

# New species of Proctotrupoidea s. l. from Europe (Hymenoptera)

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**Abstract.** *Disogmus quinquedentatus* sp. n. (♂), *Aclista niniae* sp. n. (♀), *Belyta breviscapa* sp. n. (♂), *Cinetus olebuhli* sp. n. (♂), *C. sagvoldeni* sp. n. (♀), *C. oblongus* sp. n. (♀), *Pantoclis gravlundi* sp. n. (♀), *Trimorus microspinus* sp. n. (♀), and *Telenomus ilione* sp. n. (♀) from Norway, *Trimorus cornutus* sp. n. (♀) from Denmark, and *Aclista mediterranea* sp. n. (♀) from Greece are described.

**Samenvatting.** Nieuwe soorten Proctotrupoidea s. l. uit Europa (Hymenoptera)

*Disogmus quinquedentatus* sp. n. (♂), *Aclista niniae* sp. n. (♀), *Belyta breviscapa* sp. n. (♂), *Cinetus olebuhli* sp. n. (♂), *C. sagvoldeni* sp. n. (♀), *C. oblongus* sp. n. (♀), *Pantoclis gravlundi* sp. n. (♀), *Trimorus microspinus* sp. n. (♀), en *Telenomus ilione* sp. n. (♀) uit Noorwegen, *Trimorus cornutus* sp. n. (♀) uit Denemarken en *Aclista mediterranea* sp. n. (♀) uit Griekenland worden beschreven.

**Résumé.** Nouvelles espèces des Proctotrupoidea s. l. d'Europe (Hymenoptera)

Description de *Disogmus quinquedentatus* sp. n. (♂), *Aclista niniae* sp. n. (♀), *Belyta breviscapa* sp. n. (♂), *Cinetus olebuhli* sp. n. (♂), *C. sagvoldeni* sp. n. (♀), *C. oblongus* sp. n. (♀), *Pantoclis gravlundi* sp. n. (♀), *Trimorus microspinus* sp. n. (♀) et *Telenomus ilione* sp. n. (♀) de Norvège, description de *Trimorus cornutus* sp. n. (♀) du Danemark, et description de *Aclista mediterranea* sp. n. (♀) de Grèce.

**Key words:** Europe B Proctotrupidae B Diapriidae B Scelionidae B new species.

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Four of eleven new species described below were collected in connection with a fragmentation experiment in boreal spruce forest, carried out by the Norwegian Institute for Nature Research (NINA – cf. Tømmerås & Breistein 1995). Six of the remaining species were sent to me by Mr. Lars Ove Hansen (Zoological Museum, University of Oslo), five of them in connection with a survey of the Norwegian proctotrupoid fauna to be published soon. The last remaining species I have collected in Denmark. The type material is deposited in the Zoological Museum, University of Copenhagen (ZMUC) and in the Zoological Museum, University of Oslo (ZMUO).

## Proctotrupidae, Proctotrupinae

### *Disogmus quinquedentatus* sp. n.

Holotype ♂, Norway (EIS 97), NTI, Mosvik, Kilen, 25.VII.–14.VIII.1994, Malaise trap, NINA leg. caught at station 23 in the area with coarse-grained fragmentation – cf. Tømmerås & Breistein (1995) (ZMUC).

Male. Body length 3.6 mm. Colour black; legs brown, coxae darker. Tyloids in shape of teeth on A5–A9 (fig. 1). Notauli very short, only visible at front margin of mesoscutum. Mesopleurae below tegulae not wrinkled. Fore wing 3.0 mm long, venation brown. Base of syntergite with 4 longitudinal grooves on each side of middle, the grooves reaching at most 0.6 the distance to first thyridia.

Female. Unknown.

Differs from all other *Disogmus* species (males) in having tyloids on five antennal segments. Most similar to *D. basalis* (Thomson, 1857), but this species has tyloids on A5–A8 only, and notaui normally longer (cf. Townes & Townes 1981).

