

SHORT COMMUNICATION

On the genus *Philomyceta* of China (Coleoptera: Staphylinidae: Staphylininae)

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Abstract. *Philomyceta biwenxuani* sp. nov., a new species from China: Xizang: Motuo County, is described. Additional specimens of *P. asperipennis* Schillhammer, 2012 are examined from China: Yunnan, including the first record of females. Females of an additional unidentified species are recorded from China: Xizang: Nielamu County. The key to species of *Philomyceta* Cameroon, 1944 is updated.

Key words. Coleoptera, Staphylinidae, *Philomyceta*, new species, identification key, China

Zoobank: <http://zoobank.org/urn:lsid:zoobank.org:pub:45607B32-D1F4-4AAA-9A05-B3FEA925B782>

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Introduction

Philomyceta Cameron, 1944 is a small Asian genus in the subtribe Anisolinina Hayashi, 1993. Members of the genus can be distinguished from other species of Anisolinina by having long and slender labial palpomeres, insertion of segment III of the maxillary palpi near the middle of the apex of segment II, abdominal tergite VI with the basal line bisinuate, and the lateral portions of the pronotum being strongly deflexed with the superior lateral line visible only near the base of the pronotum in dorsal view. A detailed definition of the genus can be found in SCHILLHAMMER (2004, 2012).

Presently, ten species of the genus have been described, one of which, *P. asperipennis* Schillhammer, 2012, occurs in Yunnan, China. The remaining species are distributed in India (two species), Nepal (four species) and Myanmar (three species). In this paper, an eleventh species of *Philomyceta* is described from China. Additional notes on two other Chinese species, *P. asperipennis* and an unidentified species, are provided.

Material and methods

The specimens examined in this paper were collected by searching logs and sifting leaf litter, and were killed with ethyl acetate. For examination of the genitalia, the last

three abdominal segments were detached from the body after softening in hot water. The aedeagus or female tergite X, together with other dissected pieces, were mounted in Euparal (Chroma Gesellschaft Schmidt, Koengen, Germany) on plastic slides. Photos of sexual characters were taken with a Canon G9 camera attached to an Olympus SZX 16 stereoscope; habitus photos were taken with a Canon macro photo lens MP-E 65 mm attached to a Canon EOS7D camera and stacked with Zerene Stacker (<http://www.zerene.com/cms/stacker>).

The specimens treated in this study are deposited in the Department of Biology, Shanghai Normal University, P. R. China (SHNU).

Body measurements are abbreviated as follows:

BL	body length, measured from the anterior margin of the clypeus to the posterior margin of abdominal tergite X
FL	forebody length, measured from the anterior margin of the clypeus to the apex of the elytra (apicolateral angle)
HL	length of head along the midline
HW	width of head including eyes
EYL	length of eye
TL	length of tempora
PL	length of pronotum along the midline
PW	width of pronotum at the widest point
EL	length of elytra, measured from humeral angle
EW	width of elytra at the widest point



Taxonomy

Philomyceta asperipennis Schillhammer, 2012

(Figs 1, 2, 7–10)

Philomyceta asperipennis Schillhammer, 2012: 180

Material examined. CHINA: YUNNAN: 1 ♂, Baoshan City, Mangkuan Town, Baihualing N. R., 25°18'N 98°47'E, alt. 1750 m, 24.iv.2013, Wen-Xuan Bi leg. (SHNU); 3 ♀♀, Gongshan County, Qiqi, alt. 1900 m, 2.vii.2010, Liang Tang leg. (SHNU).

Measurements. Male. BL: 11.1 mm, FL: 6.7 mm. HL: 1.83 mm, HW: 2.20 mm, EYL: 0.53 mm, TL: 1.06 mm, PL: 2.17 mm, PW: 1.83 mm, EL: 2.64 mm, EW: 2.50 mm. HW/HL: 1.21, TL/EYL: 2.00, PL/PW: 1.18, EL/EW: 1.06.

