

## Ichneumonidae (Hymenoptera) of Greenland found in Scoresbysund (Ittogortoormiit)

Reijo Jussila

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Ichneumonidae (Hymenoptera) have been found from Scoresbysund, Eastern Greenland by Dominique Elin (Laboratoire d'écologie numérique de Lille, France) 1985. The following 11 species and one subspecies are described: *Acrolyta glacialis* sp.n., *Theroscopus arcticus* sp.n., *Campodorus elini* sp.n., *C. polaris* sp.n., *Occapes hinzi* sp.n., *Campoletis rostrata* sp.n., *C. horstmanni* sp.n., *Stenomacrus brevipennis* sp.n., *S. groenlandicus* sp.n., *S. difficilis* sp.n., *Ichneumon scoresbysundensis* sp.n. and *Orthocentrus stigmaticus groenlandicus* ssp.n. In addition, records are presented for five species new to Greenland: *Gelis glacialis* (Holmgren), *G. melanogaster* (Thomson), *Atractodes alpestris* Roman, *A. pusillus* Förster and *Exochus consimilis* Holmgren.

Reijo Jussila, Krouvintie 92, FIN-21330 Paattinen, Finland

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The Ichneumonidae described in this article come from the material stemming from 60 000 insects trapped in 1985 on the East Coast of Greenland in Scoresbysund (Ittogortoormiit) 79°29'N–21°57'W. Because the last larger research of the insects of Greenland had been done in 1939 (Elin 1989) and the last paper concerning Ichneumonidae (Hymenoptera) published in 1934 (Roman 1934), this expedition gives much additional insights into the Ichneumonidae of this area.

This study is based on the material collected by Dominique Elin (Université des Sciences et Techniques de Lille, Laboratoire d'écologie numérique) 20.VI.–3.IX.1985. For the descriptions of the collecting methods, see Elin 1989.

### Pimplinae

*Pimpla sodalis sodalis* Ruthe, 1859

1 ♂ 15.VII. and 1 ♀ 9.VIII.

This holarctic subspecies has previously been recorded in Greenland (Holmgren 1872), North America (Yukon and Alaska), Iceland, Norway, Finland, Great Britain, Germany, Romania, and Russia. In North America (Colorado and California) there is also the alpine subspecies *C. s. longigenalis* (Cushman, 1920) (Jussila 1965, 1976, Carlson 1979, Šedivý 1989).

### Cryptinae

*Acrolyta glacialis* sp.n.

4 ♂♂ and 3 ♀♀ were found, the holotype ♀ 14.VIII. (coll. R. Jussila, Paattinen) and the paratypes 10.VI.–24.VIII.

Holotype female: Length about 3.0 mm. Head subpolished, face granular and mat; head rounded and narrowed behind compound eyes; malar space about 2.0 × width of mandible; clypeus rather small, mat, weakly convex with the apical 0.25 impressed, apical margin sharp and straight; genal carina joining base of mandible; occipital carina

angular on middle part; mandible rather short, moderately tapered to apex, its lower tooth a little shorter than upper tooth; flagellum widened on its middle part, with 21 segments, length-to-thickness ratios: 1st about 3.75, 2nd 3.2, 10th 1.15 and penultimate about 1.0. Upper side of pronotum, just behind collar, with a strong but short median longitudinal ridge crossing the transverse sulcus. Mesoscutum mat, its hairs with moderate density, notaulus weak, reaching about 0.35 the distance to scutellum; mesopleurum mat except for smooth and shining speculum; propodeum chagrined, transverse carinae strong, longitudinal carinae and basal section of sublateral carina absent. Second intercubitus of front wing lacking; nervellus of hind wing intercepted near its lower 0.4, vertical. Length of hind femur about  $5.0 \times$  its width. Gastral tergites polished; postpetiolus distinctly longitudinally wrinkled; apical part of tergite 2 entirely but indistinctly wrinkled; length-to-width ratios of postpetiole about 0.1 and of 2nd tergite about 0.7. Ovipositor of moderate thickness, its tip sagittate (Fig. 1).

Black; yellow on palpi; brownish orange on mandible. Legs yellowish brown; black on coxae, trochantera and femora (front and middle femora apically light).

The paratype females resemble exactly the holotype but their nervellus can be intercepted lower 0.3 and palpi darker.

Male: Length about 3.0 mm. Head, thorax and gastral tergites resemble those of the female but flagellum not broadened in its middle, and notaulus reaching about 0.5 the distance to scutellum. Flagellum not widened on its middle part, with 21 segments, length-to-thickness ratios: 1st about 2.7, 2nd 2.2, 10th 1.0 and penultimate about 1.1. Wings as in the female, nervellus intercepted near its lower 0.3. Length of hind femur about  $4.3 \times$  its width.

The colouring resembles that of the female but the palpi are darker.

*Acrolyta glacialis* mostly resembles *A. trochanteralis* Dalla Torre, 1885, with its black gaster and femora but the latter species has white trochantera and tibiae, and its tergites are punctuate.

#### *Theroscopus arcticus* sp.n.

1 ♀, the holotype, was been found 19.VIII (coll. R. Jussila, Paattinen) and 3 ♂♂ 30.VII–9.VIII.

