

The proctotrupoid wasps of Greenland

(Hymenoptera, Proctotrupeoidea s.l.)

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Buhl, P. N.: The proctotrupoid wasps of Greenland. (Hymenoptera, Proctotrupeoidea s.l.). Ent. Meddr 63: 7-10. Copenhagen, Denmark, 1995. ISSN 0013-8851.

Eight species of Proctotrupeoidea s.l. are recorded from Greenland. They are: *Zygota dentatipes* (Kieffer), *Zygota groenlandicus* sp.n., *Baeus seminulum* Haliday, *Trimorus orbiculatus* (Thomson), *Trimorus punctulator* (Ruthe), *Telenomus kolbei* Mayr, *Platygaster opacus* Ruthe, and *Dendrocercus bifoveatus* (Kieffer). The new species excepted, they are all known from the Palaearctic region.

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Hitherto only two species of Proctotrupeoidea s.l. have been recorded from Greenland, viz. *Zygota americana* Ashmead, 1888 and *Platygaster opacus* Ruthe, 1859. The first mentioned record has proved to be incorrect. In the following eight Greenlandic species are listed, one of them being described as a new species. The new species is so far only known from Greenland. The other seven species are all recorded from the Palaearctic region; none of them are so far reported from the Nearctic region.

The Greenlandic specimens examined are deposited in the Zoological Museum, Copenhagen. Most of them were originally preserved in alcohol, but have been mounted in connection with the present study.

Diapriidae (Belytinae)

The material of the diapriid recorded from Greenland as "*Zygota americana* Ashm." by Lundbeck (1896) and Henriksen (1939) proved to be composed of two species, none of which is *americana* Ashm.

Zygota dentatipes (Kieffer, 1908)

Kap Farvel, Kangikitsiq, Tupaussat, 1 ♂ 27.7.1970 (Jens Böcher); same locality, 1 ♀ 28.7.1970 (Jens Böcher); Kap Farvel, Pamiagdluk, Anordliuitsoq, 8 ♀, 2 ♂ 30.7.1970 (Jens Böcher); same locality, 1 ♀ 29.8.1970 (Jens Böcher); Disko Bugt, Akugdflit, 1 ♂ 5.7.1969 (Jens Böcher); Disko Bugt, Orpigsôq, Qarajaq, 2 ♂ 16.6.1969 (Jens Böcher); Uvkusigssat Fjord, Pagnertôg, 2 ♀, 1 ♂ 28.-29.7.1969 (Jens

Böcher); Umanak Fjord, Qarássap nunatâ, 1 ♂ 18.-19.7.1969 (Jens Böcher); Ubekendt Ejland, Tuperssuatâ, 1 ♂ 30.7.1969 (Jens Böcher); Nûgâtsiaq, 1 ♂ 26.7.1969 (Jens Böcher); Godhavn (Qeqertarsuaq), Østerlien, 1 ♂ 31.7.1968 (Jens Böcher); Godhavn (Qeqertarsuaq), 1 ♀ 12.8.1968 (Jens Böcher); Narssarsuaq, 1 ♀ 13.8.1983 (Peter Nielsen); Narssarsuaq, Mellemlandet, 580 m., 1 ♂ 5.6.-17.7.1985 (Peter Nielsen); same locality, 14 ♀, 2 ♂ 6.8.-6.9.1985 (Peter Nielsen); Umanak, 1 ♀ 18.7.1970 (P. Volsøe); Sydøstbugten, 1 ♂ 22.7.1890 (W. Lundbeck); Tigssaluk, 1 ♀ 27.7.1954 (T. Andersen).

Lundbeck (1896) notes, that he has compared his two Greenlandic specimens (1 ♀, 1 ♂) of "*Z. americana*" with specimens from Denmark where similar specimens are "not rare", and he concludes that they are conspecific. The species distributed in NW Europe as well as in Greenland is, however, *Z. dentatipes* Kieffer. The male specimens of *Z. dentatipes* from Greenland are indistinguishable from Danish males of this species, and they agree also very well with the description of *Z. dentatipes* in Nixon (1957), including the shape of the digitus. Lundbeck (1896) notes, that Ashmead's description fits "rather well" to his specimens, but according to Ashmead's (1893) description the third antennal segment of the male is 5 times as long as wide, whereas it in Lundbeck's male is hardly more than 3 times as long as wide. According to Ashmead, the antennal segments 7-14 of the female are transverse; in Lundbeck's specimen they are as long as wide. Consequently, Lundbeck's female represents an unknown species which is described below.

