

Four new species of the genus *Probles* Förster (Hymenoptera: Ichneumonidae: Tersilochinae) from Vietnam

Четыре новых вида рода *Probles* Förster (Hymenoptera: Ichneumonidae: Tersilochinae) из Вьетнама

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Abstract. Four remarkable new species of the genus *Probles* Förster are described from Vietnam: *P. (Euporizon) barycnemiformis* sp. nov., *P. (E.) diaparsiformis* sp. nov., *P. (E.) proshchalykini* sp. nov. and *P. (E.) protoversuta* sp. nov.

Резюме. Из Вьетнама описаны четыре примечательных вида рода *Probles*: *P. (Euporizon) barycnemiformis* sp. nov., *P. (E.) diaparsiformis* sp. nov., *P. (E.) proshchalykini* sp. nov. и *P. (E.) protoversuta* sp. nov.

Key words: parasitoids, taxonomy, Vietnam, Hymenoptera, Ichneumonidae, Tersilochinae, new species

Ключевые слова: паразитоиды, таксономия, Вьетнам, Hymenoptera, Ichneumonidae, Tersilochinae, новые виды

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Introduction

Probles Förster, 1869 is one of the largest tersilochine genera comprising about 60 described species (Yu et al., 2016). The genus is subdivided into five subgenera, four of them are mainly restricted to the Palaearctic region (except for one species of *Microdiaparsis* Horstmann, 1971 from India and two species of *Probles* s. str. from the Nearctic region); the most species-rich subgenus, *Euporizon* Horstmann, 1971, contents 40 species or two-thirds of all *Probles* species and is known from most regions of the world, except for South America and New Zealand.

The majority of known species of the subgenus *Euporizon* occur in the Palaearctic region where the subgenus is represented by 35 spe-

cies; the Nearctic fauna of *Euporizon* is entirely undescribed; and beyond the Holarctic region, two species are known from the Oriental region (Khalaim, 2011, 2018): one from the Afrotropical region (Khalaim, 2013) and one from Papua New Guinea (Khalaim & Villemant, 2019).

Only two species of the genus, *P. (E.) vietnamica* Khalaim, 2011 and *P. (E.) chernetsovi* Khalaim, 2018, were known from Vietnam hitherto (Khalaim, 2011, 2018), and the aim of this work is to describe four more new Vietnamese species of this genus.

Material and methods

The material of Vietmanese Tersilochinae was loaned from the National Museum of Natural His-

tory (Naturalis Museum), Leiden, The Netherlands (RMNH). Morphological terminology generally follows that of Townes (1969) with changes according to Khalaim (2011). Layer photographs were taken in the Zoological Institute of the Russian Academy of Sciences, St Petersburg, Russia, with a Canon EOS 70D digital camera attached to an Olympus SZX10 stereomicroscope. Partly focused images were assembled with the Helicon Focus 6 Pro software.

Taxonomic part

Order Hymenoptera

Family Ichneumonidae

Subfamily Tersilochinae

Genus *Probles* Förster, 1869

Probles (Euporizon) barycnemiformis sp. nov. (Figs 1–10)

Holotype. Female, **Northwest Vietnam, Lai Châu Prov.**, Hoang Lien National Park [Nature Reserve since 2006], 15 km W of Sa Pa, 1900 m, Malaise traps, 15–21.X.1999, coll. C. v. Achterberg (RMNH).

Paratype. One female, same data as for holotype (RMNH).

Comparative diagnosis. The new species resembles the genus *Barycnemis* as it has a globose head with bases of antennae somewhat displaced downwards (Fig. 5), mesosoma slightly compressed laterally, weakly curved foveate groove in centre of mesopleuron (Fig. 8), and very long anterior part of propodeum (Fig. 9), but other important features, e.g. slender legs, straight and slender spurs of hind tibia, and long and slender ovipositor (Fig. 1) indicate that this is a species of the genus *Probles*. *Probles barycnemiformis* sp. nov. is easily distinguished from other Oriental and Palaearctic species of the subgenus *Euporizon* by the combination of long and strongly rounded genae (Fig. 3) and exceptionally long anterior part of propodeum without distinct median longitudinal carinae (Fig. 9). The new species also has a remarkably small clypeus (Fig. 2).

