

New or little known Palaearctic species of Platygastriinae (Hymenoptera: Platygastriidae). III.

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Fifteen new species of Platygastriinae are described and their affinities discussed, viz. *Platygaster alpina* sp. n. (Austria), *P. bayankhongorensis* sp. n. (Mongolia), *P. breviscapa* sp. n. (Croatia), *P. kazakhstanica* sp. n. (Kazakhstan), *P. novemarticulata* sp. n. (Mongolia), *P. platygaster* sp. n. (Kyrgyzstan), *P. schwarzi* sp. n. (Austria), *P. sylveni* sp. n. (Sweden), *P. viklundi* sp. n. (Sweden), *Pyrgaspis striativentris* sp. n. (Mongolia), *Synopeas latvianum* sp. n. (Latvia), *S. microsculpturatum* sp. n. (Mongolia), *S. pinnei* sp. n. (Latvia), *S. schwarzi* sp. n. (Mongolia), and *S. wangsjoi* sp. n. (Sweden). The hitherto unknown females of *Platygaster aberrans* Buhl, 1998 and *Synopeas hansseni* Buhl, 1998, and the hitherto unknown male of *Synopeas acutispinus* Buhl, 1998, are described.

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1. Introduction

In the past 15 years I have described about 150 new Palaearctic species of Platygastriidae, nearly all of them in the subfamily Platygastriinae, in which all species are koinobiont egg-larval parasitoids on Cecidomyiidae (Diptera). And again, the vast majority of these Palaearctic species new to science described in Platygastriinae belong in the very large genera *Platygaster* (with well over 400 described species worldwide, but hardly monophyletic) and *Synopeas* (with about 220 described species worldwide). The present paper follows this trend.

Members of Platygastriinae are mostly very small (1–2 mm), black, weakly shining, with elbowed antennae that have an 8-segmented flagellum. The wings most often lack venation, though they may have fringes of setae. The stan-

dard website about the group with an annotated bibliography etc. can be found at http://atbi.biosci.ohio-state.edu:210/hymenoptera/eol_scelionidae.home, under the editorship of N. F. Johnson.

This paper is a continuation of my previous papers (Buhl 2003, 2005). It treats material from a loan by courtesy of Martin Schwarz, Biologiezentrum, Linz, from a loan by courtesy of Bert Viklund, Naturhistoriska Riksmuseet, Stockholm, from a loan by courtesy of David Notton, the Natural History Museum, London, as well as a couple of species from my own collections.

The terminology follows Vlug (1985). Standard abbreviations used are A1–A10 = antennal segments 1–10, OOL = distance between lateral ocellus and eye, LOL = distance between lateral and anterior ocelli, and T1–T6 = tergites 1–6.

2. Species

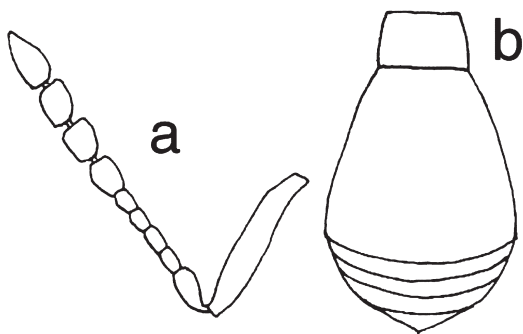


Fig. 1. *P. aberrans* Buhl, 1998, female. – a. Antenna. – b. Metasoma.

Platygaster aberrans Buhl, 1998 (Fig. 1)
Male described by Buhl (1998a). Additional material examined: 1 female, Norway, HES, Sør-Odal, Maarud, 5.VI.1972, H. Pettersen leg., preserved in Naturhistoriska Riksmuseet, Stockholm.

Description of female. Body length 1.0 mm. Antenna (Fig. 1a) more slender than in male; head and mesosoma smoother than in male, with more transverse sculpture on head, and sculpture on sides of pronotum more longitudinal. OOL:LOL = 5:6. Metapleuron smooth and bare in most of anterior half. Mesoscutum with less distinct notauli than in male, scutellum similarly shaped as in male. Body appendages lighter than in male, A1–A6 and legs (including coxae, excluding last segment of tarsi) being dirty yellow. Metasoma (Fig. 1b) very slightly longer than mesosoma, 0.8 times as long as head and mesosoma combined; T1 and base of T2 as in male.

Platygaster alpina sp. n. (Figs 2–5)

Type material. Holotype female: Austria, Hohe Tauern, W. Edelweiss Spitze (47°07'N 12°49'E), 2,280–2,400 m a.s.l., 30.VI.1999, from gall of Cecidomyiidae on *Aster alpinus* L., emerged 5.VII.1999, Martin Schwarz leg., preserved in Biologiezentrum, Linz. Paratypes: 3 females, 1 male same data as holotype but emerged 3.–25.VII.1999.

Diagnosis. Occiput with a few wrinkles; female A9 very slightly longer than wide; notauli complete; female metasoma with smooth and

pointed apical tergites, T5 half as long as its basal width, T6 fully as long as wide. Shape of metasoma most similar to that of *P. gorge* Walker, 1835 and *P. iolas* Walker, 1835, but with more transverse T5 than in these species, and *P. gorge* has A9 transverse, and *P. iolas* has notauli incomplete, cf. Vlug (1985). *P. alpina* is also somewhat similar to *P. subapicalis* Buhl, 2006, but this species has more transversely sculptured head and longer apical tergites than in *P. alpina*, cf. Buhl (2006).

Description. Female. Body length 1.6 mm. Black, antennae hardly lighter; tegulae and legs including coxae dark brown; mandibles, trochanters, apical half of fore femora, extreme apex of mid femora, base and apex of all tibiae, and segments 1–4 of all tarsi light brown.

Head from above (Fig. 2) about twice as wide as long, hardly wider than mesosoma across tegulae, finely and evenly reticulate-coriaceous; occiput with a few short transverse wrinkles medially; frons with a smooth line from anterior ocellus to antennal insertions and with a few

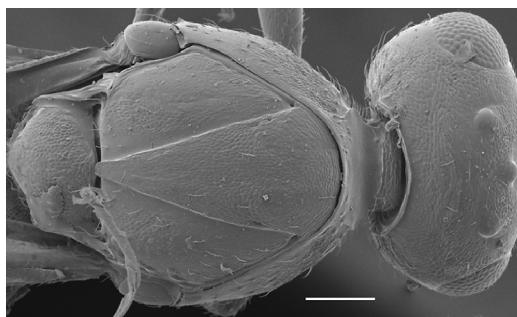


Fig. 2. *P. alpina* sp. n., female from above. Scale bar = 100 μ m.

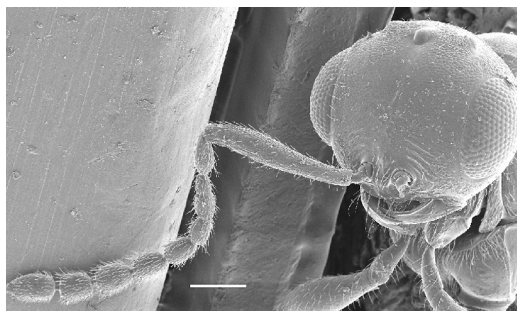


Fig. 3. *P. alpina* sp. n., female, head and antenna. Scale bar = 100 μ m.



Fig. 4. *P. alpina* sp. n., female, scutellum and propodeum.

weak transverse wrinkles above antennae. OOL:LOL = 4:3. Head in frontal view (Fig. 3) 1.2 times as wide as high. Antenna (Fig. 3) with A1 0.8 times as long as height of head, as long as distance between inner orbits; A9 slightly more than 1.1 times as long as wide.

Mesosoma 1.4 times as long as wide, slightly higher than wide (25:24). Sides of pronotum dull, finely reticulate-coriaceous (not longitudinally so), smooth along upper and hind margins. Mesoscutum with very few hairs, dull, finely reticulate-coriaceous as head, outer half of lateral lobes partly smoother; notauli distinct, smooth, complete, meeting in a fine point; mid lobe only slightly prolonged, not reaching base of scutellum, postero-medially with a short longitudinal carina; scuto-scutellar grooves deep, each with very few, inconspicuous hairs. Mesopleuron finely longitudinally striated in about upper half, smooth along front margin and below. Scutellum (Fig. 4) reticulate-coriaceous as mesoscutum, smoother in posterior 0.3, with very sparse hairs, evenly but weakly convex. Metapleuron with pilosity all over. Propodeal carinae dark, parallel, widely separated; slightly transverse area between them smooth and shiny.

Fore wing overreaching tip of metasoma by at most the length of T6, clear, 2.6 times as long as wide, with fine and dense microtrichia; marginal cilia less than 0.1 times the width of wing. Hind wing 5.4 times as long as wide, with two hamuli; marginal cilia hardly 0.3 times the width of wing.

Metasoma (Fig. 5) nearly 1.2 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 with some irregular weak longitudinal carinae and two stronger longitudinal carinae, with numerous hairs lateral of carinae. T2 slightly hairy in basal foveae, striated from these to slightly less than half of length, medially striated to about midlength of tergite, rest of tergite as well as following tergites smooth; T3–T6

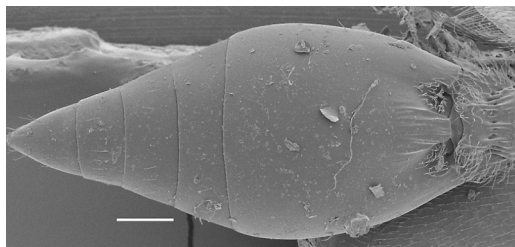


Fig. 5. *P. alpina* sp. n., female metasoma from above. Scale bar = 100 μ m.

each with about six fine hairs which are inserted in shallow punctures.

Male. Body length 1.5 mm. Antenna with A3 two-thirds as long as A4 which is only slightly triangular, about as long and as wide as A5; A9 1.6 times as long as wide; A10 1.75 times as long as A9; flagellar pubescence about one-third the width of segments. Metasoma as long as head and mesosoma combined.

Etymology. Named after the region of the type locality as well as the host plant species.

