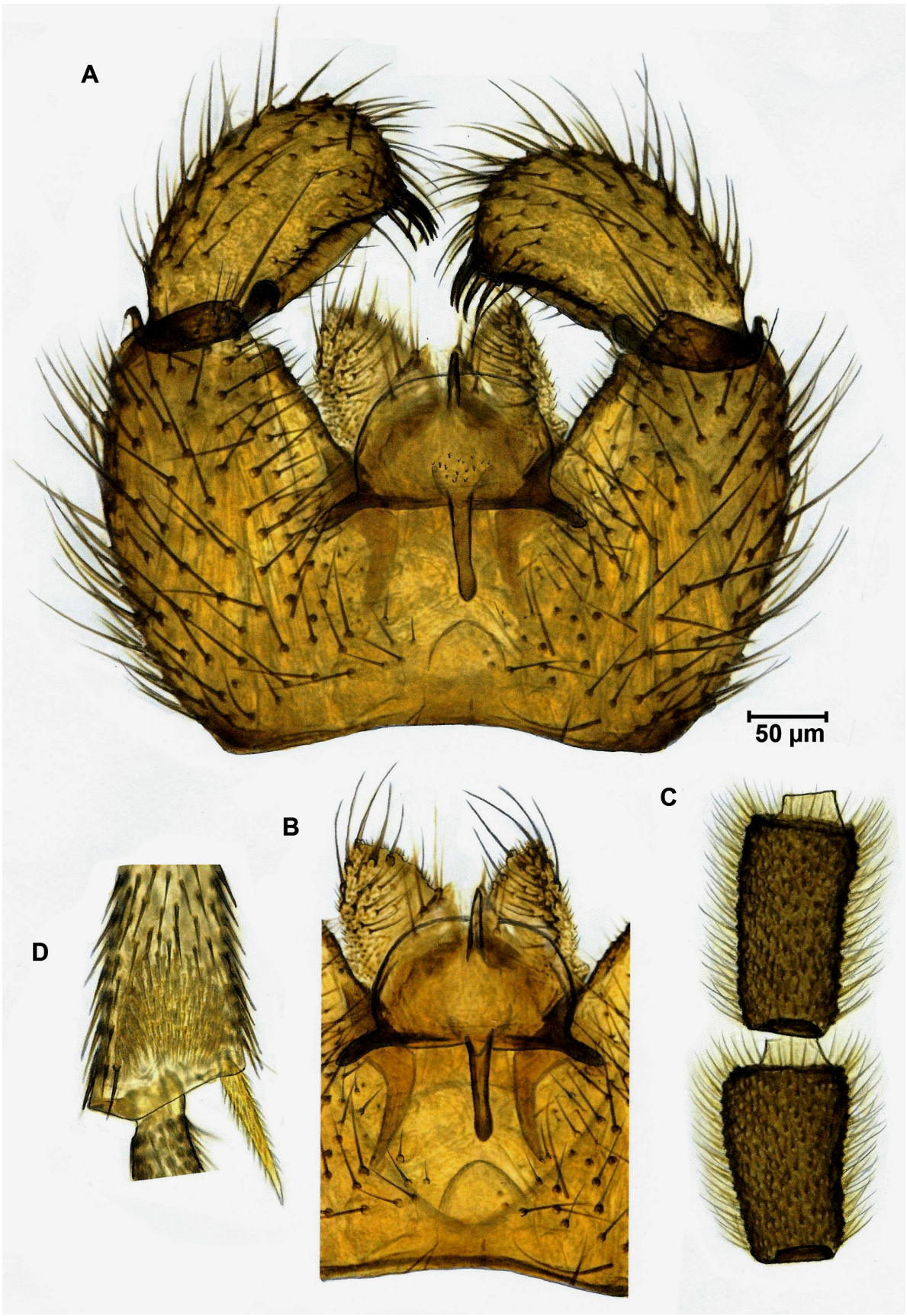

FIGURE 1. *Chaetosciara recondita* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Ventral base of hypopygium; C. Flagellomeres 4–5; D. Apex of fore tibia.

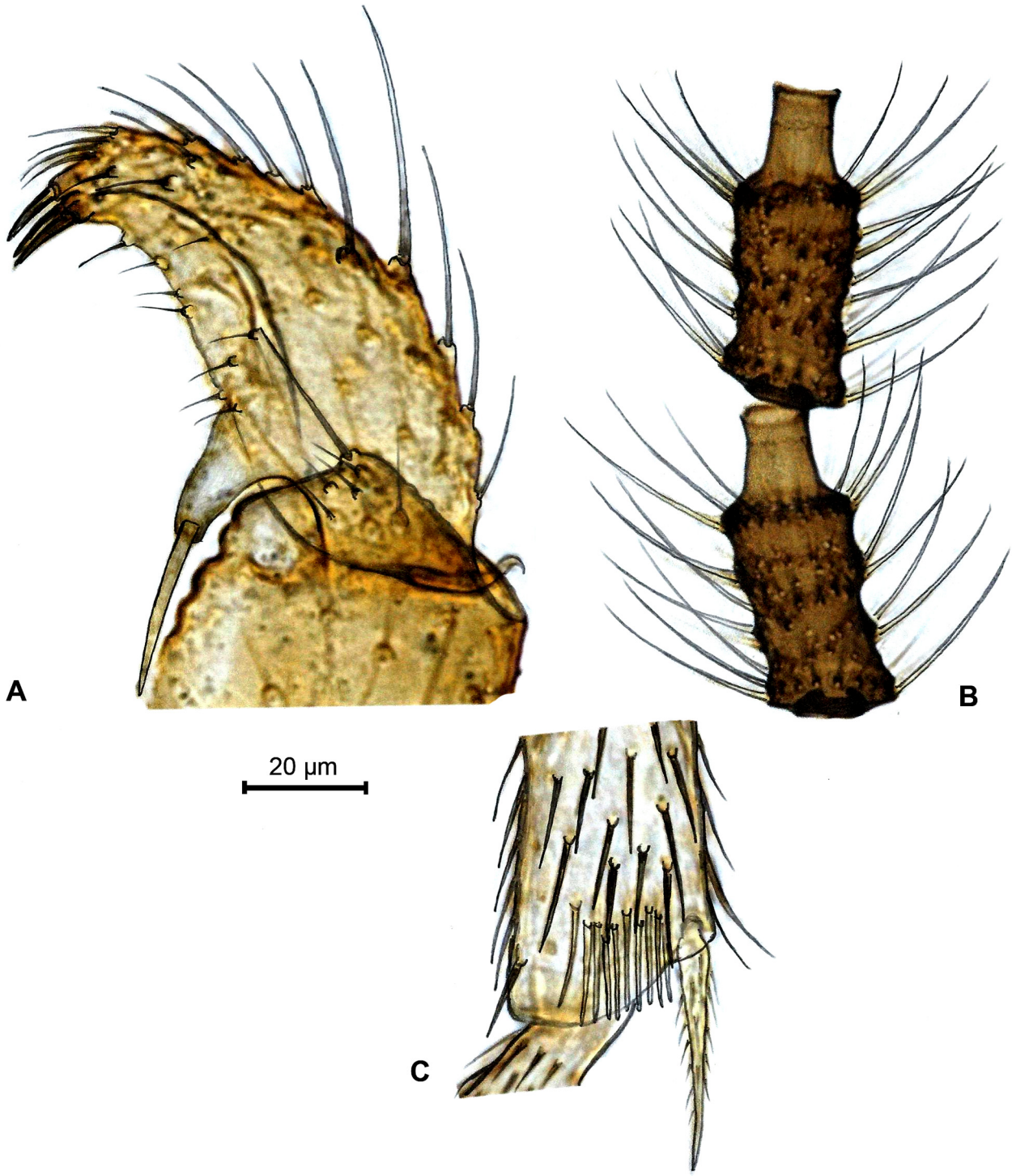

FIGURE 2. *Corynoptera gladiota* Mohrig, 2004. A. Gonostylus; B. Flagellomeres 4–5; C. Apex of fore tibia.

in all morphological details. The species belongs to the *C. parvula* group, which is species-rich and mainly distributed in the Holarctic region.

Distribution. Australia, Queensland; Papua New Guinea.

Genus *Cratyna* Winnertz, 1867

Type species: *Cratyna atra* Winnertz, 1867: 167, fig. 7.

Literature: Tuomikoski (1960): 31–41 (as *Plastosciara*); Hippa *et al.* (1998): 1–86 (as *Pseudozygoneura*); Menzel & Mohrig (1998): 362 (as *Cratyna* Winnertz); Mohrig (1999): 167–182; Menzel & Mohrig (2000): 185–191; Mohrig (2004): 141–144; Vilkamaa & Hippa (2005): 457–480; Mohrig & Menzel (2014): 138–143; Shin *et al*. (2014): 344–354; Huang *et al.* (2015): 77–95 (as *Pseudozygoneura*).

The genus currently contains the following subgenera: *Cratyna* Winnertz, 1867 s. str. (distributed worldwide), *Diversicratyna* Menzel & Mohrig, 1998 (mainly Holarctic), *Peyerimhoffia* Kieffer, 1903 (Holarctic), *Pictosciara* Mohrig, 2004 (Southern hemisphere) and *Spathobdella* Frey, 1948 (Holarctic).

***Cratyna* (*Diversicratyna*) *adulterina* Mohrig & Kauschke sp. n.**
(Fig. 3 A–B)

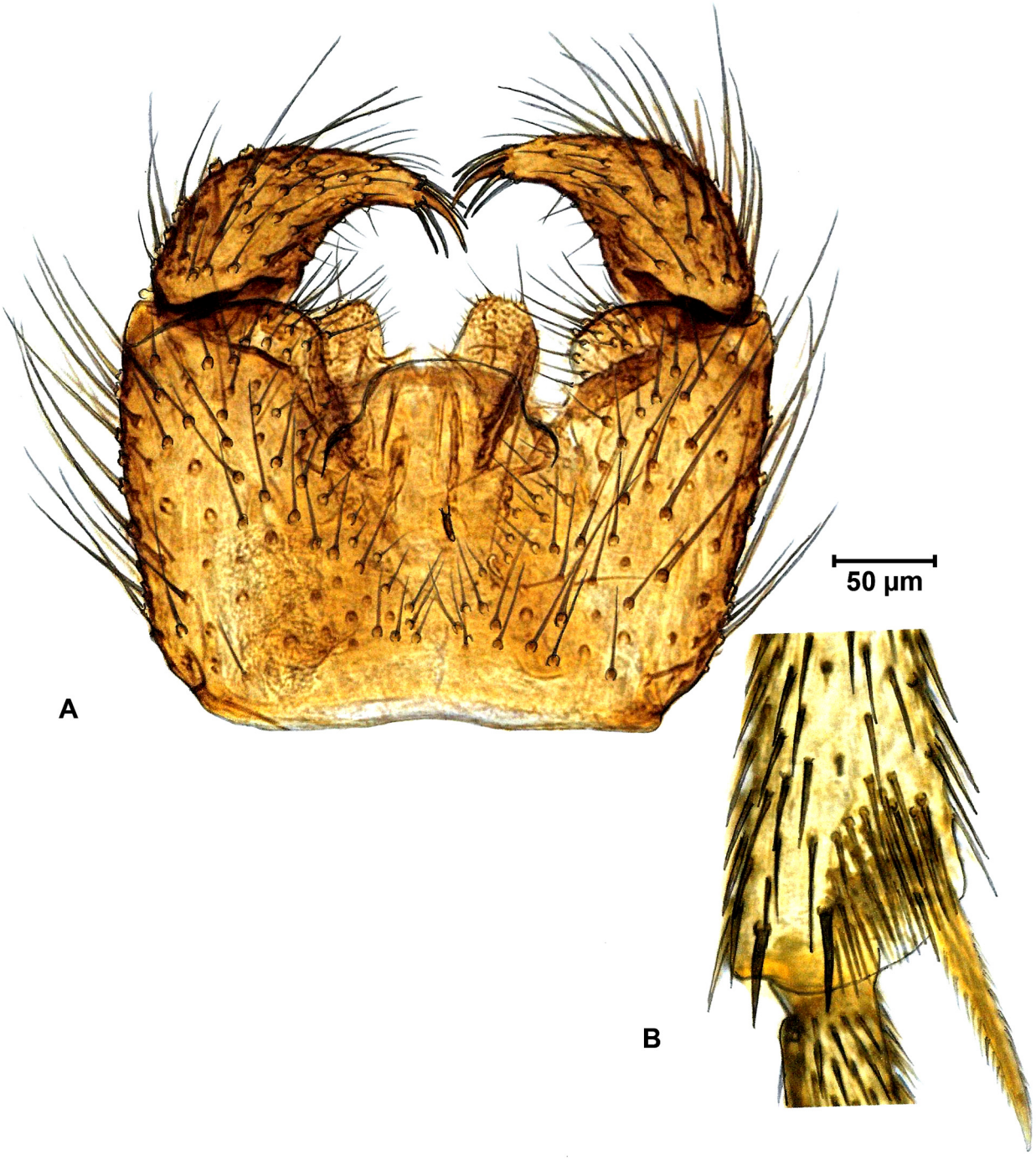

FIGURE 3. *Cratyna* (*Diversicratyna*) *adulterina* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Apex of fore tibia.

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

Holotype: Male, 8.viii.1997, Malaise trap, leg. J. Seymour (PWMP).