Female. BL: 5.8–6.2 mm, FL: 5.8–6.2 mm. HL: 1.58–1.70 mm, HW: 1.89–2.03 mm, EYL: 0.47–0.50 mm, TL: 0.89–0.95 mm, PL: 1.86–1.97 mm, PW: 1.61–1.72 mm, EL: 2.34–2.50 mm, EW: 2.28–2.42 mm. HW/HL: 1.19–1.20, TL/EYL: 1.88–1.89, PL/PW: 1.13–1.16, EL/EW: 1.01–1.03.

Female characters. Tergite X (Fig. 10) asymmetrical with posterior margin projected at middle.

Distribution. China (Yunnan).

Remarks. The collecting locality of the male specimen is about 40 km away from the type locality in the southern part of Gaoligongshan Mt. The specimen fits the original description in all characters but the area of sensory peg setae on the paramere (Figs 7–9) is distinctly longer than in the holotype, which should be considered as variability of the species. The females examined above were collected from the northern part of Gaoligongshan Mt. and correspond with the original description in all characters.

Philomyceta biwenzuani sp. nov.

(Figs 3, 4, 11–14)

Type material. HOLOTYPE: CHINA: XIZANG: ♂, glued on a card with labels as follows: "China: Xizang A. R., Motuo County, Hanmi, alt. 2100 m, 30.vii.2011, Wen-Xuan Bi leg." "Holotype / *Philomyceta biwenzuani* / Tang" [red handwritten label] (SHNU). PARATYPES. 1 ♀, Motuo County, 80 K, alt. 2100 m, 24.vii.2011, Wen-Xuan Bi leg. (SHNU); 1 ♀, Motuo County, Hanmi, alt. 2100 m, 12.–31.vii.2013, Wen-Xuan Bi leg. (SHNU); 1 ♀, Motuo County, 80 K, alt. 2100 m, 18.vii.2014, Wen-Xuan Bi leg. (SHNU); 1 ♀, Motuo County, near 80 K, 29°41'09"N 95°30'10"E, alt. 2330 m, mixed leaf litter, sifted, 9.vii.2016, Cheng, Peng & Shen leg. (SHNU).

Description. Measurements of male: BL: 11.2 mm, FL: 6.6 mm. HL: 1.78 mm, HW: 2.20 mm, EYL: 0.58 mm, TL: 0.97 mm, PL: 2.03 mm, PW: 1.75 mm, EL: 2.78 mm, EW: 2.75 mm. HW/HL: 1.23, TL/EYL: 1.67, PL/PW: 1.16, EL/EW: 1.01.

Measurements of female: BL: 10.2–11.9 mm, FL: 6.2–6.6 mm. HL: 1.61–1.75 mm, HW: 1.97–2.06 mm, EYL: 0.56–0.58 mm, TL: 0.83–0.89 mm, PL: 1.95–2.06 mm, PW: 1.70–1.75 mm, EL: 2.70–2.89 mm, EW: 2.56–2.75 mm. HW/HL: 1.17–1.22, TL/EYL: 1.43–1.52, PL/PW: 1.15–1.18, EL/EW: 1.02–1.05.

Head and pronotum black, elytra black with blue metallic tint, apical margin of elytra well delimited yellow: narrowly near suture and more broadly laterally; abdomen with segments III–VI black, segment VII black with apical portion broadly yellow, remaining segments yellow except apical

half of styli and apical third of valvifers blackish; antennae with segments I–VII black, basal 2/5 of segment II reddish, segments VIII–XI creamy white; legs blackish, tarsomeres, especially front tarsomeres, reddish brown.

