



# Entomofauna

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## A synopsis of the Platygasteridae of Fennoscandia and Denmark (Hymenoptera, Platygastroidea)

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### Abstract

Keys to the approx. 230 species of Platygasteridae known from Fennoscandia and Denmark are given. Eight species new to science are described from Denmark, viz. *Leptacis ariadne* sp. nov. (♂), *Platygaster inconspicua* sp. nov. (♀), *P. microsculpturata* sp. nov. (♀), *P. praecox* sp. nov. (♀), *P. rufitibia* sp. nov. (♀), *P. ungeri* sp. nov. (♀ ♂), *P. varicornis* sp. nov. (♀), and *Synopeas romsoeensis* sp. nov. (♀). In addition, *Synopeas esenbecki* sp. nov. (♀) is erected on the basis of KOZLOV's (1978) description of *S. scutellaris* (NEES, 1834). The work is illustrated by 33 text-figures.

### Zusammenfassung

Bestimmungstabellen für etwa 230 Arten von Platygasteridae aus Fennoskandia und Dänemark werden gegeben. Acht für die Wissenschaft neue Arten werden aus Dänemark beschrieben: *Leptacis ariadne* sp. nov. (♂), *Platygaster inconspicua* sp. nov. (♀), *P. microsculpturata* sp. nov. (♀), *P. praecox* sp. nov. (♀), *P. rufitibia* sp. nov. (♀), *P. ungeri* sp. nov. (♀ ♂), *P. varicornis* sp. nov. (♀), and *Synopeas romsoeensis* sp. nov. (♀). Außerdem wird *Synopeas esenbecki* sp. nov. auf der Basis von KOZLOV's Beschreibung von *S. scutellaris* (NEES, 1834) errichtet. Die Arbeit ist mit 33 Abbildungen versehen.

### Introduction

Hitherto modern attempts to make complete keys to species of Platygasteridae from a region have been impossible because of the lack of knowledge of types. Due to the work of VLUG (1985) on the types of HALIDAY and WALKER, and due to my own work on the types of FOERSTER, THOMSON, and ZETTERSTEDT (BUHL 1995 and 1996) I now consider

the time to be ripe for a new attempt - also because of the need to get hold of the large amount of new taxa described in recent years. E.g., of the about 230 species from Fennoscandia and Denmark keyed below (a few are doubtful), 54 (or 23.5%) have been described by the present author since 1994 as a result of rather intensive work on the family. No doubt quite a few species remain to be described even in this the most well-studied of the World's regions, but often this will depend on an even closer knowledge of the types than that acquired until now. Thus the types of a number of the species keyed below are still awaiting discovery in old collections; until that happens one has to depend on the original descriptions. Also, the males or females of many species are unknown, and in some cases the rather large variability of a species has undoubtedly caused that it is described under two or more names. A few probable such cases are noted in the keys below. Thus, very much still remains to be done, but anyway the present keys should be a usable and necessary first step, and hopefully it will also further the introduction of new students into the confused and much neglected study of platygastrid systematics.

The nomenclature used in the keys generally follows VLUG (1995). After the first mention of a species it is noted whether it is known from Denmark, Sweden, Norway or Finland (DK, S, N, FIN), and as a rule a few important characters are mentioned as a supplement to the information on the species in the couplet. To achieve an even higher level of accurate identifications it is recommended to confer the original descriptions or redescriptions.

### Sceliotrachelinae

#### *Allotropa* FOERSTER, 1856

- 1 Legs dark brown, tibiae and tarsi slightly lighter; A3 of male 1.3 x as long as A4. . . . . *mecrida* (WALKER, 1835) DK, N, FIN
- Legs entirely yellow; A3-A4 of male equal. . . . . *conventus* MANEVAL, 1936, N

#### *Amitus* HALDEMAN, 1850

- 1 T2 about 2.3 x as wide as long; L. at most 0.6 mm. . . . . *croesus* HULDIN, 1986, FIN
- T2 1.5-1.7 x as wide as long; L. at least 0.7 mm. . . . . 2
- 2 Head distinctly narrower than mesosoma; T2 striated nearly all over; female A3 longer than A4; L. 0.9-1.0 mm. . . . . *minervae* SILVESTRI, 1911, N, FIN
- Head as wide as thorax; T2 striated laterally to 0.75, smooth medially; female A3-A4 of equal length; L. 0.7 - 0.9 mm. . . . . *longicornis* (FOERSTER, 1878) FIN

#### *Fidiobia* ASHMEAD, 1894

- 1 Mesoscutum unsculptured; notauli hardly present. . . . . 2
- Mesoscutum reticulate between the sharp notauli. . . . . 3
- 2 Mesosoma 1.6 x as wide as high; A8 of female distinctly transverse; L. at most 0.6 mm. . . . . *polita* BUHL, 1998, S
- Lateral ocelli separated from eyes by their own diameter; male unknown.
- Mesosoma fully 2.5 x as wide as high; A8 of female hardly as wide as long; L. at least 0.75 mm. . . . . *synergorum* (KIEFFER, 1921) N
- A7-A8 of male distinctly transverse.
- 3 Frons and vertex with more or less coarse minute alveolate sculpture; lateral ocelli separated from eyes by their own diameter; legs yellow; L. 0.9-1.3 mm. . . . .
- . . . . . *rugosifrons* CRAWFORD, 1916, S, N
- Frons and vertex almost smooth, with very faint reticulate sculpture; lateral ocelli separated from eyes by 2 x their own diameter; legs musty yellow; L. 0.7 mm. . . . .
- . . . . . *hofferi* KOZLOV, 1971, S, FIN

**Platystasius NIXON, 1937**

- 1 Mesoscutum highly depressed along notauli; A7-A9 of male each 1.5 x as wide as long, A5-A6 triangular; L. 1.1 - 2.1 mm . . . . . *transversus* (THOMSON, 1859) S, N
- Mesoscutum not depressed along notauli; A7-A9 of male about as long as wide, A5-A6 not triangular (female unknown); L. 1.3 mm. . . . .  
 . . . . . *antennatus* (SUNDHOLM, 1956) DK, S

**Platygastrinae**

**Acerotella MASNER, 1964**

- 1 Notauli hardly present. . . . . *evanescens* (KIEFFER, 1914) DK  
 Fore wings almost clear; L. 0.9 - 1.1 mm.
- Notauli distinct in at least their anterior half. . . . . 2
- 2 Notauli distinct throughout length. . . . . *humilis* (KIEFFER, 1913) DK  
 Notauli posteriorly 3 x as wide as anteriorly; fore wings clear; L. 1.3-1.5 mm.
- Notauli hardly present in at least posterior third. . . . . 3
- 3 Female antenna with distinct 3-segmented club; L. 1.3-1.7 mm. . . . .  
 . . . . . *boter* (WALKER, 1838) DK  
 Notauli not widened posteriorly.
- Female antenna without distinct club, evenly widened towards apex; L. 0.6-1.1 mm.  
 . . . . . *hungarica* (SZELENYI, 1938) FIN  
 Fore wings brown.

**Amblyaspis FOERSTER, 1856**

- 1 T2 without basal foveae. . . . . 2
- T2 with basal foveae. . . . . 3
- 2 Female: Metasoma hairy anteriorly; coxae black (male unknown). . . . .  
 . . . . . *norvegica* KIEFFER, 1912, N  
 Notauli absent; legs except coxae yellowish red; L. 1.6 mm.
- Male: Metasoma bare anteriorly; coxae yellow (female unknown). . . . .  
 . . . . . *strandii* KIEFFER, 1912, N  
 A1-A2 yellow, A3-A10 brown, A5-A9 each as long as wide; notauli absent; L. 1.5 mm.
- 3 Occiput with a distinct carina. . . . . 4
- Occiput with at most a weak carina. . . . . 9
- 4 Body brownish yellow; female T2 as long as T3-T6 combined. . . . .  
 . . . . . *longiventris* THOMSON, 1859, N (L. 2.7 mm)
- Body darker, or if hardly so, then female T2 longer than T3-T6 combined. . . . . 5
- 5 Legs entirely red or yellow. . . . . 6
- At least hind coxae dark. . . . . 7
- 6 L. at least 2 mm. . . . . *nodicornis* (RATZEBURG, 1844) DK, S  
 A2 of female longer than A3, A3-A4 equal; A4 of male very large, A6 shorter than A7; notauli absent; L. 2.0 - 2.2 mm.
- L. hardly as much as 1.5 mm. . . . . *prorsa* (WALKER, 1835) N  
 Head 2.0 x as wide as long, occiput transversely reticulate; propleurae superficially sculptured in upper part, smooth in lower part; notauli absent; hind border of mesoscutum straight; antennae light brown.
- 7 Occiput without vertical striae. . . . . *tritici* (WALKER, 1835) DK, N  
 Head 2.0 x as wide as long, occiput granulate; notauli weakly indicated; hind border of mesoscutum straight, slightly depressed laterally.

- Occiput with vertical striae. . . . . 8
- 8 T2 haired in basal foveae. . . . . *roboris* (WALKER, 1835) DK, N  
 Head 2.2 x as wide as long; frons finely granulate, above and at sides of antennal sockets roughly sculptured; hind border of mesoscutum straight; body black; antennae reddish brown, proximally lighter; coxae brown, legs dirty yellow; apical parts of middle tibiae, hind femora and hind tibiae darkened.
- T2 bare in basal foveae. . . . . *nereus* (WALKER, 1835) N  
 Head 2.2 x as wide as long, rather dull; frons granulate, with transverse striation in lower half; hind border of mesoscutum more or less excavated; body black; antennae dark brown, A1 reddish brown; fore and middle coxae reddish brown, hind coxae black; legs uniformly reddish brown.
- 9 Occipital carina present but not complete, sometimes weak. . . . .  
 . . . . . *scelionoides* (HALIDAY, 1835) DK, N  
 Head 1.6-1.7 x as wide as long, superficially coriaceous; notauli clearly indicated posteriorly, midlobe in between prolonged as a rather narrow flange over base of scutellum; antennae brown, A1 lighter; legs entirely reddish yellow, coxae sometimes darker.
- Occipital carina not present, vertex as most slightly pointed. . . . . 10
- 10 L. at most 1.3 mm; head 2 x as wide as long; legs brown. *angustula* THOMSON, 1859  
 S. A2 of female 2 x as long as A3; wings clear.
- L. at least 1.4 mm; legs more or less reddish, or if almost brown, then head 1.7 x as wide as long. . . . . 11
- 11 Head 1.7 x as wide as long; legs brown, fore tibiae entirely, middle and hind tibiae proximally, and all tarsi lighter. . . . . *belus* (WALKER, 1835) DK, N  
 Frons nearly smooth, rather shiny and with faint sculpture, occiput faintly coriaceous; notauli clearly indicated on posterior half of mesoscutum, midlobe prolonged over base of scutellum; antennae blackish brown; L. of female 1.4 mm.
- Head 1.8 x as wide as long; legs except coxae, distal part of femora and of middle and hind tibiae light reddish. . . . . *fuscicornis* THOMSON, 1859, DK, S  
 Head weakly but evenly reticulate; sides of pronotum faintly reticulate, moderately hairy; notauli weak and incomplete; hind margin of mesoscutum at most slightly convex, not prolonged medially; antennae dark brownish; L. of female 1.6 mm.

**Anopedias FOERSTER, 1856**

- 1 Antennae slender, A6-A10 clearly longer than wide; head 2 x as wide as long; mesosoma often much flattened; female metasoma elongate. . . . .  
 . . . . . *lacustris* (KIEFFER, 1926) DK, S, N, FIN
- A6-A10 wider or male with very large bean-shaped A4; head about 1.7 x as wide as long; mesosoma moderately flattened; female metasoma short. . . . . 2
- 2 A6 of female as wide as long; male with A2 triangular, flagellar segments elongate, and A4 very large and bean-shaped; mesosoma slightly depressed and faintly sculptured; T2 with foveae hardly indicated or striated; L. 1.3-1.4 mm. . . . .  
 . . . . . *tritonus* THOMSON, 1859, S, FIN
- A6 of female elongate, if as wide as long, then other features not as above; male with antennae not as above; mesosoma stronger depressed and sculptured than in *tritonus*; T2 with foveae distinct; L. 1.0-1.2 mm. . . . . 3
- 3 Female antenna with 4-segmented club and A6 elongate; male with A6 as long as A7; mesoscutum smooth posteriorly; T2 striated in foveae to 0.5. . . . .  
 . . . . . *obscurus* THOMSON, 1859, DK, S

Head with POL = 2 OOL.

- Female antenna with club almost 3-segmented and A6 as wide as long; male with A6 smaller than A7; mesoscutum with only a very narrow strip along scutellar groove smooth, rest with rather strong alutaceous to reticulate sculpture; T2 smooth. . . . .
- ..... *sundholmi* HUGGERT, 1974, DK, S

Head with POL = 4 OOL.

**Ceratacis THOMSON, 1859**

- 1 Head about 1.7 x as wide as long; A9 of female hardly, of male very slightly longer than wide; scutellum slightly convex, at level of mesoscutum, angular behind. . . . .
- ..... *flavipes* THOMSON, 1859, S

**Euxestonotus FOUTS, 1925**

- 1 Females. . . . . 2
- Males. . . . . 5
- 2 A7-A9 each longer than wide. . . . . 3
- A7-A9 each not longer than wide. . . . . 4
- 3 T4-T6 much flattened. . . . . *error* (FITCH, 1861) DK, S, N
- Head fully 2 x as wide as long; antennae and legs mostly dark brown to blackish; L. 1.2-1.3 mm.
- T4-T6 somewhat convex. . . . . *pini* (DEBAUCHE, 1947) DK
- Head 1.9 x as wide as long; legs except trochanters, tibiae proximally and tarsal segments 1-4 brown, rest lighter; L. mostly less than *error*.
- 4 A3 as long as A4; A4 only half as wide as A9. . . . . *clavicornis* BUHL, 1995, DK
- A1 proximally yellowish brown, A1 distally and A2 brown, A3-A10 darker brown; femora distally and tibiae of fore legs yellow, rest of fore legs brown; both ends of middle and hind tibiae yellow, rest of middle and hind legs brown.
- A3 shorter than A4; A4 more than half as wide as A9. . . . .
- ..... *hasselbalchi* BUHL, 1995, DK, N
- A1-A2, coxae and femora reddish brown; tibiae yellowish brown; A3-A10 dark brown.
- 5 A4 gradually widened towards apex. . . . . *hasselbalchi* BUHL, 1995
- A4 of different shape. . . . . 6
- 6 A10 about 2 x as long as wide; L. about 0.7 mm. . . . . *pini* (DEBAUCHE, 1947)
- A10 about 3 x as long as wide; L. at least 1 mm. . . . . *error* (FITCH, 1861)

**Inostemma HALIDAY, 1833 (Females only)**

- 1 Cornutus of T1 at most reaches posterior margin of scutellum. . . . .
- ..... *brevicornu* VIKBERG, 1965, S, N, FIN
- Cornutus of T1 at least reaches posterior margin of mesoscutum. . . . . 2
- 2 Cornutus of T1 reaches posterior margin of mesoscutum. . . . . 3
- Cornutus of T1 at least reaches about middle of mesoscutum. . . . . 4
- 3 Head 1.5 x as wide as long, with notch along vertex; L. 1.8 mm. . . . .
- ..... *hemicerum* TOMSÍK, 1950, N
- Head 2.5 x as wide as long, without notch along vertex; L. 1.3 mm. . . . .
- ..... *hyperici* DEBAUCHE, 1947, N, FIN
- 4 T1 reaches middle of mesoscutum. . . . . *curtum* SZELÉNYI, 1938, DK
- T1 extends beyond anterior margin of mesoscutum. . . . . 5
- 5 Head without or hardly with notch along vertex. . . . . 6
- Vertex with distinct notch. . . . . 9

