

***Prosciara* Frey (Diptera, Sciaridae) revisited: Remarks on classification and description of nineteen new Indomalayan species**

PEKKA VILKAMAA

Finnish Museum of Natural History, Zoology Unit, P. O. Box 17, FI-00014 University of Helsinki, Finland

 pekka.vilkamaa@helsinki.fi;  <https://orcid.org/0000-0003-4366-0108>

Abstract

The following nineteen species of *Prosciara* Frey (Diptera, Sciaridae) from the Indomalayan region are newly described and illustrated: *Prosciara aduncula* **sp. nov.** (Thailand), *P. aequilobata* **sp. nov.** (Brunei), *P. anguina* **sp. nov.** (Nepal), *P. bulbacea* **sp. nov.** (Thailand), *P. calvata* **sp. nov.** (Thailand), *P. clypeata* **sp. nov.** (Thailand), *P. cymosa* **sp. nov.** (Brunei), *P. devexa* **sp. nov.** (Thailand), *P. furculigera* **sp. nov.** (India), *P. horrifera* **sp. nov.** (Thailand), *P. mediana* **sp. nov.** (Thailand), *P. microceps* **sp. nov.** (Thailand), *P. minacis* **sp. nov.** (Nepal), *P. nudimana* **sp. nov.** (Thailand), *P. operta* **sp. nov.** (Thailand), *P. perfidiosa* **sp. nov.** (Taiwan), *P. pinnifera* **sp. nov.** (Malaysia), *P. substricta* **sp. nov.** (Thailand) and *P. tenebrosa* **sp. nov.** (Thailand). Including the newly described ones, 114 species of *Prosciara* are known from the Indomalayan region. The classification of *Prosciara* and related taxa is discussed.

Key words: biodiversity, identification, morphology, *Phytosciara*, taxonomy

Introduction

While studying the Finnish fauna of Sciaridae, Tuomikoski (1960) also studied most of the existing type material of European Sciaridae and conceived the first dependable generic classification for the family. He suggested a close relationship between *Phytosciara* Frey, 1942 (type species *Sciara halterata* Lengersdorf, 1926), *Prosciara* Frey, 1942 (type species *Neosciara porrecta* Lengersdorf, 1929) and his newly described *Dolichosciara* Tuomikoski, 1960 (type species *Sciara flavipes* Meigen, 1804), treating them each as subgenera of *Phytosciara*.

Many subsequent authors have followed the subgeneric classification of Tuomikoski (1960): (Alam *et al.* 1989; Antonova 1977; Freeman 1983; Menzel & Mohrig 2000; Mohrig & Menzel 1994; Mohrig 1999; Mohrig *et al.* 1992; Shin *et al.* 2013; Steffan 1969, 1973); whereas others (Eiseman *et al.* 2018; Kjaerandsen 1994; Rudzinski 2000; Shi *et al.* 2013; Shin *et al.* 2020; Vilkamaa & Hippa 1996; Vilkamaa 2000; Wu *et al.* 2013), following the concepts proposed by Hippa & Vilkamaa (1991), have recognized a generic status for the aforementioned taxa. Here, I follow the classification of Hippa & Vilkamaa (1991) and regard *Prosciara* as a genus but shortly discuss the classification and phylogenetic issues.

With more than 95 hitherto described species, along with the largely unrevised genus *Sciara* Meigen, *Prosciara* is by far the most species-rich genus in the Indomalayan region. Hippa & Vilkamaa (1991) and Vilkamaa & Hippa (1996) described 73 species from the region, the vast majority from Burma and some from Indonesia, Malaysia, Nepal, the Philippines and Taiwan. The latter paper also includes faunistic records and an identification key to the species known at the time. Shi *et al.* (2013) described new species of *Prosciara* from China, including 16 species from the Indomalayan region of the country (including Taiwan) and published faunistic data, an identification key and illustrations of all known Chinese species. Minor contributions to the Indomalayan fauna include the two species described by Alam *et al.* (1989) from India and three single species descriptions: by Edwards (1928) (as *Phorodonta*) from the Malay Peninsula, and by Kjaerandsen (1994) and Mohrig & Menzel (1994), both from Thailand.

My aim here is to increase knowledge of the species diversity of *Prosciara* in the region.

Material and methods

The specimens were picked out from unsorted Malaise trap samples or selected from pinned museum material of Sciaridae. After dehydrating them in absolute ethanol, the specimens were dissected and mounted on microscope slides in Euparal, the pinned ones after having been treated with KOH. The morphological terminology follows Hippa & Vilkamaa (1991) and Hippa *et al.* (2010). Only males were studied. Unless otherwise stated, the hypopygium was examined in ventral aspect.

Digital photographs of the slide-mounted specimens were taken with a Leica MC170 HD camera mounted on a Leica DM 4000 B LED research microscope. The images were processed with Photoshop version CS5, CorelDraw2017 and CorelPhotopaint2017.

The material is deposited in Bernice P. Bishop Museum, Honolulu, USA (BPBM), Canadian National Collection, Ottawa (Canada), Zoological Museum, Finnish Museum of Natural History, Helsinki, Finland (MZH), Jan Ševčík Laboratory, University of Ostrava, Ostrava, Czech Republic (JSL-UOC), National Museum of Natural Science, Taichung, Taiwan (NMNS), Queen Sirikit Botanical Garden, Chiang Mai, Thailand (QSBG) and Swedish Museum of Natural History, Stockholm, Sweden (SMNH).

Remarks on phylogeny and classification of *Phytosciara* group of taxa

Before the rank of the taxa concerned can be seriously postulated, the monophyletic groups within the taxa concerned should be delimited. Hippa & Vilkamaa (1991), Vilkamaa & Hippa (1996) and Vilkamaa (2000) could not find any synapomorphies for *Phytosciara s. l.*, whereas Menzel & Mohrig (2000) suggested that the long wing vein stCuA, the rugose surface of antennal flagellomeres, the fore tibial organ with a row of stout setae and the highly arched thorax as synapomorphies for *Phytosciara s. l.* However, the length of stCuA and the surface texture of the flagellomere surface are highly variable even within *Prosciara* (see figs 2 and 3 in Vilkamaa & Hippa (1996) and fig. 1 in Shi *et al.* (2013) and the stout setae in the fore tibial organ occur at least also in *Lobosciara* Steffan, 1969 (see fig. 4 in Vilkamaa & Hippa (1994)). Additionally, the high-arched thorax is difficult to define unambiguously and can be even more pronouncedly arched in *Hybosciara* Rübsaamen, 1894. Toothed tarsal claws also occur in many species of *Bradysia* Winnertz, 1867, *Ctenosciara* Tuomikoski, 1960 and *Pseudolycoriella* Menzel & Mohrig, 1978. Also proposed synapomorphies (albeit not unique ones) for the *Phytosciara* group of taxa, are the long fore metatarsus and the leaf-mining larval feeding habits. However, the former is also present in *Lobosciara*, although not in all current *Prosciara*, and the latter has been observed so far only in *Phytosciara s. str.* Although I studied the monophyly of the *Phytosciara* group of taxa through a cladistic parsimony analysis using morphological characters (Vilkamaa 2000), none of the *Phytosciara* group of (sub)genera in their current concept were inferred as monophyletic (see Fig. 10 in Vilkamaa (2000)). However, *Prosciara* and *Phytosciara* were more closely related to each other than to *Dolichosciara*. The molecular phylogeny by Shin *et al.* (2013), although including only one species each of *Dolichosciara* and *Prosciara*, and none of *Phytosciara*, inferred these taxa as belonging to different clades, both nested within the genus *Bradysia*.

Some characters regarded as good diagnostic ones for distinguishing *Phytosciara s. str.* (a tumid gonostylus with poorly differentiated subapical megasetae, narrow oblique teeth on tarsal claws), *Prosciara* (a distinct gonostylar lobe with stout or slender megasetae, large teeth on tarsal claws) and *Dolichosciara* (a slender gonostylus with narrow gonostylar megasetae, two long setae at the apicoventral corner of the gonocoxa, a very small or completely lacking intergonocoxal lobe, a double row of setae at the hind margin of the wing) (Hippa & Vilkamaa 1991; Vilkamaa & Hippa 1996; Mohrig & Menzel 1994; Menzel & Mohrig 2000; Vilkamaa 2000) have proved variable within the genera, making the classification of species difficult.

In my hypothesis (Vilkamaa 2000), some species earlier placed in *Prosciara* (*P. crassidens* Hippa & Vilkamaa, 1991, *P. pubericornis* (Edwards, 1928) on the basis of having a distinct gonostylar lobe, stout gonostylar megasetae and only one long seta at the apicoventral corner of the gonocoxa, were nested within species of typical *Dolichosciara*. These species and *Prosciara coronula* Vilkamaa & Hippa, 1996 also have a strongly rugose surface on antennal flagellomeres and a double row of setae at the hind margin of the wing; both features typical for *Dolichosciara*, so they might be included in that genus. Some species, which on the basis of other characters, undoubtedly belong to *Dolichosciara*, also have stout, and not fine, gonostylar megasetae, for example, *D. spissispina* Vilkamaa, Hippa & Heller, 2013.

Some species of *Dolichosciara* resemble *Phytosciara* and *Prosciara* in possessing only a single, rather than the typical two, long setae at the apicoventral corner of the gonocoxa. This character is observed in *D. fabulosa* Rudzinski, 2000, *D. crocera* (Mohrig, Kauschke & Broadley, 2018), and *D. filispinosa* (Mohrig, 1999), whereas in *D. fumida* (Mohrig, 1999) and *D. chaetocoxa* (Mohrig, 1999) the number of setae is variable, with one or two present. However, based on other characters, these species undoubtedly belong to *Dolichosciara*. Although most species of *Dolichosciara* have only a very reduced intergonocoxal lobe or lack it completely, some species (*D. fabulosa*, *D. conturbata* (Mohrig, 1999) and *D. spissispina*) have a well-developed lobe, no different from those of *Phytosciara* and *Prosciara*.

The position and size of the gonostylar lobe and the number of its megasetae differs to a great extent in *Dolichosciara*. For example, *D. bellaformis* (Mohrig, 1999) has only two subapical megasetae in its gonostylus and no trace of a gonostylar lobe, and *D. atrata* (Mohrig, 1999) even lacks any differentiated megasetae, whereas *D. ruficoxa* (Brunetti, 1912) *sensu* Mohrig (1999) and *D. lobifera* (Edwards, 1928) **comb. nov.** have a large subbasal lobe with numerous megasetae in their gonostylus (see fig. 28 in Mohrig (1999) and fig. 7 A in Vilkamaa (2000)) and in *D. subfumida* (Mohrig, 1999) the whole impressed medial side of the gonostylus is covered by megasetae. In this latter species and in some other ones, the lobe itself has been completely reduced—or not yet evolved. In spite of the morphological variation in the structure of the hypopygium, *Dolichosciara* is a distinct, identifiable unit, well recognized as a genus.

The situation in *Prosciara* is less straightforward. Some of its species having a tumid gonostylus and a short gonostylar lobe, and narrow teeth on the tarsal claws (such as *Prosciara prosciroides* (Tuomikoski, 1960) and *P. plusiochaeta* Hippa & Vilkamaa, 1991, were associated with the species of *Phytosciara* in the cladogram of Vilkamaa (2000). *Phytosciara greylockensis* Eiseman, Heller & Rulik, 2018 has a group of five well-developed gonostylar megasetae that are quite similar to those of these short-lobed *Prosciara*, except that the gonostylar lobe itself is completely absent. It is sometimes difficult to decide whether the gonostylar lobe or the megasetae are well or poorly developed, as intermediate cases occur, such as in *Phytosciara* (*Prosciara*) *vulcanata* Steffan, 1973. Furthermore, some species of *Bradysia*, for example *B. scabricornis* Tuomikoski, 1960, resemble *Phytosciara*-*Prosciara* complex by having a distinct, although small, gonostylar lobe and a rugose surface of antennal flagellomeres.

If we regard only the crucial characters, the position and size of the gonostylar lobe and its megasetae, and accept that these could be highly variable also in the *Phytosciara*-*Prosciara* complex, as they are in *Dolichosciara*, then *Phytosciara s. str.* and *Prosciara* might be difficult to separate from each other, suggesting that these taxa could be regarded as synonyms. To solve this problem, the *Phytosciara* group of taxa should be studied more comprehensively using both morphological and molecular evidence, to determine the monophyletic groups and to suggest the most reasonable division of the species into nominal supraspecific taxa.

Descriptions of new species

Prosciara aduncula sp. nov.

Figs 1 A, 12 A

Material studied. Holotype male. THAILAND, Chiang Mai, Doi Inthanon N.P., Kiewlorn 1: montane forest, 20°3.549'N, 99°8.552'E, 2174 m, Malaise trap, 31.VII–7.VIII.2007 (T2953), P. Wongchai leg. (QSBG). *Paratype.* Same data as with holotype, 1 male (MZH).

Description. Male. **Head.** Face brown, paler than antenna, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 20 scattered longer and shorter setae. Clypeus with 1 seta.

Maxillary palpus in poor condition in the specimens studied, with 3 segments; 1st segment with 2–3 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres rugose, 1st flagellomere yellow, body of 4th flagellomere 2.45–2.95x as long as wide, longest setae shorter than width of flagellomere, neck darker apically, shorter than wide. **Thorax.** Brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 2 setae. Proepisternum with 5 setae. **Wing.** Wings slightly damaged in the specimens studied. Fumose brown. Length 2.7 mm. Width/length 0.40. Anal lobe moderate. Veins distinct, except stM faint. R1/R 0.75–0.90. c/w not detectable in the specimens studied. r-m as long as bM or shorter. r-m non-setose or with 3 setae, bM, M and CuA non-setose. **Legs.** Fore coxa yellow, mid- and hind coxa pale brown. Fore tibia with 2 dorsal spinose setae, or with

none. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 0.90. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig 1 A). Brown, as abdomen. Intergonocoxal area without lobe, with some setae. Gonocoxa slender, as long as gonostylus, with rather short setosity ventrally. Gonostylus with dorsomedial lobe at basal half, narrower than distal part of gonostylus; lobe with 8 slender, distinctly curved megasetae, with short dense setosity basally. Tegmen (Fig. 12 A) slightly longer than wide, slightly impressed apically, nearly straight laterally; with weakly sclerotized apicolateral rim; with large aedeagal teeth. Aedeagal apodeme rather long and slender.

