



Entomofauna

ZEITSCHRIFT FÜR ENTOMOLOGIE

Band 33, Heft 24: 333-356

ISSN 0250-4413

Ansfelden, 2. Januar 2012

Ten new species of Platygastriinae (Hymenoptera, Platygasteridae)

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Abstract

The following 10 species new to science are described: *Amblyaspis hartmanni* (Nepal), *A. populi* (Finland), *Inostemma niklassonae* (Tanzania), *Leptacis kaponeni* (Estonia), *Platygaster caricis* (Canada), *P. pubicornis* (Finland), *P. puncticauda* (Canada), *Synopeas burgeri* (Germany), *S. himalayanum* (Nepal), and *S. madeirense* (Portugal). The work is illustrated by 42 figures.

Zusammenfassung

10 neue Arten werden beschrieben: *Amblyaspis hartmanni* (Nepal), *A. populi* (Finnland), *Inostemma niklassonae* (Tanzania), *Leptacis kaponeni* (Estland), *Platygaster caricis* (Kanada), *P. pubicornis* (Finnland), *P. puncticauda* (Kanada), *Synopeas burgeri* (Deutschland), *S. himalayanum* (Nepal) und *S. madeirense* (Portugal). Die Arbeit ist mit 42 Abbildungen versehen.

Introduction

The material treated in this paper was offered to me as parts of generous loans by Mr. Martti KOPONEN (Finland), Dr. Matthias HARTMANN (Germany) and Mr. Rune BYGEBJERG (Sweden) to whom I hereby express my gratitude. Accordingly, the types are distributed in the following institutions: Department of Applied Biology, University of Helsinki, Finland (DABH); Erfurt Museum of Natural History, Germany (NME); Museum of Zoology, Lund University, Sweden (MZLU).

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.

Amblyaspis hartmanni nov.sp. (figs 1-4)

Material examined: Holotype ♂: Nepal, prov. Karnali, distr. Jumia, Maharigaon, 3250 m (82°23'21''E 29°20'24''N), 10.vii.1999, white pan trap, A. WEIGEL (NME). Paratype: 1 ♂ same data (NME).

Diagnosis. Head hardly twice as wide as long, with a strong but incomplete hyperoccipital carina; OOL longer than LOL; male A4 about twice as long as A3, 1.5 times as long as A5; notauli absent; basal foveae of T2 with distinct pubescence.

Description. ♂. Body length 1.2-1.4 mm. Dark brown, head darkest; mandibles, tegulae and antennae almost uniformly medium brown; legs including coxae light brown, slightly darkened on thickened parts of femora and tibiae.

Head from above (fig. 1) 1.9 times as wide as long, hardly wider than mesosoma; occiput slightly transversely reticulate-coriaceous, vertex finely reticulate-coriaceous (not transversely so), frons smoothly reticulate (not transversely so), only slightly roughened just above antennal insertions; hyperoccipital carina strong, laterally fading out. OOL:LOL = 4:3. Head in frontal view 1.1 times as wide as high. Antenna (fig. 2) with A1 about as long as height of head, 1.25 times as long as distance between inner orbits; A9 1.4 times as long as wide; flagellar pubescence 0.4 as long as width of segments.

Mesosoma 1.4 times as long as wide, hardly perceptible higher than wide. Sides of pronotum weakly reticulate-coriaceous (not longitudinally so) in about upper half, in lower half with longitudinal microsculpture in anterior two-thirds, rest smooth. Mesoscutum sparsely setose, most setae situated in four longitudinal rows and along margins, especially in posterior 0.2; disc finely reticulate-coriaceous (not longitudinally so), smoother just inside tegulae; notauli absent; hind margin very slightly and broadly convex over base of scutellum. Mesopleuron smooth. Scutellum (fig. 3) smoother than mesoscutum, densely setose, disc 1.1 times as long as wide. Metapleuron mostly smooth, with rather sparse whitish pilosity all over. Propodeal carinae slightly translucent, parallel, very close together but not fused.

Fore wing (rather destroyed in both specimens available) about as long as entire body, approx. 2.7 times as long as wide, infuscated, with fine and dense microtrichia; marginal cilia 0.1 width of wing. Hind wing about 7 times as long as wide; marginal cilia one-third the width of wing.

Metasoma (fig. 4) 1.0-1.1 times as long as head and mesosoma combined, about as wide as mesosoma. T1 with two longitudinal carinae close together, swollen in anterior half, along sides with short, dense pubescence. T2 smooth, with two small, distinctly pubescent basal foveae. T3-T5 reticulate, smooth along narrow base, T6-T7 reticulate all over; apical tergites with a few setae inserted in shallow punctures (each tergite with at most six setae).

C o m m e n t s . This species runs to Philippine *A. cariniceps* BUHL 1997 in BUHL's (2009) key to Oriental *Amblyaspis*, but this species has head 1.2 times as wide as mesosoma, with a complete hyperoccipital carina, and head in frontal view 1.3 times as wide as high, and A4 relatively shorter than in *A. hartmanni*. *Amblyaspis joenssoni* BUHL 2009 from Malaysia (only female known) has LOL distinctly longer than OOL, mesopleuron with numerous wrinkles, and basal foveae on T2 without pubescence.

E t y m o l o g y . Named in honour of Dr. Matthias HARTMANN, director, Erfurt Museum of Natural History, who offered me to study the material.

***Amblyaspis populi* nov.sp. (figs 5-8)**

M a t e r i a l e x a m i n e d : Holotype ♀: Finland, Sb, Sorsasalo (69157:5344), 21.vii.-17.viii.2001, trunk-window trap on aspen, Petri MARTIKAINEN (DABH).

D i a g n o s i s . Head twice as wide as long with a sharp and moderately strong hyperoccipital carina which is almost complete; female A7 only 1.1 times as wide as A6; notauli distinct, only missing in anterior 0.2; basal foveae of T2 almost bare, with striation along outer side.

D e s c r i p t i o n . ♀. Body length 2.2 mm. Black, T1 with dark brownish tint; legs including coxae yellowish brown, mandibles and A1 slightly darker, A2-A10 even darker, medium brown; tegulae dark brown.

Head from above (fig. 5) 2.0 times as wide as long, 0.95 times as wide as mesosoma; occiput finely reticulate-granulate, meshes small and not transverse, laterally behind eyes more roughened and with a few faint vertical elements; hyperoccipital carina sharp, moderately strong, nearly complete; vertex finely and uniformly granulate; frons distinctly and slightly transversely reticulate-coriaceous in slightly more than upper half, smooth below except for about four strong transverse carinae above antennal sockets. LOL = 1.15 OOL. Head in frontal view wider than high (28:26). Eyes with a few very short setae. Antenna (fig. 6) with A1 0.9 times as long as height of head, 1.25 times as long as distance between inner orbits; A7 only 1.1 times as wide as A6.

Mesosoma 1.5 times as long as wide, almost 1.1 times as high as wide. Sides of pronotum reticulate-granulate in about upper half (not longitudinally so), smooth below and along narrow hind margin. Mesoscutum sparsely and unevenly setose (most setae in anterior half and along notauli), finely and uniformly reticulate-granulate, with a small smooth area just inside tegulae; notauli distinct, missing in anterior 0.2; mid lobe posteriorly moderately wide, slightly prolonged over anterior margin of scutellum, brownish here, on each side with about 12 rather long, golden setae. Mesopleuron smooth. Scutellum (fig. 7) sculptured almost as mesoscutum, densely setose all over, disc as long as wide. Metapleuron smooth, with very sparse long pilosity on most of surface, with a dense fringe along hind and lower margins. Propodeal carinae with dark brown

tint, parallel, dorsal areas wide and sculptured; area between them smooth, about three times as long as wide.

Fore wing 0.85 times as long as entire body, 2.5 times as long as wide, almost clear, with fine and dense microtrichia; marginal cilia 0.09 width of wing. Hind wing 5.9 times as long as wide; marginal cilia one-third the width of wing.

Metasoma (fig. 8) 1.25 times as long as head and mesosoma combined, as wide as mesosoma. T1 with two strong parallel longitudinal carinae. T2 with two short, rather deep, very slightly pubescent basal foveae, laterally on outer side of each fovea with a few longitudinal striae which are slightly longer than the foveae, reaching 1/7 length of tergite, rest of T2 smooth except for faint micropunctuation along very narrow hind margin. T3-T6 with dense and distinct micropunctuation, T3-T5 smooth at narrow base, T6 smooth at apex; each apical tergite with a transverse row of long setae inserted in shallow punctures: 10 on T3, 8 on each of T4-T5; 6 on T6.

C o m m e n t s . Similar to *A. scelionoides* (WALKER 1835) which was collected together with *A. populi*, but the two species differ in several important characters with presumed specific value: *A. scelionoides* has head at most 1.7 times as wide as long, with much weaker hyperoccipital carina and without carinae above antennal sockets, A7 about 1.75 times as wide as A6, and basal foveae of T2 distinctly pubescent without striation laterally.

E t y m o l o g y . Named after the plant on which the holotype was collected.