- 6 Cornutus of T1 reaches anterior margin of thorax. . . . . *reticulatum* SZELENYI, 1938, DK, N, FIN  
 - Cornutus of T1 at least extends up to vertex. . . . . 7  
 7 Cornutus of T1 hardly reaches posterior ocelli. . . . . *hispo* WALKER, 1838, DK, N  
 - Cornutus of T1 extends much beyond anterior ocellus. . . . . 8  
 8 Cornutus of T1 with longitudinal striations. . . . . *favo* WALKER, 1838, DK  
 - Cornutus of T1 reticulate. . . . . *szabopatayi* SZELENYI, 1938, DK  
 9 Cornutus of T1 with minute spines at apex. . . . . *spinulosum* KIEFFER, 1916, DK  
 - Cornutus of T1 without spines at apex, glabrous. . . . . 10  
 10 T6 at least 2 x as long as basal width. . . . . 11  
 - T6 at most slightly longer than basal width. . . . . 12  
 11 A3 1.7 x as long as wide, A4 slightly longer than wide; fore wings without marginal cilia; T6 2.0 x as long as basal width. . . . . *boscii* (JURINE, 1807) DK, S, N, FIN  
 - Cornutus of T1 extends slightly beyond anterior ocellus.  
 - A3 2.5 x, A4 2 x as long as wide; fore wings with marginal cilia; T6 2.5 x as long as basal width. . . . . *foersteri* KIEFFER, 1914, DK  
 12 Cornutus of T1 longer, extends beyond vertex. . . . . 13  
 - Cornutus of T1 shorter, reaches occiput. . . . . 14  
 13 A3 2.0 x, A4 1.5 x as long as wide; vertex with more or less distinct transverse wrinkles on background of reticulate sculpture. . . . . *opacum* THOMSON, 1859, S,N, FIN  
 - A3 1.5 x, A4 as long as wide; vertex reticulate. . . . . *walkeri* KIEFFER, 1914, DK, N  
 14 A3 2.5 x as long as wide, A4 distinctly longer than wide. . . . .  
 - . . . . . *melicerata* WALKER, 1835, DK  
 - A3 1.6 x as long as wide, A4 as wide as long. . . . . *contariniae* SZELENYI, 1938, FIN

***Iphitrachelus* HALIDAY, 1835**

- 1 Posterior ocelli closer to anterior ocellus than to eyes; antennal club of female about 4 x as long as wide; A7-A8 of male each widened towards apex. . . . .  
 - . . . . . *lar* HALIDAY, 1835, DK, S, N, FIN  
 - Posterior ocelli closer to eyes than to anterior ocellus; antennal club of female 2.5 x as long as wide; A7-A8 of male each attenuated towards apex in form of petiole. . . . .  
 - . . . . . *gracilis* MASNER, 1957, DK, S, N, FIN

***Isocybus* FOERSTER, 1856**

- 1 T2 almost smooth. . . . . *grandis* (NEES, 1834) DK  
 - Female: A1 and A4-A5 red, A3 and A6-A10 blackish, A6-A9 transverse; scutellum laterally compressed; legs except base of coxae red. . . . . 2  
 - T2 striated to at least about one-third. . . . . 2  
 2 T2 striated to less than 0.5. . . . . 3  
 - T2 striated to more than 0.5. . . . . 7  
 3 Mesopleurae almost smooth . . . . . 4  
 - Mesopleurae with extensive striation. . . . . 5  
 4 Mesoscutum smooth over most of disc. . . . .  
 - . . . . . *bifracticornis* (ZETTERSTEDT, 1838) DK, S, N  
 - Female: Head 1.6 x as wide as long, vertex rounded; A1-A4 yellow, A5-A10 brown, A5-A9 each slightly longer than wide; scutellum hardly convex, at level of mesoscutum; legs except coxae yellow. Male: Antennae yellow, A9 2.5 x as long as wide.  
 - Mesoscutum sculptured, dull. . . . . *thomsoni* KIEFFER, 1926, S, N, FIN  
 - Female: Head 1.4 x as wide as long, vertex rounded; A1 yellowish, rest of antennae darker, A7-A9 slightly transverse; scutellum flat, hardly at level of

- mesoscutum; legs except coxae and hind femora yellowish. Male: A9 as wide as long.
- 5 Mesopleurae rather smooth above middle, striated only below. . . . . *walkeri* KIEFFER, 1926, N  
 Male: Head 1.6 x as wide as long, vertex rounded; antennae red, A9 about 1.5 x as long as wide; scutellum strongly convex, flattened above; fore legs red, middle legs reddish brown, hind legs dark brown. Female: A1 and A3-A4 red, A2 and A5-A10 black, A3-A4 equal.
- Mesopleurae striated below as well as above middle. . . . . 6
- 6 Female: Head 1.5 x as wide as long; T2 striated to 0.4; fore legs light reddish, middle and hind legs darker red, coxae dark. . . . . *trochanteratus* THOMSON, 1859, S  
 A1 light reddish, A2-A9 darker red, A9 at least as long as wide; scutellum flat, at level of mesoscutum. Male: Antennae reddish brown, A9 nearly 2 x as long as wide.
- Female: Head 1.7 x as wide as long; T2 striated to one-third; legs uniformly reddish brown, fore legs somewhat lighter (male unknown). . . . . *cotta* (WALKER, 1835) DK  
 A1-A2 red, A3-A4 reddish brown, A5-A10 dark brown; scutellum hardly convex, at level of mesoscutum.
- 7 T2 striated to at least 0.8 of length . . . . . 8
- T2 distinctly less striated. . . . . 10
- 8 T2 almost uniformly striated over whole width. . . . . *erato* (WALKER, 1835) DK  
 Male: Head 1.5 x as wide as long, vertex broadly excavated; antennae red, A9 about 1.75 x as long as wide; scutellum strongly convex; fore legs red, middle legs mostly brownish, hind legs mostly blackish. Female unknown.
- T2 smooth medially. . . . . 9
- 9 Mesopleurae striated posteriorly in upper third. . . . . *strigosus* THOMSON, 1859, DK, S  
 Male: Head 1.5 x as wide as long, vertex rounded; A1 yellowish, A2-A10 light reddish brown, A9 1.3 x as long as wide; scutellum very high, evenly convex; legs except coxae reddish. Female: A5-A9 each slightly longer than wide.
- Mesopleurae striated below as well as above. . . . . *ocellaris* KIEFFER, 1916, DK  
 Female: A1-A4 yellowish red, A5-A10 brown, A6-A9 each as long as wide; scutellum triangular, hardly elevated towards apex; legs except coxae yellowish red. Male unknown.
- 10 Antennae of both sexes red. . . . . *pallidicornis* THOMSON, 1859, DK, S  
 Female: A3 1.5 x as long as A4, A5-A9 each as long as wide; scutellum laterally compressed behind; legs red, coxae brown.
- A1 of both sexes red, A2-A10 brownish. . . . . *matuta* (WALKER, 1835) DK  
 Male: Head 1.3 x as wide as long, vertex broadly excavated; A9 about 2.5 x as long as wide; scutellum almost evenly convex, well above mesoscutum; legs except coxae bright red.

***Isostasius* FOERSTER, 1856** (The concept of species follows KOZLOV 1978)

- 1 Mesoscutum without notauli. . . . . *inserens* (KIRBY, 1800) DK, N
- Mesoscutum with notauli. . . . . *punctiger* (NEES, 1834) DK, N

***Leptacis* FOERSTER, 1856**

- 1 Females. . . . . 2
- Males. . . . . 13
- 2 Metasoma about 2.8 x as long as wide. . . . . *breisteini* BUHL, 1997, N  
 Head 1.8 x as wide as long, occipital carina weak; A4 2 x as long as A3; notauli nearly complete.

- Metasoma much less elongate. . . . . 3
- 3 A4 much longer than A3; A4-A5 about equal, each 1.7 x as long as wide. . . . .  
     . . . . . *vlugi* BUHL, 1997, DK, N  
     Head 1.8 x as wide as long, with weak occipital carina; notauli absent.
- Antennal structure much different. . . . . 4
- 4 Antenna with 3-segmented club. . . . . 5
- Antenna with 4-segmented club. . . . . 6
- 5 A3 2 x as long as A4; head from in front 1.33 x as wide as high, with upper margin  
     weakly convex. . . . . *coryphe* BUHL, 1998, DK  
     Head in lateral view with distance from upper eye margin to highest point of  
     head about 0.4 of eye height; occipital carina and notauli absent; scutellar spine  
     semi-transparent; fore wings with marginal cilia 0.2 width of wing; A1-A7 and  
     legs yellow.
- A3 slightly longer than A4; head from in front 1.1 x as wide as high, with upper  
     margin strongly convex, nearly triangular. . . . . *orchymonti* (DEBAUCHE, 1947) DK, N  
     Head in lateral view with distance from upper eye margin to highest point of  
     head about two-thirds of eye height.
- 6 Notauli distinct over most of their length; head with occipital carina. . . . .  
     . . . . . *ozines* (WALKER, 1835) DK, N  
     Head 1.8 x as wide as long; scutellum 1.3 x as long as wide at base, not  
     reaching base of T1, its prolongation "massive", not semi-transparent brown;  
     legs brownish, fore legs lighter.
- Notauli hardly indicated; if they are vaguely indicated in more than their extreme  
     posterior part, then occiput without carina. . . . . 7
- 7 A4 more than 5 x as long as wide. . . . . 8
- A4 less than 5 x as long as wide. . . . . 9
- 8 A4 less than 7 x as long as wide; metasoma longer than mesosoma. . . . .  
     . . . . . *nydia* (WALKER, 1835) DK, S, N  
     Head 1.8 x as wide as long, with distinct occipital carina; scutellum curved, 1.4  
     x as long as basal width; T1 1.3 x as long as wide; legs entirely bright red.
- A4 fully 7 x as long as wide; metasoma shorter than mesosoma. . . . .  
     . . . . . *lignicola* KIEFFER, 1916, DK  
     A7 fully 2 x as long as wide, A8-A9 each hardly longer than wide; notauli  
     absent; scutellar spine reaches middle of T1; fore wings with marginal cilia  
     only 0.125 width of wing; body dark brown, legs except coxae mostly red; L.  
     2.0-2.5 mm.
- 9 A8-A9 each distinctly more than 1.5 x as long as wide. . . . . *nice* (WALKER, 1835) N  
     Scutellum 1.5 x as long as wide, suddenly constricted, with a long and narrow  
     spine; T1 1.4 x as long as wide; metasoma about as long as head and  
     mesosoma combined; body light brown with darkened head and mesosoma;  
     antennae in basal half and legs yellowish.
- A8-A9 each distinctly less than 1.5 x as long as wide. . . . . 10
- 10 A4 hardly 1.2 x as long as A3. . . . . *tipulae* (KIRBY, 1798) DK, S, N, FIN  
     Head hardly more than 1.6 x as wide as long; mesopleurae smooth.
- A4 at least 1.5 x as long as A3. . . . . 11
- 11 Prolongation of scutellum "massive", not semi-transparent brown. . . . .  
     . . . . . *laodice* (WALKER, 1835), DK  
     Head 2.1 x as wide as long, with occipital carina; pronotum weakly sculptured  
     in lower half, upper half hairy; notauli traceable in their extreme posterior part;  
     black, A1-A6 red, legs brown, middle tibiae proximally and all tarsi lighter.
- Prolongation of scutellum semi-transparent brown. . . . . 12

- 12 A4 2.0 x as long as A3; marginal cilia of fore wing 0.25 width of wing. . . . .  
 . . . . . *buchi* BUHL, 1997, DK, N  
 Occipital carina weak; A4 3.5 x as long as wide; mesopleurae striated in upper  
 third; L. 1 mm.
- A4 1.5 x as long as A3; marginal cilia of fore wing 0.10 width of wing. . . . .  
 . . . . . *kozlovi* BUHL, 1997, DK, N  
 Head 1.8 x as wide as long, without occipital carina; notauli absent; meso-  
 pleurae striated in upper third; T1 2 x as wide as long; legs reddish yellow, hind  
 legs with coxae and thickened parts of femora and tibiae darker; L. 1.4 mm.
- 13 Head from in front only 1.1 x as wide as high, with upper margin much convex,  
 nearly triangular. . . . . *orchymonti* (DEBAUCHE, 1947)
- Head from in front more transverse, with upper margin at most moderately convex,  
 evenly rounded. . . . . 14
- 14 Notauli distinct over most of their length; head with occipital carina. . . . .  
 . . . . . *ozines* (WALKER, 1835)
- Notauli hardly indicated; if they are vaguely indicated in more than their extreme  
 posterior part, then occiput without carina. . . . . 15
- 15 A9 1.25 x as long as wide. . . . . *ariadne* sp. nov., DK  
 Cf. description below.
- A9 more than 2 x as long as wide. . . . . 16
- 16 Head without occipital carina. . . . . *nice* (WALKER, 1835)
- Head with at least a weak occipital carina. . . . . 17
- 17 Mesopleurae without distinct striations. . . . . *tipulae* (KIRBY, 1798)
- Mesopleurae distinctly striated in at least their upper third. . . . . 18
- 18 Mesopleurae striated in upper third; scutellum in lateral view not curved; L. about  
 1.0 mm. . . . . *buchi* BUHL, 1997
- Mesopleurae striated in upper half; scutellum in lateral view curved; L. about 1.5  
 mm. . . . . *nydia* (WALKER, 1835)

**Metaclisis FOERSTER, 1856**

- 1 Legs black; knees and tarsi brown. . . . . *areolatus* (HALIDAY, 1835) DK, N, FIN  
 T6 of female strongly pointed.
- Legs yellow . . . . . *?acerina* MASNER, 1981/ *aceris* MASNER, 1981, DK  
 It is not possible to separate the males of *acerina* and *aceris*; hitherto the  
 female has not been found in Europe.

**Metanopedias BRUES, 1910**

- 1 Occiput with a sharp carina; preapical antennal segment (A8) 1.7-2.0 x as long as  
 wide in female, 2.5 x in male. . . . . *lasiopterae* (KIEFFER, 1916) S, N, FIN

**Piestopleura FOERSTER, 1856**

- 1 Notauli absent; T2 of female fully 1.5 x as long as T3-T6 combined. . . . .  
 . . . . . *seron* (WALKER, 1835) DK  
 A4 of female nearly 2.5 x as long as A3; T1 smooth, without sculpture.
- Notauli indicated; T2 of female about as long as T3-T6 combined. . . . . 2
- 2 A4 of female hardly 1.2 x as long as A3 (male unknown). . . . .  
 . . . . . *catilla* (WALKER, 1835) DK, N, FIN  
 Scutellar spine straight; T1 with two lateral grooves, adjoined by longitudinal  
 striae, and with basal part elevated; L. 1.8 mm.
- A4 of female almost 3 x as long as A3. . . . . *thomsoni* KIEFFER, 1926, DK, S

Scutellar spine of female distinct and downcurved, of male indistinct; L. of female 1.1 mm.

