

# On six new or little known species of Platygastriinae (Hymenoptera: Platygastriidae)

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**Samenvatting.** Over zes nieuwe of weinig bekende Platygastriinae (Hymenoptera: Platygastriidae) *Synopeas goengeti* sp. n. (♀) en *S. tropicus* sp. n. (♀) worden beschreven uit Oeganda, *S. varipes* (Harrington, 1899) (♀, ♂) uit Canada wordt herbeschreven, en *Leptacis larsovehanseni* sp. n. (♂) uit Mexico, *L. breisteini* sp. n. (♀) uit Noorwegen, en het wijfje van *L. nice* (Walker, 1835) worden beschreven.

**Résumé.** Sur six espèces de Platygastriinae nouvelles ou peu connues (Hymenoptera: Platygastriidae) *Synopeas goengeti* sp. n. (♀) et *S. tropicus* sp. n. (♀) de l'Ouganda sont décrits, *S. varipes* (Harrington, 1899) (♀, ♂) du Canada est redécrit, et *Leptacis larsovehanseni* sp. n. (♂) du Mexique, *L. breisteini* sp. n. (♀) de la Norvège, et la femelle de *L. nice* (Walker, 1835) sont décrits.

**Key words:** Uganda - Canada - Mexico - Norway - Hymenoptera - Platygastriidae - new species - redescriptions

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## *Synopeas goengeti* sp. n. (Figs. 1-4)

Holotype ♀, Uganda, Kibale Forest, Toro District, 2.III.1973. H. Gønget leg. (Zoological Museum, University of Copenhagen).

**Female.** Body length 1.0 mm. Black, A1-A6, mandibles, most of fore legs, basal half of middle and hind tibiae, and segments 1-4 of all tarsi dark reddish, rest of antennae and legs darker.

**Head** entirely reticulate, in dorsal view (fig. 1) about 1.6 times wider than long, almost 1.2 times wider than thorax; occiput with a weak and incomplete carina. Head in frontal view 1.2 times wider than high; malar space 0.3 the height of the eye; OOL:POL:LOL = 3:18:8. Antenna (fig. 2).

**Mesosoma** about 1.5 times longer than wide and almost 1.2 times higher than wide. Sides of pronotum reticulate and hairy except along lower and hind margins. Mesoscutum evenly reticulate (as head) and covered with sparse hairs; notauli very faintly indicated posteriorly, mid lobe slightly extended into a dark, smooth and rounded plate covering base of scutellum (somewhat destroyed by pin); scuto-scutellar grooves with few long hairs. Mesopleurae smooth. Scutellum (fig. 3) smooth medially, laterally with faint sculpture and somewhat hairy, at about level of mesoscutum, posteriorly without a spine but in lateral view with a short semitransparent tubercle. Metapleurae with dense silvery pilosity except along anterior margin. Propodeal carinae fused.

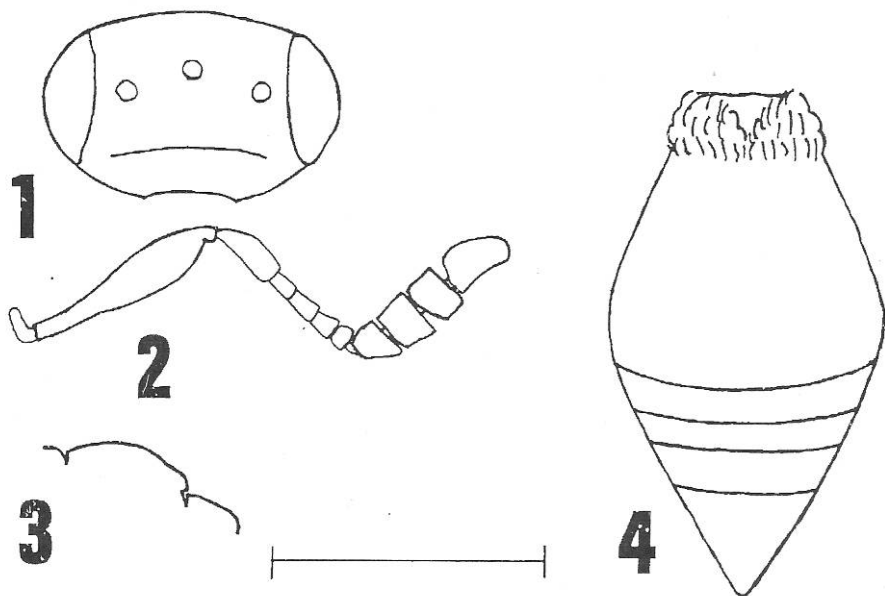
**Forewing** clear, overreaching gaster but wing only 0.8 the length of whole body, 2.8 times longer than wide; marginal cilia extremely short. Hindwing about 6.2 times longer than wide; marginal cilia hardly half the width of wing.