Description. Male. **Head**. Yellowish-brown. Eye bridge 4 facets wide. Antennal flagellomeres with short dense hair, rather short necks; 4th flagellomere with l/w index of 2.2, neck ¼ of the length of the basal node, brownish and darkened at the tip; with hairs shorter than the diameter of the basal node. Palpus short, 2-segmented; basal segment with 1–2 bristles. **Thorax.** Brown with yellow spots on the scutum and pleural sclerites. Scutum with rather short hairs and some longer lateral bristles; scutellum with short hairs and with 4 longer marginal bristles. Postpronotum with a few short hairs. Wing brownish, R_1 = R, joining C at the level of the M-fork; R_5 with ventral macrotrichia in the distal third; y = x, without macrotrichia; posterior veins without macrotrichia. Haltere rather long, brown. Legs yellowish, tarsi darkened; legs rather long and thin; fore tibia with a dense patch of brownish bristles at the inner apex; spurs of middle and hind tibiae equal and much longer than the diameter of the apex; claws without teeth. **Abdomen**. Tergites brown, sclerites yellow. Hypopygium brownish; gonocoxites somewhat longer than gonostylus, without a distinct long robust bristle on the ventral apex, the inner ventral margin with rather sparse hairs; gonostylus narrowed to the apex, with a long apical tooth and 4 shorter hyaline spines (two above and two below the tooth). Tegmen laterally curved, without any inner structure. Aedeagus short. Body length: 3.4 mm.

Comments. *Cratyna adulterina* **sp. n.** is similar to *Cratyna unispinula* (Mohrig & Menzel, 1992) from Germany. It is characterized by a 2-segmented palpus, a rather long-stalked haltere and a narrow gonostylus with a long apical tooth and four hyaline spines. The subgenus *Diversicratyna* was established for Palaearctic species and differs mainly from other *Cratyna* subgenera by a narrow elongate gonostylus with a rather strong apical tooth, surrounded by a few shorter spines. The zoogeographic distribution of the subgenus is not clear yet and requires further investigation, particularly in relation to the fauna of the Oriental region.

Distribution. Australia, Queensland.

Cratyna (*Cratyna*) *flagria* Mohrig, 1999

(Fig. 4 A–D)

Literature: Mohrig (1999): 179–180, fig. 23 a–c.

Material: 1 male, 13.vi.1997, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet tropics; 1 male, 8.viii.1997, same locality, Malaise trap, leg. J. Seymour (PWMP; PABM).

Comments. The species is characterized by flagellomeres with short basal nodes and two irregular rows of very long, cecidomyiid-like bristles and necks nearly as long as the basal node. Palpus 2-segmented, short and small. Gonocoxite short, intergonocoxal space closed, gonostylus larger than gonocoxite, elongate-oval and compact, with 5 short hyaline apical/subapical spines. Tegmen with a funnel-like apical structure.

Distribution. Australia, Queensland; Papua New Guinea.

Cratyna (*Cratyna*) *flagriola* Mohrig & Kauschke sp. n.

(Fig. 5A–C)

Type locality: Queensland, near Cairns, Palm Cove, mangrove forest at the coastline.

Holotype: Male, 3.vii.2000, caught by net, leg. W. Mohrig (PWMP).

Description. Male. **Head**. Yellowish-brown. Eye bridge 3–4 facets wide. Antennal flagellomeres with long necks and very long cecidomyiid-like bristles, arranged in three nearly circular whorls; 4th flagellomere with l/w index of 1.5, bristles about 3 times longer than the diameter of the basal node, neck as long as the basal node, pale but darkened at the tip; palpus short, three-segmented; basal segment larger, with 3 bristles and a patch of long sensillae. **Thorax.** Ochrous, with darker spots on lateral sclerites. Scutum with rather fine hairs and some longer lateral bristles; scutellum with 4 longer marginal bristles. Postpronotum bare. Wing pale, R_1 =3/4 R, joining C before the M-fork; R_5 with ventral macrotrichia in the apical third; y longer than x and with 2–3 macrotrichia; posterior veins without macrotrichia. Haltere short, brownish. Coxae and femora yellowish, tibiae and tarsi

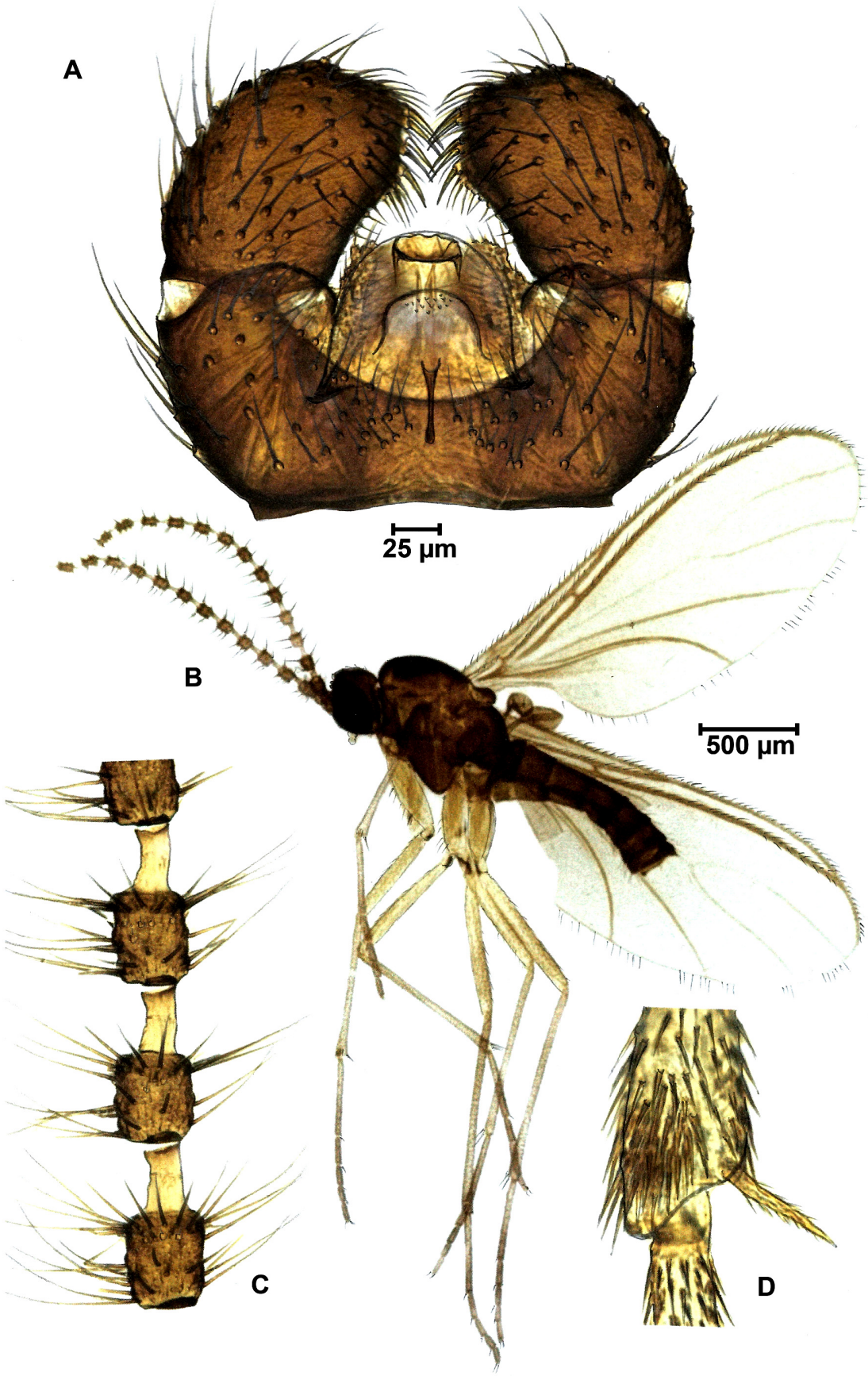

FIGURE 4. *Cratyna* (*Cratyna*) *flagria* Mohrig. A. Hypopygium; B. Male *in toto*; C. Flagellomeres 3–6; D. Apex of fore tibia.

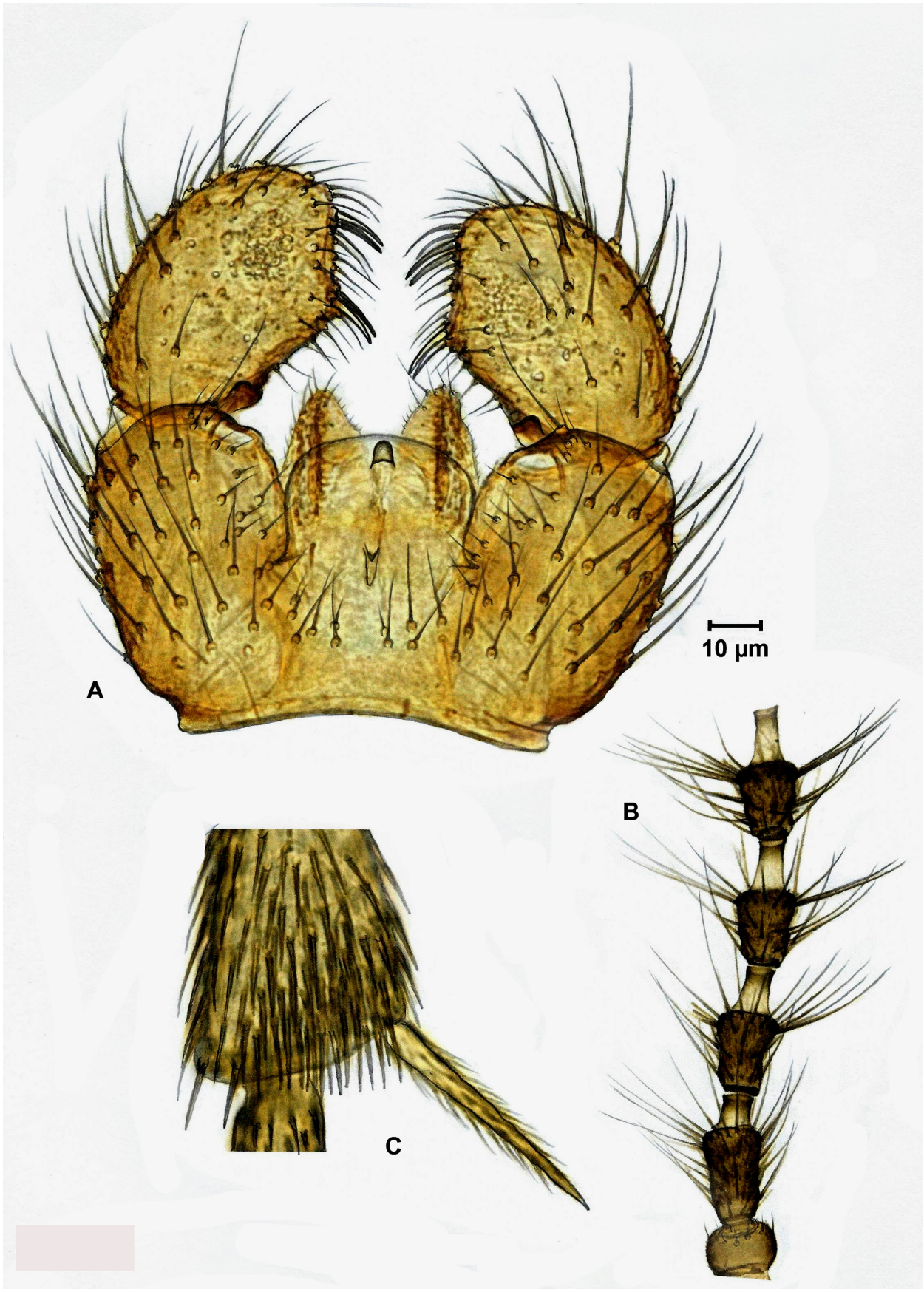

FIGURE 5. *Cratyna* (*Cratyna*) *flagriola* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Pedicel and flagellomeres 1–4; C. Apex of fore tibia.

darkened; legs rather long; fore tibia with a large patch of dark bristles at the inner apex; spurs of middle and hind tibiae equally long and much longer than the diameter of the apex; claws toothless. **Abdomen**. Brown. Hypopygium brown; gonocoxite short and as long as gonostylus, with a long, fine ventral bristle, at the inner ventral margin rather sparsely haired; gonostylus large and ovoid, on the inner side with two pairs of hyaline spines, widely separated from each other. Tegmen somewhat broader than long, rounded, with a weak inner semicircular structure and a short finger-like protuberance. Aedeagus short. Body length: 2.6 mm.

Comments. This new species is characterized by long necks and long, circular arranged whorls of bristles on the flagellomeres, a 3-segmented palpus and an ovoid gonostylus with 2 pairs of hyaline spines. The unique cecidomyiid-like flagellomeres are typical for several species found in the Malay Archipelago (Hippa *et al.* 1998, as *Pseudozygoneura*), Papua New Guinea (Mohrig 1999) and Central America (Mohrig 2003). The species is similar to *Cr. flagriantennata* Mohrig from Papua New Guinea (Mohrig 1999). It differs because of a broader space between the two pairs of spines at the apex of the gonostylus, a three-segmented palpus and a yellow body colour.

***Cratyna* (*Cratyna*) *flavothoracica* Mohrig & Kauschke sp. n.**
(Fig. 6 A–B)

Type locality: Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet tropics.
Holotype: Male, 8.viii.1997, Malaise trap, leg. J. Seymour (PWMP).
Paratype: 1 male, same data as holotype (PWMP).