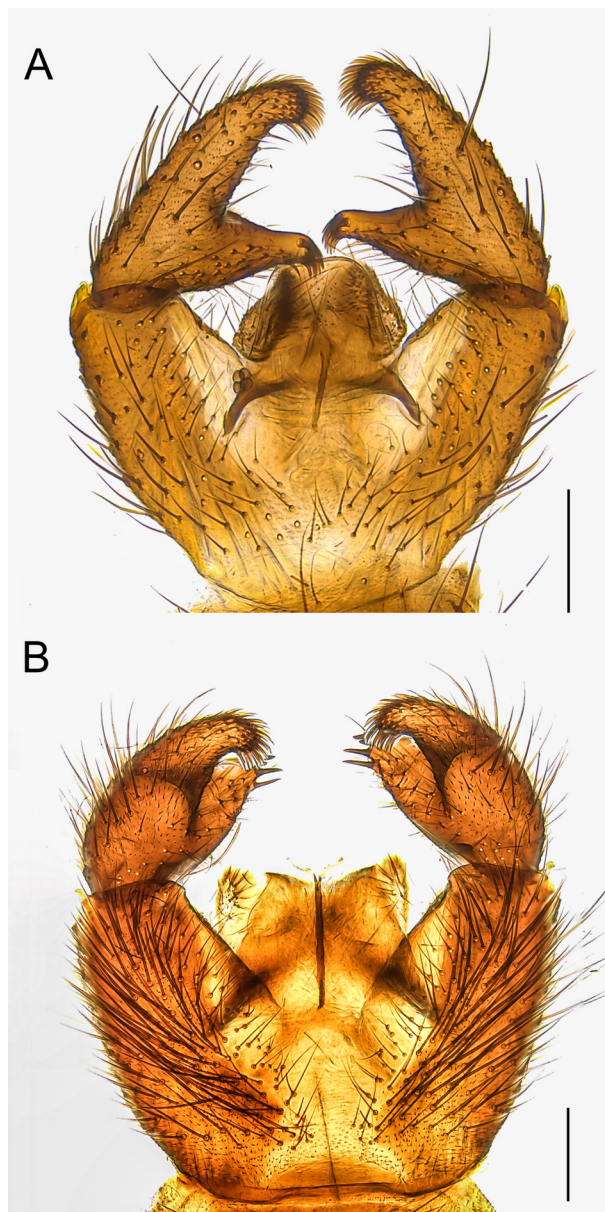


FIGURE 1. Hypopygium, ventral. **A.** *Prosciara aduncula* **sp. nov.** (holotype). **B.** *P. aequilobata* **sp. nov.** (holotype). Scale 0.1 mm.

Discussion. In having the apical part of the gonostylus longer than the gonostylar lobe, in lacking the intergonocoxal lobe, and in having moderately dense setosity of the gonocoxa, *Prosciara aduncula* **sp. nov.** resembles *P. exsecta* Vilkamaa & Hippa, 1996 and *P. devexa* **sp. nov.** but can be distinguished from *P. exsecta* by having a longer distal part of the gonostylus and a more strongly towards apex narrowed gonostylar lobe and from *P. devexa* in having the gonostylar lobe much narrower. The new species differs from both by having the gonostylar megasetae strongly recurved (see Fig. 29 in Vilkamaa & Hippa (1996) and Figs 1 A and 4 B)).

Etymology. The name is a Latin adjective, *aduncula*, bent, referring to the strongly curved gonostylar megasetae.

Prosciara aequilobata sp. nov.

Figs 1 B, 12 B, 14 C

Material studied. *Holotype male.* BRUNEI, Ladan Forest Reserve, logged forest, Malaise trap, XII.1992–II.1993, M.J. Sahat leg. (MZH).

Description. Male. **Head.** Face and antenna and maxillary palpus concolorous brown. Eye bridge 3–4 facets wide. Face with 33 scattered longer and shorter setae. Clypeus with 4 setae. Maxillary palpus with 3 segments; 3rd longer than 1st, 2nd shortest; 1st segment with 1–4 setae and an indistinct dorsal patch of sensilla; surface of antennal flagellomeres rugose, body of 4th flagellomere 2.35x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, setae dark. Anterior pronotum with 7 setae. Proepisternum with 10 setae. **Wing.** Fumose brown. Length 3.0 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.85. c/w 0.40. r-m longer than bM. r-m with 3 setae, bM, M and CuA non-setose. **Legs.** Coxae brown, concolorous with thorax. Fore tibia without spinose setae. Fore tibial organ with pale and fine vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.05. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax. Setae dark, long and stout. **Hypopygium** (Fig. 1 B). Brown. Intergonocoxal area without lobe; largely non-setose, densely microtrichose. Gonocoxa much longer than gonostylus, with long and dense setosity ventrally; with setose membrane. Gonostylus with dorsomedial lobe at basal half, larger than distal part of gonostylus, slightly oblique, in ventral view apical part of lobe and apex of gonostylus very close to each other; gonostylar lobe with 4 megasetae well separated from each other. Tegmen (Figs 12 B, 14 C) wider than long, nearly straight laterally, slightly narrowed towards apex, turned dorsad apically, with blunt apicolateral teeth, with rather large aedeagal teeth. Aedeagal apodeme long and slender.

Discussion. *Prosciara aequilobata* sp. nov. is similar to the type species of the genus *P. porrecta* (Lengersdorf, 1929) and to *P. germana* Vilkamaa & Hippa, 1996, *P. gibbosa* Hippa & Vilkamaa, 1991 and *P. mediana* sp. nov. in having a wide intergonocoxal area without a lobe, that is setose and richly microtrichose, in having long and dense setosity of the gonocoxa, in having setose membrane of gonocoxa and in having the tegmen with apicolateral teeth, the apical part of the tegmen with the aedeagal teeth turned dorsad and in having a very long aedeagal apodeme. *Prosciara operta* and *P. tenebrosa* share some of these characters but their tegmena are damaged in the specimens studied, so that only the long aedeagal apodeme is detectable.

The other species mentioned above have the gonostylar lobe strongly oblique to the apical part of the gonostylus, whereas *P. aequilobata* has the lobe only slightly oblique and *P. tenebrosa* has it parallel with the apical part. Moreover, *P. aequilobata* differs from *P. tenebrosa* in having the gonostylar megasetae nearly equal in size and placed wide apart from each other (of different sizes in a dense group in *P. tenebrosa*) and in having a longer and more densely setose gonocoxa (Figs 1 B, 10 B and 11).

For distinguishing *P. mediana*, see under the latter.

Etymology. The name is derived from the Latin words *aequalis*, similar, and *lobus*, lobe, referring to the position of the gonostylar lobe.

Prosciara anguina sp. nov.

Figs 2 A, 12 C

Material studied. *Holotype male.* NEPAL, 27°58'N, 85°00'E, 11 100 ft, Malaise trap, 25.VI.1967, Canadian Nepal expedition leg. (CNC). *Paratypes.* Same data as with holotype, 1 male (MZH); same data as previous but 18.VI.1967, 1 male (CNC); same data but 22.VI.1967, 1 male (CNC).

Description. Male. **Head.** Colours faint in the specimens studied. Eye bridge 3–4 facets wide. Face with 21 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 1 seta and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 2.9x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Colours faint in the specimens studied. Anterior pronotum with 3 setae. Proepisternum with 8 setae. **Wing.** Length 2.9 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 1.05–1.35. c/w 0.55–0.65. r-m longer than bM. r-m with 2 setae, bM, M and CuA non-setose. **Legs.** Colours faint in the specimens studied. Fore tibia with 4 dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven

row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.0. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 2 A). Brown, as abdomen. Intergonocoxal area with short setose lobe. Gonocoxa slender, longer than gonostylus, with rather stout setosity ventrally, shorter and finer medially. Gonostylus slender, with long and slender dorsomedial lobe at middle; lobe largely non-setose, with 4–5 nearly straight stout megasetae. Tegmen (Fig. 12 C) as long as wide, straight laterally and apically, slightly roundish apicolaterally; with weakly sclerotized rim apically and laterally at apical third; with large aedeagal teeth. Aedeagal apodeme rather short and stout.

Discussion. In its long and slender gonostylar lobe and in having megasetae at the gonostylar apex, *Prosciara anguina* **sp. nov.** resembles most *P. biloba* Hippa & Vilkamaa, 1991, *P. duplex* Hippa & Vilkamaa, 1991 and *P. incisa* Vilkamaa & Hippa, 1996 specimens. *Prosciara anguina* is similar to *P. biloba* and *P. duplex* in having a short, wide intergonocoxal lobe, whereas *P. incisa* has the lobe narrow. *Prosciara anguina* and *P. biloba* have a shorter and more slender gonostylar lobe than *P. duplex* and *P. incisa*. Furthermore, *Prosciara biloba* and *P. duplex* have many megasetae at the gonostylar apex, whereas *P. anguina* has two and *P. incisa* one (but also only one apical megasetae in one paratype of *P. anguina*).

Etymology. The name is a Latin adjective, *anguina*, resembling a snake, referring to the long and slender gonostylar lobe.

***Prosciara bulbacea* sp. nov.**

Fig. 2 B

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Inthanon N.P., 2014-271 (without other data) (QSBG).

Description. Male. **Head.** Face brown, paler than antenna, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 14 scattered longer and shorter setae. Clypeus with 1 seta. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres distinctly rugose, body of 4th flagellomere 2.95x as long as wide, longest setae as long as width of flagellomere, neck darker apically, shorter than wide. **Thorax.** Brown, dorsal part of scutum darker, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 3 setae. Proepisternum with 4 setae. **Wing.** Length 2.8 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.80. c/w 0.70. r-m longer than bM. r-m, bM, M and CuA non-setose. **Legs.** Coxae yellow. Fore tibia with 2 dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 0.90. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 2 B). Brown, as abdomen. Intergonocoxal area with very large setose lobe. Gonocoxa slender, longer than gonostylus, with long, rather stout and sparse setosity ventrally, shorter and finer medially. Gonostylus slender, widest at middle, with long dorsomedial lobe at apical third, lobe slightly wider than distal part of gonostylus at their distal junction; with 5 slightly curved megasetae. Tegmen as long as wide, narrowed at middle, roundish subapically, straight apically, unsclerotized except weakly sclerotized apicolateral rim, with large aedeagal teeth. Aedeagal apodeme long and slender.

Discussion. In its very large intergonocoxal lobe, *Prosciara bulbacea* **sp. nov.** resembles *P. extumida* Shi & Huang, 2013 from China but differs in having the lobe parallel-sided, not gradually tapering, and in having a longer gonostylar lobe and a narrower apical part of the gonostylus. The gonocoxa of *Prosciara bulbacea* is only slightly curved laterally, whereas it is strongly so in *P. extumida*. Furthermore, the tegmen of *Prosciara bulbacea* is more notably narrowed at middle (Fig. 2 B and figs 22 A and B in Shi *et al.* (2013)).

Etymology. The name is a Latin adjective, *bulbacea*, bulbous, referring to the prominent intergonocoxal lobe.

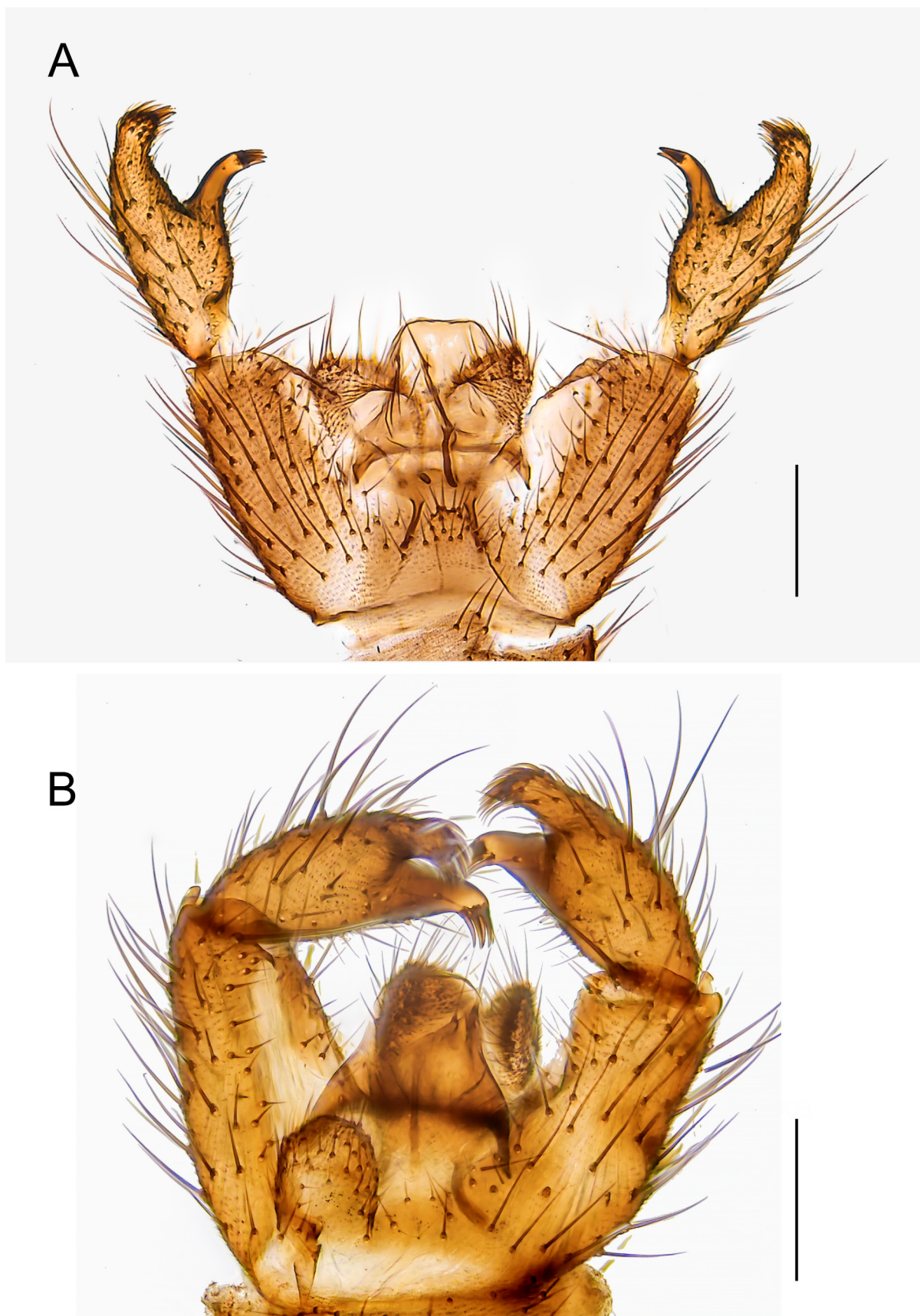


FIGURE 2. Hypopygium, ventral. **A.** *Prosciara anguina* **sp. nov.** (holotype). **B.** *P. bulbacea* **sp. nov.** (holotype). Scale 0.1 mm.