Holotype female: Length about 4.5 mm. Head polished with shallow punctures, face densely punctuate; head rounded behind compound eyes; malar space about  $1.45 \times$  width of mandible; clypeus rather narrow, moderately convex, its margin rather sharp with a median pair of small tubercles; lower tooth of mandible slightly shorter than upper tooth; occipital carina rounded in middle part; apical truncation of scape about 60 degrees from the transverse (Fig. 3); flagellum with 20 segments, length-to-thickness ratios: 1st about 2.1, 2nd 2.4, 10th 0.9 and penultimate about 1.0. Mesoscutum shining, scattered punctuate, notaulus reaching about 0.35 the distance to scutellum; mesopleurum smooth and scattered punctuate; propodeum moderate long, completely areolated, areola as long as wide, apical carina without sublateral crests. Second intercubitus of front wing present but faint; nervellus of hind wing intercepted about its lower 0.3, vertical. Length of hind femur about  $4.0 \times$  its width. Gastral tergites smooth and polished, without punctures except for longitudinally wrinkled and mat 1st tergite, their hairs very sparse; length-to-width ratios: postpetiole about 1.0 and 2nd tergite about 0.9. Ovipositor sheath about  $0.25 \times$  as long as front wing; ovipositor moderate stout, somewhat compressed, its tip of moderate length, with a nodus (Fig. 2).

Black; brownish orange to brownish on mandible (except for blackish teeth and base), palpi and stigma. Legs brownish orange to brownish except for black coxae, trochantera and femora (front and middle femora apically light).

Male: Length 3.5–5.2 mm. Head polished with shallow punctures, face densely punctuate; head rounded behind compound eyes; malar space about  $1.0 \times$  width of mandible; clypeus rather narrow, moderately convex, its margin rather sharp with a median pair of small tubercles; lower tooth of mandible slightly shorter than upper tooth; occipital carina rounded in middle part; apical truncation of scape about 60 degrees from the transverse; flagellum with 21 segments, length-to-thickness ratios: 1st and 2nd about 2.2, 10th 1.1 and penultimate about 1.0. Mesoscutum shining, scattered punctuate, notaulus reaching about 0.5 the distance to scutellum; mesoscutum smooth and scattered punctuate; propodeum moderate long, completely areolated, areola as long as wide,

apical carina without sublateral crests. Second intercubitus of front wing present; nervellus of hind wing intercepted about its lower 0.3, a little antefurcal or almost vertical. Length of hind femur about  $5.1 \times$  its width. Gastral tergites smooth and polished, without punctures, except for longitudinally wrinkled and mat 1st tergite; their hairs very sparse; length-to-width ratios: postpetiole about 1.25 and 2nd tergite about 1.0.

Colouring as in female but tibiae and tarsi darker.

*Gelis glacialis* (Holmgren, 1869)

1 ♀ 14.VIII.

This species is new to the fauna of Greenland. It has earlier been found in Spitsbergen and Northern Europe (Schmiedeknecht 1930–1933, Jussila 1973).

The frons, mesoscutum and mesopleurae of the specimen of Scoresbysund are somewhat more chagrined than those of the Norwegian specimens in my own collection.

*Gelis melanogaster* (Thomson, 1884)

2 ♀♀ 9.VIII.

This species is new to Greenland. It has earlier been found in Northern Europe, England and France (Schmiedeknecht 1930–1933, Jussila 1965, 1973).

Both specimens of Scoresbysund resemble exactly the specimens of my own collection, found in Finnish Lapland (Utsjoki, Kevo) and Norway (Hardangervidda).

*Atractodes alpestris* Roman, 1918

1 ♀ 20.VII., 1 ♂ and 1 ♀ 25.VII., and 1 ♂ 9.VIII.

This species is new to Greenland. It has earlier been found in Sweden, Germany, Eire and NW Russia (Jussila 1979).

*Atractodes aterrimus* Holmgren, 1872

1 ♂ 9.VIII.

This species has only been found in Greenland (Carlson 1979).

*Atractodes pusillus* Förster, 1876

1 ♂ 14.VI., 1 ♀ 19.VIII., 1 ♀ 24.VIII., and 1 ♂ 29.VIII.

This species is new to Greenland. It has earlier been found in Northern, Central and Western Europe, and China (Jussila 1979).

**Ctenopelmatinae**

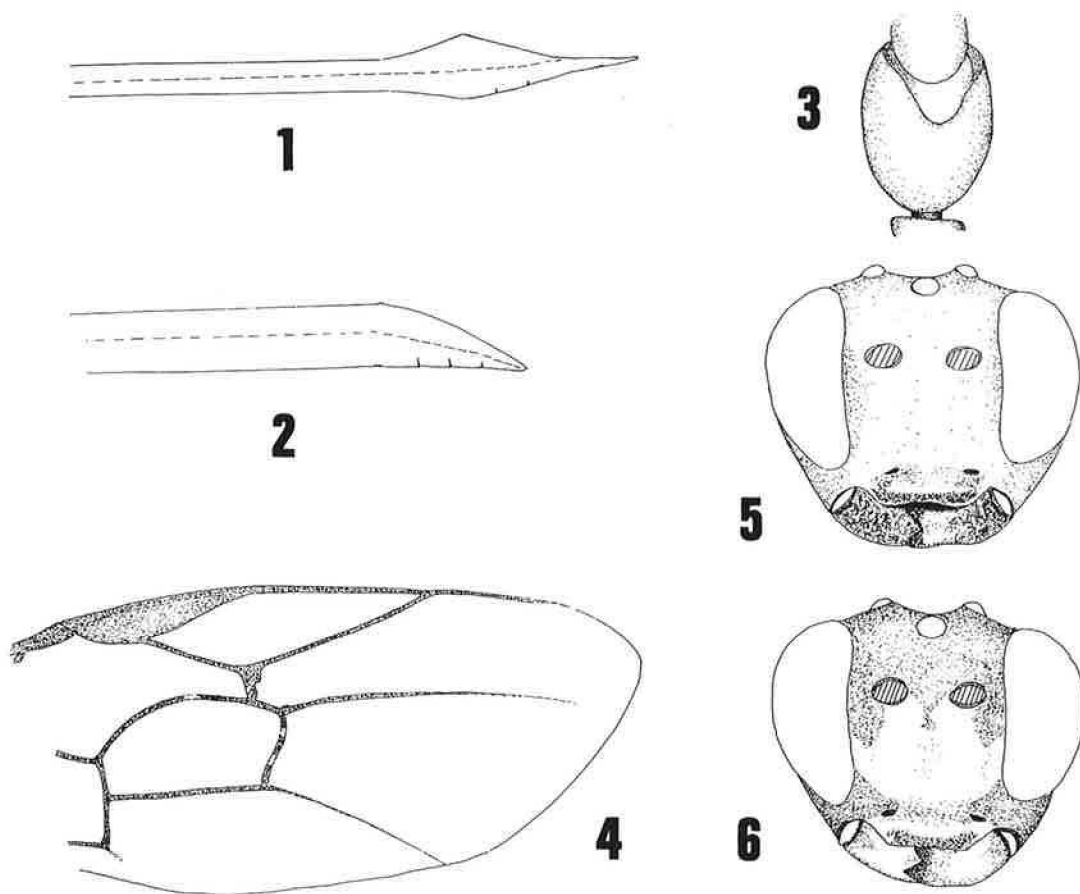
*Campodorus elini* sp. n.

