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

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Abstract

Keys to the approx. 230 species of Platygastridae known from Fennoscandia and Denmark are given. Eight species new to science are described from Denmark, viz. Leptacis ariadne sp. nov. (\mathcal{F}) , Platygaster inconspicua sp. nov. (\mathcal{F}) , P. microsculpturata sp. nov. (\mathcal{F}) , P. praecox sp. nov. (\mathcal{F}) , P. rufitibia sp. nov. (\mathcal{F}) , P. ungeri sp. nov. (\mathcal{F}) , P. varicornis sp. nov. (\mathcal{F}) , and Synopeas romsoeensis sp. nov. (\mathcal{F}) . In addition, Synopeas esenbecki sp. nov. (\mathcal{F}) 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 Platygastridae aus Fennoskandia und Dänemark werden gegeben. Acht für die Wissenschaft neue Arten werden aus Dänemark beschrieben: Leptacis ariadne sp. nov. (σ), Platygaster inconspicua sp. nov. (φ), P. microsculpturata sp. nov. (φ), P. praecox sp. nov. (φ), P. rufitibia sp. nov. (φ), P. ungeri sp. nov. (φ σ), P. varicornis sp. nov. (φ), and Synopeas romsoeensis sp. nov. (φ). 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 Platygastridae 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		
-			
Ami	tus Haldeman, 1850		
1 - 2 -	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 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		
Fidi	Fidiobia ASHMEAD, 1894		
1 - 2	Mesoscutum unsculptured; notauli hardly present. 2 Mesoscutum reticulate between the sharp notauli. 3 Mesosoma 1.6 x as wide as high; A8 of female distinctly transverse; L. at most 0.6 mm		
-	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		
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		
-	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 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-..... antennatus (SUNDHOLM, 1956) DK, S Platygastrinae Acerotella MASNER, 1964 Notauli hardly present. evanescens (KIEFFER, 1914) DK 1 Fore wings almost clear; L. 0.9 - 1.1 mm. 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. 3 boter (WALKER, 1838) DK Notauli not widened posteriorly. Female antenna without distinct club, evenly widened towards apex; L. 0.6-1.1 mm. hungarica (SZELÉNYI, 1938) FIN Fore wings brown. Amblvaspis FOERSTER, 1856 T2 without basal foveae. 2 2 norvegica Kieffer, 1912, N Notauli absent; legs except coxae yellowish red; L. 1.6 mm. 1.5 mm. 3 Body brownish yellow; female T2 as long as T3-T6 combined...... 4 longiventris THOMSON, 1859, N (L. 2.7 mm) Body darker, or if hardly so, then female T2 longer than T3-T6 combined. 5 5 L. at least 2 mm. nodicornis (RATZEBURG, 1844) DK, S 6 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. Occiput without vertical striae. tritici (WALKER, 1835) DK, N 7

border of mesoscutum straight, slightly depressed laterally.

Head 2.0 x as wide as long, occiput granulate; notauli weakly indicated; hind

8	Occiput with vertical striae. T2 haired in basal foveae. Read 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
9	Occipital carina present but not complete, sometimes weak
-	Occipital carina not present, vertex as most slightly pointed
10	L. at most 1.3 mm; head 2 x as wide as long, legs brownangustula 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	Head 1.7 x as wide as long; legs brown, fore tibiae entirely, middle and hind tibiae
	proximally, and all tarsi lighter
-	Head 1.8 x as wide as long; legs except coxae, distal part of femora and of middle and hind tibiae light reddish
And	pedias 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
_	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	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
-	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
3	tritomus; T2 with foveae distinct; L. 1.0-1.2 mm

-	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
	Head with POL = 4 OOL.
Cer	atacis 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
Ew	xestonotus FOUTS, 1925
1	Females
-	Males
2	A7-A9 each longer than wide
-	A7-A9 each not longer than wide
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 <i>error</i> .
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
5	A4 gradually widened towards apex
-	A4 of different shape
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)
Ino	stemma HALIDAY, 1833 (Females only)
1	Cornutus of T1 at most reaches posterior margin of scutellum
_	Cornutus of T1 at least reaches posterior margin of mesoscutum
2	Cornutus of T1 reaches posterior margin of mesoscutum
_	Cornutus of T1 at least reaches about middle of mesoscutum
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.
4	hyperici DEBAUCHÉ, 1947, N, FIN T1 reaches middle of mesoscutum. curtum SZELÉNYI, 1938, DK
→ -	T1 extends beyond anterior margin of mesoscutum
5	Head without or hardly with notch along vertex.
_	Vertex with digitary north

