

New species of Platygastriidae from Vietnam (Hymenoptera: Platygastroidea)

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The following 27 species are described as new to science: *Amblyaspis latiscapa* spec. nov., *A. vietnamensis* spec. nov., *Isostasius achterbergi* spec. nov., *Leptacis daklakensis* spec. nov., *L. dentiformis* spec. nov., *L. leptospina* spec. nov., *L. pilata* spec. nov., *L. semifusca* spec. nov., *L. subfilicornis* spec. nov., *L. vietnamensis* spec. nov., *Platygaster achterbergiana* spec. nov., *P. acuticeps* spec. nov., *P. convexissima* spec. nov., *P. guapa* spec. nov., *P. macrocephus* spec. nov., *P. rufopetiolata* spec. nov., *P. seminuda* spec. nov., *P. vietnamensis* spec. nov., *Sacespalus vriesi* spec. nov., *Synopeas bister* spec. nov., *S. coriaceus* spec. nov., *S. nigrispinus* spec. nov., *S. protuberatus* spec. nov., *S. terminalis* spec. nov., *S. transluceus* spec. nov., *S. vietnamianus* spec. nov. and *S. westwoodi* spec. nov. A key to the Oriental species of *Amblyaspis*, and to the known species of *Sacespalus* are given.

Introduction

Recently, Buhl (2008) described 42 new species of Platygastriidae from Indonesia and Malaysia and keyed the hitherto known Oriental species of the platygastriid genera *Leptacis*, *Synopeas*, and *Platygaster*. In the summer of 2006 I received a further generous loan of Oriental Platygastriidae by courtesy of C. v. Achterberg, Leiden. About 700 specimens of Platygastriidae from South Vietnam were collected by van Achterberg and R. de Vries in October 2005 in Malaise traps. About 60 species were present, 27 of which are here described as new to science. Some of the other specimens in the material belong to *Gastrotrypes caudatus* Brues, 1922, *G. spatulatus* Brues, 1922, *Iphitrachelus lar* Haliday, 1835, *I. masneri* Buhl, 1997, *Leptacis achterbergi* Buhl, 2007, *L. antennalis* Buhl, 1997, *L. bipartita* Buhl, 2007, *L. lineatifrons* Buhl, 2002, *L. longiclava* Buhl, 2002, *L. ? mirabilis* (Dodd, 1914), *L. pulla* Buhl, 2002, *L. transoceanica* Buhl, 2007, *L. vertexialis* Buhl, 2007, *Platygaster ?euhemerus* Walker, 1835, *P. tubulosa* Brues, 1922, *Plutomerus japonicus* Yamagishi, 1997, *Sacespalus rufiscapus* Buhl, 2007, *Synopeas acutalata* Buhl, 2004, *S. ? bengalensis* Mukerjee, 1978, and *S. synopeana* Buhl, 2002. The remainder of the specimens in the material belong mainly to a few common species of *Leptacis* and *Amblyaspis* and could not be determined at present; either being too poorly characterized or it is necessary to compare them with inaccessible types.

Terminology.— 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.

The material is preserved in the Nationaal Natuurhistorisch Museum, Leiden, The Netherlands, with duplicates deposited in the Institute of Ecology and Biological Resources of the Vietnamese Academy of Science and Technology, Hanoi, Vietnam.

The present paper was finished before the publication of Ushakumari, R. & Narendran, T.C., 2007: A taxonomic revision of *Leptacis* Foerster (Hymenoptera: Platygasteridae) of India.— Rec. zool. Surv. India 107: 7-32. In this paper, 13 species new to science are described. However, nine of them should in fact be transferred to *Synopeas*. None of the new species described in Ushakumari & Narendran’s paper are conspecific with new species described in the present paper.

Systematics
Genus *Amblyaspis* Förster, 1856

Hitherto six oriental species of this genus have been described.

Key to Oriental species of the genus *Amblyaspis* (females)

- 1. OOL longer than diameter of lateral ocellus 2
- OOL at most as long as longer diameter of lateral ocellus 6
- 2. Notauli present 3
- Notauli absent 4
- 3. Fore wing longer than entire body; T3-T6 combined less than half as long as T2; body length 1.8 mm *A. dalhousianus* (Mukerjee, 1978)
- Fore wing shorter than entire body; T3-T6 combined more than half as long as T2; body length at most 1.4 mm *A. achterbergi* Buhl, 2008
- 4. Head more than twice as wide as long *A. vietnamensis* spec. nov.
- Head at most twice as wide as long 5
- 5. Hyperoccipital carina weak and incomplete; T2 bare, without basal foveae
..... *A. peterseni* Buhl, 1997
- Hyperoccipital carina strong and complete; T2 with hairy basal foveae
..... *A. cariniceps* Buhl, 1997
- 6. Notauli missing in anterior 0.2 of mesoscutum *A. borneoensis* Buhl, 2004
- Notauli complete 7
- 7. Head 1.7 times as wide as long, without hyperoccipital carina
..... *A. thoracica* Buhl, 2001
- Head more than twice as wide as long, with hyperoccipital carina
..... *A. latiscapa* spec. nov.

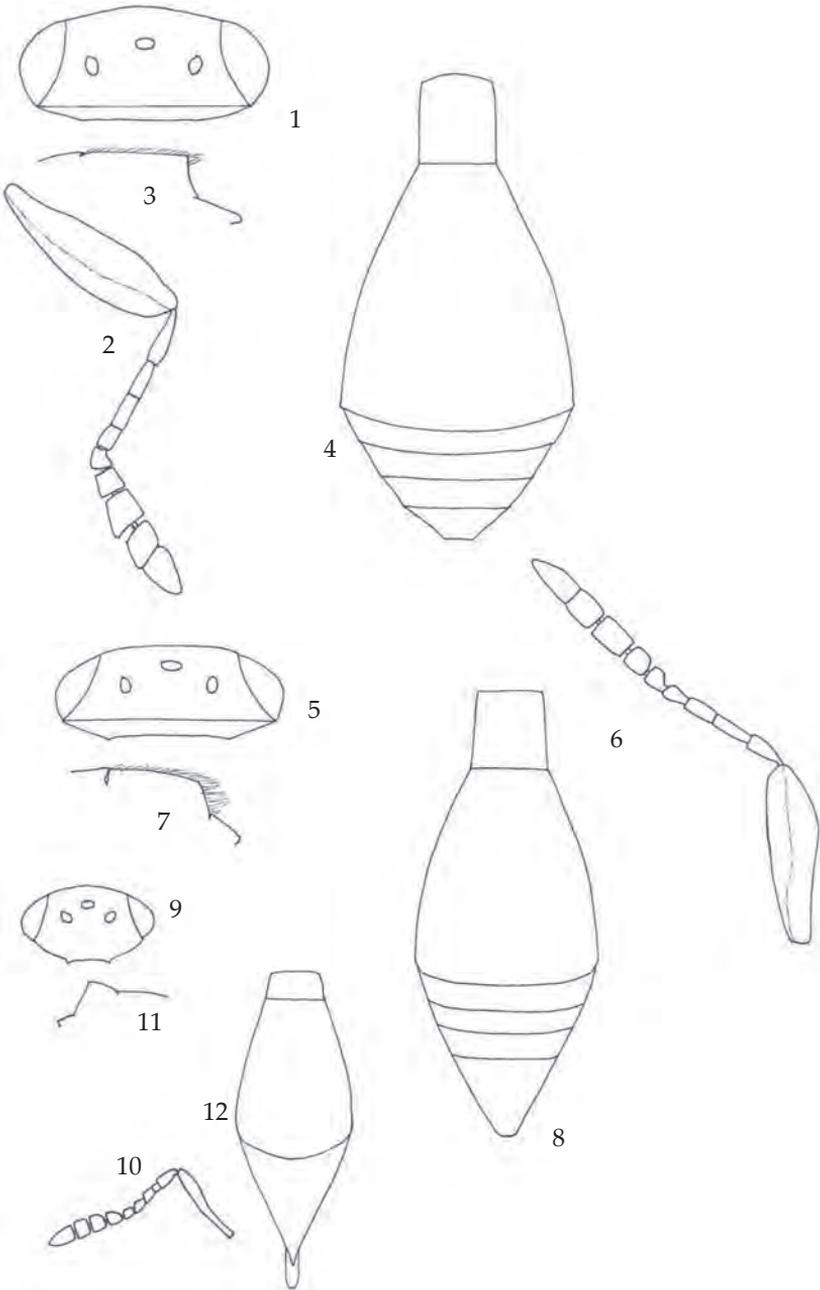
Amblyaspis latiscapa spec. nov.
(figs 1-4)

Material.— Holotype, ♀, “S. Vietnam: Lam Dong, Bidoup NuiBa N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”.

Diagnosis.— A species with head 2.2 times as wide as long, OOL equal to longer diameter of lateral ocellus, and complete notauli.

Description.— ♀. Length 2.0 mm. Black, antennae and legs light reddish brown, coxae and A7-A10 darkened.

Head from above (fig. 1) 2.2 times as wide as long, as wide as mesosoma, with a low



Figs 1-4. *Amblyaspis latiscapa* spec. nov., female – 1, head in dorsal view; 2, antenna; 3, scutellum in lateral view; 4, metasoma in dorsal view.
Figs 5-8. *Amblyaspis vietnamensis* spec. nov., female – 5, head in dorsal view; 6, antenna; 7, scutellum in lateral view; 8, metasoma in dorsal view.
Figs 9-12. *Isostasius achterbergi* spec. nov., female – 9, head in dorsal view; 10, antenna; 11, scutellum in lateral view; 12, metasoma in dorsal view.

but complete hyperoccipital carina, finely and uniformly isodiametrically reticulate-coriaceous, frons just above antennal insertions with a few distinct transverse wrinkles over whole width; head in lateral view at hyperoccipital carina forming an almost right angle between vertex and occiput (much as in *A. vietnamensis*, cf. below). OOL equal to longer diameter of lateral ocellus; OOL:LOL = 3:5. Head in frontal view 1.25 times as wide as high. Antenna (fig. 2) with A1 as long as height of head.

Mesosoma 1.4 times as long as wide, hardly higher than wide. Sides of pronotum finely reticulate-coriaceous all over (as head, but slightly smoother). Mesoscutum with short hairs along notauli, otherwise almost bare, uniformly reticulate-coriaceous almost as head; notauli complete and deep, only slightly converging, posteriorly widely separated; broad mid lobe very slightly prolonged, hardly reaching base of scutellum; scuto-scutellar grooves large, deep, triangular, each with six long hairs. Mesopleuron uniformly dull, very superficially reticulate all over. Scutellum (fig. 3) in dorsal view distinctly triangular, disc very slightly wider than long (16:15), sculptured as mesoscutum, moderately hairy on disc, densely hairy along sides. Metapleuron with pilosity all over. Propodeal carinae dark, parallel, well separated; area between them about twice as long as wide, smooth and shiny.

Forewing as long as entire body, with brownish tint and dense microtrichia, 2.5 times as long as wide; marginal cilia 0.1 times width of wing. Hindwing 5.4 times as long as wide; marginal cilia 0.3 times width of wing.

Metasoma (fig. 4) 1.1 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 crenulated (with five strong longitudinal furrows), laterally hairy. T2 bare, with two longitudinal basal foveae separated by a medial carina which is 0.8 times as long as T1, T2 posteriorly with extremely weak reticulation. Apical tergites with extensive fine micropunctuation and with superficially implanted long hairs, T3 with two long hairs on each side, T4-T5 each with six long hairs on each side, T6 with a transverse row of 10 long hairs.

Discussion.— Apart from length of OOL, this species differs from *A. dalhousianus* (Mukerjee, 1978) in having A1 much less than 4.4 times as long as wide, scutellum not semicircular, and forewing not longer than entire body, cf. also Mukerjee (1978).

Etymology.— The name refers to the relatively wide antennal scape of this species.

Amblyaspis vietnamensis spec. nov.

(figs 5-8, 115-117)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05. Paratypes: 4 ♀♀, 6 ♂♂, same data; 1 ♀ same data but 1600-1650 m, 12-19.x.2005.

Diagnosis.— A black species with light body appendages; head distinctly more than twice as wide as long with head behind hyperoccipital carina unusually steep relative to vertex; notauli absent.

Description.— ♀. Length 1.5-2.0 mm. Black, A1-A6 and fore legs light brownish yellow; A7, middle and hind legs, and all coxae very slightly darker; A8-A10, mandibles and tegulae dark brown.

Head from above (fig. 5 and 115) 2.25 times as wide as long, about as wide as meso-

soma; occiput finely isodiametrically reticulate-coriaceous, with a low but complete hyperoccipital carina; vertex and frons sculptured almost as occiput, vertex and occiput forming a nearly right angle (fig. 116), vertex with a secondary transverse carina faintly indicated just behind posterior ocelli, frons transversely striated above antennal insertions. OOL:LOL = 5:4; OOL 1.3 times diameter of lateral ocellus. Head in frontal view 1.25 times as wide as high. Antenna (fig. 6) with A1 hardly shorter than height of head.

Mesosoma (fig. 10) 1.4 times as long as wide, as wide as high. Sides of pronotum finely reticulate-coriaceous (as head) and with sparse hairs all over. Mesoscutum finely and uniformly reticulate-coriaceous (almost as head), with two broad stripes of short hairs along imaginary notauli, otherwise almost bare; notauli absent; hind margin straight, medially with a very small, dark triangular prolongation; scuto-scutellar grooves noticeable, triangular, each with about six inconspicuous hairs. Mesopleuron smooth. Scutellum (fig. 7) densely covered by pale hairs, antero-laterally distinctly margined, as long as width across outer margins. Metapleuron smooth, with sparse pilosity all over. Propodeal carinae dark, parallel; area between them about as long as wide, smooth and shiny.

Forewing 0.9 times as long as entire body, 2.4 times as long as wide, faintly infuscated and with fine and dense microtrichia; marginal cilia 0.07 times width of wing. Hindwing 5.3 times as long as wide; marginal cilia 0.25 times width of wing.

Metasoma (fig. 8) 1.2 times as long as head and mesosoma combined, 0.85 times as wide as mesosoma. T1 with two strong longitudinal keels. T2 with two shallow basal foveae, each as long as T1 and with pubescence in anterior half; T2 smooth except for very faint micropunctures along narrow hind margin; T3-T6 with stronger such punctation over most of surface (strongest on T6); T3 on each side with five rather superficially implanted long hairs on each side, T4 with six such hairs on each side, T5 with a total of about 16 slightly scattered such hairs, T6 with about 22 scattered such hairs.

♂. Length 1.8-1.9 mm. Antenna (fig. 117) entirely brownish yellow, with flagellar pubescence 0.5 times width of segments, A4 not widened.

Discussion.— Differs from the *Amblyaspis*-species described by Buhl (1997) e.g. in having more transverse head and in larger body size. Differs from *A. flavibrunneus* Dodd, 1924 e.g. in antennal structure and in colour, cf. Dodd (1924).

Etymology.— Named after the country of origin.

Genus *Isostasius* Förster, 1856

Hitherto 16 species of this genus described in the World, two of them are Oriental, cf. Vlug (1995) and Buhl (1997a, 2004a, 2004b).

Isostasius achterbergi spec. nov. (figs 9-12, 118-119)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀♀, same data; 1 ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1600-1650 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05"; 1 ♀, id, but 1650-1700 m, 11-19.x.2005.

Diagnosis.— A species with complete notauli, female A3-A7 not transverse, and A8-A9 only slightly transverse; female A4 much longer than A3; scutellum with a doubled longitudinal carina.

Description.— ♀. Length 1.2-1.5 mm. Shiny black, legs yellowish brown; A1-A3, mandibles and coxae slightly darker brown; A4-A10 very dark brown.

Head from above (figs 9 and 118) 1.9 times as wide as long, slightly wider than mesosoma, smoothly reticulate-coriaceous, stronger on occiput and vertex than on frons. OOL = 1.5 LOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 10) with A1 shorter than height of head (6:7).