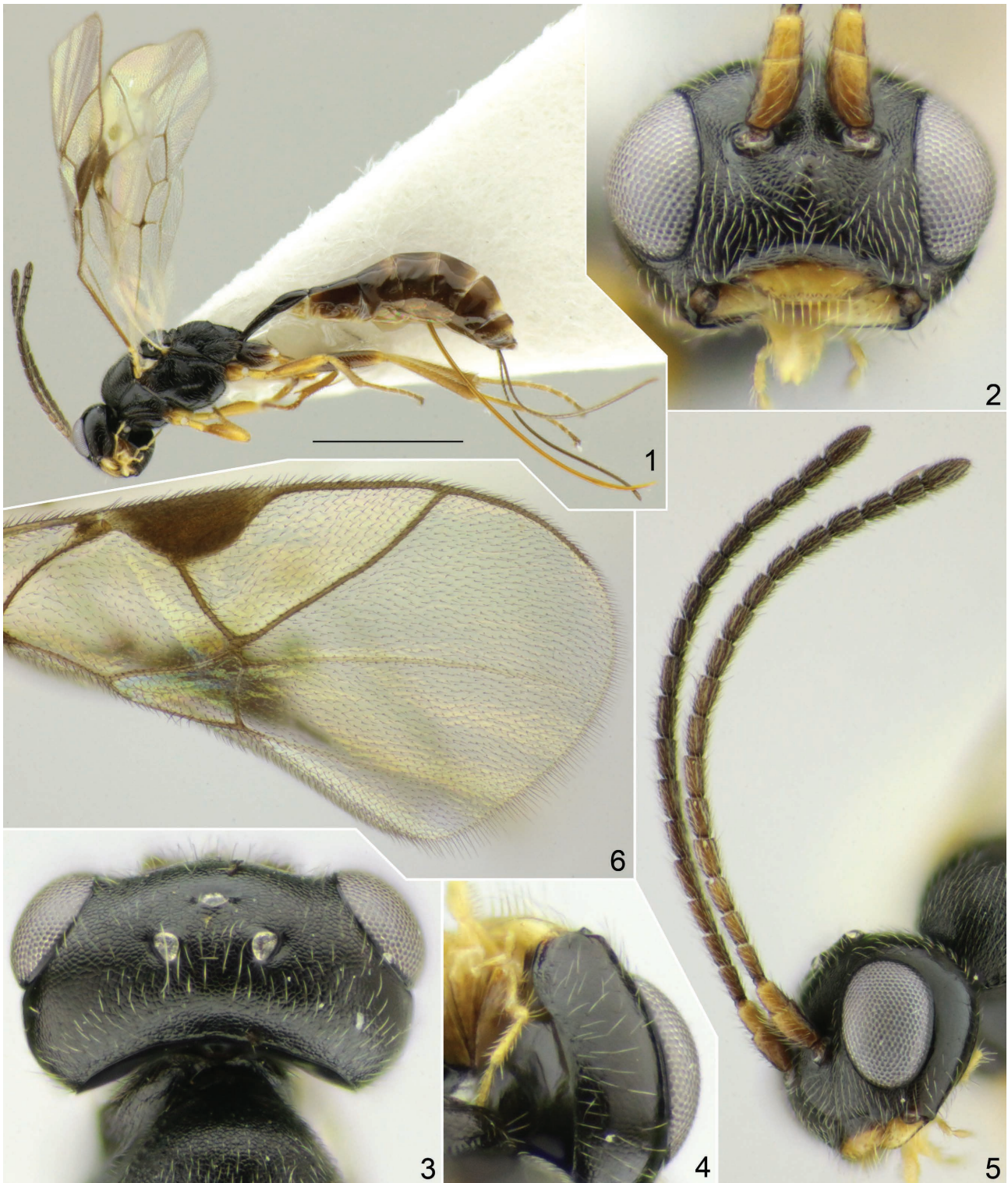
Description. Female. Body length 3.2 mm, fore wing length 2.4 mm.

Head strongly rounded behind eyes in dorsal view (Fig. 3), with bases of antennae somewhat displaced downwards (Fig. 5); gena 0.85 times

as long as eye width. Clypeus (Fig. 2) small, lenticular, 3.0 times as broad as high and 0.8 times as broad as face (shortest distance between inner eye margins), almost flat, separated from face by thin and weak groove, predominantly smooth but shagreened near upper margin, very finely punctate in upper 0.4. Mandible moderately slender, distinctly tapered towards apex in basal half, with upper tooth somewhat longer than lower. Malar space 0.9 times as long as basal mandibular width. Antennal flagellum (Fig. 5) filiform, with 17 flagellomeres; subbasal and mid flagellomeres 1.7–1.9 times and subapical flagellomeres about 1.6 times as long as broad; flagellomeres 3 to 5 with distinct and flagellomere 6 with weak subapical finger-shaped structures on outer surface (Fig. 5). Face and frons granulate, dull, impunctate. Vertex granulate, dull, with very fine and sparse punctures. Gena smooth and shining centrally, very shallowly granulate in upper and lower parts, without distinct punctures. Occipital carina complete. Hypostomal carina absent (Fig. 4).

Mesoscutum almost entirely granulate, dull and impunctate; mesopleuron centrally more or less smooth and with very fine, hardly discernible punctures. Notaulus weakly impressed, with indistinct irregular wrinkles on anterolateral side of mesoscutum. Scutellum with lateral carinae present only at extreme anterior in paratype and in anterior 0.3 in holotype. Foveate groove of mesopleuron weak and thin, slightly upcurved anteriorly, situated somewhat before centre of mesopleuron (Figs 7, 8). Propodeum mediodorsally without distinct carinae; anterior part 1.15 times as long as apical area (Fig. 9); apical area widely rounded anteriorly (Fig. 9), flat; apical longitudinal carinae complete. Propodeal spiracle separated from pleural carina by 1.0–1.5 times diameter of spiracle (Fig. 7).