6	Cornutus of T1 reaches anterior margin of thorax
	reticulatum SZELĖNYI, 1938, DK, N, FIN
-	Cornutus of T1 at least extends up to vertex
7	Cornutus of T1 hardly reaches posterior ocelli hispo WALKER, 1838, DK, N
-	Cornutus of T1 extends much beyond anterior ocellus
8	Cornutus of T1 with longitudinal striations favo WALKER, 1838, DK
-	Cornutus of T1 reticulate szabopatayi SZELÉNYI, 1938, DK
9	Cornutus of T1 with minute spines at apex spinulosum KIEFFER, 1916, DK
-	Cornutus of T1 without spines at apex, glabrous
10	T6 at least 2 x as long as basal width
-	T6 at most slightly longer than basal width
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
12	Cornutus of T1 longer, extends beyond vertex
-	Cornutus of T1 shorter, reaches occiput.
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 KEFFER, 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 SZELÉNYI, 1938, FIN
Iphi	trachelus 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
Isoc	ybus Foerster, 1856
1	T2 almost smooth grandis (NEES, 1834) DK
1	Female: A1 and A4-A5 red, A3 and A6-A10 blackish, A6-A9 transverse;
	scutellum laterally compressed; legs except base of coxae red.
	T2 striated to at least about one-third
2	T2 striated to at least about one-unitd.
2	
-	T2 striated to more than 0.5.
3	Mesopleurae almost smooth
-	Mesopieurae wiin extensive sination.
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
5	as long. 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
7	convex, at level of mesoscutum. T2 striated to at least 0.8 of length
_	T2 distinctly less striated.
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	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.
-	Al 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.
Isos	tasius FOERSTER, 1856 (The concept of species follows KOZLOV 1978)
1	Mesoscutum without notauli
Lep	tacis FOERSTER, 1856
1	Females
-	Males
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.