Head slightly trapezoid, tempora weakly narrowed behind eyes; head very densely and coarsely punctate except impressed anterior portion of clypeus narrowly impunctate, interstices partially reticulated, mostly very narrow and ridge-like except those along the midline of apical half of head, which may be more or less wider, sometimes (in two specimens) vertex with a distinct smooth area; pubescence brownish; antennae with segments IV–VIII markedly oblong, segments IX and X about as long as wide; pronotum widest at about level of large antero-lateral seta; surface with dense and coarse punctation similar to that on head, near base with a small impunctate spot; elytra along sides distinctly longer than pronotum, with depression distinct at base and along scutellum, indistinct along suture; elytral punctation very dense and confluent, interstices reticulated and ridge-like; pubescence yellow, long and dense along suture, posterior elytral margin and posterior margin of basal impression; abdominal tergites III–VI with basal transverse depression, tergites III–V with pair of oblique basal accessory lines; punctation of abdominal tergites III–VI coarse at base, gradually becoming finer toward apical margin, portion laterobasal of oblique accessory lines impunctate except for a few larger punctures, abdominal tergites VII and VIII with punctures similar in size, interstices smooth.

Male. Protarsomeres I–IV broader than those of female; sternite VII with patch of long yellow setae on median portion and posterior margin broadly emarginate at middle; sternite VIII with posterior margin emarginate at middle; aedeagus (Figs 11, 12) with median lobe and paramere slightly asymmetrical, paramere (Fig. 13) shorter than median lobe, slender and slightly bent to left side in ventral view.

Female. Tergite X (Fig. 14) with slightly asymmetrical projection at middle of posterior margin.

Etymology. This species is named in honor of Mr. Wen-xuan Bi who collected some specimens of the new species.

Distribution. China (Xizang: Motuo County).

Remarks. The new species is similar to *P. taungmae* Schillhammer, 2018 from Myanmar, but can be distinguished from it by antennal segments VIII–XI being creamy white (segments IX–XI creamy white in *P. taungmae*), abdominal tergite VI without a pair of oblique basal accessory lines, and abdominal segment VIII being entirely yellow (apical third blackish in *P. taungmae*). In appearance, it is also similar to two Indian species: *P. affinis* Cameron, 1944 and *P. caeruleipennis* Cameron, 1944 and four Nepalese species: *P. kleebergi* Schillhammer, 2012, *P. schawalleri* Schillhammer, 2012, *P. spoerrii* Schillhammer, 2012 and *P. kucerai* Schillhammer, 2014, but can be distinguished from them by the well delimited yellow apical margin of the elytra; from *P. caeruleipennis*, *P. kleebergi*, *P. kucerai* and *P. spoerrii* also by abdominal tergite VI without a pair of oblique basal accessory lines; from *P. affinis* also by the smaller eyes with TL/EYL larger than 1.4 (less than 1.3 in *P. affinis*); and from *P. caeruleipennis* also by the black legs (reddish in *P. caeruleipennis*).

Philomyceta sp.

(Figs 5, 6)