***Inostemma niklassonae* nov.sp. (figs 9-12)**

M a t e r i a l e x a m i n e d : Holotype ♀: Tanzania, Tanga region, Usambara mt., Bumbuli Hospital, 2.i.1979, Monica NIKLASSON (MZLU).

D i a g n o s i s . Female A1 distinctly widened, preapical antennal segments each about 1.25 times as wide as long; female metasoma without any horn on T1; T3-T6 combined twice as long as T2.

D e s c r i p t i o n . ♀. Body length 1.9 mm. Black; A1-A2 brown, A3-A10 very darkly so, coxae even darker, legs light brownish except dark last segment of tarsi.

Head from above (fig. 9) 1.7 times as wide as long, 1.1 times as wide as mesosoma, finely and almost uniformly reticulate-coriaceous (not transversely so); vertex smoothly convex, without notch. OOL slightly shorter than shorter diameter of lateral ocellus, hardly 0.3 as long as LOL. Head in frontal view 1.2 times as wide as high. Antenna (fig. 10) with A1 provided with a wide lamella, 0.7 times as long as height of head, as long as distance between inner orbits; A9 1.25 times as wide as long.

Mesosoma 1.7 times as long as wide, 1.1 times as wide as high. Pronotum laterally, mesoscutum and scutellum distinctly and uniformly reticulate-coriaceous, mesopleuron with similar sculpture but longitudinally striated in about upper half of posterior half. Notauli distinct but almost fading out just before reaching hind margin of mesoscutum. Scutellum (fig. 11) slightly convex.

Fore wing reaching to midlength of T5, 2.8 times as long as wide, clear, with fine and dense microtrichia; submarginal vein with knob light brown but distinct, 0.3 times as

long as wing; marginal cilia very short. Hind wing 5.5 times as long as wide; marginal cilia 0.15 width of wing.

Metasoma (figs 11-12) 1.4 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 in broad medial part smooth and bare, slightly convex in about anterior half, laterally dull and rather densely setose. T2 with a large and partly smooth depression anteriorly, tergite also in posterior half slightly smoother in narrow medial part, rest of T2 reticulate-coriaceous, towards sides in anterior two-thirds with longitudinally striated elements from sides of depression. T3-T6 uniformly reticulate-coriaceous (not longitudinally so).

C o m m e n t s . Among the described Afrotropical species of *Inostemma*, only *I. sylvaticum* (RISBEC 1953) has no horn at all on T2, but this species has distinctly more slender antennae and much shorter apical tergites than *I. niklassonae*, cf. RISBEC (1953).

E t y m o l o g y . Named after the collector.

***Leptacis koponeni* nov.sp. (figs 13-17)**

M a t e r i a l e x a m i n e d : Holotype ♀: Estonia, Vormsi, Hullo, 6.viii.2002, M. KOPONEN (DABH). Paratypes: 2♂♂ same data (DABH).

D i a g n o s i s . Female antenna with A4 1.3 times as long as A3, A9 1.5 times as wide as long; scutellum with a short tooth, less than half as long as propodeum; female metasoma about 2.2 times as long as wide, as long as rest of body.

D e s c r i p t i o n . ♀. Body length 1.0 mm. Blackish, metasoma with brownish tint, T1 medium brown; A1-A2, mandibles and legs including coxae light brownish, A3-A10 dark brownish, tegulae medium brown.

Head from above (fig. 13) 1.9 times as wide as long, 1.1 times as wide as mesosoma; occiput and frons distinctly reticulate and slightly transversely so, sculpture in lower half of frons slightly roughened and distinctly transverse; hyperoccipital carina absent, head rounded. Eyes bare. LOL = 3 OOL; OOL slightly shorter than longer diameter of lateral ocellus. Head in frontal view wider than high (15:14). Antenna (fig. 14) with A1 shorter than height of head (12:14), 1.1 times as long as distance between inner orbits; A4 1.3 times as long as A3; A9 1.5 times as wide as long.

Mesosoma 1.6 times as long as wide, 1.2 times as high as wide. Sides of pronotum in upper 0.4 with weak (not longitudinal) reticulation in slightly more than anterior half, in lower 0.6 with weak longitudinal microsculpture anteriorly. Mesoscutum evenly and moderately densely setose, finely and almost uniformly reticulate-coriaceous, without notauli; hind margin medially very slightly convex, at each side with about five long setae. Mesopleuron smooth, in upper 0.25 with very weak longitudinal striation. Scutellum (fig. 15) sculptured and setose almost as mesoscutum, hind part light brownish; tooth short and blunt, less than half as long as propodeum. Metapleuron smooth and bare except for sparse pilosity in posterior 0.4. Propodeal carinae low, brown, very slightly diverging, distinctly separated over entire length; elongate area between them smooth and shiny.

Fore wing 0.85 times as long as entire body, 2.9 times as long as wide, almost clear, with dense and moderately fine microtrichia; marginal cilia one-third the width of wing. Hind wing 8.9 times as long as wide; marginal cilia 1.2 times the width of wing.

Metasoma (fig. 16) as long as head and mesosoma combined, hardly as wide as mesosoma (13:13.5). T1 with two weak longitudinal carinae close together, bare only in slightly more than along medial 0.2, laterally with rather dense whitish setae. T2 with two short, pubescent basal foveae, rest of tergite smooth, apical tergites almost smooth; T6 pointed, hardly 1.75 times as wide as long.

♂. Body length 0.7-1.0 mm. Slightly darker than female with scutellum and metasoma almost entirely dark, scutellar tooth slightly translucent. Antenna (fig. 17). Mesopleuron only with a couple of striae in extreme upper part. Metasoma 0.8 times as long as head and mesosoma combined.

C o m m e n t s . A characteristic species on account of elongate female metasoma; approaching *L. breisteini* BUHL 1997, but this species has distinctly more slender female antennae, notauli nearly complete, distinctly longer scutellar tooth than *L. koponeni*, marginal cilia of fore wing 0.2 width of wing, and female metasoma 2.8 times as long as wide.

E t y m o l o g y . Named after the collector.

***Platygaster caricis* nov.sp. (figs 18-22)**

M a t e r i a l e x a m i n e d : Holotype ♀: Canada, Ontario, Prospect, on *Carex*, 29.v.1983, L. HUGGERT (MZLU). Paratypes: 7 ♀ ♀, 1 ♂ same data (MZLU).

D i a g n o s i s . Head 1.8 times as wide as long; female A7 1.5 times as long as A6, fully 1.3 times as wide as this, A9 1.3 times as long as wide; notauli absent, mesoscutum posteriorly only with a small convexity to scutellar base; scutellum pointed, ending in a small tooth-like lamella; female metasoma at most 0.9 times as long as rest of body, T2 with distinct but smooth basal foveae; legs mostly dark brown.

D e s c r i p t i o n . ♀. Body length 1.0-1.6 mm. Blackish; antennae, mandibles, tegulae and legs dark brown; trochanters, fore tibiae, extreme base and apex of mid tibiae, extreme base of hind tibiae, and segments 1-4 of all tarsi slightly lighter (most of fore tibiae and fore tarsi lightest).

Head from above (fig. 18) 1.8 times as wide as long, wider than mesosoma (20:17), rounded, finely and strongly transversely reticulate-coriaceous. LOL = 1.2 OOL. Head in frontal view 1.25 times as wide as high. Antenna (fig. 19) with A1 hardly shorter than height of head, 1.15 times as long as distance between inner orbits; A7 1.5 times as long as A6, fully 1.3 times as wide as this; A9 1.3 times as long as wide. Mesosoma 1.55 times as long as wide, 1.15 times as high as wide. Sides of pronotum distinctly reticulate-coriaceous, in upper half slightly, in lower half strongly longitudinally so, only smoother along narrow hind margin. Mesoscutum very sparsely and unevenly setose, weakly reticulate (hardly longitudinally so), with distinct admedian lines in anterior one-third, without notauli, hind margin medially with a small convexity to base of scutellum, otherwise unmodified, on each side with about seven moderately long setae over the rather inconspicuous scuto-scutellar grooves. Mesopleuron smooth, sometimes with faint longitudinal wrinkles in upper half. Scutellum (fig. 20) along

middle almost smooth and with very few setae, towards sides dull and rather densely setose, posteriorly slightly pointed, ending in a weakly translucent short tooth-like lamella, slightly excavated below it. Metapleuron smooth, with rather dense pilosity except for an almost bare, small area antero-medially. Propodeal carinae low, dark, diverging; slightly elongate area between them smooth and shiny.

Fore wing 1.1 times as long as entire body, 3.1 times as long as wide, infuscated, with fine and dense microtrichia; marginal cilia 0.13 width of wing. Hind wing 7.1 times as long as wide, with two hamuli; marginal cilia almost 0.4 width of wing.

Metasoma (fig. 21) 0.8-0.9 times as long as head and mesosoma combined, about 1.15 times as long as mesosoma, hardly wider than this (17.5:17). T1 with two moderately strong, slightly converging longitudinal carinae, along sides with rather sparse long setae. T2 with two smooth basal foveae reaching one-third the length of tergite, between them with a couple of longitudinal wrinkles reaching 0.1 length of tergite, rest of T2 as well as following tergites smooth except for weak reticulation along narrow hind margins; apical tergites with a few setae inserted in shallow punctures (four on each of T3-T4, six on each of T5-T6, sometimes fewer).