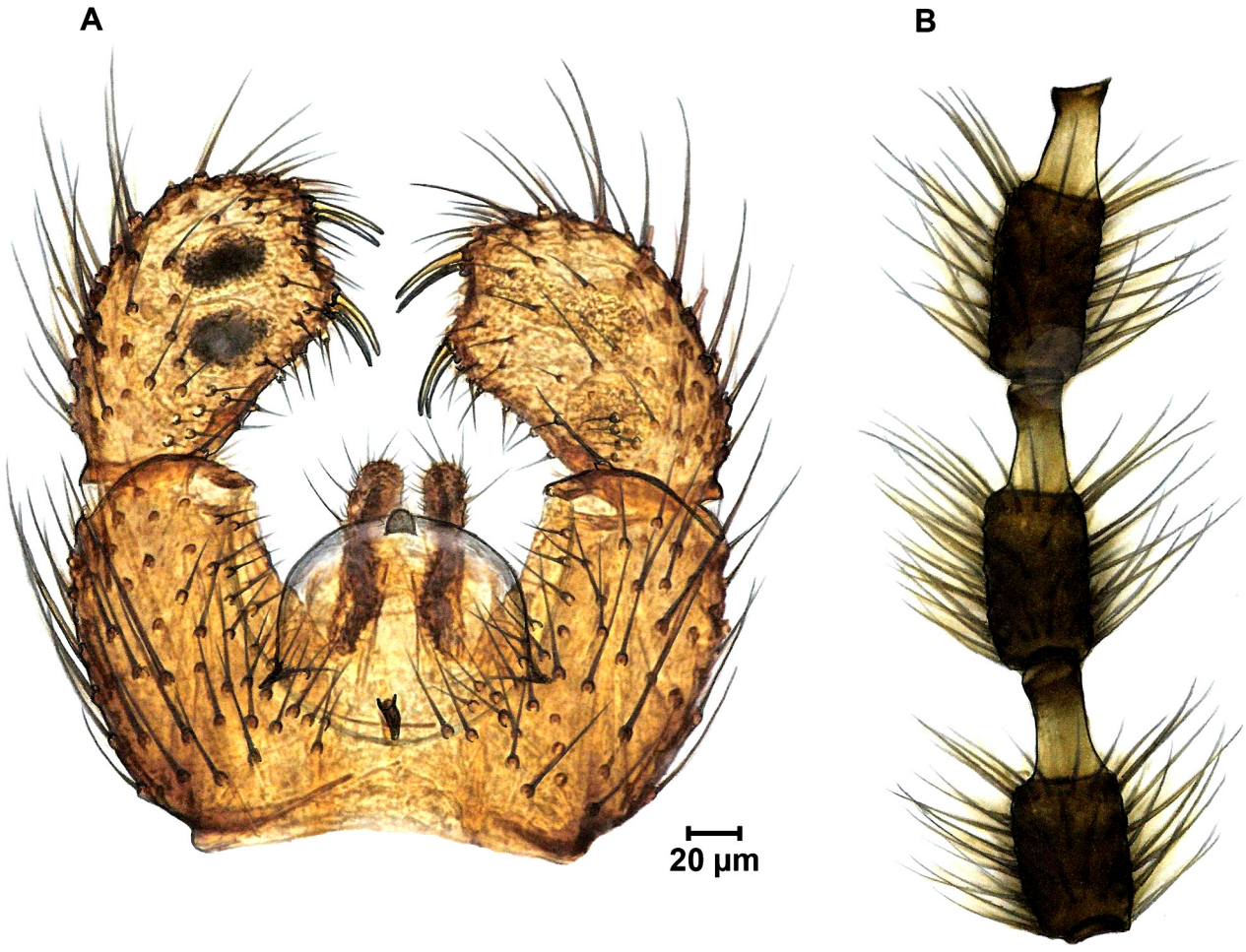

FIGURE 6. *Cratyna* (*Cratyna*) *flavothoracica* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 3–5.

Description. Male. **Head**. Brown. Eye bridge 4 facets wide. Antennal flagellomeres covered rather densely with long bristle-like hairs, necks rather long; 4th flagellomere with l/w index of 2.0, necks somewhat shorter than the basal node, pale but darkened at the tip; setae about 2 times longer than the diameter of the basal node. Palpus short, 2-segmented; basal segment longer, with 1–2 bristles and a patch of sensillae. **Thorax.** Yellowish-brown. Scutum with rather short hairs, with some longer prescutellar and lateral bristles; scutellum with 4 longer marginal bristles. Postpronotum bare. Wing somewhat brownish, R_1 =4/5 R, joining C before the M-fork; R_5 without ventral macrotrichia; y longer than x, without macrotrichia; M_1 and M_2 weak, posterior veins without macrotrichia. Haltere short, brownish. Legs yellowish, tarsi darkened; legs rather long; fore tibia with a large patch of dark bristles at the inner apex; spurs of middle and hind tibiae equal and much longer than the diameter of the apex; claws toothless. **Abdomen**. Brownish. Hypopygium brown; gonocoxite short and as long as gonostylus, with a long, strong, fine bristle on the ventral apex, the inner margin with rather long hairs; gonostylus large, somewhat concave on the inner side and with two pairs of widely separated hyaline spines. Tegmen broader than long, rounded, with an inner semicircular structure and a short finger-like protuberance apically. Aedeagus short and narrow. Body length: 2.4 mm.

Comments. The species is characterized by long flagellomeres, a two-segmented palpus, and a gonostylus that is strongly concave on the inner side and with two pairs of hyaline spines. See also comments under *Cr. pullata*.

***Cratyna* (*Cratyna*) *livida* Mohrig & Kauschke sp. n.**
(Fig. 7 A–B)

Type locality: Australia, Queensland, Atherton Tablelands, Millaa Millaa Falls, wet tropics.

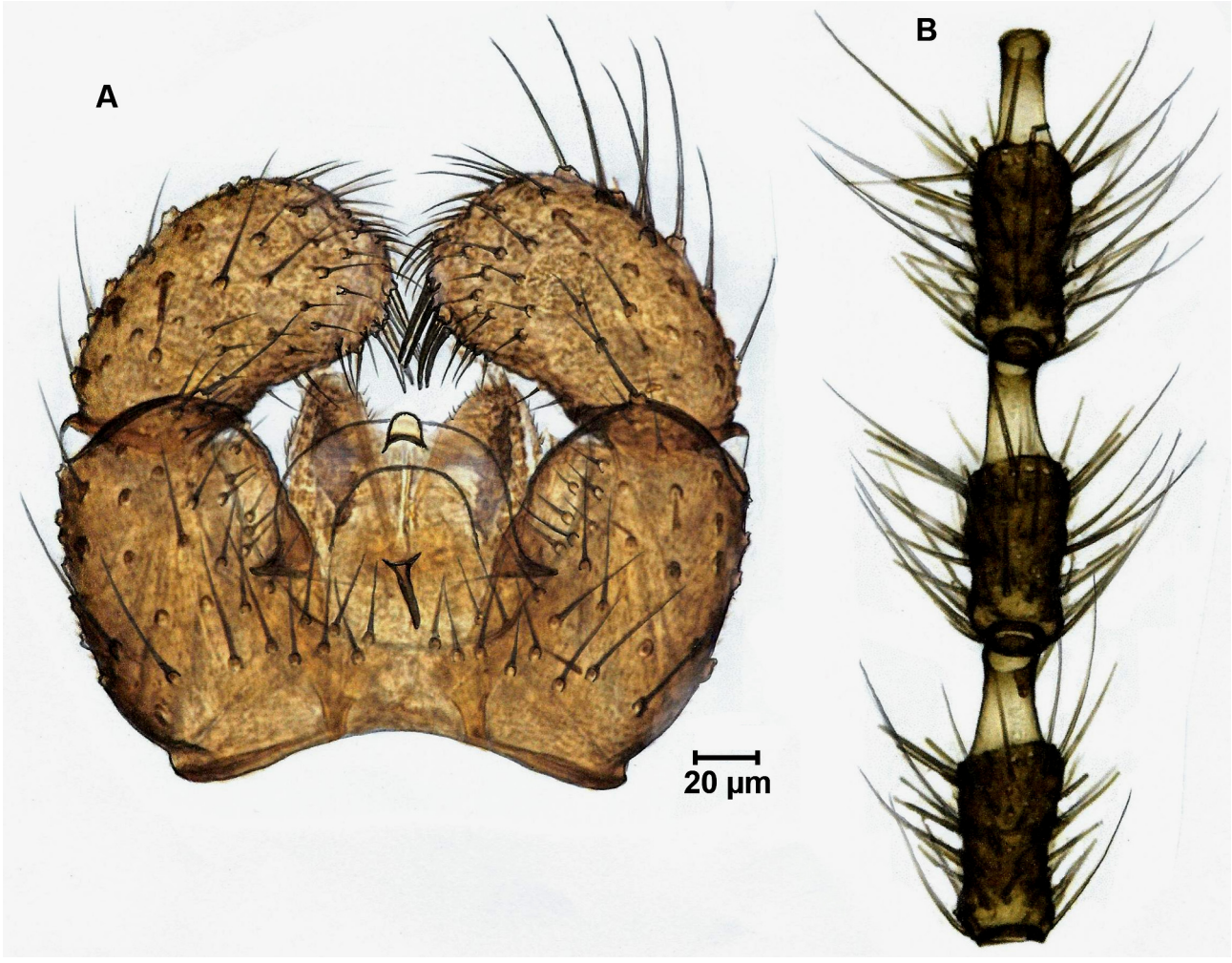

FIGURE 7. *Cratyna* (*Cratyna*) *livida* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 3–5.

Holotype: Male, 8.vii.2000, caught by net, leg. W. Mohrig (PWMP).

Description. Male. **Head**. Yellowish-brown. Eye bridge 3 facets wide. Antennal flagellomeres with rather long necks and long bristles; 4th flagellomere with a l/w index of 2.2, bristles about 2 times longer than the diameter of the basal node, necks somewhat shorter than the basal node, pale but darkened at the tip. Palpus short, 3-segmented; basal segment larger, with 3 bristles and a patch of sensillae. **Thorax.** Yellowish, with darker spots on pleural sclerites. Scutum with rather fine hairs and some longer lateral bristles; scutellum with short hairs, with 4 longer marginal bristles. Postpronotum with a few short hairs. Wing somewhat brownish, R_1 =3/4 R, joining C before the M-fork; R_5 with ventral macrotrichia in the apical third; y longer than x, without macrotrichia; M_1 and M_2 weak, posterior veins without macrotrichia. Haltere short, brownish. Legs yellowish, tarsi darkened; legs rather long; fore tibia with a large patch of dark bristles at the inner apex; spurs of middle and hind tibiae equal and much longer than the diameter of the apex; claws toothless. **Abdomen**. Brownish. Hypopygium brown; gonocoxite short and as long as gonostylus, with a fine long, strong bristle on the ventral apex, the inner ventral margin with rather sparse hairs; gonostylus large, wider apically, with two close-set pairs of hyaline spines on the inner side. Tegmen somewhat wider than long, rounded, with an inner semicircular sclerotized structure and with a short finger-like protuberance apically. Aedeagus thin and short. Body length: 2.2 mm.

Comments. This yellow-coloured species is characterized by flagellomeres with long necks and bristles, a 3-segmented palpus and the gonostylus widened apically with two close-set pairs of hyaline spines.

Distribution. Australia, Queensland.

Cratyna (*Cratyna*) *longipeda* Mohrig & Kauschke sp. n.

(Fig. 8 A–C)

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

Holotype: Male, 13.vi.1997, Malaise trap, leg. J. Seymour (PWMP).

Paratype: 1 male, 8.viii.1997, same locality (PWMP).

Description. Male. **Head**. Yellowish-brown. Eye bridge 4 facets wide. Antennal flagellomeres with long dense hair, with rather long necks; 4th flagellomere with a l/w index of 2.0, bristles longer than the diameter of the basal node, neck ½ the length of the basal node, pale but darkened at the tip. Palpus short, 2-segmented; basal segment with 3 bristles and a patch of sensillae. **Thorax.** Yellowish brown. Scutum with rather fine hairs and with some longer lateral bristles; scutellum with short hairs, with 4 longer marginal bristles. Postpronotum bare. Wing somewhat brownish, R_1 =3/4 R, joining C before the M-fork; R_5 with ventral macrotrichia in the apical third; y longer than x, without macrotrichia; posterior veins weak and without macrotrichia. Haltere short, brownish. Legs yellowish, tarsi darkened; legs rather long and thin; fore tibia with a large patch of brownish bristles at the inner apex; spurs of middle and hind tibia equal and much longer than the diameter of the tibia apex; claws without teeth. **Abdomen**. Brownish. Hypopygium brownish; gonocoxite short and somewhat longer than gonostylus, with a long, fine bristle on the ventral apex, the inner ventral margin with rather sparse hair; gonostylus large and globular, with two close-set pairs of hyaline spines on the inner side. Tegmen somewhat broader than long, rounded, with an inner semicircular sclerotized structure and apically with a short finger-like protuberance. Aedeagus short. Body length: 3.2 mm.

Comments. The species is characterized by a 2-segmented palpus and a large globular gonostylus with two close-set pairs of hyaline spines. It is similar to *Cr. interflagria* Mohrig from Papua New Guinea (Mohrig 1999), but differs since the inner side of the gonostylus is not concave and the protuberance of the tegmen is short and weakly sclerotized.

Distribution. Australia, Queensland.

Cratyna (*Cratyna*) *pullata* Mohrig & Kauschke sp. n.

(Fig. 9 A–B)

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

Holotype: Male, 29.vi.1997, Malaise trap, leg. J. Seymour (PWMP).