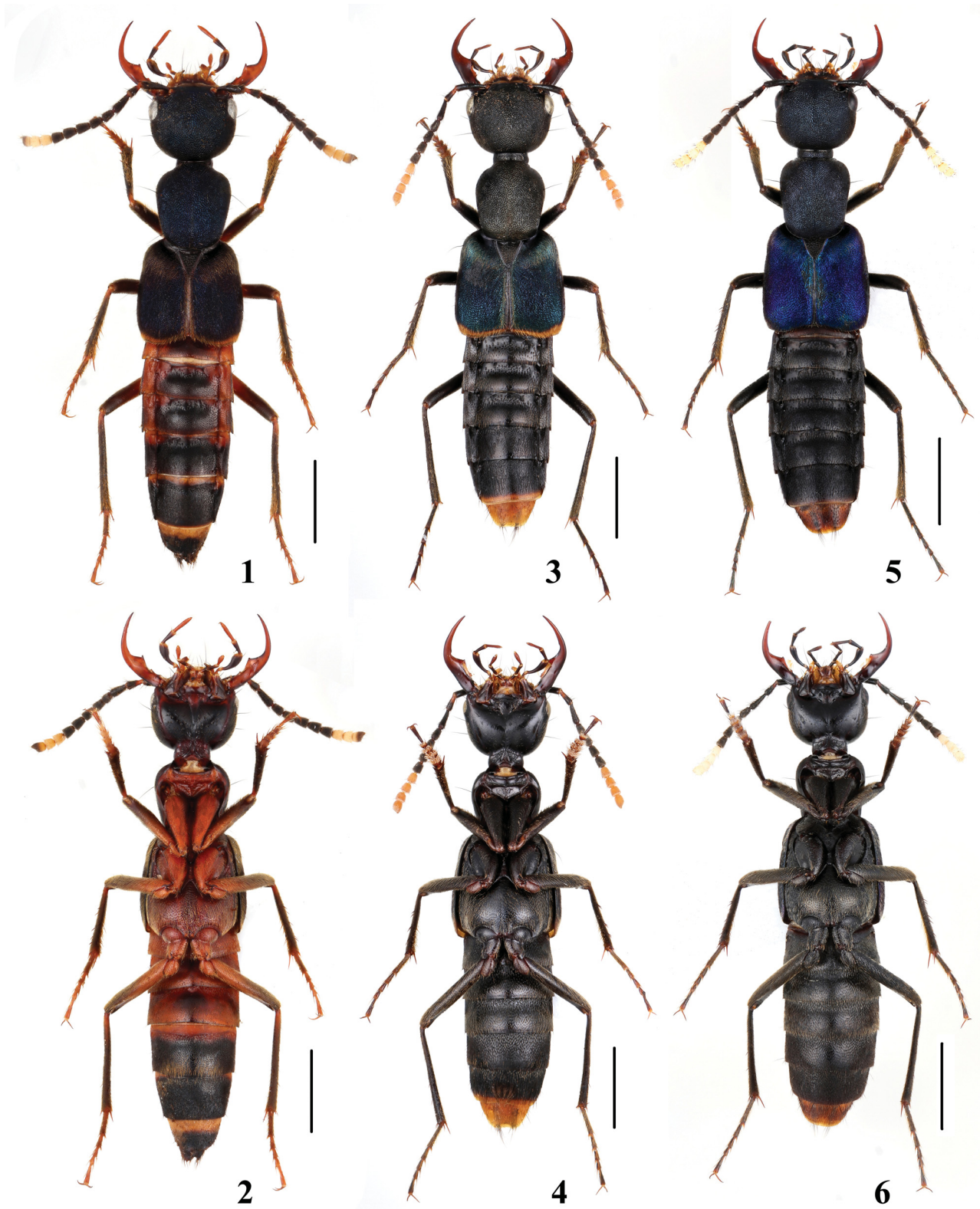
Material examined. CHINA: XIZANG: 2 ♀♀, Nielamu County, Zhangmu Town, Lixin Vill., alt. 2400–2600 m, 24.–28.vii.2010, Bi & Zhu leg. (SHNU).

Measurements. Female: BL: 10.4–11.0 mm, FL: 6.1–6.3 mm, HL: 1.67 mm, HW: 1.97 mm, EYL: 0.50–0.53 mm,

TL: 0.89 mm, PL: 1.95–2.00 mm, PW: 1.67 mm, EL: 2.67–2.72 mm, EW: 2.53–2.64 mm. HW/HL: 1.18, TL/EYL: 1.68–1.78, PL/PW: 1.17–1.20, EL/EW: 1.03–1.05.

Distribution. China (Xizang: Nielamu County).

Remarks. Examined specimens are very similar to two Nepalese species: *P. spoerrii* Schillhammer, 2012 and *P. kleebergi* Schillhammer, 2012. The collecting locality of