**Metasoma** (fig. 4) longer than mesosoma (19:15), slightly wider than this, 1.3 times wider than high. T1 and junction of T1 and T2 with dense silvery pubescence. T2 smooth, with some very faint microsculpture along hind margin. T3-T5 with more widespread microsculpture and some fine and rather superficially implanted hairs. T6 entirely microsculptured.

**Male.** Unknown.

**Comparative remarks.** Distinctly differs from other species of *Synopeas* s. str. hitherto known from the Afrotropical region: *S. bicolor* Sundholm, 1970 is brighter coloured, its head twice as wide as long and A7 longer than wide; the two other *Synopeas* species described by Sundholm (1970) have a scutellum much different from *S. goengeti* sp. n.; *S. bifoveatus* (Kieffer, 1912) and *S. congoana* (Risbec, 1958) have antennal structure different from *S. goengeti* sp. n. (cf. Kieffer 1926, Risbec 1958); *S. monticola*

(Kieffer 1910) is brighter coloured and has longer spine of scutellum than that in the new species; *S. paolii* Fouts, 1934 has more slender A4-A7, more transverse head, and it is brighter coloured than *S. goengeti* sp. n. (cf. Fouts 1934). The name is formed from the personal name of the collector, Hans Gønget.



Figs. 1-4. *Synopeas goengeti* sp. n. ♀: 1 - head, dorsal view; 2 - antenna; 3 - scutellum, lateral view; 4 - metasoma, dorsal view (reference bar 0.25 mm).

*Synopeas tropicus* sp. n. (Figs. 5-7)

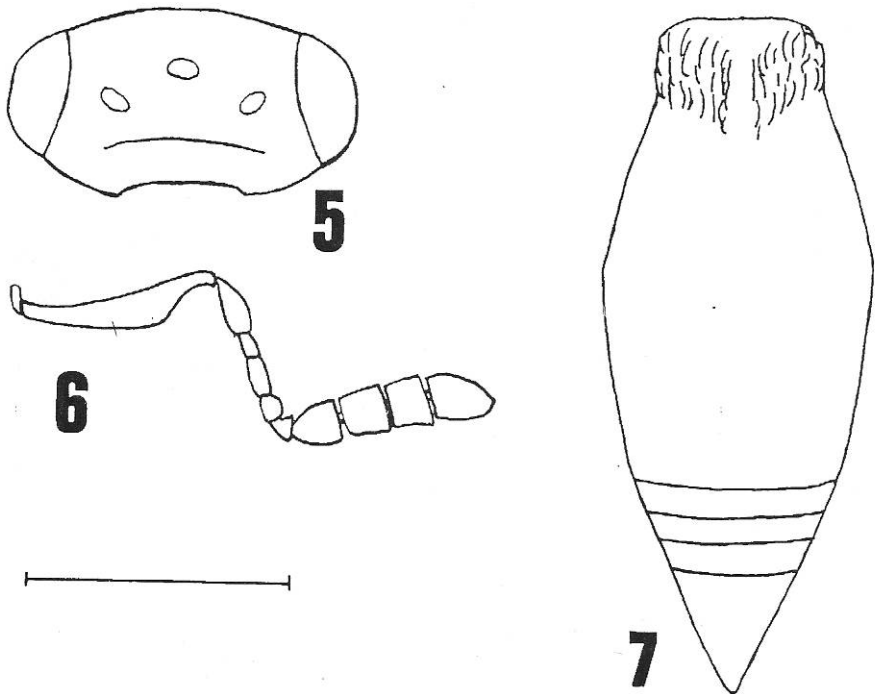
Holotype ♀, Uganda, Kisubi, 26.XI.1972. H. Gønget leg. (Zoological Museum, University of Copenhagen).