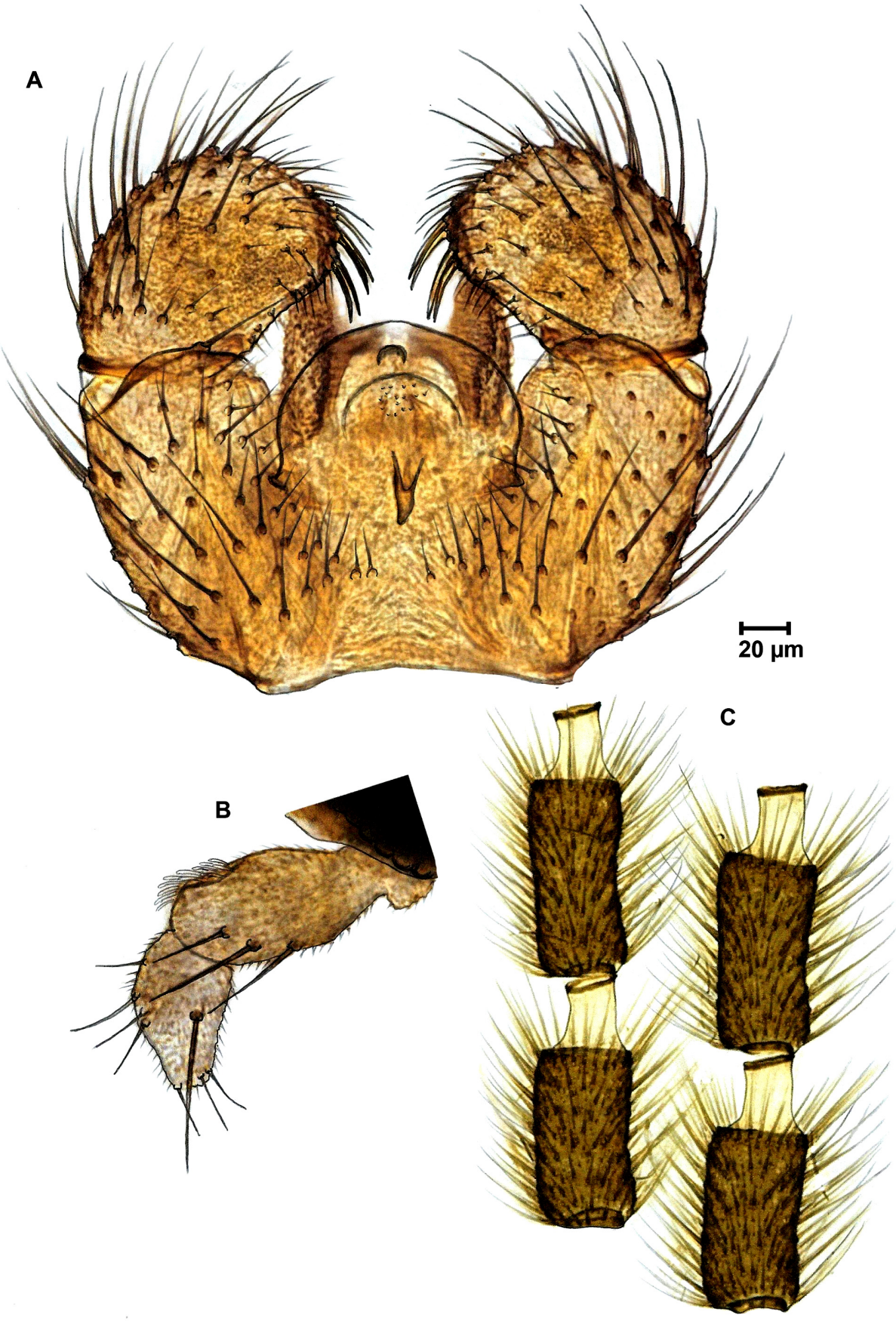

FIGURE 8. *Cratyna* (*Cratyna*) *longipeda* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Palpus; C. Flagellomeres 4–5.

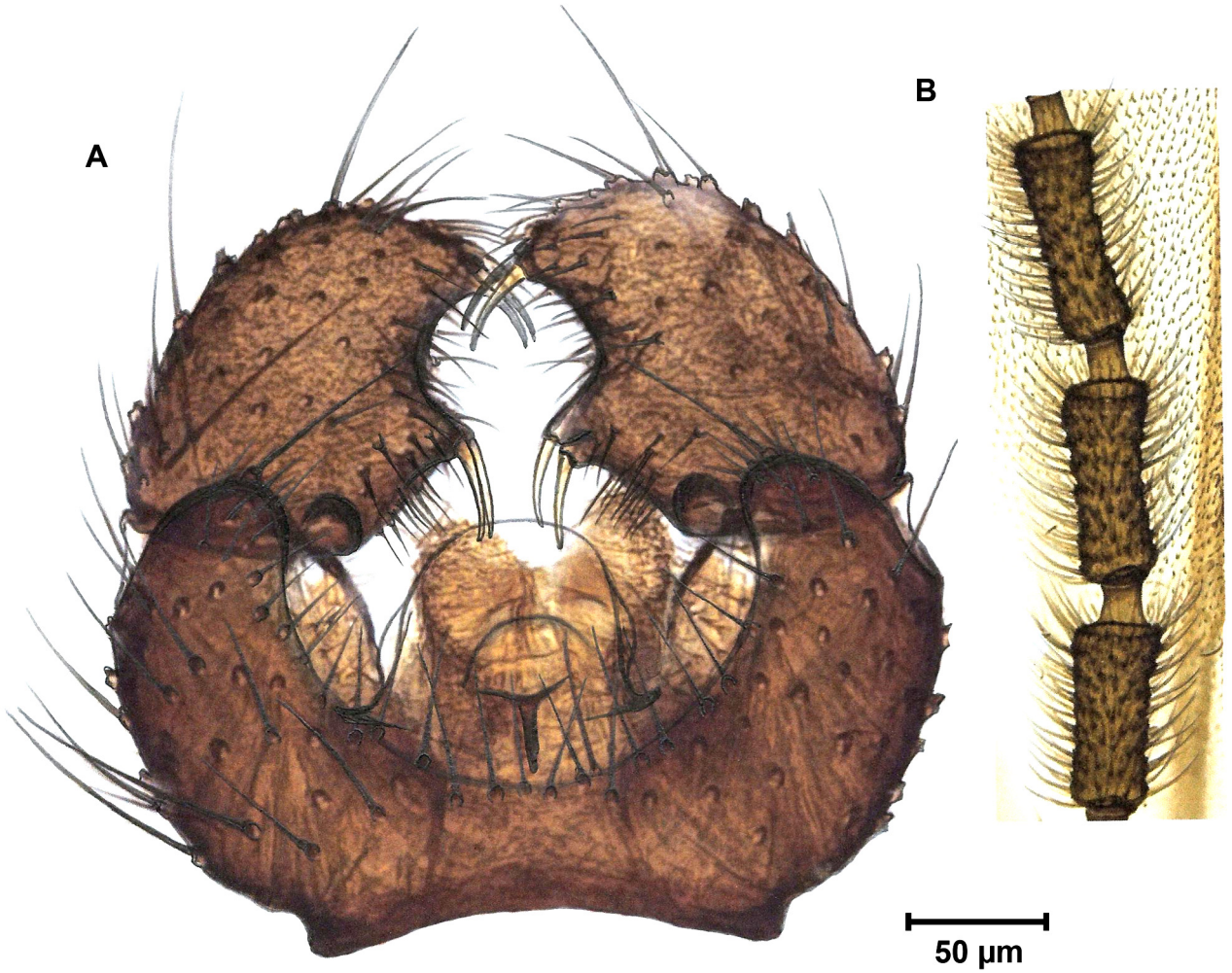

FIGURE 9. *Cratyna* (*Cratyna*) *pullata* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 4–5.

Description. Male. **Head**. Dark. Antennal flagellomeres covered rather densely with bristle-like hairs, necks rather short; 4th flagellomere with l/w index of 3.0, hairs longer than the diameter of the basal node, necks about 1/3 of the length of the basal node, brown. Palpus short, 2-segmented; basal segment larger, with 1–2 bristles and a patch of sensillae. **Thorax.** Brown. Scutum with rather long hairs, with some longer prescutellar and lateral bristles; scutellum with 4 longer marginal bristles. Postpronotum with a few short hairs. Wing somewhat brownish, R_1 as long as R, joining C before the M-fork; R_5 with ventral macrotrichia in the distal half; y = x, with 3–4 macrotrichia; M_1 and M_2 weak, posterior veins without macrotrichia. Haltere short, brownish. Coxae and femora yellowish, tibiae and tarsi darkened; legs rather long; fore tibia with a large patch of dark bristles at the apex; spurs of middle and hind tibia equal and longer than the diameter of the apex; claws without teeth. **Abdomen**. Brown. Hypopygium brown; gonocoxite short and as long as gonostylus, with a rather long, robust bristle on the ventral apex, the inner ventral margin with rather long hairs; gonostylus large, the inner side strongly concave and with two pairs of widely separated hyaline spines, the uppermost on a lobe-like protuberance. Tegmen wider than long, rounded, with an inner semicircular structure. Aedeagus short. Body length: 2.5 mm.

Comments. The species is characterized by a brown body colour and yellowish legs, 2-segmented palpus and a compact gonostylus, with a waist in the middle on the inner side and two widely separated pairs of hyaline spines. It differs from *Cr. flavothoracica* **sp. n.** because the flagellomeres have shorter necks and much shorter hairs.

Distribution. Australia, Queensland.

***Cratyna* (*Pictosciara*) *vera* Mohrig, 2004**
(Fig. 10 A–C)

Literature: Mohrig (2004): 141–142, fig. 11 a–e.

Material: 1 male, 8.vii.2000, Australia, Queensland, surroundings of Cairns, Tablelands, Millaa Millaa Falls, wet tropics, leg. W. Mohrig; 1 male, 13.vi.1997, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet tropics, leg. J. Seymour (PWMP; PABM).

Comments. *Cratyna vera* is the type species of the subgenus *Pictosciara* Mohrig, 2004, described from Papua New Guinea. It is characterized by a short 3-segmented palpus with a sensory pit on the basal segment, yellow gonocoxite, and dark brown gonostylus with a short apical tooth and 4 longer spines in the apical third.

Distribution. Australia, Queensland; Papua New Guinea.

Genus *Epidapus* HALIDAY, 1851

Type species: *Epidapus venaticus* Haliday, 1856 – Insecta Brit. Dipt. 3: 56; monotypy [= *Tipula atomaria* De Geer, 1778].
Literature: Tuomikoski (1960): 96–100; Mohrig & Jaschhof (1999): 29–36; Menzel & Mohrig (2000): 299–339; Mohrig (2004): 150–160; Vilkamaa *et al.* (2014): 429–436.

***Epidapus* (*Epidapus*) *excelsus* Mohrig & Kauschke sp. n.**
(Fig. 11 A–E)

Type locality: Australia, Queensland, Atherton Tablelands, Millaa Millaa Falls.

Holotype: Male, 8.7.2000, wet forest, caught by net, leg. W. Mohrig (PWMP).

Description. Male. **Head.** Brown, globular. Eye bridge 3 facets wide. Antenna brown; flagellomeres long and thin, brownish, with bristle-like hairs and rather long necks; 4th flagellomere with a l/w index of 3.2, hairs longer than the diameter of the basal node, neck 1/3 of the length of the basal node. Palpus one-segmented, with 3–4 bristles and a large area of rather long sensillae.

Thorax. Brown. Scutum with short and sparse hairs; scutellum with 2 longer marginal bristles. Postpronotum bare; thoracic anepisternite with one bristle; katepisternum flat and backwardly directed. Wing pale, with narrow base, R_1 = 2/3 R; R_5 without ventral macrotrichia; y shorter than x, without macrotrichia; posterior veins without macrotrichia; M-fork rather broad. Haltere very long, brownish. Legs long and thin, brownish; fore tibia with a *Bradysia*-like comb of 5 bristles at the inner apex; spurs of middle and hind tibia equal, as long as the diameter of the apex. Claws toothless. **Abdomen**. Brownish. Hypopygium brownish; gonocoxite with a long, strong bristle on ventral apex, ventral base of hypopygium and inner ventral margin of gonocoxite with sparse but rather long hairs; gonostylus narrow, with a strong apical tooth and 4 somewhat shorter spines, one near the base of the tooth. Tegmen large, apically rounded, with a few fine teeth. Aedeagus rather long. Body length: 1.5 mm.

Comments. The species is characterized by long flagellomeres, long halteres, a 1-segmented palpus, flat katepisternum, long and thin legs, a comb-like row of bristles on the apex of the fore tibia, and an elongate gonostylus with a strong apical tooth and 4 subapical spines. It belongs to the subgenus *Epidapus* s. str. It is similar to *E. ctenosciaroides* Mohrig from New Zealand (Mohrig & Jaschhof 1999), which also has a *Bradysia*-like comb of bristles at the tip of the fore tibia.

Distribution. Australia, Queensland.

Genus *Keilbachia* MOHRIG, 1987

Type species: *Keilbachia nepalensis* Mohrig, 1987 – Courier Forsch. – Inst. Senckenberg 93: 483–484; figs. 1–6; monotypy.
Literature: Mohrig & Martens (1987): 483–484; Menzel & Martens (1995): 97–129; Mohrig *et al*. (1999): 197–201; Mohrig (2004): 165–166; Hippa & Vilkamaa (2007): 31–50; Rudzinski (2008); Vilkamaa *et al*. (2006): 39–55; Vilkamaa *et al*. (2009): 1–20; Zhang *et al*. (2010): 47–56.

