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Three new species of genus *Platygaster* LATREILLE collected by the Danish "Noona Dan" expedition 1961–62 (Insecta: Hymenoptera: Proctotrupoidea: Platygastridae)

With 14 Figures

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Abstract. Three new species of genus *Platygaster* LATREILLE namely, *P. noonae* and *P. rugosiscutellum* from the Bismarck Archipelago, and *P. striatitergitis* from the Philippines, have been described.

Introduction

In despite of a rather rich catch of Proctotrupoidea by the "Noona Dan" expedition April 1961 – December 1962 to the Philippines, the Bismarck Archipelago and the Solomon Islands, specimens of the genus *Platygaster* LATREILLE, 1809 are very scarce in the material (preserved mainly in alcohol in the Zoological Museum, University of Copenhagen). This is very surprising, as *Platygaster* is a very diverse genus in temperate regions (perhaps about 200 species in Europe). Apart from the "Noona Dan" material I have, however, also examined a lot of unsorted Hymenoptera collected by Malaise trap in Botswana, Africa, and in this material Platygastridae was entirely absent. Thus, it seems that generally, this family – or at least *Platygaster* (the related genera *Synopeas* FOERSTER and *Leptacis* FOERSTER are not rare in the "Noona Dan" material) – is much better represented at higher latitudes.

Only five specimens of *Platygaster* were present in the "Noona Dan" material. They represent three species, all new to science, described below. In connection with this study the five specimens have been dried and mounted on card points.

Platygaster noonae spec. nov. (Figs. 1–6)

Material examined: Holotype ♀; Australasian region, Bismarck Archipelago, New Ireland, Lemkamin, 22. IV 1962. Paratypes: 1 ♂, same data as holotype; 1 ♀, Bismarck Archipelago, New Britain, Komgi, 1.000 m, 14. V 1962. All "Noona Dan" expedition leg. and preserved in the Zoological Museum, University of Copenhagen.

Description of holotype ♀: Body length 0.8 mm. Colour (including antennae) reddish brown, head slightly darker; mandibles and legs (including coxae) brownish yellow.

Head from above (Fig. 1) twice as wide as long, slightly wider than thorax (9:8), shiny; occiput reticulate; vertex faintly reticulate; frons almost smooth. Head from front about 1.2 times as wide as high. Genae about two-thirds the length of an eye; malar space half the height of an eye; OOL : POL : LOL = 6 : 11 : 5. Head virtually bare except along mouthparts. Antenna (Fig. 2) with very short pubescence only; length of scape 0.8 times the height of head; pedicel as long as A3–A4 combined, 1.5 times

longer than wide; A3 very small; A4 distinctly wider than A3 and wider than A5, about as wide as pedicel, as long as wide; A5 as long as wide; A6–A9 each at most slightly longer than wide; apical segment about 1.5 times longer than A9.

Thorax as high as wide and 1.25 times longer than wide. Pronotum hairy, almost smooth. Mesoscutum with sparse hairs and faintly punctured, anteriorly with admedian lines; notauli complete but weak, somewhat converging but not meeting posteriorly; mid lobe slightly prolonged and upturned, covering base of scutellum. Mesopleuron smooth. Scutellum (Fig. 3) almost smooth, with rather dense hairs, weakly convex, at level of mesoscutum. Metapleuron with short, white pubescence; sides of propodeum reticulate, almost bare. Propodeal keels parallel, well separated; area in between smooth and shiny.

Fore wing clear, reaching beyond apex of gaster by about one-quarter the length of gaster, 2.1 times as long as wide. Marginal cilia short. Hind wing about 6.7 times as long as wide, with two frenal hooks. Marginal cilia about two-fifths the width of wing.

Gaster (Fig. 4) 2.3 times longer than wide, as long as head and thorax combined, 1.67 times wider than high and narrower than thorax (3:4). T1 about 1.5 times wider than long, faintly crenulated and with a few hairs; T2 with a few striae in basal foveae to about two-fifths of length, rest of tergite almost smooth; T3–T6 combined slightly shorter than T2, shiny, with some rather superficially implanted hairs.