***Prosciara calvata* sp. nov.**

Figs 3 A, 12 D

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Inthanon N.P., Kiewlom 1: montane forest, 20°3.549'N, 99°8.552'E, 2174 m, Malaise trap, 31.VII–7.VIII.2007 (T2953) P. Wongchai leg. (QSBG). *Paratype.* Same data as with holotype, 1 male (MZH).

Description. Male. **Head.** Eye bridge 2–4 facets wide. Face with 20–32 scattered longer and shorter setae. Clypeus with 1–2 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd 1st shortest; 1st segment with 1–5 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 2.25–2.30x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax** Brown, scutum darker dorsally, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 3–5 setae. Proepisternum with 7–9 setae. **Wing.** Length 2.4–2.8 mm. Width/length 0.40. Anal lobe large. Veins distinct, except stM faint. R1/R 0.60–0.70. c/w 0.55–0.65. r-m shorter than bM. r-m with 1 seta, bM, M and CuA non-setose. **Legs.** Coxae yellow. Fore tibia with 4 dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.0–1.10. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 3 A). Brown, as abdomen. Intergonocoxal area without lobe, non-setose. Gonocoxae separated, gonocoxa moderately wide, longer than gonostylus, with rather short and fine setosity ventrally, slightly finer medially. Gonostylus slender, with long and wide dorsomedial lobe at middle, lobe larger than distal part of gonostylus, with 6 slightly curved slender megasetae; with dense group of long setae basad of lobe. Tegmen (Fig. 12 D) slightly wider than long, slightly narrowed towards apex, straight laterally, roundish apically, unsclerotized, with large aedeagal teeth. Aedeagal apodeme rather long and slender.

Discussion. *Prosciara calvata* sp. nov. resembles *P. exsecta* Vilkamaa & Hippa, 1996, *P. parallela* Vilkamaa & Hippa, 1996 and *P. devexa* sp. nov., all having a rather slender, although not filamentous, gonostylar megasetae and lacking the intergonocoxal lobe. *Prosciara calvata* differs from *P. exsecta* and *P. parallela* in having the gonostylar lobe much wider and in having non-setose wing veins M and CuA₁ (Fig. 3 A and Fig. 28 and Fig. 20 in Vilkamaa & Hippa (1996)). It differs from *Prosciara devexa* sp. nov. in having the gonostylar lobe narrower and oblique, not nearly transverse and in having the apical part of the gonostylus shorter.

Etymology. The name is a Latin adjective, *calvata*, bare, referring to the non-setose intergonocoxal area.

***Prosciara clypeata* sp. nov.**

Figs 3 B, 12 D

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Phahompok N.P., Kiewlom 1: montane forest, 20°3.455'N, 99°8.551'E, 2174 m, Malaise trap, 7–14.IX.2007 (T2810), K. Srisom & P. Wongchai leg. (QSBG). *Paratype.* Same data as with holotype, 1 male (MZH).

Description. Male. **Head.** Face and antenna concolorous brown or face darker, maxillary palpus very pale yellow. Eye bridge 2–3 facets wide. Face with 22–31 scattered longer and shorter setae. Clypeus with 2–7 setae. Maxillary palpus with 3 segments; 1st as long as 2nd, 3rd shortest; 1st segment with 3–5 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 1.50–1.55x as long as wide, longest setae shorter than width of flagellomere, neck very short, shorter than wide. **Thorax.** Brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 3 setae. Proepisternum with 8–10 setae. **Wing.** Fumose grey. Length 2.6–2.7 mm. Width/length 0.40–0.45. Anal lobe large. Veins distinct, except stM faint. R1/R 0.90–1.0. c/w 0.60–0.65. r-m shorter than bM. r-m with 1 seta, bM, M and CuA non-setose. **Legs.** Coxae yellow. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.15–1.20. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 3 B). Brown, as abdomen. Intergonocoxal area with roundish setose lobe. Gonocoxa slender, longer than gonostylus, with rather stout setosity ventrally, shorter and finer medially. Gonostylus slender, with perpendicular, rather small and slender dorsomedial lobe subapically; lobe non-setose, with 4 slightly curved megasetae in row. Tegmen (Fig. 12 E) large, longer than wide, slightly curved laterally and apically, with subtriangular lateral processes, unsclerotized except weakly sclerotized apical rim; with large aedeagal teeth. Aedeagal apodeme short and stout.

A



B



FIGURE 3. Hypopygium, ventral. **A.** *Prosciara calvata* **sp. nov.** (holotype). **B.** *P. clypeata* **sp. nov.** (holotype). Scale 0.1 mm.

Discussion. In having lateral processes in the tegmen and short antennal flagellomeres, *Prosciara clypeata* **sp. nov.** is similar to *P. pinnifera* **sp. nov.**, *P. nudimana* **sp. nov.**, *P. sinensis* Shi & Huang, 2013 and *P. tetracantha* Shi & Huang, 2013.

Prosciara clypeata and *P. sinensis* are similar in having an intergonocoxal lobe, lacking in the other two species.

Prosciara clypeata differs from *P. sinensis* in having the gonostylar lobe subapical, not apical, and in having the megasetae close to each other in a row, not wide apart at the apex of the lobe (Fig. 3 B and Fig. 19 A in Shi *et al.* (2013)). See also under *Prosciara pinnifera*.

Etymology. The name is a Latin adjective, *clypeata*, shield-bearing, referring to the large tegmen.

***Prosciara cymosa* sp. nov.**

Figs 4 A, 12 F

Material studied. *Holotype male.* BRUNEI, Ulu Tamburong N. P., Kuala Belalong Field Studies Centre, primary lowland rainforest, Malaise trap, 27.I–17.II.2015, Kaspřák & Mantič leg. (JSL-UOC). *Paratypes.* Same data as with holotype, 2 males (MZH); same data as previous but 26.I–15.II.2015, 1 male (MZH).

Description. **Male.** **Head.** Face and antenna concolorous dark brown, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 27–38 scattered longer and shorter setae. Clypeus with 1–3 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 1–3 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres rugose, body of 4th flagellomere 2.20–2.90x as long as wide, longest setae shorter than width of flagellomere, neck darkened apically, slightly shorter than wide. **Thorax.** Dark brown, setae dark. Anterior pronotum with 5–6 setae. Proepisternum with 5–25 setae. **Wing.** Fumose brown. Length 2.6–2.7 mm. Anal lobe large. Width/length 0.40–0.50. Veins distinct, except stM faint. R1/R 0.90–1.0. c/w 0.55–0.65. r-m longer than bM. r-m with 5–8 setae, bM, M and CuA non-setose. **Legs.** Coxae brown. Fore tibia without dorsal spinose setae. Fore tibial organ with dark vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.0. Tarsal claws with large teeth. **Abdomen.** Brown, paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 4 A). Dark brown, as abdomen. Intergonocoxal area wide, without lobe, non-setose proximally, setose caudally, densely microtrichose. Gonocoxa slender, longer than gonostylus, with long and dense setosity ventrally. Gonostylus slender, with dorsomedial lobe at middle, lobe slender, with some stout megasetae from base to apex. Tegmen (Fig. 12 F) slightly longer than wide, unsclerotized except distinct apical rim extended laterad as apicolateral teeth; with very long lateral parts of basal apodeme and with dorsomedial part of apodeme extended caudad joining dorsoapical sclerotizations, together in ventral view visible as dark X-formed structure; with tiny aedeagal teeth. Aedeagal apodeme long and slender.

Discussion. Except for having a differently shaped gonostylar lobe and a narrow gonocoxa, *Prosciara cymosa* sp. nov. resembles the type species of the genus, *P. porrecta*, and related species (see under *P. aequilobata*) in having a very long and dense ventral setosity of the gonocoxa and in having the intergonocoxal area wide, setose and richly microtrichose. Moreover, the tegmen of *Prosciara cymosa* is reminiscent in being apically sclerotized, with apicolateral teeth and with a long aedeagal apodeme. The tegmen is completely membranous laterally, and its exact form is not detectable.

Prosciara cymosa is distinguished from all other congeners in having its gonostylar lobe with megasetae not only apically but all over of the lobe and in having its tegmen with an X-formed dorsal sclerotization.

Etymology. The name is a Latin adjective, *cymosa*, with shoots, referring to the placement of the megasetae on the gonostylar lobe.

***Prosciara devexa* sp. nov.**

Figs 4 B, 13 A

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Phahompok N.P., Kiewlorn 1: montane forest, 20°3.455'N, 99°8.551'E, 2174 m, Malaise trap, 7–14.IX.2007 (T2810), K. Srisom & P. Wongchai leg. (QSBG).

Description. **Male.** **Head.** Face brown, darker than antenna, maxillary palpus yellow. Eye bridge 3–4 facets wide. Face with 24 scattered longer and shorter setae. Clypeus with 1 seta. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 2.1x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, dorsal part of scutum darker, anterior pronotum and proepisternum yellowish brown, setae dark. Anterior pronotum with 3 setae. Proepisternum with 5 setae. **Wing.** Length 2.7 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.80. c/w 0.65. r-m longer than bM. r-m with

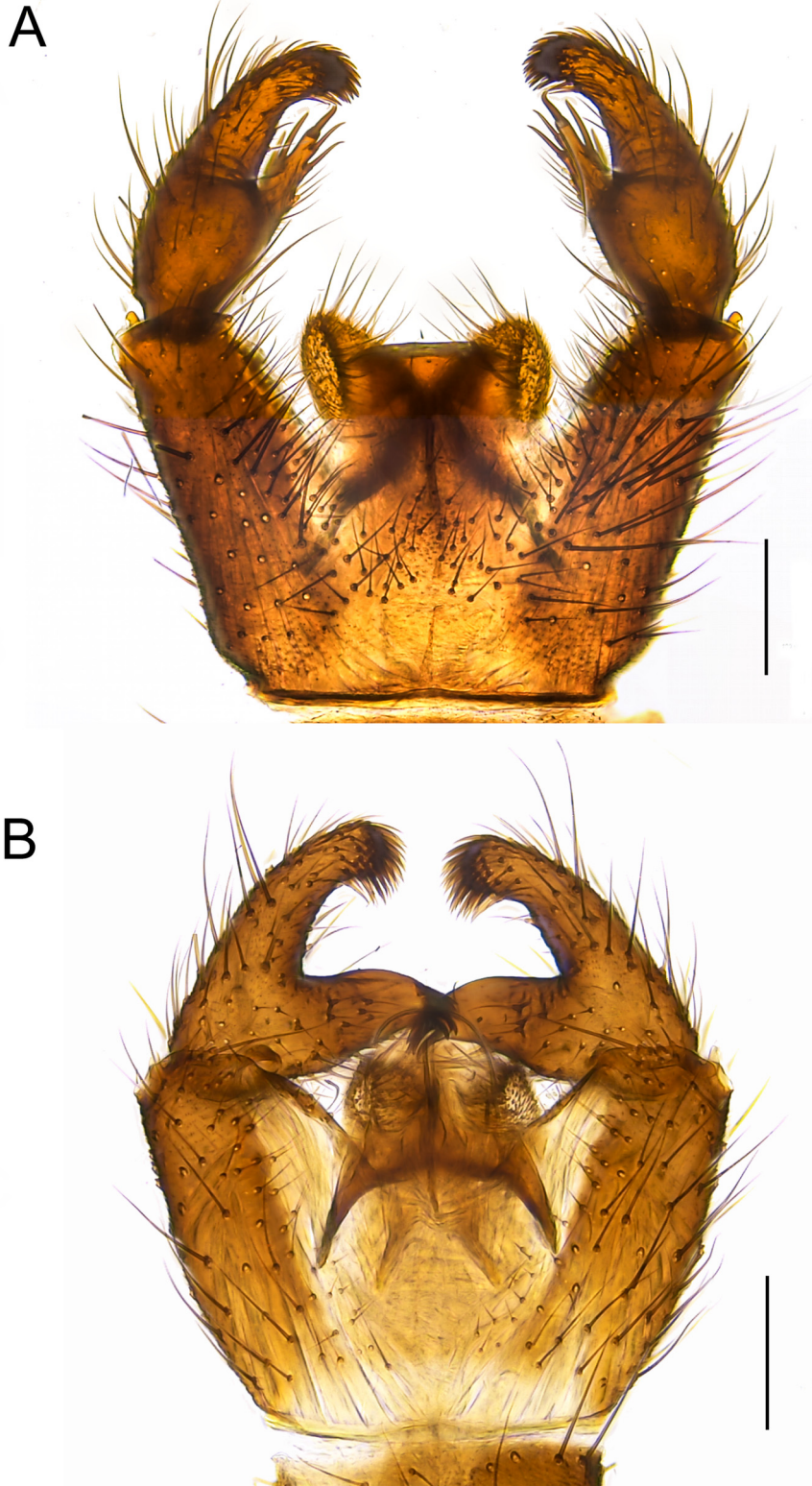


FIGURE 4. Hypopygium, ventral. **A.** *Prosciara cymosa* **sp. nov.** (holotype). **B.** *P. devexa* **sp. nov.** (holotype). Scale 0.1 mm.

2 setae, bM, M and CuA non-setose. **Legs.** Coxae yellowish. Fore tibia with 5 dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 0.95. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 4 B). Brown, as abdomen. Intergonocoxal area without lobe, largely non-setose. Gonocoxa slender, longer than gonostylus, with rather stout setosity ventrally, shorter and finer medially. Gonostylus slender,

with long and wide dorsomedial lobe at basal half; lobe setose, slightly shorter but wider than distal part of gonostylus, nearly transverse, with 7 slightly curved megasetae. Tegmen (Fig. 13 A) slightly longer than wide, slightly narrowed towards apex, roundish apically, unsclerotized except weakly sclerotized apicolateral rim; with large aedeagal teeth. Aedeagal apodeme long and slender.