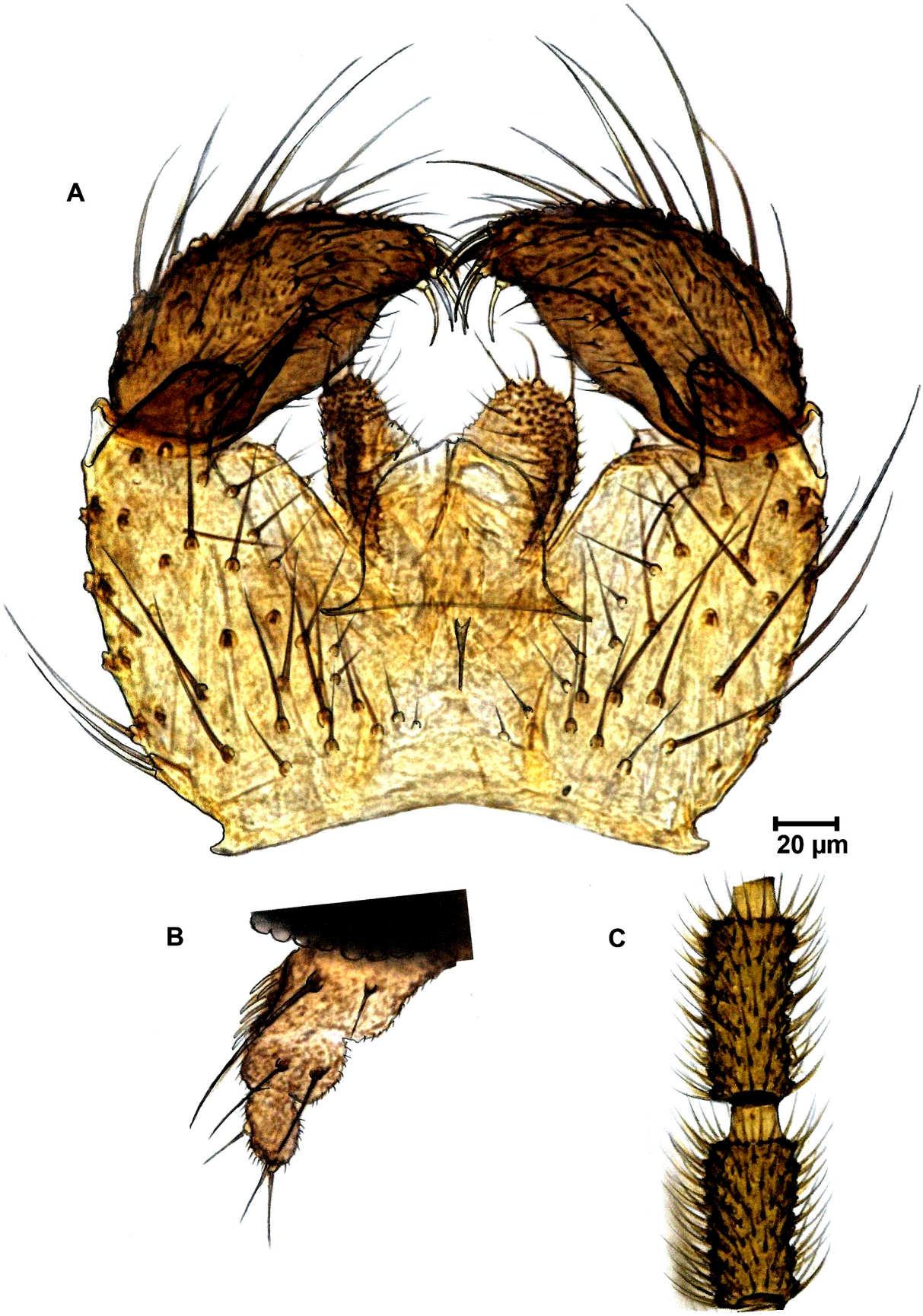

FIGURE 10. *Cratyna* (*Pictosciara*) *vera* Mohrig. A. Hypopygium; B. Palpus; C. Flagellomeres 4–5.

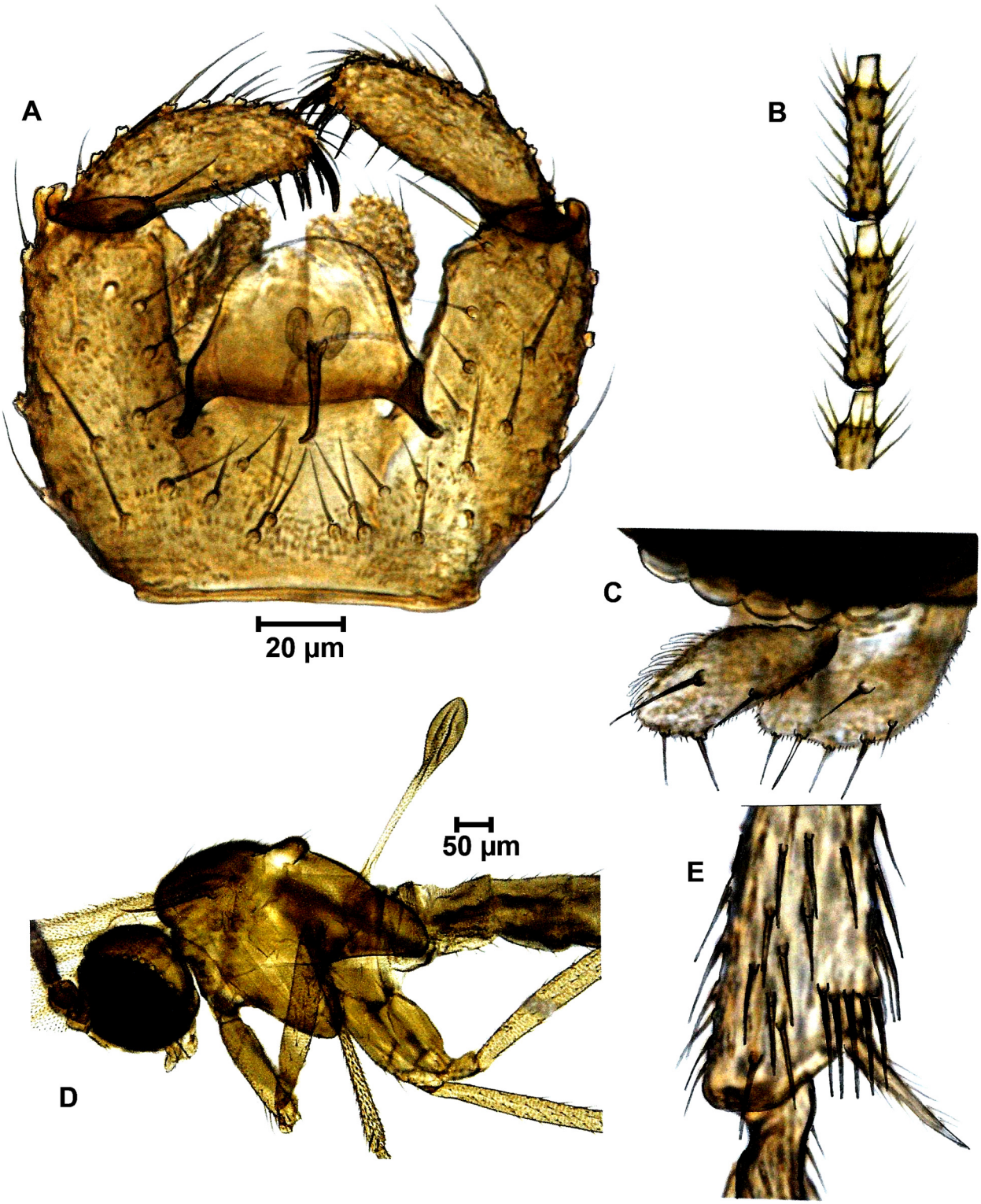

FIGURE 11. *Epidapus excelsus* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 4–5; C. Palpus; D. Head and thorax; E. Apex of fore tibia.

***Keilbachia adstrictatula* Mohrig & Kauschke sp. n.**
(Fig. 12 A–B)

Type locality: Australia, Queensland, Black Mountain Road near Kuranda, 33 km WNW of Cairns, wet forest, Malaise trap, leg. J. Seymour.

Holotype: Male, 8.viii.1997, wet forest, Malaise trap, leg. J. Seymour (PWMP).

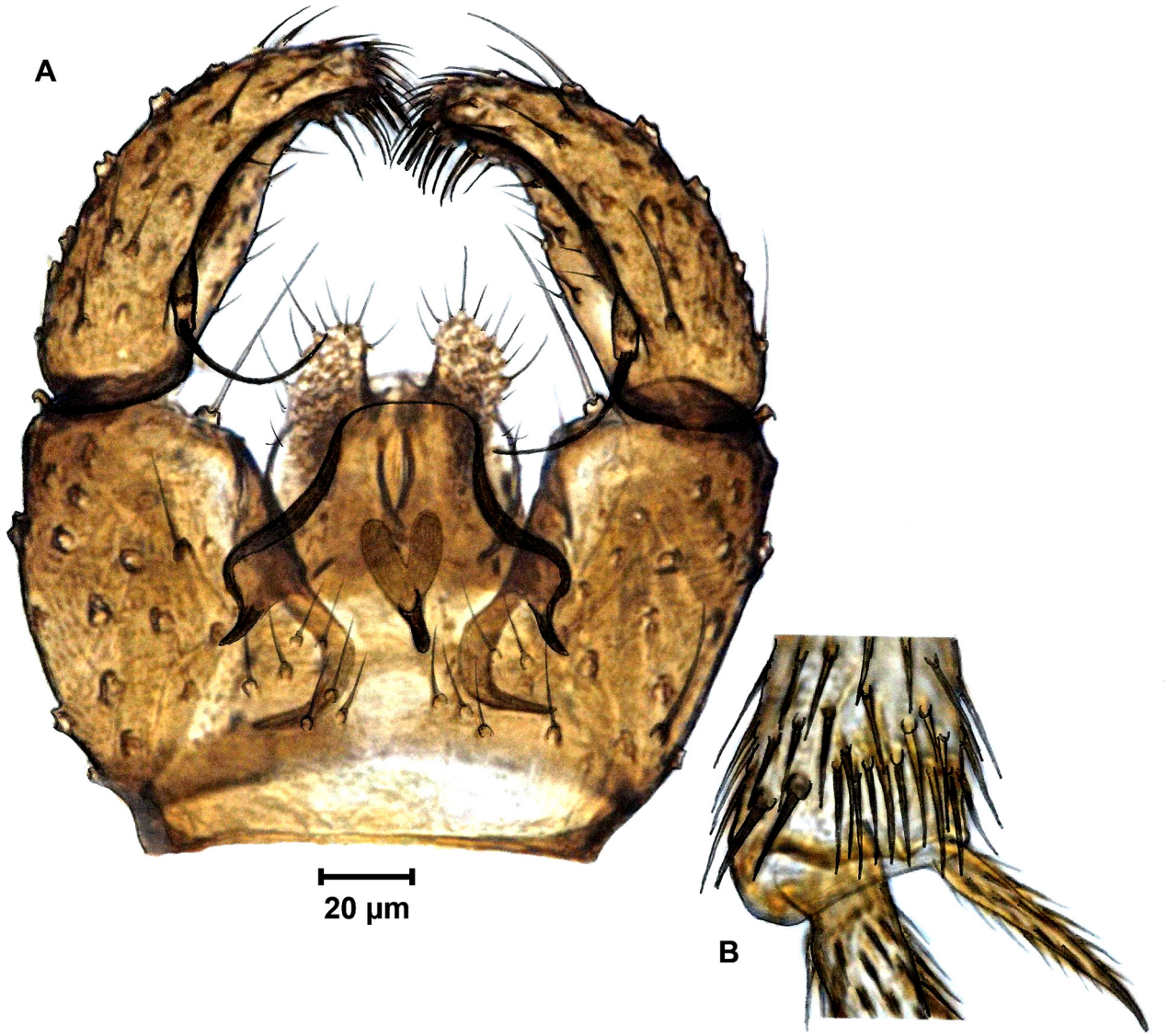

FIGURE 12. *Keilbachia adstrictatula* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Apex of fore tibia.

Description. Male. **Head.** Brown. Eye bridge 4 facets wide. Antenna brown; 4th flagellomere with l/w index of 2.0, with hairs as long as the diameter of the basal node, necks rather long, about 1/3 of the length of the basal node. Palpus 3-segmented, basal segment with one bristle. **Thorax**. Brown. Scutum with rather short hairs and some more robust lateral bristles; scutellum with 2 stronger marginal bristles. Postpronotum bare. Wing pale; R_1 = 2/3 R; R_5 without ventral macrotrichia; C somewhat longer than 1/2 w; y = x, without macrotrichia; posterior veins without macrotrichia. Haltere short and darkened. Legs yellowish brown; fore tibia with an irregular row of bristles at the inner apex, not distinctly bordered; middle and hind tibia with two equal spurs, much longer than the diameter of the apex. Claws toothless. **Abdomen**. Brown. Hypopygium brown, sparsely haired; gonocoxite shorter than gonostylus, with a long, strong bristle on the ventral apex, with short sparse hairs on the inner ventral margin; gonostylus slightly curved and concave on the inner side, apically narrowed and with two short bristle-like subapical spines within equally long hairs; on the inner side below the middle with a long and robust curved whiplash hair-like spine on a large base. Tegmen strongly bulging laterally. Aedeagus short. Body length: 1.5 mm.

Comments. The new species is characterized by a narrow gonostylus with 2 short rod-like apical spines within equally long hairs and the strongly curved whiplash hair-like spine on the inner side near the base. *Keilbachia adstrictatula* is very similar to *K. indigena* Mohrig, 2004 from Papua New Guinea. It differs by a narrower apex of the gonostylus with two rod-like spines within the hairs, a larger base of the whiplash hair-like spine, a longer

aedeagus, a hairless space at the ventral base of the hypopygium and a more row-like arrangement of bristles on the apex of the fore tibia.

Distribution. Australia, Queensland.

Genus *Lobosciara* Steffan, 1969

Type species: *Bradysia spinipennis*, Sasakawa, 1962 [Sasakawa 1962, Nature & Life in S.E. Asia 2: 130]
Literature: Steffan (1969): 772–731; Vilkamaa & Hippa (1994): 41–48.

Lobosciara trilobata Vilkamaa & Hippa, 1994
(Fig. 13 A–C)

Literature: Vilkamaa & Hippa (1994): 41–48.

Material: 1 male, 3.vii.2000, Palm Cove, near Cairns, mangrove forest along the coastline, caught by net, leg. W. Mohrig (PWMP).

Comments. *Lob. trilobata* is characterized by a long gonocoxal apodeme and a broad intergonocoxal lobe in between. Species of this genus differ considerably from all other sciarids in the structure of the male hypopygium. They are mainly characterized by a simple gonostylus – long and narrow, slightly curved and without an apical tooth or spines. The apex and the inner side have rather long hairs. Unusual structures (quite different from all known sciarid genera) characterize the ventral base of the hypopygium. The inner ventral base of the gonocoxite is lobe-like and prolonged (gonocoxal apodeme), the apodemes are of different lengths and densely haired at the apex (in *Lob. latilobata* Vilkamaa & Hippa, 1994 it is broadly rounded and with short hairs). In some species there is an additional structure at the ventral base of the hypopygium, an intergonocoxal lobe between the gonocoxal apodeme (divided as in *Lob. latilobata* or apically straight as in *Lobosciara trilobata*). The five known species are distributed in the Malay Archipelago (Borneo, Malay Peninsula, Sulawesi), Thailand, Micronesia and Australia.

Distribution. Australia, Queensland; Indonesia, Sulawesi.