**Female.** Body length 1.1 mm. Black, most of fore legs, basal part of middle and hind tibiae, and segments 1-4 of all tarsi dark reddish, A1-A6, mandibles and rest of legs somewhat darker.

**Head** in dorsal view (fig. 5) 2.0 times wider than long, almost 1.2 times wider than thorax; occiput reticulate, with a weak and incomplete carina; vertex and frons reticulate-coriaceous, frons with a faintly impressed longitudinal line medially. Head in frontal view one and a third times wider than high; malar space 0.4 the height of an eye; OOL:POL:LOL = 5:17:8. Antenna (fig. 6).

**Mesosoma** 1.4 times longer than wide and almost 1.2 times higher than wide. Sides of pronotum finely reticulate-coriaceous and hairy, except along hind margin. Mesoscutum rather sparsely hairy, finely reticulate-coriaceous, notauli absent, mid lobe posteriorly slightly prolonged into a smooth, dark and rounded plate which covers the base of scutellum; scuto-scutellar grooves with dense hairs. Mesopleurae smooth. Scutellum much destroyed by pin, with fine sculpture and hairs, hardly with spine. Metapleurae and propodeum as in *S. goengeti* sp. n.

**Forewing** clear, reaching apex of gaster, 2.6 times longer than wide; marginal cilia absent. Hindwing 5.3 times longer than wide; marginal cilia about 1/3 of the wing width.



Figs. 5-7. *Synopeas tropicus* sp. n. ♀: 5 - head, dorsal view; 6 - antenna; 7 - metasoma, dorsal view (reference bar 0.25 mm).

**Metasoma** (fig. 7) 1.1 times longer than head and mesosoma combined, narrower than thorax (11:12) and strongly convex, 1.2 times higher than wide. T2 smooth except along hind margin. T3-T6 with microsculpture except along anterior margins, with a few minute hairs.

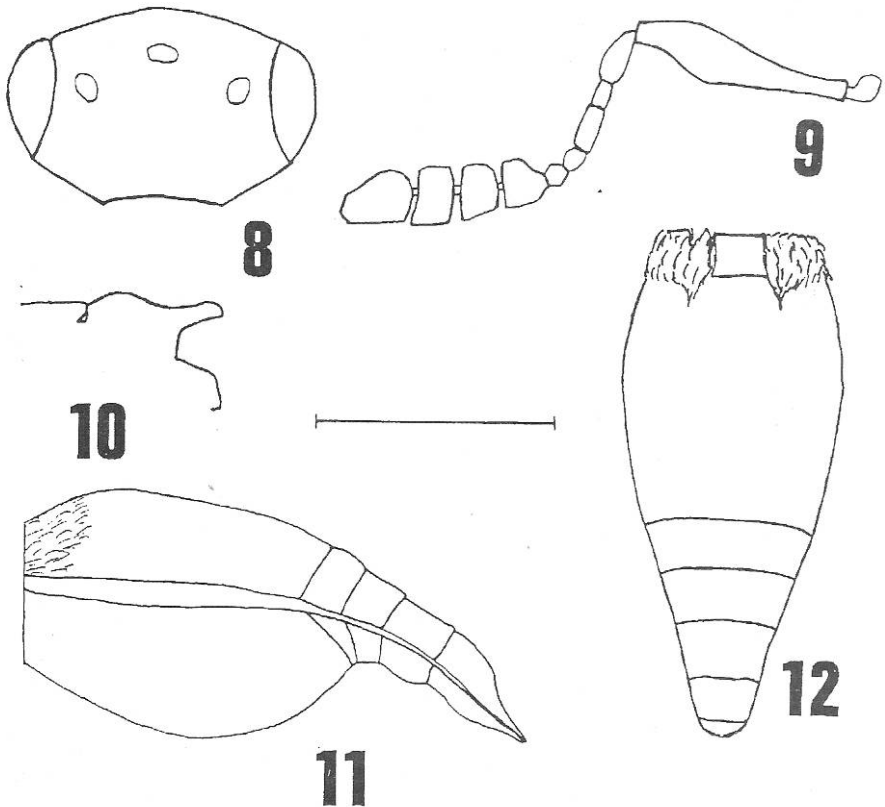
**Male.** Unknown.