Discussion. *Prosciara devexa* **sp. nov.** resembles most *P. latifurca* Hippa & Vilkamaa, 1991, *P. flavidula* Vilkamaa & Hippa, 1996, *P. pandoxa* Vilkamaa & Hippa, 1996 and *P. prolixa* Vilkamaa & Hippa, 1996 in lacking the intergonocoxal lobe, in having the gonostylar lobe large, wider than the distal part of the gonostylus and in lacking the apicolateral teeth of tegmen (See Fig. 16 C and D in Hippa & Vilkamaa (1991), Fig. 21 A and B, Fig. 22 C, D and E and Fig. 23 in Vilkamaa & Hippa (1996)).

Prosciara devexa is similar to *P. flavidula* and distinguished from *P. latifurca*, *P. pandoxa* and *P. prolixa* by having the gonostylar lobe shorter than the apical part of the gonostylus and by having the gonostylar megasetae slender. *Prosciara devexa* differs from *P. flavidula* by having a brown head and thorax, not yellow as in *P. flavidula*. Furthermore, *Prosciara devexa* has the gonostylar lobe slightly sigmoid, not gradually narrowing towards apex (see Fig. 4 B and Fig. 21 B in Vilkamaa & Hippa (1996)).

See also under *Prosciara aduncula*.

Etymology. The name is a Latin adjective, *devexa*, sloping, referring to the gently curved gonostylar lobe.

***Prosciara furculigera* sp. nov.**

Fig. 5 A

Material studied. *Holotype male.* INDIA, Assam, 6 miles N of Tinsukia, 26.III.1944, D.E. Hardy leg. (BPBM).

Description. **Male.** **Head.** Face brown, darker than antenna, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 28 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus with 3 segments; 1st longer than 2nd, 3rd shortest; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres smooth, body of 4th flagellomere 2.10x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, scutum darker than pleura, setae dark. Anterior pronotum with 2 setae. Proepisternum with 5 setae. **Wing.** Fumose brown. Length 1.9 mm. Anal lobe intermediate. Width/length 0.45. Veins distinct, except stM faint. R1/R 0.65. c/w 0.60. r-m longer than bM. r-m and bM non-setose, M and CuA₁ setose, CuA₂ non-setose. **Legs.** Coxae yellow. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 0.75. Tarsal claws with large teeth. **Abdomen.** Brown, paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 5 A). Brown, as abdomen. Intergonocoxal area with short setosity, with long and slender, apically bifurcated lobe. Gonocoxa slender, longer than gonostylus, with moderately long setosity ventrally, short medially. Gonostylus with dorsomedial lobe at middle, narrower than distal part of gonostylus; lobe with 4 slender megasetae well apart from each other. Tegmen about as long as wide, straight laterally, roundish apicolaterally, unsclerotized except weak apicolateral rim, rim broken medially; with large aedeagal teeth. Aedeagal apodeme rather short and stout.

Discussion. *Prosciara furculigera* **sp. nov.** is very similar to *P. duplicidens* Vilkamaa & Hippa, 1996 in having a long intergonocoxal lobe and four megasetae in the gonostylar lobe as well as in having setose M, CuA₁ and CuA₂. *Prosciara furculigera* differs by having a shorter and wider gonostylar lobe and an apically distinctly divided intergonocoxal lobe. The hypopygium of *P. angustiloba* Hippa & Vilkamaa, 1991 is very similar but it has a longer tegmen than the above two species as well as a non-setose CuA₂ (see Fig. 13 in Hippa & Vilkamaa (1991) and Figs 15 and 17 E in Vilkamaa & Hippa (1996)).

Etymology. The name is formed from the Latin words *furcula*, little fork, and *-ger*, bearing, referring to the apically divided intergonocoxal lobe.

***Prosciara horrifera* sp. nov.**

Figs 5 B, 13 B

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Inthanon N.P., Kewlom1/montane forest, 20°3.549'N, 99°8.552'E, 2174 m, Malaise trap, 31.VII–7.VIII.2007 (T2953), P. Wongchai leg. (QSBG). *Paratype.* Same data as with holotype, 1 male (MZH).

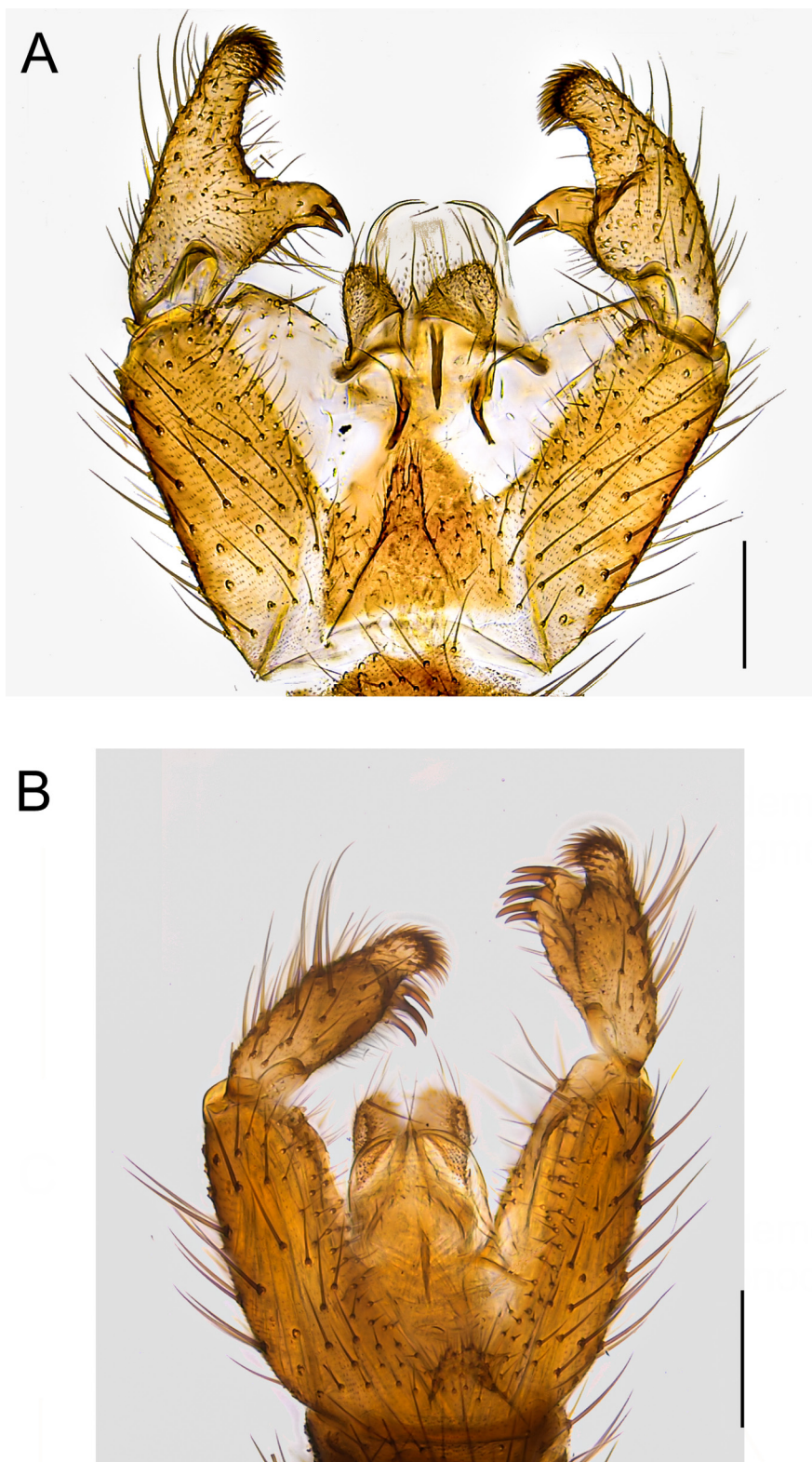


FIGURE 5. Hypopygium, ventral. **A.** *Prosciara furculigera* sp. nov. (holotype). **B.** *P. horrifera* sp. nov. (holotype). Scale 0.1 mm.

Description. Male. **Head.** Face brown, darker than antenna, maxillary palpus very pale yellow. Eye bridge 2–3 facets wide. Face with 21–26 scattered longer and shorter setae. Clypeus with 1 seta. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface

of antennal flagellomeres rugose, body of 4th flagellomere 2.35–2.50x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 2 setae. Proepisternum with 2–4 setae. **Wing.** Fumose grey. Length 2.4–2.5 mm. Width/length 0.40. Anal lobe large. Veins distinct, except stM faint. R1/R 0.70–0.80. c/w 0.65. r-m with 1–2 setae, bM non-setose, fork of M and CuA₁ setose, CuA₂ non-setose. **Legs.** Coxae yellow. Fore tibia without dorsal spinose setae. Fore tibial organ with dark and stout vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.20. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 5 B). Brown, as abdomen. Intergonocoxal area with wide setose lobe. Gonocoxa slender, longer than gonostylus, with long and stout setosity ventrally, short and fine medially. Gonostylus with short and wide dorsomedial lobe at apical third; lobe divided into dorsal and ventral parts, with 5 stout, slightly curved megasetae. Tegmen (Fig. 13 B) slightly longer than wide, straight laterally, roundish apicolaterally, unsclerotized except weakly sclerotized apical rim with medial extension basad; with large aedeagal teeth. Aedeagal apodeme rather short, slender.

Discussion. *Prosciara horrifera* **sp. nov.** is similar to *P. ensifera* Hippa & Vilkamaa, 1991 from Burma, and to *P. lobata* Antonova, 1977 and *P. ussuriensis* Antonova, 1977, from the Russian Far East, in having their gonostylar lobe divided into dorsal and ventral parts, both with stout megasetae. *Prosciara horrifera* and *P. ensifera* differ from the species of Antonova (1977) by having their intergonocoxal lobe narrower, with straight lateral sides and with a shallow apical notch, not having a broadly semicircular lobe.

By its gonostylus, *Prosciara horrifera* is nearly identical to *P. ensifera*, but it can be distinguished from the latter by having the apical rim of the tegmen complete and with a medial extension, whereas *P. ensifera* has the rim interrupted medially (Fig. 13 B and Fig. 9 C and D in Hippa & Vilkamaa (1991)). Moreover, *Prosciara horrifera* has longer antennal flagellomeres (4th flagellomere with length/width 2.35–2.50) with rugose surface (l/w 1.70–2.0, and almost smooth surface in *P. ensifera*).

Etymology. The name is a Latin adjective, *horrifera*, frightening, referring to the remarkably stout gonostylar megasetae.

***Prosciara mediana* sp. nov.**

Figs 6 A, 13 C

Material studied. *Holotype male.* THAILAND, Chiang Mai, Doi Phahompok N.P., Kiewlorn 1: montane forest, 20°3.455'N, 99°8.551'E, 2174 m, Malaise trap, 7–14.IX.2007 (T2810), K. Srisom & P. Wongchai leg. (QSBG).

Description. **Male.** **Head.** Face brown, darker than antenna, maxillary palpus yellow. Eye bridge 3–4 facets wide, without ommatidia medially. Face with 31 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus in poor condition in the specimen studied, with 3 segments; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 2.45x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 4 setae. Proepisternum with 6 setae. **Wing.** Fumose grey. Length 3.0 mm. Width/length 0.40. Anal lobe large. Veins distinct, except stM faint. R1/R 0.80. c/w 0.50. r-m shorter than bM. r-m with 8 setae, bM, M and CuA non-setose. **Legs.** Fore coxa yellow, mid- and hind coxae pale brown. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.10. Tarsal claws with large teeth. **Abdomen.** Pale brown, much paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 6 A). Brown, as abdomen. Intergonocoxal area without lobe, with some setae extending caudad. Gonocoxae separated, gonocoxa moderately slender, longer than gonostylus, with long, stout and dense setosity ventrally, short and fine medially; with setose membrane. Gonostylus slender, with large dorsomedial lobe at about middle, lobe densely setose medially, with narrow apical part bearing 4 slightly curved megasetae. Tegmen (Fig. 13 C) longer than wide, slightly narrowed towards apex, unsclerotized except apically, with sharp apicolateral teeth; aedeagal teeth not detectable. Aedeagal apodeme long and slender.

Discussion. *Prosciara mediana* **sp. nov.**, *P. germana* Vilkamaa & Hippa, 1996, *P. gibbosa* Hippa & Vilkamaa, 1991 and *P. porrecta* (Lengersdorf, 1929) are similar in being large and robust, in having the tegmen with apicolateral teeth, in having the apical part of the tegmen with aedeagal teeth turned dorsad and with a very long

aedeagal apodeme, in having the gonocoxa with long and dense setosity and in having a wide and setose and richly microtrichose intergonocoxal area without a lobe. *Prosciara mediana* and *P. germana* differ from the others by having only four, not five, gonostylar megasetae. *Prosciara mediana*, *P. gibbosa* and *P. porrecta* have the megasetae in a row, whereas in *P. germana* they are in pairs. *Prosciara germana* has the distal part of the gonostylus very long, which in *P. gibbosa* and *P. porrecta* are short, and in *P. mediana* intermediate. *Prosciara aequilobata* and *P. operta* are also similar to *P. mediana* in some characters, see under these species.

Etymology. The name is a Latin adjective, *mediana*, in the middle, referring to the intermediate length of the distal part of the gonostylus.