Description of paratype ♀: Body length 0.7 mm. Colour (including antennae) dark brown, head black; mandibles and legs (including coxae) yellowish brown. Notauli even weaker than in holotype but still complete. Gaster shorter than head and thorax combined (5:7) and only 1.67 times longer than wide. In rest of characters very similar to holotype.

Description of paratype ♂: Body length 0.8 mm. Colour as in paratype ♀. Antenna (Fig. 5) with slightly longer pubescence and A4 thicker than in ♀. Gaster (Fig. 6) shorter than head and thorax combined (12:17), twice as long as wide but more rounded apically than in ♀, T3–T7 combined only 0.6 times as long as T2. Rest of characters essentially as in ♀.

Etymology: Named after the “Noona Dan” expedition.

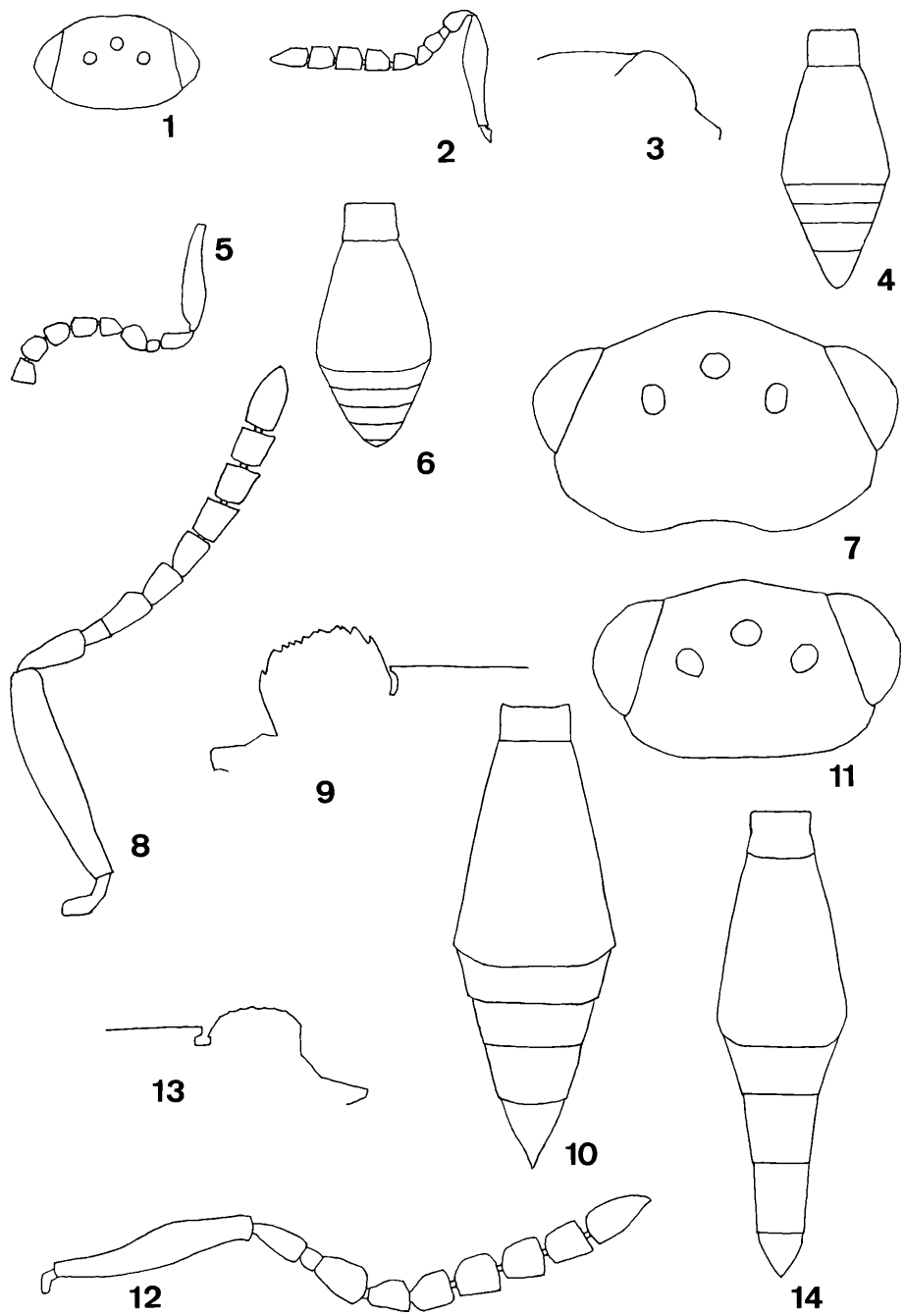
Affinities: Differs from most of the very small *Platygaster* species in having notauli complete though weak. Perhaps most similar to the North American species *P. pentatoma* (ASHMEAD, 1893) or *P. astericola* (ASHMEAD, 1893), but the first of these is brighter coloured (female) and has A5–A7 1.5 times as long as wide (male); the last mentioned has scutellum highly convex, pedicel twice as long as wide (female) and A4 not widened (male). Both species as well as the similar *P. rubi* (ASHMEAD, 1893) and *P. relativa* FOUTS, 1924 have notauli incomplete, cf. FOUTS (1924).