Fore wing with second recurrent vein (2m-cu) distinctly postfurcal. Metacarpus (R1) not reaching tip of wing (Fig. 6). First abscissa of radius (Rs+2r) straight, 1.4 times longer than width of pterostigma. Intercubitus (2rs-m) short and thick in holotype (Fig. 6), but it weakly thickened and rather long (about as long as abscissa of cubitus between intercubitus and second recurrent vein = abscissa of M between 2rs-m and 2m-cu) in paratype. Hind wing with nervellus (cu1&cu-a) dis-



Figs 1–6. *Probles barycnemiformis* sp. nov., females, holotype (1, 2, 4–6) and paratype (3): 1, habitus, lateral view (scale bar: 1.0 mm); 2, head, frontal view; 3, head, dorsal view; 4, head, posterolateral view; 5, head with antennae, lateral view; 6, apex of fore wing.



Figs 7–10. *Probles barycnemiformis* sp. nov., female, holotype: **7**, mesosoma and first tergite, lateral view; **8**, mesosoma, lateral view; **9**, propodeum and base of metasoma, dorsolateral view; **10**, apex of ovipositor.

tinctly reclivous. Legs slender. Hind tibial spurs straight or slightly curved at apex. Tarsal claws not pectinate.

First metasomal tergite moderately slender, 3.7 times as long as posteriorly broad; petiole somewhat uneven dorsally and entirely striate laterally; postpetiole smooth (Figs 7, 9). First tergite in lateral view with upper margin more or less straight in anterior 0.7 and strongly arcuate in posterior 0.3 (Fig. 7); petiole trapeziform in cross-section; postpetiole in dorsal view somewhat broader than petiole. Glymma deep, moderately large, situated in centre of first tergite, joining by deep furrow to ventral part of postpetiole (Fig. 7). Second tergite approximately 1.7 times as long as anteriorly broad. Thyridial depression clearly delimited, 2.5–3.0 times as long as broad. Ovipositor slender, weakly upcurved, with shallow dorsal subapical depression (Fig. 10); sheath 2.6 times as long as first tergite.

Head, mesosoma and first metasomal segment black with slight brownish tinge; lower 0.5–0.6 of clypeus, mandible (teeth dark red) and mouthparts yellow. Antenna brown, but scape and pedicel ventrally yellowish. Pterostigma brown. Fore and mid legs brownish yellow, but mid coxa darkened with brown base, and fore and mid tibiae and tarsi slightly brownish. Hind leg with coxa and femur dark brown (femur pale basally and apically), trochanters brownish yellow (brownish dorsally in holotype), tibia and tarsus brownish yellow in paratype and yellowish brown in holotype (tibia pale at base). Metasoma behind first segment dark brown; posterior margins of tergites pale brown (Fig. 1).

Male. Unknown.

Etymology. The species is named after the genus *Barycnemis* with the Latin suffix “-formis” (having the form of *Barycnemis*).

Distribution. Northwest Vietnam.

Remark. The paratype female is partly destroyed, i.e. both antennae, both front legs and one mid leg are missing, and one fore wing is attached to the card point apart from the insect.

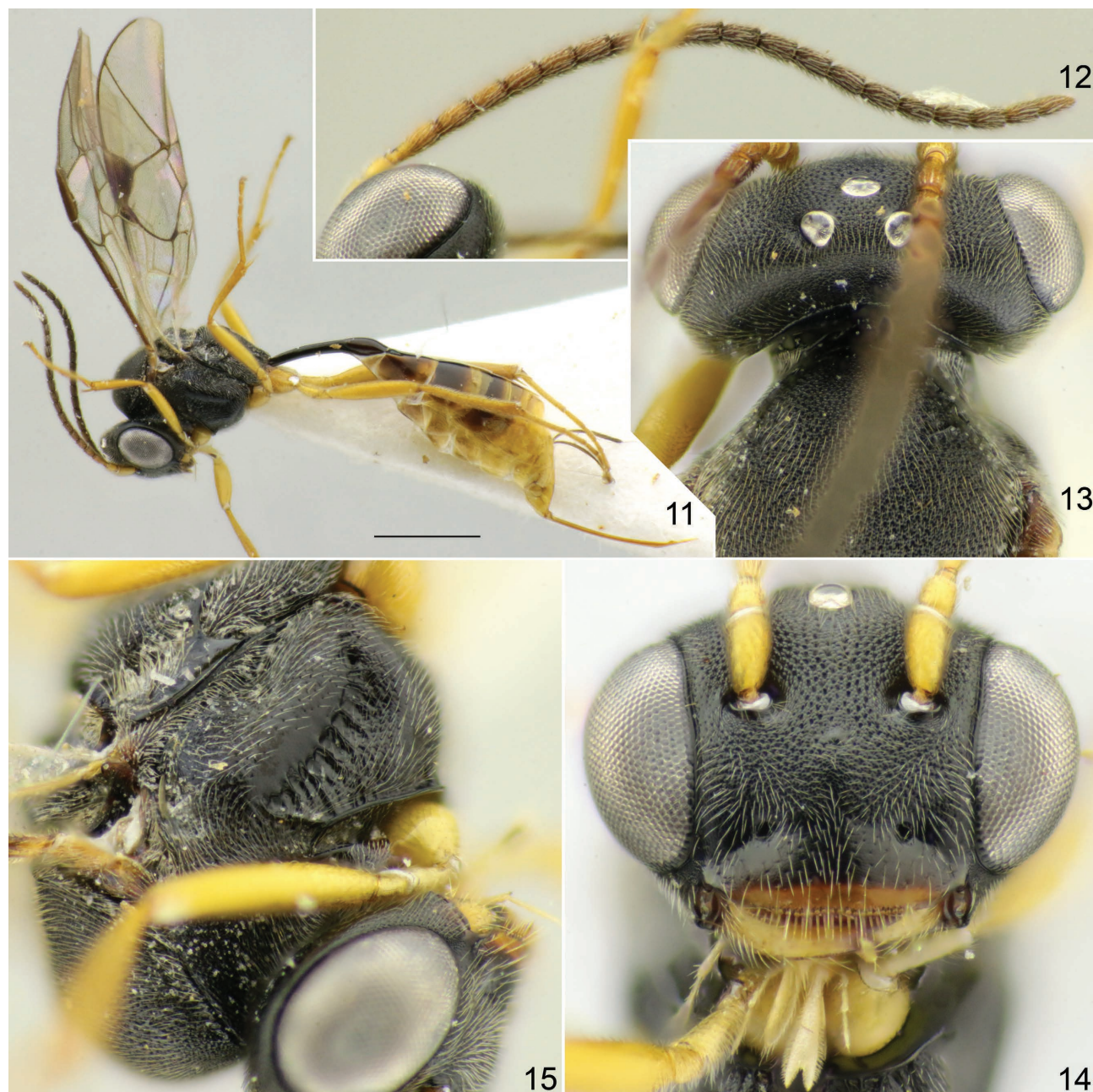
***Probles (Euporizon) diaparsiformis* sp. nov.**