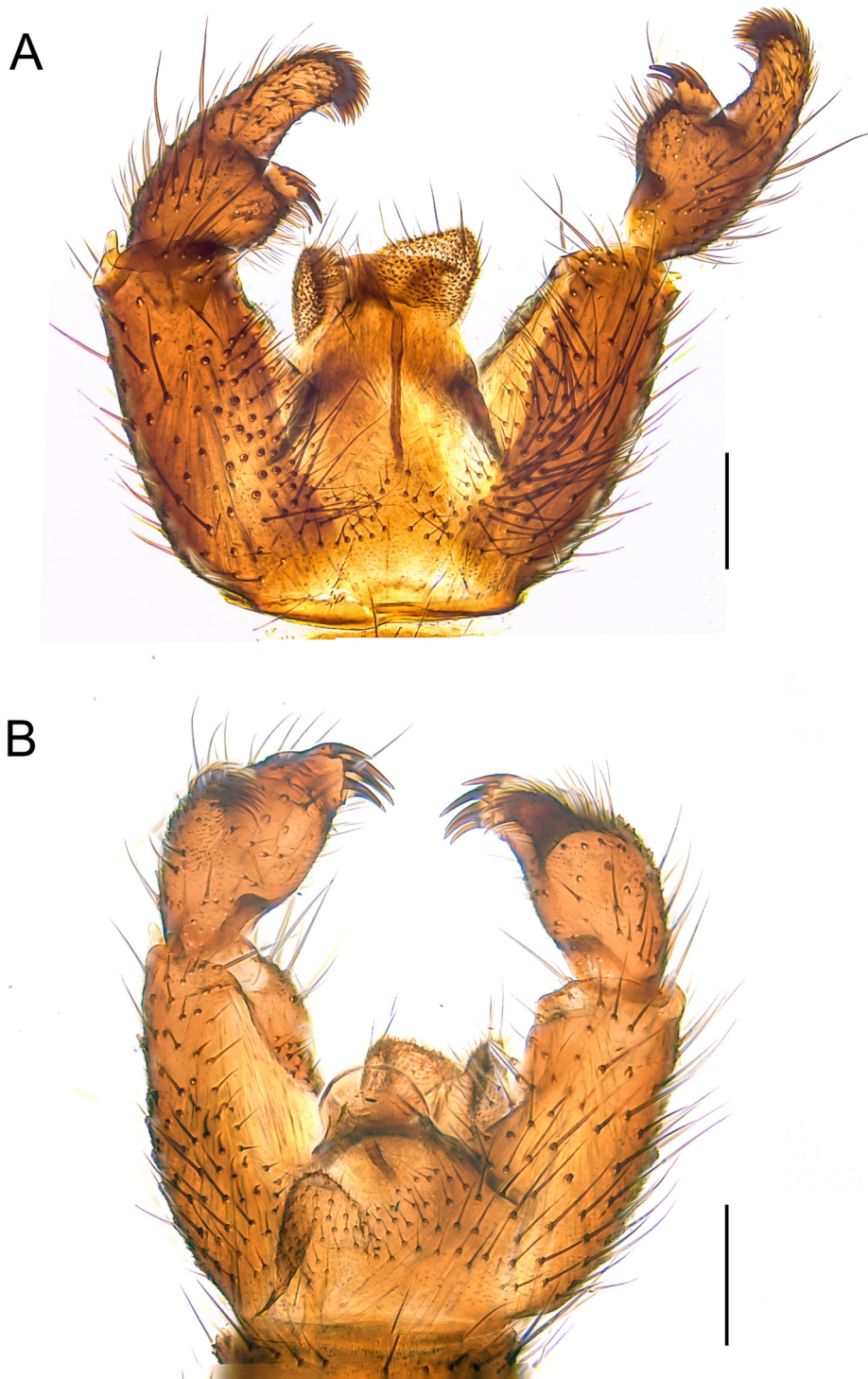


FIGURE 6. Hypopygium, ventral. **A.** *Prosciara mediana* **sp. nov.** (holotype). **B.** *P. microceps* **sp. nov.** (holotype). Scale 0.1 mm.

Prosciara microceps sp. nov.

Fig. 6 B

Material studied. *Holotype male.* THAILAND, Chiang Mai, Huai Nam Dang N.P., behind visitor house, 19°18.712'N, 98°36.399'E, 1670 m, Malaise trap, 31.VIII–7.IX.2007 (T2811), T. Boonthum & A. Chaimuengchun leg. (QSBG).

Description. Male. **Head.** Face brown, darker than antenna, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 36 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 1 or 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 3.0x as long as wide, longest setae shorter than width of flagellomere, neck darker apically, shorter than wide. **Thorax.** Missing in the specimen studied. **Wing.** Fumose brown. Length 2.8 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.90. c/w 0.60. r-m longer than bM. r-m, bM, M and CuA non-setose. **Legs.** Coxae missing in the specimen studied. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 0.90. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 6 B). Brown, as abdomen. Intergonocoxal area with large conical lobe, with many short setae. Gonocoxa slender, longer than gonostylus, with rather short setosity ventrally, short and fine medially. Gonostylus oval, with very large dorsomedial lobe, much larger than actual apex of gonostylus; lobe with 6 long, slightly curved megasetae. Tegmen small, roundish laterally and apically, unsclerotized except apicolateral rim and long, strongly sclerotized basal apodeme; aedeagal teeth not detectable. Aedeagal apodeme rather short and stout.

Discussion. In having the gonostylar lobe very large, parallel with, and extending far beyond the small apical part of the gonostylus, *Prosciara microceps* sp. nov. resembles *P. extrema* Vilkamaa & Hippa, 1996. *Prosciara microceps* differs by having the gonostylar megasetae in an apical group, not in a row, and in having an intergonocoxal lobe. Moreover, *Prosciara microceps* has much shorter ventral setosity of gonocoxa (Fig. 6 B and Fig. 24 A and B in Vilkamaa & Hippa (1996)).

Etymology. The name is formed from the Latinized Greek word *micros*, small, and the Latin word *-ceps*, head, referring to the small distal (ventral) part of the gonostylus.

Prosciara minacis sp. nov.

Figs 7A, 13 D

Material studied. *Holotype male.* NEPAL, 27°58'N, 85°00'E, 11 100 ft, Malaise trap, 2.VI.1967, Canadian Nepal expedition leg. (CNC).

Description. Male. **Head.** In poor condition in the specimen studied. **Thorax.** Brown, setae dark. Anterior pronotum with 7 setae. Proepisternum with 7 setae. **Wing.** Length 2.7 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.75. c/w 0.55. r-m much longer than bM. r-m and bM non-setose, M and CuA setose. **Legs.** Yellow. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.15. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 7 A). Brown, as abdomen. Intergonocoxal area with narrow setose lobe. Gonocoxa slender, longer than gonostylus, with rather long and stout setosity ventrally, short and fine medially. Gonostylus slender, with dorsomedial lobe at apical third; lobe with some setae, with 5 long and sharp megasetae wide apart of each other. Tegmen (Fig. 13 D) slightly longer than wide, slightly narrowed towards apex, unsclerotized except weakly sclerotized apicolateral rim; rim interrupted medially; with large aedeagal teeth. Aedeagal apodeme rather long and stout.

Discussion. *Prosciara minacis* sp. nov. resembles the Burmese *P. diversa* Vilkamaa & Hippa, 1996, *P. hastigera* Vilkamaa & Hippa, 1996, *P. pentadactyla* Hippa & Vilkamaa, 1991, *P. torulosa* Vilkamaa & Hippa, 1996, *P. tumidula* Vilkamaa & Hippa, 1996 and the Chinese *P. gyracantha* Shi & Huang, 2013 in having the gonostylar lobe arising from the basal part of the gonostylus and in having long gonostylar megasetae well separated from each other, at the apex of the lobe. *Prosciara minacis* differs from *P. gyracantha*, *P. pentadactyla* and *P. torulosa* by having its gonostylus much more slender and from *P. torulosa* and *P. tumidula* by having the gonostylar megasetae four in number (five in those two species). Moreover, *Prosciara minacis* and *P. hastigera* can be distinguished from each

other by the former having a shorter distal part of the gonostylus, and by having the intergonocoxal lobe more caudal in position (Fig. 7 A and Fig. 13 A and B in Vilkamaa & Hippa (1996)).

Etymology. The name is Latin, *minacis*, threatener, referring to the sharp, outstanding gonostylar megasetae.

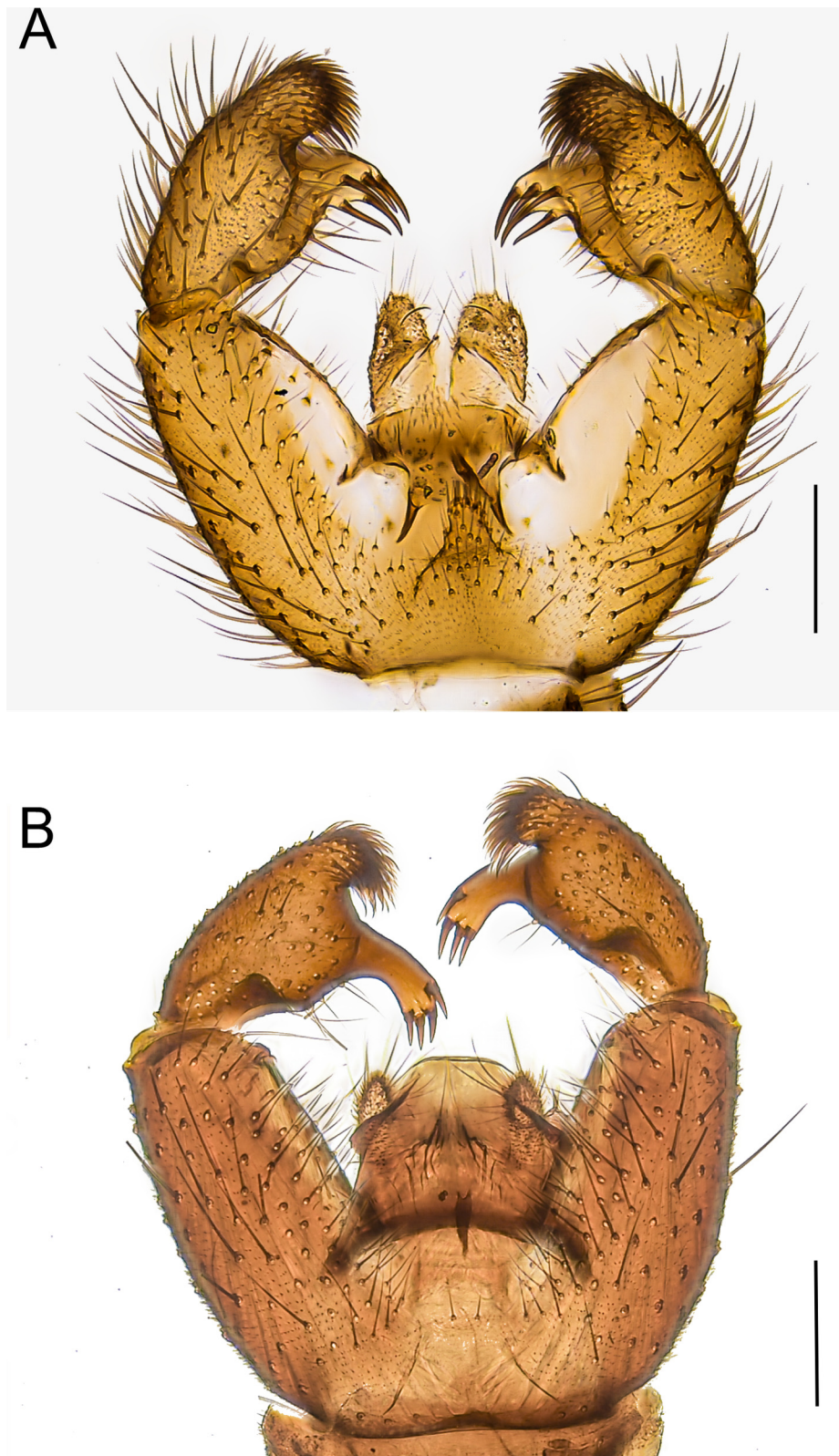


FIGURE 7. Hypopygium, ventral. **A.** *Prosciara minacis* **sp. nov.** (holotype). **B.** *P. nudimana* **sp. nov.** (holotype). Scale 0.1 mm.

***Prosciara nudimana* sp. nov.**

Figs 7 B, 13 E

Material studied. *Holotype male.* THAILAND, Chiang Mai, Huai Nam Dang N.P., behind visitor house, 19°18.712'N, 98°36.399'E, 1670 m, Malaise trap, 31.VIII–7.IX.2007 (T2804), T. Boonthum & A. Chaimuengchun leg. (QSBG).

Paratypes. Same data as with holotype, 4 males (2 QSBG, 2 MZH).

Description. Male. **Head.** Face and antenna concolorous brown, or face darker, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 22–31 scattered longer and shorter setae. Clypeus with 2–7 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 2–4 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres smooth, body of 4th flagellomere 1.7–1.9x as long as wide, with dense setosity, longest setae much shorter than width of flagellomere, neck much shorter than wide. **Thorax.** Brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 3–6 setae. Proepisternum with 4–11 setae. **Wing.** Length 2.4–2.7 mm. Width/length 0.40. Anal lobe large. Veins distinct, except stM faint. R1/R 0.80–1.0. c/w 0.45–0.50. r-m longer than bM. r-m non-setose or with 2–3 setae, bM, M and CuA non-setose. **Legs.** Coxae yellowish brown. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.20–1.25. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 7 B). Brown, as abdomen. Intergonocoxal area without lobe, with some setae. Gonocoxa slender, longer than gonostylus, with rather stout setosity ventrally, shorter and finer medially. Gonostylus slender, with perpendicular, long and slender dorsomedial lobe at apical fourth; lobe slightly narrowed at medial part, non-setose, with 4 slightly curved megasetae, one of which basad from the others. Tegmen (Fig. 13 E) about as long as wide, slightly narrowed towards apex, with subtriangular lateral processes; unsclerotized except weakly sclerotized apical rim; with small aedeagal teeth. Aedeagal apodeme short.

Discussion. By the centrally constricted, non-setose gonostylar lobe almost perpendicular to the axis of the gonostylus, *Prosciara nudimana* sp. nov. resembles *P. quadridigitata* (Yang, Zhang & Yang, 1995) but the latter has an intergonocoxal lobe and lacks the lateral processes of the tegmen. For further discussion, see under *Prosciara pinnifera*.

Etymology. The name is derived from the Latin words *nuda*, bare, and *manus*, hand, referring to the long non-setose gonostylar lobe.

***Prosciara operta* sp. nov.**

Fig. 8

Material studied. *Holotype male.* THAILAND, Phetchabun, Thung Salaeng Luang N.P., Kaeng Wang Nam Yen, 16°37.531'N, 100°53.745'E, Malaise trap, 29.XI–6.XII.2006 (T1165), Tiger Project Staff leg. (QSBG).

Description. Male. **Head.** Face and antenna concolorous pale brown, maxillary palpus yellow. Eye bridge 1–3 facets wide. Face with 36 scattered longer and shorter setae. Clypeus with 3 setae. Maxillary palpus with 3 segments; 3rd longer than 2nd, 1st shortest; 1st segment with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres slightly rugose, body of 4th flagellomere 2.4x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Brown, setae dark. Setae of anterior pronotum and proepisternum not detectable in the specimen studied. **Wing.** Length 2.8 mm. Width/length 0.40. Anal lobe small. Veins distinct, except stM faint. R1/R 0.75. c/w 0.65. r-m as long as bM. r-m with 4 setae, bM with 1 seta, M and CuA non-setose. **Legs.** Fore coxa pale brown, mid- and hind coxae brown, other joints of fore legs missing in the specimen studied. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 8 A). Brown, as abdomen. Intergonocoxal area without lobe, with some setae, richly microtrichose. Gonocoxae well separated, gonocoxa long, much longer than gonostylus, with long, stout and dense setosity ventrally, shorter and finer medially. Gonostylus (Fig. 8 B, C) slender, widest basally, with short dorsomedial lobe at apical fourth; lobe with 5 stout, almost straight megasetae in uneven group. Tegmen deformed in the specimen studied, with apicolateral teeth; aedeagal teeth not detectable. Aedeagal apodeme long and slender.