Platygaster bayankhongorensis sp. n. (Fig. 6)

Type material. Holotype female: Mongolia, 130 km S of Bayankhongor (45°03'N 100°59'E), 1,240 m, 6.VII.2004, M. Kadlecová leg. Paratypes: 2 females same data as holotype, but one J. Halada leg. All preserved in Biologiezentrum, Linz. Paratype: 1 female same data as holotype.

Diagnosis. A dark species with thick reticulate-coriaceous head without striation, female A9 1.5 times as long as wide, mesoscutum smooth with almost complete notauli, female metasoma not longer than mesosoma, and T2 with smooth basal foveae. Differs from the somewhat similar Mongolian species described by Buhl (2004a) in having more slender antennae and smoother mesoscutum. Cf. Buhl (2004a).

Description. Female. Body length 1.2–1.4 mm. Black; antennae, mandibles and legs dark brown; trochanters, base and apex of fore tibiae, base of mid and hind tibiae, and segments 1–4 of all tarsi slightly lighter.

Head from above (Fig. 6a) 1.7 times as wide as long, 1.2 times as wide as mesosoma; occiput rounded, smooth in posterior 0.4, otherwise transversely reticulate-coriaceous with a few short transverse wrinkles medially; vertex and

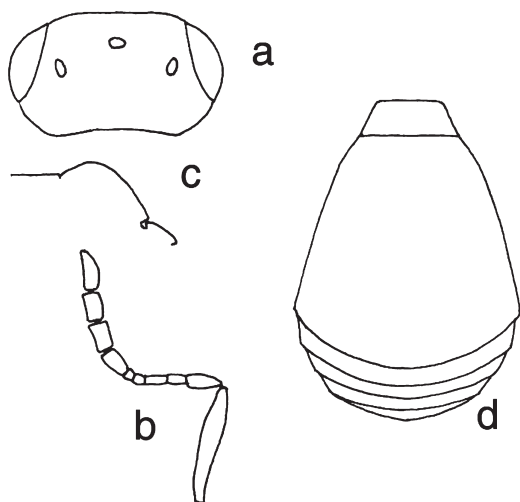


Fig. 6. *P. bayankhongorensis* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

frons finely and hardly transversely reticulato-coriaceous, frons more distinctly so and with larger meshes than vertex. OOL:LOL = 7:5. Head in frontal view 1.25 times as wide as high. Antenna (Fig. 6b) with A1 two-thirds as long as height of head, 0.9 times as long as distance between inner orbits; flagellum with scattered longer hairs which are up to as long as width of segments; A9 1.5 times as long as wide.

Mesosoma 1.7 times as long as wide, 1.1 times as high as wide. Sides of pronotum smooth, with very few, inconspicuous hairs. Mesoscutum with a few inconspicuous hairs along notauli, smooth; notauli distinct and almost complete, fading out in longitudinal rugosity anteriorly; mid lobe blunt posteriorly, not prolonged; scuto-scutellar grooves triangular, with a few, inconspicuous hairs. Mesopleuron with longitudinal striation in upper third, rest smooth. Scutellum (Fig. 6c) smooth, evenly convex, with very few hairs. Metapleuron smooth, with sparse pilosity, almost bare in lower half. Propodeal carinae low, slightly diverging, area between them about as long as its distal width, shiny and almost smooth.

Fore wing overreaching tip of metasoma by a distance equal to about 1.5 times the length of T3–T6, 0.75 times as long as entire body, 2.5 times as long as wide, clear, with short and moderately dense microtrichia; marginal cilia absent.

Hind wing 5.0 times as long as wide, with two hamuli; marginal cilia 0.2 times the width of wing.

Metasoma (Fig. 6d) as long as mesosoma, as wide as head. T1 with numerous fine longitudinal carinae. T2 with smooth and slightly hairy basal foveae, between foveae striated to 0.3 of length; hind margin of T2–T6 with distinct reticulation; T3–T4 virtually bare, T5 with a transverse row of eight hairs which are inserted in shallow punctures.

Etymology. Named after the type locality.

Platygaster breviscapa sp. n. (Fig. 7)

Type material. Holotype female: Croatia, Zadar, Borik, 26.VI.1961, S. Erlandsson leg., preserved in Naturhistoriska Riksmuseet, Stockholm. Ad-

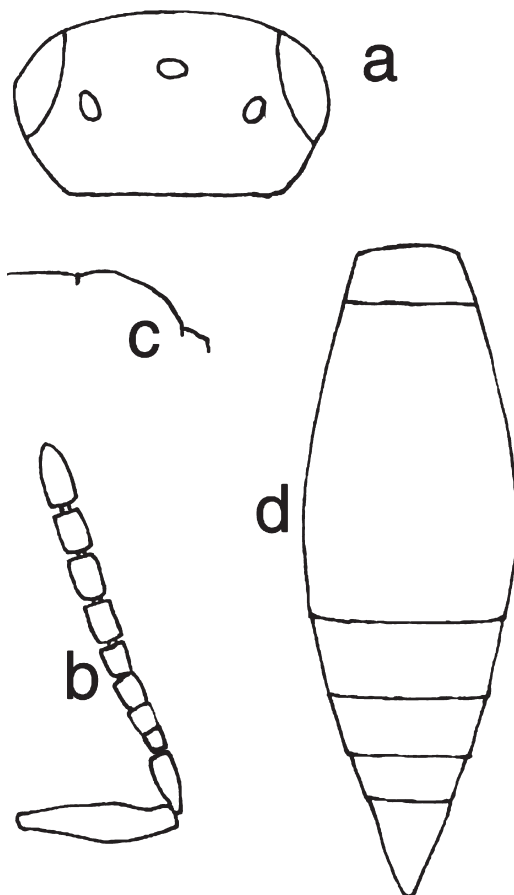


Fig. 7. *P. breviscapa* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

ditional material: 2 females, England, West Sussex, near Chichester, Kingley Vale, VI.–VII.1963, preserved in the Natural History Museum, London.

Diagnosis. A species with antennal scape only 0.6 times as long as height of head, complete notauli; metasoma only 0.75 as wide as mesosoma, about as long as head and mesosoma combined, with hardly striated T2. An isolated distinct species on account of relatively short antennal scape and narrow, almost smooth metasoma.

Description. Female. Body length 1.5 mm. Dull black, antennae and legs dark brown; most of fore tibiae, base of mid and hind tibiae, and segments 1–4 of all tarsi lighter brown.

Head from above (Fig. 7a) 1.8 times as wide as long, hardly 1.1 times as wide as mesosoma, finely reticulate-coriaceous; occiput broadly rounded, without striation; frons smooth along middle, medially in lower half with weak transverse reticulation on the smooth background. OOL:LOL = 1:2; OOL hardly as long as length of lateral ocellus. Head in frontal view 1.2 times as wide as high. Antenna (Fig. 7b) with A1 0.6 times as long as height of head, 0.85 times as long as distance between inner orbits; A9 1.25 times as long as wide.

Mesosoma 1.4 times as long as wide, hardly 1.1 times as high as wide. Sides of pronotum dull reticulate-coriaceous as head over most of surface. Mesoscutum almost bare, dull reticulate-coriaceous as head, almost longitudinally striated in posterior two-thirds medially, in posterior third over most of width; notauli complete but posteriorly obscured by the strong longitudinal sculpture; mid lobe posteriorly blunt, hardly prolonged; scuto-scutellar grooves bare and rather narrow. Mesopleuron smooth. Scutellum (Fig. 7c) weakly convex, distinctly and uniformly reticulate-coriaceous, bare. Metapleuron with pilosity all over. Propodeal carinae short, diverging; much transverse area between them smooth and shiny.

Fore wing clear, 2.2 times as long as wide, with fine and moderately dense microtrichia; marginal cilia very short. Hind wing 4.8 times as long as wide, with two hamuli; marginal cilia 0.13 times the width of wing.

Metasoma (Fig. 7d) about as long as head and

mesosoma combined, 0.75 as wide as mesosoma. T1 with two longitudinal carinae on a somewhat uneven background. T2 with only a few wrinkles around basal foveae to hardly 0.2 of length of tergite, rest of tergite as well as following tergites smooth; T3–T5 laterally each with a few hairs which are inserted in shallow punctures (not forming rows), T6 with scattered such hairs.

Male. Unknown.

Etymology. The name refers to the characteristically short scape.

Platygaster kazakhstanica sp. n. (Fig. 8)

Type material. Holotype female: Kazakhstan, lake 50 km S of Balkhash, 26.–28.VI.1992, K. Denes leg., preserved in Biologiezentrum, Linz. Paratype: 1 male same data as holotype. (The label on the paratype reads “50 km E of Balkhash”,

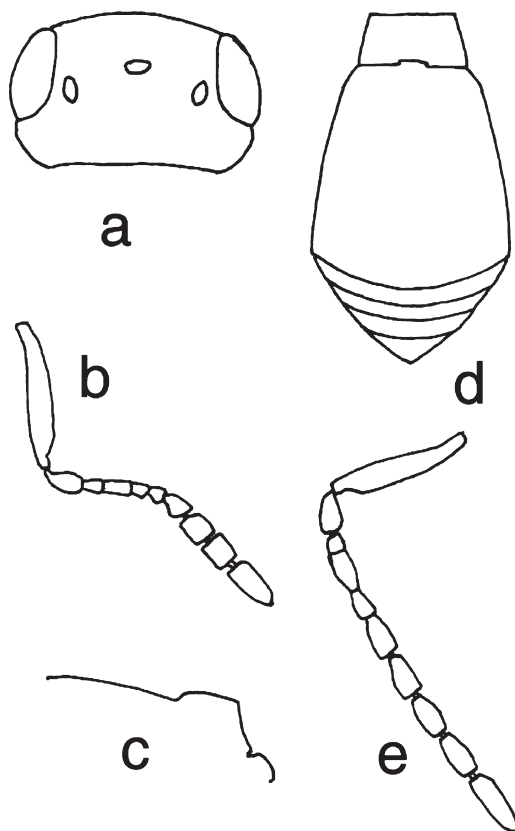


Fig. 8. *P. kazakhstanica* sp. n. – a. Head from above. – b. Female antenna. – c. Scutellum and propodeum. – d. Female metasoma from above. – e. Male antenna.

otherwise identical to that of holotype. Hardly both are true, but it is not possible to determine whether the type locality in fact is 50 km S or 50 km E of Balkhash.)