The females of *Z. dentatipes* collected more re-

cently in Greenland are very similar to *Z. norvegica* (Kieffer, 1913), redescribed by Nixon (1957). *Z. norvegica* (only the female is known) is rather common in Denmark. Nixon (1957) suggested that *Z. ruficornis* (Curtis, 1831) – also only known in the female sex and extremely similar to *norvegica* – is the female of *Z. dentatipes*, and *Z. norvegica* the female of *Z. spinosipes* Kieffer, 1908, but it seems to be the other way around.

Z. dentatipes is also known from Scotland, France, and Russia.

Zygota groenlandicus sp. n. (Figs. 1-2)

Holotype ♀: Kap Farvel, Pamiagdhluk, Anordliuitsoq, 30.7.1970 (Jens Böcher). Paratypes (19 ♀): Same locality and date as holotype, 2 ♀ (Jens Böcher); same locality, 1 ♀ 15.7.1970 (Jens Böcher); Godhavn (Qeqertarsuaq), Østerlien, 1 ♀ 4.7.1969 (Jens Böcher); same locality, 1 ♀ 8.7.1969 (Jens Böcher); Godhavn (Qeqertarsuaq), 1 ♀ 30.5.1968 (Jens Böcher); same locality, 1 ♀ 11.9.1968 (Jens Böcher); same locality, 1 ♀ 23.5.1969 (Jens Böcher); same locality, 2 ♀ 2.6.1969 (Jens Böcher); same locality, 70 m., 7 ♀ 4.9.1968 (Jens Böcher); Igaliko-Fjord, Musartut, 1 ♀ 2.9.1889 (W. Lundbeck); Julianehåb (Qaqortoq), 1 ♀ 8.8.1957 (Chr. Vibe).

Description. Female: Length 2.8-3.9 mm (holotype 3.9 mm). Colour black; antennae uniformly reddish; mouthparts and legs brownish yellow; apex of gaster brown.

Head uniformly finely punctured and hairy all over, 1.1 times as high as long and 1.2 times as wide as long; facial furrows not confluent with subantennal rugosity. Malar space equal to the height of an eye; temples as long as an eye; OOL:POL:LOL = 3:3:2. Antenna (Fig. 1) with short and dense pubescence; scape with some hairs hardly half as long as width of segment. Scape 4.5 times as long as wide, shorter than height of head (9:11); pedicel less than one-third the length of scape (5:18), 1.67 times as long as wide; first flagellar segment 1.6 times as long as pedicel, 2.67 times as long as wide, and 0.75 times as wide as the following segments; second flagellar segment hardly longer than wide; flagellar segments 3-12 about equal, each as long as wide; apical segment 1.7 times as long as the preapical segment, 1.6 times as long as wide.

Thorax wider than head (7:6), as high as wide and 1.5 times as long as wide. Pronotum dorsally hairy, laterally smooth and bare. Mesoscutum shiny and finely punctured and densely hairy all

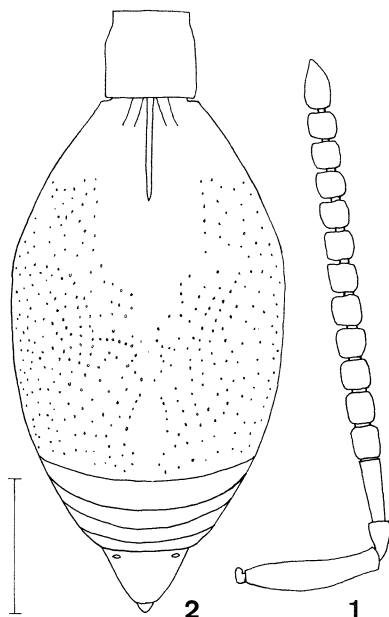


Fig. 1, 2. *Zygota groenlandicus* sp.n. – 1, female antenna; 2, female gaster, dorsal view. Scale bar 0.5 mm.

over, with deep notauli, and anteriorly with weak admedian lines. Mesopleuron finely punctured and hairy. Scutellar fovea somewhat reniform; scutellum sculptured as mesoscutum, hairy especially laterally. Metanotum rather protuberant medially. Metapleuron and sides of propodeum with rather dense pilosity. Posterior margin of propodeum between the 2 lateral keels not produced backwards.