## Diapriidae, Belytinae

### *Aclista mediterranea* sp. n.

Holotype ♀, Greece, Párga, Parga beach, 13–27.VII.1990, leg. Audun Mikalsen (ZMUC).

Female. Body length 3.4 mm. Colour blackish, antennae, mandibles, tegulae and legs light reddish brown.

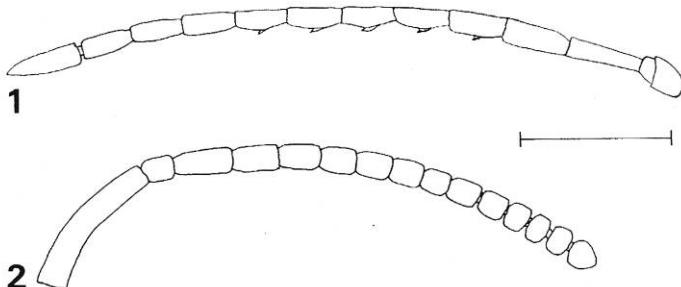


Fig. 1. Antenna of *Disogmus quinquedentatus* sp. n. ♂ (reference bar 0.50 mm).

Fig. 2. Antenna of *Aclista mediterranea* sp. n. ♀ (reference bar 0.50 mm).

Head much hairy, from above 1.6 times wider than long, frontal prominence with a weak but distinct emargination. Facial furrows hardly present, sculpture below antennal insertions weak. Antenna (fig. 2) with A1 2.5 times longer than A3 which is twice as long as wide, A14 distinctly transverse, three-fourths as long as wide.

Mesosoma with long and dense hairs dorsally; dorsal areas of propodeum not longer than wide; inner lateral keel of propodeum complete, ending in a very weak tooth, from this tooth a weak incomplete keel runs forward inside inner lateral keel, parallel with medial keel.

Fore wing almost clear, slightly overreaching gaster; marginalis 0.6 as long as its distance from basalis, two-thirds as long as the radial cell; stigmalis very oblique, two-thirds as long as marginalis; cubitalis spurious, straight, continuing the direction of radialis, as long as radial cell; postmarginalis hardly overreaching radial cell.

Petiole twice as long as wide, with five even keels on an almost smooth background. Metasoma behind petiole 2.1 times longer than wide. Large tergite with sparse long hairs, at base with a fairly even, fan-shaped area of strong sulcation; middle furrow hardly longer than the lateral ones, almost 0.6 as long as petiole. Large sternite without a keel at base.

Male. Unknown.

Runs to *A. prolongata* (Kieffer, 1907) in Nixon's (1957) key, but *prolongata* has A1 longer in relation to A3 and emargination of frontal prominence stronger. *A. mediterranea* is rather similar to *A. transversa* Buhl, 1997, but this species is distinctly less hairy, it has much longer radial cell, less elongate petiole, larger A15 and less transverse head (about 1.4 times wider than long) than *mediterranea*, and it has frontal prominence without an emargination, cf. also Buhl (1997).

#### *Aclista niniae* sp. n.

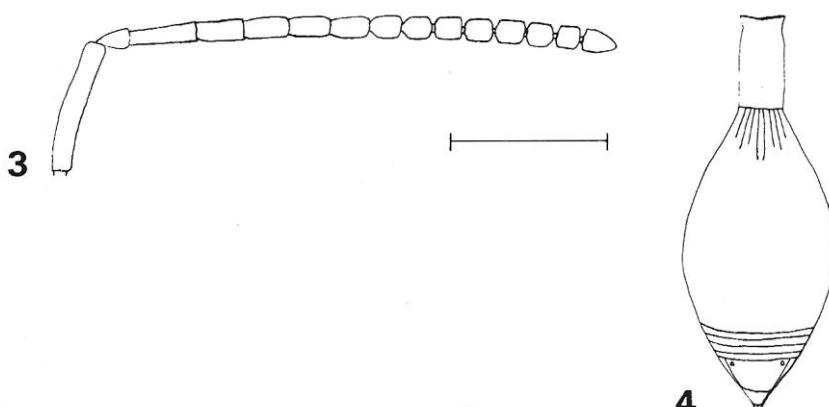
Holotype ♀, Norway (EIS 97), NTI, Mosvik, Kilen, 25.VII.–14.VIII.1994, Malaise trap, NINA leg. Caught at station 9 in the area with coarse-grained fragmentation (cf. Tømmerås & Breistein 1995). Paratype ♀, same label data as holotype (ZMUC).