Diagnosis. A dark species characterised by scutellum posteriorly being concave in lateral view, further by thick head and weak but almost complete notauli. The similar North African *P. bonessi* Buhl, 2000 has no notauli and scutellum more vertical posteriorly than in *P. kazakhstanica*. Cf. Buhl (2000a).

Description. Female. Body length 1.1 mm. Black, antennae and legs very dark brown; apex of fore tibiae, base and apex of mid tibiae, basal half of hind tibiae, and segments 1–4 of all tarsi medium brown.

Head from above (Fig. 8a) 1.7 times as wide as long, 1.2 times as wide as mesosoma, distinctly and transversely reticulate-coriaceous, strongest and most transversely so on the broad and rounded occiput. OOL about equal to shorter diameter of lateral ocellus; OOL:LOL = 10:27. Antenna (Fig. 8b) with A9 as wide as long.

Mesosoma 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum distinctly, longitudinally reticulate-coriaceous over most of surface. Mesoscutum with very few hairs, faintly and unevenly longitudinally reticulate-coriaceous; notauli weakly indicated over most of length, in anterior 0.25 disappearing in microsculpture; mid lobe posteriorly wide, slightly and bluntly prolonged to base of scutellum; scuto-scutellar grooves large, each with at most seven long hairs. Mesopleuron in about upper third with fine longitudinal striation, rest smooth. Scutellum (Fig. 8c) sculptured as mesoscutum, with very few hairs, in dorsal view almost ending in a blunt tooth posteriorly, in lateral view obliquely cut off. Metapleuron smooth, with pilosity except along narrow anterior margin. Propodeal carinae diverging, area between them slightly transverse, smooth and shiny.

Fore wing clear, 2.6 times as long as wide, 0.75 times as long as entire body, with dense and pale, fine microtrichia; marginal cilia very short. Hind wing 5.25 times as long as wide, with two hamuli; marginal cilia 0.25 times the width of wing.

Metasoma (Fig. 8d) very slightly longer than mesosoma, 0.75 times as long as head and meso-

soma combined, hardly as wide as mesosoma. T1 with two rather weak longitudinal carinae, area between them smooth and bare, lateral areas with numerous hairs. T2 with smooth basal foveae, tergite between them striated to almost 0.3 of length, rest of tergite smooth. T3–T5 with weak reticulation along hind margin, T6 with such sculpture all over; apical tergites with a few fine hairs which are inserted in shallow punctures.

Male. Body length 1.1 mm. Antenna (Fig. 8e). Sculpture on occiput less transverse, on mesoscutum stronger than in female. T2 striated only to 0.2 of its length.

Etymology. Named after the country of the holotype locality.

Platygaster novemarticulata sp. n. (Figs 9–12)

Type material. Holotype female: Mongolia, 130 km S of Bayankhongor (45°03'N 100°59'E), 1,240 m, 6.VII.2004, J. Halada leg., preserved in Biologiezentrum, Linz. Paratype: 1 female same data as holotype.

Diagnosis. A striking *Platygaster*-species in having 9-segmented antennae. As the species is only aberrant in having 9-segmented antennae, in other respects a rather typical *Platygaster* s.str., it is hardly sensible to erect a new genus for it at the present level of study. Also other platygastrid genera, e.g. *Fidiobia* and *Metanopedias*, contain species with both 9- and 10-segmented antennae.

Description. Female. Body length 1.4 mm. Black, antennae and legs medium brown; most of fore tibiae, base and apex of mid tibiae, entire fore tarsi and segments 1–4 of mid and hind tarsi yellowish brown.

Head from above (Fig. 9) 1.7 times as wide as long, slightly more than 1.1 times as wide as mesosoma; occiput broad and rounded, finely transversely striated, vertex even finer transversely striated; frons smooth, with very fine oblique striation around antennal insertions. OOL:LOL = 9:8. Head in frontal view (Fig. 10) one and a third times as wide as high. Antenna (Fig. 11) 9-segmented, with A1 two-thirds as long as height of head, 6/7 as long as distance between inner orbits.

Mesosoma (Figs 9 and 12) 1.4 times as long as wide, slightly higher than wide (23:22). Sides of pronotum with longitudinal microsculpture and sparse hairs, with smooth broad upper and hind margins. Mesoscutum bare, dull reticulate-

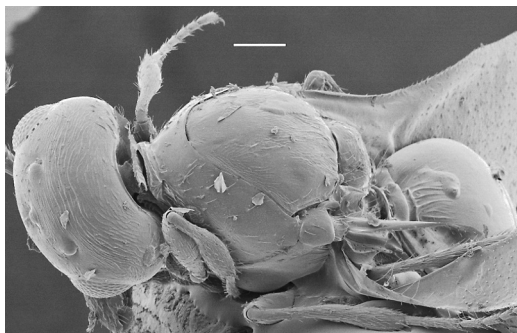


Fig. 9. *P. novemarticulata* sp. n., female from above. Scale bar = 100 μ m.

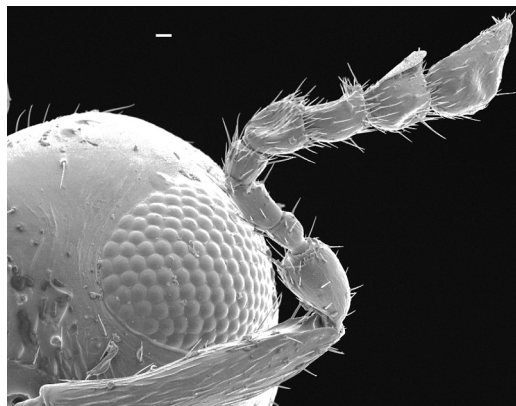


Fig. 11. *P. novemarticulata* sp. n., female antenna. Scale bar = 10 μ m.

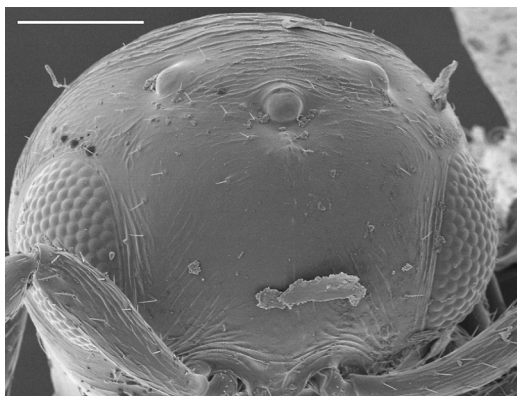


Fig. 10. *P. novemarticulata* sp. n., female, head in frontal view. Scale bar = 100 μ m.

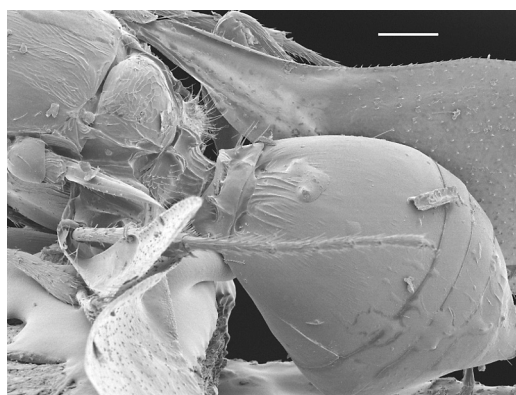


Fig. 12. *P. novemarticulata* sp. n., female meso- and metasoma from above. Scale bar = 100 μ m.

coriaceous, smoother laterally; notauli very faintly indicated posteriorly; mid lobe blunt, not prolonged; scuto-scutellar grooves bare. Mesopleuron smooth, in upper 0.3 with very fine oblique striation. Scutellum (Fig. 12) dull reticulate-coriaceous, with sparse hairs, evenly convex. Metapleuron with moderately dense pilosity all over. Propodeal carinae short, parallel; almost rectangular area between them smooth and shiny.

Fore wing clear, 2.5 times as long as wide, 0.8 times as long as body, slightly overreaching tip of metasoma, with moderately dense and very short microtrichia (the wing looks just punctured); marginal cilia absent. Hind wing about 5.0 times as long as wide, with two hamuli; marginal cilia 0.2 times width of wing.

Metasoma (Fig. 12) 0.9 times as long as head and mesosoma combined, as wide as mesosoma. T1 with two widely separated longitudinal carinae, otherwise smooth, with about four erect

hairs on each side. T2 with bare, short and distinct basal foveae, tergite weakly striated in and between basal foveae to one-third of length, rest of tergite as well as following tergites almost smooth; T3 with one hair on each side which is inserted in a shallow puncture, following tergites each with 3–4 such hairs on each side.

Etymology. The name refers to the 9-segmented antennae.

Platygaster platygaster sp. n. (Fig. 13)

Type material. Holotype female: Kyrgyzstan, Kyrgyz Mountain Range, Ala-Archa river, Uzun-Bulak, 1,800 m a.s.l., VI.2000, V. Gurko leg., preserved in Biologiezentrum, Linz.

Diagnosis. A species with distinctly striated occiput, finely sculptured frons, complete notauli, and female metasoma very slightly stri-

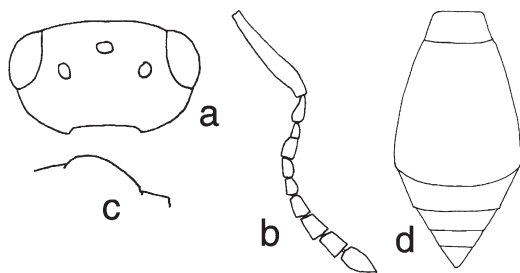


Fig. 13. *P. platygaster* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

ated, distinctly wider than mesosoma, with T3–T6 combined hardly half as long as T1–T2 combined. Similar to *P. iberica* Buhl, 1999 but with stronger sculptured head, less slender antennae, less convex scutellum, and relatively shorter T3–T6. Cf. also Buhl (1999).