**Comparative remarks.** From the species compared to *S. goengeti* sp. n. above, *S. tropicus* sp.n. differs in the following characters: in *S. tuberosus* Sundholm, 1970 and *S. bicolor* Sundholm, 1970 metasoma not higher than wide; in *S. nigerrimus* Sundholm, 1970 (only male known) marginal cilia on Forewings present; in *S. congoana* (Risbec, 1958) antennal structure is much different; *S. monticola* (Kieffer 1910) and *S. seychellensis* (Kieffer 1912) are distinct by different antennal structure, metasoma hardly longer than mesosoma, and pale legs. In *S. paolii* Fouts, 1934 metasoma only 1.1 times as long as wide, antennae and legs golden yellow. *S. tropicus* sp. n. is closely similar to the N. W. European species *S. hyllus* (Walker 1835), the body appendages in which are entirely black, occiput evenly rounded, body size larger (cf. description of *S. hyllus* in Vlug (1985) and the material mentioned by Buhl (1994)).

***Synopeas varipes* (Harrington, 1899) (Figs. 8-12)**

Lectotype ♀, Canada, Hull, 7.VIII.1897. Paralectotype ♂, Hull, 21.VIII.1897 (CNC, Ottawa — design. Masner in Sarazin, 1986). Additional material. ♀, "N. Sawler, N. S., July 2 1951. K. H. Sanford. Taken on Apple"; ♀, "Kouchibouguac N. P. N. B.

9.VIII.1977. S. J. Miller. Code-5805G" (CNC, Ottawa). ♀, Mexico, Oaxaca, Candelaria Loxicha, 8-11.I.1995. L. O. Hansen leg. (Zoological Museum, University of Copenhagen).



Figs. 8-12. *Synopeas varipes* (Harrington): 8 - head, dorsal view (lectotype ♀); 9 - female antenna; 10 - scutellum, lateral view (lectotype ♀); 11 - metasoma, lateral view (lectotype ♀); 12 - metasoma, dorsal view (paralectotype ♂) (reference bar 0.25 mm).

**Lectotype female.** Body length 1.1 mm. Brownish black, legs brown.

**Head** uniformly and distinctly reticulate, without occipital carina, in dorsal view (fig. 8) 1.7 times wider than long, just slightly wider than thorax; head in frontal view 1.1 times wider than high; malar space ca. 1/3 the height of the eye; OOL:POL:LOL = 3:22:10. Antenna (fig. 9) missing in the lectotype, the figure is based on a specimen from Kouchibouguac.

**Mesosoma** slightly higher than wide (14:13) and one and a quarter times longer than wide. Pronotum laterally and mesoscutum uniformly reticulate-coriaceous, with some fine hairs; notauli indicated in posterior two thirds; mid lobe prolonged, reaching scutellum in a fine point. Scuto-scutellar grooves rather wide and deep, covered with few long hairs. Mesopleurae smooth. Scutellum (fig. 10) densely haired, without

semitransparent parts. Metapleurae and sides of propodeum smooth and bare in anterior third, rest with rather long and sparse white pilosity. Propodeal carinae fused.