**Platygaster** LATREILLE, 1809 (including *Prosactogaster* KIEFFER, 1914)

1	Females. ....	2
-	Males. ....	93
2	Scutellum with a tooth and/ or keel posteriorly. ....	3
-	Scutellum without tooth or keel. ....	10
3	A7-A9 each nearly 3 x as long as wide; T6 pointed, longer than T3-T5 combined, more than 2 x as long as basal width. .... <i>xeneus</i> WALKER, 1835, DK	
	Scutellum in dorsal view rounded, apically extended into a small sharp triangle.	
-	A7-A9 and T6 much shorter. ....	4
4	Notauli nearly complete. ....	5
-	Notauli absent or very short. ....	6
5	A7-A9 each as long as wide. .... <i>lyneborgi</i> BUHL, 1998, DK	
	Head 1.7 x as wide as long; scutellum at level of mesoscutum, with a small tooth; T2 smooth; legs yellow.	
-	A7-A9 each nearly 1.5 x as long as wide. .... <i>molsensis</i> BUHL, 1995, DK, N	
	Head 2 x as wide as long; scutellum and T2 as in <i>lyneborgi</i> ; legs dark brown.	
6	A9 transverse. ....	7
-	A9 at least as long as wide. ....	9
7	A4 about 3 x as long as wide. .... <i>hybrida</i> BUHL, 1994, DK, N	
	Notauli absent; scutellum at level of mesoscutum, with a tooth; T1 with 7 carinae; T2 without foveae, striated to 0.20 over whole width.	
-	A4 at most 2 x as long as wide. ....	8
8	L. more than 1.5 mm, scutellum vertical behind. .... <i>signata</i> (FOERSTER, 1861) N	
	Notauli absent; scutellum above level of mesoscutum, with a keel but hardly with tooth; T1 crenulated; T2 almost without foveae, striated to 0.25 over whole width.	
-	L. less than 1.5 mm, scutellum triangular behind. <i>leptines</i> WALKER, 1835, DK, S, N	
	Notauli absent; scutellum at level of mesoscutum; T2 smooth, with small basal foveae.	
9	Median plate of mesoscutum only slightly prolonged, just covering extreme base of scutellum; scutellum moderately convex, in lateral view cut off posteriorly at an angle of 90°; scutellum, seen from behind, clearly excavated, possessing a narrow membranous flange. .... <i>laricis</i> HALIDAY, 1835, N	
	A9 hardly longer than wide; T2 faintly striated in basal foveae; A1-A6 and legs yellow.	
-	Median plate of mesoscutum prolonged into a broad membranous plate, postero-lateral parts of mesoscutum provided with long hairs, covering base of scutellum; scutellum excavated and dorsally prolonged into a broad plate, high above propodeum, and a second membranous plate under it. .... <i>munki</i> BUHL, 1994, DK, N	
	A9 slightly longer than wide; T2 smooth; A1 and legs yellow.	
10	Metasoma with only 2 tergites. .... ( <i>Cylindrogaster</i> ) <i>tubulosa</i> BRUES, 1922, DK, S	
	A7-A9 each at most 1.5 x as long as wide; notauli complete.	
-	Metasoma with 6 tergites. ....	11
11	T4 hardly transverse. ....	12
-	T4 strongly transverse. ....	34
12	Sternite 2 with a hump between hind coxae. ....	13
-	Sternite 2 without a hump between hind coxae. ....	20
13	T2 1.8 x as long as wide, with nearly parallel sides. .... <i>acrisius</i> WALKER, 1835, DK, N	

- A8-A9 each as long as wide; notauli complete; T2 striated in foveae to 0.5; T3-T6 with longitudinal microsculpture.
- T2 less elongate, distinctly widened towards apex. . . . . 14
  - 14 T1 crenulated, without keels. . . . . *praecox* sp. nov., DK  
Cf. description below.
  - T1 with two keels (sometimes on background of crenulation). . . . . 15
  - 15 Occiput not striated. . . . . *subuliformis* (KIEFFER, 1926) DK, S  
A7-A9 each slightly longer than wide; notauli complete; scutellum reticulate-coriaceous, slightly above mesoscutum; T2 striated to 0.4; T4-T6 with faint sculpture.
  - Occiput striated. . . . . 16
  - 16 A8-A9 transverse. . . . . *tisias* WALKER, 1835, DK  
Head 1.6 x as wide as long; notauli complete; T1 crenulated and with 2 keels; T2 striated in foveae to one-third; T3-T6 smooth, joints between tergites thickened.
  - A8-A9 each at least slightly longer than wide. . . . . 17
  - 17 T4 much longer than wide. . . . . *damokles* BUHL, 1998, N  
A9 slightly longer than wide; notauli complete; T2 faintly striated in foveae to one-third; T4-T6 flat, weakly sculptured; antennae and legs dark.
  - T4 at most one and a third times as long as wide at base. . . . . 18
  - 18 A8-A9 each 1.5 x as long as wide. . . . . *gladiator* ZETTERSTEDT, 1838, DK, S, N  
Occiput finely striated; notauli complete; T2 striated in and between foveae to 0.4-0.5, with faint longitudinal sculpture to 0.75; T4-T6 with faint longitudinal microsculpture; antennae and legs dark.
  - A8-A9 each only slightly longer than wide. . . . . 19
  - 19 Head 2.0 x as wide as long. . . . . *confinis* THOMSON, 1859, DK, S  
Occiput with a few faint transverse striae; T2 striated in foveae to hardly 0.5; T3-T6 almost smooth, joints between tergites slightly thickened; antennae and legs mostly dark brown, A1-A2 light brown.
  - Head 2.4 x as wide as long. . . . . *munita* WALKER, 1835, DK, N  
Occiput with strong, transverse carinae; T2 with very deep foveae which are striated to 0.5; T4-T5 with superficial sculpture; antennae black; legs mostly dark brown.
  - 20 Metasoma very long, with parallel sides; T3 more than 2 x as long as wide. . . . .  
. . . . . (*Parallelogaster*) *lamelliformis* HUGGERT, 1973, DK, S, FIN  
A8-A9 each slightly longer than wide; notauli complete; metasoma more than 9 x as long as wide, flat and smooth.
  - Metasoma constricted behind T2. . . . . 21
  - 21 A8-A9 each more than 2 x as long as wide. . . . . 22
  - A8-A9 each at most 2 x as long as wide. . . . . 25
  - 22 A8-A9 each fully 3 x as long as wide. . . . . *compressicornis* (THOMSON, 1859) S, N, FIN  
Head about 2.3 x as wide as long; notauli complete; scutellum finely alutaceous; T1 with 2 long keels and some shorter and finer ones; T2 striated in foveae to 0.4; T3-T6 with a depression, each with a transverse row of punctures. (Close to *compressicornis* is *angustula* (THOMSON, 1859) the type material of which is unknown. According to THOMSON (1859) it has head less wide and mesoscutum more sculptured than *compressicornis*).
  - A8-A9 each less than 3 x as long as wide. . . . . 23
  - 23 T3 only about one-third as long as basal width. . . . . *schlicki* BUHL, 1995, DK, N  
A7-A9 each 2.5 x as long as wide; notauli complete; scutellum smooth; T2 striated in and between basal foveae to 0.4; T3-T6 smooth.

- T3 at most slightly transverse. . . . . 24
- 24 Mesosoma wider than high. . . . . *plana* BUHL, 1994, DK, N  
A2 a little more than 2 x as long as wide, A3 slightly longer than wide, A4  
about 2 x as long as wide, and A7-A9 each slightly more than 2 x as long as  
wide; T2 striated in and between basal foveae to 0.3.
- Mesosoma as high as wide. . . . . *planoides* BUHL, 1995, DK  
A2 almost 3 x as long as wide, A3 about 2 x as long as wide, A4 about 2.5 x as  
long as wide, and A7- A9 each slightly more than 2 x as long as wide; T2  
striated in and between basal foveae to about 0.4.
- 25 A8-A9 each 2 x or almost 2 x as long as wide. . . . . 26
- A8-A9 each distinctly less than 2 x as long as wide. . . . . 27
- 26 T5 very flat and narrow, hardly 0.25 x as wide as T2. . . . . *lanceolata* BUHL, 1996, S  
A7-A9 each 2 x as long as wide; notauli incomplete; T2 striated in foveae to  
0.5; T4-T6 with fine rugosity, T5 fully 5 x as long as wide.
- T5 convex, fully one-third as wide as T2. . . . . *hyalinata* (THOMSON, 1859) S  
A7-A9 each about 2 x as long as wide; notauli incomplete; T2 striated in basal  
foveae to 0.75; T4-T6 with punctures, T5 also with longitudinal micro-  
sculpture, 3 x as long as wide.
- 27 T5 widened towards apex. . . . . *krarupi* BUHL, 1995, DK  
A7-A9 each about as long as wide; notauli almost complete; T2 striated  
between foveae to 0.25; T4-T5 longitudinally coriaceous.
- T5 with parallel sides. . . . . 28
- 28 T5 as wide as long. . . . . *vulgaris* BUHL, 1998, DK, N  
Head 1.6 x as wide as long, without striae; A7-A9 each very slightly longer than  
wide; notauli complete; T1 crenulated; T2 striated over whole width to 0.75,  
about as long as T3-T6 combined.
- T5 longer than wide. . . . . 29
- 29 T1 crenulated. . . . . 30
- T1 with 2 keels. . . . . 32
- 30 Notauli absent. . . . . *masneri* HUGGERT, 1975, DK, S  
Frons almost smooth medially, reticulate laterally, with some wrinkles above  
antennae; A7-A9 each hardly longer than wide; T2 striated to about 0.5, medi-  
ally somewhat shorter; T3-T6 with longitudinal reticulate-rugose sculpture.
- Notauli complete. . . . . 31
- 31 T4 much longer than wide. . . . . *gyge* WALKER, 1835, DK, S, N, FIN  
Head 2.3 x as wide as long, frons transversely coriaceous; A7-A9 each 1.5 x as  
long as wide; T2 striated in foveae to 0.5; T4-T6 smooth; legs brightly coloured.
- T4 not longer than wide . . . . . *rugosiceps* BUHL, 1994, S  
Head 1.8 x as wide as long, frons strongly transversely striated; A7-A9 each  
slightly longer than wide; T2 striated in and between basal foveae to 0.6; legs  
more or less brownish.
- 32 Legs entirely yellowish. . . . . *luteocoxalis* (KOZLOV, 1966) DK, N, FIN  
Head 1.6 x as wide as long; notauli incomplete; T2 striated in and between  
foveae to nearly 0.5; whole body with dark reddish tint.
- Legs dark. . . . . 33
- 33 Head 2.3 x as wide as long; frons and mesoscutum smooth; T2 striated; T3-T5  
smooth. . . . . *cyrtilus* WALKER, 1835, DK, N  
A7-A9 not longer than wide; notauli nearly complete.
- Head 1.9 x as wide as long; frons and mesoscutum reticulate-coriaceous; T2 hardly  
striated; T3-T5 with rugosity. . . . . *microsculpturata* sp. nov. DK  
Cf. description below.

- 34 T5 hardly transverse. . . . . 35  
 - T5 strongly transverse. . . . . 45
- 35 Mid lobe of mesoscutum much prolonged posteriorly, covering basal part of scutellum. . . . . *lundensis* BUHL, 1997, S  
 A7-A9 each 2 x as long as wide; notauli missing in anterior one-third; T1 crenulated; T2 striated in foveae to 0.5, as long as T3-T6 combined.
- Mid lobe not covering base of scutellum. . . . . 36
- 36 Mesoscutum entirely, T2 almost entirely striated. . . . . *striatifacies* BUHL, 1996, S  
 Head 1.5 x as wide as long; A7-A9 each slightly longer than wide; T1 with 3 weak keels; T3-T6 smooth.
- Mesoscutum and T2 much less striated. . . . . 37
- 37 Antennae and legs yellowish red. . . . . *rutilipes* BUHL, 1997, DK, N  
 Head 1.75 x as wide as long; A8-A9 each slightly longer than wide; notauli indicated in basal 0.5; T1 crenulated; T2 striated in foveae to 0.4; T5 slightly transverse.
- Antennae and legs at least partly darker. . . . . 38
- 38 T5 smooth; tibiae yellowish red. . . . . *rufitibia* sp. nov., DK  
 Cf. description below.
- T5 at least faintly sculptured; tibiae darker. . . . . 39
- 39 A8-A9 transverse. . . . . 40
- A8-A9 each at least as long as wide. . . . . 41
- 40 Head 1.8 x as wide as long, occiput transversely rugose. . . . . *nigra* NEES, 1834, S  
 Notauli complete; scutellum at level of mesoscutum, reticulate-coriaceous; T1 with 2 keels and crenulated; T2 striated in and between foveae to hardly 0.5; T5 slightly transverse; antennae entirely and legs mostly dark brown. (Close to *nigra* is *laticeps* THOMSON, 1859 the type material of which is unknown. According to THOMSON (1859) it has wider and smoother head than *nigra*).
- Head 2.3 x as wide as long; occiput transversely striated. . . . . *oebalus* WALKER, 1835, N  
 Notauli complete; scutellum above level of mesoscutum; T1 with 2 keels and crenulated; T2 striated in foveae to one-third; T5 not transverse; antennae and legs black.
- 41 A8-A9 hardly longer than wide; frons and mesoscutum smooth. . . . .  
 . . . . . *galenus* WALKER, 1835, DK  
 Head 1.9 x as wide as long, frons smooth; notauli incomplete, mesoscutum and scutellum smooth; T2 striated in foveae, these very short; T5 longer than wide; antennae and legs dark brown.
- A8-A9 each distinctly longer than wide; frons and mesoscutum more or less sculptured. . . . . 42
- 42 T2 striated over whole width to 0.5; T5 longer than wide. . . . .  
 . . . . . *demades* WALKER, 1835, DK, N  
 Head 2.0 x as long as wide; A7-A9 each 1.5 x as long as wide; notauli incomplete; scutellum strongly convex; wings clear; T1 strongly crenulated; T3 smooth, with a transverse line of deeply implanted hairs which is interrupted in the middle; T4 smooth with two irregular transverse lines of deeply implanted hairs.
- T2 with medial striae shorter than striae in foveae, or T5 hardly as long as wide. 43
- 43 T2 striated in and between foveae to about 0.4; T5 hardly as long as wide. . . . .  
 . . . . . *betulae* (KIEFFER, 1916) DK  
 A9 almost 2 x as long as wide; notauli incomplete; T1 crenulated (sensu ROSKAM 1986).
- T2 with medial striae shorter than lateral; T5 hardly as wide as long. . . . . 44