Mesosoma (figs 118-119) 1.3 times as long as wide, as wide as high. Sides of pronotum finely reticulate-coriaceous (not longitudinally so) in upper half, smooth and with sparse hairs below and behind. Mesoscutum with sparse hairs, distinctly and uniformly reticulate-coriaceous; notauli complete and deep, slightly widened posteriorly; mid lobe ending in a point above the smooth and wide scuto-scutellar groove, with 3 long hairs on each side above groove. Mesopleuron smooth, in upper half with 4 longitudinal wrinkles except anteriorly. Scutellum (figs 11 and 118) finer sculptured and smoother than mesoscutum, moderately hairy, elevated along middle, abruptly sloping posteriorly. Metapleuron slightly dull and with sparse pilosity over most of surface. Propodeal carinae dark, short; area between them much transverse.

Forewing reaching apex of metasoma, clear, with fine and dense microtrichia, 2.9 times as long as wide; submarginal vein 0.25 times as long as wing, light brown, with small knob; marginal cilia 0.1 times width of wing. Hindwing 6.2 times as long as wide; marginal cilia 0.4 times width of wing.

Metasoma (fig. 12) 1.25 times as long as head and mesosoma combined, hardly as wide as mesosoma, 1.5 times as wide as high. T1 rather evenly crenulated. T2 at each side with a furrow to half of length, medially striated to almost 0.4 the length of tergite. T3 smooth in anterior half, reticulate-coriaceous in posterior half.

Discussion.— Differs from the known species of the genus in the combination of shape of antenna and complete notauli. Most similar to Neotropical *I. subfilicornis* Buhl, 2004, but this species as female A3-A4 of about equal length and metasoma less elongate than *I. achterbergi*, cf. Buhl (2004a).

Etymology.— Named after one of the collectors.

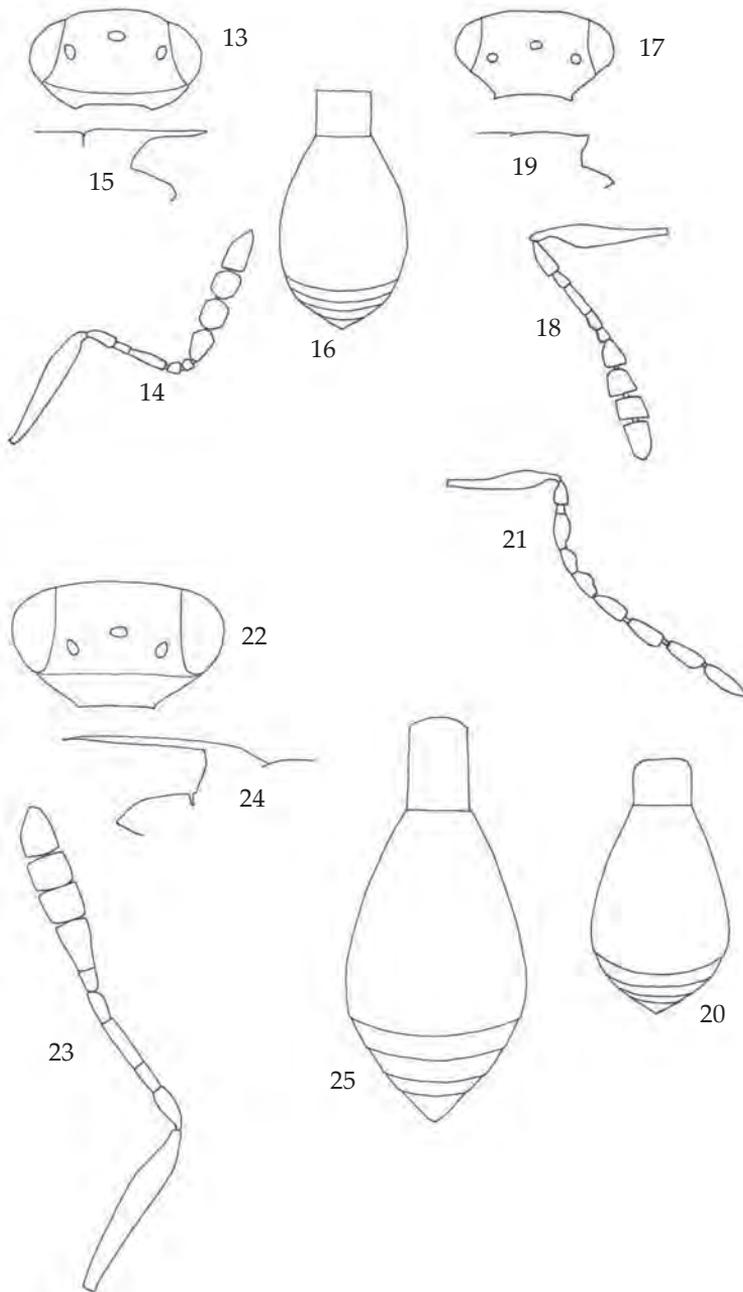
Genus *Leptacis* Förster, 1856

Hitherto 48 Oriental species described, most of them are keyed by Buhl (2008).

Leptacis daklakensis spec. nov. (figs 13-16, 120)

Material.— Holotype, "♀. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀♀, same data as holotype; 1 ♀, same data but 550-610 m, 21-26.x.2005; 1 ♀ same data, but 760-770 m, 21-26.x.2005.

Diagnosis.— A species with black body; female A4 fully twice as long as A3, A8-A9 each slightly elongate; head with a strong hyperoccipital carina; scutellum with a thin



Figs 13-16. *Leptacis daklakensis* spec. nov., female.— 13, head in dorsal view; 14, antenna; 15, scutellum in lateral view; 16, metasoma in dorsal view.

Figs 17-21. *Leptacis dentiformis* spec. nov.— 17, head in dorsal view; 18, female antenna; 19, scutellum in lateral view; 20, female metasoma in dorsal view; 21 male antenna.

Figs 22-25. *Leptacis leptospina* spec. nov., female.— 22, head in dorsal view; 23, antenna; 24, scutellum in lateral view; 25, metasoma in dorsal view.

spine longer than propodeum; and marginal cilia of forewing 0.25 times width of wing.

Description.— ♀. Length 1.2 mm. Black, A1-A6, legs and scutellar spine brownish-yellow; hind tibia slightly darkened at apex.

Head from above (fig. 13) 1.8 times as wide as long, 1.2 times as wide as mesosoma, finely and more or less transversely reticulate-coriaceous; hyperoccipital carina (fig. 120) strong and complete; vertex distinctly elevated. OOL about one-third the diameter of lateral ocellus. Head in frontal view 1.1 times as wide as high. Antenna (fig. 14) with A1 1.3 times as long as distance between inner orbits, 0.85 times as long as height of head.

Mesosoma 1.6 times as long as wide, 1.2 times as high as wide. Pronotum broad, dorsally reticulate, sides smooth, with sparse hairs in upper 0.4. Mesoscutum faintly reticulate-coriaceous, without notauli, hind margin very slightly convex, with dense hairs above scuto-scutellar grooves. Mesopleuron finely longitudinally striated in upper third, rest smooth. Scutellum (fig. 15) hairy and sculptured as mesoscutum. Metapleuron smooth, with whitish pilosity in less than posterior half. Propodeal carinae low, dull, very dark brown, close together and converging, area between them smooth and shiny.

Forewing clear, with fine and dense microtrichia, 2.95 times as long as wide; marginal cilia 0.25 times width of wing. Hindwing 6.7 times as long as wide; marginal cilia 0.7 times width of wing.

Metasoma (fig. 16) as long as mesosoma, 0.9 times as wide as this. T1 smooth and slightly swollen in anterior 0.3, posteriorly to this with two parallel longitudinal carinae, smooth and bare between them, pubescent laterally. T2 with two small tufts of pubescence at base, smooth except for reticulation along hind margin; apical tergites also smooth, with reticulation posteriorly.

Discussion.— Similar to *Leptacis maldarensis* Mukerjee, 1981, but this species has the vertex distinctly less angled than in *L. daklakensis*; female of *L. mendolongensis* Buhl, 2002, has A1 longer than height of the head, A4 only 1.4 times as long as A3 and a large lamella below the scutellar spine; *L. tegulata* Buhl, 2008, lacks the hyperoccipital carina, and *L. vertexialis* Buhl, 2008, has longer marginal cilia on the wings. Cf. Mukerjee (1981) and Buhl (2002, 2008).

Etymology.— Named after the province of the type locality.

Leptacis dentiformis spec. nov.
(figs 17-21, 121)

Material.— Holotype, "♀, Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♂♂, same data.

Diagnosis.— Female antenna with A2 and A4 of about equal length, A9 clearly transverse; head without hyperoccipital carina; scutellum only with a small tooth.

Description.— ♀. Length 1.3 mm. Black, A1-A3 and legs including coxae light brownish; A4-A10, apex of hind femur and of hind tibia, and least segment of all tarsi darkened.

Head from above (fig. 17) 2.0 times as wide as long, 1.1 times as wide as mesosoma; occiput strongly transversely reticulate-coriaceous, almost finely transversely striated,

behind eyes smooth; hyperoccipital carina absent; vertex slightly transversely reticulate-coriaceous and with punctures with hairs; frons with superficial and much transverse reticulation. OOL equal to diameter of lateral ocellus; LOL = 2.2 OOL. Head in frontal view 1.2 times as wide as high. Antenna (fig. 18) with A1 shorter than height of head (17:18).

Mesosoma 1.8 times as long as wide, 1.2 times as high as wide. Sides of pronotum smooth, in upper and anterior half with faint reticulation. Mesoscutum (fig. 121) superficially reticulate-coriaceous, evenly and moderately densely hairy, without notauli, hind margin medially with a very small, triangular prolongation to base of scutellum; scuto-scutellar grooves narrowly triangular, each with about seven inconspicuous hairs. Mesopleuron smooth. Scutellum (fig. 19) sculptured as mesoscutum, with denser hairs than disc of mesoscutum, posteriorly only with a tiny, triangular brownish tooth. Metapleuron smooth and bare, with pilosity only along upper and hind margins. Propodeal carinae dark, parallel, very close together.

Forewing as long as entire body, faintly infuscated, with fine and dense microtrichia, 2.6 times as long as wide; marginal cilia 0.14 times width of wing. Hindwing 6.1 times as long as wide; marginal cilia nearly 0.5 times width of wing.

Metasoma (fig. 20) 0.9 times as long as mesosoma, slightly narrower than this. T1 with two strong longitudinal, parallel keels. T2 with two small basal foveae with pubescence. T2-T6 smooth, each with fine microsculpture posteriorly.

♂. Length 1.1-1.2 mm. Antenna (fig. 21) with flagellar pubescence equal to width of segments.

Discussion.— In shape of scutellum similar to two African species, *L. risbeci* Masner, 1960 and *L. celisi* (Risbec, 1958), but these species have female antennal structure distinctly different than in *L. dentiformis*, cf. Masner (1960).

Etymology.— The name refers to the dentiform scutellum.

Leptacis leptospina spec. nov.
(figs 22-25)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Scutellar spine very long and thin relative to scutellar disc, reaching middle of T1; forewing without marginal cilia, its microtrichia not strong; hindwing hardly 7 times as long as wide with its marginal cilia 0.4 times width of wing.

Description.— ♀. Length 1.9 mm. Black, A1-A6 and legs light reddish brown; apex of hind femur and of hind tibia, and last segment of all tarsi darkened.

Head from above (fig. 22) 1.7 times as wide as long, almost 1.2 times as wide as mesosoma, finely and almost uniformly, isodiametrically reticulate-coriaceous, with a low but complete hyperoccipital carina. OOL half as long as longer diameter of lateral ocellus, and half as long as LOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 23) with A1 1.1 times as long as height of head.

Mesosoma 1.9 times as long as wide, fully 1.1 times as high as wide. Sides of pronotum very faintly reticulate-coriaceous in upper and anterior half, rest smooth. Mesoscutum uniformly sculptured as head, with short and sparse hairs, without notauli;

scuto-scutellar grooves triangular, each with about five long hairs. Mesopleuron smooth. Scutellum (fig. 24) finer sculptured and with slightly denser hairs than on mesoscutum, with a long and thin, semitransparent brown spine which reaches mid-point of T1. Metapleuron smooth and bare over most of surface, with scattered pilosity posteriorly. Propodeal carinae high, fused, roughly sculptured, very slightly semitransparent.

Forewing clear, with dense and rather long microtrichia, 0.95 times as long as entire body, 2.7 times as long as wide, without marginal cilia. Hindwing 6.8 times as long as wide; marginal cilia 0.4 times width of wing.

Metasoma (fig. 25) 0.9 times as long as head and mesosoma combined, slightly narrower than mesosoma. T1 with two strong, parallel longitudinal keels. T2 basally with three longitudinal carinae, the lateral ones 0.8 times as long as T1, the medial one half as long as these, between them with two bare basal foveae; T2-T5 with fine reticulate microsculpture along hind margin, T6 with such sculpture all over; T3-T5 each with a transverse row of superficially implanted fine hairs, medially interrupted on T3; T3 with about 16, T4 with 18, and T5 with 20 such hairs; T6 rather densely covered by more scattered hairs.

Discussion.—Runs to *L. silvatica* Buhl, 2007 in Buhl's (2008) key, but this species has unusually strong microtrichia on forewing, and hindwing fully 10 times as long as wide with its marginal cilia 0.9 times width of wing, cf. Buhl (2008).

Etymology.—The name refers to the very thin scutellar spine.

Leptacis pilata spec. nov.
(figs 26-29)

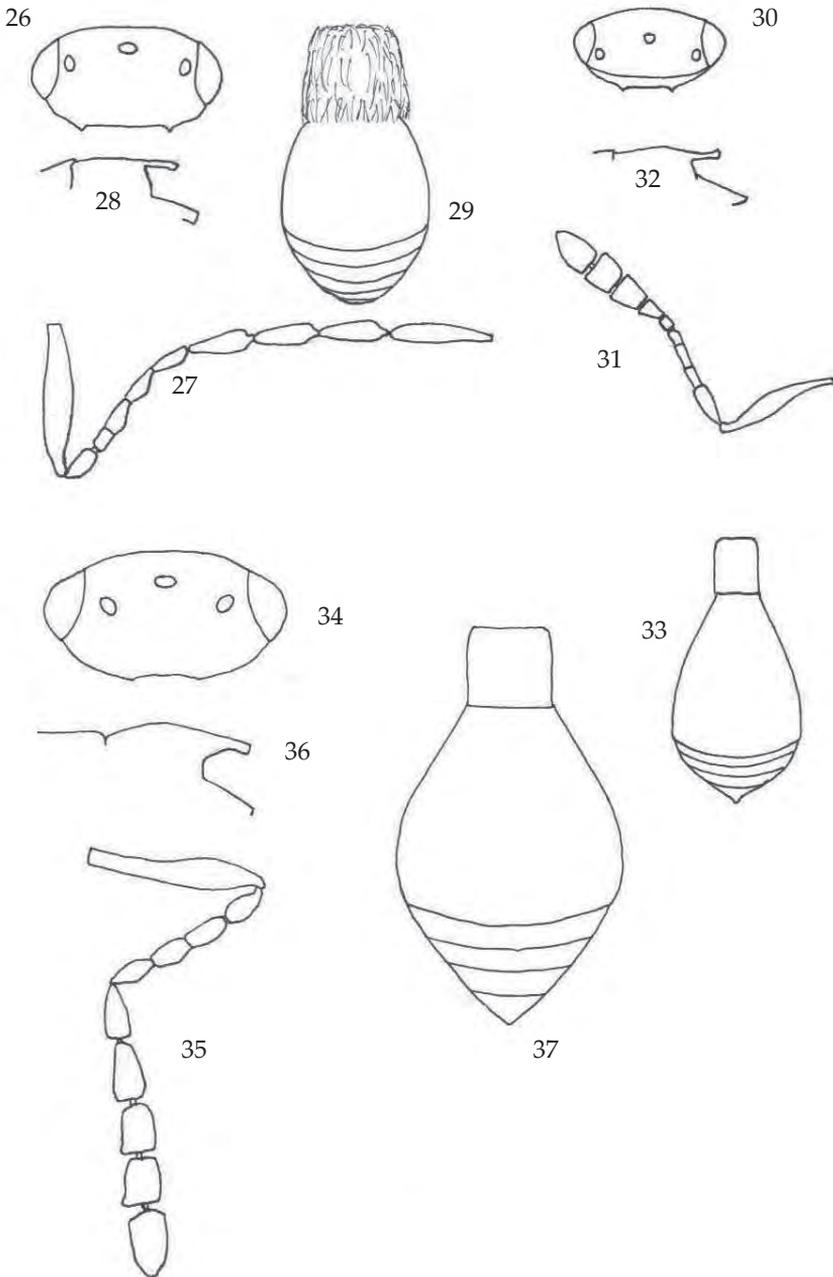
Material.—Holotype, ♂, "S.Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.—A species with forewing only 2.3 times as long as wide, with marginal cilia 0.4 times width of wing, and base of metasoma with very strong pilosity.