Platygaster rugosiscutellum spec. nov. (Figs. 7–10)

Material examined: Holotype ♀; Australasian region, Bismarck Archipelago, New Ireland, Lemkamin, 22. IV 1962, “Noona Dan” expedition leg. Preserved in the Zoological Museum, University of Copenhagen.

Description of holotype ♀: Body length 2.4 mm. Colour black; antennal segments 1–3 and legs brownish yellow; mandibles, A4–A10, tegulae, and coxae reddish brown; gaster brown towards apex.

Head from above (Fig. 7) 1.7 times as wide as long, 1.25 times wider than thorax; occiput rather dull, finely and evenly reticulate; vertex somewhat shiny, with faint microsculpture; frons rather shiny, with traces of irregular punctation. Head from front 1.25 times as wide as high. Genae hardly as long as an eye; malar space about 0.6 times the height of an eye; OOL:POL:LOL = 6:11:5. Head somewhat hairy on genae and with a few long hairs around mouthparts, the rest virtually bare. Antenna (Fig. 8) with short pubescence; scape with a few inconspicuous longer hairs. Scape shorter than height of head



Figs. 1–6: *Platygaster noonae* spec. nov. 1–4: holotype ♀ – 1: head from above – 2: antenna – 3: scutellum in lateral view – 4: gaster in dorsal view. 5–6: paratype ♂ – 5: antenna (last segment missing) – 6: gaster in dorsal view.
Figs. 7–10: *Platygaster rugosiscutellum* spec. nov., holotype ♀. 7: head from above – 8: antenna – 9: scutellum in lateral view – 10: gaster in dorsal view.
Figs. 11–14: *Platygaster striatitergitis* spec. nov., holotype ♀. 11: head from above – 12: antenna – 13: scutellum in lateral view – 14: gaster in dorsal view.

(3:4); pedicel as long as A3–A4 combined, twice as long as wide; A3 small; A4 about 1.5 times as long as wide, longer than A5; A5–A9 of about equal length; A5 distinctly, A9 barely longer than wide; A10 about 1.5 times longer than A9.

Thorax higher than wide (9:8) and 1.6 times as long as wide. Pronotum smooth and bare medially; sides of pronotum hairy, coriaceous in anterior half, smooth and shiny except for a few punctures in posterior half. Mesoscutum bare except along posterior margin, faintly coriaceous, notauli complete, mid lobe hardly touching base of scutellum in an acute point, scuto-scutellar grooves narrow. Mesopleuron with extensive longitudinal striation. Scutellum (Fig. 9) much above level of mesoscutum, almost quadrangular in lateral view, with strongly raised rugosity dorsally and with short and rather sparse hairs. Metapleuron and sides of propodeum dull and densely hairy; propodeal keels parallel, widely separated, area in between with a third, shorter longitudinal keel.

Fore wing almost clear, reaching apex of gaster, 3.0 times as long as wide. Marginal cilia short. Hind wing 5.6 times as long as wide, with two frenal hooks. Marginal cilia one-sixth the width of wing.

Gaster (Fig. 10) 2.25 times as wide as high, wider than thorax (9:8) and longer than head and thorax combined (25:18). T1 crenulated and with two stronger keels, twice as wide as long, with long hairs laterally. T2 striated in and between basal foveae to one-third of length, rest finely coriaceous and bare. T3–T6 combined slightly shorter than T2 (11:12), almost smooth; T3–T5 transverse, each with a row of hairs; T6 hairy, pointed at apex, about as long as wide at base. Ovipositor far exerted, half as long as gaster. Sternite 2 without a hump between hind coxae, without pubescence at base but with a row of conspicuous white hairs along lateral margins to three-fifths of length.