**Forewing** clear, slightly overreaching gaster, shorter than whole body (35:44), 2.5 times longer than wide; marginal cilia hardly present. Hindwing 5.6 times longer than wide; marginal cilia hardly 0.4 the width of the wing.

**Metasoma** (fig. 11) narrower than mesosoma (11:13), as long as head and mesosoma combined, and as high as wide. T2 smooth, T3–T4 with microsculpture in posterior half; T5–T6 entirely microsculptured; T6 with some fine hairs at apex. T3–T5 each strongly transverse, T5 hardly half as long as wide at base; T6 almost 1.4 times longer than wide.

**Paralectotype male.** Antenna with A9 one and 2/3 times longer than wide, flagellar pubescence half as long as width of segments. Metasoma (fig. 12) as long as mesosoma, 1.1 times wider than high, pointed and somewhat downcurved at apex, but not forming a tube as in female. Hind margin of T2 and T3–T7 entirely sculptured. The rest of characters mostly as in female.

**Variability.** Body length in specimens from N. Sawler and from Mexico 0.9 mm. A specimen from Mexico is darkest, black, two other examined specimens also somewhat darker than types. The scape and part of the pedicel are coloured as legs. As mentioned by Fouts (1924), the original description of *Synopeas (Sactogaster) varipes* is insufficient, and the above lectotype redescription is intended to fill this gap.

***Leptacis larsovehanseni* sp. n.** (Figs. 13–16)

Holotype ♂, Mexico, Oaxaca, Candelaria Loxicha, 8–11.I.1995. L. O. Hansen leg. (Zoological Museum, University of Copenhagen).

**Male.** Body length 1.1 mm. Black, A1–A2 and legs brownish yellow, mandibles and thickened parts of hind femora and tibiae slightly darker; T1 dark brown.

**Head** rather shiny, reticulate, transversely so in lower half of frons; head just slightly wider than thorax, from above (fig. 13) 1.8 times wider than long, without occipital carina; head in frontal view one and a quarter times wider than high, malar space about 1/3 the height of an eye; OOL:POL:LOL = 3:19:7. Antenna (fig. 14) with hairs of flagellum 1.5–2.0 times longer than the width of segments.

**Mesosoma** slightly higher than wide (13:12) and 1.6 times longer than wide. Sides of pronotum with weak reticulation and sparse hairs in upper half, rest bare and with very faint longitudinal microsculpture. Mesoscutum with sparse hairs, uniformly and weakly reticulate-coriaceous, without notauli; hind margin triangularly prolonged but not semitransparent medially, laterally with hairs covering scuto-scutellar grooves. Mesopleurae with faint longitudinal striation just below tegulae, rest smooth. Scutellum (fig. 15) sculptured and hairy almost as mesoscutum, spine overreaching anterior margin of T1, semitransparent brownish. Metapleurae and sides of propodeum with white pilosity in posterior third, rest smooth and bare. Propodeal carinae long and fused, areas lateral of carinae almost smooth, with a few hairs.