Description. Female. Body length 1.5 mm. Black, antennae and legs hardly lighter; mandibles, base and apex of all tibiae, and segments 1–4 of all tarsi reddish brown.

Head from above (Fig. 13a) 1.9 times as wide as long, 1.1 times as wide as mesosoma; occiput medially rather strongly transversely striated, behind eyes reticulate-coriaceous; vertex and frons finely reticulate-coriaceous (not transversely so); frons medially with a weak impressed longitudinal line, medially in lower half and just above antennal insertions with weak transverse wrinkles. OOL:LOL = 6:7. Head in frontal view 1.2 times as wide as high. Antenna (Fig. 13b) with A1 0.8 times as long as height of head, longer than distance between inner orbits (16:15); A9 1.25 times as long as wide.

Mesosoma 1.4 times as long as wide, slightly higher than wide (23:22). Sides of pronotum reticulate-coriaceous in upper anterior part (not longitudinal so), smooth along broad upper and hind margins and in lower half, here with numerous distinct hair-implantations. Mesoscutum with sparse, scattered hairs; mid lobe reticulate-coriaceous, in extreme posterior part smooth, in anterior 0.3 with smooth admedian lines; lateral lobes smooth, along anterior margin and in posterior half of inner third reticulate-coriaceous; notauli complete, distinct and smooth, meeting in a fine point at base of scutellum; scuto-scutellar grooves wide, each with at most six inconspicuous

hairs. Mesopleuron smooth. Scutellum (Fig. 13c) finely and uniformly reticulate-coriaceous, evenly and moderately hairy, weakly convex. Metapleuron with pilosity all over. Propodeal carinae parallel, slightly transverse area between them smooth and shiny.

Fore wing 0.8 times as long as body, 2.7 times as long as wide, faintly brownish, with dense and rather fine microtrichia; marginal cilia 0.06 times the width of wing. Hind wing 5.8 times as long as wide, with two hamuli; marginal cilia 0.2 times the width of wing.

Metasoma (Fig. 13d) 1.2 times as long as head and mesosoma combined, fully 1.1 times as wide as mesosoma. T1 with numerous fine longitudinal carinae and with two stronger longitudinal carinae, laterally with numerous hairs. T2 with basal foveae pubescent at base, tergite almost smooth except for a few weak striae along inner slopes of basal foveae to about 0.4 length of tergite. T3–T6 smooth, with hairs inserted in shallow punctures, T3–T5 each with a transverse row of about eight such hairs, T6 with eight more scattered hairs.

Etymology. The name refers to the relatively flattened, broad metasoma.

Platygaster schwarzi sp. n. (Fig. 14)

Type material. Holotype female: Austria, Hohe Tauern, Tauernock (47°04'N 12°49'E), 2,060–2,150 m, 21.VIII.1999. Paratype: 1 female, Hohe Tauern, Edelweiss Spitze (47°07'N 12°50'E), 2,500–2,570 m, 25.VIII.2001. Both Martin Schwarz leg. and preserved in Biologiezentrum, Linz.

Diagnosis. A dark species with head twice as wide as long, reticulate-coriaceous with only a few wrinkles on occiput; female antenna with A4 fully twice as long as wide, A9 1.2 times as long as wide; notauli complete; metasoma with T2 very slightly striated, female T3–T6 combined hardly half as long as T2. Similar to *P. longestriolatus* Thomson, 1859, but this species has three hamuli on hind wing, and T2 distinctly striated over whole width to two-thirds of length. Cf. Buhl (1995). *P. schwarzi* differs also from other similar species, e.g. *P. taras* Walker, 1835, in having T2 only slightly striated, and from *P. sonchis* Walker, 1835 and *P. cebes* Walker, 1835 e.g. in having more transverse head and more slender

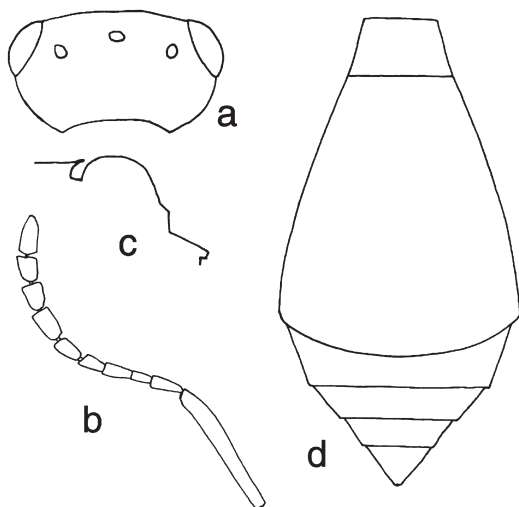


Fig. 14. *P. schwarzi* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

antennae. Cf. Vlug (1985).

Description of holotype. Female. Body length 1.8 mm. Black; apex of fore femora, base and apex of fore tibiae, knees of mid and hind legs, and segments 1–4 of all tarsi dark brown.

Head from above (Fig. 14a) 2.0 times as wide as long, hardly wider than mesosoma, distinctly reticulate-coriaceous, behind ocelli with five transverse wrinkles; occiput broadly rounded; frons with a longitudinal medial impression, in lower third with oblique wrinkles above antennal insertions; OOL:LOL = 9:8. Head in frontal view 1.2 times as wide as high. Antenna (Fig. 14b) with A1 nearly 1.1 times as long as height of head; A9 1.2 times as long as wide.

Mesosoma 1.4 times as long as wide, hardly 1.1 times as high as wide. Sides of pronotum in upper 0.4 reticulate-coriaceous (not longitudinally so), smooth along broad hind margin and below, medially bare, along hind margin and in lower 0.4 with numerous hair-implantations. Mesoscutum with a few scattered hairs, almost uniformly reticulate-coriaceous, in anterior 0.4 with very indistinct admedian lines; notauli deep and complete, meeting in a rather fine point above base of scutellum; scuto-scutellar grooves wide and smooth, each with about six long hairs. Mesopleuron smooth except for a few short wrinkles just below tegula. Scutellum (Fig. 14c) rather densely hairy, dull, finely and uniformly reticu-

late-coriaceous, evenly convex slightly above level of mesoscutum. Metapleuron with pilosity all over. Propodeal carinae parallel, slightly elongate area between them smooth and shiny, with some very weak and short carinae in anterior half.

Fore wing as long as entire body, 2.6 times as long as wide, clear, with dense and moderately long microtrichia; marginal cilia 0.08 times the width of wing. Hind wing 5.7 times as long as wide, with two hamuli; marginal cilia 0.25 times the width of wing.

Metasoma (Fig. 14d) slightly more than 1.1 times as long as head and mesosoma combined, 1.1 times as wide as mesosoma. T1 with numerous similar longitudinal carinae, hairy laterally, along sides with 5–6 long erect hairs. T2 with smooth but slightly hairy basal foveae, at apices of foveae with extremely weak traces of striation to hardly half the length of tergite, tergite between foveae weakly striated to about midlength, rest of T2 as well as following tergites smooth; T3 with 8, T4 with 10 hairs which are inserted in rather shallow punctures; T5 with 14 slightly irregularly arranged hairs which are inserted in slightly deeper punctures, T6 with 10 such hairs.

Description of paratype. Frons without medial impression; mesoscutum and scutellum less hairy than in holotype; area between propodeal carinae without fine carinae; metasoma hardly 1.1 times as long as head and mesosoma combined, hardly wider than mesosoma, T2 with slightly shorter striation than in holotype.

Etymology. Named after the collector.

Platygaster sylveni sp. n. (Figs 15–16)

Type material. Holotype female: Sweden, Uppland, Rindö, 21.V.1978, ex. *Oligotrophus juniperinus* (L.) on *Juniperus communis* L., emerged indoors 1.VI.1978, E. Sylvén leg., preserved in Naturhistoriska Riksmuseet, Stockholm. Paratypes: 2 females, 2 males same data as holotype.

Diagnosis. A species with head fully twice as wide as long, without striation, female A9 1.5, male A9 2.0 times as long as wide, notauli complete, female metasoma hardly longer than head and mesosoma combined, and T2 only with short striation between basal foveae. Similar to *P. entwistlei* Buhl, 1997 (Scotland, also from *O. juniperinus* on juniper), but this species has head less transverse than in *P. sylveni*, with strongly

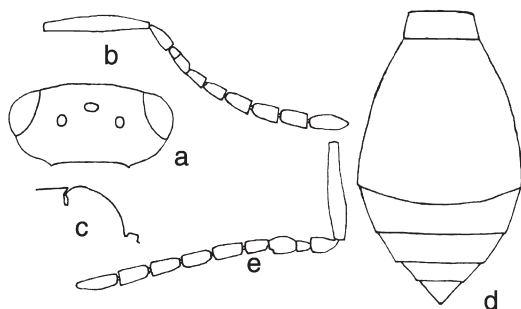


Fig. 15. *P. sylveni* sp. n. – a. Head from above. – b. Female antenna. – c. Scutellum and propodeum. – d. Female metasoma from above. – e. Male antenna.

striated occiput, notauli only visible in posterior half, T1 with numerous similar longitudinal carinae, T2 striated to half of its length, and A5–A9 of male each only 1.6 times as long as wide, cf. Buhl (1997).

Description. Female. Body length 1.5–1.7 mm. Dark reddish brown with light brown antennae and legs (not entirely hardened after hatching?).

Head from above (Figs 15a and 16) 2.1 times as wide as long, 1.1 times as wide as mesosoma; occiput and vertex rounded, distinctly reticulate-coriaceous (not transversely so), occiput medially with a few oblique wrinkles; frons weakly reticulate-coriaceous laterally, smooth medially. OOL = LOL. Head in frontal view about one and a third times as wide as high. Antenna (Fig. 15b) with A1 fully 0.8 times as long as height of head, as long as distance between inner orbits; A9 1.5 times as long as wide.