3	Metasoma much less elongate
3	A4 indeh longer than A3, A4-A3 about equal, each 1.7 x as long as wide
	Head 1.8 x as wide as long, with weak occipital carina; notauli absent.
_	Antennal structure much different
4	Antenna with 3-segmented club.
4	Antenna with 4-segmented club.
5	A3 2 x as long as A4; head from in front 1.33 x as wide as high, with upper margin
)	
	weakly convex
	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	A4 more than 5 x as long as wide
-	A4 less than 5 x as long as wide
8	A4 less than 7 x as long as wide; metasoma longer than mesosoma.
	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	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	Prolongation of scutellum "massive", not semi-transparent brown.
	Head 2.1 x as wide as long, with occipital carina, pronotum weakly sculptured
	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	A4 2.0 x as long as A3; marginal cilia of fore wing 0.25 width of wing
	Duchi Butil, 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
	Head 1.8 x as wide as long, without occipital carina; notauli absent; mesopleurae 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
14	Notauli distinct over most of their length; head with occipital carina
-	Notauli hardly indicated, if they are vaguely indicated in more than their extreme posterior part, then occiput without carina.
15	A9 1.25 x as long as wide ariadne sp. nov., DK Cf. description below.
- 16	A9 more than 2 x as long as wide
-	Head with at least a weak occipital carina
17	Mesopleurae without distinct striations
18	Mesopleurae distinctly striated in at least their upper third
-	Mesopleurae striated in upper half; scutellum in lateral view curved; L. about 1.5
	mm
Mei	aclisis 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.
Met	anopedias 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
Pie:	stopleura FOERSTER, 1856
1	Notauli absent; T2 of female fully 1.5 x as long as T3-T6 combined
2	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
	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
-	Males
2	Scutellum with a tooth and/ or keel posteriorly
-	Scutellum without tooth or keel
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 xeneus WALKER, 1835, DK
	Scutellum in dorsal view rounded, apically extended into a small sharp triangle.
-	A7-A9 and T6 much shorter
4	Notauli nearly complete
-	Notauli absent or very short. 6
5	A7-A9 each as long as wide lyneborgi 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 molsensis 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
,	Notauli absent; scutellum at level of mesoscutum, with a tooth; 71 with 7
	carinae, T2 without foveae, striated to 0.20 over whole width.
_	A4 at most 2 x as long as wide
8	L. more than 1.5 mm, scutellum vertical behind signata (FOERSTER, 1861) N
J	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. leptines 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
	membraneous flange laricis 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 membraneous 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 propo-
	deum, and a second membraneous plate under it munki BUHL, 1994, DK, N
10	A9 slightly longer than wide; T2 smooth; A1 and legs yellow.
10	Metasoma with only 2 tergites (Cylindrogaster) tubulosa BRUES, 1922, DK, S
	A7-A9 each at most 1.5 x as long as wide; notauli complete.
-	Metasoma with 6 tergites.
11	T4 hardly transverse
12	T4 strongly transverse. 34 Sternite 2 with a hump between hind coxae. 13
12	Sternite 2 with a hump between hind coxae
13	T2 1.8 x as long as wide, with nearly parallel sides. <i>acrisius</i> WALKER, 1835, DK, N
13	12 1.0 A as long as wide, with hearly parallel sides. delisins walker, 1033, 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	T1 crenulated, without keels
-	T1 with two keels (sometimes on background of crenulation)
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.
16	Occiput striated
_	A8-A9 each at least slightly longer than wide
- 17	T4 much longer than wide
1 /	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	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	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.
- 31	Metasoma constricted behind T2
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
22	Head about 2.3 x as wide as long; notauli complete; scutellum finely aluta-
	ceous; 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 punc-
	tures. (Close to <i>compressicornis</i> is <i>angustula</i> (THOMSON, 1859) the type
	material of which is unknown. According to THOMSON (1859) it has head less
	wide and mesoscutum more sculptured than <i>compressicornis</i>).
-	A8-A9 each less than 3 x as long as wide
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
	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
-	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
25	striated in and between basal foveae to about 0.4.
25	A8-A9 each 2 x or almost 2 x as long as wide
-	A8-A9 each distinctly less than 2 x as long as wide
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	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	T1 crenulated 30
-	T1 with 2 keels
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	T4 much longer than wide
51	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
-	
	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
22	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	Head 2.3 x as wide as long; frons and mesoscutum smooth; T2 striated; T3-T5
	smooth
	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
-	T5 strongly transverse
35	Mid lobe of mesoscutum much prolonged posteriorly, covering basal part of scutel-
	lum 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	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	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	T5 smooth; tibiae yellowish red rufitibia sp. nov., DK
	Cf. description below.
-	T5 at least faintly sculptured; tibiae darker
39	A8-A9 transverse
-	A8-A9 each at least as long as wide
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; from 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 sculp-
-	
42	tured
42	12 strated over whole width to 0.5, 15 longer than wide
	plete; 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
	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	Head 1.8 x as wide as long; T2 with medial striae 0.5 as long as lateral
	Occiput strongly striated; A7-A9 each 1.5 x as long as wide; notauli incom-
	plete; scutellum smooth; T1 and T3 as in <i>demades</i> , 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 <i>demades</i> .
45	Mesosoma at least 1.75 x as long as wide
-	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	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
	foveae to about 0.5.
48	Occiput hardly striated (sometimes striated in <i>splendidula</i>)
-	Occiput more or less striated
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 com-
	plete; T1 crenulated; T2 striated to 0.5-0.7, metasoma rather pointed at apex.
-	Scutellum distinctly less convex, without raised sculpture
50	Area between propodeal carinae with cross carinae forming a turned M 51
51	Area between propodeal carinae hardly with cross carinae
<i>)</i> 1	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	Notauli incomplete
))	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	T2 hardly striated
-	T2 distinctly striated
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	A1-A4 and legs reddish yellow
50	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	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	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	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
<i>6</i> 1	strongly convex, well above level of mesoscutum.
61	T2 without striae. 62
62	T2 striated
02	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	Notauli very short
-	Head 1.8 x as wide as long; A8-A9 each about as long as wide; scutellum
	emooth: T1 crenulated: A1-A5 and lens vallowish
-	Notauli distinct in at least posterior two-thirds
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	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	From 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; from 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; T
	with 2 keels; T3-T6 finely punctate; antennae dark brown, A2-A3 lighter; al
	femora dark brown, all tibiae and tarsi yellowish brown.
-	Head 2.0 x as wide as long; frons weaker sculptured
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, T
	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 hal
	transversely rugose minthe WALKER, 1835, DK, N
	Occiput transversely striated; A7-A9 as in <i>laeviventris</i> ; 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
	From 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	Scutellum strongly convex, with raised rugosity vintheri BUHL, 1994, DK
70	From 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	Scutellum distinctly above mesoscutum, almost triangular in dorsal view, vertica
_	posteriorly
	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	Scutellum strongly convex, more or less compressed in posterior part and postero
	laterally with a strong rounded impression, median plate of mesoscutum prolonged
	and usually covering base of scutellum
-	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 o
	scutellum
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 foveau
	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
	A7-A9, notauli and T2 as in athamas; hairs on T3-T6 less deeply implanted
	than in athamas, T6 transverse.
74	Notauli complete 74