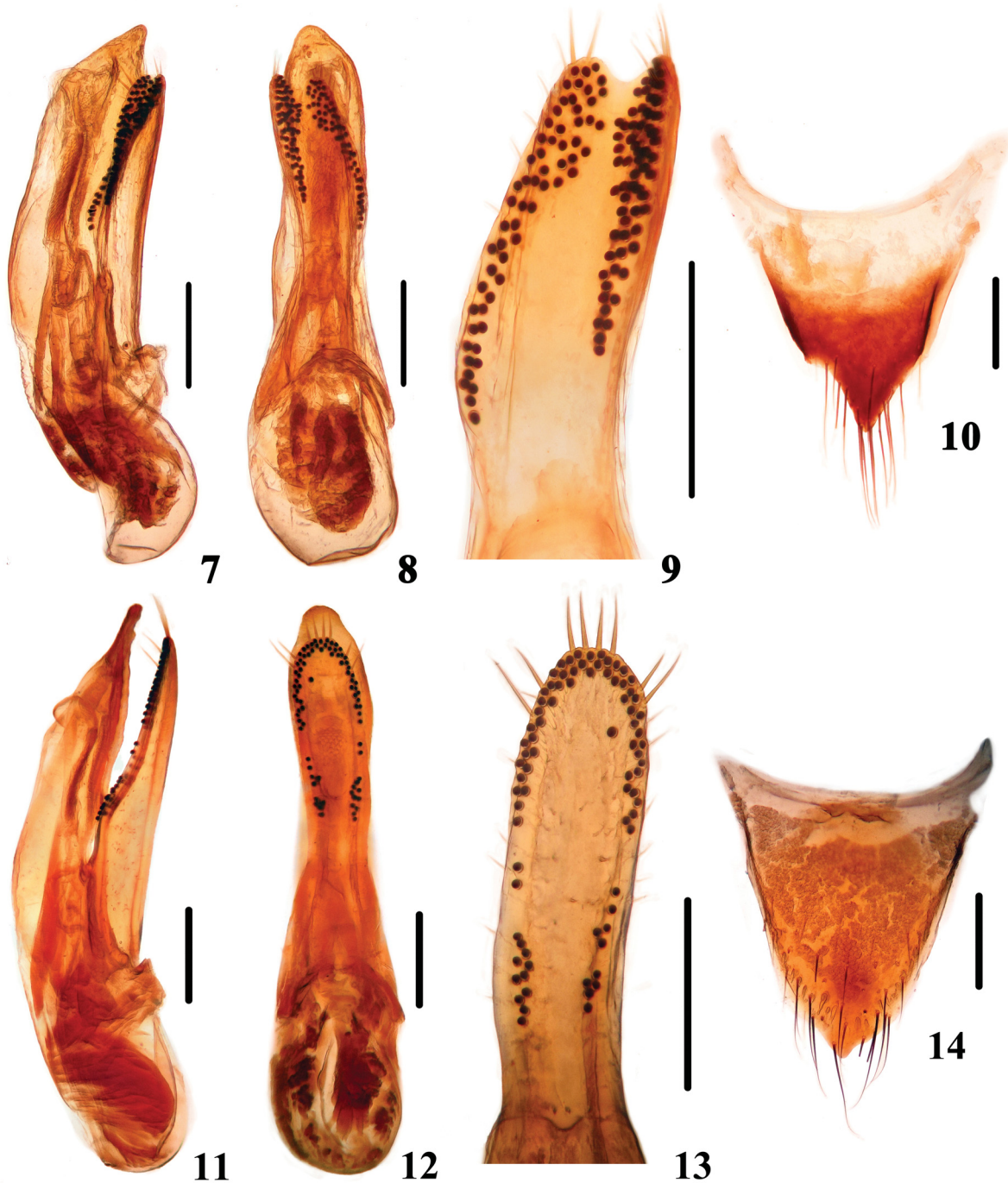
Figs 1–6. Habitus of species of *Philomyceta*. 1, 2 – *P. asperipennis* Schillhammer, 2012 (female, Gongshan County); 3, 4 – *P. biwenxuani* sp. nov. (male, holotype, Xizang, Motuo County); 5, 6 – *Philomyceta* sp. (female, Xizang, Nielamu County). Scale bars: 2 mm.

the species is about 30 km away from the type locality of *P. kleebergi*. Examining a male specimen will be necessary to reveal whether the specimens represent *P. kleebergi*.