♂: Body length 1.1 mm. Antenna (fig. 22) with A9 1.9 times as long as wide; flagellar pubescence uneven, setae from 0.15 to about 1.0 times as long as width of segments. Metasoma as long as mesosoma.

C o m m e n t s . Similar to the Palaearctic species *P. molsensis* BUHL 1995, but this species has female antennae less clavate, A6-A7 being of almost equal size, notauli nearly complete, and male A4 hardly longer than A2, cf. also the differential diagnosis in BUHL (1995).

E t y m o l o g y . Named after the plant on which the types were collected.

***Platygaster pubicornis* nov.sp. (figs 23-26)**

M a t e r i a l e x a m i n e d : Holotype ♀: Finland, Sa, Savitaipale (6795:3538), 17.vi.2006, M. KOPONEN (DABH). Paratypes: Finland, Sa, Taipalsaari, Sillanmäki (6792:552), 17.vi.2006, 1 ♀; Finland, Sa, Luumäki (6755: 3514), 18.vi.2006, 1 ♀; Finland, Sa, Mikkeli (6835:503), 23.vi.2008, 1 ♀. All M. KOPONEN (DABH).

D i a g n o s i s . Head twice as wide as long; occiput finely, transversely reticulate-coriaceous; female A9 1.0-1.33 times as wide as long; flagellar pubescence conspicuous; scutellum evenly convex, slightly above mesoscutum; female metasoma 1.5-1.7 times as long as rest of body; T2 striated to almost 0.4 of length, medially much shorter; apical tergites smooth, combined longer than T2, evenly narrowed towards apex, T5-T6 each with about 10 setae.

D e s c r i p t i o n . ♀. Body length 1.5-1.7 mm. Black, antennae almost as dark; mandibles, tegulae and legs including coxae dark brown; trochanters, extreme apices of femora, most of fore tibiae, base and apex of mid and hind tibiae, and segments 1-4 of all tarsi lighter brown (fore legs usually lightest).

Head from above (fig. 23) 2.0 times as wide as long, 1.2 times as wide as mesosoma; occiput finely, transversely reticulate-coriaceous, anteriorly behind ocelli with a couple of weak transverse wrinkles; vertex finely reticulate-coriaceous (not transversely so); frons faintly reticulate, partly transversely so, medially almost smooth, just above

antennal insertions with weak transverse striation. OOL = LOL. Head in frontal view wider than high (21:18). Antenna (fig. 24) with A1 0.8 times as long as height of head, slightly longer than distance between inner orbits (12:11.5); A9 1.0-1.33 times as wide as long; flagellar pubescence conspicuous, standing away from segments to a distance equal to 0.3-0.5 the width of segments.

Mesosoma 1.6 times as long as wide, 1.15 times as high as wide. Sides of pronotum reticulate-coriaceous (not longitudinally so) in slightly more than anterior half of upper 0.4, rest mostly smooth except for scattered raised seta-implantations (except along hind margin). Mesoscutum rather sparsely and evenly setose (implantations not scaly), finely reticulate-coriaceous, lateral lobes smooth on outer half or on most of surface; notauli complete and deep, posteriorly ending in a fine point just touching base of scutellum; scuto-scutellar grooves rather wide, each with three distinct setae. Mesopleuron smooth. Scutellum (fig. 25) finely reticulate-coriaceous, sparsely setose, very slightly above level of mesoscutum, weakly and evenly convex. Metapleuron with pilosity all over. Propodeal carinae low, dark, parallel, sculptured on dorsal surface; slightly transverse area between them smooth.

Fore wing reaching to about midlength of T6, 2.7 times as long as wide, clear, with fine and dense microtrichia (bare in basal 0.45); marginal cilia 0.08 width of wing. Hind wing 5.7 times as long as wide, with two hamuli; marginal cilia hardly 0.2 width of wing.

Metasoma (fig. 26) 1.5-1.7 times as long as head and mesosoma combined, very slightly narrower than mesosoma. T1 with numerous longitudinal carinae, two of them slightly stronger than rest. T2 striated from basal foveae to almost 0.4 (9:24) of length, medially with a few inconspicuous wrinkles, rest of T2 as well as following tergites smooth; T3-T4 each with less than 10 setae inserted in shallow punctures around midlength, T5-T6 each with about 10 such more scattered punctures; apical tergites not flattened, T5 around midlength hardly more than 1.4 times as wide as high. Sternite 2 anteriorly slightly prolonged under most of T1.

C o m m e n t s . Similar to *Platygaster gorge* WALKER 1835, but that species has occiput more striated, implantations of setae on mesoscutum scaly, mesoscutum more convex (distinctly higher than scutellum), and scutellum much more sloping behind than in *P. pubicornis* (lectotype of *P. gorge* seen). Shape of antennae, scutellum and metasoma approaching those of *P. alpina* BUHL 2009, but this species has A9 1.1 times as long as wide, less setose than in *P. pubicornis*, sides of pronotum sculptured also below, mesopleuron striated in upper half, metasoma hardly 1.2 times as long as rest of body, striae of T2 longest medially, and T3-T6 each with only about six setae.

E t y m o l o g y . The name refers to the unusually setose female antennae.

***Platygaster puncticauda* nov.sp. (figs 27-30)**

M a t e r i a l e x a m i n e d : Holotype ♀: Canada, Ontario, Rondeau Prov. Park, 27.viii.1982, L. HUGGERT (MZLU).

D i a g n o s i s . Head 2.33 times as wide as long, occiput strongly transversely striated; A9 1.1 times as long as wide; mesoscutum evenly and densely setose, notauli absent in anterior half, scutellum almost smooth, much convex, mostly densely setose; female metasoma very slightly longer than rest of body, very slightly more than twice as long as

wide, striated from basal foveae to two-thirds of length; apical tergites smooth, with numerous punctures (at least 20 in two rows on each of T4-T5).

Description. ♀. Body length 1.4 mm. Black, antennae, mandibles and T6 dark brown, coxae and mid and hind legs dark reddish-brown, fore femora slightly lighter, fore tibiae and tarsi (except last segment) yellowish brown.

Head from above (fig. 27) 2.33 times as wide as long, wider than mesosoma (26:23); occiput strongly transversely striated all over up to ocellar area, vertex finely reticulate-coriaceous, frons covered by very fine oblique striation out from a smoother midline. OOL = LOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 28) with A1 0.8 times as long as height of head, very slightly longer than distance between inner orbits (16:15.5); A9 1.1 times as long as wide.

Mesosoma 1.3 times as long as wide, slightly higher than wide (24:23). Sides of pronotum finely reticulate-coriaceous, in lower half longitudinally so, smooth only along rather narrow upper and hind margins. Mesoscutum evenly and densely setose, seta-implantations slightly raised, disc dull reticulate-coriaceous in anterior half, almost smooth in posterior half; notauli distinct posteriorly, fading out at around midlength of their courses; mid lobe distinctly and broadly prolonged to base of scutellum, at each side with dense and long, golden setae over scuto-scutellar grooves. Mesopleuron smooth. Scutellum (fig. 29) with disc twice as wide as long, strongly convex, moderately densely setose and almost smooth medially, densely setose towards sides, posteriorly almost vertical. Metapleuron with dense pilosity all over. Propodeal carinae short, parallel; much transverse area between them smooth and shiny.

Fore wing 2.5 times as long as wide, reaching about apex of metasoma, clear, with fine and moderately dense microtrichia; marginal cilia slightly less than 0.1 width of wing. Hind wing 5.25 times as long as wide, with two hamuli; marginal cilia 0.25 width of wing. Mid tarsi 1.15 times as long as mid tibiae.

Metasoma (fig. 30) 1.05 times as long as head and mesosoma combined, 0.85 times as wide as mesosoma. T1 evenly covered by numerous longitudinal furrows. T2 striated in basal foveae to two-thirds the length of tergite, medially with a few longitudinal carinae to 0.2 length of tergite, rest of T2 as well as following tergites smooth. T3-T6 with setae inserted in deep punctures: 16 in one irregular transverse row on T3, 24 in two irregular transverse rows on T4, 20 in two irregular transverse rows on T5, 12 scattered punctures with setae on T6.

Comments. This species runs to *P. atriplicis* (ASHMEAD 1893) or *P. asynaptae* (ASHMEAD 1893) in FOUTS' (1924) and MACGOWN'S (unpublished) key, but *P. atriplicis* has head only twice as wide as long, scutellum with only a few setae, metasoma distinctly wider than mesosoma, and apical tergites with much fewer setae than in *P. puncticauda*, with only one even row on each of T4-T5; *P. asynaptae* has head almost three times as wide as long, but not wider than mesosoma, vertex smooth, A2 slightly less than twice as long as wide (in *P. puncticauda* it is distinctly more than twice), mesosoma about twice as long as wide, and mesoscutum "with four areas of longitudinally placed rows of appressed pubescence" according to FOUTS (1924). *P. puncticauda* is rather similar to Palaearctic *P. euhemerus* WALKER 1835, but this species has scutellum longer and much fewer punctures on apical tergites than in *P. puncticauda*.