Mesosoma 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum smooth, weakly reticulate-coriaceous in upper 0.4, smooth along margins, below with sparse hair-implantations. Mesoscutum sparsely hairy, weakly reticulate-coriaceous, outer half of lateral lobes smooth; notauli complete and strong; mid lobe posteriorly ending in a fine point hardly reaching base of scutellum; scuto-scutellar grooves wide and deep, each with about five long hairs. Mesopleuron smooth. Scutellum (Fig. 15c) evenly convex, sparsely hairy, smooth, finely reticulate-coriaceous anteriorly and laterally. Metapleuron with pilosity all over. Propodeal carinae very slightly diverging, area between them about as long as wide, smooth and shiny.

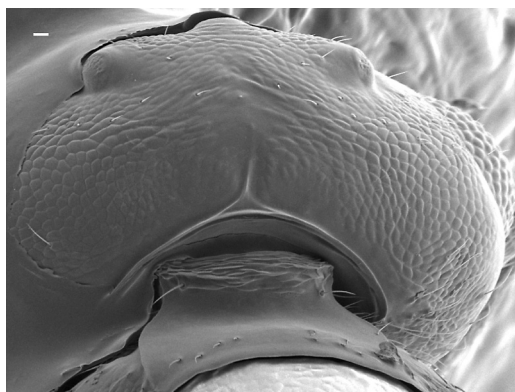


Fig. 16. *P. sylveni* sp. n., head from above. Scale bar = 10 μ m.

Fore wing clear, overreaching tip of metasoma by about the length of T5–T6, 2.5 times as long as wide, with fine and dense microtrichia; marginal cilia short. Hind wing 5.1 times as long as wide, with two hamuli; marginal cilia 0.25 width of wing.

Metasoma (Fig. 15d) very slightly longer than head and mesosoma combined, about as wide as head. T1 with two longitudinal carinae, between them fine longitudinal carinae in anterior half, smooth in posterior half. T2 with basal foveae almost smooth, between them longitudinally striated to hardly one-third of length. T3–T6 smooth, each with 4–5 hairs on each side which are inserted in shallow punctures.

Male. Body length 1.6 mm. Antenna (Fig. 15e) with A6–A9 each about twice as long as wide; flagellar pubescence about one-third the width of segments.

Etymology. Named after the collector.

Platygaster viklundi sp. n. (Fig. 17)

Type material. Holotype female: Sweden, Torne Lappmark, Vakkajokk delta, 15.–16.VII.1941, G. Wängsjö leg., preserved in Naturhistoriska Riksmuseet, Stockholm.

Diagnosis. A large species with occiput evenly reticulate-coriaceous, female preapical antennal segments fully 1.8 times as long as wide, hind wing with four hamuli, striation of T2 to about 0.8 of length of tergite, apical tergites short. Similar to *P. frater* Buhl, 2006 (44 females examined), but this species is at most 2.1 mm long, it has occiput with transverse wrinkles medially,

mesopleuron smoother below, fore wing darker and more extensively covered by denser microtrichia (the mostly bare area at base of wing covers hardly 0.25 of wing length in *frater*, almost 0.4 in *viklundi*), hind wing with only three hamuli, carinae of T1 less uniform, apical tergites more hairy, and body appendages darker than in *P. viklundi*. *P. viklundi* differs from other large species with long striation on T2, i.e. *P. longestriolatus* Thomson, 1859, *P. minuta* Zetterstedt, 1838, *P. orus* Walker, 1835, *P. otanes* Walker, 1835, and *P. quadrifarius* Kieffer, 1916, most obviously in having distinctly longer preapical antennal segments. *P. viklundi* differs from *P. lapponica* Thomson, 1859 (only male known) in having occiput not striated. Cf. Kieffer (1926), Vlug (1985), and Buhl (1995, 2006).

Description. Female. Body length 2.4 mm. Black; antennae, mandibles, tegulae, all coxae, and mid and hind legs rather uniformly medium brown, tibiae slightly lighter in basal half; fore femora, tibiae and tarsi yellowish.

Head from above (Fig. 17a) 1.8 times as wide as long, as wide as mesosoma, distinctly and evenly reticulate-coriaceous; frons transversely striated in lower 0.4 above antennae, with a smooth longitudinal line from medial ocellus to striated area. OOL:LOL = 5:4. Eyes with a few very fine hairs. Head in frontal view 1.25 times as wide as high. Antenna (Fig. 17b) with A1 fully 1.1 times as long as distance between inner orbits; preapical antennal segments each 1.8–1.9 times as long as wide; A10 only 7/6 as long as A9.

Mesosoma 1.5 times as long as wide, very slightly higher than wide. Sides of pronotum dull reticulate-coriaceous in upper 0.4, rest with numerous hair-implantations on a smooth background, with rather dense long hairs. Mesoscutum distinctly but slightly finer reticulate-coriaceous than head; lateral lobes medially somewhat smoother; admedian lines indicated in anterior third; notauli strong and complete, meeting in a fine point slightly behind posterior margin of disc but not reaching scutellum; disc only with a few hairs along notauli and laterally; scuto-scutellar grooves wide, deep and smooth, each with 4–5 inconspicuous hairs. Mesopleuron longitudinally striated in most of upper half and below, smooth in medial 0.4. Scutellum (Fig. 17c) sparsely hairy, dull, more unevenly sculptured

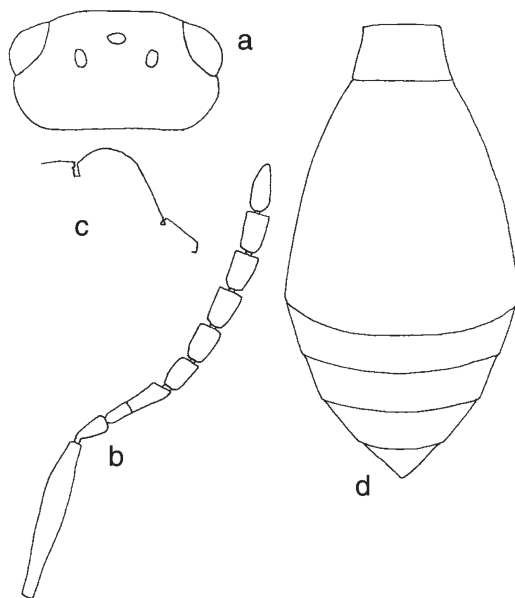


Fig. 17. *P. viklundi* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

than mesoscutum, with fine and short longitudinal carinae anteriorly and posteriorly, strongly margined laterally. Metapleuron and dorsal areas of propodeum with dense whitish pilosity; propodeal carinae parallel, area between them smooth and shiny, about 1.25 times as long as wide.

Fore wing overreaching apex of metasoma by half the length of T2–T6 combined, 0.95 times as long as entire body, 2.6 times as long as wide, clear, with long and dense microtrichia; marginal cilia 0.06 the width of wing. Hind wing nearly 5.2 times as long as wide, with four hamuli; marginal cilia hardly one-fifth the width of wing.

Metasoma (Fig. 17d) very slightly longer than head and mesosoma combined, fully 1.1 times as wide as these. T1 with numerous strong longitudinal carinae. T2 striated to fully 0.8 of its length, medially very slightly shorter, laterally and posteriorly with a few long hairs (about 12 on each side). T3–T6 smooth; T3 with about 5 hairs which are inserted in shallow punctures in a single transverse line on each side; T4 with about 12 slightly more irregularly placed such hairs on each side; T5 with about 15 hairs which are inserted in somewhat deeper punctures on each side, arranged in two irregular transverse rows,

both narrowly interrupted at middle; T6 with dense (about 16) hairs.

Male. Unknown.

Etymology. Named for curator Bert Viklund, Stockholm, who arranged the loan of the material.

Pyrgaspis striativentris sp. n. (Figs 18–20)

Type material. Holotype male: Mongolia, 130 km S of Bayankhongor (45°03'N 100°59'E), 1,240 m, 6.VII.2004, J. Halada leg., preserved in Biologiezentrum, Linz. Paratypes: 4 males same data as holotype, but M. Kadlecová leg.

Diagnosis. A species with relatively low scutellum, male metasoma about 1.7 times as long as wide, and T2 striated to 0.8 of length. The only other species of the genus, *Pyrgaspis haloxylonomyiae* Kozlov, 1967, was collected abundantly on the same locality as *P. striativentris*, but *P. haloxylonomyiae* has scutellum distinctly higher and more pointed, male metasoma at most 1.5 times as long as wide (eight males examined), and T2 striated to only 0.25 of length. Cf. also Kozlov (1967).

Description. Male. Body length 1.4–1.5 mm. Black, A1 and legs excluding coxae light brownish, thickened parts of femora and tibiae sometimes slightly darkened; A2–A10 and mandibles darker reddish brown, coxae almost black.

Head from above (Fig. 18) 1.8 times as wide as long, fully 1.1 times as wide as mesosoma; occiput rounded, transversely reticulate-coriaceous, antero-medially slightly striated; vertex reticulate-coriaceous, between ocelli trans-

versely so; frons distinctly reticulate-coriaceous, medially and below with transverse elements. OOL = LOL. Head in frontal view (Fig. 19) 1.3 times as wide as high. Antenna (Fig. 18) with A1 0.75 times as long as height of head, shorter than distance between inner orbits (15:18); A9 2.3 times as long as wide; A10 1.7 times as long as A9.

Mesosoma (Fig. 18) 1.5 times as long as wide, as wide as high. Sides of pronotum in upper 0.4 reticulate-coriaceous with longitudinal elements, rest strongly longitudinally striated. Mesoscutum with very few hairs, distinctly longitudinally reticulate-coriaceous; notauli fine but almost complete, fading out just before anterior margin of disc, posteriorly meeting in a fine point; mid lobe slightly prolonged, not reaching scutellum; scuto-scutellar grooves distinct, each with about six long hairs. Mesopleuron finely longitudinally striated over most of surface, with only a small area antero-medially and a slightly larger area postero-medially smooth. Scutellum (Figs 18 and 20) with short and sparse hairs, longitudinally striated, with a fine tooth postero-medially, uniformly dark. Metapleuron longitudinally striated, in posterior half with rather sparse pilosity. Propodeal carinae short, diverging, well separated; area between them smooth.