Female. Body length 2.7 mm. Colour blackish; A1–A2, mandibles and legs yellowish brown, flagellum dark brown. Frontal prominence with a weak emargination, facial furrows distinct, not confluent with subantennal rugosity. Antenna (fig. 3) with 15 segments, slightly thickened in apical half; scape hardly narrowed apically, twice as long as A3 which is almost 3.5 times longer than wide; A4 more than twice as long as wide;

A14 as long as wide. Scutellar fovea 1.75 times wider than long. Dorsal areas of propodeum not longer than wide, inner lateral keels distinct throughout, not ending in teeth. Radial cell almost 2.7 times longer than marginalis. Petiole twice as long as wide, with four even longitudinal keels, areas in between smooth. Metasoma behind petiole almost twice as long as wide, lateral furrows at base of large tergite only slightly shorter than the middle one, this 0.6 times as long as petiole; T3–T6 short, almost smooth (fig. 4), apical tergite upturned. Large sternite without keel at base.

Male. Unknown.

Differs from *A. filiformis* (Kieffer, 1910) and related species in having longer A3 compared to A1, and in having lateral furrows at base of T2 longer; differs from *A. fractinervis* (Kieffer, 1910) in having shorter A3 compared to A1, and in having differently shaped metasoma (cf. Nixon 1957).



Figs 3–4. *Aclista ninae* sp. n. ♀: 3 – antenna, 4 – metasoma, dorsal view (reference bar 0.50 mm).

#### *Belyta breviscapa* sp. n.

Holotype ♂, Norway (EIS 97), NTI, Mosvik, Kilen, 1–25.VII.1994, Malaise trap, leg. NINA. Caught at station 5 in the control area – cf. Tømmerås & Breistein (1995) (ZMUC).

Male. Body length 3.4 mm. Colour blackish; legs except coxae brownish. Scape shorter than A3 (12:13), only 2.7 times longer than wide (fig. 5), with short and dense hairs except on outer side (seen from above) which is almost bare. A3 with a weak emargination in basal two-fifths (fig. 5); A4 as long as A3, three times as long as wide; A13 shorter and thinner than A4 but still three times as long as wide. Scutellar fovea 1.6 times wider than long. Propodeal carina forked at base. Front tibia with a row of 5–7 long bristles, which are not sharply differentiated from shorter bristles. Marginalis two-thirds as long as its distance from basalis, radial cell closed, 1.4 times longer than marginalis. Petiole about 1.5 times longer than wide, with irregular longitudinal furrows, somewhat narrowed in anterior third. Genitalia with digitus similar to digitus of *B. rugosicollis* Kieffer, 1909 (cf. fig. 82 in Nixon 1957), with three small teeth.

Female. Unknown.

Differs from *B. rugosicollis* Kieffer, 1909 in having shorter scape, shorter petiole, and in not having 3–4 sharply differentiated bristles on fore tibiae.