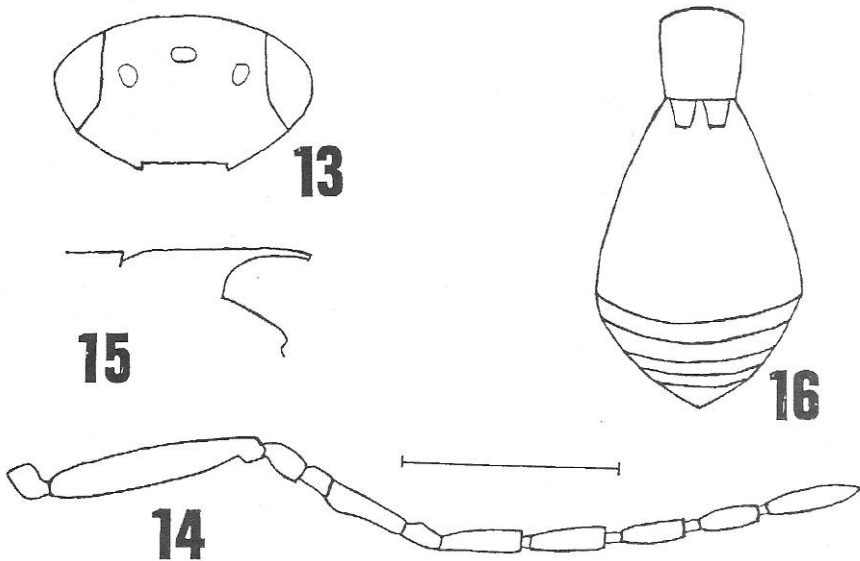
**Forewing** faintly brownish, as long as whole body, 2.9 times longer than wide; marginal cilia 1/4 of the wing width. Hindwing with two frenal hooks, 9.5 times longer than wide; marginal cilia as long as width of wing.

**Metasoma** (fig. 16) 0.8 times as wide as mesosoma and as long as this; T1 with two weak longitudinal keels in posterior 0.6, lateral of keels rather densely covered with short white pubescence, anterior 0.4 of tergite smooth and elevated. Basal foveae of T2 hairy, rest of tergite almost smooth; T3–T7 with weak microsculpture and some minute hairs.

**Female.** Unknown.

**Comparative remarks.** American species *L. aliena* Fouts, 1927 from the USA has different antennal structure, cf. Fouts (1927); *L. americana* (Ashmead, 1887) and *L. gahani* Fouts, 1924 from the USA have mesonotum squarely excised posteriorly and

spine of scutellum not sharply pointed apically, and female abdomen of *L. americana* (male unknown) is wider than thorax (in *L. gahani* flagellar hairs longer than in *L. larsovehanseni* sp. n. — cf. Fouts 1924); *L. asclepius* (Walker, 1839) from Brazil has a long and slender petiole; in *L. bisecta* (Brues, 1910) from Brazil head twice as wide as long and mesonotum elevated posteriorly; in *L. brasiliensis* (Brues, 1910) from Brazil head twice as wide as long, differently shaped scutellum and darker legs than *L. larsovehanseni* sp. n.; *L. erythropus* Ashmead, 1896 from the W. Indies has A2 longer than A4; in *L. grenadensis* (Ashmead, 1895) from the W. Indies hind legs black, parts of head slightly lighter and antennae except club brownish-yellow (cf. Kieffer 1926); *L. longipes* (Ashmead, 1887) and *L. longispina* Fouts, 1927 from USA differ from *L. larsovehanseni* sp. n. by the shape of antennae (cf. Fouts 1924, 1927); in *L. nigricornis* (Ashmead, 1894) from the W. Indies OOL larger than in *L. larsovehanseni* sp. n., it is differently sculptured and is larger (2 mm); in *L. pallipes* Fouts, 1924 from the USA head twice as wide as long, without visible sculpture (cf. Fouts 1924). The name is formed from the personal names of the collector, Lars Ove Hansen.



Figs. 13-16. *Leptacis larsovehanseni* sp. n. ♂: 13 - head, dorsal view; 14 - antenna; 15 - scutellum, lateral view; 16 - metasoma, dorsal view (reference bar 0.25 mm).