Fore wing reaching base of tergite 7 (holotype), sometimes reaching apex of gaster. Marginalis half as long as its distance from basalis; radial cell very indistinct, the cell, as indicated, twice the distance between marginalis and basalis; post-marginalis half as long as marginalis.

Gaster (Fig. 2) about 1.25 times as long as head and thorax combined, beyond petiole 1.8-1.9 times as long as wide, wider than thorax (9:7) and 1.2 times as wide as high. Petiole as wide as long, with rather dense long hairs and longitudinal carinae. Middle furrow at base of the large tergite 2 strong and slightly longer than petiole, lateral furrows short and weak; tergite 2 sharply and very distinctly punctate and covered with dense but rather short hairs, and becoming more smooth and bare towards base and midline. Tergites 3-6 shiny, almost smooth, hairy except medially. Tergite 7 shorter than basal width, dull,

densely hairy except along hind margin which is smooth and bare, pores distinct. Tergite 8 small, dull and hairy, not keeled. Sternites 2-7 densely punctuate and hairy. In dorsal view of the gaster, the apical sternite shows laterally a dense, short fringe of pale pubescence as well as some outstanding hairs.

Male: Unknown.

A very distinct species on account of the strongly punctured tergite 2. The punctuation is even stronger than in *Z. subaptera* (Thomson, 1858), but the tergite is less hairy and the hairs are shorter in *groenlandicus* than in *subaptera*. *Z. groenlandicus* occurs in the same localities and on the same dates as *Z. dentatipes*, but the two species are rather different and there are no intermediates. Apart from having an unpunctured large tergite 2, *Z. dentatipes* differs from *Z. groenlandicus* e.g. in having first flagellar segment only 1.9 times as long as wide and 1.4 times as long as pedicel, in having flagellar segments 3-12 distinctly transverse, and in being smaller, average body size being 2.5-3.0 mm.

Scelionidae (Scelioninae)

Baeus seminulum Haliday, 1833

Rosenvinges Plantage, 1 ♀ 29.7.1983; Narssarsuaq, 2 ♀ 20.6.1983; same locality, 1 ♀ 1.8.1983; same locality, 1 ♀ 13.8.1983; same locality, 1 ♀ 31.8.1983; Narssarsuaq, Hospitalsdalen, 10 m., 3 ♀ 16.-24.7.1984; Narssarsuaq, "marsh 50 m.", 1 ♂ 5.6.-6.8.1985; Qagssiarssuk, 2 ♀ 22.7.1983; Qagssiarssuk, "ruin, ø. 200", 3 ♀ 18.8.1983; same locality, 4 ♀ 31.8.1983. All Peter Nielsen leg.

Formerly known from Iceland, Great Britain, Sweden, Denmark, Germany, Belgium, Hungary, Moldavia, and Russia.

Trimorus orbiculatus (Thomson, 1859)

Kap Farvel, Pamiagdlok, Anordliutsoq, 4 ♀, 1 ♂ 30.7.1970 (Jens Böcher); same locality, 3 ♀ 29.8.1970 (Jens Böcher); Rosenvinges Plantage, 2 ♀ 29.7.1983 (Peter Nielsen); same locality, 1 ♀ 20.8.1983; Upernaviarssuk, 1 ♀ 24.7.1983 (Peter Nielsen); same locality, 1 ♀ 8.8.1983 (Peter Nielsen); Narssarsuaq, 1 ♀ 1.8.1983 (Peter Nielsen); same locality, 2 ♀ 31.8.1983 (Peter Nielsen); Nunatak, 2 ♀ 30.8.1983 (Peter Nielsen).

Although this species was synonymized with *T. ovatus* (Thomson, 1859) by Szabó (1966), I prefer

to follow Hellén (1971) in treating them as separate species. Petersen (1956) reported "*T. pedestris* Nees" from Iceland. I have examined his specimens, and they are identical with *T. orbiculatus* from Greenland (the true *pedestris* Nees is in fact a *Gryon*, cf. Graham (1988)).