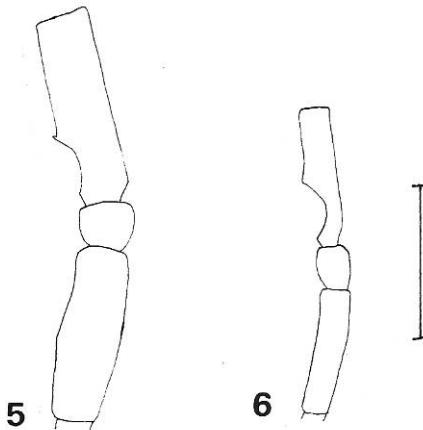


Fig. 5. *Belyta breviscapa* sp. n., ♂, antennal segments 1–3 (reference bar 0.25 mm).

Fig. 6. *Cinetus olebuhli* sp. n., holotype ♂, antennal segments 1–3 (reference bar 0.25 mm).

#### *Cinetus olebuhli* sp. n.

Holotype ♂, Norway (EIS 97), NTI, Mosvik, Kilen, 19.V. –9.VI.1994, Malaise trap, NINA leg. Caught at station 9 in the area with coarse-grained fragmentation (cf. Tømmerås & Breistein 1995). Paratype ♂, Norway (EIS 28), BØ, Drammen, Underlia, VIII. –IX.1993, Malaise trap, leg. L. O. Hansen (ZMUC).

**Male.** Body length 2.1 mm. Colour blackish; antennae, mandibles and coxae dark brown, legs light brownish. Rugosity below antennal insertions almost covering entire face, reaching the short facial furrows. Scape shorter than A3 (17:19), A3 3.8 times longer than wide, with a rather strong emargination covering almost half, weakly widened at apex of emargination (fig. 6); A4 shorter than A3 (15:19), about 3.8 times longer than wide; A13 about 2.5 times longer than wide. Petiole three times longer than wide, with parallel sides. Metasoma about as wide as thorax.

Paratype body length 2.0 mm. Scape distinctly shorter than A3 (7:9), A13 only 2.0 times longer than wide, petiole only 2.2 times longer than wide. Otherwise as holotype.

**Female.** Unknown.

Differs from all species in Nixon's (1957) key except *aletes* Nixon, 1957 in having A1 shorter than A3; A3 of *aletes* is even longer compared to A1 (10:7). Among the species mentioned by Hellén (1964) *olebuhli* is most similar to *sequester* Nixon, 1957 and *ditomus* (Kieffer, 1910), but *sequester* has A1 only 2.5 times, and A3 2 times longer than wide, and A13 3 times longer than wide; *ditoma* has A13 hardly twice as long as wide (and A1 and A3 of equal length).

Named after my father.

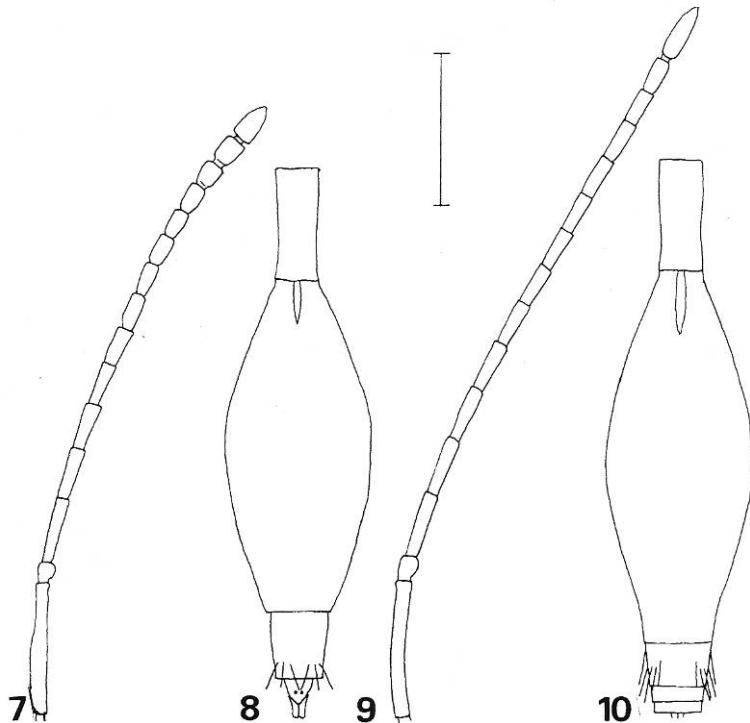
#### *Cinetus sagvoldeni* sp. n.