E t y m o l o g y . The name refers to the unusually numerous punctures with setae on the apical tergites.

***Synopeas burgeri* nov.sp. (figs 31-34)**

M a t e r i a l e x a m i n e d : Holotype ♀: Germany, Thuringia, Weimar, Ettersburg, "Seerosenteich" (water lily pond, cf. plate 1), 18.vi.2009, tree eclector trap in oak, F. BURGER (NME).



Plate 1: Type locality of *Synopeas burgeri* nov.sp. (photo courtesy of F. BURGER).

D i a g n o s i s . Belongs to *Synopeas* s.str.; hyperoccipital carina weak; female A2-A4 slender with A3-A4 combined one and a third times as long as A2, A9 1.5 times as wide as long; notauli absent; mesopleuron striated in most of upper half; scutellum with a short, thick tooth without lamella; fore wing without marginal cilia; female metasoma 1.15 times as long as mesosoma, 1.5 times as wide as high.

D e s c r i p t i o n . Female. Body length 1.4 mm. Black; A1-A6 light yellowish brown, A7 slightly darker, A8-A10 medium dark brown, mandibles mostly dark brownish, all coxae black; fore legs light yellowish brown, femora darkened in basal 0.7; mid and hind legs with light yellowish brown trochanters, extreme apex of femora, and basal half of tibiae, rest dark brownish; all tarsi light yellowish brown with apical half of last segment darkened.

Head from above (fig. 31) 1.8 times as wide as long, about as wide as mesosoma, finely reticulate-coriaceous (not transversely so), occiput with three weak longitudinal carinae postero-medially; frons in lower 0.4 with transverse wrinkles above antennal sockets; hyperoccipital carina weak but complete. LOL = 4.25 OOL. Head in frontal view 1.15 times as wide as high. Antenna (fig. 32) with A1 fully as long as height of head, 1.4 times as long as distance between inner orbits; A9 1.5 times as wide as long.

Mesosoma 1.5 times as long as wide, slightly more than 1.1 times as high as wide. Sides of pronotum reticulate-coriaceous (not longitudinally so), smooth in slightly less than lower half except for very few seta-implantations. Mesoscutum with moderately dense and slightly unevenly distributed adpressed whitish setae, finely and uniformly reticulate-coriaceous, without notauli; hind margin medially slightly prolonged to base of scutellum, prolongation unmodified; scuto-scutellar grooves each with about nine inconspicuous setae. Mesopleuron with about ten longitudinal striae over most of length in about upper half, rest smooth. Scutellum (fig. 33) slightly smoother than mesoscutum,

denser setose than this, posteriorly dark, with a blunt, short tooth. Metapleuron smooth, bare in upper 0.3 and along narrow anterior margin, rest with whitish pilosity. Propodeal carinae dark, moderately high, fused except basally.

Fore wing fully 0.9 times as long as entire body, 2.6 times as long as wide, clear, with fine and dense microtrichia; marginal cilia absent. Hind wing 4.9 times as long as wide; marginal cilia 0.2 width of wing.

Metasoma (fig. 34) 0.85 times as long as head and mesosoma combined, 1.15 times as long as mesosoma, about as wide as this, 1.5 times as wide as high. T1 with a dull, bare reticulate-coriaceous mid area bordered by a carina on each side, laterally densely pubescent. T2 distinctly reticulate-coriaceous in posterior 0.15, rest smooth. T3-T5 each distinctly reticulate-coriaceous in posterior half, T6 with such sculpture except along extreme base; apical tergites with very inconspicuous setae.

Comments. Similar to *S. trebius* (WALKER 1835) and *S. velutinus* (WALKER 1835), but both these species have strong hyperoccipital carina, A2 as long as A3-A4 combined, less sculptured mesopleuron, and distinct marginal cilia of fore wing; *S. trebius* also has A9 hardly 1.1 times as wide as long, distinctly longer scutellar spine than in *S. burgeri*, and junction of T1-T2 with three strong carinae; *S. velutinus* also has head without distinct meshes, A1 only 1.25 times as long as distance between inner orbits, A9 hardly 1.3 times as wide as long, notauli indicated posteriorly, marginal cilia of hind wing 0.4 width of wing, and scutellar tooth with a lamella (type material of *S. trebius* and *S. velutinus* seen). *S. burgeri* is also rather similar to *S. bohemani* BUHL 1998, but this species has legs entirely orange-yellow, A9 as long as wide, mesopleuron almost smooth, scutellum with longer spine than in *S. burgeri* and translucent with a lamella, and metasoma 1.7 times as wide as high, cf. also BUHL (1998).

E t y m o l o g y : Named in honour of the collector, prominent hymenopterist Frank BURGER (Weimar).

***Synopeas himalayanum* nov.sp. (figs 35-38)**

M a t e r i a l e x a m i n e d : Holotype ♀: Nepal, prov. Seti, distr. Bajhang, 12 km NE of Chainpur, Talkot, Gads S of Talkot, 1400 m (81°17'54''E 29°36'17''N), 28.vi.2009, riverside, at light, A. WEIGEL (NME).

D i a g n o s i s . A small species of *Synopeas* s.str. without hyperoccipital carina; female A9 1.3 times as wide as long; notauli distinct in posterior half; scutellum only slightly pointed, without tooth or lamella; marginal cilia of fore wing 0.1 width of wing; female metasoma 0.9 times as long as rest of body, 1.3 times as wide as high, pointed, T3-T6 combined only very slightly shorter than T2, T6 about 0.9 times as long as wide.

D e s c r i p t i o n . ♀. Body length 0.85 mm. Black, A1-A2 brown, A3 and basal 0.6 of A1 light brown, A4-A10 and tegulae very dark brown; legs light brownish, coxae and thickened part of femora and tibiae, and last segment of tarsi, slightly darker, on hind legs distinctly darker.

Head from above (fig. 35) 1.9 times as wide as long, 1.2 times as wide as mesosoma, reticulate-coriaceous, meshes large and somewhat transverse on most of occiput and frons; hyperoccipital carina absent. OOL slightly longer than longer diameter of lateral ocellus; LOL = 1.5 OOL. Head in frontal view 1.2 times as wide as high. Antenna (fig.

36) with A1 0.8 times as long as height of head, about as long as distance between inner orbits; A9 about 1.3 times as wide as long.

Mesosoma 1.5 times as long as wide, higher than wide (15:13). Sides of pronotum smooth. Mesoscutum sparsely and almost evenly setose, weakly reticulate-coriaceous, on middle of disc almost smooth; notauli in posterior half distinct, meeting in a rather fine point just touching base of scutellum, in anterior half fading out; scuto-scutellar grooves each with a few inconspicuous setae. Mesopleuron smooth. Scutellum (fig. 37) almost smooth, slightly denser setose than mesoscutum, posteriorly very slightly pointed, dark, without lamella. Metapleuron smooth, with long whitish pilosity which is very sparse in about anterior half. Propodeal carinae slightly separated anteriorly, converging and meeting posteriorly, in lateral view dark with a translucent spot around midlength.

Fore wing 0.85 times as long as entire body, 2.75 times as long as wide, faintly yellowish, with fine and rather sparse microtrichia; marginal cilia 0.1 width of wing. Hind wing 6.5 times as long as wide; marginal cilia about 0.5 width of wing.

Metasoma (fig. 38) 0.9 times as long as head and mesosoma combined, 1.25 times as long as mesosoma, as wide as this, 1.3 times as wide as high. Tergites smooth except for short and weak crenulation around junction of T1-T2 and faint sculpture along very narrow hind margin on T2, on posterior half of T3-T5, and over most of T6. T3 with a couple of setae on each side, T4-T5 each with a transverse row of 6-8 setae inserted in shallow punctures.

C o m m e n t s . The somewhat similar Vietnamese *S. nigrispinus* BUHL 2009 has head isodiametrically reticulate-coriaceous, distinctly stronger scutellar spine than *S. himalayanum*, and fore wing with very sparse microtrichia and no marginal cilia. Philippine *S. acutiventre* BUHL 1997 also has distinctly stronger scutellar spine than *S. himalayanum* and metasoma more pointed than in this species. Philippine *S. montanum* BUHL 1997 has scutellum more similar to that of *S. himalayanum* but more elongate meso- and metasoma than in this species. Spanish *S. gastralis* BUHL 2001 is perhaps most similar to *S. himalayanum* but has A3 only half as long as A4 (in *himalayanum* it is about 0.7 times as long), mesosoma 1.25 times as high as wide, sides of pronotum sharply reticulate over most of surface, scutellum with a distinct spine, fore wing only 2.3 times as long as wide with no marginal cilia, and metasoma as long as rest of body, hardly 0.9 times as wide as mesosoma, cf. also BUHL (2001).

E t y m o l o g y . Named after the Himalayan mountain range of which the type locality is a part.