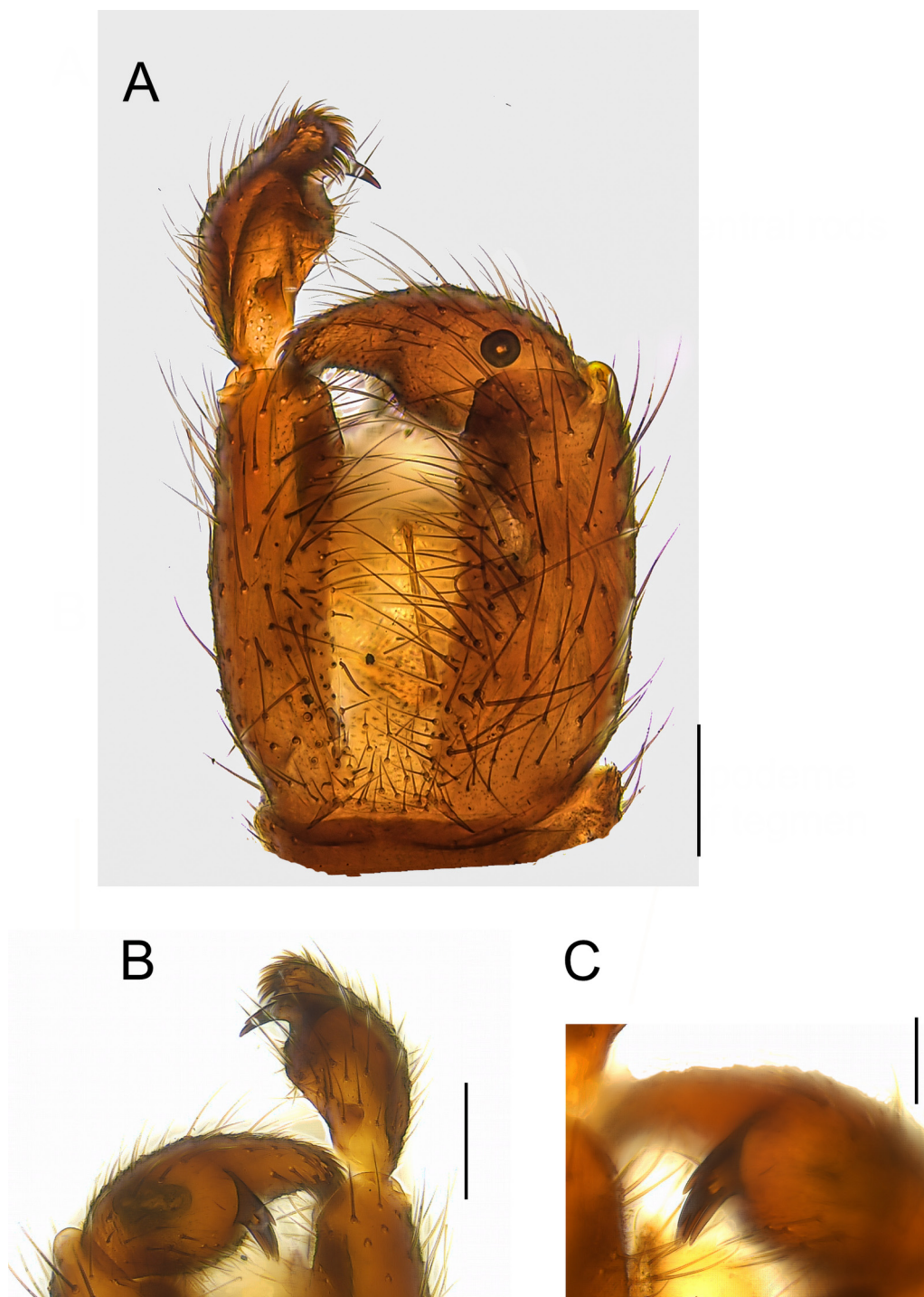


FIGURE 8. *Prosciara aperta* **sp. nov.** (holotype). **A.** Hypopygium, ventral. **B.** Gonostyli, dorsal. **C.** Dorsal lobe of gonostylus, ventral. Scale for A and B 0.1 mm, for C 0.05 mm.

Discussion. In many features of the hypopygium, *Prosciara aperta* **sp. nov.** resembles the type species *P. porrecta* and similar species (see under *P. aequilobata*), including the dorsal lobe of the gonostylus being in an oblique position. *Prosciara aperta* differs by having the lobe almost completely on the dorsal side of the gonostylus, with only the megasetae visible in the ventral view, by having the megasetae in a dense unequal group and by having a relatively longer gonocoxa. *Prosciara aperta* differs specifically from *P. tenebrosa* **sp. nov.** by having the gonostylar lobe oblique to, not parallel to the distal part of the gonostylus (Figs 8 and 10 B).

Etymology. The name is a Latin adjective, *operta*, hidden, referring to the placement of the lobe, in ventral view seen behind the distal part of the gonostylus.

***Prosciara perfidiosa* sp. nov.**

Figs 9 A, 13 F

Material studied. *Holotype male.* TAIWAN, Fu Shan Botanical Garden, Malaise trap, 7–10.V.2018, J. Ševčík & M. Tkoč leg. (NMNS). *Paratype.* TAIWAN, Yangminshan near Taipei, 450 m, 28.III.1965, C.M. Yoshimoto & B.D. Perkins leg., 1 male (BPBM).

Description. Male. **Head.** Face brown, paler than antenna, maxillary palpus yellow. Eye bridge 3–4 facets wide. Face with 15 scattered longer and shorter setae. Clypeus with 1 seta. Maxillary palpus with 3 segments; 3rd longest, 2nd and 1st subequal; 1st segment subglobular, with 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres very rugose, body of 4th flagellomere 2.6x as long as wide, longest setae shorter than width of flagellomere, neck as long as wide. **Thorax.** Brown, setae dark. Anterior pronotum with 4 setae. Proepisternum with 5 setae. **Wing.** Fumose brown. Length 1.9 mm. Width/length 0.45. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.85. c/w 0.75. r-m longer than bM. r-m, bM, M and CuA non-setose. **Legs.** Coxae yellowish. Fore tibia without dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.20. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 9 A). Intergonocoxal area without lobe, with some setae. Gonocoxae separated by a narrow cleft. Gonocoxa rather wide, roundish laterally, longer than gonostylus, with moderately long setosity ventrally, with shorter and finer medially. Gonostylus narrowly oval, widest at middle, with short dorsomedial lobe subapically, with 6–7 slightly curved megasetae. Tegmen (Fig. 13 F) as long as wide, subquadrangular, strongly sclerotized laterally and apically, with medial part of apex unsclerotized; with long lateral parts of basal apodeme; with many large aedeagal teeth. Aedeagal apodeme rather long.

Discussion. The body of the paratype of *Prosciara perfidiosa* sp. nov. is in poor condition and the description is based mainly on the holotype. However, the hypopygium of the paratype is well preserved and allows a positive identification. I place the species in *Prosciara* with reservation. It shares with other species many key features of the genus, such as the dorsomedial lobe of the gonostylus, the long fore metatarsus and the uneven row of stout setae in the fore tibial organ and the tarsal claws with large perpendicular teeth. However, the base of the hypopygium is untypical, the margins of the gonocoxae being ventrally separated only by a narrow cleft and the tegmen is strongly sclerotized with very long lateral parts of the basal apodeme. Moreover, the first segment of the maxillary palpus is roundish, not elongated as in other known species of *Prosciara*.

Prosciara perfidiosa sp. nov. resembles most *P. producta* Tuomikoski, 1960, *P. ellipsoidea* Shi & Huang, 2013, *P. globoidea* Shi & Huang, 2013 and *P. oligotricha* Shi & Huang, 2013 in having a moderately slender gonostylus with a dorsomedial lobe near the apex of the gonostylus. *Prosciara perfidiosa* differs from *P. ellipsoidea* by the lack of the intergonocoxal lobe and from other species mentioned above by the structures described above (see Fig. 13 F and Fig. 6 in Shi *et al.* 2013)).

Etymology. The name is a Latin adjective, *perfidiosa*, treacherous, referring to the ambiguous placement of the species into *Prosciara*.

***Prosciara pinnifera* sp. nov.**

Figs 9 B, 14 A

Material studied. *Holotype male.* MALAYSIA, Selangor, Genting Highlands, Gunung Ulu Kali, 5650 ft, forest edge, Malaise trap, 3–22. III.1997, H. Hippa, M. Jaschhof & B. Viklund leg. (SMNH).

Description. Male. **Head.** Face and antenna concolorous brown, maxillary palpus pale brown. Eye bridge 2–3 facets wide. Face with 18 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus with 3 segments; 3rd longer or as long as 1st, 2nd shortest, 1st segment with 2 setae and indistinct dorsal patch of sensilla, surface of antennal flagellomeres slightly rugose, body of 4th antennal flagellomere 1.5x as long as wide, longest setae shorter than width of flagellomere, neck much shorter than wide. **Thorax.** Brown, setae dark. Anterior pronotum with 6 setae. Proepisternum with 9 setae **Wing.** Fumose grey. Length 2.7 mm. Width/length 0.45. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.80. c/w 0.60. r-m shorter than bM. r-m non-setose or with 2 setae, bM, M and CuA non-setose. **Legs.** Coxae yellowish brown. Fore tibia without spinose setae. Fore tibial organ with pale and fine vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.05. Tarsal claws with large teeth. **Abdomen.** Brown, paler than thorax. Setae dark, long and stout. **Hypopygium**

(Fig. 9 B). Brown, concolorous with abdomen. Intergonocoxal area without lobe, with some setae. Gonocoxa slender, longer than gonostylus, with dense and long setosity. Gonostylus long and slender, with dorsomedial lobe at apical half, lobe slightly longer than apical part of gonostylus, with 4 curved megasetae in row. Tegmen (Fig. 14 A) slightly wider than long, straight laterally and apically, with subtriangular lateral processes; with large aedeagal teeth. Aedeagal apodeme distinct.

A



B



FIGURE 9. Hypopygium, ventral. **A.** *Prosciara perfidiosa* **sp. nov.** (holotype). **B.** *P. pinnifera* **sp. nov.** (holotype). Scale 0.1 mm.

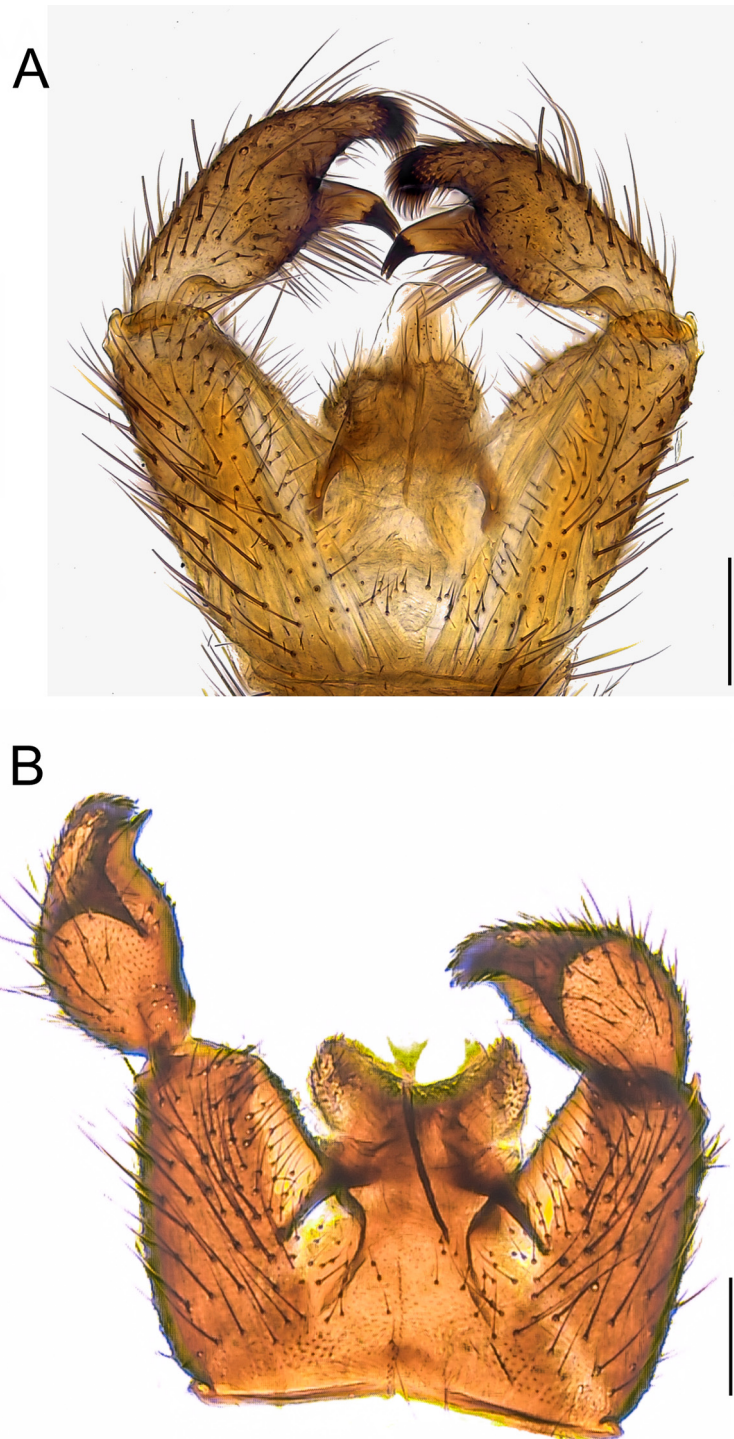


FIGURE 10. Hypopygium, ventral. **A.** *Prosciara substricta* **sp. nov.** (holotype). **B.** *P. tenebrosa* **sp. nov.** (holotype). Scale 0.1 mm.