Holotype ♀, Norway (EIS 35), BV, Rollag, Bråtåsen, IX.1994, Malaise trap, leg. Lars Ove Hansen & Bjørn A. Sagvolden (ZMUO). Paratypes 11♀: 8♀, same label data as holotype; 2♀, Rollag, Vårviken, VIII.1994, Malaise trap, leg. L. O. Hansen & B. A. Sagvolden; ♀, Norway (EIS 28), BØ, Hurum, Verket, 19.VIII. –1.X.1995, Malaise trap on sandy slope, leg. L. O. Hansen & O. Hanssen (ZMUC).

Female. Body length 3.1 mm. Runs to *C. brevipetiolatus* Thomson, 1859 and *C. lusitanicus* (Kieffer, 1907) in Nixon's (1957) key, but it differs from *brevipetiolatus* in having A14 fully one and a third times longer than wide (fig. 7), from *lusitanicus* in having long outstanding hairs on A15, and from both in having more slender metasoma, petiole being 2.3–2.5 times longer than wide, and T2 being more than twice as long as wide (fig. 8). Petiole with three even longitudinal keels dorsally, area between keels almost smooth.

Male. Unknown.

Caught together with *C. brevipetiolatus* and *C. oblongus* sp. n. described below. Named after one of the collectors.



Figs. 7–8. *Cinetus sagvoldeni* sp. n. ♂: 7 – antenna, 8 – metasoma, dorsal view (reference bar 0.50 mm).  
 Figs. 9–10. *Cinetus oblongus* sp. n. ♀: 9 – antenna, 10 – metasoma, dorsal view (reference bar 0.50 mm).

#### *Cinetus oblongus* sp. n.

Holotype ♀, same label data as for *C. sagvoldeni* sp. n. holotype above (ZMUC). Paratypes 4♀: 3♀, same label data as holotype; ♀, Norway (EIS 173), FV, Alta, Eiby, Valsetmoen, 8.VIII.–10.IX.1995, Malaise trap, on a sandy slope, leg. L. O. Hansen & H. Rinden (ZMUC).

Female. Body length 3.1 mm. Runs to *C. princeps* Nixon, 1957 in Nixon's (1957) key as A14 is fully twice as long as wide (fig. 9), but it differs from *princeps* in having a much more slender metasoma, petiole and T2 each being 2.5 times longer than wide (fig. 10).

Flagellum in addition to basic pubescence with long outstanding hairs 1.5 times longer than width of segments.

Male. Unknown.

**Pantoclis gravlundi sp. n.**

Holotype ♀, Norway (EIS 173), FV, Alta, Eiby, Valsetmoen, 8.VIII.–10.IX.1995, Malaise trap on a sandy slope, leg. L. O. Hansen & H. Rinden (ZMUC).

Female. Body length 3.3 mm. Runs to *P. leviventris* (Kieffer, 1907) in Nixon's (1957) key and generally similar to this species, but *gravlundi* has radial cell sharply closed and T2 without distinct punctures. Whereas petiole of *leviventris* has longitudinal carinae uneven and interrupted by transverse carinae, *gravlundi* has the two dorsal longitudinal keels even, uninterrupted on a smooth background. The punctuation of sternite 2 is much finer in *gravlundi* than in *leviventris*. *P. gravlundi* has marginalis hardly half as long as its distance from basalis and three-quarters as long as stigmalis which is 0.3 as long as the radial cell. *P. leviventris* has marginalis somewhat more than half as long as its distance from basalis and slightly longer than stigmalis. Subantennal rugosity coarser in *gravlundi* than in *leviventris* and A1–A3 darker, dark reddish, scape partly blackened.