1 ♂ (the holotype) was found 10.VII. (coll. R. Jussila, Paattinen).

Holotype male: Length about 6.0 mm. Head punctuate-chagrined, mat; vertex rounded behind compound eyes; malar space about  $0.4 \times$  width of mandible; occipital carina rounded in middle part; clypeus moderately wide, width about  $2.7 \times$  length, its profile moderately convex, swollen medial near the apex, its apical margin rounded on the midline, laterally sharp; upper tooth of mandible a little wider than lower tooth; flagellum with 24 segments, length-to-thickness ratios: 1st about 5.0, 2nd 3.5, 7th 2.0 and penultimate about 2.2. Mesoscutum mat, notaulus reaching about 0.4 the distance to scutellum; mesopleurum rather mat and wrinkled, ventral more polished and with shallow punctures; propodeum mat, too, median carinae rather strong. Areolet of front wing absent; nervellus of hind wing antefurcal, intercepted below the middle. Length of hind femur about  $4.0 \times$  width; claws of moderate size. Gaster dorsal  $\pm$  mat; 1st segment rather slender, its median dorsal carinae strong reaching about 0.5 the distance to apex.

Black; yellow on face (Fig. 6), clypeus, mandible (except for brown teeth), palpi, hind corner of pronotum and tegula. Coxae black (front and middle coxae apically whitish); first trochantera  $\pm$  blackish, 2nd trochantera  $\pm$  whitish; front and middle femora, tibiae and tarsi orange to brownish orange, hind femora blackish. Gastral tergites black; yellowish to orange on apical edges of 3rd to 6th tergites; sternites yellow but plicae brown.

Female unknown.



Figs. 1–2. Ovipositor tip. — 1. *Acrolyta glacialis* sp.n. (holotype). — 2. *Theroscopus arcticus* sp.n. (holotype). — Fig. 3. Antennal scape of *Th. arcticus* sp.n. (holotype). — Fig. 4. Tip of right forewing of *Campodorus polaris* sp.n. (holotype). Figs. 5–6. Face. — 5. *C. polaris* sp.n. (holotype). — 6. *C. elini* sp.n. (holotype).

This species resembles *C. lobatus* (Thomson, 1895) but in the latter species the mesopleurae are not wrinkled but chagrined, the hind legs lighter and more variable in colouring, and its gaster has a dorso-median orange strike.

I name the species in honour of Me Dominique Elin who helped me to get the Ichneumonid material of Scoresbysund.

#### *Campodorus polaris* sp.n.

1 ♀ (the holotype) 25.VI. (coll. R. Jussila, Paattinen).

Holotype female: Length about 7.0 mm. Head chagrined, mat; vertex narrowed behind compound eyes; malar space about  $0.6 \times$  width of mandible; clypeus wide and short (width about

$3.2 \times$  length), its profile somewhat swollen in its middle (Fig. 5), its apical margin hollowed on the midline; mandibular teeth equally wide; flagellum with 33 segments, length-to-thickness ratios: 1st about 4.4, 2nd 2.9, 7th 2.0 and penultimate about 1.1. Mesoscutum mat, notaulus shallow reaching about 0.3 the distance to scutellum; mesopleurum mat and wrinkled, speculum polished; propodeum mat, too, median carinae not strong. Areolet of front wing absent but the first intercubitus with a lump or short stump (Fig. 4); nervellus of hind wing intercepted at the middle. Length of hind femur about  $5.3 \times$  its width; claws of moderate size. Gaster dorsal  $\pm$  mat; 1st segment rather broad, its length about  $1.2 \times$  apical width, its median dorsal carinae weak reaching about 0.4 the distance to apex.

Black; brownish red on clypeus and mandible (except for black base and teeth); yellowish brown on palpi and ventral side of flagellum. Legs orange; coxae and trochantera black; dark on apices of hind tibiae and on middle and hind tarsi. Gastral tergites and sternites black.

Male unknown.

This species resembles *C. torvus* (Holmgren, 1870) and *C. tenebrosus* (Roman, 1909) but the thorax, tegulae and abdomen are completely black. The veining of the wings is also different: the two latter species have no areolet and no ast of the first intercubitus.

*Occapes hinzi* sp.n.

1♂ (the holotype) 28.VI. (coll. R. Jussila, Paattinen) and 1♂ (a paratype) 20.VII.