- 75	Notauli incomplete
- 76	Head at most 2 x as wide as long
70	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
77	Occiput longitudinally striated medially, A8-A9 each slightly transverse 78
_	Occiput transversely striated; A8-A9 at least as long as wide
78	Occipital sculpture sharp
-	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
	Head 1.75 x as wide as long, from 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	A8-A9 each as wide as long
-	A8-A9 each slightly longer than wide.
81	T6 pointed, as long as wide
-	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
	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	A8-A9 transverse

	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	Notauli nearly complete
	most of legs brown. Notauli missing in at least about anterior third
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
	hair-implantations; scutellum at level of mesoscutum; T2 striated in foveae to one-third; T6 as long as wide.
-	Notauli indicated posteriorly
88	T2 striated in foveae to 0.6
	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 <i>P. abisa</i> -
	res 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	mation). A8-A9 each nearly 2 x as long as wide litoralis BUHL, 1998, N
0,7	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.
90	A8-A9 each 1.5 x as long as wide. 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
- 91	and legs brownish. Notauli missing in at most anterior 0.6. 91 Occiput distinctly and densely transversely striated; legs red
71	
	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
•	Notauli missing in anterior 0.3; scutellum and T1 as in <i>chloropus</i> ; 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.
-	Scutellum without tooth or keel behind

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	A7-A9 each hardly longer than wide
-	A7-A9 each distinctly longer than wide
96	Lenght 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	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
	A7-A9 each fully 2 x as long as wide; cf. female.
-	T1 with 7 weak keels
	A7-A9 each 2.5-3.0 x as long as wide; cf. female.
99	Scutellum vertical behind
-	Scutellum more or less sloping behind
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 crenu-
	lated; 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
	A6-A9 each about 1.5 x as long as wide; cf. female.
-	Metasoma with 7 tergites
102	Legs unusually thickened; A2 triangulary dilated; A5 much transverse
	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
-	Mesosoma about 1.5 x as long as wide
104	A9 about 1.5 x as long as wide nottoni Винг, 1995
-	A9 more than 2 x as long as wide
105	Occiput hardly striated (sometimes striated in <i>splendidula</i>)
-	Occiput more or less striated
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	T2 hardly striated
-	T2 distinctly striated
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 <i>gracilines</i> 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
	Natural complete
-	Notauli complete.
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	Frons striated above antennae
	Frons without striae above antennae.
112	Head 1.9 x as wide as long, T2 striated to two-thirds over whole width.
113	
	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	Frons without smooth longitudinal line medially, propleurae in lower half smooth,
113	with nunctures and hairs minuta 7 ETTER STEET 1939
	with punctures and hairs
	cf. female.
-	Frons without smooth longitudinal line medially; propleurae in lower half
	punctured-rugose
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
_	T2 distinctly striated
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 <i>munita</i> WALKER, 1835, cf. above.
	NIACO I MUNITA WALKER, 1833, CI. 200VC.
-	Notauli incomplete
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
_	Notauli complete
121	Mesoscutum striated all over striatidorsum BUHL, 1998, S
121	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