Male. Unknown.

Named after the Danish writer Thorkild Gravlund (1879–1939).

**Scelionidae, Teleasinae**

**Trimorus cornutus sp. n.**

Holotype ♀, Denmark, NEZ, Selsø, 5.VII.–6.VIII.1996, Malaise trap, leg. P. N. Buhl (ZMUC).

Female. Body length 1.0 mm. Colour black; mandibles and legs dark reddish brown; trochanters, apex of femora, both ends of tibiae, and segments 1–4 of all tarsi yellowish brown.

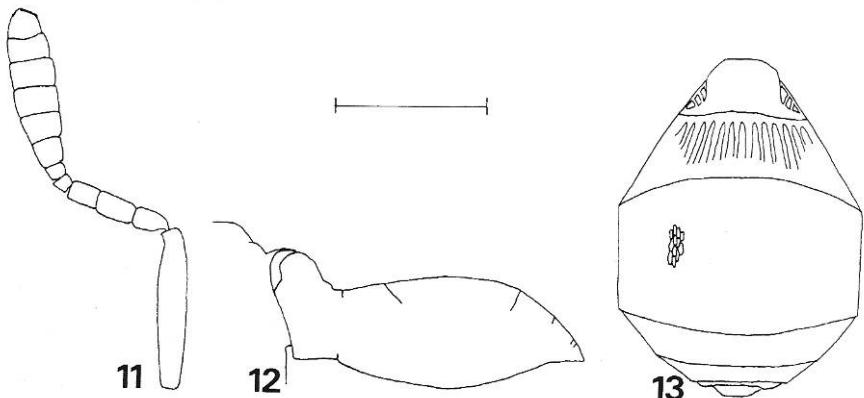
Head from above 2.3 times wider than long, wider than thorax (17:15). Occiput and vertex reticulate-coriaceous, frons almost smooth, with reticulation along inner orbits and with a weak incomplete longitudinal line medially; malar space striated. Head from in front 1.3 times wider than high; malar space fully half the height of an eye; lateral ocelli separated by twice their diameter from inner orbits; OOL:POL:OL = 4:8:3. Antenna (fig. 11) with A2 hardly shorter than A3 which is 1.7 times longer than wide, A4 very slightly longer than wide.

Mesosoma as long as wide and very slightly higher than wide (16:15). Mesoscutum finely reticulate-coriaceous and punctured, rather densely hairy, notauli hardly indicated posteriorly. Scutellum sculptured and hairy as mesoscutum. Metanotum with a spine which is a hair-thin lamella in lateral view (fig. 12), broad triangular and smooth in dorsal view.

Fore wing almost 0.9 times as long as whole body, distinctly overreaching apex of gaster, fully 3 times longer than wide, with faint brownish tint, marginal cilia one-third the width of wing. Hind wing with marginal cilia hardly half the width of wing.

Metasoma (figs 12–13) 1.1 times longer than head and mesosoma combined and 1.1 times wider than thorax. T1 with a distinct, smooth cornutus, tergite only sculptured laterally of cornutus, here with a few longitudinal grooves. T2 longitudinally striated to about three-quarters of length, smooth posteriorly, laterally with some reticulation. T3 somewhat shiny, without striae, distinctly reticulate, only with a few hairs laterally. T4 reticulate, smooth along posterior margin; rest of tergites almost smooth, apical tergites sparsely hairy.

Male: Unknown.



Figs. 11–13. *Trimorus cornutus* sp. n. ♀: 11 – antenna, 12 – mesosoma, posterior part and metasoma, lateral view, 13 – metasoma, dorsal view (reference bar 0.25 mm).

. Runs to *T. ("Propentacantha") autumnalis* (Thomson, 1859) in Kieffer's (1926) key, but this species has T1 striated, only slightly humped anteriorly, and A2–A4 each not longer than wide. In shape of metanotal spine and T1 *cornutus* sp. n. seems to be similar to *T. nigrinotum* (Dodd, 1914) from Australia, but this species has frons entirely striated, T3 smooth, thorax and T1 reddish, and legs golden-yellow (cf. Dodd 1930).