Updated key to *Philomyceta* species

The key is based on that by SCHILLHAMMER (2014), with *P. biwenxuani* sp. nov. included. The unidentified species from Xizang: Nielamu County is very similar to *P. sporii* and *P. kleebergi* which can be only distinguished by male genitalia (see couplet 10) and is hence not included in the key.

- 1 Apical margin of elytra narrowly but sharply delimited by yellowish coloration, at least in lateral half. 2
- Elytra entirely dark, metallic bluish to partly greenish in color. 6
- 2 Antennomere VIII creamy white; first three visible abdominal tergites with transverse basal depression and pairs of subparallel to oblique basal accessory lines; elytra without distinct longitudinal carinae. 3
- Antennomere VIII dark; first five visible abdominal tergites with transverse basal depression, first four visible tergites with pairs of subparallel to oblique



Figs 7–14. Sexual characters. 7–10 – *Philomyceta asperipennis* Schillhammer, 2012 (7–9 – ♂, Baoshan City; 10 – ♀, Gongshan County). 11–14 – *P. biwenxuani* sp. nov. (11–13 – ♂, holotype; 14 – ♀, paratype); 7, 11 – aedeagus in lateral view; 8, 12 – aedeagus in ventral view; 9, 13 – apical portion of paramere; 10, 14 – female abdominal tergite X. Scale bars: 0.25 mm.

- basal accessory lines; elytra with distinct longitudinal carinae. 4
- 3 Antennomere XI creamy white; elytra entirely dark except for narrowly yellowish posterior margin; first three visible abdominal tergites black.
..... *P. biwenxuani* sp. nov.
- Antennal segment XI dark; elytra with basal fifth reddish; first three visible abdominal tergites reddish.
..... *P. semicyanea* (Fauvel, 1895)
- 4 Pronotum reddish, abdominal segment VIII yellowish. *P. costata* (Fauvel, 1895)
- Pronotum blackish, abdominal segment VIII with basal two thirds yellowish and apical third black. 5
- 5 Abdominal segment III reddish, segments IV and V reddish with medio-posterior portion darkened.
..... *P. asperipennis* Schillhammer, 2012
- Abdominal segment III–V blackish.
..... *P. taungmae* Schillhammer, 2018
- 6 First three visible abdominal tergites with transverse basal depression and pair of distinct subparallel to very slightly oblique carinae; tergite VI with much weaker depression and either without carinae or carinae very indistinct and short; posterior margin of tergite VII broadly bright reddish, occupying up to one fourth of tergite length (from basal line to posterior margin); legs always entirely black, rarely tibiae dark brown. 7
- First four visible tergites with distinct transverse basal depression and pair of distinct and markedly oblique carinae; posterior margin of tergite VII very narrowly obscurely reddish, if broadly bright reddish, then legs entirely reddish. 8
- 7 Eyes larger, tempora less than 1.3 times as long as eyes, median lobe of aedeagus with apex simple.
..... *P. affinis* Cameron, 1944
- Eyes smaller, tempora at least 1.4 times as long as eyes, median lobe of aedeagus with apex deeply bifurcate. *P. schawalleri* Schillhammer, 2012
- 8 Legs red, rarely dark reddish brown.
..... *P. caeruleipennis* Cameron, 1944
- Legs black. 9
- 9 Eyes larger, tempora about 1.6 times as long as eyes in males, less than 1.5 times in females; paramere

- with distinctly broadened apex, aedeagus: fig. 5 in SCHILLHAMMER (2014).
..... *P. kucerai* Schillhammer, 2014
- Eyes smaller, tempora more than 1.7 times as long as eyes in males, at least 1.6 times in females; paramere without broadened apex. 10
- 10 Paramere more asymmetric with area of sensory peg setae longer, aedeagus: fig. 13 in SCHILLHAMMER (2012). *P. spoerrii* Schillhammer, 2012
- Paramere less asymmetric with area of sensory peg setae shorter, aedeagus: fig. 12 in SCHILLHAMMER (2012). *P. klebergi* Schillhammer, 2012

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