- 44 Head 1.8 x as wide as long; T2 with medial striae 0.5 as long as lateral. . . . .  
 . . . . . *apicalis* THOMSON, 1859, S, FIN  
 Occiput strongly striated; A7-A9 each 1.5 x as long as wide; notauli incomplete; scutellum smooth; T1 and T3 as in *demades*, T4 smooth, with some deeply implanted hairs laterally. (Close to *apicalis* is *tuberosula* KIEFFER, 1926 the type material of which is unknown. According to THOMSON (1859) (who described it as *tuberosus* NEES, 1834) it has more shiny mesoscutum, stronger convex scutellum, and shorter and smoother metasoma than *apicalis*).
- Head 2.1 x as wide as long; T2 smooth between foveae. . . . .  
 . . . . . *pelias* WALKER, 1835, DK, N  
 Wings infuscated; T3 and T4 with a few hairs, not particularly deeply implanted. Otherwise much as *demades*.
- 45 Mesosoma at least 1.75 x as long as wide. . . . . 46  
 - Mesosoma hardly more than 1.5 x as long as wide. . . . . 48
- 46 A7-A9 each about 3 x as long as wide. . . . .  
 . . . . . (*Triplatygaster*) *contorticornis* RATZEBURG, 1844, DK, S, N, FIN  
 Metasoma much wider than mesosoma.  
 - A7-A9 each about as long as wide. . . . . 47
- 47 Notauli complete. . . . . *nottoni* BUHL, 1995, DK  
 Metasoma slightly wider than mesosoma; T1 with 2 keels; T2 striated to about 0.5; T3-T6 combined almost as long as T2.  
 - Notauli very short. . . . . *szelenyii* HUGGERT, 1975, DK  
 Metasoma somewhat wider than mesosoma; T1 crenulated; T2 striated in foveae to about 0.5.
- 48 Occiput hardly striated (sometimes striated in *splendidula*). . . . . 49  
 - Occiput more or less striated. . . . . 61
- 49 Scutellum very highly convex, with raised rugosity. . . . . *virgo* DAY, 1971, DK  
 Head 1.6 x as wide as long; A7-A9 each 1.5 x as long as wide; notauli complete; T1 crenulated; T2 striated to 0.5-0.7; metasoma rather pointed at apex.  
 - Scutellum distinctly less convex, without raised sculpture. . . . . 50
- 50 Area between propodeal carinae with cross carinae forming a turned M. . . . . 51  
 - Area between propodeal carinae hardly with cross carinae. . . . . 52
- 51 Head 1.8 x as wide as long; legs brown. . . . . *lativentris* THOMSON, 1859, S  
 A7-A9 each as long as wide; notauli complete; T1 evenly crenulated; T2 striated between foveae to 0.25.  
 - Head 1.5 x as wide as long; legs reddish. . . . . *lysicles* WALKER, 1835, DK, N  
 T2 striated between foveae to 0.33, rest of characters as in *lativentris* which is perhaps just a synonym of *lysicles*.
- 52 T6 extremely flattened, nearly twice as long as T3-T5 combined. . . . .  
 . . . . . (*Urocyclops*) *depressiventris* THOMSON, 1859, DK, S, N, FIN  
 A7-A9 each hardly longer than wide; notauli complete; T2 striated in foveae to fully 0.5.  
 - T6 less flattened and much shorter. . . . . 53
- 53 Notauli incomplete. . . . . *splendidula* RUTHE, 1859, DK, S, N  
 Head 1.7 x as wide as long; A7-A9 each about as long as wide; mesoscutum in posterior half and scutellum smooth; T1 crenulated; T2 striated to about 0.4.  
 - Notauli complete. . . . . 54
- 54 T2 hardly striated. . . . . 55  
 - T2 distinctly striated. . . . . 57
- 55 Scutellum at level of mesoscutum. . . . . *gracilipes* HUGGERT, 1975, DK, S, N

- Head 1.7 x as wide as long; A7-A9 each hardly longer than wide; T1 with 2 keels; legs and basal half of antennae yellowish.
- Scutellum above level of mesoscutum. . . . . 56
  - 56 A1-A4 and legs reddish yellow. . . . . *abia* WALKER, 1835, DK, N  
Head 1.8 x as wide as long; A7-A9 each not longer than wide; T2 with some short striae between foveae.
  - Antennae and legs dark. . . . . *inconspicua* sp. nov., DK  
Cf. description below.
  - 57 T2 striated to 0.5. . . . . *striolatus* NEES, 1834, DK, S, FIN  
Frons above antennae with transverse striae; A7-A9 each hardly as long as wide; scutellum coriaceous; T1 crenulated; T6 as long as wide; fore legs reddish, rest of legs dark.
  - T2 striated to at least two-thirds. . . . . 58
  - 58 T1 with 2 keels. . . . . *minuta* ZETTERSTEDT, 1838, S  
Head 1.8 x as wide as long, almost uniformly reticulate-coriaceous; A7-A9 each slightly longer than wide; scutellum at level of mesoscutum, reticulate-coriaceous.
  - T1 crenulated. . . . . 59
  - 59 Head 1.8 x as wide as long. . . . . *fuscipes* THOMSON, 1859, S, FIN  
Head entirely reticulate-coriaceous; A7-A9 each hardly longer than wide; mesoscutum and scutellum sculptured as head, scutellum above level of mesoscutum; T6 about as long as wide.
  - Head 1.6 x as wide as long. . . . . 60
  - 60 T2 striated to two-thirds. . . . . *longestriolatus* THOMSON, 1859, S  
Head reticulate-coriaceous, above antennae with transverse striae, occiput medially transversely rugose; A7-A9 each slightly longer than wide; scutellum just above mesoscutum, finer sculptured than this; T6 transverse.
  - T2 striated to three-fourths. . . . . *otanes* WALKER, 1835, DK  
Head entirely reticulate-coriaceous; A7-A9 hardly longer than wide; scutellum strongly convex, well above level of mesoscutum.
  - 61 T2 without striae. . . . . 62
  - T2 striated. . . . . 69
  - 62 A8-A9 each nearly 2 x as long as wide. . . . . *lineaticeps* BUHL, 1994, DK  
Head 2 x as wide as long, entirely transversely striated; notauli complete; scutellum at level of mesoscutum; T1 with 2 keels.
  - A8-A9 each at most 1.5 x as long as wide. . . . . 63
  - 63 Notauli very short. . . . . *nisus* WALKER, 1835, DK, N  
Head 1.8 x as wide as long; A8-A9 each about as long as wide; scutellum smooth; T1 crenulated; A1-A5 and legs yellowish.
  - Notauli distinct in at least posterior two-thirds. . . . . 64
  - 64 Frons entirely smooth. . . . . *soederlundi* BUHL, 1998, S  
Head 2.1 x as wide as long; mesoscutum and scutellum smooth; T1 with 2 keels.
  - Frons more or less sculptured or punctured. . . . . 65
  - 65 Frons finely punctured on a smooth background. . . . . *ericeti* RONDANI, 1877, DK  
Head 2.0 x as wide as long, rounded behind eyes, frons finely punctured, occiput finely striated; mesoscutum reticulate-coriaceous, notauli obliterated in anterior third; scutellum reticulate-coriaceous; T1 almost smooth; T6 pointed, as long as wide; antennae and legs mostly dark.
  - Frons sculptured. . . . . 66
  - 66 Frons nearly smooth with some superficial striation. . . . . *oscus* WALKER, 1835, DK

- Head 1.7 x as wide as long, occiput strongly transversely striated; T1 with 2 keels; A2-A6 and legs light brown.
- Frons striated or with somewhat coarse sculpture above antennal sockets. . . . . 67
  - 67 Head 2.3 x as wide as long; frons striated fan-like with transverse striae above antennal sockets. . . . . *aegeus* WALKER, 1835, DK, N  
Occiput strongly transversely striated; A7-A9 each 1.5 x as long as wide; T1 with 2 keels; T3-T6 finely punctate; antennae dark brown, A2-A3 lighter; all femora dark brown, all tibiae and tarsi yellowish brown.
  - Head 2.0 x as wide as long; frons weaker sculptured. . . . . 68
  - 68 A4 wider than A5; frons weakly fan-like striated and faintly reticulate. . . . . *laeviventris* THOMSON, 1859, S  
Occiput strongly transversely striated; A9 hardly 1.5 x as long as wide; T1 smooth and with 2 keels; T3-T6 with superficially implanted hairs. (Perhaps just a synonym of the following species).
  - A4 narrower than A5; frons finely fan-like alutaceous-coriaceous, in lower half transversely rugose. . . . . *minthe* WALKER, 1835, DK, N  
Occiput transversely striated; A7-A9 as in *laeviventris*; T1 with a crenulated strip over whole width and with 2 keels; T3-T6 with deeply implanted hairs.
  - 69 Mesoscutum striated all over. . . . . *striatithorax* BUHL, 1994, DK, N  
Frons with extensive transverse striation; occiput longitudinally striated; A7-A9 each slightly longer than wide; scutellum very slightly above mesoscutum, punctured; T1 with 2 keels; T2 striated in and between foveae to 0.7-0.8; T6 transverse.
  - Mesoscutum at most distinctly less striated. . . . . 70
  - 70 Scutellum strongly convex, with raised rugosity. . . . . *vintheri* BUHL, 1994, DK  
Frons with extensive transverse striation; occiput reticulate, medially with longitudinal striae; A7-A9 each fully 1.5 x as long as wide; notauli complete; T1 with 2 keels; T2 striated in and between foveae to 0.5, behind striae with longitudinal microsculpture to 0.8.
  - Scutellum less convex, without raised sculpture. . . . . 71
  - 71 Scutellum distinctly above mesoscutum, almost triangular in dorsal view, vertical posteriorly. . . . . *abrupta* BUHL, 1994, DK, N  
Frons strongly transversely striated; A7-A9 each slightly longer than wide; notauli incomplete; T1 crenulated; T2 with faint striae in foveae to 0.5; A1-A5 and legs except coxae orange.
  - Scutellum evenly convex. . . . . 72
  - 72 Scutellum strongly convex, more or less compressed in posterior part and posterolaterally with a strong rounded impression; median plate of mesoscutum prolonged and usually covering base of scutellum. . . . . 73
  - Scutellum less convex, entire or at most with a small roundish impression, never more or less compressed; median plate of mesoscutum at most reaching base of scutellum. . . . . 74
  - 73 Head about 2.0 x as wide as long; frons alutaceous. . . . . *athamas* WALKER, 1835, DK, N  
A7-A9 each slightly longer than wide; notauli incomplete; T2 striated in foveae to 0.5; T3-T6 with deeply implanted hairs; T6 slightly elongate.
  - Head about 2.5 x as wide as long; frons faintly fan-like striated. . . . . *euhemerus* WALKER, 1835, DK  
A7-A9, notauli and T2 as in *athamas*; hairs on T3-T6 less deeply implanted than in *athamas*; T6 transverse.
  - 74 Notauli complete. . . . . 75

- Notauli incomplete. . . . . 83
- 75 Head more than 2 x as wide as long. . . . . 76
- Head at most 2 x as wide as long. . . . . 77
- 76 Frons extensively striated. . . . . *borealis* BUHL, 1998, N  
 Head 2.1 x as wide as long, occiput longitudinally striated-rugose; A8-A9 each about as long as wide; T1 with 2 keels; T2 striated in and between foveae to 0.4; antennae and legs dark brown.
- Frons not striated. . . . . *quadrifarius* (KIEFFER, 1916) DK  
 Head 2.1 x as wide as long, occiput striated; A7-A9 each slightly longer than wide; T2 striated to less than 0.4; legs partly reddish-brown.
- 77 Occiput longitudinally striated medially; A8-A9 each slightly transverse. . . . . 78
- Occiput transversely striated; A8-A9 at least as long as wide. . . . . 79
- 78 Occipital sculpture sharp. . . . . *occipitalis* BUHL, 1994, DK, N  
 Head 2 x as wide as long, frons striated except medially; mesoscutum with longitudinal rugosity; T1 with 2 keels; T2 striated in and between foveae to 0.5; T6 nearly as long as wide.
- Occipital sculpture rather obscured. . . . . *marginatus* THOMSON, 1859, S  
 Frons weaker striated than in *occipitalis*; mesoscutum without longitudinal rugosity; rest of characters as in *occipitalis* which is perhaps just a synonym of *marginatus*.
- 79 A8-A9 each 1.5 x as long as wide. . . . . *danica* BUHL, 1999, DK  
 Head 1.75 x as wide as long, frons smooth, reticulate laterally; scutellum reticulate, at level of mesoscutum; T1 crenulated and with 2 keels; T2 striated in and between foveae to 0.5.
- A8-A9 each at most slightly longer than wide. . . . . 80
- 80 A8-A9 each as wide as long. . . . . *puccinii* VLUG, 1995, S  
 Head 1.9 x as wide as long; occiput finely striated medially; frons nearly smooth; scutellum hardly above mesoscutum, reticulate-coriaceous; T1 crenulated and with 2 weak keels; T2 striated to 0.5, medially slightly shorter.
- A8-A9 each slightly longer than wide. . . . . 81
- 81 T6 pointed, as long as wide. . . . . *sagana* WALKER, 1835, DK, N  
 Head 1.9 x as wide as long, frons faintly coriaceous; T1 crenulated and with 2 keels; T2 striated in foveae to one-third; antennae and legs dark.
- T6 transverse. . . . . 82
- 82 Head 2.0 x as wide as long, occiput strongly striated; T1 with 2 keels; T2 striated to one-third. . . . . *equestris* SPITTLER, 1969, DK  
 Frons striated above antennae; scutellum strongly convex, coriaceous; legs dark.
- Head 1.8 x as wide as long, occiput with a few striae; T1 crenulated; T2 striated to 0.5. . . . . *suecica* (KIEFFER, 1926) DK, S, N  
 Frons smooth medially, reticulate-coriaceous and punctured laterally, without striae above antennae; scutellum slightly convex, finely reticulate-coriaceous; middle and hind legs mostly dark, fore legs lighter.
- 83 A8-A9 each fully 2 x as long as wide. . . . . *ennius* WALKER, 1835, DK  
 Head 2.2 x as wide as long, frons with weak striation; notauli nearly complete; T1 crenulated; T2 striated in foveae to one-third; antennae and legs dark, A2-A5, tibiae and tarsi lighter.
- A8-A9 at most nearly 2 x as long as wide. . . . . 84
- 84 A8-A9 transverse. . . . . *clavata* BUHL, 1994, DK