***Synopeas madeirense* nov.sp. (figs 39-42)**

M a t e r i a l e x a m i n e d : Holotype ♀: Portugal, Madeira, Boa Morte, Quinta Grande, 550 m, 21.iv.1995, M. KOPONEN (DABH).

D i a g n o s i s . A small species belonging to *Synopeas* s.str.; head in frontal view 1.2 times as wide as high, hyperoccipital carina weak, LOL = 3 OOL; female A9 1.4 times as wide as long; scutellum behind with a narrow, almost vertical brownish lamella, without tooth; marginal cilia of fore wing 0.1 width of wing; female metasoma 0.8 times as long as rest of body, 1.4 times as wide as high.

Description. ♀. Body length 0.85 mm. Black; A1-A6 and legs light brownish; A7-A10, mandibles, tegulae, coxae, mid and hind femora, apical 0.4 of hind tibiae, and last segment of tarsi darker brown.

Head from above (fig. 39) 1.85 times as wide as long, 1.05 times as wide as mesosoma, distinctly reticulate (not transversely so), hyperoccipital carina weak. LOL = 3 OOL. Head in frontal view 1.2 times as wide as high. Antenna (fig. 40) with A1 shorter than height of head (12:13), 1.33 times as long as distance between inner orbits; A9 1.4 times as wide as long.

Mesosoma 1.45 times as long as wide, 1.15 times as high as wide. Sides of pronotum reticulate-coriaceous in most of upper half, smooth below and along hind margin. Mesoscutum very sparsely setose, weakly and almost uniformly reticulate-coriaceous, notauli very faintly indicated over most of length; mid lobe posteriorly narrow, dark, just touching base of scutellum, on each side with about six long setae over each triangular scuto-scutellar groove. Mesopleuron smooth. Scutellum (fig. 41) along middle smooth and almost bare, towards sides densely setose, posteriorly with a narrow, almost vertical brownish lamella. Metapleuron smooth, bare in most of anterior 0.4, rest with moderately dense long, whitish pilosity. Propodeal carinae moderately high, straight, dark brown, virtually fused.

Fore wing hardly shorter than entire body, 2.7 times as long as wide, almost clear, with fine and dense microtrichia; marginal cilia 0.1 width of wing. Hind wing 6.5 times as long as wide; marginal cilia fully half as long as width of wing.

Metasoma (fig. 42) 0.8 times as long as head and mesosoma combined, hardly 1.1 times as long as mesosoma, very slightly narrower than this (14:14.5), 1.4 times as wide as high. T1 with three longitudinal carinae, laterally moderately densely pubescent. T2 with two tufts of pubescence basally, smooth except for reticulate microsculpture along very narrow hind margin, T3-T5 smooth with a wider reticulate hind margin, T6 reticulate all over; apical tergites with a few very inconspicuous short setae.

Comments. Similar to *S. pinnei* BUHL 2009 from Latvia, but this species has head with stronger hyperoccipital carina, head in frontal view hardly wider than high, preapical antennal segments more transverse than in *S. madeirense*, and fore wing without marginal cilia. *S. madeirense* runs to *S. neuroteri* KIEFFER 1916 and *S. involutus* KIEFFER 1926 in KIEFFER's (1926) key, but the first mentioned species has metasoma as high as wide, the last mentioned has OOL = LOL, and both species have conformation of antennae different than in *S. madeirense*, cf. KIEFFER (1926).

Ety m o l o g y. Named after the island of Madeira.