T. orbiculatus is also known from Finland, Sweden, Denmark, and Russia.

Trimorus punctulator (Ruthe, 1859)

Narssarsuaq, 3 ♀ 20.6.1983; same locality, 4 ♀ 5.7.1983; Narssarsuaq, Hospitalsdalen, 1 ♀, 1 ♂ 9.-23.6.1984; same locality, 1 ♀ 5.-16.7.1984; same locality, 1 ♀ 16.-24.7.1984; same locality, 6 ♀ 24.7.-12.8.1984; Upernaviarssuk, 2 ♀, 1 ♂ 6.7.1983; same locality, 6 ♀ 24.7.1983; same locality, 8 ♀ 8.8.1983; same locality, 2 ♀ 25.8.1983. All Peter Nielsen leg.

The Greenlandic specimens are very similar to the Icelandic material of the species reported by Petersen (1956). The wings of the specimens from Greenland are slightly longer, however, reaching base or middle of tergite 1.

T. punctulator is also known from the Faroes, Moldavia, and Russia.

Scelionidae (Telenominae)

Telenomus kolbei Mayr, 1879

Kap Farvel, Kangikitoq, Tupaussat, 1 ♀, 1 ♂ 28.7.1970 (Jens Böcher); Kap Farvel, Pamiagdlok, Anordliutsoq, 3 ♀, 27 ♂ 30.7.1970 (Jens Böcher); same locality, 8 ♀, 7 ♂ 29.8.1970 (Jens Böcher); Qagssiarssuk, "ruin, ø. 200", 1 ♂ 18.8.1983 (Peter Nielsen); same locality, 2 ♀ 31.8.1983 (Peter Nielsen); Narssarsuaq, 1 ♀ 31.8.1983 (Peter Nielsen).

Very different from the "*Telenomus* sp." reported from Iceland by Petersen (1956). *T. kolbei* is a characteristic species, especially on account of its rather thick head. The Greenlandic specimens agree very well to the descriptions in Kieffer (1926), Kozlov (1978), and Kozlov & Kononova (1983).

T. kolbei is known from Denmark, Austria, and the Crimea.

Platygastridae

Platygaster opacus Ruthe, 1859

Qagssiarssuk, "ruin, ø. 200", 1 ♀ 22.7.1983 (Peter Nielsen); Qagssiarssuk, 6 ♀ 22.7.1983

(Peter Nielsen); same locality, 8 ♀ 18.8.1983 (Peter Nielsen); same locality, 2 ♀ 31.8.1983 (Peter Nielsen); Kussuag, 2 ♀ 19.-23.8.1982 (Peter Nielsen); Narssarsuaq, 1 ♀ 1.7.1983 (Peter Nielsen); Upernaviarssuk, 5 ♀ 9.-16.8.1982 (Peter Nielsen); Nunatak, 2 ♀ 30.8.1983 (Peter Nielsen); Tasermiut, Quinquadalen, 1 ♀ 26.-31.7.1984 (Peter Nielsen); Sarqaq, 2 ♀ 23.6.1948 (Chr. Vibe).

Earlier recorded from Greenland by Petersen (1956). Also known from Iceland, Sweden, Denmark, and England.

Megaspilidae (Ceraphronoidea)

Dendrocerus (Macrostigma) bifoveatus (Kieffer, 1907)

Kap Farvel, Pamiagdlok, Anordliuitsok, 1 ♀ 30.7.1970 (Jens Böcher); same locality, 5 ♀, 4 ♂ 29.8.1970 (Jens Böcher); Nanortalik, 1 ♂ 30.6.1948 (Chr. Vibe).

The Greenlandic specimens agree well with the description and the figures in Dessart (1972), also in the structure of male genitalia.

Formerly known from Iceland, Sweden, France, and Russia.

Dansk sammendrag

Otte arter af Proctotrupeoidea sensu lato rapporteres fra Grønland: *Zygota dentatipes* (Kieffer), *Z. groenlandicus* sp. n., *Baeus seminulum* Haliday, *Trimorus orbiculatus* (Thomson), *T. punctulator* (Ruthe), *Telenomus kolbei* Mayr, *Platygaster opacus* Ruthe og *Dendrocerus bifoveatus* (Kieffer). Bortset fra den nye art er de alle tidligere kendt fra den palæarktiske region - ingen fra den nearktiske

region. Den nye art, *Zygota groenlandicus*, er let kendelig fra de hidtil beskrevne holarktiske arter af slægten på grund af sit stærkt punkterede 2. bagkropsled (Fig. 2).

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