- Head 1.6 x as wide as long, frons smooth, occiput finely striated; scutellum at level of mesoscutum, smooth; T1 crenulated; T2 striated in foveae to 0.4; A1-A5 and legs yellow.
- A8-A9 each at least as long as wide. . . . . 85
  - 85 Notauli nearly complete. . . . . *dryope* WALKER, 1835, DK, N  
Head 2.3 x as wide as long, frons smooth; A8-A9 each as long as wide; mesoscutum and scutellum smooth; T2 striated in and between foveae; antennae and most of legs brown.
  - Notauli missing in at least about anterior third. . . . . 86
  - 86 A8-A9 each at most very slightly longer than wide. . . . . 87
  - A8-A9 each at least about 1.5 x as long as wide. . . . . 89
  - 87 Notauli absent. . . . . *inermis* WALKER, 1835, DK  
Head 2.2 x as wide as long, frons faintly strigose; mesoscutum with scale-like hair-implantations; scutellum at level of mesoscutum; T2 striated in foveae to one-third; T6 as long as wide.
  - Notauli indicated posteriorly. . . . . 88
  - 88 T2 striated in foveae to 0.6. . . . . *ungeri* sp. nov., DK  
Cf. description below.
  - T2 striated in foveae to one-third, medially shorter. . . . . *manto* WALKER, 1835, DK  
Head 2.0 x as wide as long, strongly narrowed behind eyes, frons smooth; mesoscutum nearly smooth, notauli very faintly indicated posteriorly; scutellum smooth; T1 crenulated; T6 rounded, much transverse; antennae and legs mostly dark. (According to the inadequate original description the female of *P. abisares* WALKER, 1835 should run to this couplet; cf. male in couplet 119 below. The variable species (-complex?) *P. splendidula* RUTHE, 1859 also runs to this couplet when specimens have striated occiput, cf. couplet 53 for further information).
  - 89 A8-A9 each nearly 2 x as long as wide. . . . . *litoralis* BUHL, 1998, N  
Head 2 x as wide as long, frons smooth; notauli faintly indicated posteriorly; scutellum smooth; T1 crenulated; T2 striated in foveae to 0.5, medially to 0.25; T6 bluntly pointed; antennae and legs dark.
  - A8-A9 each 1.5 x as long as wide. . . . . 90
  - 90 Notauli nearly absent. . . . . *betularia* KIEFFER, 1916, DK  
Frons smooth; scutellum strongly convex; T1 crenulated; T2 striated over whole width to one-third; T6 slightly transverse but sharply pointed; antennae and legs brownish.
  - Notauli missing in at most anterior 0.6. . . . . 91
  - 91 Occiput distinctly and densely transversely striated; legs red. . . . .  
. . . . . *varicornis* spec. nov., DK  
Cf. description below.
  - Occiput finely striated, laterally coriaceous; legs more or less brownish. . . . . 92
  - 92 Head 1.7 x as wide as long; frons faintly reticulate. . . . . *chloropus* THOMSON, 1859, S  
Notauli missing in anterior 0.4; scutellum smooth, slightly above mesoscutum; T1 crenulated; T2 striated in and between foveae to hardly 0.5; T3-T6 combined about 0.5-0.75 as long as T2.
  - Head 2.0 x as wide as long; frons faintly fan-like striated, in lower half punctured. . . . .  
. . . . . *polita* THOMSON, 1859, S  
Notauli missing in anterior 0.3; scutellum and T1 as in *chloropus*; T2 striated in foveae to 0.5, area in between smooth; T3-T6 combined as long as T2.
  - 93 Scutellum with a tooth or keel behind. . . . . 94
  - Scutellum without tooth or keel behind. . . . . 99

- 94 Notauli nearly complete. . . . . *molsensis* BUHL, 1995  
 A7-A9 each 2.3 x as long as wide; cf. female.
- Notauli absent, very faint or short. . . . . 95
- 95 A7-A9 each hardly longer than wide. . . . . 96
- A7-A9 each distinctly longer than wide. . . . . 98
- 96 Length more than 1.5 mm; scutellum vertical behind. . . *signata* (FOERSTER, 1861)  
 In all respects very similar to female, cf. this.
- Length less than 1.5 mm; scutellum pointed behind. . . . . 97
- 97 Head 2.0 x as wide as long; scutellum behind triangular in lateral view, excavated below. . . . . *leptines* WALKER, 1835  
 A7-A9 each about as long as wide; cf. female.
- Head 1.8 x as wide as long; scutellum in lateral view with a very short and low tooth, not excavated below. . . . . *aberrans* BUHL, 1998, DK  
 A7-A9 each distinctly transverse; occiput transversely reticulate; notauli very faint; T1 crenulated; T2 smooth.
- 98 T1 with 2 strong keels. . . . . *munki* BUHL, 1994  
 A7-A9 each fully 2 x as long as wide; cf. female.
- T1 with 7 weak keels. . . . . *hybrida* BUHL, 1994  
 A7-A9 each 2.5-3.0 x as long as wide; cf. female.
- 99 Scutellum vertical behind. . . . . 100
- Scutellum more or less sloping behind. . . . . 101
- 100 Scutellum slightly before hind margin vertically cut off in upper half in a right-angled emargination; A7-A9 each 2 x as long as wide. . . *danielssoni* BUHL, 1998, S  
 Head 1.8 x as wide as long, occiput striated; notauli hardly indicated; T1 crenulated; T2 striated distal of foveae to 0.75.
- Scutellum with vertical hind margin entire; A7-A9 each more than 2 x as long as wide. . . . . *abrupta* BUHL, 1994  
 Scutellum slightly lower than in female, cf. this.
- 101 Metasoma with only 2 tergites. . . . . *tubulosa* BRUES, 1922  
 A6-A9 each about 1.5 x as long as wide; cf. female.
- Metasoma with 7 tergites. . . . . 102
- 102 Legs unusually thickened; A2 triangular dilated; A5 much transverse. . . . .  
 . . . . . *szelenyii* HUGGERT, 1975  
 A9 slightly transverse; cf. female.
- Legs of normal shape; A2 not distinctly triangular; A5 hardly transverse. . . . . 103
- 103 Mesosoma at least 1.75 x as long as wide. . . . . 104
- Mesosoma about 1.5 x as long as wide. . . . . 105
- 104 A9 about 1.5 x as long as wide. . . . . *nottoni* BUHL, 1995
- A9 more than 2 x as long as wide. . . . . *contorticornis* RATZEBURG, 1844
- 105 Occiput hardly striated (sometimes striated in *splendidula*). . . . . 106
- Occiput more or less striated. . . . . 117
- 106 Head 1.4 x as wide as long. . . . . *rutubus* WALKER, 1835, DK  
 Notauli very short; T2 laterally striated to 0.5; legs yellowish red.
- Head at least 1.6 x as wide as long. . . . . 107
- 107 T2 hardly striated. . . . . 108
- T2 distinctly striated. . . . . 109
- 108 Scutellum above level of mesoscutum; T2 with some short striae between foveae. . . . .  
 . . . . . *abia* WALKER, 1835
- Scutellum at level of mesoscutum; T2 without striae. . . *gracilipes* HUGGERT, 1975  
 (The insufficiently described *P. norvegica* KIEFFER, 1913 seems to run to this couplet. It differs from *gracilipes* in having metasoma pointed at apex, as long

- as head and mesosoma combined, and in having middle and hind legs dark, cf. KIEFFER 1926).
- 109 Notauli incomplete. . . . . *splendula* RUTHE, 1859  
A5-A9 each slightly longer than wide; cf. female.
- Notauli complete. . . . . 110
- 110 T2 striated in foveae to at least 0.5, and between foveae to at least one-third. . . 111
- T2 striated in foveae to at most about 0.5, and then hardly striated medially. . . 116
- 111 T2 striated to 0.5 over whole width. . . . . *striolatus* NEES, 1834  
A4 very large; cf. female.
- T2 longer striated at least in foveae. . . . . 112
- 112 Frons striated above antennae. . . . . 113
- Frons without striae above antennae. . . . . 114
- 113 Head 1.9 x as wide as long; T2 striated to two-thirds over whole width. . . . .  
. . . . . *longestriolatus* THOMSON, 1859  
A4 moderately widened; preapical segments slightly longer than wide; cf. female.
- Head 1.6 x as wide as long; T2 striated to three-fourths over whole width. . . . .  
. . . . . *vulgaris* BUHL, 1998
- 114 Head 1.6 x as wide as long. . . . . *otanes* WALKER, 1835  
A4 very large; A7-A9 each about 1.5 x as long as wide; cf. female.
- Head 1.8 x as wide as long. . . . . 115
- 115 Frons without smooth longitudinal line medially; propleurae in lower half smooth, with punctures and hairs. . . . . *minuta* ZETTERSTEDT, 1838  
A4 moderately widened; A7-A9 each slightly more than 1.5 x as long as wide; cf. female.
- Frons without smooth longitudinal line medially; propleurae in lower half punctured-rugose. . . . . *fuscipes* THOMSON, 1859
- 116 Head and mesoscutum smooth. . . . . *depressiventris* THOMSON, 1859  
A7 1.4, A9 1.6 x as long as wide; cf. female.
- Head and mesoscutum reticulate-coriaceous. . . . . *subuliformis* (KIEFFER, 1926)
- 117 T2 hardly striated. . . . . 118
- T2 distinctly striated. . . . . 120
- 118 Notauli complete. . . . . *bucolion* WALKER, 1835, DK  
Head 2.3 x as wide as long, frons coriaceous with wrinkles above antennae;  
A7-A9 each very slightly longer than wide; notauli complete. Probably the male of *munita* WALKER, 1835, cf. above.
- Notauli incomplete. . . . . 119
- 119 Frons faintly punctured. . . . . *ericeti* RONDANI, 1877
- Frons with very fine fan-like alutaceous sculpture, nearly smooth. . . . .  
. . . . . *abisares* WALKER, 1835, DK  
Head 2.0 x as wide as long; A7-A9 each at most slightly longer than wide; T1 crenulated; antennae and most of legs dark.
- 120 Notauli incomplete. . . . . 121
- Notauli complete. . . . . 132
- 121 Mesoscutum striated all over. . . . . *striatidorsum* BUHL, 1998, S  
Head 1.8 x as wide as long, striated all over; A7-A9 each very slightly longer than wide; notauli hardly indicated; T1 crenulated and with 3 keels; T2 striated in foveae to 0.6.
- Mesoscutum hardly striated. . . . . 122
- 122 Legs yellowish. . . . . *luteocoxalis* (KOZLOV, 1966)

-	Legs distinctly darker. . . . .	123
123	Notauli nearly complete. . . . .	124
-	Notauli distinctly shortened. . . . .	126
124	Frons and mesoscutum smooth. . . . .	<i>dryope</i> WALKER, 1835
-	Frons and mesoscutum sculptured. . . . .	125
125	Head 1.8 x as wide as long. . . . .	<i>apicalis</i> THOMSON, 1859
-	Head 2.0 x as wide as long. . . . .	<i>demades</i> WALKER, 1835
126	T2 smooth between foveae. . . . .	127
-	T2 striated between foveae to at least 0.25. . . . .	129
127	Notauli absent. . . . .	<i>inermis</i> WALKER, 1835
-	Notauli present posteriorly. . . . .	128
128	Frons smooth. . . . .	<i>manto</i> WALKER, 1835
	A7-A9 each hardly longer than wide; cf. female.	
-	Frons striate-reticulate. . . . .	<i>ungeri</i> spec. nov.
	Cf. description below.	
129	T2 striated over whole width to one-third. . . . .	130
-	T2 differently striated. . . . .	131
130	A7-A9 each distinctly longer than wide. . . . .	<i>betulae</i> (KIEFFER, 1916)
-	A7-A9 each hardly longer than wide. . . . .	<i>betularia</i> KIEFFER, 1916
131	Head 2.0 x as wide as long; T2 striated in foveae to 0.5, between foveae to 0.25. . . . .	<i>litoralis</i> BUHL, 1998
-	Head 1.75 x as wide as long; T2 striated in and between foveae to hardly 0.5. . . . .	<i>chloropus</i> THOMSON, 1859
132	Mesoscutum striated all over. . . . .	<i>striatithorax</i> BUHL, 1994
	A7-A9 each slightly longer than wide; cf. female.	
-	Mesoscutum distinctly less striated. . . . .	133
133	Scutellum strongly convex, with raised rugosity. . . . .	<i>vintheri</i> BUHL, 1994
	A7-A9 each 2 x as long as wide; cf. female.	
-	Scutellum less convex, without raised sculpture. . . . .	134
134	T2 striated in foveae to at most 0.4, medially sometimes shorter. . . . .	135
-	T2 striated in foveae to at least about 0.5. . . . .	139
135	Frons smooth. . . . .	<i>deipyra</i> WALKER, 1835, DK
	Head 1.8 x as wide as long; A7-A9 each about as long as wide; T1 with 2 keels; T2 striated in foveae to one-third; antennae and most of legs brown. Perhaps the male of <i>tisias</i> WALKER, 1835, cf. above.	
-	Frons at least partly sculptured or striated. . . . .	136
136	Frons with extensive striation. . . . .	<i>borealis</i> BUHL, 1998
	A7 and A8 each as long as wide, A9 slightly transverse; cf. female.	
-	Frons at most striated above antennae. . . . .	137
137	T2 between foveae smooth; frons faintly alutaceous to coriaceous. . . . .	<i>sagana</i> WALKER, 1835
-	T2 with at least a few striae between foveae; frons with transverse wrinkles or striae above antennae. . . . .	138
138	Head 1.8 x as wide as long; metasoma about 2.5 x as long as wide. . . . .	<i>attenuata</i> WALKER, 1835-group sensu VLUG (1985) DK

- A7-A9 each about as long as wide; T1 with 2 keels; T2 superficially striated in foveae to one-third, between foveae with a few striae; antennae and legs blackish brown.
- Head 2.0 x as wide as long; metasoma less elongate. . . . . *equestris* SPITTLER, 1969  
A6-A9 each nearly 2 x as long as wide.
  - 139 Head more than 2 x as wide as long. . . . . 140
  - Head at most 2 x as wide as long. . . . . 142
  - 140 A9 1.8 x as long as wide. . . . . *compressicornis* (THOMSON, 1859)  
Frons with fine transverse wrinkles above antennae; cf. female.
  - A9 more than 2 x as long as wide. . . . . 141
  - 141 Frons distinctly striated in lower half; T2 striated in foveae to 0.5-0.6. . . . .  
. . . . . *transversiceps* BUHL, 1998, DK, S  
Head 2.3 x as wide as long; A7-A9 each 2.4 x as long as wide.
  - Head striated on occiput only; T2 striated over whole width to two-thirds. . . . .  
. . . . . *quadrifarius* (KIEFFER, 1916)
  - 142 Occiput with longitudinal striation. . . . . 143
  - Occiput with transverse striation. . . . . 144
  - 143 Sculpture on occiput sharp. . . . . *occipitalis* BUHL, 1994  
A5-A9 each slightly longer than wide; cf. female.
  - Sculpture on occiput obscured. . . . . *marginatus* THOMSON, 1859
  - 144 T1 evenly crenulated. . . . . 145
  - T1 with 2 keels, sometimes also crenulated. . . . . 146
  - 145 Frons with extensive transverse striation. . . . . *rugosiceps* BUHL, 1994  
A5-A9 each slightly longer than wide; cf. female.
  - Frons smooth medially, reticulate and punctured laterally. *suecica* (KIEFFER, 1926)
  - 146 A7-A9 each about 1.75 x as long as wide. . . . . *puccinii* VLUG, 1995
  - A7-A9 each about as long as wide. . . . . *confinis* THOMSON, 1859

**Synopeas FOERSTER, 1856**

- 1 Females: Sternite 2 ventrally recessed, and T4-T6 forming a long tail. Males: Metasoma relatively long, pointed and slightly downcurved (*Sactogaster* FOERSTER, 1856). . . . . 2
- Females: Sternite 2 sometimes much convex but then T4-T6 do not form a tail. Males: Metasoma rarely long and then not in the least downcurved apically. . . . . 4
- 2 Females: Hind margin of sternite 2 forming angle of much more than 90° with surface of sternite 3. . . . . *osaces* (WALKER, 1835) S  
Head 2.0 x as wide as long with a very indistinct occipital carina; notauli indicated in posterior third; T3-T6 with microsculpture; T4 hardly longer than T3, about 3 x as wide as long; T5 hardly as long as wide, 0.6 as long as T6 (male unknown).
- Females: Hind margin of sternite 2 forming angle of much less than 90° with surface of sternite 3. . . . . 3
- 3 Females: Sternite 2 pointed behind, posterior third bifurcate. . . . .  
. . . . . *ventralis* (WESTWOOD, 1833) DK, N  
Notauli complete; T3-T6 finely sculptured; T4 much longer than T3; T5 1.5 x as long as wide; T6 1.3 x as long as T5 (male unknown).
- Females: Sternite 2 semicircular behind, not bifurcate. . . . .  
. . . . . *curvicauda* (FOERSTER, 1856) DK, N, FIN  
Head 1.9 x as wide as long, occiput angled but without carina; notauli indicated in posterior half; T3-T6 with microsculpture; T4 much longer than T3, 1.2 x as wide as long; T5 2 x as long as wide, slightly more than half as long as T6.