Fore wing clear, 2.4 times as long as wide, 0.8 times as long as body, with rather dense and very fine microtrichia (the wing looks just punctured); marginal cilia absent. Hind wing 4.25 times as long as wide, with two hamuli; marginal cilia 0.15 times width of wing.

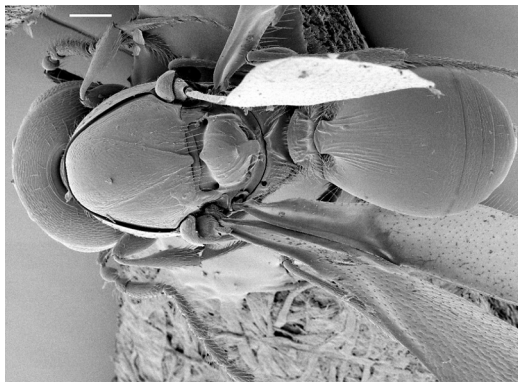


Fig. 18. *P. striativentris* sp. n., male from above. Scale bar = 100 μ m.

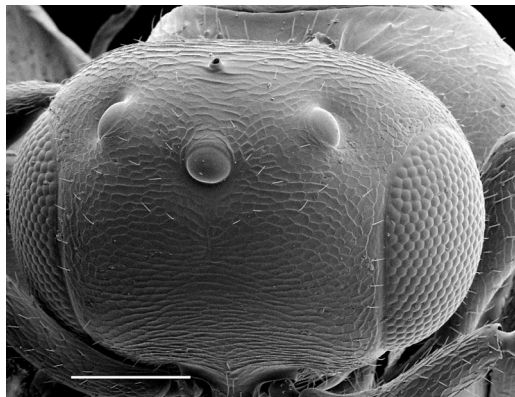


Fig. 19. *P. striativentris* sp. n., male, head in frontal view. Scale bar = 100 μ m.

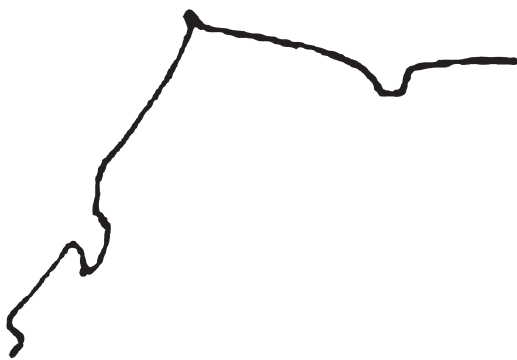


Fig. 20. *P. striativentris* sp. n., male, scutellum and propodeum.

Metasoma (Fig. 18) 0.75 times as long as head and mesosoma combined, slightly longer than mesosoma (19:18) and slightly narrower than this. T1 with several weak longitudinal carinae and with three stronger longitudinal carinae, laterally with numerous hairs. T2 with hairy basal foveae, striated to 0.8 its length except laterally; T2–T5 with distinct reticulation along hind margin; apical tergites with very few and inconspicuous hairs which are inserted in shallow punctures.

Etymology. The name refers to the characteristic long striation on T2.

Synopeas acutispinus Buhl, 1998 (Fig. 21a)
Female described by Buhl (1998a). Additional material examined: 1 female, Sweden, ÖG, S. Anna sn., Torönsborg, 10.VII.1940, G. Wängsjö leg.; 3 males, ÖG, S. Anna sn., Svensmarö, 25.VI.1977, G. Wängsjö leg., all preserved in Naturhistoriska Riksmuseet, Stockholm.

Description of male. Body length 1.4 mm. Antenna (Fig. 21a) with A2–A6 reddish brown, A7–A10 dark brown, flagellar pubescence very short, A4 keeled to almost 0.9 of length.

Synopeas hansseni Buhl, 1998 (Fig. 21b)

Male described by Buhl (1998b). Additional material examined: 1 female, Sweden,

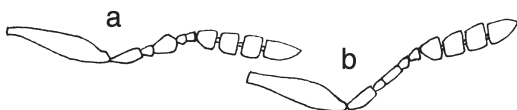


Fig. 21. Antennae of *Synopeas* species. – a. *S. acutispinus* Buhl, 1998 male. – b. *S. hansseni* Buhl, 1998 female.

Sk., Vittskövle, 16.VII.1945, G. Wängsjö leg., preserved in Naturhistoriska Riksmuseet, Stockholm.

Description of female. Body length 1.4 mm. Antenna (Fig. 21b). Metasoma as long as mesosoma, 1.2 times as wide as high; T3–T6 combined half as long as T2.

Comments. Female hitherto unknown. *S. acutispinus* Buhl, 1998 and *S. hansseni* Buhl, 1998 are rather similar but clearly separated in both sexes by the more angled occiput of *S. hansseni* which has also scutellar spine turned upwards and semitransparent (straight and dark in *S. acutispinus*).

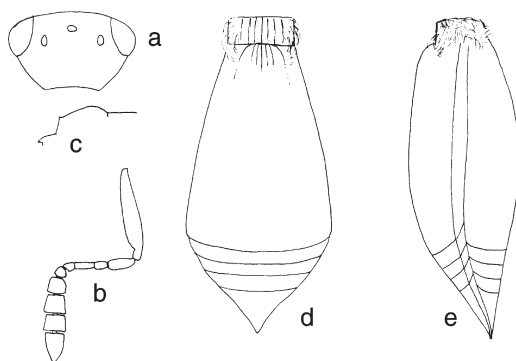


Fig. 22. *S. latvianum* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above. – e. Metasoma in lateral view.

Synopeas latvianum sp. n. (Figs 22–24)

Type material. Holotype female: Latvia, 6 km E. of Jekabpils, Malaise trap in wood, 30.VII.–26.VIII.2006, P.N. Buhl leg. Paratype: 1 female same data. Both preserved in Zoological Museum, University of Copenhagen. Additional material: 1 female, England, Hereford, Rothamsted Exp. Stn. Suction trap coll., 8.IX.1973, in the Natural History Museum, London.

Diagnosis. An aberrant species on account of structure of metasoma. T1 with several weak longitudinal carinae, clearly separated from T2 which is unusually convex anteriorly. Furthermore, propodeal carinae are clearly separated and diverging, and tooth of scutellum is characteristically shaped. An isolated species on account of shape of base of metasoma. Apart from this,

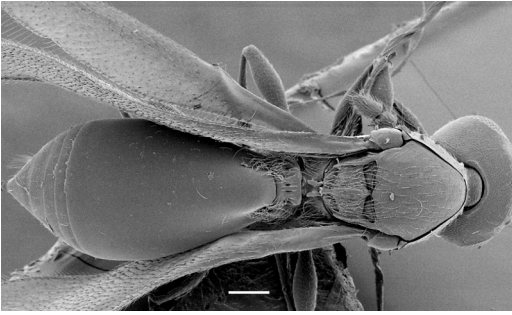


Fig. 23. *S. latvianum* sp. n. female from above. Scale bar = 100 μ m.

Mongolian *S. striatitergitis* Buhl, 2004 approaches *S. latvianum* in sculpture of T1 and T2 and in having well separated propodeal carinae, but these are parallel in *S. striatitergitis* which also has almost complete notauli and scutellum with a vertical lamella behind, cf. Buhl (2004a).

Description. Female. Body length 1.4–1.7 mm. Black, A1 and legs except coxae dark reddish, hind femora darkest; A2–A6 very dark reddish, almost black; coxae and A7–A10 blackish.

Head from above (Figs 22a and 23) 1.7 times as wide as long, as wide as mesosoma, finely reticulate-coriaceous, with a few transverse wrinkles medially behind ocelli and around antennal insertions, without hyperoccipital carina. OOL slightly longer than longer diameter of lateral ocellus; OOL:LOL = 2:3. Head in frontal view 1.15 times as wide as high. Antenna (Fig. 22b) with A1 0.85 times as long as height of head.

Mesosoma (Figs 23–24) 1.5 times as long as wide, 1.15 times as high as wide. Sides of pronotum faintly, partly longitudinally reticulate-coriaceous except along narrow hind margin. Mesoscutum uniformly and very finely reticulate-coriaceous, evenly and moderately hairy, without notauli; hind margin almost straight, unmodified; scuto-scutellar grooves each with about 8 long hairs. Mesopleuron smooth except for a few weak striae below tegula. Scutellum (Fig. 22c and 23) densely hairy except on medial elevation which ends in a tiny, dark tooth. Metapleuron with pilosity all over. Propodeal carinae low, dark, clearly diverging, area between them smooth and shiny, posteriorly as wide as long.

Fore wing overreaching tip of metasoma by a length equal to 1.5 times the combined length of

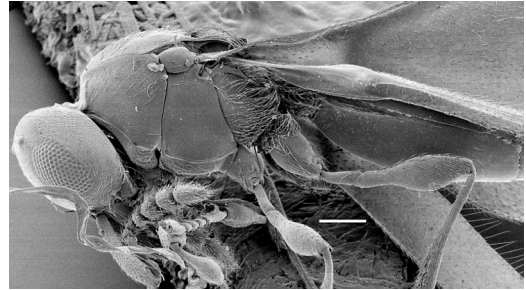


Fig. 24. *S. latvianum* sp. n. female in lateral view. Scale bar = 100 μ m.

T3–T6, clear, with fine and dense microtrichia, 2.5 times as long as wide; marginal cilia at most 0.08 the width of wing. Hind wing 6.0 times as long as wide; marginal cilia 0.3 the width of wing.

Metasoma (Figs 22d–e and 23–24) 1.3 times as long as head and mesosoma combined, 1.1 times as wide as mesosoma, and 1.3 times as wide as high. T1 with several weak longitudinal carinae, laterally with rather dense pubescence which continues in the short and deep basal foveae on T2. T2 distinctly protruding anteriorly between basal foveae and with a few longitudinal striae basally which are about as long as T1, otherwise smooth. T3–T6 each finely reticulate-coriaceous in anterior half, smooth in posterior half, T3–T5 each with a medially interrupted transverse row of hairs which are inserted in shallow punctures (8 on T3, about 16 on each of T4–T5), T6 with scattered hairs.