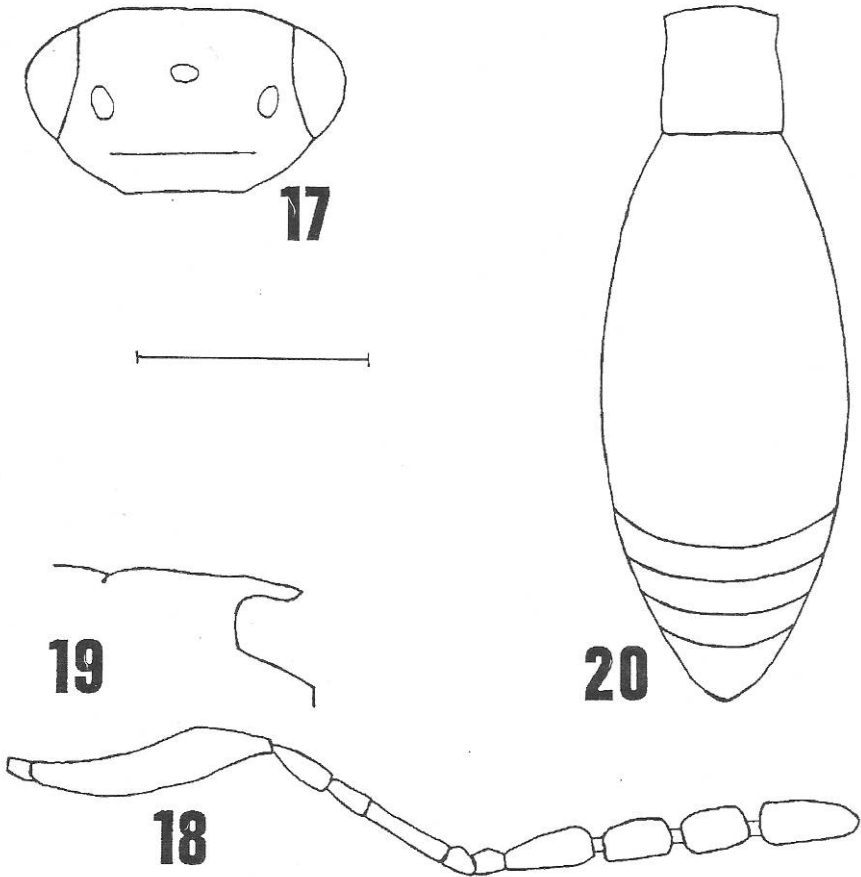
***Leptacis breisteini* sp. n.** (Figs. 17-20)

Holotype ♀, Norway (EIS 97), NTI, Mosvik, Kilen, 14.VIII.-7.IX. 1994, Malaise trap leg. Norwegian Institute for Nature Research, Trondheim. Paratype ♀, 25.VII.-14.VIII.1994, label data as in holotype (Zoological Museum, University of Copenhagen).

**Female.** Body length 1.3-1.5 mm. Black, most of A1-A6, mandibles, legs and scutellar spine bright reddish.

**Head** in dorsal view (fig. 17) 1.8 times wider than long, as wide as thorax, with a weak occipital carina, evenly reticulate. Head in frontal view almost 1.2 times wider than

high; malar space  $2/7$  the height of the eye; OOL:POL:LOL 3:26:11. Antenna (fig. 18) with dense pubescence ca. 0.4 the width of segments as well as with some longer outstanding hairs.



Figs. 17-20. *Leptacis breisteini* sp. n. ♀: 17 - head, dorsal view; 18 - antenna; 19 - scutellum, lateral view; 20 - metasoma, dorsal view (reference bar 0.25 mm).

**Mesosoma** 1.2 times higher than wide and 1.6 times longer than wide. Sides of pronotum with faint reticulation except along hind margin, in upper half with sparse hairs. Mesoscutum with weak reticulation and sparse hairs, notauli weak but nearly complete. Mesopleurae dull and with faint longitudinal striation in upper third, rest smooth. Scutellum (fig. 19) triangular in dorsal view, 1.3 times longer than wide, moderately hairy and with faint microsculpture, spine not reaching hind margin of propodeum. Metapleurae smooth and bare except in posterior 0.4. Propodeal carinae clearly separated, parallel, area in between smooth and shiny.