- Male: A2 slightly longer than A4, this 1.5 x as long as wide; A6-A9 each hardly longer than wide; T2 nearly 2 x as long as T3-T7 combined.
- 4 Metasoma of female 5 x, of male 2.5 x as long as wide. . . . .  
 . . . . . (*Ectadius*) *craterus* (WALKER, 1835) DK, S, N, FIN  
 Notauli complete; scutellum with a distinct spine. . . . . 5
- Metasoma much shorter. . . . . 5
- 5 Notauli complete or almost complete. . . . . 6
- Notauli much incomplete or absent. . . . . 8
- 6 Notauli almost complete; head 1.6 x as wide as long; scutellar spine long and straight, reaching T1. . . . .  
 . . . . . *acutispinus* BUHL, 1998, DK  
 Antennae and legs dark; fore wings without marginal cilia; female metasoma shorter than mesosoma (male unknown). . . . .
- Notauli complete; head 1.7-2.2 x as wide as long, if only 1.7 x then scutellar spine turned upwards. . . . . 7
- 7 Pronotum laterally reticulate-coriaceous all over; head 1.7 x as wide as long. . . . .  
 . . . . . *hansseni* BUHL, 1998, N  
 A7-A9 of male each as long as wide (female unknown); occiput without carina; fore wings with marginal cilia. . . . .
- Pronotum distinctly less sculptured; head 2.2 x as wide as long. . . . .  
 . . . . . *jasius* (WALKER, 1835) S  
 Scutellar spine strong and straight; female metasoma in lateral view slightly pointed and downcurved. . . . .
- 8 Mesosoma laterally compressed, less than two-thirds as wide as head; mesoscutum 1.5 x as long as wide. . . . .  
 . . . . . *myles* (WALKER, 1835) DK  
 Notauli very short; scutellum smooth, with distinct spine; antennae and legs mostly brown. . . . .
- Mesosoma not thus compressed. . . . . 9
- 9 Metasoma at least 1.3 x as high as wide. . . . .  
 . . . . . *hyllus* (WALKER, 1835) DK, S, N, FIN  
 Head 2.1 x as wide as long; scutellum slightly below level of mesoscutum, without spine but with a short vertical lamella; metasoma 1.8 x as long as mesosoma; antennae and legs black. . . . .
- Metasoma hardly higher than wide. . . . . 10
- 10 Midlobe of mesoscutum prolonged as a smooth, roundish plate, clearly situated above level of base of scutellum (a levelled gap present). . . . . 11
- Scutellar line continuous with line of mesoscutum (no levelled gap present). . . . 13
- 11 Mesoscutum in front of scutellum very strongly swollen; A9 of female longer than wide. . . . .  
 . . . . . *gibberosus* BUHL, 1997, N  
 Head 1.75 x as wide as long, with strong occipital carina; notauli absent; fore wings with marginal cilia; legs except coxae reddish yellow. . . . .
- Mesoscutum in front of scutellum moderately swollen; A9 of female transverse. . . 12
- 12 Head 2.0 x as wide as long. . . . .  
 . . . . . *rhanis* (WALKER, 1835) DK, N  
 Frons finely coriaceous with some transverse wrinkles above antennae; female metasoma as high as wide; L. of female 1.8 mm. . . . .
- Head 1.8 x as wide as long. . . . .  
 . . . . . *convexus* THOMSON, 1859, S  
 Head evenly reticulate; female metasoma 1.1 x as wide as high; L. of female 1.2 mm. . . . .
- 13 Notauli entirely absent. . . . . 14
- Notauli at least faintly indicated. . . . . 25
- 14 Frons with irregular transverse carinae over most of surface. *frontalis* BUHL, 1998, N  
 Head 1.9 x as wide as long, with strong occipital carina; scutellar spine strong; fore wings with marginal cilia; female metasoma 1.1 x as long as mesosoma. . . . .

- Frons uniformly or almost uniformly sculptured. . . . . 15
- 15 Legs uniformly bright orange. . . . . 16
- Legs at least partly darkened. . . . . 17
- 16 A7-A9 of female transverse; fore wings with marginal cilia. . *brevis* BUHL, 1998, N  
 Head 1.9 x as wide as long, with strong occipital carina; scutellum with distinct spine; female metasoma as long as mesosoma. . . . .
- A7-A9 of female as long as wide; fore wings without marginal cilia. . . . .  
 . . . . . *bohemani* BUHL, 1998, N  
 Head 1.7 x as wide as long, with strong occipital carina; scutellum with distinct spine; female metasoma 1.2 x as long as mesosoma. . . . .
- 17 Scutellum with a distinct spine. . . . . 18
- Scutellum at most with a very fine and short spine. . . . . 21
- 18 L. 0.75 mm; spine in lateral view hardly shorter than anterior part of scutellum. . . . .  
 . . . . . *romsoeensis* sp. nov., DK  
 Cf. description below.
- L. more than 1 mm; spine in lateral view much shorter than anterior part of scutellum. . . . . 19
- 19 Scutellum in lateral view straight dorsally, continuous with dorsal profile of mesoscutum, spine not narrowed towards apex. . . . .  
 . . . . . *esenbecki* sp. nov. (*S. scutellaris* (NEES, 1834) sensu KOZLOV, 1978) DK  
 As shown by HUGGERT (1980) *Platygaster scutellaris* NEES, 1834 is in fact a synonym of *Leptacis tipulae* (KIRBY, 1798). However, KOZLOV (1978) used the name *scutellaris* NEES for a species of *Synopeas* which in fact is new to science. Cf. description and figure in KOZLOV (1978). I hereby name it after Christian Gottfried NEES VON ESENBECK.
- Scutellum in lateral view slightly convex dorsally, a little below posterior margin of mesoscutum, spine narrowed towards apex. . . . . 20
- 20 Occiput with a strong carina. . . . . *trebius* (WALKER, 1835) DK, N  
 Head 2.3 x as wide as long, entirely pustulated, temples strongly narrowed behind eyes; legs red except hind femora and tibiae which are distally darkened.
- Occiput without carina. . . . . *autumnalis* BUHL, 1998, DK  
 Head 1.8 x as wide as long; legs mostly dark.
- 21 A4 of female about 5 x as long as wide (male unknown). . . . .  
 . . . . . *gracilicornis* KIEFFER, 1916, DK  
 Occiput with carina; posterior ocelli separated from eyes by 0.5 their own diameter; scutellum with minute tooth; fore wings without marginal cilia.
- A4 of female at most about 3 x as long as wide. . . . . 22
- 22 Scutellum posteriorly with at most a small keel just above propodeal carinae. . . . . 23
- Scutellum posteriorly with a spine or a distinct semi-transparent lamella. . . . . 24
- 23 Scutellum in lateral view slightly sloping downwards to strongly curved propodeal carinae. . . . .  
 . . . . . *euryale* (WALKER, 1835) DK  
 Head 1.6 x as wide as long, with a weak occipital carina which is interrupted medially; A1-A6 yellowish red.
- Scutellum in lateral view much sloping downwards to a small keel just above the slightly curved propodeal carinae. . . . . *inermis* THOMSON, 1859, DK, S, N, FIN  
 Head 1.7 x as wide as long, with a weak occipital carina; fore wings without marginal cilia; metasoma shorter than head and mesosoma combined.
- 24 L. of female 1 mm (male unknown); scutellum posteriorly with a fine tooth. . . . .  
 . . . . . *gallicola* KIEFFER, 1916, DK  
 Posterior ocelli separated from eyes by their own diameter; fore wings without marginal cilia.

- L. of female 1.5 mm (male unknown); scutellum posteriorly with a semi-transparent lamella. . . . . *lugubris* THOMSON, 1859, S  
 Head 1.9 x as wide as long, with strong occipital carina; mesopleurae partly reticulate and striate; fore wings without marginal cilia.
- 25 L. less than 1 mm. . . . . *ciliatus* THOMSON, 1859, DK, S, N  
 Occiput with carina; scutellum with very fine tooth, shorter and thinner than maximum width of metatarsus of middle legs; fore wings with distinct marginal cilia; female metasoma short; antennae and legs mostly brown, base of tibiae yellow.
- L. more than 1 mm. . . . . 26
- 26 Scutellum with a short tubercle. . . . . *larides* (WALKER, 1835) DK  
 Head 1.7 x as wide as long, with strong occipital carina, strongly narrowed behind eyes; scutellum with an S-formed, brown transparent lamella from top of scutellar tubercle downwards.
- Scutellum with a distinct spine. . . . . 27
- 27 T6 of female strongly transverse. . . . . 28
- T6 of female at least about as long as wide. . . . . 29
- 28 A3-A9 of female each 0.66 x as long as wide; A1-A6 yellow. . . . .  
 . . . . . *affinis* (NEES, 1834) DK, S  
 Occiput with carina; fore wings with marginal cilia; legs yellow, thickened parts of femora and tibiae darker.
- A8 of female about as long as wide, A9 about 0.75 x as long as wide; A1-A6 yellowish red, A1 distally darker. . . . . *velutinus* (WALKER, 1835) N  
 Head 2.0 x as wide as long, with strong occipital carina, strongly narrowed behind eyes; notauli present in their posterior half; scutellar spine with a lamella underneath; legs preponderantly reddish yellow, middle and hind femora somewhat darker.
- 29 Female metasoma distinctly convex, only about 1.25 x as wide as high. . . . . 30
- Female metasoma more flattened. . . . . 31
- 30 Mesoscutum with the small tubercle medially in front of scutellum dull. . . . .  
 . . . . . *opacus* THOMSON, 1859, S  
 Head 1.9 x as wide as long, without occipital carina; notauli very faintly indicated posteriorly; scutellum with a short, triangular but distinct spine; fore wings without marginal cilia; metasoma fully 1.1 x as long as head and mesosoma combined.
- Mesoscutum with the small tubercle medially in front of scutellum shiny. . . . .  
 . . . . . *decurvatus* (NEES, 1834) S, FIN  
 Mesoscutum more shiny and tubercle in front of scutellum more distinct than in *opacus*, otherwise similar to this species.
- 31 Occipital carina present; spine of scutellum fine and short, downcurved. . . . .  
 . . . . . *muticus* (NEES, 1834) DK, S, N  
 Female metasoma gradually narrowed towards apex, T2 not longer than T3-T6 combined.
- Occiput hardly with carina; spine of scutellum strong and straight. . . . .  
 . . . . . *sisis* (WALKER, 1835) DK, N  
 Head 2.5 x as wide as long; notauli only indicated by coriaceous lines; propodeal carinae long and straight.

**Trichacis FOERSTER, 1856**

- 1 Mesopleurae striated in upper half. . . . . *nosferatus* BUHL, 1997, N  
 A4 of female 1.2 x as long as A3 (male unknown).

- Mesopleurae smooth. . . . . 2
- 2 Legs except coxae reddish. . . . . 3
- Legs more or less dark brown. . . . . 4
- 3 Female: A4 almost 2 x as large as A3; wings clear; T2 not longer than T3-T6 combined. . . . . *abdominalis* THOMSON, 1859, S  
     A2 of female larger than A4, A6 wider than A5 but narrower than A7 (male unknown).
- Female: A4 not larger than A3; wings slightly infuscated; T2 longer than T3-T6 combined. . . . . *opaca* THOMSON, 1859, S  
     Less shiny than *abdominalis*; A7-A9 of male each about 1.5-1.7 x as long as wide.
- 4 Notauli reaching front margin of mesoscutum; A7-A9 of male each almost 1.2 x as wide as long. . . . . *remulus* (WALKER, 1835) DK  
     Antennae and legs of male dark brown, A1 proximally, and fore tibiae and tarsi lighter.
- Notauli not reaching front margin of mesoscutum; A7-A9 of male each 1.25 x as long as wide. . . . . *pisis* (WALKER, 1835) DK  
     Antennae and legs of male lighter than in *remulus*.

**Descriptions of new species**  
*Leptacis ariadne* sp. nov. (figs. 1-4)

♂: Length 1.0 mm. Colour black; antennae, mandibles and legs reddish-yellow; A6-A10 brownish.

Head in dorsal view (fig. 1) 1.8 x as wide as long, 1.1 x as wide as thorax; occiput finely transversely striated and reticulate, hardly with a carina but sharply angled; vertex finely reticulate-coriaceous, frons faintly so with a few weak wrinkles above antennae. Head from in front 1.2 x as wide as high; malar space about one-fourth the height of an eye; lateral ocelli separated from eyes by less than their own diameter; head in lateral view with distance from upper eye margin to highest point of head about half of eye height; OOL:POL:LOL = 5:47:20. Antenna (fig. 2) with A9 1.25 x as long as wide; flagellar pubescence short and dense, hardly 0.5 as long as width of segments.

Mesosoma 1.6 x as long as wide and 1.2 x as high as wide. Sides of pronotum faintly longitudinally reticulate, smooth just in front of tegulae, in upper half with sparse hairs. Mesoscutum weakly reticulate-coriaceous, moderately hairy, without trace of notauli; scuto-scutellar grooves triangular, with a few hairs. Mesopleurae smooth. Scutellum (fig. 3) at level of mesoscutum, faintly coriaceous, smooth in posterior half, rather densely hairy, in dorsal view evenly narrowed posteriorly, in lateral view with a short semi-transparent spine. Metapleurae and sides of propodeum bare and almost smooth, hairy posteriorly. Propodeal carinae in lateral view high and semi-transparent, in dorsal view virtually fused.

Fore wing large, about 1.25 x as long as whole body, 2.6 x as long as wide, with brownish tint and densely hairy all over; marginal cilia 0.2 the width of wing. Hind wing 9.0 x as long as wide, with two frenal hooks; marginal cilia about as long as width of wing.

Metasoma (fig. 4) slightly longer than mesosoma (19:18) and nearly as wide as this. T1 hardly as wide as long, smooth, with numerous long white hairs especially along sides. T2 nearly smooth, with very short and indistinct basal foveae; T3-T7 with weak microsculpture and some very fine hairs.

♀ unknown.

Material examined: Holotype ♂, Denmark, North East Jutland, Rold Skov, Vesterskov, 7.VIII.1997. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

An aberrant species because of shape of antennae, scutellum and fore wings; it clearly belongs in the same group as *orchymonti* and *coryphe* ("subgenus" *Anacoryphe* DEBAUCHE, 1947), cf. also differential characters for these species in couplet 5 above.

***Platygaster inconspicua* spec. nov. (figs. 5-8)**

♀: Body length 1.4-1.5 mm (holotype 1.4 mm). Colour black; mouthparts, fore tibiae, both extreme ends of middle and hind tibiae, and segments 1-4 of all tarsi dark brown.

Head from above (fig. 5) 1.7 x as wide as long, wider than thorax (15:14); occiput reticulate-coriaceous with a few short wrinkles medially; vertex evenly reticulate-coriaceous; frons reticulate-coriaceous, smooth medially, with fine transverse striations above antennae. Head from in front almost 1.2 x as wide as high; malar space one-third the height of an eye; OOL:POL:LOL = 6:19:8. Antennae (fig. 6) with A9 1.3 x as long as wide.