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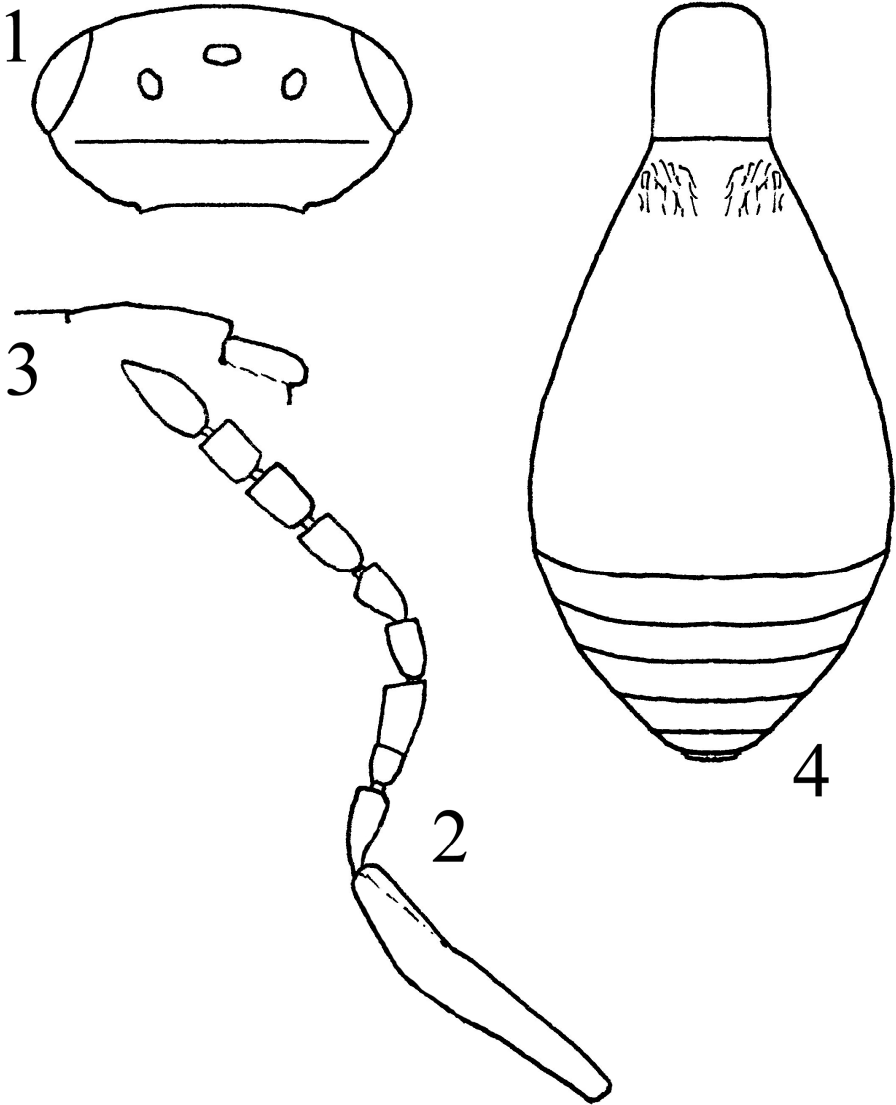
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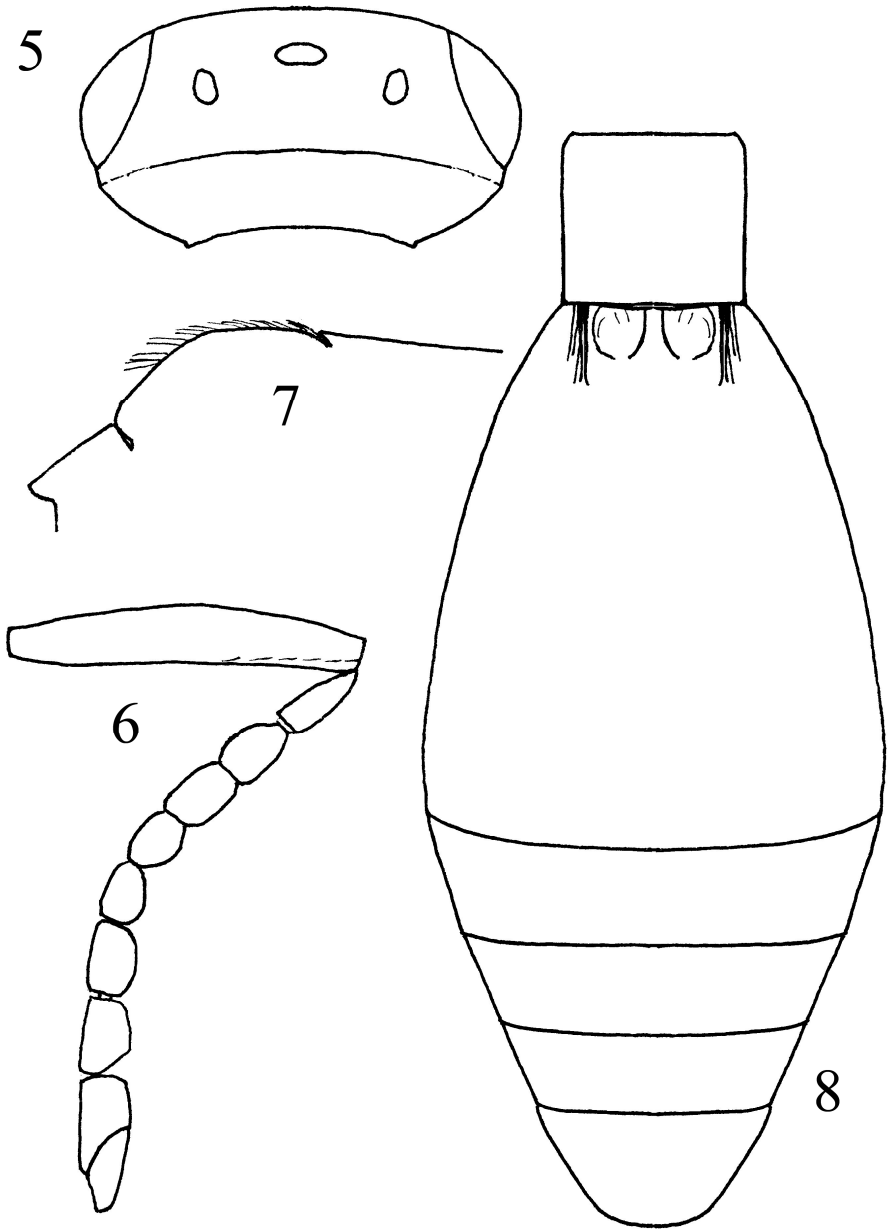
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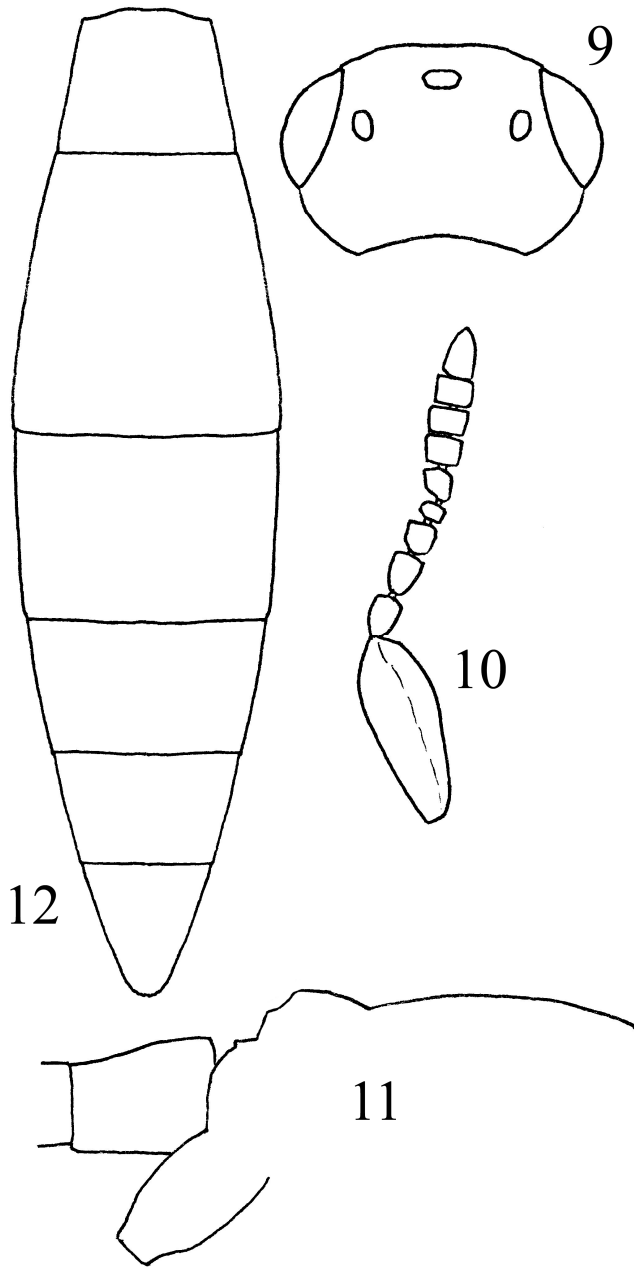
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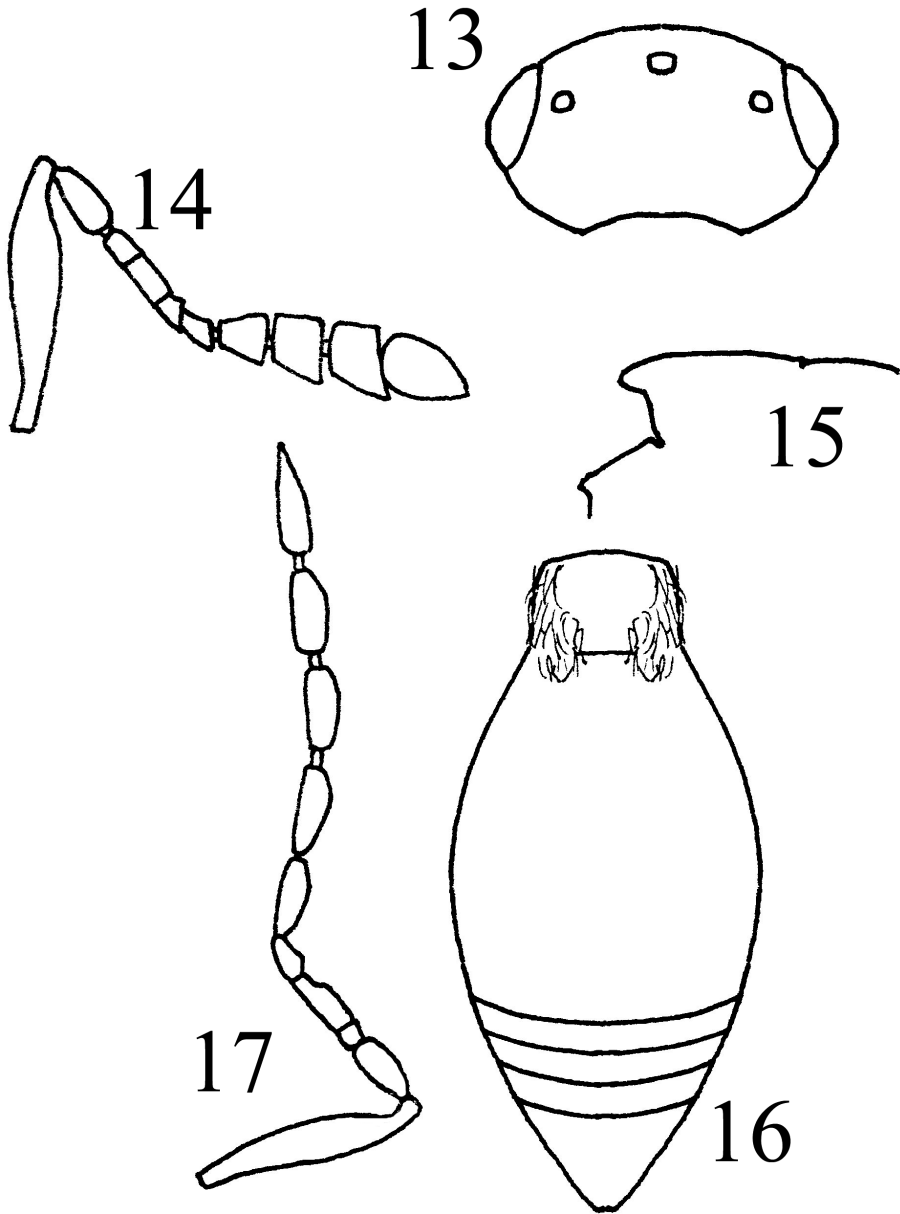
Figs 1-4: *Amblyaspis hartmanni* nov.sp. ♂: (1) head, (2) antenna, (3) scutellum and propodeum, (4) metasoma.



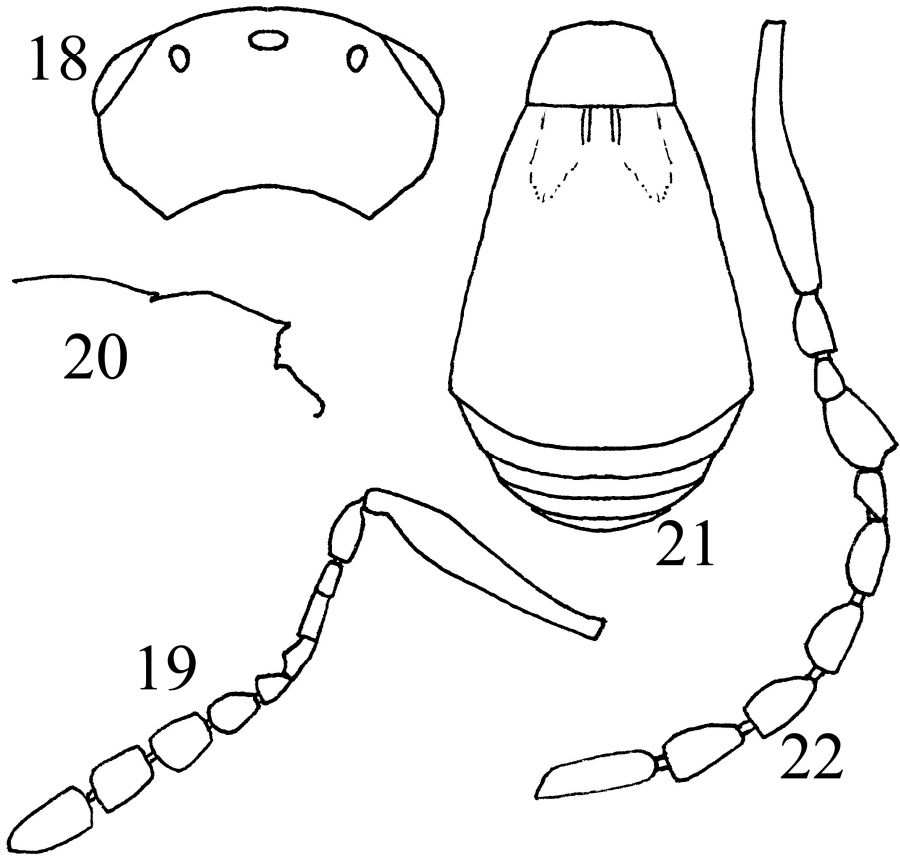
Figs 5-8: *Amblyaspis populi* nov.sp. ♀: (5) head, (6) antenna, (7) scutellum and propodeum, (8) metasoma.