(Figs 11–19)

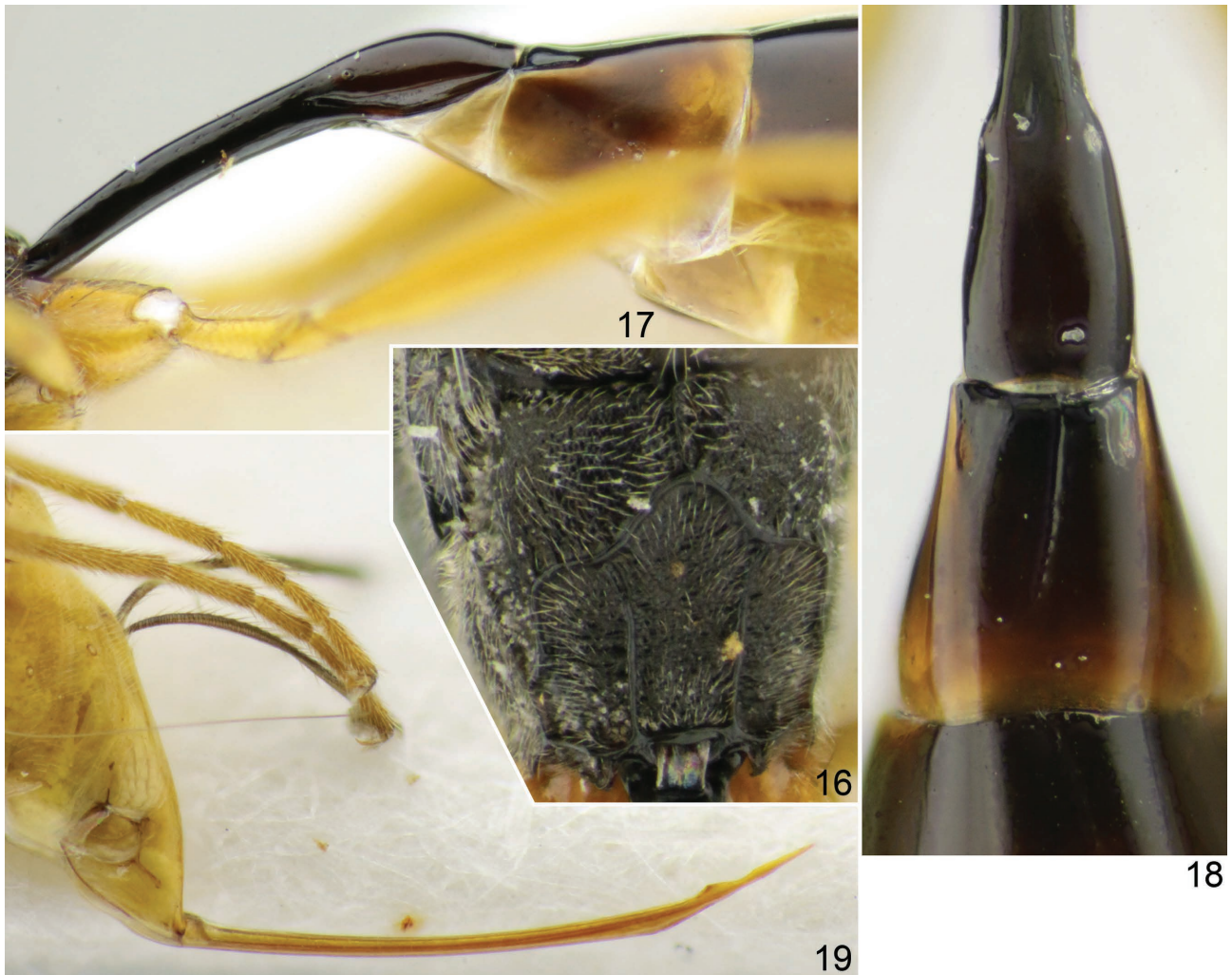
Holotype. Female, Northeast Vietnam, Hòa Bình Prov., Pa Co, Hang Kia Nature Reserve, 20°44'37"N,

104°56'20"E, 1045 m, Malaise trap 6, 9–23.X.2009, coll. C. v. Achterberg & R. de Vries (RMNH).