Description.—♂. Length 0.95 mm. Black, A1-A3 and legs yellowish brown, tegulae and A4-A10 dark brown.

Head from above (fig. 26) 1.9 times as wide as long, very slightly wider than mesosoma; occiput dull, isodiametrically reticulate-coriaceous, vertex smoother, frons also smoother than occiput and transversely reticulate-coriaceous; hyperoccipital carina absent, but head rather sharply angled. OOL about equal to diameter of lateral ocellus; OOL:LOL = 2:9. Head in frontal view 1.2 times as wide as high. Antenna (fig. 27) with A1 as long as height of head; flagellar pubescence 1.5 times as long as width of segments.

Mesosoma 1.5 times as long as wide, 1.25 times as high as wide. Sides of pronotum with very few hairs, superficially reticulate-coriaceous except along narrow hind margin, in lower half longitudinally so. Mesoscutum with very few hairs, uniformly superficially reticulate-coriaceous, without notauli; hind margin bluntly angled medially and brownish, with 4 long hairs at each side. Mesopleuron smooth. Scutellum (fig. 28) finer sculptured than mesoscutum, medially bare, laterally moderately hairy, with a brownish spine and a narrow, brown, vertical lamella. Metapleuron smooth, only with pilosity at hind margin. Propodeal carinae low, semitransparent brown, fused.



Figs 26-29. *Leptacis pilata* spec. nov., male.— 26, head in dorsal view; 27, antenna; 28, scutellum in lateral view; 29, metasoma in dorsal view.

Figs 30-33. *Leptacis semifusca* spec. nov., female.— 30, head in dorsal view; 31, antenna; 32, scutellum in lateral view; 33, metasoma in dorsal view.

Figs 34-37. *Leptacis subfilicornis* spec. nov., female.— 34, head in dorsal view; 35, antenna; 36, scutellum in lateral view; 37, metasoma in dorsal view.

Forewing fully 1.1 times as long as entire body, 2.3 times as long as wide, faintly yellowish, with rather long (not thick) and moderately dense microtrichia; marginal cilia 0.4 times width of wing. Hindwing 11.7 times as long as wide; marginal cilia 1.7 times width of wing.

Metasoma (fig. 29) slightly shorter than mesosoma (11:12), hardly 0.9 times as wide as this. T1 smooth, dorsally with a few long hairs, laterally and posteriorly with very dense and long pilosity which also covers T2 basally. T2 and apical tergites smooth, with weak reticulation along hind margins.

Discussion.— Rather similar to *L. tenuissimus* Buhl, 2008 (only ♀ known) in structure of T1, but *tenuissimus* has sides of pronotum less sculptured, mesopleuron slightly sculptured, forewing 2.9 times as long as wide, with very dense microtrichia and with marginal cilia at their longest only 1/8 times the width of wing, and hindwing 7.7 times as long as wide with marginal cilia 0.5 times the width of wing. Cf. Buhl (2008).

Etymology.— The name refers to the very long hairs on wing margins and on T1.

Leptacis semifusca spec. nov.

(figs 30-33 and 122-123)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup NuiBa N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀♀, same data.

Diagnosis.— Head with strong hyperoccipital carina, frons almost finely transversely striated; marginal cilia of forewing 0.4 times width of wing.

Description.— ♀. Length 0.85-0.95 mm. Blackish, A1-A3, mandibles, tegulae, legs including coxae, dorsal areas of propodeum, posterior part of scutellar spine, and T1 more or less yellowish brown; A4-A7 only slightly darkened, A8-A10 dark brown.

Head from above (figs 30 and 122) 1.9 times as wide as long, as wide as mesosoma; occiput shiny, slightly transversely reticulate with large meshes, behind eyes smooth; hyperoccipital carina strong and complete; vertex and frons strongly transversely reticulate, almost finely transversely striated over most of surface. OOL equal to diameter of lateral ocellus. Head in frontal view only slightly wider than high (14:13). Antenna (fig. 31) with A1 shorter than height of head (11:13).

Mesosoma 1.7 times as long as wide, 1.2 times as high as wide. Sides of pronotum smooth except for some slight microstriation in lower half. Mesoscutum (fig. 122) almost smooth, densely and evenly covered by golden hairs, without notauli; hind margin slightly convex, with numerous hairs. Mesopleuron smooth, with a couple of long hairs just below tegula. Scutellum (fig. 32) sculptured and hairy almost as mesoscutum. Metapleuron smooth, with very sparse pilosity except along upper and hind margins. Propodeal carinae semitransparent, fused.

Forewing (fig. 123) fully 1.1 times as long as entire body, about 3.0 times as long as wide, faintly infuscated, with strong and dense microtrichia; marginal cilia 0.4 times width of wing. Hindwing about 12 times as long as wide; marginal cilia 1.25 times width of wing.

Metasoma (fig. 33) 0.9 times as long as head and mesosoma combined, slightly narrower than mesosoma. T1 swollen in anterior half, rest smooth. T2-T6 virtually smooth, T2 basally slightly pubescent along anterior margin.

Discussion.— Somewhat similar to *L. lineatifrons* Buhl, 2002 in sculpture of head, but this species has a different antennal structure and lacks hyperoccipital carina. *Leptacis vertexialis* Buhl, 2008 differs from *L. semifusca* e.g. in shape of antenna, in having shorter marginal cilia of wings, and in having T1 with two longitudinal carinae, and T2 with two small basal foveae. Cf. also Buhl (2002, 2008).

Etymology.— The name refers to the partly dark, partly light colour of this species.

Leptacis subfilicornis spec. nov.
(figs 34-37)

Material.— Holotype, ♀, “S. Vietnam, Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1680-1700 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”.

Diagnosis.— A black species with finely reticulate-coriaceous head which is 1.9 times as wide as long; hyperoccipital carina and notauli absent; female A2-A5 about equal, A8-A9 each slightly longer than wide; mesosoma slightly depressed; forewing 2.5 times as long as wide with marginal cilia 0.2 times width of wing; metasoma short.

Description.— ♀. Length 1.3 mm. Black; A1-A2, mandibles and legs including coxae light brownish; A3-A5, posterior half of scutellum and of propodeum, and entire T1 medium brown; A6-A10 dark brown.

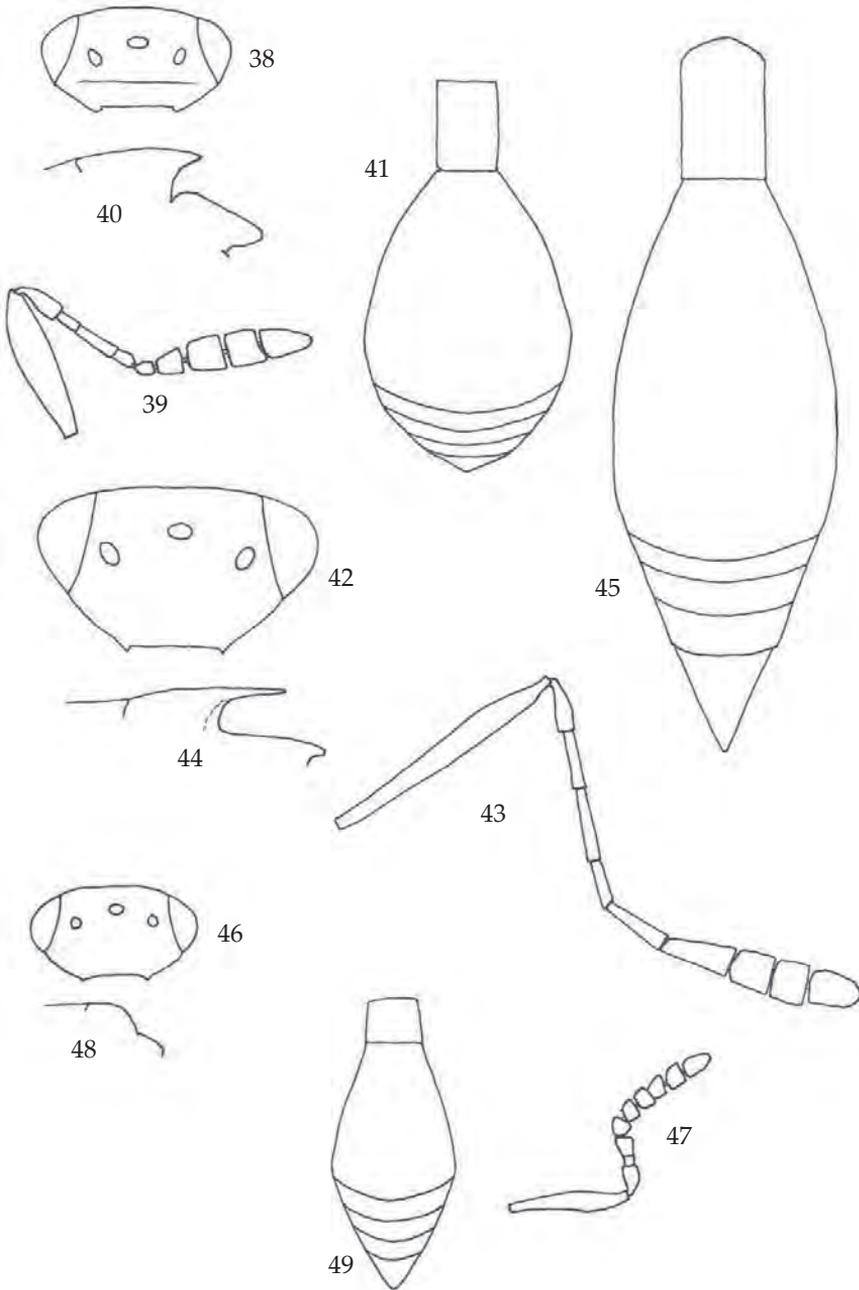
Head from above (fig. 34) 1.9 times as wide as long, as wide as mesosoma, finely, isodiametrically reticulate-coriaceous, on occiput transversely reticulate-coriaceous, with no trace of hyperoccipital carina. LOL = 2 OOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 35) with A1 shorter than height of head (16:17); flagellum with numerous hairs about 0.7 times (and a few even longer than) width of segments.

Mesosoma hardly 1.4 times as long as wide, as wide as high. Sides of pronotum weakly reticulate-coriaceous, in lower half with longitudinal elements, and smooth along hind margin. Mesoscutum with few hairs, most of them laterally and along imaginary notauli; disc finely and uniformly reticulate-coriaceous, without notauli; hind margin almost straight; triangular scuto-scutellar grooves each with 6-7 inconspicuous hairs. Mesopleuron smooth except for a few weak longitudinal striae just below tegula. Scutellum (fig. 36) slightly finer sculptured than mesoscutum, sparsely hairy and with a brownish semitransparent spine. Metapleuron smooth and bare, with pilosity in posterior corner. Propodeal carinae low, dark, parallel, area between them more than twice as long as wide.

Forewing slightly longer than entire body, 2.5 times as long as wide, with faint brownish tint and fine and dense microtrichia; marginal cilia 0.2 times width of wing. Hindwing 7.8 times as long as wide; marginal cilia 0.75 times width of wing.

Metasoma (fig. 37) 0.9 times as long as head and mesosoma combined, slightly narrower than mesosoma. T1 raised in most of anterior half, postero-medially with two weak longitudinal carinae close together, laterally with sparse pilosity. T2 with few hairs in weak basal impressions, smooth except for faint microsculpture along hind margin. T3-T6 smooth, each with a transverse trace of faint microsculpture; T3 with 8, T4-T5 each with 10 hairs, T6 with fewer, longer hairs.

Discussion.— Runs to *L. philippinensis* Buhl, 1997 in Buhl’s (2008) key to Oriental *Leptacis*, but this species has e.g. less transverse head, basal flagellar segments of female



Figs 38-41. *Leptacis transoceanica* Buhl, 2008, female.— 38, head in dorsal view; 39, antenna; 40, scutellum in lateral view; 41, metasoma in dorsal view.
Figs 42-45. *Leptacis vietnamensis* spec. nov., female.— 42, head in dorsal view; 43, antenna; 44, scutellum in lateral view; 45, metasoma in dorsal view.
Figs 46-49. *Platygaster achterbergiana* spec. nov., female.— 46, head in dorsal view; 47, antenna; 48, scutellum in lateral view; 49, metasoma in dorsal view.

antenna of more unequal length, and more elongate wings than *L. subfilicornis*, cf. Buhl (1997a).

Etymology.— The names refers to the moderately slender antennae.

Leptacis transoceanica Buhl, 2008
(figs 38-41)

Material.— 1 ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05"; 1 ♀, "S. Vietnam: Đông Nai, Cát Tiên N.P., c. 100 m, 1-9.x.2005, Malaise trap in *Ficus* trail, C. v. Achterberg & R. de Vries, RMNH'05".

The female of this species is drawn in this paper for the first time.

Leptacis vietnamensis spec. nov.
(figs 42-45, 124)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratype: 1 ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— A species with female A3 5 times as long as wide, 0.75 times as long as A4, A6-A7 of about equal length, A7 more than twice as long as wide, A8 hardly longer than wide, A9 transverse; female T6 as long as wide.

Description.— ♀. Length 2.2-2.5 mm. Black, A1 and legs light brown, A2-A6 medium brown, A7-A10 and mandibles dark brown.

Head from above (figs 42 and 124) about 1.75 times as wide as long, 1.1 times as wide as mesosoma, dull, finely and almost uniformly reticulate-coriaceous (not transversely so), behind each eye with about six oblique wrinkles; vertex evenly rounded, without trace of hyperoccipital carina. OOL 0.6 times diameter of lateral ocellus. Head in frontal view 1.2 times as wide as high. Antenna (fig. 43) with A1 0.95 times as long as width of head.

Mesosoma fully 1.9 times as long as wide, 1.1 times as high as wide. Sides of pronotum with faint longitudinal microsculpture in anterior 0.4, rest smooth, with a few hairs in upper half. Mesoscutum (fig. 124) uniformly and rather densely hairy, weakly reticulate-coriaceous, without notauli; hind margin slightly convex, with dense hairs above scuto-scutellar grooves. Mesopleuron with faint longitudinal striation in most of upper half, rest smooth. Scutellum (fig. 44) sculptured and hairy as mesoscutum, with a dark brownish spine and a small semitransparent lamella behind. Metapleuron smooth, with pilosity along upper and hind margins. Propodeal carinae slightly semitransparent, close together, anteriorly fused.

Forewing 3.0 times as long as wide, with brownish tint, microtrichia fine and dense; marginal cilia 0.1 times width of wing. Hindwing 7.3 times as long as wide; marginal cilia 0.4 times width of wing.

Metasoma (fig. 45) longer than head and mesosoma combined (7:6), 0.9 times as wide as mesosoma. T1 smooth in anterior third, with two longitudinal carinae, smooth between them, laterally with short and sparse pubescence. T2 smooth, bare basally, with two inconspicuous foveae at extreme base. T3-T6 smooth and bare.