Entomofauna, Band 20, Heft 3/2 Ansfelden, 30. April 1999 124 Frons and mesoscutum smooth. dryope WALKER, 1835 125 Head 1.8 x as wide as long. apicalis THOMSON, 1859 Head 2.0 x as wide as long. demades WALKER, 1835 T2 striated between foveae to at least 0.25. A7-A9 each hardly longer than wide; cf. female. Cf. description below. 130 A7-A9 each distinctly longer than wide. betulae (KIEFFER, 1916) A7-A9 each hardly longer than wide. betularia KIEFFER, 1916 131 Head 2.0 x as wide as long; T2 striated in foveae to 0.5, between foveae to 0.25... litoralis BUHL 1998 Head 1.75 x as wide as long; T2 striated in and between foveae to hardly 0.5..... 132 Mesoscutum striated all over. striatithorax BUHL, 1994 A7-A9 each slightly longer than wide; cf. female. 133 Scutellum strongly convex, with raised rugosity. vintheri BUHL, 1994 A7-A9 each 2 x as long as wide; cf. female. 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 tisias WALKER, 1835, cf. above. A7 and A8 each as long as wide, A9 slightly transverse; cf. female. Frons at most striated above antennae. sagana WALKER, 1835 T2 with at least a few striae between foveae; from with transverse wrinkles or striae 138 Head 1.8 x as wide as long; metasoma about 2.5 x as long as wide. attenuata 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
-	Head at most 2 x as wide as long
140	A9 1.8 x as long as wide
-	A9 more than 2 x as long as wide
141	Frons distinctly striated in lower half, T2 striated in foveae to 0.5-0.6
_	Head striated on occiput only, T2 striated over whole width to two-thirds
	quadrifarius (KIEFFER, 1916)
142	Occiput with longitudinal striation.
-	Occiput with transverse striation.
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
-	T1 with 2 keels, sometimes also crenulated
145	From 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
Syne	opeas 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)
-	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 sur-
	face of sternite 3
	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 sur-
	face of sternite 3
3	Females: Sternite 2 pointed behind, posterior third bifurcate
	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.

4	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
	Notauli complete; scutellum with a distinct spine.
-	Metasoma much shorter
5	Notauli complete or almost complete
-	Notauli much incomplete or absent
6	Notauli almost complete; head 1.6 x as wide as long; scutellar spine long and straight, reaching T1
_	Notauli complete; head 1.7-2.2 x as wide as long, if only 1.7 x then scutellar spine
	turned upwards7
7	Pronotum laterally reticulate-coriaceous all over; head 1.7 x as wide as long
	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
	Scutellar spine strong and straight; female metasoma in lateral view slightly
8	pointed and downcurved. Mesosoma laterally compressed, less than two-thirds as wide as head; mesoscutum
0	1.5 y og long og vide
	1.5 x as long as wide
-	Mesosoma not thus compressed
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	Midlobe of mesoscutum prolonged as a smooth, roundish plate, clearly situated
10	above level of base of scutellum (a levelled gap present)
11	Mesoscutum in front of scutellum very strongly swollen; A9 of female longer than
11	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.
12	Mesoscutum in front of scutellum moderately swollen; A9 of female transverse. 12
12	Head 2.0 x as wide as long
	metasoma as high as wide; L. of female 1.8 mm.
-	Head 1.8 x as wide as long
13	Notauli entirely absent
-	Notauli at least faintly indicated. 25
14	Frons with irregular transverse carinae over most of surface. <i>frontalis</i> BUHL,1998,N
. 7	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	Legs uniformly bright orange
-	Legs at least partly darkened
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
17	Scutellum with a distinct spine.
-	Scutellum at most with a very fine and short spine.
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	Scutellum in lateral view straight dorsally, continuous with dorsal profile of meso-
17	scutum, 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	Occiput with a strong carina trebius (WALKER, 1835) DK, N
	Head 2.3 x as wide as long, entirely pustulated, temples strongly narrowed be-
	hind 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 dia-
	meter; scutellum with minute tooth; fore wings without marginal cilia.
-	A4 of female at most about 3 x as long as wide
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
24	marginal cilia; metasoma shorter than head and mesosoma combined. L. of female 1 mm (male unknown); scutellum posteriorly with a fine tooth
24	L. of female 1 min (male unknown), scuterium posterioriy with a fine footh
	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
25	L. less than 1 mm
-	L. more than 1 mm
26	Scutellum with a short tubercle
-	Scutellum with a distinct spine
27	T6 of female strongly transverse
-	T6 of female at least about as long as wide
28	A8-A9 of female each 0.66 x as long as wide; A1-A6 yellow
	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
30	Female metasoma more flattened
	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
	Mesoscutum more shiny and tubercle in front of scutellum more distinct than in <i>opacus</i> , otherwise similar to this species.
31	Occipital carina present; spine of scutellum fine and short, downcurved
	Female metasoma gradually narrowed towards apex, T2 not longer than T3-T6 combined.
-	Occiput hardly with carina; spine of scutellum strong and straight
	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