Holotype male: Length about 8.0 mm. Head chagrined and mat, temple polished or subpolished; vertex not narrowed behind compound eyes; malar space about  $1.0 \times$  width of mandible; clypeus smooth, apically and proximally somewhat projecting; mandibular teeth equally wide (the lower teeth of the right mandible a little broken); flagellum with 25 segments; length-to-thickness ratios: 1st about 2.4, 2nd 2.3, 7th 2.0 and penultimate about 1.8. Mesoscutum smooth and polished, notaulus deep reaching about 0.6 the distance to scutellum; mesopleurum smooth and polished, somewhat wrinkled in its middle; propodeum wrinkled and subpolished, its lateral longitudinal carinae complete. Areolet of front wing absent; nervellus of hind wing antefurcal, intercepted below the middle. Fifth tarsal segments not elongate or arched, their claws of moderate size, pectinate for more than half of their length (Fig. 8). Gaster dorsal chagrined and proximally mat but subpolished or polished apically; length of 1st segment about  $2.0 \times$  apical width, its median dorsal carinae rather strong reaching about 0.4 the distance to apex.

Black; on face a yellow blotch (Fig. 7), also yellow on clypeus and mandible (except for dark brown teeth). Legs brownish orange; coxae, trochantera and proximal ends of femora, apices of tibiae and tarsi somewhat dark. Gastral tergites black; yellow on ridges.

The paratype specimen corresponds to the holotype.

Female unknown.

The genus *Occapes* Townes, 1969 has only three species: in addition to *hinzi* *O. selandriae* (Brischke, 1878) from Central Europe (Brischke 1878) and *O. sierrae* Townes, 1969 from USA, Northern California (Carlson 1979). *Occapes selandriae* is distinguished from *hinzi* by the following features: head (also clypeus and mandibles) with stronger punctures, the lower tooth of mandible a little wider and longer than upper tooth, thorax distinctly punctured; in the male face, cheek nearly entirely yellow, and ventral part of thorax yellow, legs more light.

The species is named in of honour Dr h.c. Rolf Hinz who helped me with the identifications of the species of *Occapes*.

**Campopleginae**

*Campoletis longiceps* (Roman, 1926)

3 ♂♂ and 30 ♀♀ 20.VI.–3.IX.

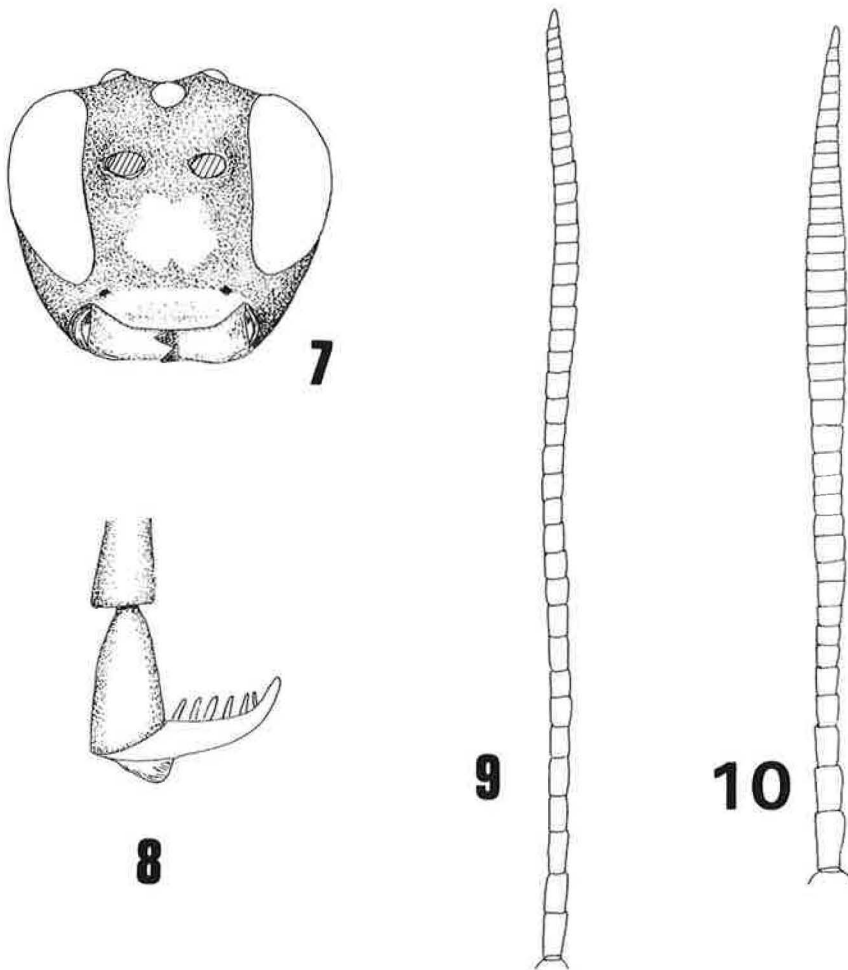
This species has earlier been recorded from Greenland (Roman 1933, Carlson 1979). It has also been found in Novaja Zemlya (Roman 1933).

The face is illustrated in Fig. 11 and the propodeum in Fig. 14.

*Campoletis rostrata* sp.n.

17 ♂♂ and 5 ♀♀ were found, the holotype ♀ 24.VIII. (coll. R. Jussila, Paattinen), the paratypes 20.VII.–29.VIII.