**Forewing** as long as whole body, 2.5 times longer than wide, almost clear but densely hairy; marginal cilia 1/5 of the wing width. Hindwing 7.1 times longer than wide; marginal cilia 2/3 the width of wing.

**Metasoma** (fig. 20) slightly longer than head and mesosoma combined, 0.8 times as wide as thorax. T1 with two weak longitudinal keels, area in between smooth and bare, areas lateral of keels as well as the short basal foveae of T2 with short whitish pubescence, rest of T2 smooth and bare except hind margin which is covered by reticulate microsculpture, T3–T6 covered almost entirely by such microsculpture, hardly hairy.

**Male.** Unknown.

The specimens were caught in a spruce forest area used for an ecological fragmentation experiment, in stations 14 (paratype) and 16 (holotype) in the area for fine grained fragmentation (cf. Tømmerås & Breistein 1995). **Comparative remarks.** *L. breisteini* sp. n. is a remarkable species on account of the long and slender metasoma, in this respect it is similar to Afrotropical *L. africana* Masner, 1960 but this species is much smaller (0.75 mm), with less slender A7–A10 and a differently shaped scutellar spine (cf. Masner 1960). Among Palaearctic species *L. breisteini* sp. n. is most similar to *L. bitensis* Kieffer, 1926, but this species has a much longer scutellar spine, shorter metasoma, and wanting notauli (cf. Kieffer 1926, Kozlov 1978). Named after Ms. June Breistein of the Norwegian Institute for Nature Research who supplied me with material for examination.

*Leptacis nice* (Walker, 1835) (Fig. 21)

Material examined. ♀, Norway (EIS 28), AK, Oslo, Østensjøvannet, 22.VIII.–30.IX.1995, Malaise trap at a forest edge, M. Falck leg. (Zoological Museum, University of Oslo).

**Female.** Body length 2.3 mm. Head 1.75 times wider than long. Antenna (fig. 21) with flagellar pubescence about 1/3 the width of segments. Metasoma about as long as head and mesosoma combined, slightly wider than thorax (12:11). T1 1.4 times longer than wide, metasoma behind T1 1.5 times longer than wide. The rest of characters essentially similar to those in lectotype male as described by Vlug (1985). Only two males (collected near London) have been hitherto known (cf. Vlug & Graham 1984). The discovery of a female argued against Kozlov's (1978) suggestion as to possible identity of *L. nice* and *L. tipulae* (Kirby, 1798) and consequent synonymy.

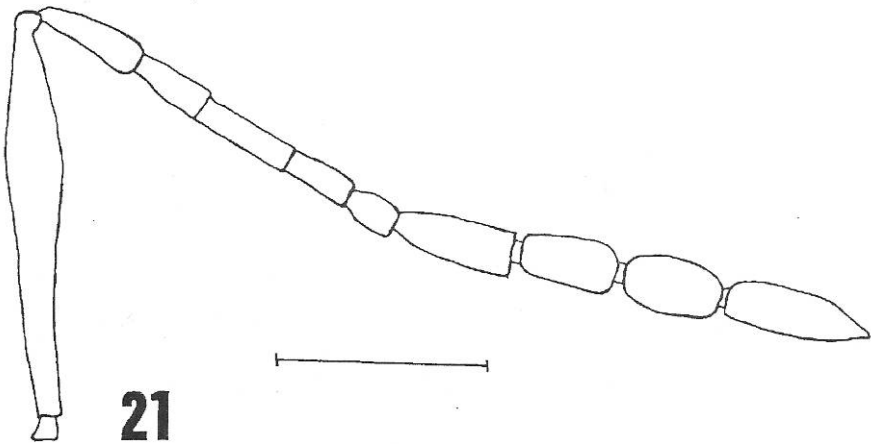


Fig. 21. Antenna of *Leptacis nice* (Walker, 1835) ♀ (reference bar 0.25 mm).



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