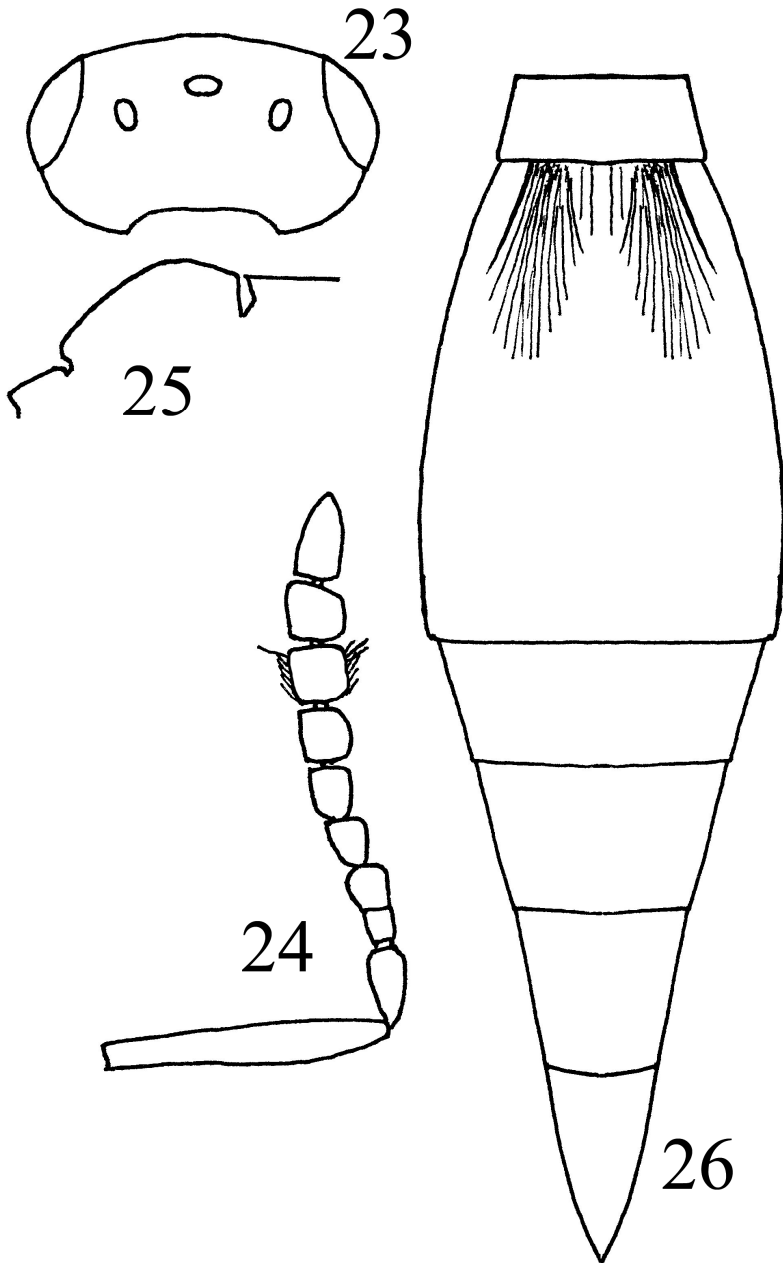
Figs 9-12: *Inostemma niklassonae* nov.sp. ♀: (9) head, (10) antenna, (11) scutellum, propodeum and T1, (12) metasoma.



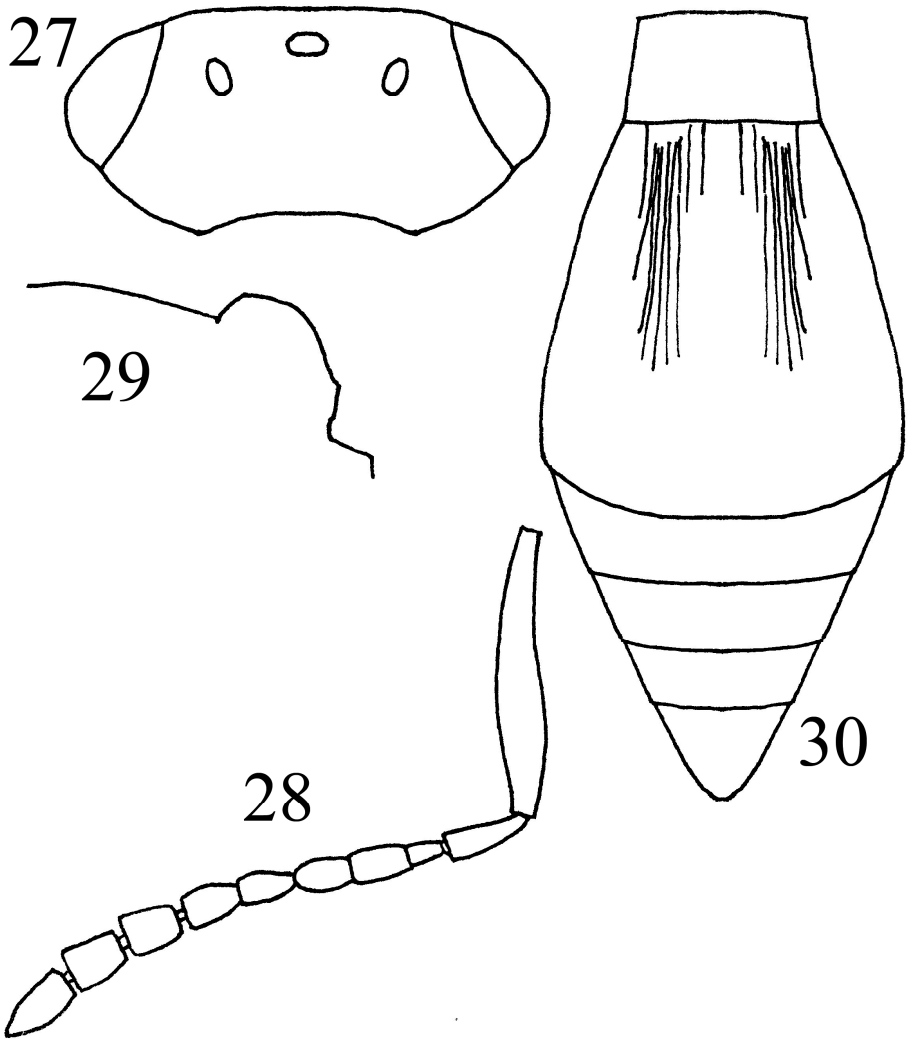
Figs 13-17: *Leptacis koponeni* nov.sp.: (13) head, (14) ♀ antenna, (15) scutellum and propodeum, (16) ♀ metasoma, (17) ♂ antenna.



