

AUSTRALIAN HYMENOPTERA PROCTOTRYPOIDEA.

No. 3.

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The families *Diapriidae*, *Belytidae*, and *Proctotrypidae*; with additions to the *Ceraphronidae* and *Scelionidae*.

Family PROCTOTRYPIDAE.

The old name is used, for the present, instead of *Serphidae*. The Australian representatives of the family do not appear to be numerous, as rather extensive collections made by the author, and others seen by him, have produced but five species, represented by seven specimens. One remarkable and distinct new genus is described, but the other new species fall into well-known genera.

Table of Australian genera.

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| (1) Mandibles small or absent; pronotum and postscutellum spined; scape abnormal; venation abnormal; stigma slender, lanceolate | <i>Acanthoserphus</i> , n. g. |
| Mandibles large; pronotum and postscutellum not spined; scape normal; venation normal; stigma large, semicircular | (2) |
| (2) Parapsidal furrows complete and distinct | <i>Disogmus</i> , Foerster |
| Parapsidal furrows incomplete, at the most indicated anteriorly ... | (3) |
| (3) Propleura striate | <i>Proctotrypes</i> , Latreille |
| Propleura not striate | (4) |
| (4) Oviduct of female filiform | <i>Cryptoserphus</i> , Kieffer |
| Oviduct of female not filiform | <i>Phaenoserphus</i> , Kieffer |

ACANTHOSERPHUS, n. g.

♂ ♀. Head, viewed from above, transverse: eyes occupying the whole length of the vertex, large; ocelli large, in a triangle, rather close together, and widely separated from the eyes; frons triangular, about as wide as greatest length, the antennae inserted in its middle, and separated from each other by a blunt erect tooth. Antennae 13-jointed in both sexes; scape rather stout, prolonged on its dorsal edge into a sharp point, this completely hiding the pedicel and covering base of first funicle joint, its outer edge also with a small sharp spur some distance from apex, this scarcely defined in the male:

pedicel inserted within the scape, short and stout; funicle joints long, in the male filiform, in the female slightly thickened distad. Maxillary palpi long and slender, 5-jointed, the first joint short; labials 3-jointed. Mandibles small, or absent (?). Pronotum short, situated far below the scutum (lateral aspect), with a large, stout, semi-erect, sharp horn on either side. Propleura not striate. Scutum with deep, complete, parapsidal furrows, these meeting caudad. Scutellum with a deep transverse groove at base. Postscutellum with a large semi-erect spine, this blunt at apex. Metanotum rugose. Petiole of abdomen very short; body of abdomen narrowed somewhat at base, compressed laterally; the male with two or three segments visible, the first occupying almost all of surface; the female with one segment only visible, produced into a long fleshy oviduct, this about as long as the abdomen. Legs long and slender, tarsal claws simple. Forewings ample; submarginal vein distant from the costa, the stigma slender, lanceolate; radial cell closed, long, over twice as long as greatest width; basal vein distinct, not attaining the submarginal; median and submedian veins distinct, the latter fading distad, the former curving upward and forming a rather short discoidal vein, this separated from a proximal prolongation of the radial vein by a short interruption; median vein with also at its apex a short vein curving downward, this giving off a false recurrent vein running almost parallel with the hind margin of the wing; another false recurrent vein runs from near discoidal vein almost to the wing apex; veins, except where otherwise stated, true, not brown lines or marks. Hindwings with a costal vein only.

A remarkable genus, widely separated from other genera of its family. The form of the scape, apparent absence of mandibles, spined pronotum and postscutellum, slender stigma, and well-developed venation readily distinguish it. *Type*.—The following species.

ACANTHOSERPUS ALBICOXA, n. sp.

♀. Black, shining, with a dull-yellowish patch involving the tegula; coxae white, also joints 9 and 10 (except apex of latter) of antennae; rest of antennae black, the scape and pedicel golden-yellow, also trochanters, femora, and tibiae; the tibiae faintly dusky, the tarsi fuscous. Body shining, smooth, with very scattered pin-punctures, the metanotum rugose. Forewings long and broad, uniformly darkly infuscate, the venation fuscous. Funicle joints long, rod-like, gradually shortening, the first longest, the tenth not twice as long as wide, the last joint one-third longer than preceding,

broadly rounded at apex. Length, 4.10 mm.; to end of oviduct, 6.30 mm.

♂. Like the female, but the yellowish patch on the thorax somewhat larger. Funicle wholly black, not widened toward apex, the tenth joint two and a half times as long as wide, the last joint pointed at apex. Length, 4.10 mm.