Discussion.— Approaches *L. aranea* Masner, 1960 and *L. mirabilis* (Dodd, 1914) in shape of antenna, but *L. vietnamensis* has A6 much longer and the following segments shorter than in these two species, cf. Huggert (1976).

Etymology.— Named after the country of the type locality.

Genus *Platygaster* Latreille, 1809

Hitherto 29 Oriental species described, keyed by Buhl (2008).

Platygaster achterbergiana spec. nov.
(figs 46-49 and 125)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K' Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 3 ♀♀, same data.

Diagnosis.— Body black, legs brownish; head without hyperoccipital carina, occiput smooth in posterior 0.4-0.6, anteriorly transversely reticulate-coriaceous, frons smooth; notauli nearly complete; T2 without striation.

Description.— ♀. Length 1.0 mm. Shiny black; A1 basally and most of A2 light to medium brown; legs including coxae light to medium brown, hind coxa and all femora darker than rest of legs; rest of antennae, mandibles and tegula dark brown, or in some specimens A1-A2 and legs entirely yellowish brown.

Head from above (figs 46 and 125) 1.8 times as wide as long, 1.1 times as wide as mesosoma; occiput smooth over whole width in posterior 0.4-0.6, anteriorly distinctly, transversely reticulate-coriaceous, medially very slightly angled; vertex smooth except for some weak reticulation around ocelli; frons smooth, cheek with some wrinkles. OOL:LOL = 3:4. Head in frontal view 1.2 times as wide as high. Antenna (fig. 47) with A1 shorter than height of head (12:13).

Mesosoma 1.4 times as long as wide, higher than wide (15:14). Sides of pronotum smooth, with at most 15 hairs in upper half. Mesoscutum (fig. 125) with a few hairs laterally and along notauli, smooth, only with reticulation anteriorly of notauli, these distinct, missing in about anterior 0.2; mid lobe narrow behind, touching base of scutellum; scuto-scutellar grooves of moderate size, each with about five inconspicuous hairs. Mesopleuron smooth. Scutellum (fig. 48) at level of mesoscutum, smooth, rather densely and evenly hairy. Metapleuron with pilosity all over. Propodeal carinae slightly diverging, area between them about as long as wide, smooth and shiny.

Forewing overreaching tip of metasoma by a length equal to T5-T6, 2.5 times as long as wide, clear, with dense and moderately long microtrichia; marginal cilia 0.15 times width of wing. Hindwing 7.5 times as long as wide, with two hamuli; marginal cilia 0.6 times width of wing.

Metasoma (fig. 49) 0.9-1.0 times as long as head and mesosoma combined, hardly 0.9 times as wide as mesosoma. T1 with two longitudinal carinae. T2 smooth except for a couple of weak wrinkles in basal foveae, reaching 0.3 times length of tergite. T3-T6 smooth except for some very weak traces of microsculpture (strongest on T6), with superficially implanted hairs: Two on T3, and four on each of T4-T6.

Discussion.— Similar to *P. achterbergi* Buhl, 2008, but differs from this species most

importantly in having more sculptured occiput and weaker margined head; also in having broader flagellar segments and darker body appendages. Cf. Buhl (2008).

Etymology.— Named after one of the collectors.

Platygaster acuticeps spec. nov.
(figs 50-53 and 126)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1680-1700 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀♀, same data.

Diagnosis.— A species with head 2.25 times as wide as long, acutely rounded in both dorsal and lateral view; female A8-A9 each about as long as wide; scutellum low; female apical tergites short, with superficially implanted hairs.

Description.— ♀. Length 0.90-0.95 mm. Shiny black; A1-A2 or A1-A6, and legs including coxae light yellowish; A3-A10 or A6-A10, mandibles, and tegulae dark brown.

Head from above (figs 50 and 126) 2.25 times as wide as long, 1.25 times as wide as mesosoma; occiput smooth, in anterior 0.4 with irregular transverse wrinkles over whole width; vertex in lateral view pointed but without hyperoccipital carina, smooth as frons. OOL:LOL = 3:2. Head in frontal view 1.3 times as wide as high. Antenna (fig. 51) with A1 shorter than height of head (12:13), A9 1.0-1.5 times as long as wide.

Mesosoma 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum smooth except for weak rugosity antero-medially, with sparse hairs. Mesoscutum (fig. 126) smooth, mid lobe laterally and lateral lobes in outer half with sparse hairs; notauli complete, or rather entire mid lobe distinctly elevated, posteriorly pointed and slightly prolonged; scuto-scutellar grooves triangular, wide, each with about six long hairs. Mesopleuron smooth. Scutellum (fig. 52) at level of mesoscutum, smooth, moderately hairy. Metapleuron with pilosity all over. Propodeal carinae parallel, area between them square, smooth and shiny.

Forewing 2.6 times as long as wide, overreaching tip of metasoma by a length equal to T2, faintly yellowish and with rather fine and dense microtrichia; marginal cilia slightly more than 0.1 times width of wing. Hindwing 6.7 times as long as wide, with two hamuli; marginal cilia 0.5 times width of wing.

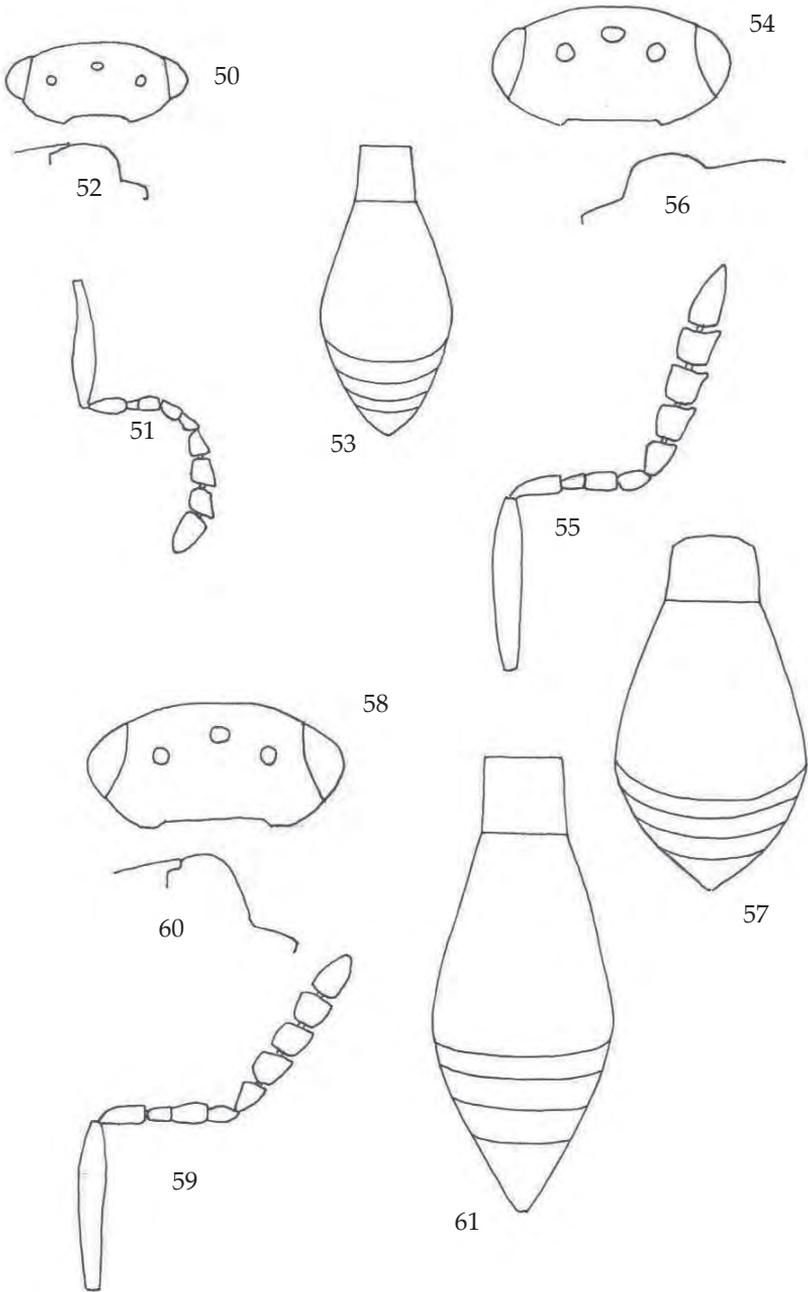
Metasoma (fig. 53) slightly shorter or as long as head and mesosoma combined, almost as wide as mesosoma. T1 with two longitudinal carinae. T2 smooth in and between basal foveae. T3-T6 smooth; T3 with two, T4-T6 each with about four superficially implanted hairs.

Discussion.— Head characteristically acutely rounded in both dorsal and lateral view. Differs in this aspect from otherwise somewhat similar species such as *P. achterbergi* Buhl, 2008 (which also has shorter OOL than *P. acuticeps*). Cf. Buhl (2008).

Etymology.— The names refers to the characteristically shaped head.

Platygaster convexissima spec. nov.
(figs 54-57)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".



Figs. 50-53. *Platygaster acuticeps* spec. nov., female.— 50, head in dorsal view; 51, antenna; 52, scutellum in lateral view; 53, metasoma in dorsal view.

Figs 54-57. *Platygaster convexissima* spec. nov., female.— 54, head in dorsal view; 55, antenna; 56, scutellum in lateral view; 57, metasoma in dorsal view.

Figs 58-61. *Platygaster guapa* spec. nov., female.— 58, head in dorsal view; 59, antenna; 60, scutellum in lateral view; 61, metasoma in dorsal view.

Diagnosis.— Legs yellowish brown, coxae dark brown; head evenly rounded, occiput densely and distinctly striated; notauli visible in posterior half; forewings with dense microtrichia; T2 striated in basal foveae to half of length, medially with a few striae less than half as long; T4-T5 each with about 10 hair-implantations.

Description.— ♀. Length 1.2 mm. Shiny black, A1-A5 and legs yellowish brown; A6-A10 and coxae dark brown.

Head from above (fig. 54) 2.0 times as wide as long, 1.1 times as wide as mesosoma; occiput densely and rather strongly, almost half-circularly striated all over; hyperoccipital carina absent; vertex laterally faintly reticulate, medially smooth with transverse wrinkles; frons faintly transversely reticulate-striate, strongest in lower half. OOL:LOL = 2:1. Head in frontal view 1.25 times as wide as high. Antenna (fig. 55) with A1 0.9 times as long as height of head.

Mesosoma hardly 1.4 times as long as wide, 1.1 times as high as wide. Sides of pronotum with weak reticulate sculpture all over except along narrow upper and hind margins, with scattered hairs over most of surface. Mesoscutum with a few hairs along margins and along notauli, weakly reticulate-coriaceous, smooth in posterior 0.25 and on most of lateral lobes; notauli weak, fading out in anterior half; mid lobe posteriorly rather narrowly prolonged to base of scutellum; scuto-scutellar grooves wide, covered by dense, conspicuous hairs. Mesopleuron smooth. Scutellum (fig. 56) smooth between dense hair-implantations, rather abruptly sloping posteriorly. Metapleuron with pilosity all over. Propodeal carinae parallel, distinctly transverse area between them smooth and shiny.

Forewing overreaching tip of metasoma by a length equal to 1.5 times combined length of T3-T6, 2.3 times as long as wide, almost clear, with moderately fine and dense microtrichia; marginal cilia 0.08 times width of wing. Hindwing 5.4 times as long as wide, with two hamuli; marginal cilia 0.4 times width of wing.

Metasoma (fig. 57) 0.9 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 evenly crenulated. T2 striated in basal foveae to about half of length of tergite, medially only to slightly more than 0.2 of length. T3-T5 with some faint traces of reticulation, with moderately deeply implanted hairs: 2 on each side of T3, and 5 on each side of each of T4-T5; T6 smooth, with 8 superficially implanted hairs.

Discussion.— Similar to *Platygaster luteipes* Buhl, 2007 but with stronger striated occiput, smoother mesoscutum with longer notauli, denser hairy and differently shaped scutellum, and darker body appendages (especially coxae), cf. Buhl (2008).

Etymology.— The name refers to the relatively strongly convex scutellum.

Platygaster guapa spec. nov.
(figs 58-61)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Female A7-A9 each as long as wide; mid lobe of mesoscutum posteriorly broadly and distinctly prolonged, covering base of scutellum; T3-T6 combined at most 0.75 times as long as T2, with moderately deeply implanted hairs.

Description.— ♀. Length 1.4 mm. Black; A1 and legs light brownish, A2-A10, mandibles and coxae dark brown.

Head from above (fig. 58) 2.1 times as wide as long, 1.2 times as wide as mesosoma; occiput finely and slightly transversely reticulate-coriaceous, medially between eyes with a few transverse wrinkles in anterior part; hyperoccipital carina very weak but complete, surrounded by parallel wrinkles; vertex and frons very faintly reticulate-coriaceous, frons in lower half weakly fan-like striated, with fine transverse wrinkles above antennae. OOL = LOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 59) with A1 0.9 times as long as height of head.

Mesosoma 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum faintly longitudinally reticulate-coriaceous, along narrow hind margin smooth. Mesoscutum with very sparse hairs, uniformly and weakly reticulate-coriaceous; notauli indicated in hardly posterior 0.4; mid lobe posteriorly broadly and distinctly prolonged, brownish, covering base of scutellum; scuto-scutellar grooves inconspicuous but with dense hairs. Mesopleuron smooth except for a small dull area just below tegula. Scutellum (fig. 60) dull but finer sculptured than mesoscutum, densely hairy especially postero-laterally, slightly impressed here. Metapleuron very faintly sculptured, with sparse long, whitish pilosity all over. Propodeal carinae diverging, slightly transverse area between them smooth and shiny.

Forewing overreaching tip of metasoma by a length equal to T5-T6 combined, faintly brownish, 2.3 times as long as wide, with fine and dense microtrichia; marginal cilia 0.1 times width of wing. Hindwing 5.9 times as long as wide, with two hamuli; marginal cilia 0.4 times width of wing.

Metasoma (fig. 61) 1.1 times as long as head and mesosoma combined, hardly 0.9 times as wide as mesosoma. T1 with two longitudinal carinae. T2 striated in basal foveae to almost 0.4 the length of tergite, smooth medially. T3-T6 almost smooth, with traces of weak reticulation; T3 with 3 moderately deeply implanted hairs on each side, T4 with 4, T5 with 5 such hairs on each side (almost forming a complete transverse row), T6 with about ten more scattered and superficially implanted hairs along margins.

Discussion.— In mesoscutal-scutellar structure similar to Japanese *P. matsutama* Yoshida & Hirashima, 1979 and *P. sugitama* Yoshida & Hirashima, 1979, but with smoother occiput, shorter A9, and shorter metasoma than these species, cf. Yoshida & Hirashima (1979).

Etymology.— Named in honour of miss G. Warren (Hillerød, Denmark).

Platygaster macroceps spec. nov.
(figs 62-65)

Material.— Holotype, ♀, "S. Vietnam: Đông Nai, Cát Tiên N.P., c. 100 m, 1-9.x.2005, Malaise trap in *Ficus* trail, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— A species with large, broadly rounded head which is at most finely striated, much wider than mesosoma; female A9 about as long as wide; notauli short and very weak; forewings with long and sparse microtrichia; metasoma short, T2 striated to 0.7.

Description.— ♀. Length 1.05 mm. Black, A1-A5 and legs light brownish, A6-A10 and coxae medium brownish.

Head from above (fig. 62) 1.8 times as wide as long, 1.25 times as wide as mesosoma; occiput finely transversely reticulate-striate, posteromedially slightly concave; vertex finely transversely reticulate-coriaceous; frons very finely fan-like striated. OOL = LOL. Head in frontal view 1.3 times as wide as high. Antenna (fig. 63) with A1 0.8 times as long as height of head, as long as distance between inner orbits; A9 about as long as wide.