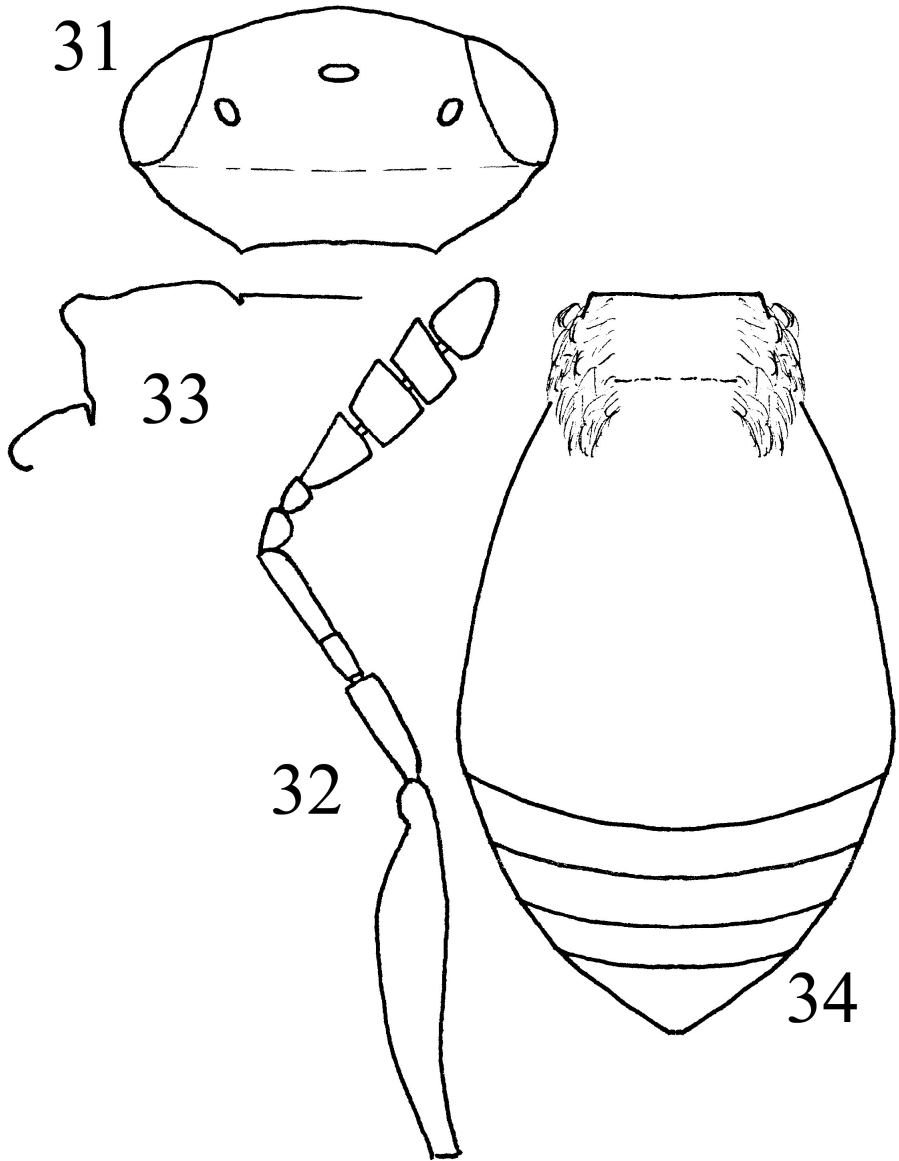
Figs 18-22: *Platygaster caricis* nov.sp.: (18) head, (19) ♀ antenna, (20) scutellum and propodeum, (21) ♀ metasoma, (22) ♂ antenna.



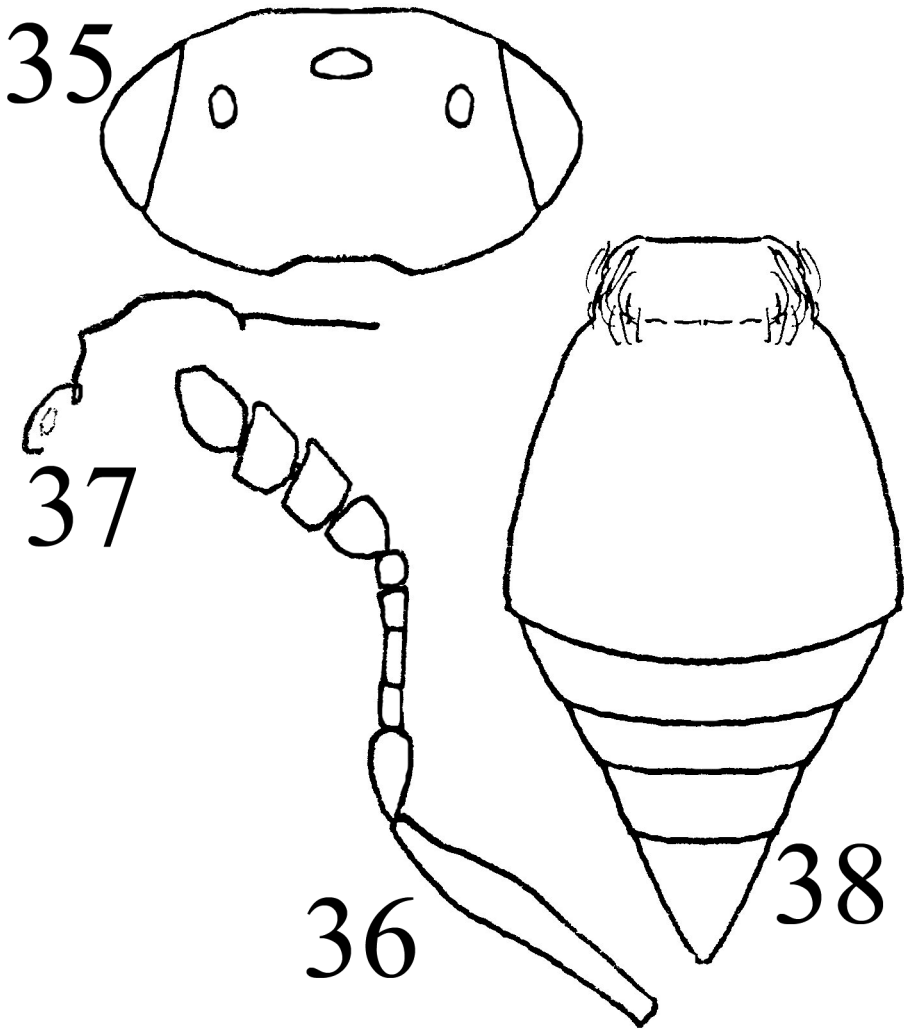
Figs 23-26: *Platygaster pubicornis* nov.sp. ♀: (23) head, (24) antenna, with setae indicated on A8, (25) scutellum and propodeum, (26) metasoma.



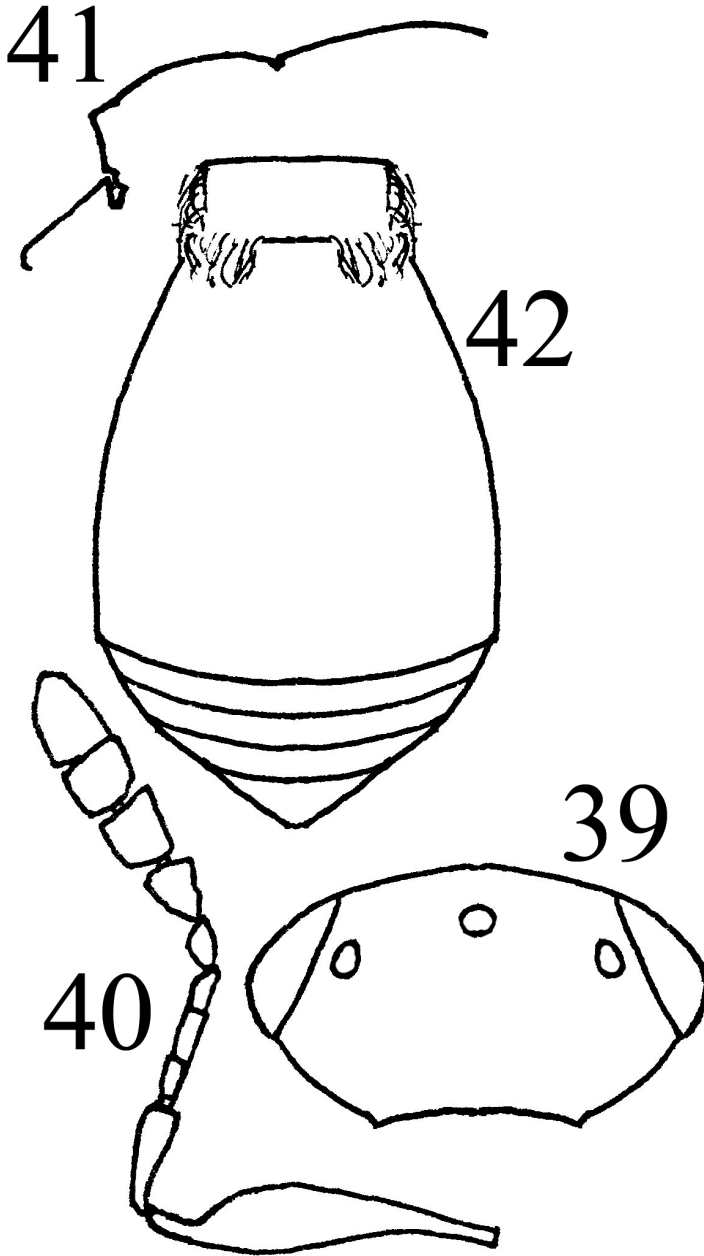
Figs 27-30: *Platygaster puncticauda* nov.sp. ♀: (27) head, (28) antenna, (29) scutellum and propodeum, (30) metasoma.



Figs 31-34: *Synopeas burgeri* nov.sp. ♀: (31) head, (32) antenna, (33) scutellum and propodeum, (34) metasoma.



Figs 35-38: *Synopeas himalayanum* nov.sp. ♀: (35) head, (36) antenna, (37) scutellum and propodeum, (38) metasoma.



Figs 39-42: *Synopeas madeirense* nov.sp. ♀: (39) head, (40) antenna, (41) scutellum and propodeum, (42) metasoma.

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Band/Volume: [0033](#)

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Artikel/Article: [Ten new species of Platygastriinae \(Hymenoptera, Platygastriidae\) 333-356](#)