Hab.—Queensland: Kuranda, 1,200 ft. Described from two females and one male taken on decayed log in jungle, April 3, 1915 (A. P. Dodd).

It is possible that the oviduct is freely retractile, as before capturing the insects it was not noticed. *Type.*—I. 5087, South Australian Museum. A male and female on two tags, male and female heads, antennae, and wings on a slide.

DISOGMUS, Foerster.

Kieffer (1909) lists fifteen species, from Europe and North America.

DISOGMUS NIGERRIMUS, n. sp.

♀. Shining black; cephalic tibiae and all tarsi ferruginous. Thorax convex dorsad; scutum and scutellum smooth, shining, the metanotum coarsely rugose; parapsidal furrows deep and complete, almost joining caudad; scutellum with a deep groove separating it from scutum; metanotum with a deep transverse groove at base, this interrupted at meson, the sclerite nearly as long as the scutum. Petiole visible as a transverse line; abdomen compressed laterally, somewhat narrowed at base, as long as the thorax, striate at base; oviduct about as long as body of abdomen (the oviduct appears retractile, as in *Acanthoserphus*, and possibly in life it is withdrawn). Mandibles acute, edentate; maxillary palpi 5-jointed. Legs rather slender, the femora long, cylindrical. Forewings long and broad; subhyaline, with a large square blotch commencing at base of stigma and continued some distance beyond radial vein, extending fully half-way across wing, dusky; venation fuscous, the stigma large, semicircular; radial cell small, not one-half as large as stigma; median and basal veins indicated by brown lines. Antennae 13-jointed: scape moderately long; pedicel short, wider than long; funicle joints long, filiform, the first fully twice as long as wide, the tenth a little shorter, the last joint somewhat longer. Length, to apex of oviduct, 5.50 mm.; without oviduct, 4.00 mm.

Hab.—Tasmania: Hobart (A. M. Lea).

Type.—I. 5088, South Australian Museum. A female on a tag, head, antennae, and forewings on a slide.

PROCTOTRYPES, Latreille.

Serphus, Schrank, Kieffer, 1909.

Kieffer has split the old genus *Proctotrypes* into three genera, which do not appear valid. The characters given for *Serphus* are:—"Propleures striées; abdomen ordinairement rouge en majeure partie; oviduct filiforme." The species described below has some striae on the propleura, but the oviduct is not filiform, and the body is wholly black. Kieffer's *Serphus*, Schrank, contains fifteen species, chiefly from Europe and North America.

PROCTOTRYPES AUSTRALIAE, Kieffer.

Berlin Ent. Zeitschr., vol. lii., 1907, p. 266. Australia.

PROCTOTRYPES JANTHINAE, n. sp.

♀. Shining-black, the antennae concolorous; legs black, the knees and anterior tibiae and tarsi golden-yellow; posterior tibiae and tarsi fuscous; apex of all coxae yellow. Head, scutum, and scutellum smooth, with very fine pubescence; propleura smooth, but with some striae, the mesopleura striate for dorsal half; parapsidal furrows wholly wanting; metanotum rugose, the anterior portion short at meson, the dividing carina thus V-shaped with its apex cephalad. Petiole not visible from above; the abdomen abruptly convex above from its base (lateral aspect), produced into a long non-filiform oviduct, this longer than body of abdomen. Forewings long, broad; hyaline; venation fuscous; stigma large, as wide as long, the radial vein small, scarcely distant from the stigma, the radial cell visible as a narrow split; no other veins. Scape as long as first funicle joint, the pedicel much wider than long; first funicle joint fully twice as long as wide, the others shortening, the penultimate one-third longer than wide; last joint distinctly longer than scape. Length, to apex of oviduct, 4.05 mm.

Hab.—Victoria: Melbourne (?). One female, labelled "No. 57, National Museum, bred from larva of fungus beetle, *Thallis janthina*, 16/9/13, F.S."

Type.—In the National Museum, Melbourne. A female on a tag, antennae and forewings on a slide.

CRYPTOSERPUS, Kieffer.

Another of Kieffer's divisions of *Proctotrypes*, and of very doubtful validity. Eleven species are known—one, *C. unidentatus*, Kieffer, from Chili, the remainder from Europe.

CRYPTOSERPUS NIGRISCUTUM, n. sp.