Male. Unknown.

Etymology. Named after the country of the type locality.

Synopeas microsculpturatum sp. n. (Figs 25–28)

Type material. Holotype female: Mongolia, Övörkhanga, 159 km SW of Arvaykheer (45°11'N 101°26'E), 1,250 m a.s.l., 5.VII.2004, J. Halada leg. Paratype: 1 female, Mongolia, 130 km S of Bayankhongor (45°03'N 100°59'E),



Fig. 25. *S. microsculpturatum* sp. n., female. – a. Head from above. – b. Antenna.

1,240 m, 6.VII.2004, J. Halada leg. Both preserved in Biologiezentrum, Linz.

Diagnosis. A *Synopeas* s.str. with scutellum lacking tooth, only very slightly keeled; T2 with fine but distinct microsculpture in most of posterior two-thirds of length. The Mongolian species *S. vulgaris* Buhl, 2004 is similar to this species, but apart from smoother T2 it has head stronger margined, mesoscutum with a more distinct and less dull prolongation medially on hind margin, and scutellum less sculptured than in *S. microsculpturatum*. Cf. Buhl (2004a).

Description. Female. Body length 1.2 mm. Black, mandibles and legs hardly lighter; extreme base and apex of femora, more of base and of apex of tibiae (almost basal half of mid and hind tibiae), and segments 1–4 of all tarsi reddish brown.

Head from above (Figs 25a and 26) 1.9 times as wide as long, almost 1.1 times as wide as mesosoma, finely and uniformly reticulate-coriaceous (not transversely so), without hyperoccipital carina. OOL 1.3 times as long as longer diameter of lateral ocellus; OOL:LOL = 5:12. Head in frontal view 1.05 times as wide as high. Antenna (Fig. 25b and 27) with A1 0.7 times as long as height of head, as long as distance between inner orbits.

Mesosoma (Figs 26–27) 1.5 times as long as wide, almost 1.1 times as high as wide. Sides of pronotum reticulate-coriaceous as head (not longitudinally so) all over. Mesoscutum evenly and sparsely hairy, uniformly sculptured as head, with no trace of notauli; hind margin medially with a triangular prolongation reaching base of scutellum, prolongation dark, not thickened, sculptured as rest of disc; scuto-scutellar grooves covered by dense whitish hairs. Mesopleuron in upper third finely longitudinally striated in more than posterior half, rest smooth except for weak longitudinal microsculpture along lower margin. Scutellum (Figs 26–27) slightly smoother than mesoscutum, moderately hairy, denser towards sides, along middle with a keel in extreme posterior part, tip brownish. Metapleuron smooth and bare in about upper and anterior 0.3, rest with pilosity. Propodeal carinae high, dark, curved, very close together.

Fore wing clear, slightly overreaching tip of metasoma, 0.8 times as long as entire body, 2.6 times as long as wide, with dense and rather fine

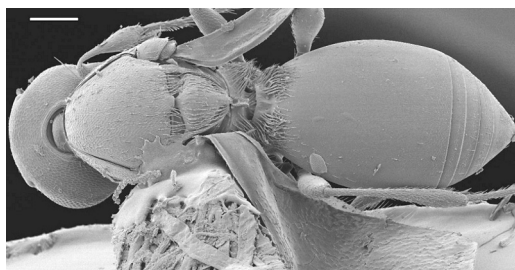


Fig. 26. *S. microsculpturatum* sp. n., female from above. Scale bar = 100 μ m.

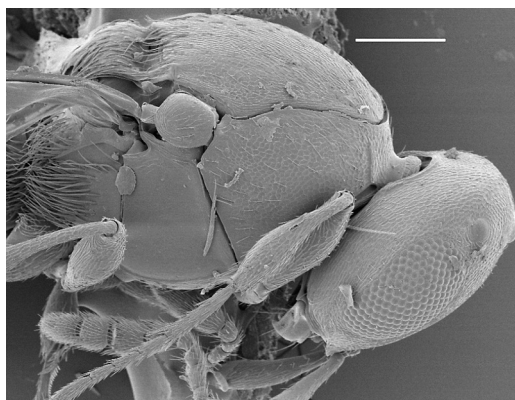


Fig. 27. *S. microsculpturatum* sp. n., female, head and mesosoma in lateral view. Scale bar = 10 μ m.

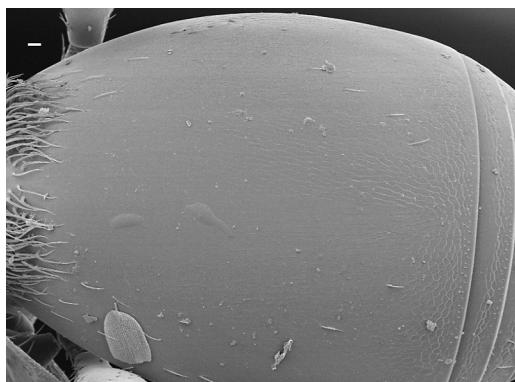


Fig. 28. *S. microsculpturatum* sp. n., female, tergite 2. Scale bar = 100 μ m.

microtrichia (Fig. 26); marginal cilia absent. Hind wing 5.2 times as long as wide; marginal cilia 0.3 times the width of wing.

Metasoma (Figs 26 and 28) 1.0–1.05 times as long as head and mesosoma combined, very slightly wider than mesosoma, one and a third times as wide as high. T2 with fine but distinct re-

ticulate microsculpture in at least posterior 0.6 of length (Fig. 28), T3–T6 also with such microsculpture, T2–T6 smooth basally; apical tergites with hairs which are inserted in shallow punctures, eight on each of T4–T5.

Etymology. The name refers to the characteristically sculptured T2.

Synopeas pinnei sp. n. (Fig. 29)

Type material. Holotype female: Latvia, 6 km E of Jekabpils, Malaise trap in wood, 30.VII.–26.VIII.2006. Paratypes: 1 female, 1 male, Latvia, Jekabpils, 1 km S of Brodi, Malaise trap in open grassland by pond, 29.VII.–25.VIII.2006. All P.N. Buhl leg. and preserved in Zoological Museum, University of Copenhagen.

Diagnosis. Belongs to *Synopeas* s. str. A characteristic species on account of head in frontal view being hardly wider than high, shape of scutellum, and short and broad metasoma. Differs from somewhat similar species, e.g. *S. inermis* Thomson, 1859, *S. lugubris* Thomson, 1859, and *S. spinulus* Buhl, 2004 especially in the elongate face and broad metasoma. Cf. Buhl (1998a, 2004b).

Description. Female. Body length 1.0–1.2 mm. Dull black; A1–A6, trochanters, tibiae and tarsi dark reddish brown, basal half of A1 and of tibiae lighter; A7–A10, coxae, femora and last

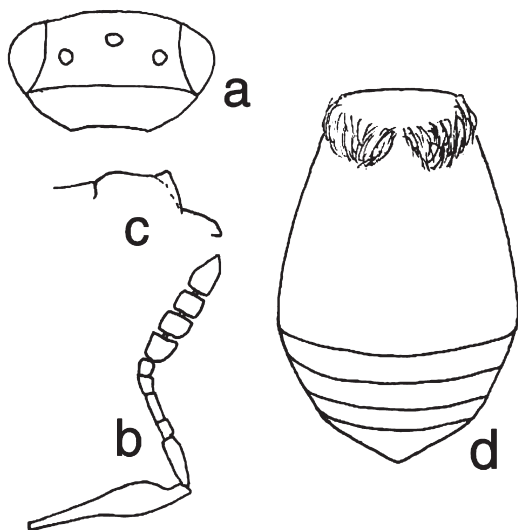


Fig. 29. *S. pinnei* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

segment of all tarsi blackish (in paratype A7–A10 not darkened).

Head from above (Fig. 29a) 1.6 times as wide as long, as wide as mesosoma, finely and uniformly reticulate-coriaceous except for wrinkles around antennal insertions; hyperoccipital carina complete. OOL equal to diameter of lateral ocellus; OOL:LOL = 2:5. Head in frontal view as high as wide in holotype, very slightly wider than high (17:16) in paratype. Antenna (Fig. 29b) with A1 0.85 times as long as height of head.

Mesosoma 1.45 times as long as wide, 1.15 times as high as wide. Sides of pronotum finely reticulate-coriaceous (not longitudinally so) all over. Mesoscutum finely and uniformly reticulate-coriaceous, evenly and moderately hairy, without notauli; hind margin medially with a tiny, weakly brownish prolongation to base of scutellum; scuto-scutellar grooves covered by dense, whitish hairs. Mesopleuron smooth except for longitudinal rugosity just below tegula. Scutellum (Fig. 29c) densely hairy, along middle slightly elevated, ending in a distinct, dark lamella. Metapleuron with pilosity all over. Propodeal carinae dark and fused.

Fore wing overreaching tip of metasoma by a length equal to 1.5 times the combined length of T3–T6, clear, 2.5 times as long as wide, with fine and dense microtrichia, without marginal cilia. Hind wing 5.5 times as long as wide; marginal cilia fully 0.2 width of wing.

Metasoma (Fig. 29d) 1.15 times as long as mesosoma, 0.8 times as long as head and mesosoma combined, 1.1 times as wide as mesosoma, and 1.4 times as wide as high. T2 smooth, T3–T5 each with a transverse stripe of weak microsculpture, T6 with such sculpture all over; T5 with a complete transverse row of hairs which are inserted in shallow punctures, T5–T6 each with about 8 hairs.

Male. Body length 1.0 mm. Antenna with A4 widened, 1.5 times as wide and as long as A5 (A7–A10 missing in unique specimen).

Etymology. Named after mr. Valdis Pinne, owner of both type localities.