Genus *Phytosciara* Frey, 1942

Type species: *Sciara halterata* Lengersdorf, 1926 – Knowia 5(3): 250, fig. 12.
Literature: Tuomikoski (1960): 103–110; Hippa & Vilkamaa (1991): 113–155; Mohrig & Menzel (1994): 167–210; Menzel & Mohrig (2000): 429–451.

Phytosciara (*Dolichosciara*) *bella* Mohrig, 1999
(Fig. 14 A–D; 17 A)

Literature: Mohrig (1999): 185–186, fig. 27 a–e.

Material. 1 male, Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet forest, Malaise trap, leg. J. Seymour (PWMP).

Comments. The species is characterized by flagellomeres with a very rough surface, a yellowish scape and pedicel, yellow and black spotted body colour, only 2 long strong bristles on the ventral apex of the gonocoxite; 3–4 fine hyaline spines below the apical hairs of gonostylus, a simple tegmen (as long as broad, apically rounded) and a small intergonocoxal space, with divergent hairs. The specimen from Australia differs somewhat regarding the last character. The intergonocoxal space is somewhat lobe-like with two patches of short divergent bristles (not enough for taxonomic separation).

Distribution. Australia, Queensland; Papua New Guinea.

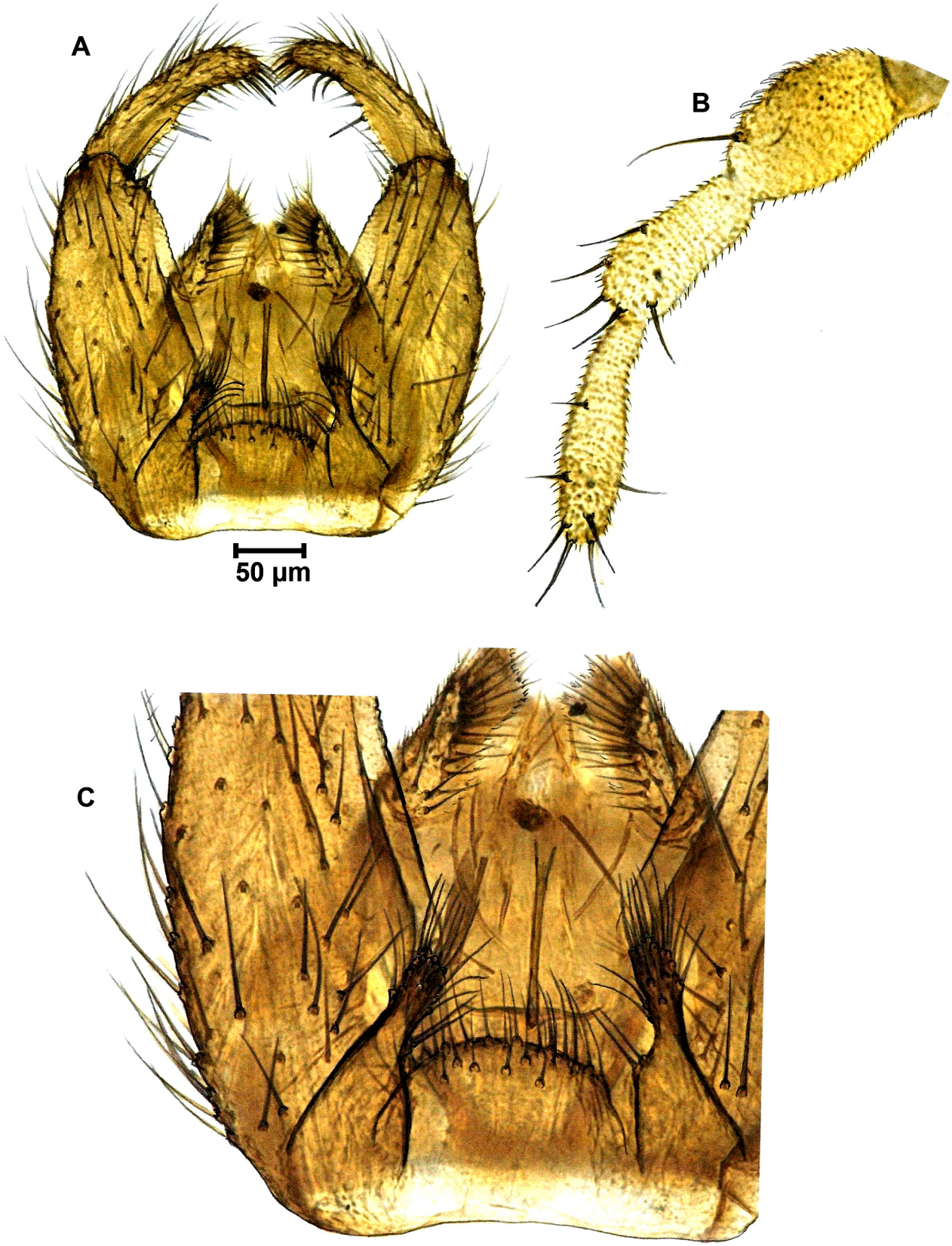

FIGURE 13. A. *Lobosciara trilobata* Vilkamaa, & Hippa. A. Hypopygium; B. Palpus; C. Ventral base of hypopygium.

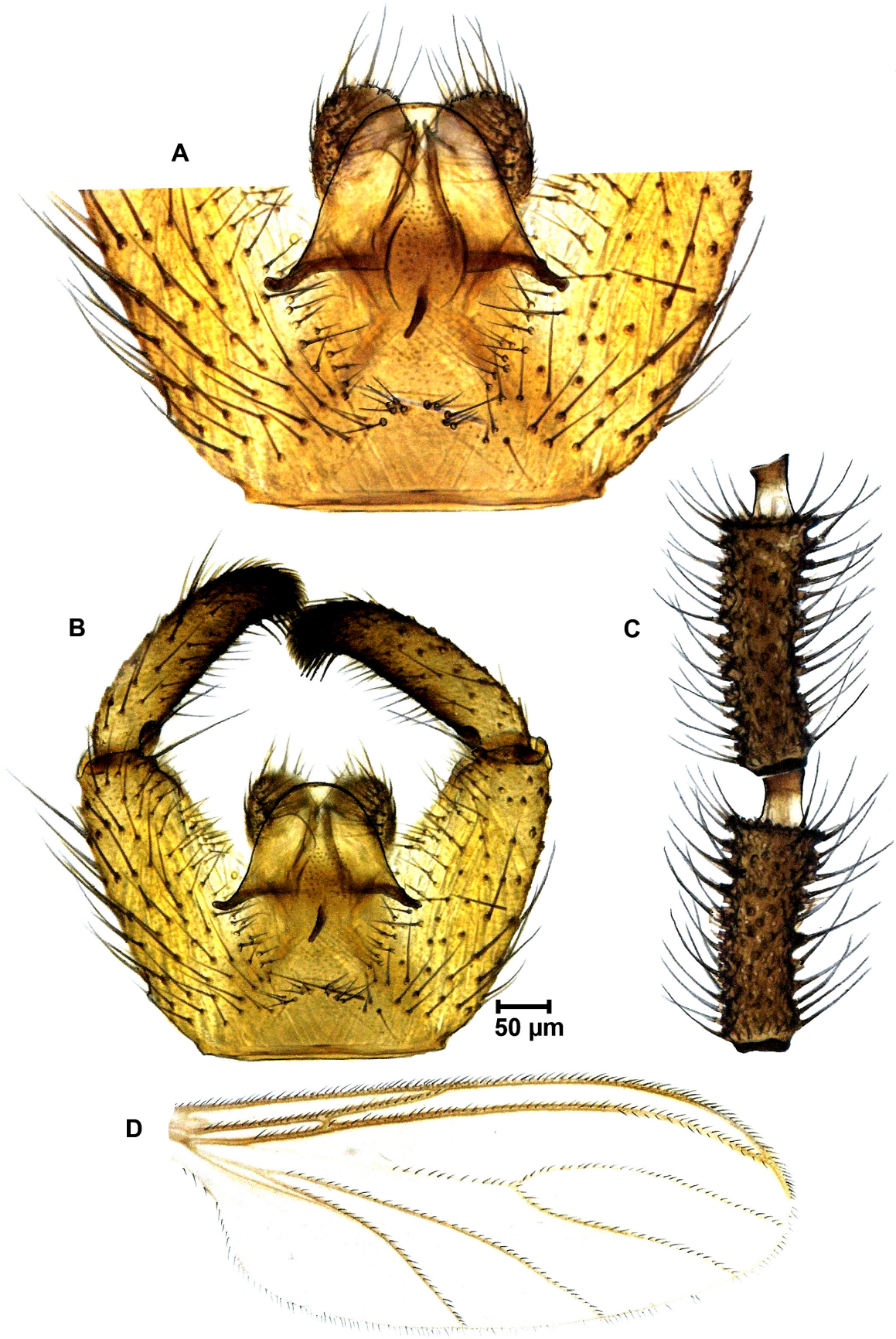

FIGURE 14. *Phytosciara bella* Mohrig, 1999. A. Ventral base of hypopygium; B. Hypopygium; C. Flagellomeres 4–5; D. Wing.

***Phytosciara* (*Dolichosciara*) *conturbata* MOHRIG, 1999**
(Fig. 15 A–B; 17 B)

Literature: Mohrig (1999): 183–184, fig. 26 a–d.

Material. 1 male, 8.viii.1997, Australia, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet forest, Malaise trap; 1 male, 13.vi.1997, Black Mountain Road near Kuranda, 33 km WNW of Cairns, wet forest, Malaise trap, leg. J. Seymour (PWMP; PABM).

Comments. This species is characterized by a long basal lobe of the hypopygium, just one long robust bristle on the ventral apex of the gonocoxite, a slender gonostylus with two fine hyaline spines (or spine-like bristles) below apical hairs (not really different from bristles on the inner side). It has been described from Gulf Province, Papua-New Guinea.

Distribution. Australia, Queensland; Papua New Guinea.

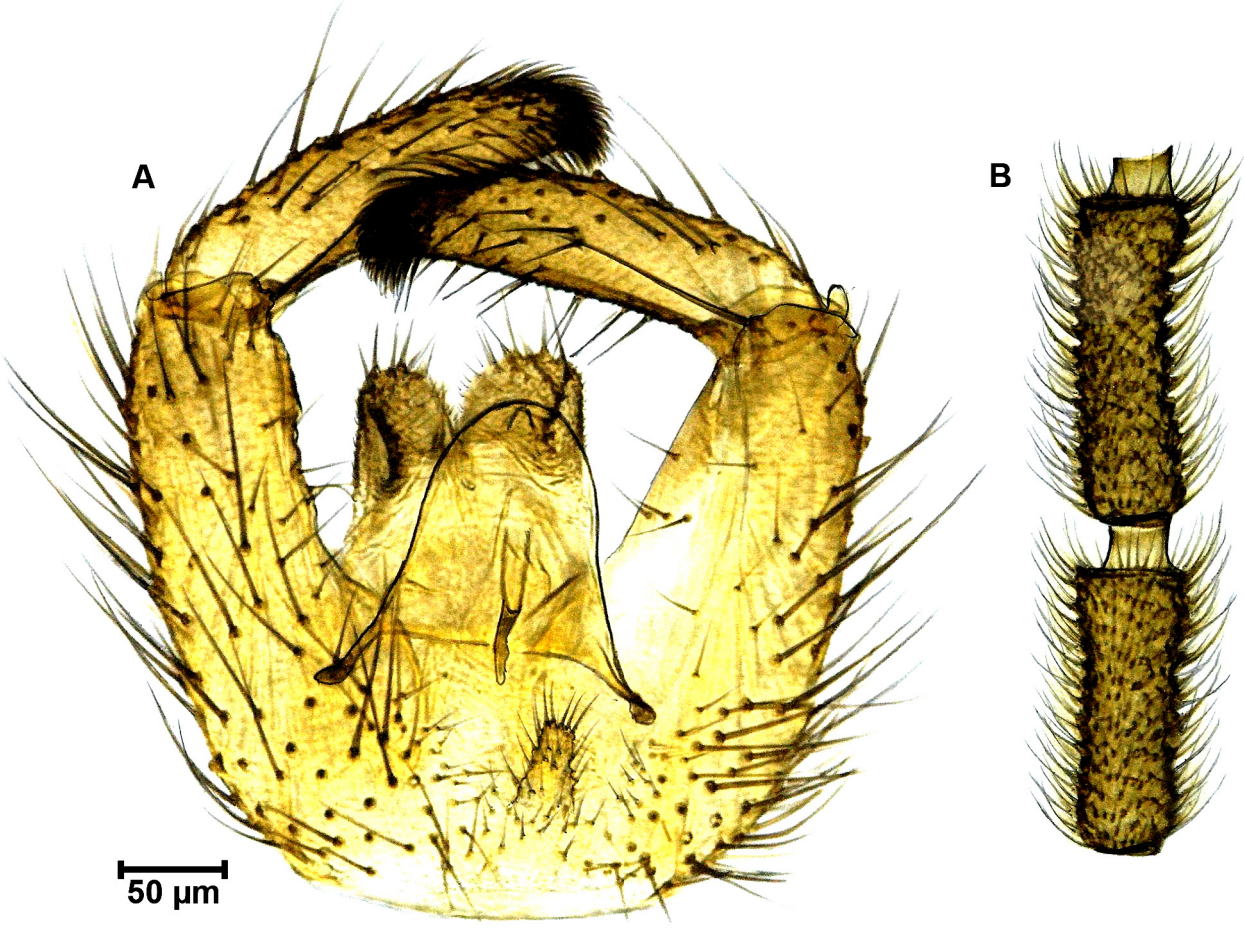

FIGURE 15. A. *Phytosciara conturbata* Mohrig. A. Hypopygium; B. Flagellomeres 4–5.

***Phytosciara* (*Dolichosciara*) *pseudoornata* MOHRIG, 1999**
(Fig. 16 A–B; 17 C)

Literature: Mohrig (1999): 187–188, fig. 29 a–d.