Mesosoma 1.4 times as long as wide, 1.1 times as high as wide. Sides of pronotum with fine longitudinal microsculpture except along upper and hind margins, in upper half with numerous hair-implantations. Mesoscutum finely and almost uniformly, smoothly reticulate-coriaceous, with very few hairs; notauli very faintly indicated in about posterior half; mid lobe slightly and bluntly prolonged to base of scutellum; scuto-scutellar grooves inconspicuous, each with about five hairs. Mesopleuron smooth. Scutellum (fig. 64) smooth, with few hairs, most of them laterally. Metapleuron with pilosity all over. Propodeal carinae short, slightly diverging, area between them transverse.

Forewing 0.75 times as long as entire body, 2.4 times as long as wide, faintly infuscated, with long and rather sparse microtrichia; marginal cilia 0.1 times width of wing. Hindwing 5.7 times as long as wide, with two hamuli; marginal cilia 0.3 times width of wing.

Metasoma (fig. 65) 0.9 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 crenulated. T2 striated in basal foveae to 0.7 times length of tergite. T3-T6 smooth; T3 with four deep hair-implantations; T4-T5 each with about 14 such hair-implantations in a dense, transverse row; T6 with some hairs.

Discussion.— *P. malabaricus* (Mukerjee, 1978) is similar to this species in some respects but differs e.g. in having shorter antennae, less sparse and shorter microtrichia on forewing, and smooth metasoma, cf. Mukerjee (1978). *P. rufopetiolata* spec. nov. is also at first glance rather similar to *P. macrocephala*, but see below.

Etymology.— The name refers to the relatively large head of this species.

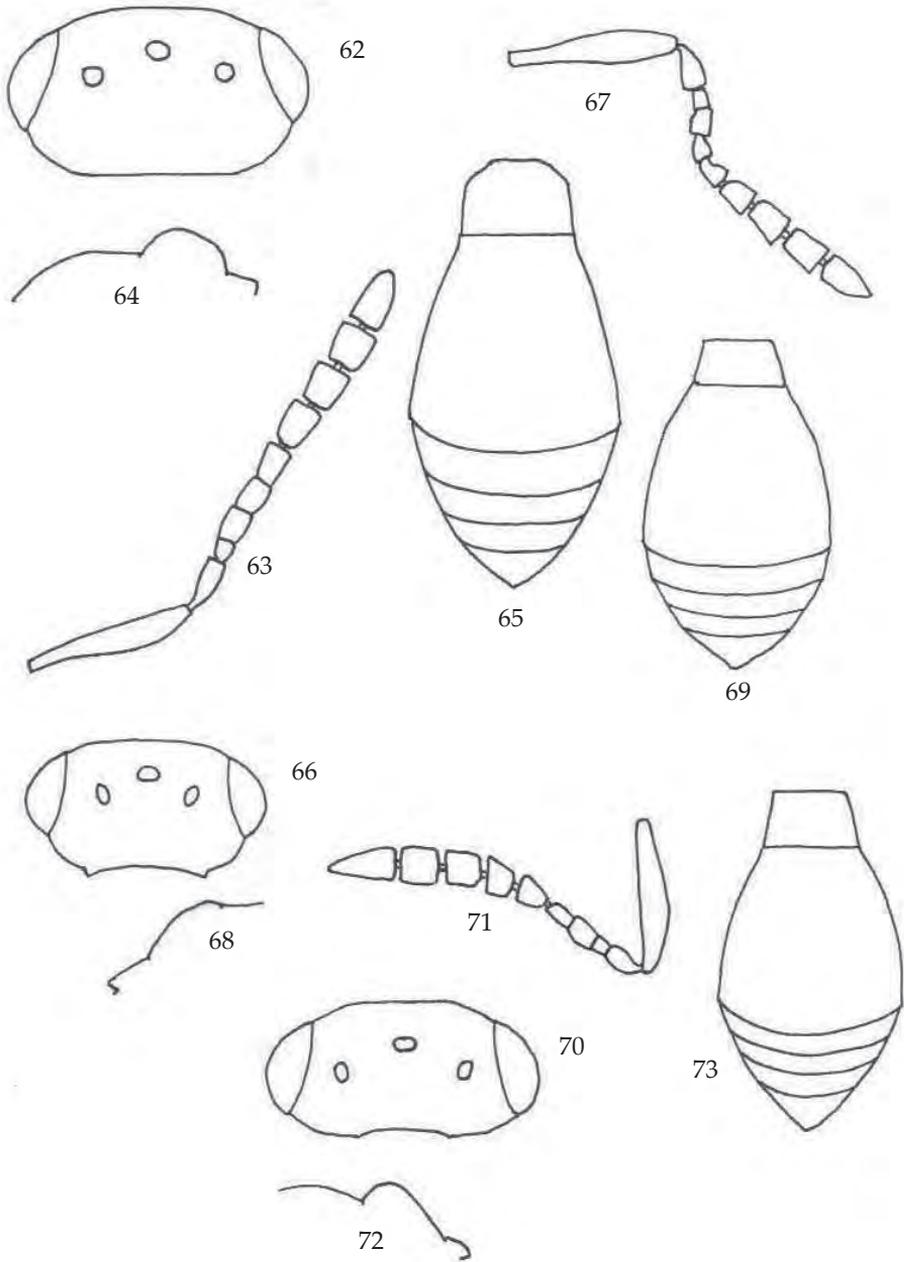
Platygaster rufopetiolata spec. nov.
(figs 66-69, 127)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratype: 1 ♀, "S. Vietnam, Lam Dong, Bidoup Nui N.P., near Da Lat, 1680-1700 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Head with finely and densely transversely striate-reticulate occiput; female A9 1.2 times as long as wide; notauli nearly complete; metasoma short, with reddish T1.

Description.— ♀. Length 0.90 mm. Black; A1-A3, mandibles and legs including coxae light brownish yellow; A4-A10 and last segment of tarsi dark brown; tegula and T1 reddish brown.

Head from above (figs 66 and 127) 1.9 times as wide as long, 1.2 times as wide as mesosoma; occiput finely and densely transversely striate-reticulate; hyperoccipital carina absent; vertex finely reticulate-coriaceous, between ocelli with some transverse elements; frons with faint fan-like sculpture. LOL = 1.25 OOL. Head in frontal view 1.2



Figs 62-65. *Platygaster macroceps* spec. nov., female.— 62, head in dorsal view; 63, antenna; 64, scutellum in lateral view; 65, metasoma in dorsal view.

Figs 66-69. *Platygaster rufopetiolata* spec. nov., female.— 66, head in dorsal view; 67, antenna; 68, scutellum in lateral view; 69, metasoma in dorsal view.

Figs 70-73. *Platygaster seminuda* spec. nov., female.— 70, head in dorsal view; 71, antenna; 72, scutellum in lateral view; 73, metasoma in dorsal view.

times as wide as high. Antenna (fig. 67) with A1 shorter than height of head (13:14), A9 1.1 times as long as wide.

Mesosoma 1.4 times as long as wide, higher than wide (15:14). Sides of pronotum smooth except for a small area of rugosity anteriorly, with scattered hairs (very few in lower half). Mesoscutum (fig. 127) with sparse, almost evenly scattered hairs, faintly reticulate-coriaceous, almost smooth in posterior half and on lateral lobes; weak notauli present nearly to anterior margin; mid lobe posteriorly blunt, very slightly prolonged to base of scutellum; scuto-scutellar grooves small, with very few inconspicuous hairs. Mesopleuron smooth. Scutellum (fig. 68) smooth except for spots with traces of reticulation, moderately hairy except medially. Metapleuron with pilosity all over. Propodeal carinae parallel, slightly transverse area between them smooth and shiny.

Forewing overreaching tip of metasoma by a length equal to length of T2, clear, with fine and dense microtrichia, 2.8 times as long as wide; marginal cilia 1/8 times width of wing. Hindwing 7.0 times as long as wide, with two hamuli; marginal cilia fully 0.4 times width of wing.

Metasoma (fig. 69) hardly 0.9 times as long as head and mesosoma combined, slightly narrower than mesosoma. T1 with two weak longitudinal carinae. T2 with a few very short wrinkles between basal foveae, otherwise smooth. T3-T6 smooth, with a few superficially implanted hairs: T4 with 2 on each side, T5 and T6 each with 3 on each side.

Discussion.—Runs to *P. imlaci* Buhl, 1997 in Buhl's (2008) key to Oriental *Platygaster*, but this species has hyperoccipital carina and only a few striae on occiput, thicker antennae than *P. rufopetiolata*, and T1 crenulated, cf. Buhl (1997a).

Etymology.—The name refers to the contrastingly brighter coloured first metasomal segment.

Platygaster seminuda spec. nov.
(figs 70-73 and 128)

Material.—Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀, same data.

Diagnosis.—Head fully twice as wide as long, finely but distinctly striated behind, frons moderately transversely sculptured; A9 as wide as long; notauli visible in less than basal half; scutellum smooth; metasoma short, T2 striated in basal foveae to slightly more than half of length, medially with short striae; hairs of apical tergites moderately deeply implanted.

Description.—♀. Length 0.90 mm. Black, A1-A3 and legs light brownish yellow; A4-A6, coxae, thickened part of mid and hind femora, apex of hind tibia, and last segment of all tarsi slightly darker; A7-A10, mandibles and tegulae dark brown.

Head from above (figs 70 and 128) 2.1 times as wide as long, fully 1.2 times as wide as mesosoma; occiput finely and densely transversely striated, rounded; vertex isodiametrically reticulate-coriaceous, between ocelli transversely so; frons weakly transversely reticulate-coriaceous, stronger so in lower third, along middle smooth. OOL = LOL. Head in frontal view 1.25 times as wide as high. Antenna (fig. 71) with A1 0.75 times as long as height of head; A9 as wide as long.

Mesosoma one and a third times as long as wide, 1.1 times as high as wide. Sides of pronotum with fine longitudinal microsculpture, smooth in most of upper third. Mesoscutum (fig. 128) with sparse, scattered hairs, faintly longitudinally reticulate-coriaceous; notauli weakly indicated in posterior 0.4; mid lobe slightly bluntly prolonged to base of scutellum; scuto-scutellar grooves each with 7-8 long hairs. Mesopleuron smooth. Scutellum (fig. 72) smooth, laterally with faint traces of sculpture, with sparse hairs. Metapleuron with pilosity all over. Propodeal carinae short, parallel; transverse area between them smooth.

Forewing 0.75 times as long as entire body, 2.3 times as long as wide, almost clear, with sparse and rather long microtrichia; marginal cilia 0.1 times width of wing. Hindwing 5.8 times as long as wide, with two hamuli; marginal cilia one-third the width of wing.

Metasoma (fig. 73) 0.8 times as long as head and mesosoma combined, hardly 0.9 times as wide as mesosoma. T1 densely and evenly crenulated. T2 not longer than wide, striated in basal foveae to fully half of length, medially to one-third of length. T3-T6 smooth; T4-T5 each with a transverse row of 10 moderately deeply implanted hairs (row on T4 medially interrupted), T6 with a transverse row of 6 less deeply implanted hairs.

Description of paratypes ♀. Length 1.2-1.3 mm. Antennae dark brown, only A2-A3 lighter, brownish yellow; legs dark brown with trochanters, most of fore tibia, basal half of mid and hind tibiae, and segments 1-4 of all tarsi light brownish. Head from above 2.0 times as wide as long. Forewing with distinctly denser microtrichia than in holotype. Metasoma (fig. 128) as long as head and mesosoma combined; T2 1.2 times as long as wide, and apical tergites longer than in holotype, T4 with six, T5 with four moderately deeply implanted hairs on each side (rows slightly interrupted medially).

Discussion.—The holotype is rather different from the two paratypes at first glance, but in fact few differences are probably just due to the difference in body size, the more stable defining characters being identical in all specimens. Runs to *P. satara* Mani, 1975 in Buhl's (2008) key to Oriental *Platygaster*, but *P. satara* has complete notauli and T2 striated only in basal third. *P. seminuda* is rather similar to *P. crenulata* Buhl, 2004 from Mongolia, but *P. crenulata* has less smooth frons, more striated T2, and it has darker body appendages than *P. seminuda*. Cf. also Buhl (2004c).

Etymology.—The name of the species, "half-naked", refers to the rather sparsely hairy wings and dorsal areas of mesosoma.

Platygaster vietnamensis spec. nov.
(figs 74-77, 129-130)

Material.—Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratypes: 2 ♀♀, same data as holotype; 1 ♀, same data as holotype, but 1600-1650 m, 12-19.x.2005.

Diagnosis.—A species with head 2.2 times as wide as long; occiput smooth in posterior half, rest transversely striate-reticulate; frons smooth; female A8-A9 each 1.6 times as long as wide; scutellum low, and T3-T6 short.

Description.—♀. Length 1.2-1.7 mm. Black, A1-A2 and legs except coxae yellowish brown.

Head from above (figs 74 and 129) 2.2 times as wide as long, 1.1 times as wide as mesosoma; occiput smooth in posterior half, distinctly transversely striate-reticulate in anterior half; hyperoccipital carina distinct behind ocelli; vertex weakly reticulate-coriaceous, between ocelli smooth and with a few transverse wrinkles; frons smooth, with a few wrinkles around antennal insertions. LOL = 1.1 OOL. Head in frontal view 1.25 times as wide as high. Antenna (fig. 75) with A1 as long as height of head; A9 at least 1.5 times as long as wide.

Mesosoma (figs 129-130) 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum smooth except for a spot of rugosity antero-medially, with scattered hairs over most of surface. Mesoscutum with a few hairs along notauli and along outer and hind margins of lateral lobes, smooth except for fine microsculpture around anterior ends of notauli and laterally and posteriorly on lateral lobes; notauli fading out just before reaching anterior margin of disc; mid lobe posteriorly rather narrow but bluntly reaching base of scutellum; scuto-scutellar grooves each with about ten long hairs. Mesopleuron smooth. Scutellum (fig. 76) smooth, densely and evenly hairy. Metapleuron with dense pilosity all over. Propodeal carinae nearly parallel, area between them about as long as wide, smooth and shiny.

Forewing overreaching tip of metasoma by a length equal to 1.4 times combined length of T3-T6, 2.2 times as long as wide, faintly infuscated, with fine and dense microtrichia; marginal cilia 0.08 times width of wing. Hindwing 5.5 times as long as wide, with two hamuli; marginal cilia hardly 0.4 times width of wing.

Metasoma (figs 77 and 130) 0.9 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma. T1 with two longitudinal carinae. T2 without striation, along extreme hind margin with weak microsculpture. T3-T6 with reticulate-punctate microsculpture over most of surface, each with four superficially implanted hairs.