Mesopleurae smooth

-	recopiculae sittootti
2	Legs except coxae reddish
-	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
-	Female: A4 not larger than A3; wings slightly infuscated; T2 longer than T3-T6 combined
4	Notauli reaching front margin of mesoscutum; A7-A9 of male each almost 1.2 x as wide as long
-	Notauli not reaching front margin of mesoscutum; A7-A9 of male each 1.25 x as long as wide

2

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

Antennae and legs of male lighter than in remulus.

σ: 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)

9: 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-coria-ceous; 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)

9: 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, from slightly fan-like reticulate-coriaceous, with a smooth line from anterior occilus, 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.

o' unknown.

Material examined: Holotype 9, Denmark, South Zealand, Holmegards 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)

9: 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 occilus, 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 sligthly 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 xas 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 Prosactogaster 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. VLUG (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. resinosae MACGOWN, 1979 in MACGOWN's unpublished key to North American species of Platygaster, but resinosae has much longer antennae than praecox, cf. MACGOWN (1979).

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

9: 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 irregulary 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 ⁹, 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)

9: 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 irregulary sculptured laterally; from 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.

or 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 $\mathfrak P$, Denmark, West Jutland, Tipperne, 24.VI.1996. Per UNGER leg. Paratypes: $\mathfrak P$, $\mathfrak P$ 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)

9: 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 irregulary 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 ⁹, 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)

9: 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.

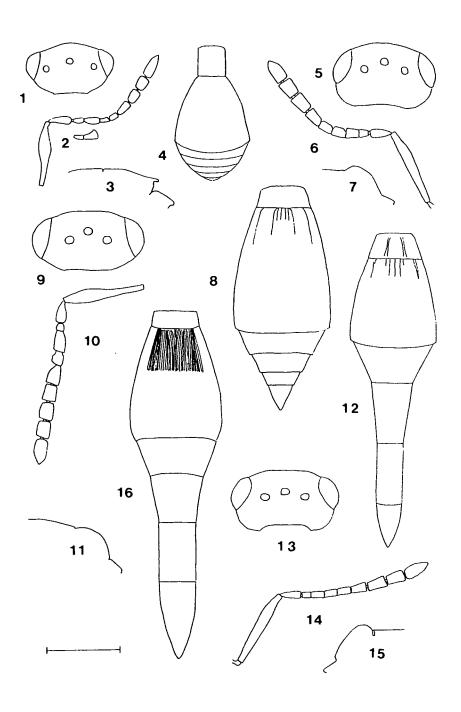
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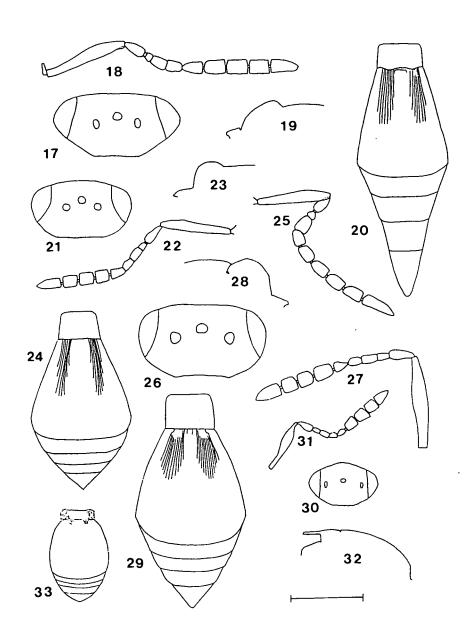
Material examined: Holotype \$, Denmark, Fyn, Romsø, 9.VII.1997. P.N. BUHL leg. Preserved in the Zoological Museum, University of Copenhagen.

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.

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Roland GERSTMEIER

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