Material. 11 males, 8.vii.2000, Australia, Queensland, Fig Tree Cathedral, Gilles Highway near Cairns, wet forest, caught by net, leg. W. Mohrig; 20 males, 8 females, 13.vi.1997; 1 male, 1 female, 23.vi.1997; 5 males, 11 females, 29.vi.1997; 13 males, 15 females, 8.viii.1997, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35´S, 145°16´E, wet forest, Malaise trap, leg. J. Seymour (PWMP; 2 males, 1 female in ANIC; 2 males in PABM).

Comments. The species is characterized by a yellow scape and pedicel, a yellowish thorax, a long y without or with just 1–2 macrotrichia, a yellow hypopygium with a darkened gonostylus, gonocoxite with 2 long strong bristles, a gonostylus with 4 strong spines on dorsal side, a small intergonocoxal lobe with a few bristles, and a longer than broad tegmen. The species has been described from Papua New Guinea. It is a common species within wet forests.

Distribution. Australia, Queensland; Papua New Guinea.

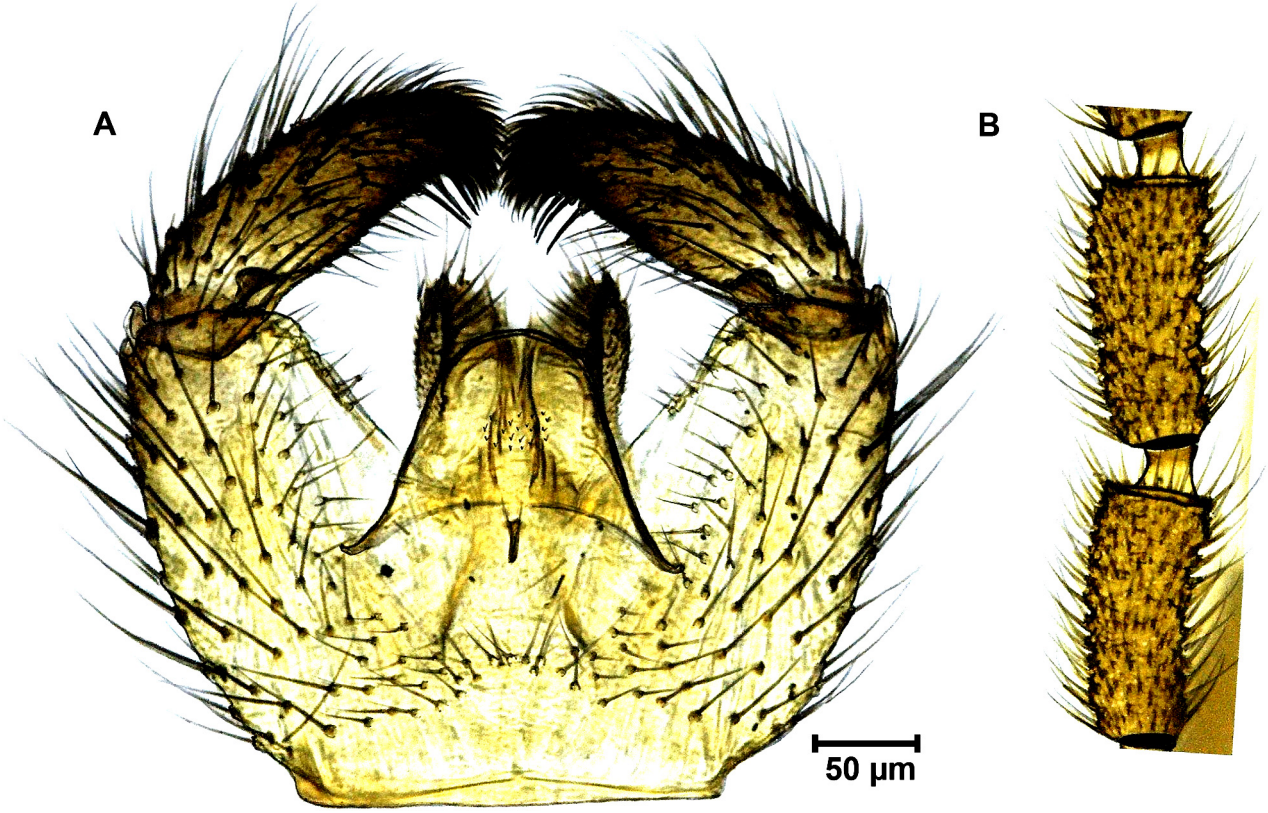

FIGURE 16. A. *Phytosciara pseudoornata* Mohrig. A. Hypopygium; B. Flagellomeres 4–5.

Genus *Scatopsciara* Edwards, 1927

Type species: *Sciara quinquelineata* Macquart, 1834: 149 (= *Sciara vitripennis* Meigen, 1818).
Literature: Tonnoir & Edwards (1927): 798 (as subgenus of *Sciara* Meigen); Tuomikoski 1960: 150–156; Menzel & Mohrig (2000): 480–508; Mohrig (2004): 166–168; Vilkamaa *et al.* (2012d): 67–74.

Scatopsciara (*Xenopygina*) *brevicolla* Mohrig & Kauschke sp. n.

(Fig. 18 A–C)

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

Holotype: Male, 29.viii.1997, Malaise trap, leg. J. Seymour (PWMP).

Paratypes: 3 males, same data; 1 male, 8.viii.1997, Queensland, Mt Lewis, 37 km WSW of Port Douglas, 16°35′S, 145°16′E; 1 male, 3.vii.2000, Queensland, Palm Cove near Cairns, mangrove forest along the coastline, leg. W. Mohrig; 14 males, 2.vii.2000, Queensland, Mount Malloy near Kuranda, wet tropics, leg. W. Mohrig (PWMP; 2 in ANIC; 2 in PABM; 1 in PKHH; 1 in SDEI).

Description. Male. **Head.** Brown. Eye bridge 3 facets wide. Antenna brown; 4th flagellomere with l/w index of 2.5, hairs somewhat longer than the diameter of the basal node, neck rather long, about 1/4 of the length of the basal node. Palpus yellow, 3-segmented, basal segment with one bristle and a flat area of sensillae. **Thorax.**

Brown. Scutum with rather long dorsocentral and a few stronger lateral and prescutellar bristles; scutellum with 2 long marginal bristles. Postpronotum bare. Wing broad and brownish; R_1 short, = 1/2 R; R_5 with ventral macrotrichia in the distal half; C = 2/3 w; y = x, without macrotrichia; posterior veins without macrotrichia. Haltere short and brown. Legs yellow, tarsi darkened; fore tibia with a broad row of bristles (8–10) at the inner apex;

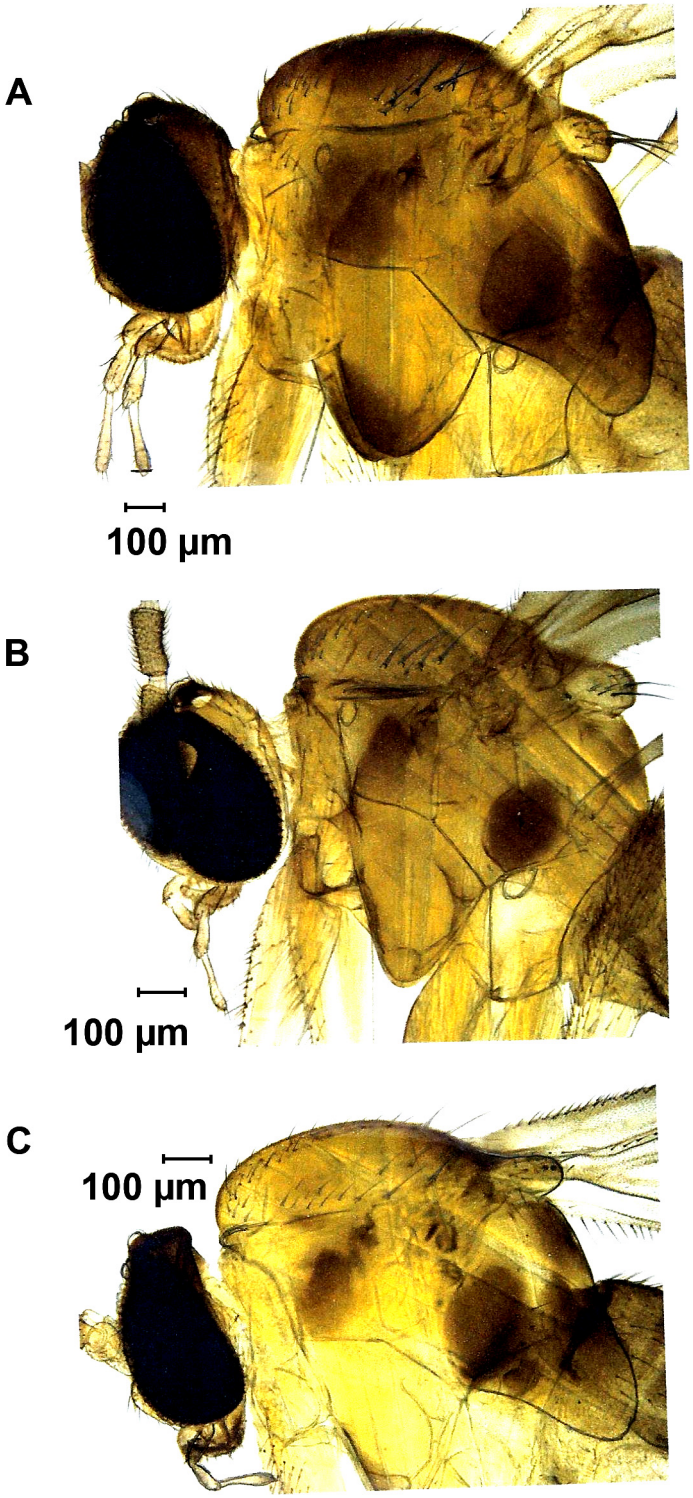

FIGURE 17. Comparison of thorax colouration in three *Phytosciara* species. A. *Phytosciara bella* Mohrig; B. *Phytosciara conturbata* Mohrig; C. *Phytosciara pseudoornata* Mohrig.

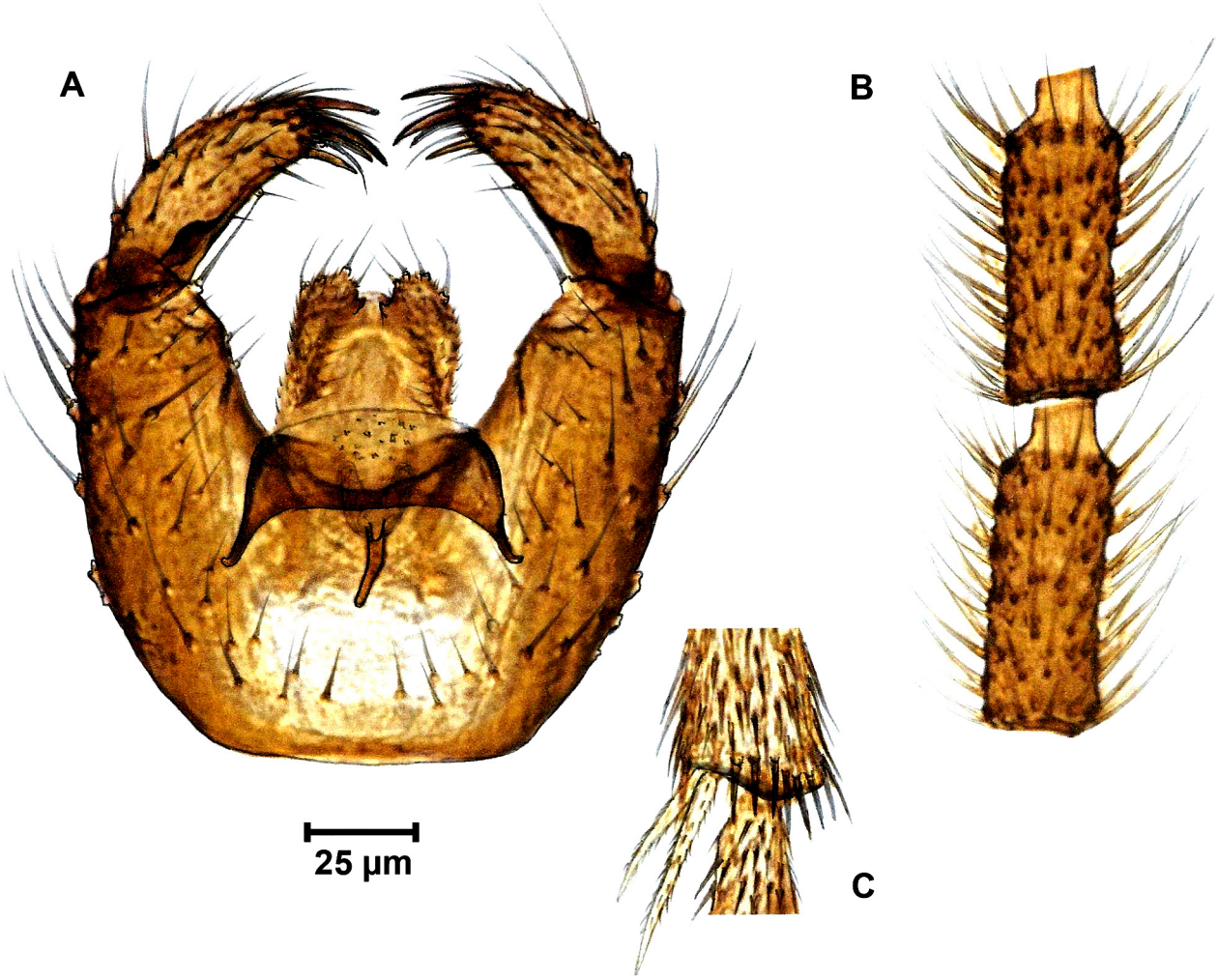

FIGURE 18. *Scatopsciara brevicolla* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 3–4; C. Spurs of hind tibia.

middle and hind tibia with two unequal spurs. Claws without teeth. **Abdomen**. Brown, with sparse hair. Hypopygium brown, ventral base sparsely hairy; gonocoxite ventrally with short sparse hairs at the inner border; gonostylus narrow, on the apex with 4 somewhat unequal spines: one apical spine long and tooth-like, a second above the apex, a third near the base of a long apical spine and the fourth below the apex. Tegmen wider than long, flatly rounded apically, sclerotized laterally. Aedeagus rather short. Body length: 1.2 mm.