Holotype female: Length about 6.5 mm. Head chagrined, mat; vertex distinctly narrowed behind compound eyes; malar space about  $1.3 \times$  width of mandible (Fig. 12); clypeus rather long and rounded in profile, its width about  $0.9 \times$  length; mandibular teeth equally wide; flagellum with 29 segments, length-to-thickness ratios: 1st about 3.0, 2nd 2.2, 7th 1.8 and penultimate about 1.0. Mesoscutum mat, without distinct notaulus; mesopleurum mat and wrinkled, speculum polished; propodeum mat and wrinkled, too, its carinae weak but distinct, areola long (length about  $1.7 \times$  breadth, Fig. 15). Areolet of front wing distinct, second recurrent vein joined somewhat proximally from the middle; nervellus of hind wing antefurcal, intercepted near its apical end. Length of hind femur about  $6.5 \times$  width; claws of



Figs. 7–8. *Occapes hinzi* sp.n. — 7. Face (paratype). — 8. Apex of hind leg (holotype). Figs. 9–10. Flagellum. — 9. *Ichneumon laricis* Cresson (after Heinrich 1961). — 10. *I. scoresbysundensis* sp.n. (holotype).

moderate size. Gaster dorsal  $\pm$  mat; 1st segment rather long, length of postpetiole about  $1.25 \times$  its breadth; length of 2nd tergite about  $1.7 \times$  breadth; length of ovipositor about  $0.7 \times$  length of the first gastral segment. The whole insect is rather hairy.

Black; brownish orange on mandible (except for dark brown teeth and black base) and palpi; dark brown on stigma of front wing. Legs brownish orange; black on coxae and trochantera; front femora proximally, and middle and hind femora black; front tarsi, middle and hind tibiae and tarsi  $\pm$  dark brownish. Gaster black; proximal tergites with yellowish hind edges; ventral fold yellow.

The paratype females resemble exactly the holotype but the tibiae can be lighter.

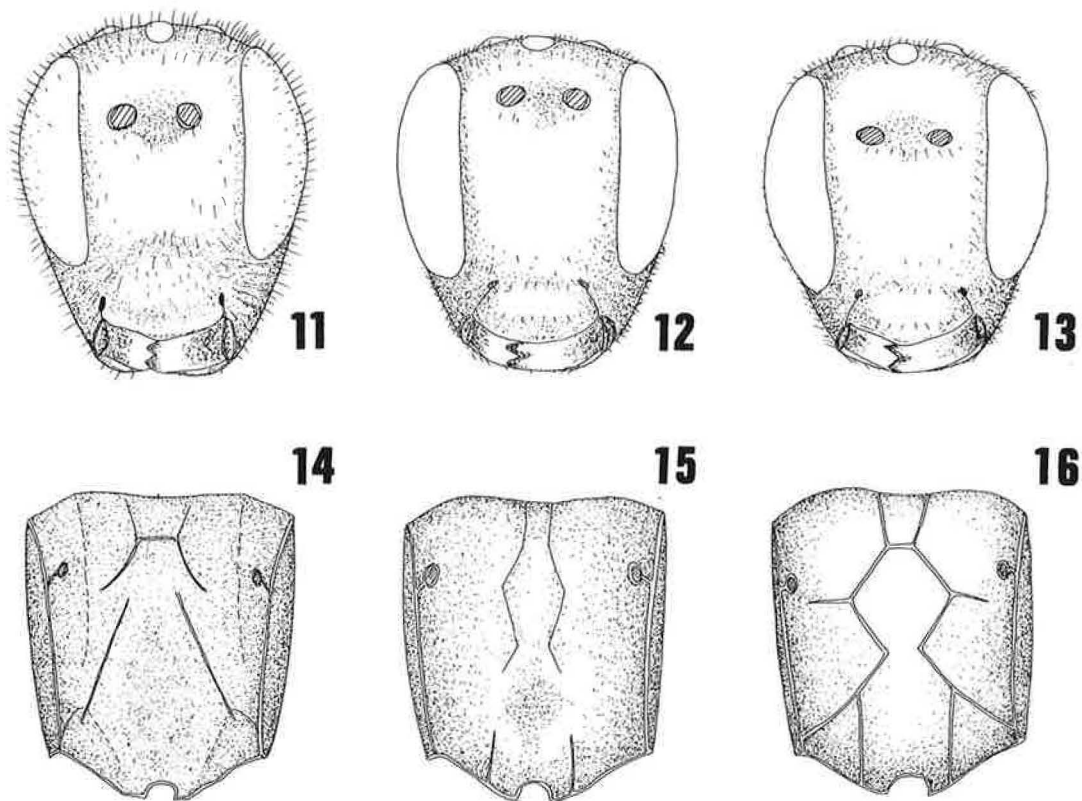
Male resembles the holotype female but its length is about 7.0 mm, length-to-thickness ratios of flagellum about 2.85, 2.6, 1.2 and 1.2, and length of hind femur about 5.5. The colouring is exactly like that of the females.

*C. rostrata* resembles *C. longiceps* mainly by the form of its face (= long cheeks) and mat and wrinkled surface of its head and thorax. But the latter is more pubescent and robust and the structure of the propodeum is different (Figs. 11 and 14).

*Campoletis horstmanni* sp.n.

1 ♀ (the holotype) 29.VIII. (coll. R. Jussila, Paattinen).





Figs. 11–16. Face. — 11. *Campoletis longiceps* Roman (female found 20.VI.1985). — 12. *C. rostrata* sp.n. (holotype). — 13. *C. horstmanni* sp.n. (holotype). Figs. 14–16. Propodeum, in dorsal view. — 14. *C. longiceps* Roman (female found 20.VI.1985). — 15. *C. rostrata* sp.n. (holotype). — 16. *C. horstmanni* sp.n. (holotype).

Holotype female: Length about 5.0 mm. Head chagrined, mat; vertex clearly narrowed behind compound eyes; malar space about  $1.0 \times$  width of mandible (Fig. 13); clypeus rather long, width about  $0.9 \times$  length; mandibular teeth equally wide; flagellum with 28 segments, length-to-thickness ratios: 1st about 3.1, 2nd 2.3, 7th 1.8 and penultimate about 1.0. Mesoscutum mat, without distinct notaulus; mesopleurum mat and chagrined, speculum rather polished; propodeum chagrined, too, with distinct carinae, area superomedia rather long (length about  $1.6 \times$  breadth) (Fig. 16). Areolet of front wing distinct, second recurrent vein joined a little proximally from the middle; nervellus of hind wing vertical, intercepted near its apical end. Length of hind femur about  $5.9 \times$  width; claws of moderate size. Gaster dorsal  $\pm$  mat; 1st segment rather long, length of postpetiole about  $1.6 \times$  breadth; length of 2nd tergite about  $1.4 \times$  breadth; length of ovipositor about  $0.9 \times$

length of 1st gastral segment. The whole insect has rather long hairs.