Etymology and affinities: The name “*rugosiscutellum*” refers to the sculpture of the scutellum which is most characteristic. The scutellar sculpture is somewhat similar in the NW-European species *P. virgo* DAY, 1971 and *P. vintheri* BUHL, 1994, but these species have scutellum evenly convex, and they differ from *P. rugosiscutellum* in many other respects, cf. DAY (1971) and BUHL (1994).

Platygaster striatitergitis spec. nov. (Figs. 11–14)

Material examined: Holotype ♀; Oriental region, Philippines, Palawan, Mantalingajan, Pinigisan, 600 m, 1.IX. 1961, “Noona Dan” expedition 1961–62 leg. Preserved in the Zoological Museum, University of Copenhagen.

Description of holotype ♀: Body length 2.2 mm. Colour black; A1–A3 and legs brownish yellow, mandibles, tegulae and coxae slightly darker; A4–A10 and sixth tergite brownish.

Head from above (Fig. 11) 1.8 times as wide as long; occiput posteriorly more or less longitudinally striated, occiput anteriorly and vertex almost smooth; frons faintly punctured and with trace of a longitudinal line from anterior ocellus towards clypeus, lower third of frons transversely striated. Head from front wider than high (9:7). Genae about two-thirds the length of an eye; malar space hardly one-third the height of an eye; OOL:POL:LOL = 4:12:5. Head with a few hairs on genae and around mouthparts, rest virtually bare. Antenna (Fig. 12) with short pubescence; scape with a few inconspicuous longer hairs. Scape shorter than height of head (11:14); pedicel about as long as but thinner than A4; A3 small; A4 thick; A5 shorter and thinner than A4, A5–A9 each not or hardly longer than wide; apical segment about 1.5 times longer than A9.

Thorax 0.8 times as wide as head, higher than wide (17:14) and 1.6 times as long as wide. Pronotum medially smooth and bare; sides of pronotum coriaceous and hairy in anterior half, in posterior half smooth and almost bare. Mesoscutum with fine and sparse hairs, anteriorly with traces of admedian lines; notauli complete; mid lobe ending in an acute point not reaching scutellum; scuto-scutellar grooves narrow. Mesopleuron longitudinally striated in upper half except anteriorly. Scutellum (Fig. 13) strongly convex, above level of mesoscutum, with somewhat raised rugosity, finely and sparsely hairy. Metapleuron and sides of propodeum with dense, whitish pilosity. Propodeal keels parallel, well separated, area in between smooth and shiny.

Fore wing with yellowish tint, reaching middle of tergite 5, 2.5 times as long as wide. Marginal cilia short. Hind wing 4.0 times as long as wide, with two frenal hooks. Marginal cilia hardly one-fourth the width of wing.

Gaster (Fig. 14) 1.6 times as wide as high, as wide as thorax and longer than head and thorax combined (5:3). T1 crenulated, twice as wide as long, with short hairs laterally. T2 bare, striated in basal foveae almost to posterior margin of tergite, laterally and medially almost smooth. T3–T6 with fine hairs; T3–T5 longitudinally striated except along anterior and posterior margins, T6 almost smooth; T3 transverse, T4 hardly as long as basally wide, T5 distinctly longer than wide, T6 slightly longer than wide. First sternite with dense whitish pubescence; second sternite without a hump between hind coxae, without pubescence at base but with a row of white hairs at each side to half the length of sternite. Sternites 2–6 sculptured as the corresponding tergites.

Etymology and affinities: The name "*striatitergitis*" refers to the characteristically striated tergites 2–5. This species is rather similar to *P. rugosiscutellum* spec. nov. in several respects, especially in structure of thorax. The scutellum is, however, more evenly convex and weaker sculptured in *P. striatitergitis*. The two species are also rather different in shape of antennae and especially in shape of gaster. Among the species of *Platygaster* with long gaster, *P. striatitergitis* is a characteristic species on account of the colour in combination with the sculpture of gaster.

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