Comments. The species is characterized by unequal spurs on the middle and hind tibia and a wide row of bristles on the apex of the fore tibia. The gonostylus is elongate with 4 unequal spines. The apical spine is long and tooth-like. The 4th flagellomere is rather long with a l/w index of 2.5. A similar species is not known yet.

Distribution. Australia, Queensland.

Scatopsciara dubiosa Mohrig & Kauschke sp. n.

(Fig. 19 A–E)

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

Holotype: Male, 13.vi.1997, wet forest, Malaise trap, leg. J. Seymour (PWMP).

Paratypes: 1 male, 13.vi.1997; 1 male, 8.viii.1997, type locality, same data (PWMP; 1 male in ANIC).

Description. Male. **Head.** Brown. Eye bridge 3 facets wide. Antenna brown, scape and pedicel somewhat paler; 4th flagellomere with l/w index of 2.0, hairs as long as the diameter of the basal node, neck about 1/4 of the

length of the basal node. Palpus rather long, 3-segmented, basal segment with one bristle and a patch of sensillae. **Thorax.** Brown. Scutum with rather short pale hairs, some dorsocentral and lateral bristles stronger; scutellum with 2 long marginal bristles. Postpronotum bare. Wing broad and pale; R_1 short, = 1/2 R; R_5 short and without ventral macrotrichia; C = 2/3 w; y shorter than x, without macrotrichia; posterior veins without macrotrichia. Haltere short and darkened. Coxae and femora yellowish, tibia and tarsi darkened; fore tibia at the inner apex with an irregular row of bristles, proximally weakly bordered; middle and hind tibia with two unequal spurs. Claws toothless. **Abdomen**. Brown. Hypopygium brown; gonocoxite ventrally with a long, strong bristle and with sparse short hairs on the inner margin; gonostylus narrow, at the apex with 2 short and somewhat unequal spines. Tegmen wider than long, apically rounded. Aedeagus short and robust. Body length: 1.2 mm.

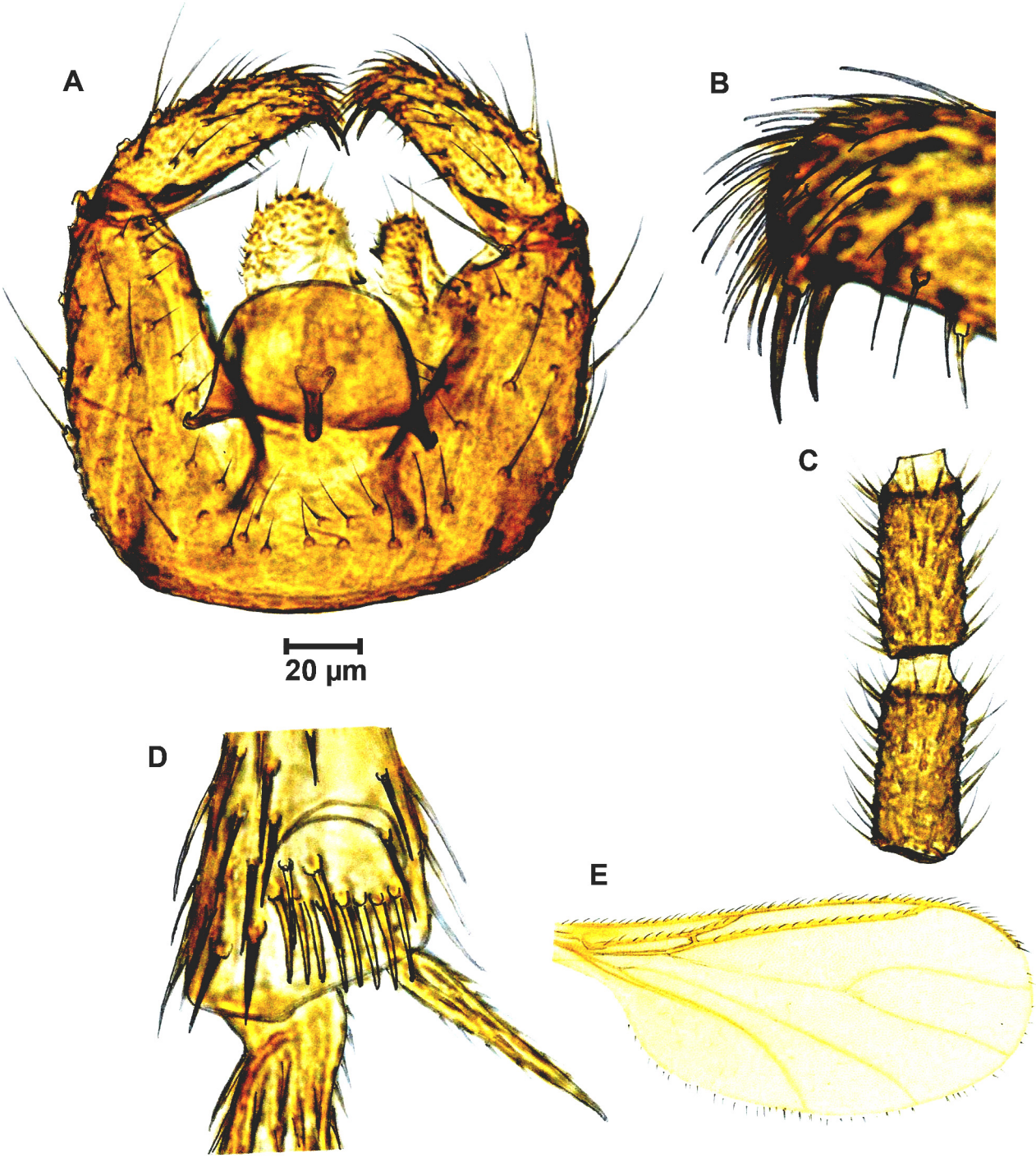

FIGURE 19. *Scatopsciara dubiosa* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Apex of gonostylus; C. Flagellomeres 4–5; D. Apex of fore tibia; E. Wing.

Comments. The species is characterized by unequal spurs on the middle and hind tibia and an irregular row of bristles on the apex of the fore tibia, with a semicircular border proximally. This structure is unusual for species of *Scatopsciara*, but all other characters are in accordance with this genus. Gonostylus elongate with 2 unequal apical spines. The species is currently left unplaced in *Scatopsciara*.

Distribution. Australia, Queensland.

***Scatopsciara* (*Scatopsciara*) *validovenosa* Mohrig & Kauschke sp. n.**
(Fig. 20 A–B)

Type locality: Australia, Queensland, Palm Cove, near Cairns, mangrove forest along the coastline.

Holotype: Male, 3.vii.2000, caught by net, leg. W. Mohrig (PWMP).

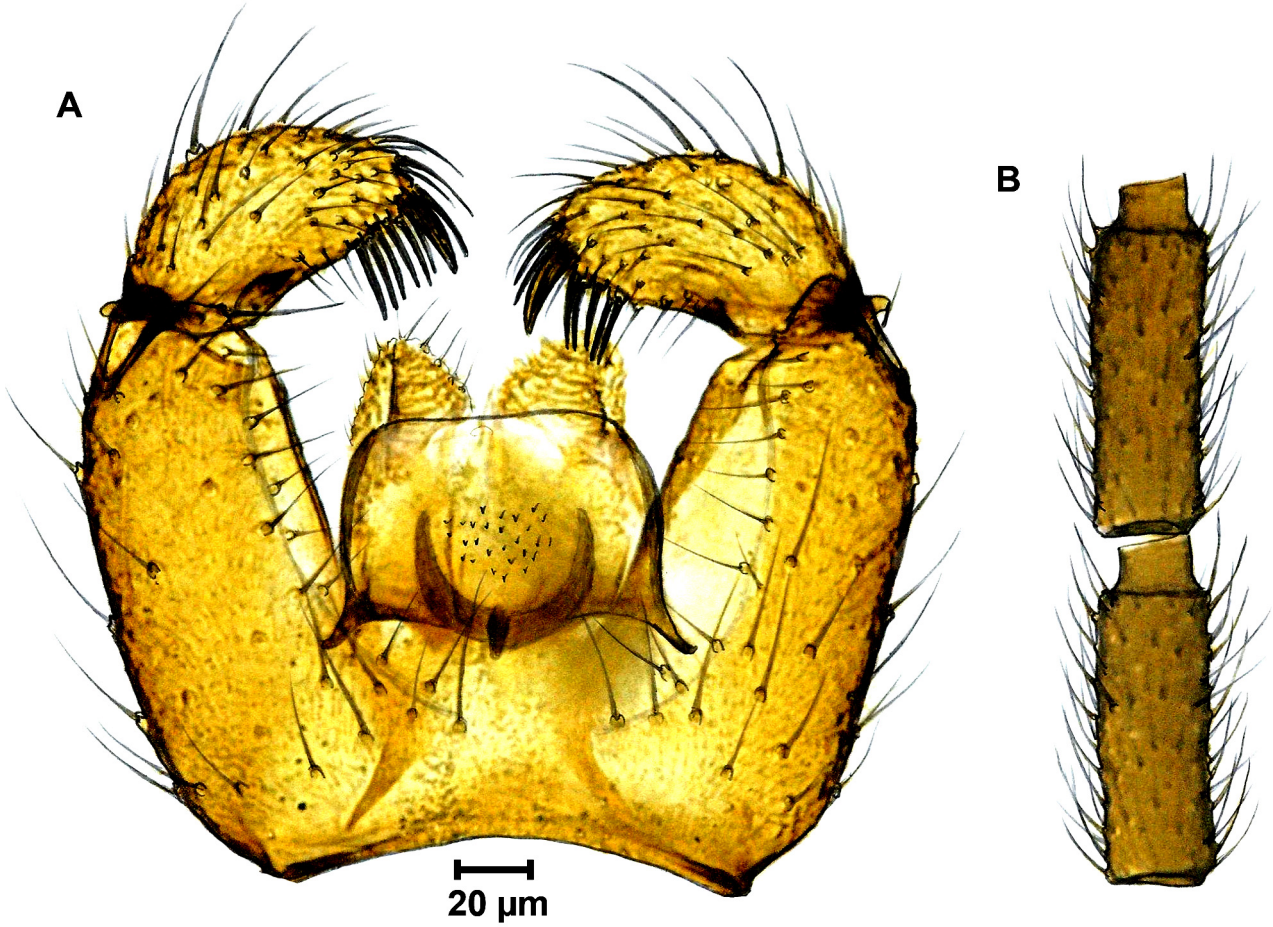

FIGURE 20. *Scatopsciara validovenosa* Mohrig & Kauschke **sp. n.** A. Hypopygium; B. Flagellomeres 4–5.

Description. Male. **Head.** Brown. Eye bridge 3 facets wide. Antenna dark brown; 4th flagellomere with l/w index of 3.0, with a few curved hyaline sensoria-like bristles between somewhat long appressed hairs, neck dark brown and about 1/5 of the length of the basal node. Palpus 3-segmented, basal segment large, with 2 bristles and short sensillae. **Thorax**. Dark brown. Scutum with very short hairs, short lateral bristles; scutellum with 4 short marginal bristles; Postpronotum bare. Wing pale, with very distinct posterior veins; R_1 short, = 1/3 R; R_5 without ventral macrotrichia; C = 2/3 w; y very short, = 1/3 x, without macrotrichia; M-fork narrow; Cu-stem short, CuA_2 rather strongly curved; posterior veins without macrotrichia. Haltere short and darkened. Legs brown; fore tibia with a very broad comb-like row of paler bristles at the inner apex; middle tibia with two short unequal spurs, hind tibia with one short spur only. Claws large and strongly curved. **Abdomen**. Brown, with fine sparse hairs.

Hypopygium brown; gonocoxite with a rather short strong bristle on the ventral apex, with sparse hairs ventrally but rather long at the inner margin; gonostylus short and compact, with a strong apical tooth and an irregular row of 6 spines in the distal third. Tegmen large, wider than long, with a small area of fine teeth. Aedeagus very short, furca large and strongly sclerotized. Body length: 2.2 mm.

Comments. The species is characterized by a strong apical tooth and 6 subapical spines in the distal third of the gonostylus, a large and broad tegmen and a short aedeagus with a large furca. It belongs to the *Scatopsciara atomaria* group and is similar to species of the Palaearctic region.

Distribution. Australia, Queensland.

Species list

C. = *Corynoptera*; *Chaet*. = *Chaetosciara*; *Cr*. = *Cratyna*; *E*. = *Epidapus*; *K*. = *Keilbachia*; *Lob*. = *Lobosciara*; *Ph*. = *Phytosciara*; *Sc*. = *Scatopsciara.*

adstrictatula **sp. n.**, *K.*
adulterina **sp. n.**, *Cr.*
bella Mohrig, 1999, *Ph.*
brevicolla **sp. n.**, *Sc.*
conturbata Mohrig, 1999, *Ph.*
dubiosa **sp. n.**, *Sc.*
excelsus **sp. n.**, *E.*
flagria Mohrig, 2004, *Cr.*
flagriola **sp. n.**, *Cr.*
flavothoracica **sp. n.**, *Cr.*
gladiota Mohrig, 2004, *C.*
livida **sp. n.**, *Cr.*
longipeda **sp. n.**, *Cr.*
pseudoornata Mohrig, 1999, *Ph.*
pullata **sp. n.**, *Cr.*
recondita **sp. n.**, *Chae.*
trilobata Vilkamaa, & Hippa, 1994, *Lob.*
validovenosa **sp. n.**, *Sc.*
vera Mohrig, 2004, *Cr.*

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