Discussion. In having lateral processes in its tegmen, *Prosciara pinnifera* **sp. nov.** is similar to *P. clypeata* **sp. nov.**, *P. nudimana* **sp. nov.**, *P. sinensis* Shi & Huang, 2013 and *P. tetracantha* Shi & Huang, 2013. *Prosciara pinnifera* and *P. nudimana* are similar in lacking the intergonocoxal lobe, present in the other three species. *Prosciara pinnifera* differs from *P. nudimana* by having the gonostylar lobe shorter, setose and narrowed towards apex and by having the lobe nearly parallel with the distal part of the gonostylus (Figs 7 B and 9 B). All species mentioned above as well as the presumably related *Prosciara quadridigitata* (Yang, Zhang & Yang, 1995) have unusually short antennal flagellomeres for the genus, see for example Fig. 14 in Shi *et al.* (2013). Furthermore, the otherwise different *Prosciara didactyla* Kjaerandsen, 1994 has very short antennal flagellomeres.

Etymology. The name is derived from the Latin words *pinna*, fin, and *-fer*, carrying, referring to the lateral processes of the tegmen.

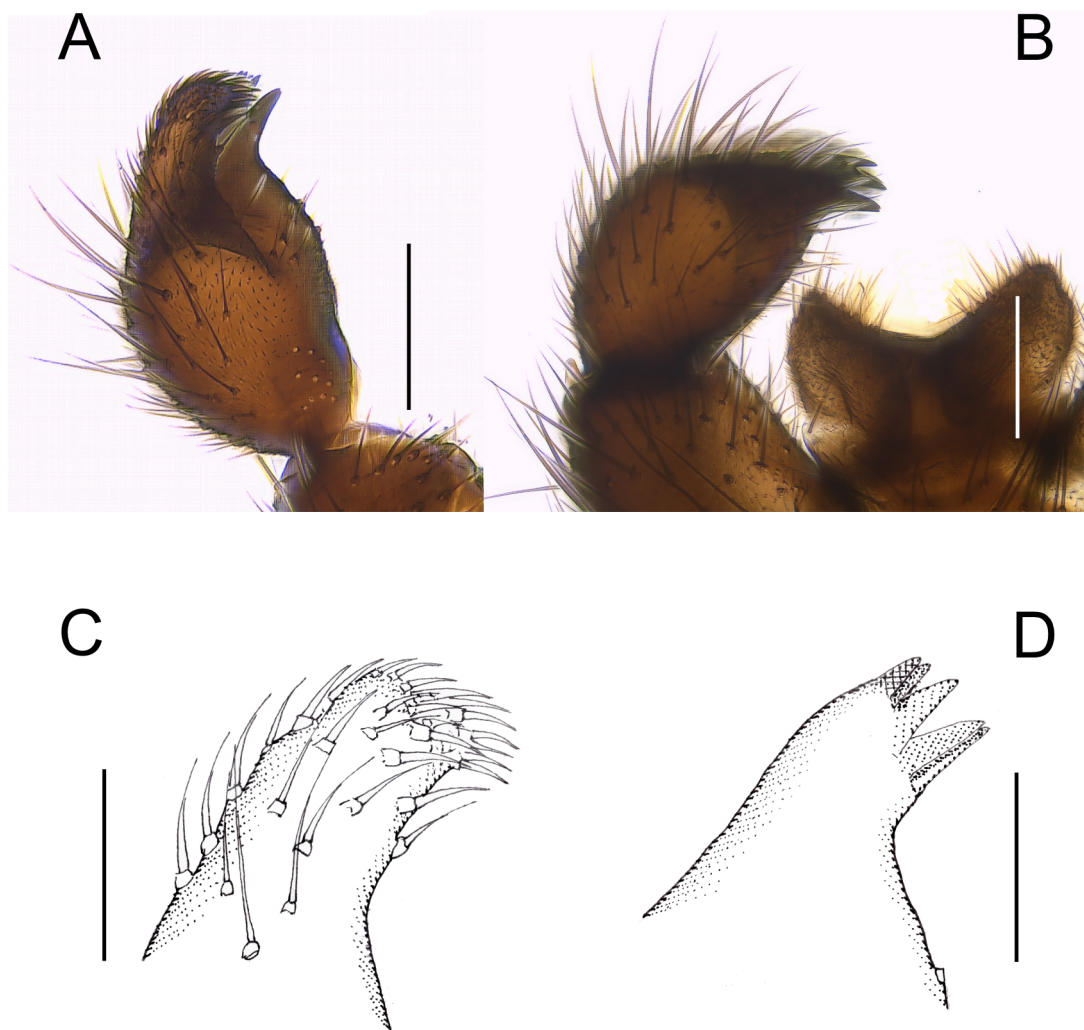


FIGURE 11. *Prosciara tenebrosa* sp. nov. (holotype). **A.** Gonostylus, ventral. **B.** Gonostylus, dorsal. **C.** Ventroapical (distal) part of gonostylus, ventral. **D.** Dorsal lobe of gonostylus, ventral. Scale for A and B 0.1 mm, for C and D 0.05 mm.

***Prosciara substricta* sp. nov.**

Figs 10 A, 14 B

Material studied. **Holotype male.** THAILAND, Chiang Mai, Huai Nam Dang N.P., behind visitor house, 19°18.712'N, 98°36.399'E, 1670 m, Malaise trap, 31.VIII–7.IX.2007 (T2811), T. Boonthum & A. Chaimuengchun leg. (QSBG).

Description. **Male.** **Head.** Face brown, darker than antenna, maxillary palpus yellow. Eye bridge 2–3 facets wide. Face with 31 scattered longer and shorter setae. Clypeus with 2 setae. Maxillary palpus in poor condition in the specimen studied. 1st segment with 1 or 2 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres nearly smooth, body of 4th flagellomere 2.65x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Colours faded in the specimen studied. Anterior pronotum with 5 setae. Proepisternum with 5 setae. **Wing.** Fumose grey. Length 2.6 mm. Width/length 0.40. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.65. c/w 0.55. r-m longer than bM. r-m, bM non-setose, M and CuA₁ setose, CuA₂ non-setose. **Legs.** Colours of coxae faded in the specimen studied. Fore tibia with 4 dorsal spinose setae. Fore tibial organ with pale vestiture forming uneven row. Fore tibial spur longer than tibial width. Length of fore femur/fore metatarsus 1.05. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 10 A). Brown, as abdomen. Intergonocoxal area without lobe, with some setae. Gonocoxa slender, longer than gonostylus, with stout but sparse setosity ventrally, short and fine medially.

Gonostylus slender, widest at middle, with rather small and slender dorsomedial lobe at apical fourth; lobe with 4/5, nearly straight, stout megasetae; basad of lobe outstanding group of long setae. Tegmen (Fig. 14 B) long and slender, straight laterally and apically, unsclerotized except weakly sclerotized apical rim; with moderate aedeagal teeth. Aedeagal apodeme long and slender.

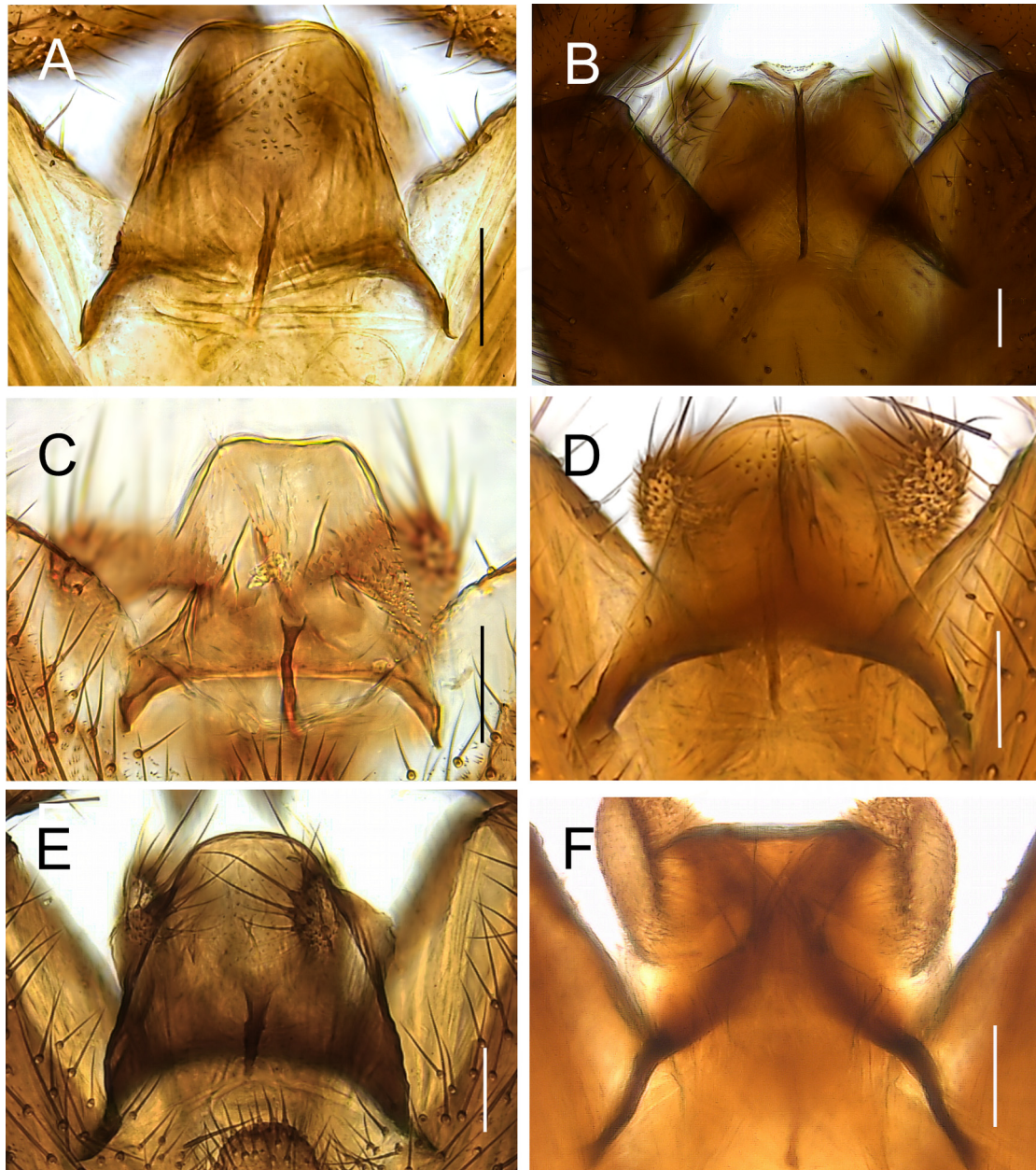


FIGURE 12. Tegmen, ventral. **A.** *Prosciara aduncula* **sp. nov.** (paratype). **B.** *P. aequilobata* **sp. nov.** **C.** *P. anguina* **sp. nov.** (holotype). **D.** *P. calvata* **sp. nov.** (holotype). **E.** *P. clypeata* **sp. nov.** (holotype). **F.** *P. cymosa* **sp. nov.** (holotype). Scale 0.05 mm.

Discussion. In lacking the intergonocoxal lobe and in having a slender dorsomedial lobe and apical part of the gonostylus, *Prosciara substricta* **sp. nov.** resembles most *P. anfracta* Vilkamaa & Hippa, 1996. *Prosciara substricta* differs by having only four, not five, megasetae and by having even more slender gonostylar structures, gonocoxa and tegmen (Figs 10 A, 14 B and Fig. 22 A and B in Vilkamaa & Hippa (1996)).

Etymology. The name is a Latin adjective, *substricta*, narrow, referring to the long and slender structures of the hypopygium.

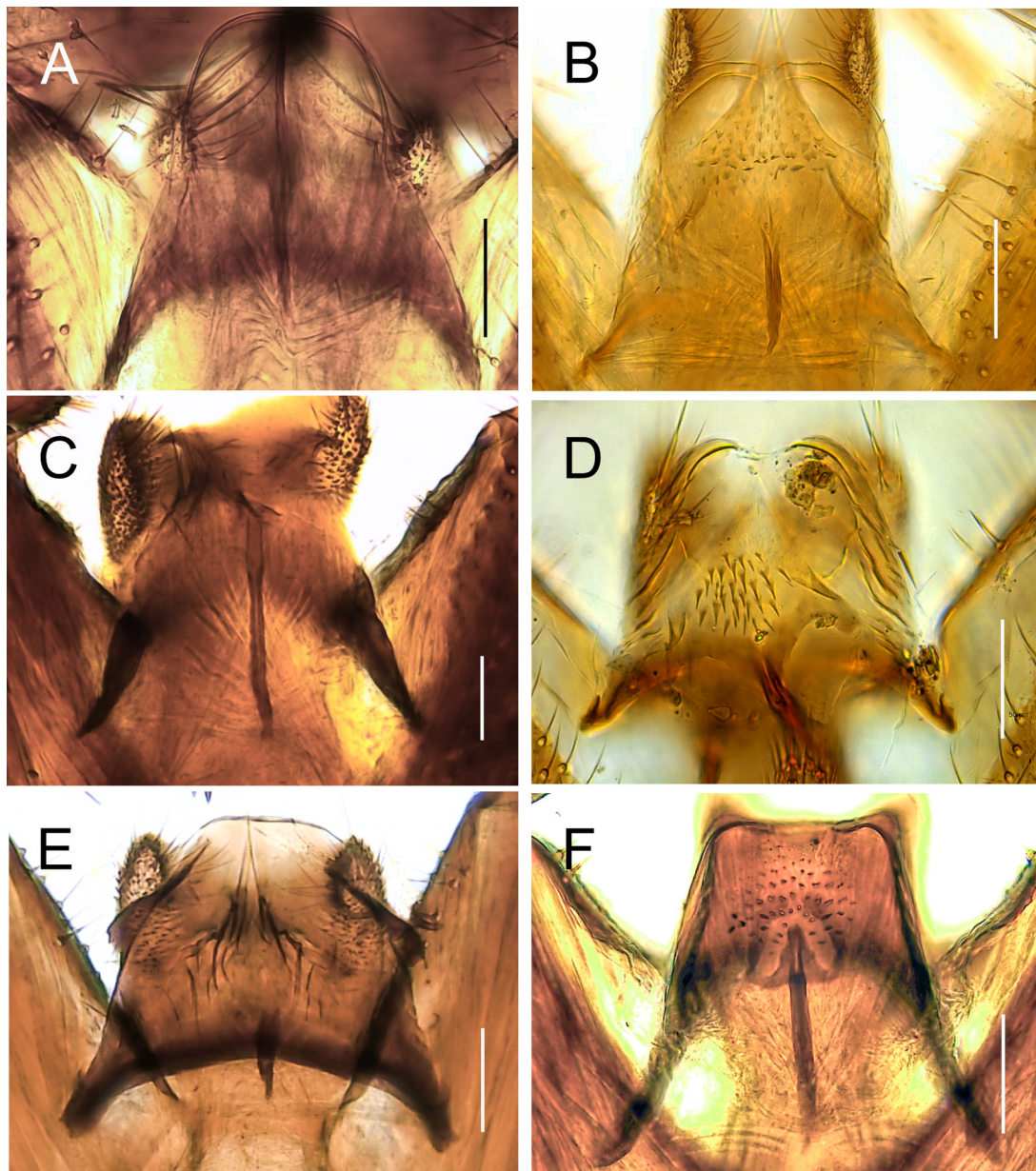


FIGURE 13. Tegmen, ventral. **A.** *Prosciara devexa* **sp. nov.** (holotype). **B.** *P. horrifera* **sp. nov.** (holotype). **C.** *P. mediana* **sp. nov.** (holotype). **D.** *P. minacis* **sp. nov.** (holotype). **E.** *P. nudimana* **sp. nov.** (holotype). **F.** *P. perfidiosa* **sp. nov.** (holotype). Scale 0.05 mm.