Comparative diagnosis. The new species resembles the genus *Diaparsis* as it has a strongly transverse head (Fig. 13), large clypeus (Fig. 14), foveate groove of mesopleuron strongly oblique and with coarse transverse wrinkles (Fig. 15), and propodeum with a strong basal keel (Fig. 16); but first metasomal tergite with glymma joining by distinct furrow with the ventral part of the



Figs 11–15. *Probles diaparsiformis* sp. nov., female, holotype: **11**, habitus, lateral view (scale bar: 1.0 mm); **12**, antenna, lateral view; **13**, head, dorsal view; **14**, head, frontal view; **15**, mesosoma, anterolateral view.



Figs 16–19. *Probles diaparsiformis* sp. nov., female, holotype: **16**, propodeum, dorsal view; **17**, base of metasoma, lateral view; **18**, postpetiole and second tergite, dorsal view; **19**, apex of metasoma with ovipositor, lateral view.

postpetiole (Fig. 17), and second tergite with long thyrical depression (Fig. 18) indicate that this is a species of the genus *Probles*. *Probles diaparsiformis* sp. nov. is easily distinguished from other Oriental and East Palaearctic species of the subgenus *Euporizon* by its strongly oblique and coarse foveate groove on the mesopleuron (Fig. 15), very short ovipositor with two dorsal subapical teeth (Fig. 19), and densely punctate head and mesosoma (Figs 13, 14).

Description. Female. Body length 4.7 mm, fore wing length 3.3 mm.

Head strongly and roundly constricted behind eyes in dorsal view (Fig. 13); gena almost half as long as eye width. Clypeus (Fig. 14) large, lenticular, 2.6 times as broad as high, almost flat in

lateral view, with lower margin slightly truncate; clypeus separated from face by weak impression, smooth, finely punctate in upper 0.8. Mandible slender, with upper tooth exceptionally long, more than 3.0 times longer than the lower. Malar space 0.65 times as long as basal mandibular width. Antennal flagellum (Fig. 12) weakly tapered towards apex, with 19 flagellomeres; all flagellomeres (except for basal and apical ones) 1.6–1.8 times as long as broad; flagellomeres 4 to 6 with subapical finger-shaped structures on outer surface. Face and frons very densely punctate on granulate and dull background. Vertex granulate, dull, without distinct punctures. Gena very shallowly granulate, weakly shining, with very fine inconspicuous punctures. Occipital carina complete.

Mesoscutum and scutellum very densely punctate on granulate and dull background. Notaulus as wrinkle on anterolateral side of mesoscutum. Scutellum with lateral carinae present in anterior half. Foveate groove of mesopleuron very broad, strongly upcurved anteriorly, extending across mesopleuron, with coarse transverse wrinkles (Fig. 15). Mesopleuron densely punctate (except impunctate area just above foveate groove), smooth between punctures centrally and granulate peripherally. Propodeum entirely granulate, impunctate, dull; transverse carina with short adjacent wrinkles. Propodeum with short basal keel which is 0.3 times as long as apical area (Fig. 16); apical area rounded anteriorly (Fig. 16), flat; apical longitudinal carinae subparallel in posterior 0.8, reaching transverse carina anteriorly (Fig. 16). Propodeal spiracle separated from pleural carina by half diameter of spiracle.

Fore wing with second recurrent vein (2m-cu) distinctly postfurcal. Metacarpus (R1) reaching tip of wing. First abscissa of radius (Rs+2r) straight, 1.3 times longer than width of pterostigma. Intercubitus (2rs-m) long, weakly thickened, about as long as abscissa of cubitus between intercubitus and second recurrent vein (abscissa of M between 2rs-m and 2m-cu). Hind wing with nervellus (cu1&cu-a) weakly reclivous. Legs slender. Tarsal claws weakly curved, not pectinate.

First metasomal tergite slender, 4.5 times as long as posteriorly broad, entirely smooth, with upper margin very weakly convex in basal 0.8 and strongly arcuate in posterior 0.2 (Fig. 17); petiole round in cross-section; postpetiole in dorsal view broader than petiole (Fig. 18). Glymma deep, situated in posterior 0.4 of first tergite, joining by deep furrow to ventral part of postpetiole (Fig. 18). Second tergite 1.7 times as long as anteriorly broad. Thyridial depression clearly delimited, 3.0 times as long as broad, posteriorly rounded (Fig. 18). Ovipositor short, slightly upcurved, with two dorsal subapical teeth (proximal tooth strong, distal tooth weak) (Fig. 19); sheath 0.7 times as long as first tergite.

Head and mesosoma black; lower 0.3 of clypeus and tegula yellow-brown; mandible (teeth dark red) and mouthparts yellow. Antenna with scape and pedicel brownish yellow, flagellum brown. Pterostigma dark brown, with pale marks at prox-

imal and distal corners. Legs brownish yellow, but hind tibia and tarsus slightly darkened (brown). First metasomal segment black with slight brownish tinge. Metasoma behind first segment predominantly dark brown, ventrally and posteriorly yellow; posterior margins of tergites 2 to 5 yellow (Fig. 11).