♀. Black; thorax chestnut-brown, the scutum and metathorax black; legs and tegulae wholly golden-yellow; antennae brown, the scape yellow. Head very transverse, with scattered short pubescence. Scutum convex, smooth like the head and with scattered pubescence, without a trace of parapsidal furrows; scutellum rather small, somewhat convex; metanotum divided into two halves; anterior half with a median and lateral carinae, between these smooth, separated from posterior half by a transverse carina, the posterior half somewhat declivous, rugose, covered with dense whitish pubescence. Petiole only visible from above as a transverse line. Body of abdomen compressed, oval, with a filiform oviduct which is nearly as long as body of abdomen; abdomen at base with a delicate median longitudinal impression, and a few short obscure carinae, its anterior margin carinate. Forewings long, broad; subhyaline; stigma longer than greatest width, the radial vein longer than stigma, the radial cell narrow; no trace of median, basal veins, etc. Scape stout, somewhat shorter than first funicle joint; pedicel stout, quadrate; funicle joints slender, the first much narrowed at base, the others less so; one over twice length of pedicel, the others shortening, the penultimate two-thirds longer than wide, the last joint as long as funicle one. Length, to apex of oviduct, 3.25 mm.; to base of oviduct, 2.25 mm.

Hab.—Queensland: Cairns district, 1,500 ft. One female caught by sweeping in jungle, September 18, 1913 (A. P. Dodd).

Type.—I. 5089, South Australian Museum. A female on a tag, antennae and forewings on a slide.

CRYPTOSERPUS NITIDUS, n. sp.

♂. Shining-black; legs (including coxae), tegulae, and antennal scape and pedicel, golden-yellow. Prothorax and mesothorax finely densely pubescent; parapsidal furrows present anteriorly; metanotum as in *nigriscutum*, also petiole and base of abdomen. Forewings long, broad; hyaline; stigma somewhat longer than greatest width, the radial vein almost parallel with its distal margin; no trace of other veins, except submarginal; radial cell narrow; venation fuscous. First funicle joint two and a half times as long as wide, distinctly longer than second, the tenth one-half longer than wide, the last as long as first. Length, 3.00 mm.

Hab.—Queensland: Cairns district. One male caught by sweeping in jungle, July 24, 1913 (A. P. Dodd).

Type.—I. 5090, South Australian Museum. A male on a tag, head, antennae, and forewings on a slide.

PHAENOSERPUS, Kieffer.

Kieffer, 1909, lists 32 species from widely distant *habitats*.

PHAENOSERPUS INTRUDENS, Smith.

Trans. Ent. Soc., London, 1878, p. 5. Australia.

Family BELYTIDAE.

Few species have been obtained, and of these most fall into new genera. More males have been collected, but were left entirely alone, as it was thought they might belong to wingless females yet to be discovered. Kieffer has erected many genera on the male sex only, which does not seem a wise plan, as wingless females are probably more numerous than has been supposed, and would possibly differ greatly from their males. Where sexes differ greatly in family or group it seems preferable to use one only as the stable sex for generic erections. The Australian genera, on the whole, appear to possess less wing venation, as compared with the already known forms from other countries.

Table of Australian genera.

(1) Wingless	(2)
Winged	(3)
(2) Parapsidal furrows complete and distinct	<i>Aclista</i> , Foerster (part)
Parapsidal furrows wanting	<i>Neobetyla</i> , n. g.
(3) Abdomen after the second segment produced into a long, fleshy, four-segmented protuberance, or stylus	<i>Styloclista</i> , n. g.
Abdomen not produced or stylate	(4)
(4) Forewings split longitudinally from apex	<i>Pantolytomyia</i> , n. g.
Forewings normal, not split from apex	(5)
(5) Petiole very long, as long as body of abdomen; scutellum semi-rugose	<i>Psilommella</i> , n. g.
Petiole much shorter than body of abdomen; scutellum smooth	(6)
(6) Radial cell closed	<i>Meuselina</i> , Kieffer
Radial cell open	(7)
(7) Hindwings with one closed cell	<i>Aclista</i> , Foerster (part)
Hindwings without a closed cell	<i>Pantolytoidea</i> , n. g.

STYLACLISTA, n. g.

♀. Head normal, globular. Antennae 15-jointed, the joints all longer than wide, without a distinct club, the apical joints faintly incrassate. Mandibles not small, but not long; falcate; bidentate. Forewings ample; marginal vein long and slender; stigmal short, with a distinct knob; median indicated, the basal distinct, the recurrent faintly indicated,