#### *Trimorus microspinus* sp. n.

Holotype ♀, Norway (EIS 35), BV, Rollag, Vårviken, VIII.1995, Malaise trap, leg. L. O. Hansen & B. A. Sagvolden (ZMUO).

**Female.** Body length 1.1 mm. Colour black; legs dark brown; antennal toruli, mandibles, trochanters, extreme apex of femora, both extreme ends of tibiae, and most of tarsi lighter brown.

Head from above 2.1 times as wide as medially long, 1.3 times wider than thorax. Occiput not margined, densely and evenly reticulate-coriaceous as vertex; frons irregularly reticulate-coriaceous and hairy in upper half and along eyes, smooth and bare medially in lower half, with a strong medial line from anterior ocellus to antennal insertions. Head from in front 1.2 times wider than high; malar space strongly striated, 0.8 the height of an eye; OOL:POL:LOL = 10:11:5. Antenna (fig. 14) with scape fully as long as A2–A7 combined; A2 1.7 times longer than wide, slightly longer than A3 which is 1.6 times longer than wide, as wide as A2, slightly longer than A4 which is 1.2 times longer than wide.

Mesosoma 1.3 times longer than wide and about as high as wide. Sides of pronotum rather shiny, reticulate. Mesoscutum rather densely hairy, reticulate-coriaceous, with notaui indicated posteriorly. Scutellum 0.4 as long as mesoscutum, almost smooth, with a few punctures and hairs. Metanotum with a very short and blunt medial tooth not above level of scutellum (fig. 15).

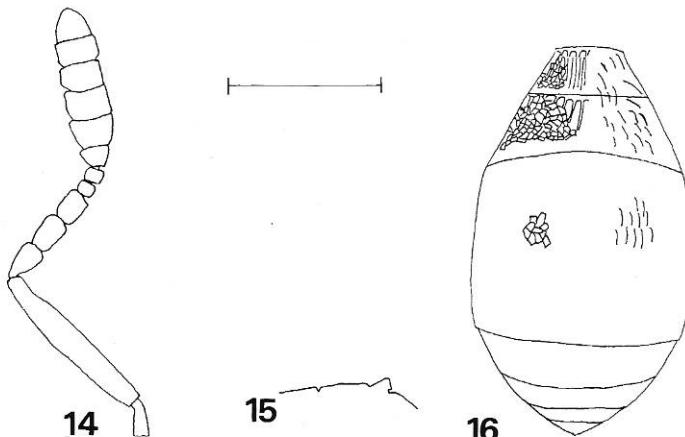
Fore wing very narrow, hardly reaching middle of propodeum.

Metasoma (fig. 16) 1.2 times longer than head and mesosoma combined, 1.2 times wider than thorax, rather densely and uniformly hairy. T1 rather convex dorsally, fully twice as wide as long, finely longitudinally striated, striae obliterated by rugosity laterally.

T2 with short longitudinal carinae, reaching slightly more than half of length medially, laterally reticulate-coriaceous. T3 distinctly reticulate, rather shiny, almost 1.2 times wider than long. T4 with finer reticulation, T5–T7 with microsculpture and some punctures.

Male. Unknown.

Runs to *T. autumnalis* (Thomson, 1859) in Hellén's (1971) key, but this species has no longitudinal line on frons and almost circular metasoma. *T. microspinus* runs to *Hoplogryon bacilliger* Kieffer, 1908 and *H. sectigena* Kieffer, 1908 in Kieffer's (1926) key, but both differ from *microspinus* in having A3–A4 equal, each as long as wide. Furthermore, *bacilliger* has vertex sharp, and *sectigena* has malar space without striae. *Trimorus microspinus* is also rather similar to *T. punctulator* (Ruthe, 1859) and to *T. wollastonae* Graham, 1984, but both these species have scutellum sculptured as mesoscutum, A3–A4 are more elongate in *punctulator* than in *microspinus*, cf. Petersen (1956), and scutellum of *microspinus* is much shorter than that of *wollastonae* (cf. Graham 1984).