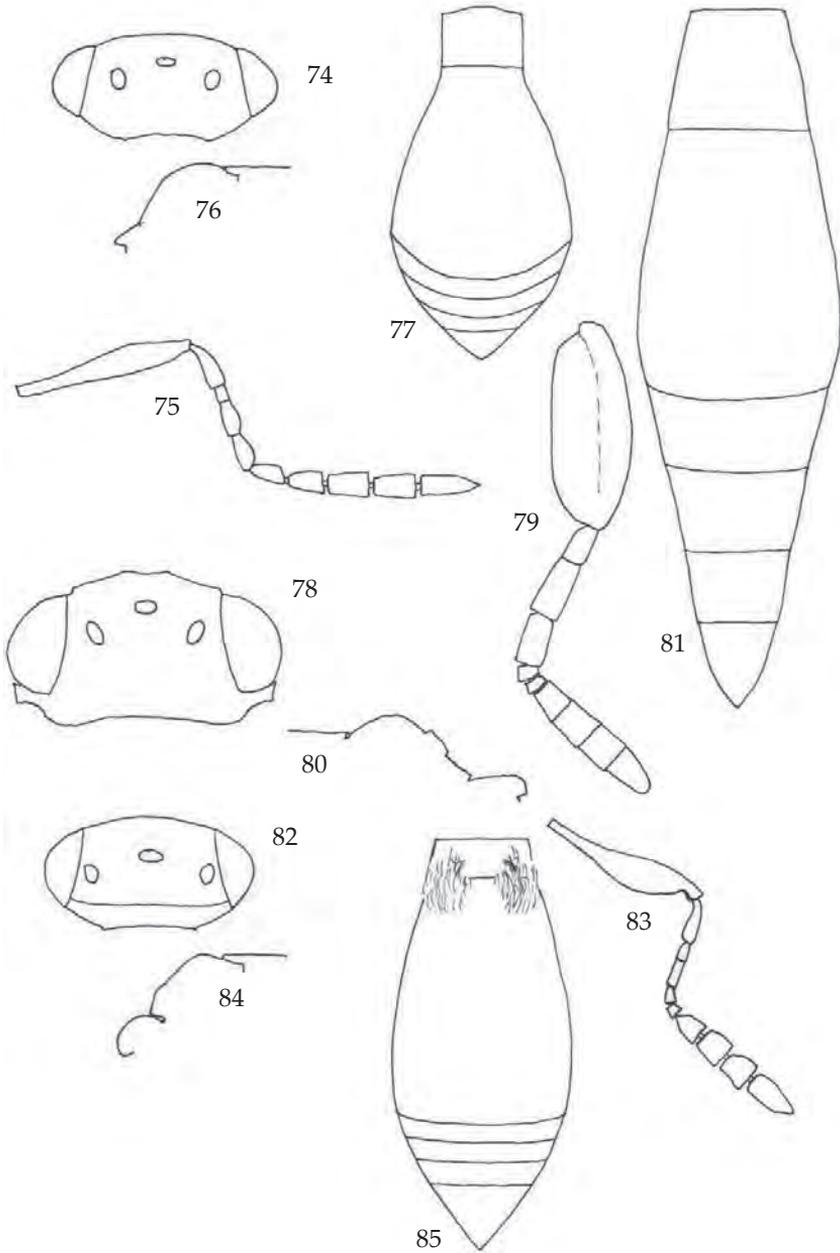
Discussion.— Similar to *P. achterbergi* Buhl, 2007 and *P. baliensis* Buhl, 2007, but e.g. with more transverse head and more elongate flagellar segments than these species, cf. Buhl (2007).

Etymology.— Named after the country of origin of the holotype.

Genus *Sacespalus* Kieffer, 1917

Key to World species of the genus *Sacespalus* (females)

1. T3-T6 combined shorter than T2 2
 - T3-T6 (when fully exposed) longer than T2 4
2. A3 longer than A4, more than 3 times as long as wide *S. rugosiceps* Kieffer, 1917
 - A3 at most as long as A4, distinctly less than 3 times as long as wide 3
3. OOL equal to about 2 times ocellar diameter; legs mostly black
 - *S. indicus* Mani, 1975
 - OOL much shorter than ocellar diameter; legs mostly reddish brown
 - *S. dubiosus* Buhl, 2004
4. Head with coarse cell-shaped sculpture on background of reticulation 5
 - Head only with rather uniform fine reticulate sculpture 6
5. Legs reddish brown, all coxae dark; forewing clear or almost clear; metasoma 0.7 times as wide as mesosoma *S. vriesi* spec. nov.



Figs 74-77. *Platygaster vietnamensis* spec. nov., female.— 74, head in dorsal view; 75, antenna; 76, scutellum in lateral view; 77, metasoma in dorsal view.

Figs 78-81. *Sacespalus vriesi* spec. nov., female.— 78, head in dorsal view; 79, antenna; 80, scutellum in lateral view; 81, metasoma in dorsal view.

Figs 82-85. *Synopeas bister* spec. nov., female.— 82, head in dorsal view; 83, antenna; 84, scutellum in lateral view; 85, metasoma in dorsal view.

- Legs bright yellowish brown, only hind coxa dark; forewing distinctly yellowish; metasoma 0.6 times as wide as mesosoma *S. manii* Buhl, 2008
- 6. T4-T5 not longer than wide; A1 reddish brown; metasoma 0.75 times as wide as mesosoma *S. rufiscapus* Buhl, 2008
- T4-T5 distinctly longer than wide; A1 blackish brown; metasoma 0.6 times as wide as mesosoma *S. japonicus* Yamagishi, 1982

Sacespalus vriesi spec. nov.
(figs 78-81, 131)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1600-1650 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratype: 1 ♀, same data as holotype.

Diagnosis.— Head with rough areolate sculpture; forewings clear or almost clear; metasoma long, 0.7 times as wide as mesosoma.

Description.— ♀. Length 2.2-2.6 mm. Black; A1-A2 dark reddish brown, legs except coxae slightly lighter reddish brown.

Head from above (fig. 78) 1.8 times as wide as long, 0.9 times as wide as mesosoma, with rough areolate sculpture, forming irregular cells on background of fine, dull reticulation, and a reverse V-shaped impressed area in lower half of frons (fig. 131). LOL = 2 OOL; OOL 0.7 times longer diameter of lateral ocellus. Head in frontal view 1.2 times as wide as high. Antenna (fig. 79) with A1 nearly 0.9 times as long as height of head.

Mesosoma 1.4 times as long as wide, hardly 1.2 times as wide as high. Sides of pronotum in upper half roughly sculptured as head, in concave lower half finely reticulate-coriaceous and with a few vertical striae. Mesoscutum almost bare, finely and uniformly reticulate-coriaceous, with strong and complete notauli which are sculptured as rest of disc, posteriorly much widened, twice as wide as distance between them; mid lobe only very slightly prolonged posteriorly, not reaching base of scutellum; scuto-scutellar groove wide, bare. Mesopleuron finely reticulate-coriaceous, strongly concave over most of surface, with a few wrinkles in and below concavity. Scutellum (fig. 80) slightly more dull than mesoscutum, bare, with a carina along middle. Metapleuron with pilosity all over. Propodeal carinae dark, diverging, slightly transverse area between them with fine microsculpture.

Forewing nearly reaching tip of metasoma, clear, 2.2 times as long as wide, without microtrichia or marginal cilia. Hindwing 5.7 times as long as wide, with two hamuli; marginal cilia about 0.25 times with of wing.

Metasoma (fig. 81) 1.25 times as long as head and mesosoma combined, 0.7 times as wide as mesosoma. T1 with two weak longitudinal carinae, almost smooth between them, finely hairy at sides. T2 anteromedially depressed, smooth except for five very short longitudinal carinae at anterior margin, laterally finely longitudinally striated over entire length, posteriorly only with a narrow smooth mid part. T3 smooth along middle, T3-T6 otherwise densely punctured with longitudinal elements, especially T5 with longitudinal rugosity; T3-T6 almost bare.

Discussion.— Differs from *S. manii* Buhl, 2008 e.g. in having rough sculpture on

head more transverse, in having clear wings, wider metasoma, and darker body appendages, cf. Buhl (2008).

Etymology.— Named after one of the collectors.

Genus *Synopeas* Förster, 1856

Hitherto 33 Oriental species described, keyed by Buhl (2008).

Synopeas bister spec. nov. (figs 82-85, 132-133)

Material.— Holotype, ♀, “S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”. Paratypes: 1 ♀, 1 ♂, same data as holotype; 1 ♂ same data, but 1600-1650 m, 12-19.x.2005.

Diagnosis.— Head with occipital carina; female A4 2.75 times as long as wide, 1.6 times as long as A3; A8-A9 each about as long as wide; notauli absent; scutellum with a very small lamella behind; metasoma hardly as long as head and mesosoma combined, 1.4 times as wide as high.

Description.— ♀. Length 1.2-1.4 mm. Black, A1-A6 and legs except coxae light reddish brown, A7-A10 dark brown.

Head from above (figs 82 and 132) 1.9 times as wide as long, as wide as mesosoma, finely, isodiametrically reticulate-coriaceous, occiput more shiny than vertex and frons; hyperoccipital carina complete and distinct. OOL half as long as shorter diameter of lateral ocellus; LOL = 3 OOL. Head in frontal view 1.1 times as wide as high. Antenna (fig. 83) with A1 0.9 times as long as height of head.

Mesosoma (figs 132-133) 1.5 times as long as wide, 1.1 times as high as wide. Sides of pronotum finely reticulate-coriaceous in upper half (not longitudinally so), smooth along hind margin and in lower half; hairy in upper half. Mesoscutum weakly and uniformly reticulate-coriaceous, moderately and rather evenly hairy, without notauli; hind margin medially with a distinct, narrow and smooth, dark prolongation to base of scutellum; wide scuto-scutellar grooves covered by dense hairs. Mesopleuron smooth. Scutellum (fig. 84) densely covered with short, whitish hairs, along middle smooth, bare and slightly elevated, with a very small brownish lamella at posterior end. Metapleuron smooth and bare in anterior 0.4, most of rest of surface with sparse, white pilosity. Propodeal carinae dark brownish, curved, fused.

Forewing almost clear but with fine and dense microtrichia, 2.3 times as long as wide, 0.9 times as long as entire body; marginal cilia absent. Hindwing 5.4 times as long as wide; marginal cilia hardly 0.4 times width of wing.

Metasoma (fig. 85) shorter than head and mesosoma combined (20:21), 0.9 times as wide as mesosoma, and 1.4 times as wide as high. T2-T5 smooth, along hind margins distinctly reticulate-coriaceous, T6 with such rough microsculpture all over.

♂. Length 1.3 mm. Antennae and legs more brownish than in female; A1 and mid and hind femora and tibiae dark brown in about apical half; A2-A10 dark brown. Antenna (fig. 133) with only very short pubescence. Metasoma slightly longer than mesosoma (16:15).

Discussion.— Differs from *S. achterbergi* Buhl, 2008 e.g. in having shorter and more sculptured metasoma. *S. bister* is similar to *S. scutoscutellaris* Buhl, 2008, this has less sharply angled vertex, shorter female A4 and A8-A9, and it has prolongation of mesoscutum in front of scutellum longer and smoother than in *S. bister*.

Etymology.— Named in honour of my good friend, Mr. B. Warren (Hillerød, Denmark).

Synopeas coriaceus spec. nov.
(figs 86-89)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Belongs to *Synopeas* s.str.; head with hyperoccipital carina; notauli and marginal cilia of forewing absent; T2 in most of in posterior 0.4 distinctly reticulate-coriaceous.

Description.— ♀. Length 1.5 mm. Black, A1-A6 and legs excluding coxae medium brownish, apex of hind femur and of hind tibia, and last segment of all tarsi darkened.

Head from above (fig. 86) 1.9 times as wide as long, as wide as mesosoma, finely and almost uniformly, more or less isodiametrically reticulate-coriaceous, with a weak but complete hyperoccipital carina. OOL about 0.6 times shorter diameter of lateral ocellus; OOL:LOL = 1:4. Head in frontal view 1.1 times as wide as high. Antenna (fig. 87) with A1 0.8 times as long as height of head.

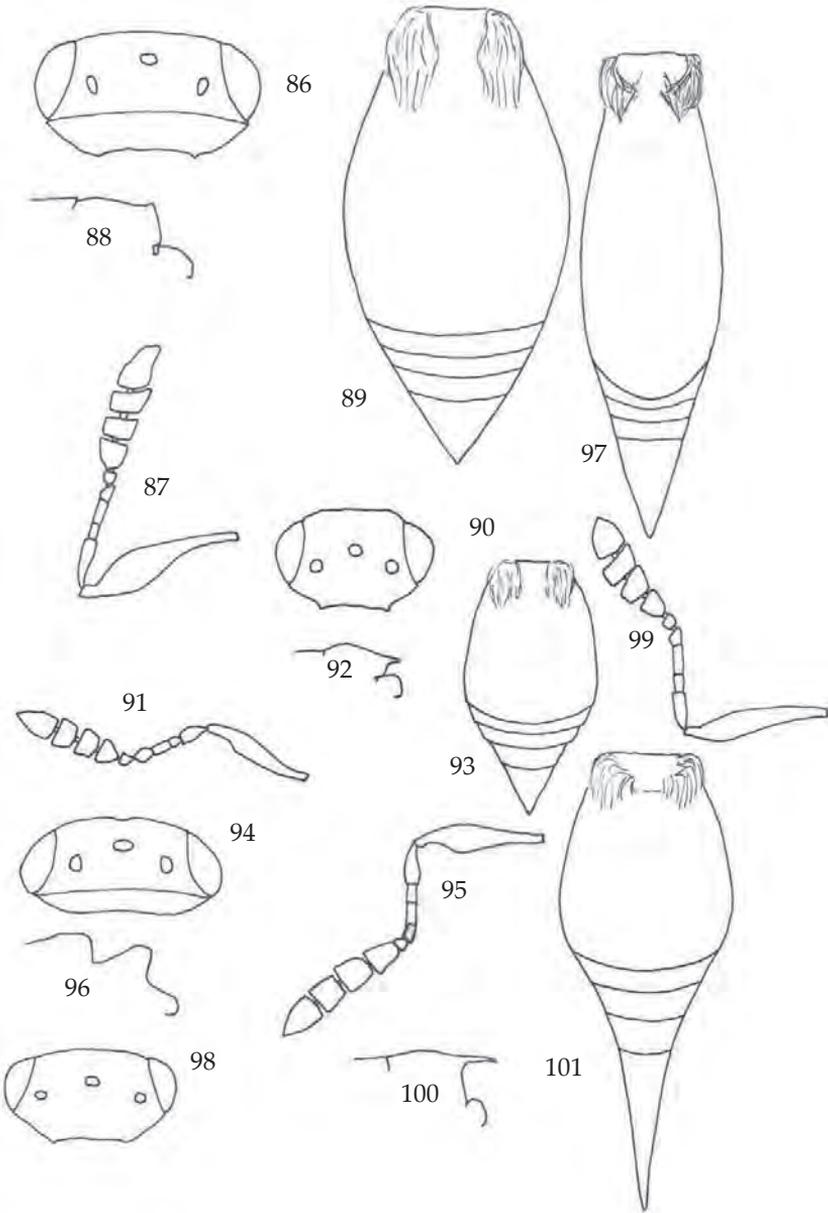
Mesosoma 1.4 times as long as wide, 1.1 times as high as wide. Sides of pronotum reticulate-coriaceous almost as head except in lower 0.3 and along narrow hind margin. Mesoscutum uniformly sculptured as head, sparsely and rather evenly hairy, without notauli, hind margin medially with a dark, smooth and rather narrow prolongation to base of scutellum; scuto-scutellar grooves wide and with numerous whitish hairs. Mesopleuron with a narrow reticulate-coriaceous area just below tegula, otherwise smooth. Scutellum (fig. 88) almost smooth, along middle sparsely hairy, laterally densely hairy, posteriorly with a vertical, dark carina. Metapleuron with dense whitish pilosity except in anterior 0.25 which is smooth and bare. Propodeal carinae dark and fused.

Forewing reaching tip of metasoma, 2.4 times as long as wide, clear, with fine and moderately dense microtrichia, without marginal cilia. Hindwing 5.5 times as long as wide; marginal cilia 0.3 times width of wing.

Metasoma (fig. 89) as long as head and mesosoma combined, narrower than mesosoma (22:23), 1.3 times as wide as high. T2 smooth, in posterior 0.4 dull reticulate-coriaceous, except along sides. T3-T5 dull reticulate-coriaceous along hind margin, T6 with such sculpture all over. Sternite 2 with a distinct hump at base.

Discussion.— Differs from the somewhat similar species *S. obesus* Buhl, 2001 and *S. striatitergitis* Buhl, 2004 most obviously in sculpture of T2, cf. also Buhl (2001, 2004c).

Etymology.— The name refers to the unusually extensive reticulate-coriaceous sculpture on this species.



Figs 86-89. *Synopeas coriaceus* spec. nov., female.— 86, head in dorsal view; 87, antenna; 88, scutellum in lateral view; 89, metasoma in dorsal view.
 Figs 90-93. *Synopeas nigrispinus* spec. nov., female.— 90, head in dorsal view; 91, antenna; 92, scutellum in lateral view; 93, metasoma in dorsal view.
 Figs 94-97. *Synopeas protuberatus* spec. nov., female.— 94, head in dorsal view; 95, antenna; 96, scutellum in lateral view; 97, metasoma in dorsal view.
 Figs 98-101. *Synopeas terminalis* spec. nov., female.— 98, head in dorsal view; 99, antenna; 100, scutellum in lateral view; 101, metasoma in dorsal view.