Black; brownish on teeth of mandibles, blackish brown on stigma of front wing. Legs yellowish brown, dark brown to black on all coxae, first trochantera, femora (hind femur apically light), and middle and hind tibiae (hind tibia medially lighter); tarsi  $\pm$  dark. Gaster black with yellow sternites.

Male unknown.

*C. horstmanni* resembles *C. rostrata* but its malar space is not so long, its propodeal carinae are more distinct and the postpetiole is longer. I name the species in honour of Dr Klaus Horstmann who helped me with the identifications of the species of Campopleginae.

*Diadegma combinatum* (Holmgren, 1868)

1 ♀ 10.VII. and 1 ♂ 30.VII.

The species has earlier been recorded from Greenland by Roman (1933) but Roman's identification would be questionable in view of Horstmann's (1969) finding that the Holmgren collection no longer contains any type material of *D. combinatum* (Carlson 1979). The species has also been found in Northern and Central Europe and Russia (Schmiedeknecht 1909, Carlson 1979).

*Hyposoter frigidus* (Lundbeck, 1897)

1 ♀ 30.VI.

The species has been recorded only from Eastern Greenland (Roman 1934, Carlson 1979).

*Hyposoter pectinatus* (Thomson, 1887)

1 ♀ 29.VIII.

The species has earlier been recorded from Eastern Greenland (Roman 1930, 1933, Carlson 1979) but also from Northern and Central Europe (Schmiedeknecht 1909).

**Mesochorinae**

*Mesochorus agilis* Cresson, 1865  
= *nigriceps* Thomson, 1885

1 ♀ 3.IX.

*M. agilis* occurs in Greenland, the Arctic, Hudsonian, Canadian, and Transition zones of North America, and Boreal and Central Europe (Dasch 1971).

**Orthocentrinae**

*Plectiscidea hyperborea* (Holmgren, 1869)

2 ♂♂ and 24 ♀♀ 4–29.VIII. I have verified the female and male type specimens from Green Harbour (A. E. Holmgren, coll. Naturhistoriska Riksmuseet, Stockholm).

*P. hyperborea* has been recorded from West and East Greenland, Novaja Zemlya, Spitsbergen (Petersen 1956), North and Central Europe and Northern Russia (Jussila 1965).

*Orthocentrus stigmaticus* ssp. *groenlandicus* ssp.n.

Holotype ♀ 9.VIII (coll. R. Jussila, Paattinen) and 2 paratype ♀♀ 9–24.VII.

For exact descriptions of the species and the subspecies, see Aubert 1978.

Holotype female: Length about 3.0 mm. Flagellum with 26 segments, length-to-thickness ratios: 2nd about 1.0, 3rd 1.15, 5th 1.0 and 10th about 0.9. Mesoscutum somewhat chagrined and punctured, notaulus very shallow; mesopleurum smooth and shining; propodeum smooth and shining, too, carinae distinct. Areolet with distinct second intercubitus. First to third gastral tergites rugulose except for smooth and shining apical margins; 1st tergite without dorso-lateral longitudinal carinae.

Black; yellowish brown to brownish yellow on flagellum, palpi, apical margin of clypeus, mandible and stigma. Legs brownish yellow; dark on coxae, femora and hind tibia (the latter whitish on its base).

The paratype specimens resemble exactly the holotype.

The new subspecies differs from the nominate ssp. *stigmaticus* Holmgren of Northern and Central Europe by its first gastral tergite whose longitudinal carinae are lacking (like in ssp. *meridionator* Aubert, 1960 of Southern Europe and ssp. *planator* Aubert, 1978 from the mountains of Central Europe) and differs from ssp. *meridionator* by its distinct second intercubitus. Because the exemplars of Greenland belong to their own population which is spatially isolated from the populations of ssp. *planator* I shall name it as its own subspecies.

*Stenomacrus brevipedennis* sp.n.

209 ♂♂ and 56 ♀♀ were found, the holotype ♀ 24.VII (coll. R. Jussila, Paattinen) and the paratypes 25.VI.–3.IX.

Holotype female: Length about 2.7 mm. Head smooth and shining with face somewhat granular; vertex not narrowed behind compound eyes, occiput deeply touching the lateral ocelli; malar space about 2.5 × width of mandible; occipital



carina rounded in middle part; flagellum with 20 segments, length-to-width ratios: 1st about 0.9, 2nd 1.0, 10th and penultimate about 0.8. Mesoscutum polished, notaulus indistinct; mesopleurum smooth; propodeum with distinct carinae, smooth except for granular and  $\pm$  mat areola and the surroundings of preceptal carina. Wings short: length of front wing = length of head + thorax, its width about  $1.2 \times$  width of hind femur; areolet lacking. Length of hind femur about  $3.3 \times$  width. Gaster, seen from above, compressed from segment 3 to apex; tergites smooth and shining, tergite 1 and basal 0.3 of tergite 2 with strong longitudinal striae; length-to-width ratios of 1st tergite about 1.6 and 2nd about 1.0.

Black; brownish yellow on flagellum, mandible and palpi. Legs brownish yellow; coxae and femora blackish.

The paratype females resemble greatly the holotype. However, the length of the body varies from 2.5 to 3.0 mm, the striation of the 2nd gastral tergite can be only on its base, or reaches to its middle part, and the blackish colour of the legs can be brownish.