Male. Unknown.

Etymology. The species is named after the genus *Diaparsis* with the Latin suffix “-formis” (having the form of *Diaparsis*).

Distribution. Northeast Vietnam.

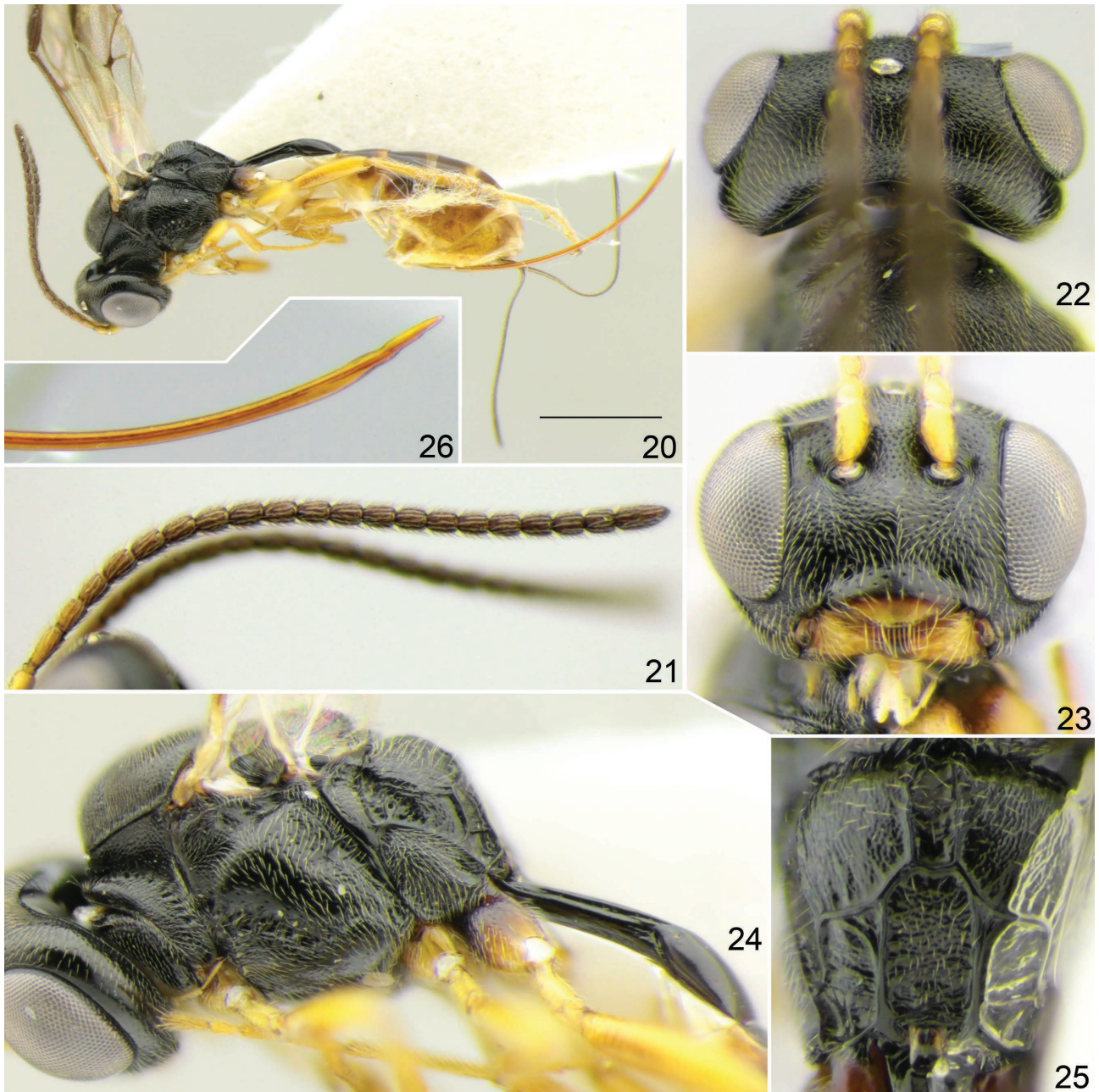
***Probles (Euporizon) proshchalykini* sp. nov.**
(Figs 20–26)

Holotype. Female, **Southern Vietnam**, *Dak Lak Prov.*, Chu Yang Sin National Park, Krong K'Mar [Krông Kmar], 740–900 m, Malaise trap, 2–10. VI.2007, coll. C. v. Achterberg & R. de Vries (RMNH).

Comparative diagnosis. *Probles proshchalykini* sp. nov. is immediately distinguished from other Oriental and East Palaearctic species of the genus by its head with genae short and strongly swollen behind the eyes (Fig. 22). The new species also possesses an unusually small clypeus (Fig. 23) and broad rectangular basal area of propodeum delimited laterally by strong basal longitudinal carinae (Fig. 25).

Description. Female. Body length 4.2 mm, fore wing length 3.0 mm.