Mesosoma hardly 1.4 x as long as wide, very slightly higher than wide. Sides of pronotum reticulate-coriaceous and hairy in upper half except posteriorly, in lower half smooth, with scattered punctures with hairs. Mesoscutum reticulate-coriaceous, rather sparsely hairy, lateral lobes smooth on outer half, admedian lines indicated in anterior one-third; notauli deep and complete, meeting in an acute point reaching base of scutellum; scuto-scutellar grooves wide and deep, with some hairs. Mesopleurae smooth. Scutellum (fig. 7) slightly convex, just above level of mesoscutum, reticulate-coriaceous, moderately hairy. Metapleurae and sides of propodeum with whitish pilosity; propodeal carinae straight, well separated, area in between smooth and shiny.

Fore wing clear, slightly overreaching tip of gaster, 0.8 as long as whole body, 2.7 x as long as wide; marginal cilia short. Hind wing 5.4 x as long as wide, with two frenal hooks; marginal cilia one-fifth the width of wing.

Metasoma (fig. 8) one and a quarter times as long as head and mesosoma combined, as wide as thorax. T1 crenulated; T2 with very faint striation in basal foveae and some short striae on area in between, rest of tergite as well as the following tergites smooth, T3-T4 laterally with a few superficially implanted hairs, T5-T6 with more scattered and slightly deeper implanted hairs.

♂ unknown.

Material examined: Holotype ♀, Denmark, North East Zealand, Skuldelev Ås, 9.VI.1991. P.N. BUHL leg. Paratype: 1 ♀, Denmark, South Zealand, the beach South of Køge, 12.V.1997. P.N. BUHL leg. Both types preserved in the Zoological Museum, University of Copenhagen.

Most similar to *P. cebes* WALKER, 1835, but this species has A9 not longer than wide, lower sides of pronotum without punctures with hairs, propodeal carinae connected by one or more transverse carinae, and metasoma shorter and more rounded at apex than in *inconspicua*, cf. VLUG (1985). *P. inconspicua* differs widely from *P. abia* WALKER, 1835 along which it is mentioned in couplet 56 in the key above.

***Platygaster microsculpturata* spec. nov. (figs. 9-12)**

♀: Length 1.8 mm. Colour black; most of fore tibiae, basal half of middle and hind tibiae, and all tarsi dark reddish, rest of tibiae darker.

Head from above (fig. 9) 1.9 x as wide as long, slightly wider than thorax (16:15); occiput strongly transversely striated, vertex reticulate-coriaceous, frons slightly fan-like reticulate-coriaceous, with a smooth line from anterior ocellus, above antennae distinctly

transversely striated. Head from in front 1.25 x as wide as high; malar space hardly 0.4 height of an eye; OOL:POL:LOL = 9:16:7. Antenna (fig. 10) with A4 thick, fully as wide as A2; A7-A9 each about 1.2 x as long as wide.

Mesosoma 1.4 x as long as wide and slightly higher than wide (16:15). Sides of pronotum almost smooth except for some rugosity anteriorly, with sparse hairs all over. Mesoscutum weakly reticulate-coriaceous, with a few hairs; notauli abruptly ending shortly before reaching anterior margin of disc; mid lobe posteriorly prolonged, reaching base of scutellum, rather broad here; scuto-scutellar grooves rather wide, with a few hairs. Mesopleurae smooth. Scutellum (fig. 11) hardly as high as mesoscutum, smooth except anteriorly, hairy laterally. Metapleurae and sides of propodeum with pilosity all over. Propodeal carinae wide apart, short and parallel, the transverse area between them smooth and shiny.

Fore wing reaching base of T6, clear but densely hairy almost all over, 2.5 x as long as wide; marginal cilia short. Hind wing 4.9 x as long as wide, with two frenal hooks; marginal cilia 0.25 width of wing.

Metasoma (fig. 12) one and two-thirds as long as head and mesosoma combined, 2.2 x as long as mesosoma, and 0.8 x as wide as this. T1 smooth, with 2 strong keels; T2 with a few short striae between basal foveae, and with a few faint traces of striae behind foveae, rest of tergite almost smooth; T3-T4 with longitudinal rugosity except medially and along margins; T5 with such rugosity over whole width except at margins; T6 nearly smooth. Sternite 2 without a hump anteriorly; T4-T6 moderately flattened (T5 twice as wide as high), joints between tergites not thickened.

♂ unknown.

Material examined: Holotype ♀, Denmark, South Zealand, Holmegårds Mose, 1.IX. 1997. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

Most similar to *P. cyrsilus* WALKER, 1835, cf. separating characters in couplet 33 in the key above.

### *Platygaster praecox* spec. nov. (figs. 13-16)

♀: Length 1.9 mm. Colour black; mouthparts, both ends of tibiae, and segments 1-4 of tarsi dark reddish brown; apical part of fore tibiae yellowish.

Head shiny, from above (fig. 13) almost twice as wide as long, very slightly wider than thorax; occiput transversely reticulate and with a few transverse wrinkles medially; vertex reticulate-coriaceous; frons almost smooth medially and in upper half, here with a longitudinal impression from anterior ocellus, frons in lower half laterally with weak reticulation and a few punctures, with a few weak transverse wrinkles above antennal sockets. Head from in front 1.25 x as wide as high; malar space one-third the height of an eye; OOL:POL:LOL = 3:8:3. Antenna (fig. 14) with A3-A6 each a little longer than wide, A4-A6 about equal, A7-A10 wider, A7-A9 each almost 1.5 x as long as wide, each slightly widened towards apex. Flagellar pubescence very short.

Mesosoma one and a third times as long as wide and slightly higher than wide (16:15). Sides of pronotum with reticulation and hairs in upper anterior corner, rest smooth, in lower third with some scattered punctures with hairs. Mesoscutum with complete and sharp notauli and with a few hairs, shiny, with weak reticulation, smoother on outer parts of lateral lobes and posteriorly on mid lobe which is ending in a fine point almost reaching scutellum. Scuto-scutellar grooves not wide but deep, with only a few hairs. Mesopleurae smooth. Scutellum (fig. 15) rather strongly convex, above level of mesoscutum, finely and evenly reticulate-coriaceous and with a few hairs. Metapleurae and sides of propodeum covered by whitish pilosity. Propodeal carinae short, widely separated; area in between transverse and smooth.

Fore wing clear, reaching middle of T6, almost 2.7 x as long as wide; marginal cilia very short. Hind wing fully 5.7 x as long as wide, with two frenal hooks; marginal cilia about one-fourth the width of wing.

Metasoma (fig. 16) 1.8 x as long as head and mesosoma combined, narrower than thorax (13:15). T1 evenly and densely crenulated; T2 striated in and between basal foveae to 0.4 of length, rest of tergite as well as the following tergites smooth and almost bare. Sternite 2 rather convex and prolonged anteriorly between hind coxae; T3-T6 somewhat convex, T5 1.8 x as wide as high, joints between apical tergites not thickened.

♂ unknown.

Material examined: Holotype ♀, Denmark, East Jutland, Sønderskov S. of Barrit, 12.III.1997, in sample of leaf litter in wood. Michael HANSEN leg. Preserved in the Zoological Museum, University of Copenhagen.

*Platygaster praecox* runs to *Prosotogaster marshalli* KIEFFER, 1916 in KIEFFER'S (1926) key, but *marshalli* has much shorter antennae than *praecox*. Five other Palaearctic species are rather similar to *praecox*: *Platygaster confinis* THOMSON, 1859 has more sculptured mesoscutum, less convex scutellum, and less transverse T1 than *praecox*, cf. BUHL (1995); *P. gladiator* ZETTERSTEDT, 1838 has thicker antennae, more sculptured mesoscutum, less striated T2, and broader T4-T6 than *praecox*, cf. BUHL (1995); *P. gyge* WALKER, 1835 has 2nd sternite not produced anteriorly, cf. VLOG (1985); *P. phragmitis* (SCHRANK, 1781) has different antennae, shorter wings and brighter coloured legs than *praecox*, cf. SZELINYI (1958); *P. subuliformis* (KIEFFER, 1926) has much shorter antennae than *praecox*, cf. BUHL (1995) and for further separating characters also couplets 14-15 in the key above. *P. praecox* runs to *P. resinosa* MACGOWN, 1979 in MACGOWN'S unpublished key to North American species of *Platygaster*, but *resinosa* has much longer antennae than *praecox*, cf. MACGOWN (1979).

#### *Platygaster rufitibia* spec. nov. (figs. 17-20)

♀: Length 1.6 mm. Colour black; antennae, mandibles and legs more or less dark brownish; trochanters, all tibiae and segments 1-4 of all tarsi yellowish red.

Head from above (fig. 17) twice as wide as long, almost 1.2 x as wide as thorax; occiput strongly transversely striated; vertex irregularly coriaceous, almost smooth between ocelli; frons superficially transversely striated, somewhat stronger above antennae, smooth medially. Head from in front 1.3 x as wide as high; malar space half the height of an eye; OOL:POL:LOL = 3:5:2. Antenna (fig. 18) with A2 nearly as long as A3-A4 combined; A7-A9 each about 1.5 x as long as wide.

Mesosoma 1.4 x as long as wide, 1.1 x as high as wide. Sides of pronotum reticulate except along wide hind margin, sparsely hairy in upper 0.4; mesoscutum faintly shiny and sparsely hairy, reticulate-coriaceous, lateral lobes smoother medially; notauli fading out anteriorly; mid lobe broad, touching base of scutellum, here about 0.4 as wide as this; scuto-scutellar grooves wide, distinctly hairy. Mesopleurae smooth. Scutellum (fig. 19) convex, just above level of mesoscutum, smooth and almost bare medially, laterally faintly sculptured and moderately hairy.

Metapleurae and sides of propodeum with whitish pilosity; propodeal carinae of normal length, parallel, well separated, area in between smooth and shiny.

Fore wing clear, hairless in basal third, reaching apex of gaster, nearly 2.2 x as long as wide; marginal cilia short. Hind wing about 4.4 x as long as wide, with two frenal hooks; marginal cilia about one-fifth the width of wing.

Metasoma (fig. 20) 1.2 x as long as head and mesosoma combined, hardly 0.9 as wide as thorax, and nearly 1.9 x as wide as high. T1 evenly crenulated; T2 striated in basal foveae to about half of length, rest of tergite as well as the following tergites smooth; T3

with one transverse row of moderately deeply implanted hairs, T4 with two such rows; T5-T6 with more scattered punctures with hairs. Sternite 2 without any trace of hump anteriorly but rather densely pubescent here.

♂ unknown.

Material examined: Holotype ♀, Denmark, East Jutland, Mols Laboratory area, *Fraxinus* wood, 22.VI.1992. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

The name of the species refers to the reddish tibiae which contrast rather sharply to the darker femora. Runs to *P. iolas* WALKER, 1835 in VLUG's (1985) key, but *iolas* has A4 not longer than A3, propodeum very short, strip-like in the middle and hidden under scutellum, and legs blackish brown. *P. apicalis* THOMSON, 1859 is generally similar to *P. rufitibia*, but *apicalis* has slightly more elongate A3-A4, mid lobe of mesoscutum narrower posteriorly, sternite 2 anteriorly with a small prolongation, and T5 distinctly sculptured and longer than in *rufitibia*, cf. also couplets 38-44 in the key above.

*Platygaster ungeri* spec. nov. (figs. 21-25)

♀: Length 1.1-1.4 mm (holotype 1.1 mm). Colour black; mouthparts, trochanters, most of fore femora, base of middle and hind tibiae, and all tarsi dark reddish brown, fore tibiae somewhat lighter.

Head shiny, from above (fig. 21) 1.8 x as wide as long, 1.1 x as wide as thorax; occiput with fine and dense transverse striation over whole width; vertex with fine transverse striation between ocelli, more irregularly sculptured laterally; frons superficially transversely striate-reticulate, smooth medially. Head from in front 1.2 x as wide as high; malar space one-third the height of an eye; OOL:POL:LOL = 7:14:5. Antenna (fig. 22) with A2 2.5 x as long as wide, as long as A3-A4 combined; A7-A9 each very slightly longer than wide (8:7).

Mesosoma almost 1.5 x as long as wide, higher than wide (15:13). Sides of pronotum longitudinally reticulate except along hind margin, sparsely hairy. Mesoscutum weakly reticulate-coriaceous and sparsely hairy; notauli weak, fading out in anterior half; mid lobe broad, reaching base of scutellum; scuto-scutellar grooves covered by rather dense hairs. Mesopleurae smooth, with a few wrinkles below tegulae. Scutellum (fig. 23) moderately convex, just above mesoscutum, smooth and with some hairs, these rather dense laterally. Metapleurae and sides of propodeum with whitish pilosity. Propodeal carinae low, parallel, well separated, area in between smooth and shiny, slightly transverse.

Fore wing clear, 0.9 as long as whole body, almost 2.6 x as long as wide; marginal cilia hardly 0.1 the width of wing. Hind wing 6.0 x as long as wide, with two frenal hooks; marginal cilia one-third the width of wing.

Metasoma (fig. 24) about as long as head and mesosoma combined, as wide as head, 1.7 x as long as wide, and nearly twice as wide as high. T1 evenly crenulated; T2 striated in basal foveae to about 0.6 of length, rest of tergite smooth; T3-T5 smooth, T3-T4 each with a medially interrupted row of rather deeply implanted hairs; T5 with a complete row of deeply implanted hairs; T6 with weak sculpture and a row of deeply implanted hairs.

♂: Length 1.3 mm. Antenna (fig. 25) with A9 nearly one and two-thirds times as long as wide; flagellar pubescence about 0.6 the width of segments. Otherwise much as female.

Material examined: Holotype ♀, Denmark, West Jutland, Tipperne, 24.VI.1996. Per UNGER leg. Paratypes: 5 ♀, 1 ♂ same data. All types preserved in the Zoological Museum, University of Copenhagen.

Named after the collector. Runs to *P. pedasus* WALKER, 1835 in VLUG's (1985) key and rather similar to this species, but *pedasus* has occiput with only some short transverse striae, A2 of female hardly twice as long as wide, shorter than A3-A4 combined, preapical

antennal segments more elongate than in *ungeri*, midlobe between notauli not quite reaching scutellum, metasoma twice as long as wide, T5 with a narrow transverse strip of fine rugosity in front of the row of hairs, and antennae and legs brighter coloured than *ungeri*, cf. VLUG (1985). The two species *P. abisares* WALKER, 1835 and *P. manto* WALKER, 1835 are even more different from *ungeri* than *pedasus*, cf. VLUG (1985) and couplets 88 and 128 in the key above.

*Platygaster varicornis* spec. nov. (figs. 26-29)

♀: Length 1.4 mm. Colour black; A1-A5 and legs red, mandibles and last segment of tarsi darker.

Head from above (fig. 26) 1.85 x as wide as long, 1.1 x as wide as thorax; occiput distinctly and densely transversely striated; vertex finely reticulate-coriaceous; frons in upper half very finely transversely reticulate-striated, in lower half finely transversely striated. Head from in front one and a third times as wide as high; malar space half as high as an eye; OOL:POL:LOL = 8:25:9. Antenna (fig. 27) with short and inconspicuous hairs; A4 slightly longer than A3 and A5, 1.75 x as long as wide; A7-A9 each very slightly longer than wide.