Male: Length about 3.0 mm. Head smooth and shining, face somewhat granular; vertex a little narrowed behind compound eyes; occiput deep, touching the lateral ocelli; malar space about  $2.0 \times$  width of mandible; occipital carina rounded in middle part; flagellum with 19 segments, length-to-thickness ratios: 1st about 1.3, 2nd 1.25, 10th and penultimate about 1.2. Mesoscutum polished, notaulus lacking; mesopleurum smooth; propodeum with distinct carinae,  $\pm$  granular. Wings fully developed; in front wing radius about  $0.3$  basad of the middle of stigma, its apical part about  $2.0 \times$  its basal part. Length of hind femur about  $3.3 \times$  width. Gaster, seen from above, somewhat compressed from segment 3; tergites smooth and shining; tergite 1 with strong longitudinal striae, the 2nd tergite can be striated on its basal part; length-to-width ratios of 1st tergite about 1.4 and of 2nd tergite about 1.0.

Black; yellowish on mandible, palpi and stigma and sometimes on dorsal edge on face. Legs brownish yellow; coxae and apical parts of middle and hind tibiae.

*S. brevipennis* most of all resembles *S. pedestris* Holmgren, 1869 (Holmgren 1869) from Spitsbergen [lectotype ♀: Advent Bay, A. E. Holm-

gren leg., coll. Naturhistoriska Riksmuseet, Stockholm (Aubert 1981)] but the latter species is completely brownish yellow and the legs are lighter, the flagellum is a little wider (length-to-thickness ratios in the 1st segment about 0.75, 2nd 0.9, 10th 0.8 and the penultimate about 1.0), the 1st and 2nd gastral tergites are smooth, only the apical part of the 1st tergite is somewhat striated, and the first gastral tergite is wider (length about 0.3 of width). It also resembles *S. terrestris* Roman, 1914 (Roman 1914) but the latter species has distinctly longer flagellae (e.g. the length of the 1st segment is about  $1.5 \times$  its thickness). The male resembles the *S. solitarius* (Holmgren, 1883) male but the latter is yellow, its pedes are lighter and its face is more granular.

*Stenomacrus groenlandicus* sp.n.

86 ♂♂ and 110 ♀♀ were found, the holotype ♀ 14.VIII. (coll. R. Jussila, Paattinen) and the paratypes 30.VI.–3.IX.

Holotype female: Length about 2.5 mm. Head smooth and shining with somewhat chagrined face; vertex rounded and narrowed behind compound eyes, occipital carina rounded in middle part; flagellum with 19 segments, length-to-thickness ratios: 1st about 1.5, 2nd 1.3, 10th and penultimate about 1.0. Mesoscutum polished and a little punctured, notaulus distinct; mesopleurum smooth, prepectal carina present; propodeum shining with distinct carinae and areola. Wings fully developed; in front wing radius about 0.25 basad of the middle of stigma, its apical part about  $2.4 \times$  its basal part; second intercubitus lacking. Length of hind femur about  $3.4 \times$  width. Gaster, seen from above, compressed from segment 3 to apex; tergites smooth and shining; tergite 1 somewhat chagrined; length-to-width ratios: 1st tergite about 1.1 and 2nd tergite about 0.8.

Black; brownish on antenna and middle part of face; yellowish on mandible, palpi and stigma. Legs brownish yellow; middle and hind coxae dark.

The paratype females greatly resemble the holotype. However, the body length varies from 2.0 to 2.7 mm and the dark colouring from blackish to dark brown.

Male: Length about 2.8 mm. Head smooth and shining with somewhat chagrined face; ver-

tex rounded and narrowed behind compound eyes; occipital carina rounded in middle part; flagellum with 19 segments, length-to-thickness ratios: 1st and 2nd about 1.5, 10th 1.2 and penultimate about 1.1. Mesoscutum polished, notaulus indistinct; mesopleurum smooth, prepectal carina present; propodeum somewhat chagrined with distinct carinae and areola. Wings fully developed; in front wing radius about 0.3 basad of the middle of stigma, its apical part about  $2.3 \times$  its basal part; second intercubitus lacking. Length of hind femur about  $3.6 \times$  width. Gaster, seen from above, somewhat compressed from segment 2 to apex; tergites smooth and shining, tergite 1 a little chagrined with distinct longitudinal carinae, length-to-width ratios: 1st tergite about 1.7 and 2nd tergite about 1.1.

Black; brownish on palpi; yellowish on stigma. Legs yellowish brown, coxae and femora blackish.

The female of *S. groenlandicus* resembles *S. dispar* (Holmgren, 1883) but the latter is lighter (yellowish brown), and its vertex is not narrowed behind the compound eyes. One paratype specimen of *S. dispar* has slightly reduced wings. The males of *S. dispar* are also lighter and they have wider 1st tergites (length =  $1.13\text{--}1.33 \times$  width).

#### *Stenomacrus difficilis* sp.n.

1 ♀ (the holotype) was found 19.VIII. (coll. R. Jussila, Paattinen) and 1 ♀ (the paratype) 14.VIII.

Holotype female: Length about 2.8 mm. Head smooth and shining with a little granular face; vertex not narrowed behind compound eyes; flagellum with 17 segments, length-to-thickness ratios: 1st and 2nd about 1.5, 10th and penultimate about 1.1. Mesoscutum polished and distinctly punctured; mesoscutum smooth, prepectal carina present; propodeum shining with distinct carinae and areola. Wings fully developed; in front wing radius about 0.25 basad of the middle of stigma, its apical part about  $2.8 \times$  its basal part; second intercubitus lacking. Length of hind femur about  $3.5 \times$  width. Gaster, seen from above, compressed from segment 3 to apex. Tergites 1 and 2 chagrined and somewhat wrinkled, the other tergites smooth and shining; length-to-width ratios: 1st tergite about 1.3 and 2nd tergite about 0.9.