Synopeas nigrispinus spec. nov.
(figs 90-93, 134)

Material.— Holotype, ♀, “S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K’Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”. Paratype: 1 ♀, same data.

Diagnosis.— Belongs to *Synopeas* s.str.; head without hyperoccipital carina, 1.7 times as wide as long; scutellar spine dark, short but distinct; forewing with very sparse microtrichia and without marginal cilia; metasoma shorter than head and mesosoma combined, with T6 as long as wide.

Description.— ♀. Length 0.9-1.1 mm. Black, A1 light brown; trochanters, fore and mid tibiae, basal 0.6 of hind tibia, and segments 1-4 of fore and mid tarsi light brownish yellow; A2-A10 and rest of legs including coxae and entire hind tarsus dark brown.

Head from above (figs 90 and 134) 1.7 times as wide as long, 1.15 times as wide as mesosoma, distinctly and uniformly, isodiametrically reticulate-coriaceous, without hyperoccipital carina. OOL 1.3 times longer diameter of lateral ocellus; OOL:LOL = 4:5. Head in frontal view 1.2 times as wide as high. Antenna (fig. 91) with A1 0.9 times as long as height of head.

Mesosoma (fig. 134) 1.5 times as long as wide, 1.15 times as high as wide. Sides of pronotum isodiametrically reticulate-coriaceous, smooth in lower half and along broad hind margin. Mesoscutum with very sparse, scattered hairs, weakly reticulate-coriaceous; notauli fine but almost complete; mid lobe slightly prolonged to base of scutellum in a rather fine point; scuto-scutellar grooves almost bare. Mesopleuron smooth. Scutellum (fig. 92) sculptured as mesoscutum, sparsely hairy medially, densely hairy towards sides, with a dark, distinct tooth without lamella. Metapleuron smooth and with very sparse pilosity in anterior half, rest with dense pilosity. Propodeal carinae semitransparent, high, short, fused.

Forewing slightly overreaching tip of metasoma, 0.8 times as long as entire body, 2.5 times as long as wide, clear, with very sparse and short microtrichia, without marginal cilia. Hindwing 7.0 times as long as wide; marginal cilia 0.5 times width of wing.

Metasoma (figs 93 and 134) 0.8-0.9 times as long as head and mesosoma combined, 1.1-1.3 times as long as mesosoma, hardly as wide as this, 1.2 times as wide as high. T2 smooth; T2-T5 with fine reticulate microsculpture along hind margin; T6 with such sculpture all over, as long as wide; apical tergites with fine, superficially implanted hairs (forming a complete transverse row on T5).

Discussion.— Differs from *S. flavispinus* Buhl, 2008 e.g. in having longer OOL, distinct notauli, microtrichia of forewing more sparse, and darker scutellar spine and body appendages. *S. lemkinensis* Buhl, 1997 and *S. luteolipes* Buhl, 1997 have more transverse head, shorter notauli, and shorter scutellar tooth than *S. nigrispinus*. Cf. Buhl (1997a, 2008).

Etymology.— The name refers to the dark, non-translucent scutellar spine.

Synopeas protuberatus spec. nov.
(figs 94-97, 135)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1600-1650 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05". Paratype: 1 ♀, same data as holotype, but 1650-1700 m, 11-19.x.2005.

Diagnosis.— A species with a large gap between mesoscutum and scutellum which is distinctly protuberant; metasoma 1.2 times as high as wide, T6 1.5 times as long as wide.

Description.— ♀. Length 1.3 mm. Black, antennae and legs very dark brown; trochanters, apex of fore femur, base and apex of fore tibia, basal half of mid and hind tibiae, and segments 1-4 of all tarsi lighter reddish brown.

Head from above (fig. 94) 2.0 times as wide as long, 1.1 times as wide as mesosoma, finely (and hardly transversely) reticulate-coriaceous; hyperoccipital carina (fig. 135) low but complete. OOL:LOL = 2:3; OOL equal to longer diameter of lateral ocellus. Head in frontal view 1.3 times as wide as high. Antenna (fig. 95) with A1 shorter than height of head (14:15).

Mesosoma fully 1.4 times as long as wide, 1.2 times as high as wide. Sides of pronotum finely, isodiametrically reticulate-coriaceous, smooth along hind margin. Mesoscutum moderately and evenly hairy, finely and uniformly reticulate-coriaceous, without notauli; hind margin medially with a broad, dark and dull protuberance, laterally very densely hairy. Mesopleuron smooth. Scutellum (figs 96 and 135) dorsally smooth and bare medially, laterally with fine and dense hairs, posteriorly without a tooth or lamella, in paratype with a distinct spine. Metapleuron smooth and bare in anterior half, rest with whitish pilosity. Propodeal carinae dark and fused.

Forewing overreaching tip of metasoma by a distance equal to 0.5 times length of T6, clear but with fine and dense microtrichia, 2.5 times as long as wide; marginal cilia very short. Hindwing 5.2 times as long as wide; marginal cilia one-third the width of wing.

Metasoma (figs 97 and 135) 1.5 times as long as head and mesosoma combined, 0.85 times as wide as mesosoma, 1.2 times as high as wide. Broad hind margin of T2 and entire T3-T6 distinctly reticulate, T4-T5 each with a medially interrupted transverse row of hairs, T6 1.5 times as long as its basal width.

Discussion.— Similar to *S. dentiscutum* (Szabó, 1981) but with more protruding hind margin of mesoscutum and scutellum, and more elongate T6. Scutellum relatively lower than in *S. talhouki* Vlug, 1976 which also has T6 only 1.2 times as long as wide. *S. procerus* Buhl, 2005 has metasoma wider than high. *S. tuberosus* Sundholm, 1970 has T6 only as long as wide, and scutellum less abruptly ending posteriorly. *Synopeas kimi* Choi & Buhl, 2006 has head without hyperoccipital carina and metasoma 1.4 times as high as wide. Cf. Sundholm (1970), Vlug (1976), Buhl (2000, 2005), and Buhl & Choi (2006).

Etymology.— The name refers to the protuberant hind margin of mesoscutum and scutellum.

Synopeas terminalis spec. nov.
(figs 98-101)

Material.— Holotype, ♀, “S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1600-1650 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”.

Diagnosis.— Female A9 twice as wide as long; marginal cilia of forewing 0.2 times width of wing; female T6 much longer than preceding tergites, 2.4 times as long as its basal width.

Description.— ♀. Length 1.4 mm. Black, A1 and legs including coxae yellowish brown; A1 and hind tibia darkened at apex; A2-A10 very dark brown.

Head from above (fig. 98) 1.8 times as wide as long, very slightly wider than mesosoma, without hyperoccipital carina, finely reticulate-coriaceous, on occiput strongest and slightly transversely so; OOL 1.7 times as long as diameter of lateral ocellus; OOL:LOL = 5:6. Head in frontal view wider than high (17:15). Antenna (fig. 99) with A1 shorter than height of head (14:15).

Mesosoma fully 1.5 times as long as wide, higher than wide (19:16). Sides of pronotum smooth except for fine rugosity anteriorly along upper margin. Mesoscutum almost smooth, only with microsculpture anteriorly of notauli and in posterior 0.3, sparsely and evenly hairy; notauli fine but almost complete, posteriorly ending in a rather fine point at base of scutellum; scuto-scutellar grooves each with about five inconspicuous hairs. Mesopleuron smooth. Scutellum (fig. 100) sculptured as posterior part of mesoscutum, with denser hairs than this, with a dark spine. Metapleuron smooth, with pilosity except along anterior margin. Propodeal carinae semitransparent, fused.

Forewing just reaching apex of metasoma, faintly infuscated and with fine and dense microtrichia, 2.5 times as long as wide; marginal cilia 0.2 times width of wing. Hindwing 6.9 times as long as wide; marginal cilia 0.7 times width of wing.

Metasoma (fig. 101) 1.3 times as long as head and mesosoma combined, as wide as head, 1.2 times as wide as high. T2 smooth except for some spots of weak reticulation in front of hind margin. T3-T5 each with a transverse stripe of weak reticulation with hairs at about midlength. T6 with some very weak microsculpture basally, otherwise smooth, 2.4 times as long as wide, in lateral view slightly upturned.

Discussion.— Strikingly similar to *Leptacis konkanensis* Mukerjee, 1978 in many ways, but this species has female A9 3 times as wide as long, and metasoma hardly 1.1 times as long as head and mesosoma combined, cf. Mukerjee (1978).

Etymology.— The names directs the attention to the unusually pointed body end of this species.

Synopeas transluceus spec. nov.
(figs 102-106, 136-137)

Material.— Holotype, ♀, “S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1650-1700 m, 11-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH’05”. Paratypes: 2 ♀♀, 1 ♂, same data as holotype; 2 ♀♀, same data, but 1600-1650 m, 12-19.x.2005; 1 ♂, same data, but 1680-1700 m.

Diagnosis.— Belongs to *Synopeas* s. str.; head with hyperoccipital carina; notauli absent; scutellar tooth and propodeal carinae distinct, semitransparent;

Description.— ♀. Length 0.9-1.1 mm. Black, A1-A6 and legs including coxae brownish yellow; A7-A10, mandibles and tegulae dark brown.

Head from above (figs 102 and 136) 1.9 times as wide as long, as wide as mesosoma, distinctly and almost uniformly reticulate-coriaceous (only transversely so just around antennal insertions); hyperoccipital carina low but complete. OOL equal to about 0.8 times diameter of lateral ocellus; OOL:LOL = 1:4.4. Head in frontal view 1.2 times as wide as high. Antenna (fig. 103) with A1 hardly shorter than height of head (28:29).

Mesosoma (figs 136-137) 1.5 times as long as wide, almost 1.2 times as high as wide. Sides of pronotum smooth, isodiametrically reticulate-coriaceous only in anterior half of upper 0.3. Mesoscutum faintly reticulate-coriaceous, sparsely and evenly hairy, without notauli; hind margin medially with a small, smooth, dark prolongation to base of scutellum; scuto-scutellar grooves each with 5-7 long hairs. Mesopleuron smooth. Scutellum (fig. 104) smooth and almost bare along middle, laterally densely hairy, with a semitransparent tooth with lamella below. Metapleuron smooth and bare in anterior 0.6, rest with whitish pilosity. Propodeal carinae high, semitransparent brown, fused.

Forewing fully 0.9 times as long as entire body, 2.7 times as long as wide, with brownish tint and fine and dense microtrichia; marginal cilia 0.22 times width of wing. Hindwing 6.5 times as long as wide; marginal cilia 0.63 times width of wing.

Metasoma (fig. 105) as long as mesosoma or at most 0.9 times as long as head and mesosoma combined, 0.9 times as wide as mesosoma, 1.4 times as wide as high. Hind margin of T2-T5, and entire T6 distinctly reticulate-coriaceous, apical tergites only with a few inconspicuous hairs.

♂. Length 0.8-0.9 mm. Antenna (fig. 106) with short flagellar pubescence and a few erect hairs which are slightly shorter than width of segments. Metasoma 0.9 times as long as mesosoma.

Discussion.— Runs to *S. mangiferae* Austin, 1984 in Buhl's (2008) key to Oriental *Synopeas*, but this species lacks scutellar tooth and has a quite different habitus than *S. translucens* which at first glance looks like a *Leptacis*, e.g. because of its very long marginal cilia of forewing. Cf. also Austin (1984).

Etymology.— The name refers to the characteristic translucent parts of scutellum and of propodeum.

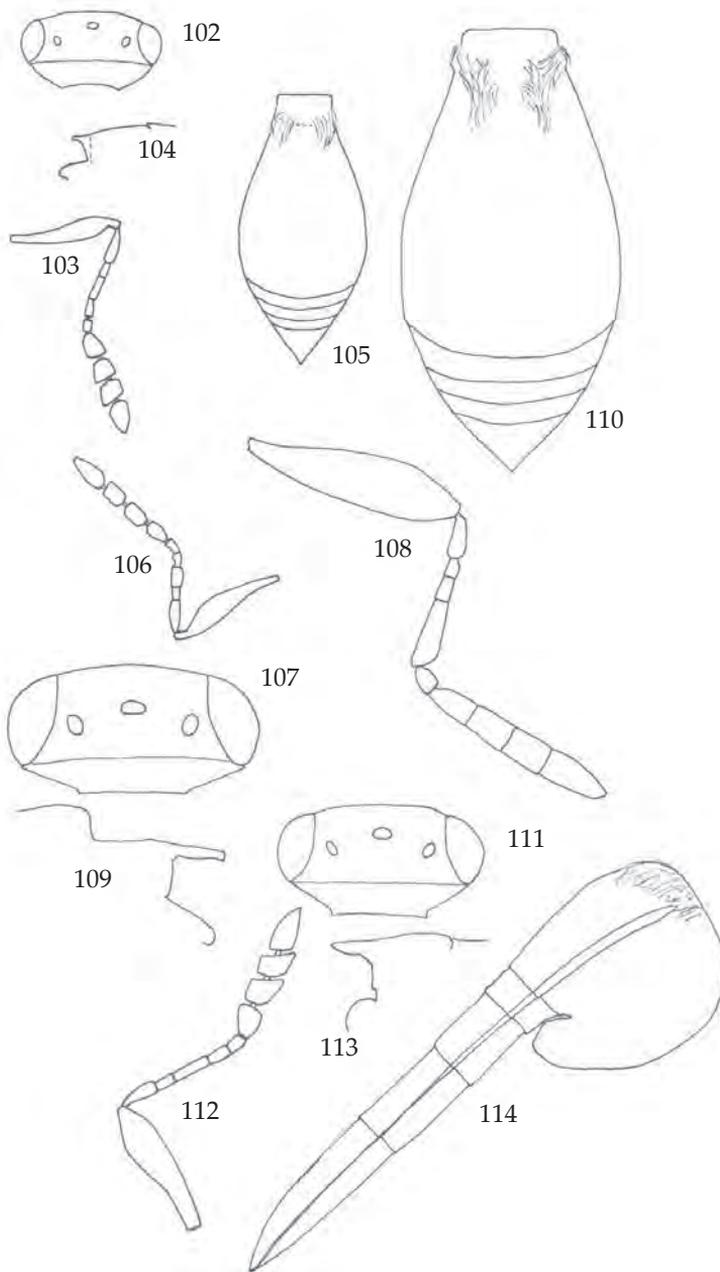
Synopeas vietnamianus spec. nov.

(figs 107-110)

Material.— Holotype, ♀, "S. Vietnam: Lam Dong, Bidoup Nuiba N.P., near Da Lat, 1680-1700 m, 12-19.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Head with hyperoccipital carina; female antenna with A8-A9 each 1.3 times as long as wide; scutellum much below level of mesoscutum and with a long spine; female metasoma not longer than mesosoma.

Description.— ♀. Length 1.9 mm. Black, A1-A4 and fore and middle legs reddish brown, tibiae lighter than femora; hind femur, distal half of hind tibia, and most of hind tarsus much darker; all coxae and trochanters black; A5-A10 dark brown.



Figs 102-106. *Synopeas transluceus* spec. nov.— 102, head in dorsal view; 103, female antenna; 104, scutellum in lateral view; 105, female metasoma in dorsal view; 106, male antenna.

Figs 107-110. *Synopeas vietnamianus* spec. nov., female.— 107, head in dorsal view; 108, antenna; 109, scutellum in lateral view; 110, metasoma in dorsal view.

Figs 111-114. *Synopeas westwoodi* spec. nov., female.— 111, head in dorsal view; 112, antenna; 113, scutellum in lateral view; 114, metasoma in lateral view.

Head from above (fig. 107) 2.0 times as wide as long, as wide as mesosoma, dull; occiput finely and evenly, isodiametrically reticulate-coriaceous, medially with a fine longitudinal carina; hyperoccipital carina complete and rather strong; vertex and frons on dull background with a medial longitudinal carina and irregular transverse carinae forming large, uneven, transverse cells. OOL equal to shorter diameter of lateral ocellus; OOL:LOL = 1:2. Head in frontal view almost 1.2 times as wide as high. Antenna (fig. 108) with A1 as long as height of head.