Synopeas schwarzi sp. n. (Figs 30–32)

Type material. Holotype female: Mongolia, 75 km S of Bayankhongor (45°20'N 100°48'E), 1,330 m a.s.l., 8.VII.2004, J. Halada leg. Para-

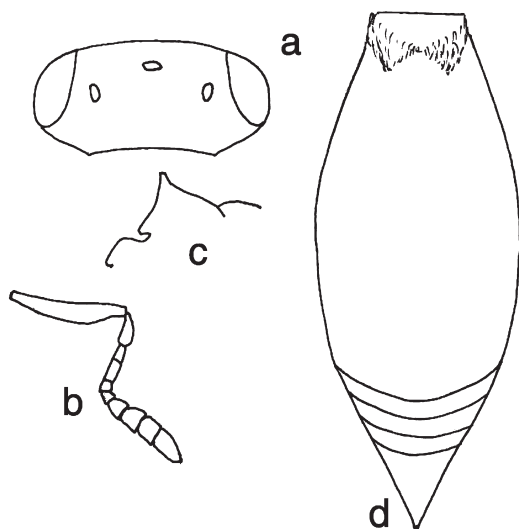


Fig. 30. *S. schwarzi* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

types: 4 females same data as holotype; 2 females 75 km S of Bayankhongor (46°31'N 100°53'E), 1150 m, 9.VII.2004, J. Halada leg. All preserved in Biologiezentrum, Linz.

Diagnosis. A species with a distinct scutellar tooth directed upwards, metasoma as high as wide, and A1–A6 and legs reddish. *S. denticutum* (Szabó, 1981) has scutellar tooth not directed upwards, and metasoma distinctly higher than wide, cf. Buhl (2000b).

Description. Female. Body length 1.4–2.2 mm. Black; A1–A6, mandibles, tegulae and legs including coxae dark reddish; A7–A10 and last segment of tarsi very dark brown.

Head from above (Fig. 30a and 31) 1.15 times

as wide as long, fully 1.1 times as wide as mesosoma, finely reticulate-coriaceous (not transversely so); occiput rounded, without hyperoccipital carina, antero-medially with a few short and weak transverse wrinkles; frons in lower half with weak transverse wrinkles. OOL as long as longer diameter of lateral ocellus; LOL:OOL = 2:1. Head in frontal view 1.3 times as wide as high. Antenna (Fig. 30b) with A1 short, 0.7 times as long as height of head, 0.85 times as long as distance between inner orbits.

Mesosoma (Figs 31–32) almost 1.5 times as long as wide, higher than wide (29:25). Sides of pronotum finely reticulate-coriaceous as head (not transversely so), in most of lower 0.4 with only very faint longitudinal microsculpture. Mesoscutum sparsely and evenly hairy, uniformly sculptured as head, with no trace of notauli; hind margin medially broadly prolonged to base of scutellum, prolongation smooth and semitransparent brown; scuto-scutellar grooves densely covered by whitish hairs. Mesopleuron with distinct longitudinal striation in upper 0.3, rest smooth. Scutellum (Figs 30c and 31–32) smooth, medially bare, towards sides rather densely hairy, with a dark, upwards directed, distinct tooth, below it with a faintly brownish medial carina. Metapleuron smooth and bare in about anterior and upper 0.4, rest with whitish pilosity. Propodeal carinae semitransparent brown, very close together.

Fore wing clear, 2.6 times as long as wide, very slightly overreaching tip of metasoma, 0.7 times as long as entire body, with short and rather dense microtrichia; marginal cilia absent. Hind wing 4.6 times as long as wide; marginal cilia 0.15 times the width of wing.

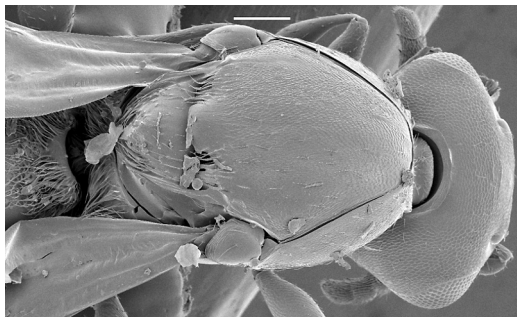


Fig. 31. *S. schwarzi* sp. n., female, head and mesosoma from above. Scale bar = 100 µm.

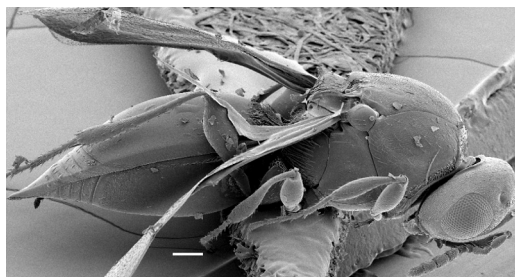


Fig. 32. *S. schwarzi* sp. n., female in lateral view. Scale bar = 100 µm.

Metasoma (Figs 30d and 32) 1.2–1.6 times as long as head and mesosoma combined, about as wide as mesosoma, as high as wide or very slightly higher than wide. T3–T5 distinctly reticulate-coriaceous along broad hind margin, T6 with such sculpture basally, otherwise with at most very faint sculpture except for some rugosity in apical third; T3 on each side with a couple of hairs which are inserted in shallow punctures, T4–T6 each with four such hairs on each side.

Etymology. Named in honour of Dr. Martin Schwarz, Linz, who offered me to loan the material.

Synopeas wangsjoii sp. n. (Figs 33–35)

Type material. Holotype female: Sweden, ÖG, S:t Anna k:a, 12.VII.1977, G. Wängsjö leg., preserved in Naturhistoriska Riksmuseet, Stockholm. Paratypes: 2 females same data as holotype; 1 female, Sweden, Öland, Gamla Skogsby, Kalkstad, 7–18.VIII.2003, Malaise trap in meadow with bushes, J. Liljeblad leg.; 1 female, Öland, Borgholm, all preserved in Naturhistoriska Riksmuseet, Stockholm.

Diagnosis. A *Synopeas* s. str.-species with distinct occipital carina, without notauli, scutellum hardly with tooth but with lamella behind, and female metasoma 1.25 times as long as head and mesosoma combined, wider than head and

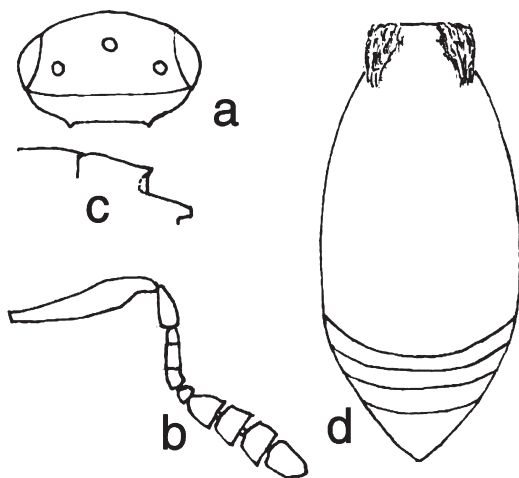


Fig. 33. *S. wangsjoii* sp. n., female. – a. Head from above. – b. Antenna. – c. Scutellum and propodeum. – d. Metasoma from above.

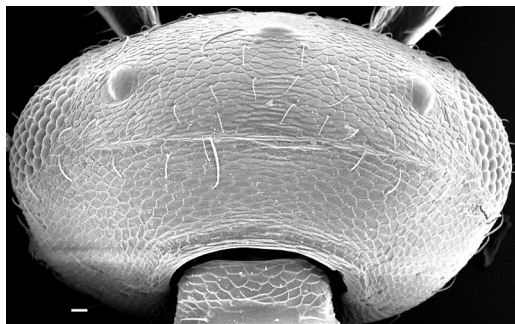


Fig. 34. *S. wangsjoii* sp. n., female, head from above. Scale bar = 10 μ m.



Fig. 35. *S. wangsjoii* sp. n., female from above. Scale bar = 100 μ m.

distinctly wider than high. Approaching *S. larides* (Walker, 1835) (only male known) in shape of scutellum, but this species has notauli indicated on a pustulated mesoscutum, head entirely pustulated and somewhat differently shaped, and body appendages darker than in *S. wangsjoii*. Cf. Vlug (1985).

Description. Female. Body length 1.3–1.5 mm. Black, metasoma with brownish tint; A1–A6 and legs light yellowish brown; coxae and last segments of tarsi light-medium brown; A7–A10 and tegulae dark brown.

Head from above (Figs 33a and 34–35) 1.7 times as wide as long, 1.1 times as wide as mesosoma; occiput finely and slightly transversely reticulate-coriaceous, with a weak but complete

hyperoccipital carina; vertex weakly transversely reticulate-coriaceous between ocelli, laterally finely reticulate-coriaceous without transverse elements as is entire frons (meshes very small). Lateral ocelli separated from eye by their longer diameter. Head in frontal view 1.1 times as wide as high. Antenna (Figs 33b and 35) with A1 0.9 times as long as height of head.

Mesosoma (Fig. 35) fully 1.5 times as long as wide, 1.2 times as high as wide. Sides of pronotum finely reticulate-coriaceous (not longitudinally so) in slightly more than upper half, rest smooth. Mesoscutum sparsely hairy, finely reticulate-coriaceous, smooth medially in slightly less than posterior half, without trace of notauli; hind margin medially prolonged as a smooth brownish plate to base of scutellum; scuto-scutellar grooves wide, each with about five long hairs. Mesopleuron smooth. Scutellum (Figs 33c and 35) smooth and bare medially, not keeled, laterally with dense hairs, posteriorly with a narrow vertical semitransparent lamella below a tiny tooth (in one paratype this a fine but distinct spine). Metapleuron smooth and bare in most of anterior 0.4, rest with long, whitish pilosity. Propodeal carinae slightly semitransparent, fused.

Fore wing clear, overreaching tip of metasoma by the length of T5–T6, 2.8–3.0 times as long as wide, with fine and dense microtrichia; marginal cilia very short. Hind wing 6.9 times as long as wide; marginal cilia 0.4 the width of wing.

Metasoma (Figs 33d and 35) 1.25 times as long as head and mesosoma combined, 1.1 times as wide as head, almost 1.4 times as wide as high. T1–T2 almost smooth. T3–T6 slightly reticulate except along margins; apical tergites with hairs which are inserted in shallow punctures which form a medially interrupted transverse row on each of T4–T5.

Male. Unknown.

Etymology. Named after the collector of the holotype.

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