Black; brownish on flagellum; yellowish on mandible, palpi and stigma. Legs yellowish; middle and hind coxae brownish.

The paratype specimen corresponds to the holotype. *S. difficilis* is distinguished from *S. groenlandicus* in the following features: Its face is more granular, the vertex is not narrowed, the flagella have less segments, the 1st and 2nd gastral tergites are completely black, and the pedes are more light. It also resembles *S. hilaris* (Holmgren, 1883) (Holmgren 1883, Aubert 1981) but in the latter species the 1st and 2nd tergites are not longitudinally striate but granular, and its face is more granular; 1st and 2nd tergites are also quadratic.

#### *Stenomacrus longipes* n. sp.

4 ♂♂ were found, the holotype ♂ 30.VII. (coll. R. Jussila, Paattinen) and the paratypes 15.VII.–3.IX.

Holotype male: Length about 3.0 mm. Head smooth and shining but face strongly granular and mat; head not narrowed behind compound eyes; malar space about  $3.0 \times$  width of mandible; flagellum with 21 segments, length-to-thickness ratios: 1st and 2nd about 3.0, 10th 2.5 and penultimate about 1.7. Mesoscutum polished, without notaulus; mesopleurum smooth, prepectal carina present; propodeum a little chagrined with indistinct carinae. In front wing radius about 0.3 basad of the middle of stigma, its apical part about  $2.5 \times$  its basal part; second intercubitus lacking. Length of hind femur about  $5.2 \times$  width; length of hind leg about  $1.25 \times$  length of thorax + gaster. Gaster, seen from above, somewhat compressed from segment 2 to apex; tergites smooth and shining, tergite 1 and base of tergite 2 somewhat chagrined with some longitudinal striae, longitudinal carinae lacking; length-to-width ratios: 1st tergite about 1.5 and 2nd tergite about 1.2.

Black; yellow on palpi, mandible and stigma. Legs black; lighter colour on base of middle and hind tibiae and apex of hind tarsi.

The paratypes resemble the holotype but the ratios of the flagellar segments varies from 2.5–3.1 in the 1st and the 2nd segment, 2.0–2.6 in the 10th and 1.3–1.7 in the penultimate segment, and the ratio of the hind legs and the thorax + the gaster 1.15–1.25. The abdomen is not compressed in all males.

Key to the *Stenomacrus* species

1. Females ..... 2
- Males ..... 4
2. Wings short, useless for flight ..... *brevipennis* sp.n.
- Wings of normal length ..... 3
3. 2nd gastral tergite chagrined, with longitudinal striae; face more granular; vertex not narrowed behind compound eyes ..... *difficilis* sp.n.
- 2nd gastral tergite smooth and shining; face only somewhat chagrined; vertex narrowed behind compound eyes ..... *groenlandicus* sp.n.
4. 2nd gastral tergite chagrined, with longitudinal striae ..... *brevipennis* sp.n.
- 2nd gastral tergite smooth and shining ..... 5
5. Hind leg 1.15–1.25 × longer than thorax + gaster; face granular and mat ..... *longipes* sp.n.
- Hind leg shorter; face only somewhat chagrined ..... *groenlandicus* sp.n.

## Metopiinae

*Exochus consimilis consimilis* Holmgren, 1856

1 ♂ has been found 30.VI. and 5 ♀♀ 5.VII.–19.VIII.

The species is new to Greenland. This subspecies has previously been found in Northern and Central Europe (e.g. throughout Finland) (Jussila 1965) and European Russia (Tolkanits 1981). In North America there are the subspecies *E. c. teculum* Townes, 1959 and *E. c. subobscurus* Townes, 1959 (Townes & Townes 1959).

Because the specimens of Scoresbysund have blackish coxae and trochantera, and their interantennal process is entirely black they belong to the nominate subspecies (c.f. Townes & Townes 1959).

## Ichneumoninae

*Ichneumon scoresbysundensis* sp.n.

1 ♀ (the holotype) 30.VII. (coll. R. Jussila, Paattinen).

Holotype female: Length about 10.0 mm. Head rather strongly punctured; temple profile only slightly, cheek profile considerably narrowed, the former with curved, the latter with almost straight outline; malar space about 1.8 × longer than width of base of mandible; mandible normal. Flagellum fairly long, filiform and rather

stout, widened beyond middle and attenuated at apex (Fig. 10), with 36 segments, length-to-thickness ratios: 1st about 1.7, 2nd 1.5, 10th 0.8, 15th 0.5 and penultimate about 0.8. Mesoscutum flat, moderately densely and finely punctured, shiny, notaulus obsolete; scutellum slightly convex, smooth with some punctures; propodeum fairly short, areola square. Length of hind femur about 2.8 × its width; hind coxa rather strongly but irregularly punctured, without scopa. Median field of postpetiolus not very shiny, with indistinct striae and a few scattered punctures; gastrocoeli fairly deep and their interval as wide as one of them; 2nd and 3rd tergites rather densely punctured.

Black; ferruginous on median part of face, facial and frontal orbits, and stigma of front wing, Gaster black; ferroginous on postpetiolus, 2nd tergite and lateral parts of 3rd tergite. Legs ferroginous except for black coxae and trochantera.

This species most resembles *I. lariae* Curtis, 1835 (cf. Heinrich 1961) but in the latter species its malar space is about as long as the width of the base of the mandible, its flagellum is filiform, slender and of even width throughout, neither widened beyond the middle nor attenuated at the apex and inconspicuously flattened ventral toward the apex (Fig. 9). Its hind coxa has also a thin, indistinct scopa, and its 2nd and 3rd tergites are fairly sparse and not strongly punctured.

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