***Prosciara tenebrosa* sp. nov.**

Figs 10 B, 11

Material studied. Holotype male. THAILAND, Chiang Mai, Doi Inthanon N.P., 2014-271 (without other data) (QSBG).

Description. Male. **Head.** Face concolorous brown with antenna, maxillary palpus yellow. Eye bridge 2–4 facets wide. Face with 30 scattered longer and shorter setae. Clypeus without setae. Maxillary palpus with 3 segments; 1st longer than 3rd, 2nd shortest; 1st segment with 3 or 4 setae and indistinct dorsal patch of sensilla; surface of antennal flagellomeres rugose, body of 4th flagellomere 2.2x as long as wide, longest setae shorter than width of flagellomere, neck shorter than wide. **Thorax.** Dark brown, anterior pronotum and proepisternum yellow, setae dark. Anterior pronotum with 2 setae. Proepisternum with 6 setae. **Wing.** Length 2.9 mm. Width/length 0.45. Anal lobe intermediate. Veins distinct, except stM faint. R1/R 0.90. c/w 0.60. r-m much longer than bM. r-m with 3 or 6

setae, bM, M and CuA non-setose. Hind margin with some ventral setae. **Legs.** Fore legs missing in the specimen studied. Tarsal claws with large teeth. **Abdomen.** Brown, slightly paler than thorax, setae dark, long and stout. **Hypopygium** (Fig. 10 B). Intergonocoxal area wide, without lobe, with some setae, richly microrichose. Gonocoxa rather wide, longer than gonostylus, with long, stout and dense setosity ventrally, shorter and finer medially, with setose membrane. Gonostylus (Fig. 11) narrowly oval, widest at middle, with large dorsal lobe subapically in dorsal side of apical part of gonostylus, with 5/6, stout and straight megasetae. Tegmen in poor condition in the specimen studied, aedeagal apodeme long and slender.

Discussion. For the features of the hypopygium and for the distinguishing characters of *Prosciara tenebrosa* **sp. nov.**, see the discussion under *Prosciara aequilobata* and *P. operta*.

The hind margin of the wing of *Prosciara tenebrosa* has a partial double row of setae, which within *Prosciara* is otherwise present only in *P. coronula* Vilkamaa & Hippa, 1996, *P. crassidens* Hippa & Vilkamaa, 1991 and *P. pubericornis* (Edwards, 1928), all untypical species in the genus. The feature occurs invariably in the related genus *Dolichosciara* as well as in the genus *Ctenosciara* Tuomikoski and in the subfamily Sciarinae.

Etymology. The name is a Latin adjective, *tenebrosa*, dark, referring to the colour of the species.

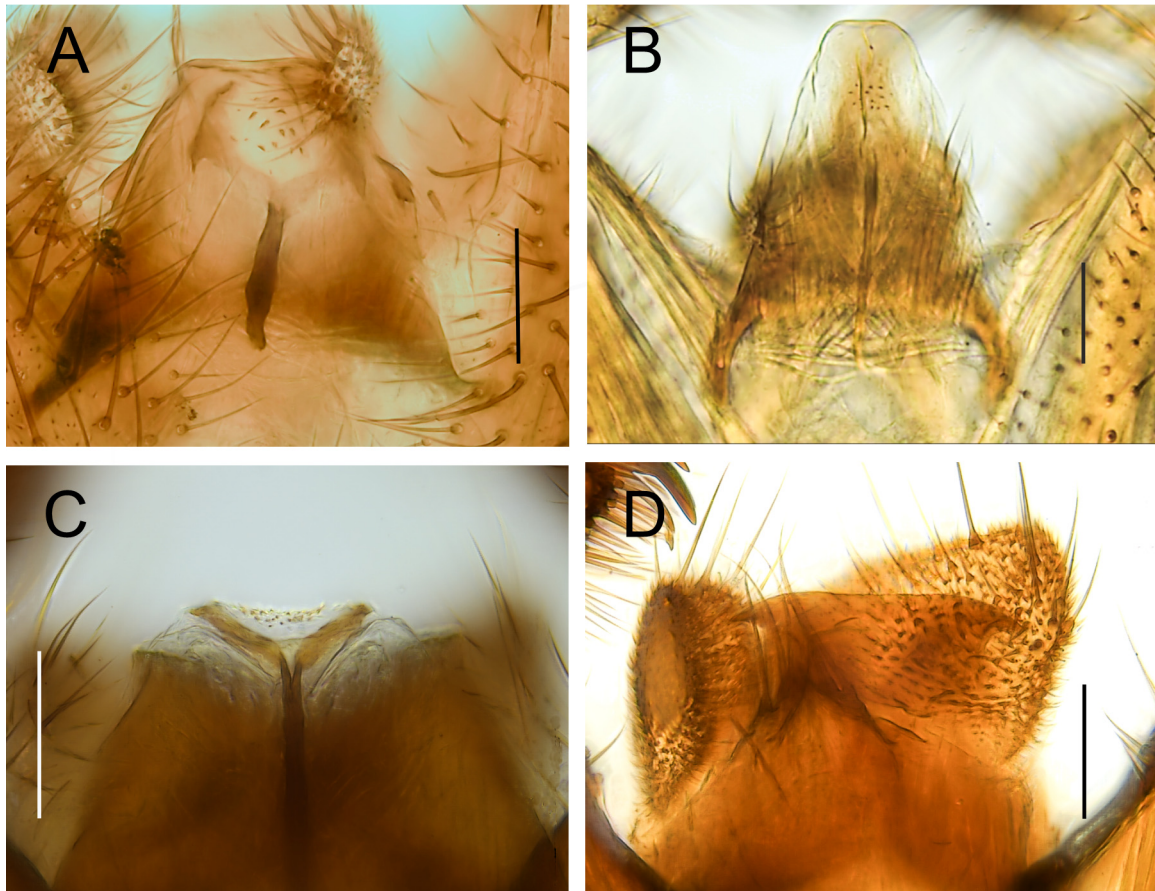


FIGURE 14. Tegmen (A and B) and apical part of tegmen (C and D), ventral. **A.** *Prosciara pinnifera* **sp. nov.** (holotype). **B.** *P. substricta* **sp. nov.** (holotype). **C.** *P. aequilobata* **sp. nov.** (holotype). **D.** *P. mediana* **sp. nov.** (holotype). Scale 0.05 mm.

Acknowledgements

I thank Neal Evenhuis (Honolulu), Jan Ševčík (Ostrava) and Bradley Sinclair (Ottawa) for materials and Pentti Halenius (Helsinki) for processing the digital images. Conrad Gillett (Helsinki) kindly checked the English.

References

Alam, S., Chaudhuri, P.K. & Dasgupta, S.K. (1989) Two new Indian species of *Phytosciara* Frey (Sciariidae: Diptera). *Entomon*, 14, 109–115.

<https://doi.org/10.5962/bhl.title.8711>

- Brunetti, E. (1912) *Diptera Nematocera (excluding Chironomidae and Culicidae)*. *Diptera. Vol. 1*. In: Shipley, A.E. & Marshall, G.A.K. (Eds.), *Fauna of British India*. Taylor and Francis, London, pp. 1–581.
<https://doi.org/10.5962/bhl.title.8711>
- Edwards, F.W. (1928) Diptera Nematocera from the Federated Malay States Museums. *Journal of the Federated Malay States Museums*, 14, 1–139.
- Eiseman, C.S., Heller, K. & Rulik, B. (2018) A new dark-winged fungus gnat (Diptera: Sciaridae) mining leaves of *Clintonia borealis* (Aiton) Raf. (Liliaceae). *Proceedings of the Entomological Society of Washington*, 120, 500–507.
<https://doi.org/10.4289/0013-8797.120.3.500>
- Freeman, P. (1983) *Sciarid flies Diptera, Sciaridae*. In: Fitton, M.G. (Ed.), *Handbooks for the Identification of British Insects*, 9 (Part 6), 1–68.
- Hippa, H. & Vilkamaa, P. (1991) The genus *Prosciara* (Frey) (Diptera, Sciaridae). *Entomologica Fennica*, 2, 113–155.
<https://doi.org/10.33338/ef.83544>
- Hippa, H., Vilkamaa, P. & Heller, K. (2010) Review of the Holarctic *Corynoptera* Winnertz, 1867, s. str. (Diptera, Sciaridae). *Zootaxa*, 2695 (1), 1–197.
<https://doi.org/10.11646/zootaxa.2695.1.1>
- Kjaerandsen, J. (1994) *Prosciara didactyla* sp. n. and *P. megachaeta* Hippa & Vilkamaa, 1991 from Thailand (Diptera, Sciaridae). *Entomologica Fennica*, 5, 147–148.
<https://doi.org/10.33338/ef.83810>
- Lengersdorf, F. (1926) Die Sciariden des naturhistorisches Museums in Wien. *Konowia*, 5, 122–129.
<https://doi.org/10.1002/mmnd.192619260210>
- Lengersdorf, F. (1929) Die Revision der Sciaridensammlung des Pfarrers Dr. W. Grzegorzek. *Bulletin d'Académie Polonaise des Sciences et Lettres. Classe des Sciences Mathématiques et Naturelles, Série B: Sciences Naturelles (Zoologie)*, 1929 (1928), 105–112.
- Meigen, J.W. (1804) *Klassifikation und Beschreibung der europäischen Zweiflügligen Insekten (Diptera Linn.)*. 1 (1). Karl Reichard, Braunschweig, 20 + 152 pp. [pp. v–xxiv + 1–152]
- Menzel, F. & Mohrig, W. (2000) *Revision der paläarktischen Trauermücken (Diptera: Sciaridae)*. *Studia dipterologica Supplement*, Volume 6 (1999). Ampyx-Verlag, Halle [Saale], 761 pp.
- Mohrig, W. (1999) Die Trauermücken (Diptera: Sciaridae) von Papua-Neuguinea. Teil I – Gattungen *Sciara*, *Schwenckfeldina*, *Aerumnosa* gen. nov., *Cratyna*, *Phytosciara* und *Chaetosciara*. *Studia dipterologica*, 6, 153–203.
- Mohrig, W. & Menzel, F. (1994) Revision der paläarktischen Arten von *Phytosciara* Frey (Diptera: Sciaridae). *Beiträge zur Entomologie*, 44, 167–210.
- Mohrig, W., Menzel, F. & Kozánek, M. (1992) Neue Trauermücken (Diptera, Sciaridae) aus Nord-Korea and Japan. *Dipterological Research*, 1992, 17–32.
- Mohrig, W., Kauschke, E. & Broadley, A. (2018) New black fungus gnats (Diptera: Sciaridae) from Eastern Australia. *Zootaxa*, 4450 (2), 203–241.
<https://doi.org/10.11646/zootaxa.4450.2.3>
- Rudzinski, H.-G. (2000) *Dolichosciara fabulosa* sp. n.: Eine neue Trauermücken-Art von Madagaskar (Diptera: Nematocera: Sciaridae). *Annals of the Natal Museum*, 41, 151–155.
- Shi, K., Huang, J., Komarova, L., Zhang, S. & Wu, H. (2013) Review of the genus *Prosciara* Frey (Diptera, Sciaridae) from China. *Zootaxa*, 3640 (3), 301–342.
<https://doi.org/10.11646/zootaxa.3640.3.1>
- Shin, S., Jung, S., Menzel, F., Heller, K., Lee, H. & Lee, S. (2013) Molecular phylogeny of black fungus gnats (Diptera: Sciaroidea: Sciaridae) and the evolution of larval habitats. *Molecular Phylogenetics and Evolution*, 66, 833–846.
<https://doi.org/10.1016/j.ympev.2012.11.008>
- Shin, S., Lee, H., Menzel, F. & Lee, S. (2020) Taxonomic study on the *Phytosciara* genus group (Diptera: Sciaridae) in Korea, including the description of a new species. *Journal of Asia-Pacific Entomology*, 23, 358–363.
<https://doi.org/10.1016/j.aspen.2020.01.005>
- Steffan, W.A. (1969) Insects of Micronesia Diptera: Sciaridae. *Bernice P. Bishop Museum Insects of Micronesia*, 12, 669–732.
- Steffan, W.A. (1973) Notes on Hawaiian Sciaridae (Diptera) and descriptions of two new species. *Pacific Insects*, 15, 353–361.
- Vilkamaa, P. (2000) Phylogeny of *Prosciara* Frey and related genera (Diptera: Sciaridae). *Systematic Entomology*, 25, 47–72.
<https://doi.org/10.1046/j.1365-3113.2000.00094.x>
- Vilkamaa, P. & Hippa, H. (1994) The genus *Lobosciara* Steffan (Diptera, Sciaridae). *Entomologica Fennica*, 5, 41–48.
<https://doi.org/10.33338/ef.83790>
- Vilkamaa, P. & Hippa, H. (1996) Review of the genus *Prosciara* Frey (Diptera, Sciaridae) in the Indomalayan region. *Acta Zoologica Fennica*, 202, 1–57.
- Wu, H., Shi, K., Huang, J. & Zhang, S. (2013) Review of the genus *Dolichosciara* Tuomikoski (Diptera, Sciaridae) from China. *Zootaxa*, 3745 (3), 343–364.
<https://doi.org/10.11646/zootaxa.3745.3.3>