Head swollen and strongly rounded behind eyes in dorsal view (Fig. 22); gena almost half as long as eye width. Clypeus (Fig. 23) small, lenticular, 2.2 times as broad as high, 0.7 times as broad as face (shortest distance between inner eye margins), slightly convex, separated from face by broad impression, smooth and shining, finely punctate in upper 0.3. Mandible robust, somewhat twisted and rather strongly tapered towards apex (so that its width at level of teeth 0.4 times as great as basal mandibular width); upper tooth distinctly longer than lower one. Malar space 0.7 times as long as basal mandibular width. Antennal flagellum (Fig. 21) filiform, with 20 flagellomeres; subbasal flagellomeres 1.3–1.4 times and subapical flagellomeres 1.1 times as long as broad; flagellomeres 4 to 6 with subapical finger-shaped structures on outer surface. Face, frons and vertex granulate, dull, with dense punctures which quite distinct on frons and



Figs 20–26. *Probles proshchalykini* sp. nov., female, holotype: **20**, habitus (without wing apices), lateral view (scale bar: 1.0 mm); **21**, antenna, lateral view; **22**, head, dorsal view; **23**, head, frontal view; **24**, head, mesosoma and base of metasoma, lateral view; **25**, propodeum, dorsal view; **26**, apex of ovipositor.

mostly indistinct on face and vertex. Gena with very fine and sparse punctures on smooth and shining background. Occipital carina complete.

Mesoscutum granulate, dull, with dense punctures (mostly indistinct anteriorly). Notaulus weakly impressed, indistinct. Scutellum with lateral carinae present only at its extreme anterior. Mesopleuron with fine and moderately dense

punctures on smooth and shining background, peripherally granulate and dull. Foveate groove of mesopleuron deep and broad, S-curved, extending from epicnemial carina to almost base of mid coxa, with coarse transverse wrinkles (Fig. 24). Propodeum with clearly delimited rectangular basal area which is twice as long as broad and 0.65 times as long as apical area (Fig. 25); basal longi-

tudinal carinae strong, subparallel; transverse carina and apical longitudinal carinae strong, complete; dorsolateral area finely granulate, weakly shining, impunctate; apical area truncate anteriorly (Fig. 25), flat, granulate, with weak transverse wrinkles adjacent to apical longitudinal carinae. Propodeal spiracle separated from pleural carina by 1.5 times diameter of spiracle (Fig. 24).

Fore wing with second recurrent vein (2m-cu) weakly postfurcal. Metacarpus (R1) not reaching tip of the wing. First abscissa of radius (Rs+2r) straight, 1.2 times longer than width of pterostigma. Intercubitus (2rs-m) long, slightly thickened, almost 3.0 times longer than abscissa of cubitus between intercubitus and second recurrent vein (abscissa of M between 2rs-m and 2m-cu). Hind wing with nervellus (cu1&cu-a) vertical. Legs slender. Tarsal claws weakly curved, not pectinate.

First metasomal tergite moderately slender, 3.6 times as long as posteriorly broad, smooth and shining dorsally, predominantly smooth ventro-laterally, with several strong striae before glymma; first tergite in lateral view with upper margin straight in anterior 0.7 and arcuate in posterior 0.3; petiole trapeziform in cross-section, with sharp dorsolateral carina (Fig. 24); postpetiole in dorsal view broader than petiole. Glymma deep, moderately large, situated slightly behind centre of first tergite and joining by deep furrow to ventral part of postpetiole (Fig. 24). Second tergite 1.4 times as long as anteriorly broad. Thyridial depression small, oval, clearly delimited, about 1.5 times as long as broad. Ovipositor slender, weakly and evenly upcurved, with shallow dorsal subapical depression (Fig. 26); sheath 2.3 times as long as first tergite.

Head, mesosoma and first metasomal segment black; lower 0.4 of clypeus and mouthparts yellow, but teeth of mandible reddish black; scape and pedicel of antenna as well as tegula yellow or brownish yellow. Antennal flagellum brown. Pterostigma dark brown. Legs brownish yellow, but fore and mid coxae darker at base, and hind coxa dark brown except for brownish yellow apex. Metasoma behind first segment predominantly brown to dark brown dorsally and laterally, yellow ventrally and at distal end; tergites 2 to 5 dorsally with posterior yellow band (Fig. 20).

Male. Unknown.

Etymology. The species is named in honour of the well-known Russian entomologist, expert in Apoidea (Hymenoptera), M.Yu. Proshchalykin (Vladivostok).

Distribution. Southern Vietnam.

Probles (Euporizon) protoversuta sp. nov.
(Figs 27–31)

Holotype. Female, **Northwest Vietnam, Lai Châu Prov.**, Hoang Lien National Park [Nature Reserve since 2006], 15 km W of Sa Pa, 1900 m, Malaise traps, 15–21.X.1999, coll. C. v. Achterberg (RMNH).