Mesosoma one and a third times as long as wide and higher than wide (18:17). Sides of pronotum reticulate, smoother in front of tegulae, with sparse hairs except anteriorly in lower half, in lower corner with 4-5 short carinae. Mesoscutum reticulate-coriaceous, lateral lobes smooth medially; disc with hairs along imaginary notauli and along margins, rest bare; notauli indicated in posterior 0.4; mid lobe prolonged posteriorly, reaching base of scutellum, rather wide and smooth here, on each side with dense yellowish hairs covering scuto-scutellar grooves. Mesopleurae smooth, with a few punctures and wrinkles just below tegulae. Scutellum (fig. 28) at level of mesoscutum, evenly convex, rather smooth but densely hairy, especially laterally. Metapleurae and sides of propodeum with dense pilosity; propodeal carinae short and broad, widely separated, the short area in between shiny and almost smooth.

Fore wing almost as long as whole body (27:29), 2.3 x as long as wide, almost clear but densely hairy; marginal cilia short. Hind wing 5.0 x as long as wide, with two frenal hooks; marginal cilia hardly 0.3 x the width of wing.

Metasoma (fig. 29) about as long as head and mesosoma combined, 0.9 x as wide as thorax. T1 irregularly crenulated; T2 striated in basal foveae to fully two-fifths of length, area in between almost smooth; T4-T6 with some rather deeply implanted hairs.

♂ unknown.

Material examined: Holotype ♀, Denmark, LFM, Krenkerup Haveskov, 18-19.VIII. 1997. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

Rather close to *P. chloropus* THOMSON, 1859 and *P. polita* THOMSON, 1859, cf. characters mentioned in couplets 91-92 in the key above. Perhaps even closer to *P. lata* FOERSTER, 1861, but this species has A4-A5 equal, and head more transverse, notauli longer, scutellum more convex, T2 more striated, T3-T6 distinctly longer, and body appendages somewhat darker than in *varicornis*, cf. also BUHL (1996).

*Synopeas romsoeensis* spec. nov. (figs. 30-33)

♀: Length 0.75 mm. Colour black; antennae and legs dark reddish brown; A7-A10 and last segment of hind tarsi darker; anterior tibiae, middle and hind tibiae basally, and tarsi somewhat lighter.

Head from above (fig. 30) 1.7 x as wide as long, 1.1 x as wide as thorax, transversely reticulate and somewhat shiny. Occiput hardly with carina but somewhat angled. Head

from in front 1.1 x as wide as high; malar space about two-fifths the height of an eye; OOL:POL:LOL = 5:38:17. Antenna (fig. 31) with sparse and rather short hairs; A1 3 x as long as A2 which is as long as A3-A4 combined; A4 slightly longer and wider than A3, hardly twice as long as wide; A7-A9 each about as long as wide, A10 only slightly longer than A9.

Mesosoma 1.6 x as long as wide, and 1.1 x as high as wide. Sides of pronotum smooth except for some rugosity in upper anterior corner. Mesoscutum with faint rugosity, moderately hairy and without notauli, smooth medially in front of scutellum and narrowly prolonged here but not swollen, at sides of prolongation with rather dense hairs. Mesopleurae smooth. Scutellum at level of mesoscutum, smooth and bare medially, rather densely hairy laterally, in dorsal view triangular, in lateral view (fig. 32) forming a straight spine which is almost as long as anterior part. Metapleurae with scarce, dorsal areas of propodeum with denser pilosity; propodeal carinae long, straight and fused.

Fore wing clear, longer than whole body (32:31), 2.7 x as long as wide; marginal cilia one-sixth the width of wing. Hind wing about 6.5 x as long as wide; marginal cilia three-fourths the width of wing.

Metasoma (fig. 33) shorter than mesosoma (13:14) and hardly as wide as this, 1.4 x as wide as high. T1 smooth and shiny, densely hairy laterally; T2-T6 smooth, T3-T6 with some very fine hairs.

♂ unknown.

Material examined: Holotype ♀, Denmark, Fyn, Romsø, 9.VII.1997. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

The name *romsoeensis* refers to the holotype locality; the small, almost undisturbed wood-covered island of Romsø (about one square km) 3 km off the east coast of Funen. *S. romsoeensis* is a characteristic small species on account of the long and straight scutellar spine. KOZLOV (1978) says nothing about the length of this spine in his new species *S. thysanus*, but this species has larger OOL than *romsoeensis*, it has occipital carina, and T1 with longitudinal striations, cf. KOZLOV (1978).

#### Figures (Scale bar = 0.25 mm)

Figs. 1-4 *Leptacis ariadne* sp. nov. male: 1 head in dorsal view; 2 antenna (A3-A4 also in different view); 3 scutellum in lateral view; 4 metasoma in dorsal view.

Figs. 5-8 *Platygaster inconspicua* sp. nov. female: 5 head in dorsal view; 6 antenna; 7 scutellum in lateral view; 8 metasoma in dorsal view.

Figs. 9-12 *Platygaster microsculpturata* sp. nov. female: 9 head in dorsal view; 10 antenna; 11 scutellum in lateral view; 12 metasoma in dorsal view.

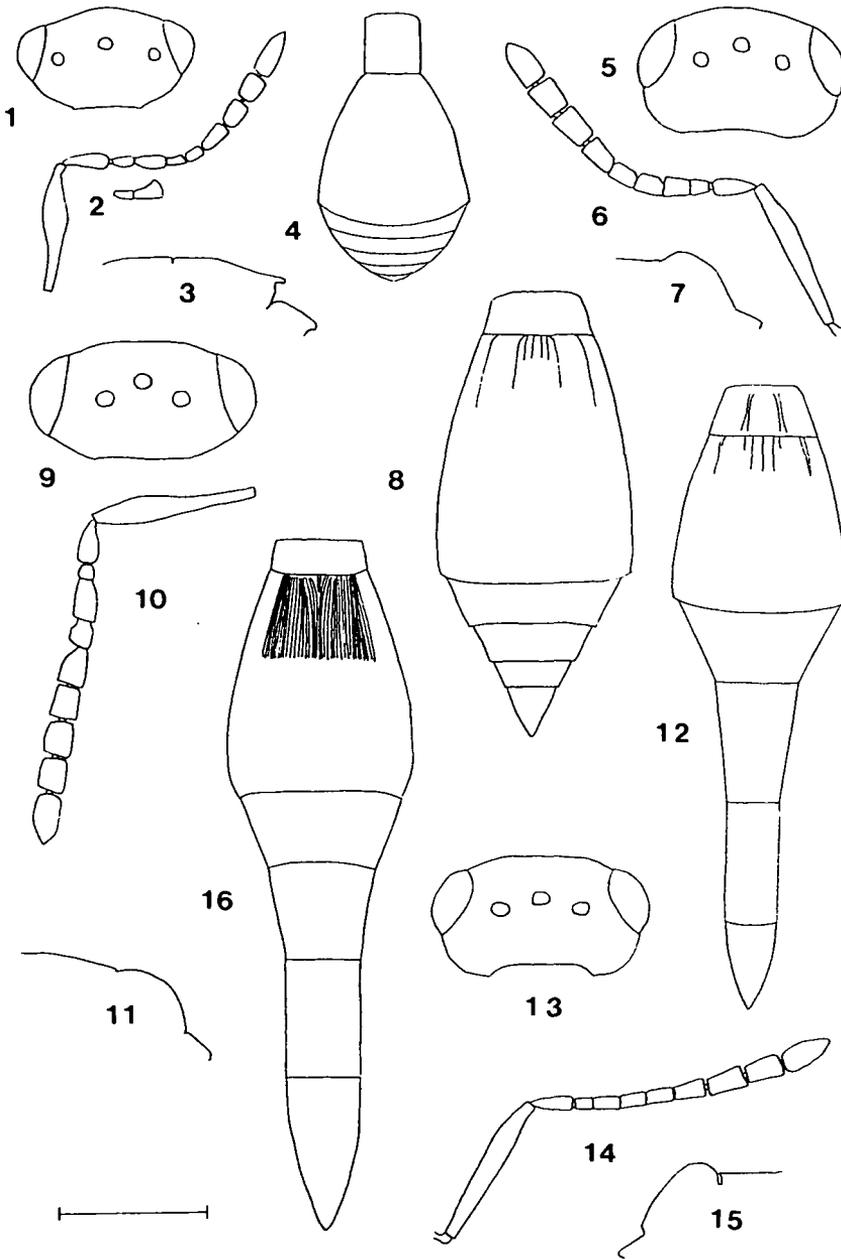
Figs. 13-16 *Platygaster praecox* sp. nov. female: 13 head in dorsal view; 14 antenna; 15 scutellum in lateral view; 16 metasoma in dorsal view.

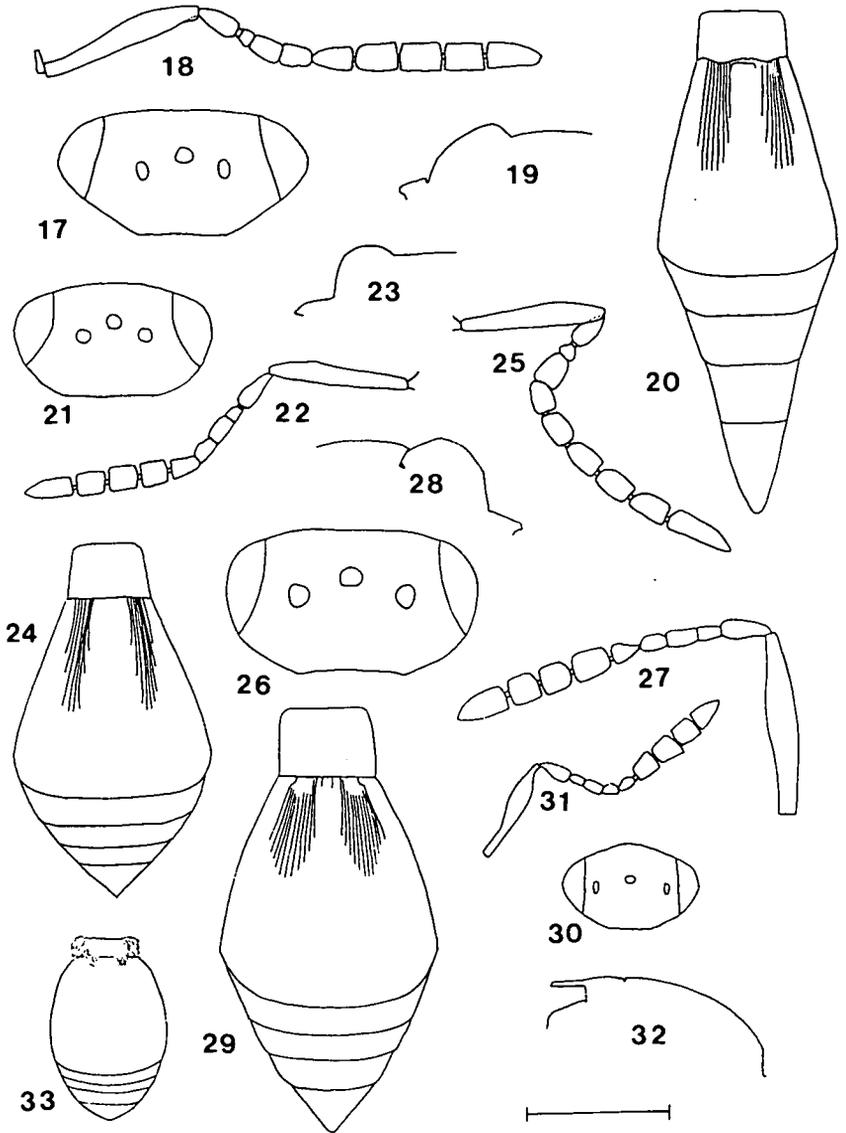
Figs. 17-20 *Platygaster rufitibia* sp. nov. female: 17 head in dorsal view; 18 antenna; 19 scutellum in lateral view; 20 metasoma in dorsal view.

Figs. 21-25 *Platygaster ungeri* sp. nov.: 21 female head in dorsal view; 22 female antenna; 23 female scutellum in lateral view; 24 female metasoma in dorsal view; 25 male antenna.

Figs. 26-29 *Platygaster varicornis* sp. nov. female: 26 head in dorsal view; 27 antenna; 28 scutellum in lateral view; 29 metasoma in dorsal view.

Figs. 30-33 *Synopeas romsoeensis* sp. nov. female: 30 head in dorsal view; 31 antenna; 32 mesoscutum and scutellum in lateral view; 33 metasoma in dorsal view.





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## Literaturbesprechung

**NOWAK, B. & SCHULZ, B. 1998: Tropische Früchte. Biologie, Verwendung, Anbau und Ernte.** - BLV Verlagsgesellschaft, München. 239 S.

Mit zunehmender Reisetätigkeit und größerer Aufgeschlossenheit gegenüber exotischen Gerichten steigt auch der Bedarf an Hintergrundinformationen über die verzehrten Genüsse. Endlich gibt es ein Buch über tropische Früchte, das keine Fragen mehr offen läßt - ein Bestimmungsbuch und Wegweiser durch den Fruchtedschungel. Knapp 160 Arten tropischer und subtropischer Früchte (Früchte, Beeren, Samen) werden in Bild und Text vorgestellt. Neben einer genauen Beschreibung findet man auch ausführliche Angaben über Verwendung, Verbreitung sowie Anbau und Ernte; d.h. Informationen wo und wie diese Früchte wachsen, wann sie reif sind und wie sie behandelt werden müssen.

Roland GERSTMEIER

**Bayerisches Landesvermessungsamt 1997: Amtliche topographische Karten 1:50000, Bayern Süd auf CD-ROM.** - Bayerisches Landesvermessungsamt, München.

Was wäre die Entomologie ohne genaue Fundortangaben! Für die exakte Bezeichnung eines Fundortes in Bayern eignen sich die amtlichen topographischen Karten 1:50000 hervorragend. Die liegen nun auch in digitaler Form als Top50 für den PC-Benutzer vor. Nun gibt es derartige digitale Kartenwerke in nicht geringer Anzahl, entscheidend jedoch ist die Genauigkeit und Aktualität der Karten. Das vorliegende Kartenwerk setzt hier Maßstäbe. Nicht nur die gerade genannten Qualitätskriterien sind auf dem neuesten Stand, die zahlreichen Optionen zur individuellen Manipulation des gewählten Kartenausschnittes lassen kaum Wünsche offen: Vergrößern/verkleinern von Kartenausschnitten, Kopieren und Drucken von Kartenausschnitten, Suchen nach ca. 20000 Orten und Ortsteilen, Messen von Flächen und Distanzen, Eintragen von eigenen Informationen als Graphik, Messpunkt oder Text, Navigieren mit GPS, Anzeige verschiedener Koordinatensysteme, Positionierung über Koordinaten oder Ortsnamen, Anzeige der Koordinaten jedes beliebigen Fundpunktes, Anzeige von Verwaltungsgrenzen und Kartenlegenden. Wem das nicht genügt, der kopiert den gewünschten kartenausschnitt über die Zwischenablage in eine andere Anwendung. Selbstverständlich gibt es dieses Kartenwerk in digitaler Form auch für Nordbayern. Fazit: Top50 ist wirklich top und genau das Richtige für den fundortsuchenden Entomologen.

Michael CARL

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