Figs. 14–16. *Trimorus microspinus* sp. n. ♀: 14 – antenna, 15 – metanotum, lateral view, 16 – metasoma, dorsal view (reference bar 0.25 mm).

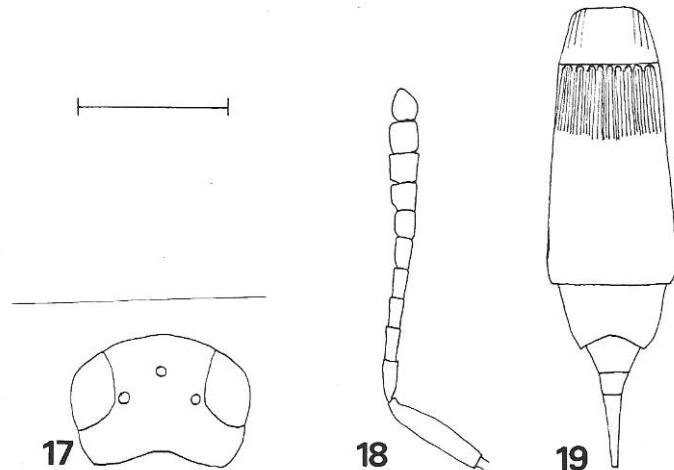
#### Scelionidae, Telenominae

##### *Telenomus ilione* sp. n.

Holotype ♀, Norway (EIS 28), AK, Oslo, Østensjøvannet, 22.VIII.–30.IX.1995, Malaise trap in forest edge, leg. M. Falck (ZMUC).

Female. Body length 1.4 mm. Colour black; apical half of pedicel yellowish; trochanters, femora apically, both ends of tibiae, and tarsi entirely reddish.

Head very slightly wider than thorax, from above (fig. 17) 1.6 times wider than long, finely reticulate-coriaceous, frons somewhat smoother, with a distinct depression above antennal insertions, occipital carina wanting. Antenna (fig. 18) with A2 one and a third times longer than A3 which is more than twice as long as wide, slightly longer than A4; A4–A5 equal, each twice as long as wide; A8–A10 each as long as wide; A11 hardly longer than A10.



Figs. 17–19. *Telenomus ilione* sp. n. ♀: 17 – head, dorsal view, 18 – antenna, 19 – metasoma, dorsal view (reference bar 0.25 mm).

Mesosoma almost 1.2 times wider than high; mesoscutum evenly reticulate-coriaceous, without notauli, scutellum smooth, with some sparse punctures.

Forewing almost clear, hardly reaching apex of gaster; postmarginalis about 2.2 times longer than stigmalis, marginal cilia short. Hind wing with marginal cilia about 0.3 the width of wing.

Metasoma (fig. 19) longer than head and mesosoma combined (4:3), 0.75 times as wide as thorax. T1 smooth except for a few striae laterally; T2 one and two-thirds times longer than wide, striated to one-third of length, rest of tergite with uneven surface to three-fourths of length; T3 almost smooth; apical tergites forming a long, upturned tail.

Male. Unknown.

Rather similar to *T. promachivorus* (Gahan, 1924) and *T. benefactor* (Crawford, 1911), but these two species have more transverse head and less slender antennae than *ilione* sp. n. (cf. Crawford 1911 and Kozlov & Kononova 1983). *T. benefactor* and another similar species, *T. lopicida* Silvestri, 1932, also differ from *ilione* sp. n. in having a hump on T1 (cf. Masner 1976 and Kozlov & Kononova 1983).

#### Acknowledgements

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