Comparative diagnosis. In having a sinuate ovipositor (Fig. 31), the new species resembles the subgenus *Microdiaparsis* Horstmann, 1971 and the *P. fulgida* species group of the subgenus *Euporizon* designated for three very close species occurring in South Korea (Khalaim et al., 2013). *Probles protoversuta sp. nov.* is intermediate between them as it has the gena 0.75 times as broad as the eye width, while in *Microdiaparsis*, the gena is longer (the above-mentioned ratio 0.9–1.2), and in the *P. fulgida* species group, the gena is shorter (this ratio 0.4–0.5). In the subgenus *Microdiaparsis*, the new species is most similar to *P. neoversuta* (Horstmann, 1967) as both species possess a strongly sinuate ovipositor apex, and their mesopleuron is distinctly punctate on a smooth background; but it is distinct in having (in addition to the shorter gena) a weaker foveate groove of the mesopleuron, longer intercubitus (vein 2rs-m) in the fore wing, shorter ovipositor, and densely granulate, dull and almost impunctate gena. In the *P. fulgida* species group, *P. protoversuta sp. nov.* is similar to *P. fulgida* Khalaim et Balueva, 2013 by having a weak and short foveate groove of the mesopleuron and strongly sinuate ovipositor apex; but it differs from the latter species (in addition to the longer gena) by the flagellum with finger-shaped structures present only on flagellomeres 4 to 6 (on flagellomeres 2 [or 3] to 6 in *P. fulgida*), longer basal area of propodeum (Fig. 30), longer second metasomal tergite, and granulate and almost impunctate head.

Description. Female. Body length 4.2 mm, fore wing length 3.2 mm.

Head distinctly constricted and weakly rounded behind eyes in dorsal view; gena 0.75 times as



Figs 27–31. *Probles protoversuta* sp. nov., female, holotype: **27**, habitus, lateral view (scale bar: 1.0 mm); **28**, head, mesosoma and base of metasoma, lateral view; **29**, hind femur, tibia and basitarsus, lateral view; **30**, propodeum, dorsolateral view; **31**, apex of ovipositor.

long as eye width. Clypeus lenticular, 2.8 times as broad as high, about as broad as face, slightly convex, separated from face by distinct furrow, smooth in lower 0.7 and finely granulate in upper 0.3, punctate in upper half. Mandible slender, weakly tapered in basal half; upper tooth distinctly longer than lower. Malar space 0.9 times as long as basal mandibular width. Antennal flagellum filiform, with 24 flagellomeres; subbasal flagellomeres 1.6–1.8 times and subapical flagellomeres 1.1–1.2 times as long as broad; flagellomeres 4 to 6 with very thin and long subapical finger-shaped structures on outer surface. Face, frons, vertex and gena densely granulate, dull, with fine and mostly indistinct (because of granulation) punctures. Occipital carina complete. Hypostomal carina absent.

Mesoscutum granulate, dull, with moderately dense fine punctures which are mostly indistinct on central lobe and distinct on lateral lobes. Notaulus indistinct, vestigial on anterolateral side of mesoscutum, with short and sharp groove distant from anterolateral margin of mesoscutum. Scutellum with lateral carinae present only at its base. Mesopleuron punctate on smooth and shining background (except for impunctate area just above foveate groove), peripherally mostly granulate. Foveate groove of mesopleuron moderately deep, weakly S-curved, situated more or less in centre of mesopleuron, with transverse wrinkles extending downwards and reaching epicnemial carina anteriorly (Fig. 28). Epicnemial carina with upper end abruptly curved to reach front margin of mesopleuron at level of lower third of pronotum. Propodeum with basal area indistinct because of irregular wrinkles (Fig. 30), 0.7 times as long as apical area; dorsolateral area shallowly granulate, weakly shining, with very fine and sparse punctures; apical area widely rounded anteriorly (Fig. 30), flat, granulate, impunctate, dull; apical longitudinal carinae distinct only posteriorly, vestigial in front part. Propodeal spiracle adjacent to pleural carina (Fig. 30).

Fore wing with second recurrent vein (2m-cu) distinctly postfurcal. Metacarpus (R1) almost reaching tip of wing. First abscissa of radius (Rs+2r) straight, 1.25 times longer than width of pterostigma. Intercubitus (2rs-m) moderately long, thickened, about as long as abscissa of

cubitus between intercubitus and second recurrent vein (abscissa of M between 2rs-m and 2m-cu). Hind wing with nervellus (cu1&cu-a) weakly reclivous. Legs slender (Fig. 29). Tarsal claws strongly curved, not pectinate.

First metasomal tergite slender, 4.2 times as long as posteriorly broad, entirely smooth and shining, in lateral view with upper margin weakly convex in anterior 0.7 and strongly arcuate in posterior 0.3; petiole round in cross-section; postpetiole in dorsal view broader than petiole. Glymma deep, moderately large, situated in posterior 0.65 of first tergite, joining by deep furrow to ventral part of postpetiole (Fig. 28). Second tergite 2.2 times as long as anteriorly broad. Thyridial depression about 4.0 times as long as broad. Ovipositor slender, weakly upcurved, strongly sinuate at apex (Fig. 31); sheath 2.8 times as long as first tergite.

Head, mesosoma and first metasomal segment black; lower 0.4 of clypeus, mandible (teeth dark red) and tegula brownish yellow; mouthparts yellow. Antenna with yellowish brown scape and pedicel as well as black (but slightly paler at base) flagellum. Pterostigma brown with small pale spots at proximal and distal corners. Legs brownish yellow, but hind coxa extensively darkened with brown base, and hind tibia and tarsus infuscate. Metasoma behind first segment predominantly dark brown, yellow ventrally and dorsally on distal tergites, and with yellowish markings on sides (Fig. 27).

Male. Unknown.

Etymology. The species name is based on the species name *P. versuta* with the Latinized Greek prefix “proto-” (before).

Distribution. Northwest Vietnam.

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