Mesosoma 1.6 times as long as wide, 1.2 times as high as wide. Pronotum dorsally weakly reticulate; sides in anterior half and upper third weakly reticulate, rest smooth, sides in upper half with sparse hairs. Mesoscutum with dense hairs, in posterior half very dense, with distinct hair-implantations, sculpture weakly and uniformly fine reticulate-coriaceous; no trace of notauli; disc highly elevated above scutellum, hind margin laterally with dense white hairs, medially with a square, bare and smooth area which is very slightly protuberant but hardly lighter than rest of disc. Mesopleuron smooth, just below tegula with a small dull area with 3 hairs. Scutellum (fig. 109) anteromedially smooth and with few hairs, rest densely hairy, with a strong, dark spine. Metapleuron smooth, bare in anterior 0.4, in upper 0.4 over most of length, rest with white pilosity which is sparse on medial part. Propodeal carinae dark, dull dorsally, fused, slightly diverging in apical third.

Forewing hardly shorter than entire body, almost clear but with fine and very dense microtrichia, 2.4 times as long as wide; marginal cilia absent. Hindwing 5.2 times as long as wide; marginal cilia fully 0.2 times width of wing.

Metasoma (fig. 110) as long as mesosoma, hardly 0.9 times as wide as this, 1.5 times as wide as high. T1-T5 smooth, T2-T5 reticulate-coriaceous in front of hind margins; T6 with rougher sculpture all over.

Discussion.— Runs to *S. nigricoxa* Buhl, 2008 in Buhl's (2008) key to Oriental *Synopeas*, but this species has female A8-A9 only as long as wide, and it has metasoma more convex than in *S. vietnamianus*. Cf. also Buhl (2008). *S. vietnamianus* is similar to *S. gibberosus* Buhl, 1997 in structure of scutellum, but A5 of *S. vietnamianus* is relatively much larger, A8-A9 are more elongate, and metasoma is less convex than in *S. gibberosus*, cf. also Buhl (1997a).

Etymology.— Named after the country of the type locality.

Synopeas westwoodi spec. nov.
(figs 111-114)

Material.— Holotype, ♀, "S. Vietnam: Dak Lak, Chu Yang Sin N.P., Krong K'Mar, 590-840 m, 22-26.x.2005, Malaise trap, C. v. Achterberg & R. de Vries, RMNH'05".

Diagnosis.— Belongs to subgenus *Sactogaster* Förster, 1856. Hyperoccipital carina present; notauli incomplete and indistinct; sternite 2 forms cornutus behind; body appendages brightly coloured.

Description.— ♀. Length 2.0 mm. Black, A1-A6 and legs light brown, A7-A10 dark brown.

Head from above (fig. 111) 1.9 times as wide as long, very slightly wider than meso-

soma, dull, finely and uniformly, isodiametrically reticulate-coriaceous, with a weak hyperoccipital carina, and with a longitudinal carina in lower 0.3 of frons. OOL equal to shorter diameter of lateral ocellus; OOL:LOL = 2:3. Head in frontal view 1.25 times as wide as high. Antenna (fig. 112) with A1 shorter than height of head (17:20), longer than distance between inner orbits (17:15).

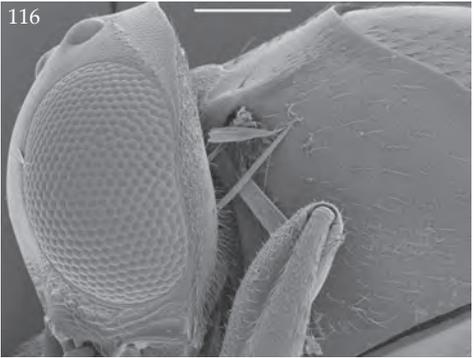
Mesosoma 1.5 times as long as wide, 1.2 times as high as wide. Sides of pronotum reticulate-coriaceous (as head) in upper half, rest smooth. Mesoscutum slightly more unevenly sculptured as head, with very few hairs; notauli weak and incomplete, fading out in anterior half, posteriorly meeting at base of scutellum in a fine point; scuto-scutellar grooves wide, each covered by about eight conspicuous white hairs. Mesopleuron smooth except for a small dull area just below tegula. Scutellum (fig. 113) dull, with dense white hairs and a strong, dark spine. Metapleuron smooth, with white pilosity except along bare anterior 0.25, along upper margin bare in anterior 0.6. Propodeal carinae dark, slightly separated.

Forewing reaching tip of metasoma, 2.7 times as long as wide, faintly brownish, with fine and dense microtrichia, without marginal cilia. Hindwing 5.5 times as long as wide; marginal cilia about 0.25 times width of wing.

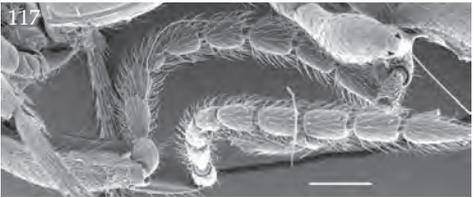
Metasoma (fig. 114) 1.4 times as long as head and mesosoma combined, 0.6 times as wide as mesosoma, 1.5 times as high as wide. T2 reticulate-coriaceous in posterior 0.2, T3-T6 with such sculpture all over, sternite 2 with such sculpture in upper third in posterior half.

Discussion.— Most similar to Palaearctic *S. ventralis* (Westwood, 1833), but larger and with brighter coloured body appendages than this species, with stronger margined occiput, and with weaker notauli. Differs from the somewhat similar *S. subaequalis* (Förster, 1856) e.g. in having stronger scutellar spine and in shape of the second sternite. Cf. Kieffer (1926) and Buhl (1997b).

Etymology.— Named after J.O. Westwood who described the most similar species.



Figs 115-117. *Amblyaspis vietnamensis* spec. nov.—
115, head and mesosoma in dorsal view; 116,
head in lateral view; 117, male antennae.



Figs 118-119. *Isostasius achterbergi* spec. nov.—
118, head and mesosoma in dorsal view; 119, fe-
male in lateral view.

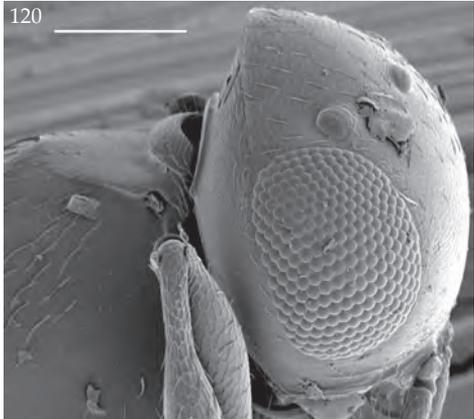


Fig. 120. *Leptacis daklakensis* spec. nov., head in lat-
eral view.

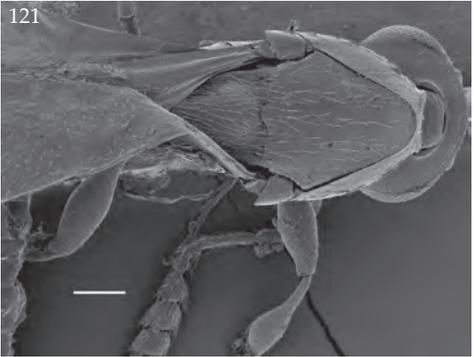


Fig. 121. *Leptacis dentiformis* spec. nov., head, an-
tenna and mesosoma of female in dorsal view.



Figs 122-123. *Leptacis semifusca* spec. nov.— 122, head and mesosoma in dorsal view; 123, wings and female body in posterior view.

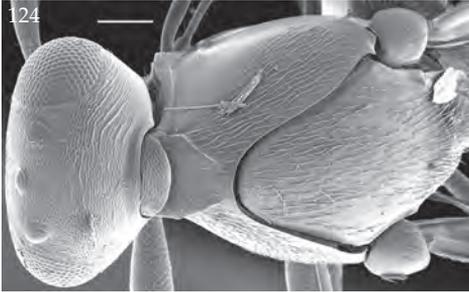


Fig. 124. *Leptacis vietnamensis* spec. nov., head and mesosoma in dorsal view.



Fig. 125. *Platygaster achterbergiana* spec. nov., head and mesosoma in dorsal view.



Fig. 126. *Platygaster acuticeps* spec. nov., head and mesosoma in dorsal view.



Fig. 127. *Platygaster rufopetiolata* spec. nov., female head, antenna and mesosoma in dorsal view.

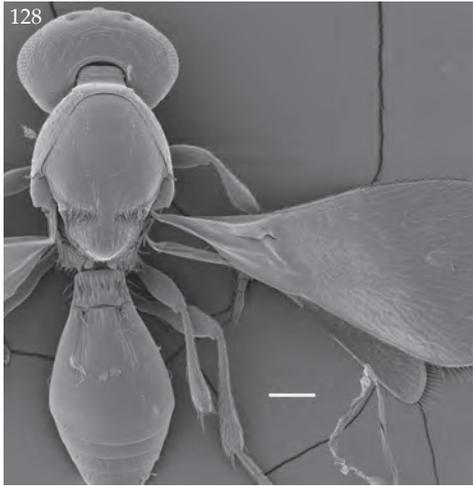
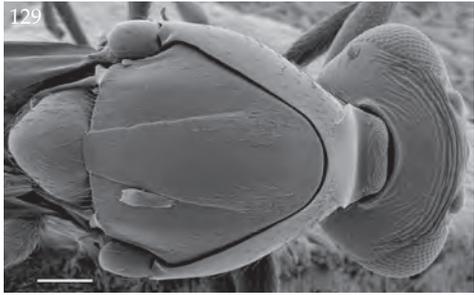


Fig. 128. *Platygaster seminuda* spec. nov., female in dorsal view.



Figs 129-130. *Platygaster vietnamensis* spec. nov.— 129, head and mesosoma in dorsal view; 130, female in lateral view.



Fig. 131. *Sacespalus vriesi* spec. nov., head in frontal view.



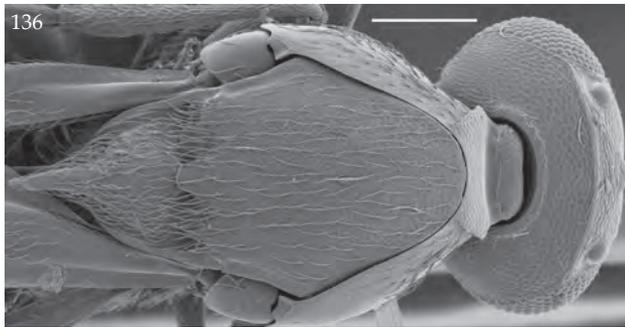
Figs 132-133. *Synopeas bister* spec. nov.— 132, head and mesosoma in dorsal view; 133, male in lateral view.



Fig. 134. *Synopeas nigrispinus* spec. nov., female in dorsal view.

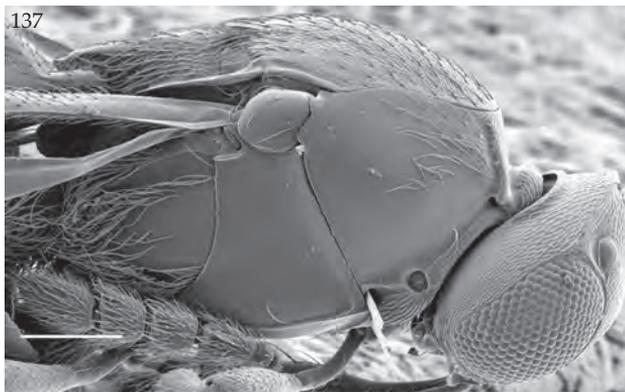


Fig. 135. *Synopeas protuberatus* spec. nov., female in lateral view.



Figs 136-137. *Synopeas transluceus* spec. nov.— 136, head and mesosoma in dorsal view; 137, head and mesosoma in lateral view.

Scale bars for figs. 115-137 = 100 μ m.



References

- Austin, A.D., 1984. New species of Platygastriidae (Hymenoptera) from India which parasitise pests of mango, particularly *Procontarinia* spp. (Diptera: Cecidomyiidae).— Bull. Ent. Res. 74: 549-557.
- Buhl, P.N., 1997a. On some new or little known species of Platygastriinae (Hymenoptera, Platygastriidae).— Entomofauna 18: 429-467.
- Buhl, P.N., 1997b. Revision of some types of Platygastriinae described by A. Forster (Hymenoptera, Platygastriidae).— Z. Arb. Oest. Entomol. 49: 21-28.
- Buhl, P.N., 2001. Taxonomical notes on Platygastriidae (Hymenoptera, Platygastroidea).— Entomofauna 22: 17-38.
- Buhl, P.N., 2002. New species of *Leptacis* Förster, 1856 from Malaysia (Hymenoptera, Platygastriidae).— Entomofauna 23: 13-25.
- Buhl, P.N., 2004a. New Neotropical species of Platygastriinae (Hymenoptera, Platygastriidae).— Entomofauna 25: 221-236.
- Buhl, P.N., 2004b. New African Platygastriinae (Hymenoptera: Platygastriidae).— Folia Entomol. Hung. 65: 65-84.
- Buhl, P.N., 2004c. Platygastriidae (Hymenoptera) from Mongolia.— Ann. Hist.-Nat. Mus. Nat. Hung. 96: 115-152.
- Buhl, P.N., 2005. New species of South African Platygastriinae (Hymenoptera, Platygastriidae).— Entomofauna 26: 281-304.
- Buhl, P.N., 2008. New and little known Platygastriidae from Indonesia and Malaysia (Hymenoptera: Platygastroidea).— Zoologische Mededelingen 82: 515-579.
- Buhl, P.N. & J.-Y. Choi, 2006. Taxonomic review of the family Platygastriidae (Hymenoptera: Platygastroidea) from the Korean Peninsula.— J. Asia-Pacific Entomol. 9: 121-137.
- Dodd, A.P., 1924. Chalcidoidea and Proctotrupoidea from Lord Howe and Norfolk Islands with descriptions of new genera and species.— Trans. R. Soc. S. Australia 48: 162-186.
- Huggert, L., 1976. A new genus and three new species of Platygastriidae from Zaire. With a key to the species of *Iphitrachelus* Walk. and supplementary descriptions of *Leptacis* spp. (Hymenoptera, Proctotrupoidea).— Ent. Scand. 7: 217-229.
- Kieffer, J.J., 1926. Scelionidae.— Tierreich 48: 1-885.
- Masner, L., 1960. A revision of the African species of the genus *Leptacis* Först. (Hymenoptera, Platygastriidae).— Rev. Zool. Bot. Afr. 62: 1-34.
- Mukerjee, M.K., 1978. Descriptions of some new and records of known Platygastriidae (Hymenoptera: Proctotrupoidea) from India.— Mem. School. Ent. 5: 67-98.
- Mukerjee, M.K., 1981. On a collection of Scelionidae and Platygastriidae (Hymenoptera: Proctotrupoidea) from India.— Rec. Zool. Survey India, Misc. Publ. 27:1-78.
- Sundholm, A., 1970. Results of the Lund University Expedition in 1950-51. Hymenoptera: Proctotrupoidea.— South African Animal Life 14: 306-401.
- Vlug, H.J., 1976. *Synopeas talhouki* n. sp. (Hym. Platygastriidae), a parasite of *Odinadiplosis amygdali* (Anagnostopoulos) (Dipt. Cecidomyiidae) with notes on its distribution and biology.— Z. ang. Ent. 80: 262-266.
- Vlug, H.J., 1995. Catalogue of the Platygastriidae (Platygastroidea) of the world.— Hymenopterorum Catalogus 19. 168 pp.
- Yoshida, N. & Y. Hirashima, 1979. Systematic studies on Proctotrupoid and Chalcidoid parasites of gallmidges injurious to *Pinus* and *Cryptomeria* in Japan and Korea (Hymenoptera).— Esakia 14: 113-133.

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