

resemble more the larvae of *Paracorotoca* and related genera than those of *Thyreoxenus*. Silvestri did not find the larvae of *Oideprosoma* together with the adults but in a nest about 500 miles away. We share the opinion of Seevers (1957) and Kistner (personal communication) that the species assignment given by Silvestri is incorrect. The suspected *Termitoptocinus* larvae were found, however, in the same nest as the adults. Their resemblance with larvae of *Paracorotoca* is such that we raise some doubt on the assignment of those larvae also. Kistner and Watson have studies in progress which show that the larvae are not *Termitoptocinus* (Kistner, personal communication).

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## Dolichopodidae (Diptera) from Papua New Guinea. II. Some new species of the genus *Thinophilus* Wahlberg, 1844, from the Lowland\*

Patrick Grootaert

Koninklijk Belgisch Instituut voor Natuurwetenschappen, Vautierstraat 29, 1040 Brussels, Belgium

Henk J.G.Meuffels

Meesweg 16, 6325 BG Vilt, Netherlands

ABSTRACT: Five new species of *Thinophilus* are described and illustrated. A key is provided for the six known species of Papua New Guinea.

RESUME: Cinq espèces nouvelles de *Thinophilus* sont décrites et illustrées. Une clé est donnée pour les six espèces actuellement connues de Papouasie Nouvelle-Guinée.

#### 1 INTRODUCTION

Until now, *Thinophilus taylori* Parent, 1939, described from New Ireland, was the only known species of *Thinophilus* from Papua New Guinea. In the present paper, five new taxa of the genus *Thinophilus* Wahlberg, 1844 (Hydrophorinae) are described. All five species were found along small rivers or ponds in the lowlands (Madang province) in the beginning of the dry season of 1982. They constituted only a very low percentage of the large numbers of Dolichopodids occurring in the same area.

Two of the five species, *T.(S.)splendens* sp.nov. and *T.(S.)fuscicoxalis* sp.nov. are placed in the subgenus *Schoenophilus* Mik, 1878, on the strength of possessing only four nearly equally long dorsocentral bristles. As this constitutes the only reliable difference between *Thinophilus* Wahlberg and *Schoenophilus* Mik, one can only consider the last taxon as a subgenus of the first, following on this point Becker (1917) and other authors.

In 1932, Parent erected a new genus *Parathinophilus* for his species *P.expolitus* from Australia. The main difference from *Thinophilus* consists in the presence of (very small) acrostichals. *Thinophilus milleri* Parent, 1933, described from New Zealand, belongs clearly to this genus, showing acrostichals, two pairs of post-verticals and a wing venation similar to that of *P.expolitus* Parent. Moreover, in

\* Biological Station Leopold III, Laing Island, Contribution no.57.

both species the first segment of tarsus I bears ventrally a 'peluche blanche' in the males. The difference from the genus *Thinophilus* being rather poor, even if one adds a colour feature (antennae entirely black in *Parathinophilus*), it seems advisable to consider *Parathinophilus* Parent, as a subgenus of *Thinophilus* Wahlberg, 1844, including at the moment two species: *Thinophilus (Parathinophilus) expolitus* (Parent, 1932) comb.nov. and *T.(P.)milleri* Parent, 1933.

## 2 DESCRIPTIONS

### *Thinophilus (Thinophilus) flagellatus* sp.nov. (Figs.1-3)

Medium-sized, metallic shining species with black palpi and yellowish legs. All femora dorsally darkened. Front femora apically with five strong posteroventral bristles. Aedeagus with a long, black, flat enroled extension.

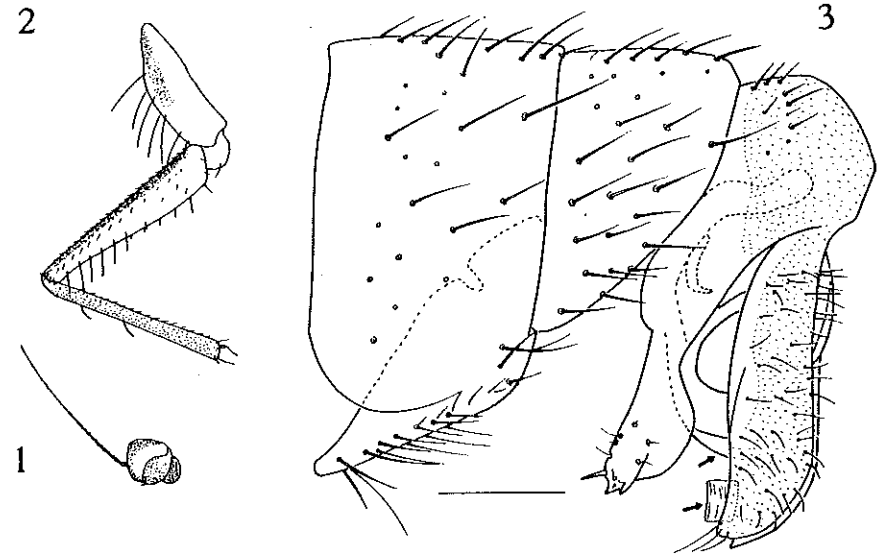
#### Male

**Head.** Frons and face shining metallic green with coppery and purple reflections. Face slightly narrowing from frons downwards to about middle and from thereon widening again. Face at narrowest point wider than ocellar callus. Clypeus much shorter than epistoma, broader than long, projecting. Palpi large, as long as epistoma, brownish black, with sparse short black hairs. Rostrum large, black. Occiput shining green, convex. Chetotaxy: 2 ocellars, pointing sideways; 2 verticals, pointing forwards and inwards; 2 tiny postocellars; 2 postverticals, not in row with the postoculars; postoculars white, uniseriate above, irregularly multiseriate below, forming 'favoris'. Labium with some short hairs.

**Antennae.** Short, black; third segment largely yellow, leaving only upper and anterior margin black. First segment short, bare. Second segment encompassing third segment partly at upper margin and bearing very small bristles. Third segment rounded (Fig.1), practically bare. Arista inserted on upper margin, very shortly pubescent, nearly bare; first aristal segment very short.

**Thorax.** Mesonotum shining black on disk, with blue, purple and green reflections; a shining green median stripe beginning in front of the mesonotum, bifurcating beyond middle and encircling a large, oval black spot in front of the scutellum. Humeri with a rounded dull black spot, encircled by a shining green area; notopleura dull black. Scutellum shining blackish green with a shining purplish-green median stripe. Pleura shining blackish green with coppery and purple reflections. Chetotaxy: no acr; 5 dc (first one short, preceded by some scattered hairs); 1 humeral, 1 notopleural, 1 weak posthumeral, 2 intraalars; scutellum with 2 large marginal bristles. Prothoracic collar with a row of white bristles. Some white prothoracic bristles (lower one strong). Pleura bare.

**Legs.** Yellow. Coxae I yellow, base brownish exteriorly; coxae II blackish, with yellow tip; coxae III brown. All trochanters yellow. Femora dorsally darkened. All tibiae brown. Front tarsi somewhat annulated, four posterior tarsi yellowish-



Figures 1-3. *Thinophilus flagellatus* sp.nov. holotype male: 1. Antenna; 2. Front femur in posterior view; 3. Hypopygium, enroled extension on aedeagus indicated by arrows. Scale 0.2 mm.

brown. *Coxae I* with long black bristles anteriorly and a transverse row of smaller black bristles at apex. Trochanters with a small ventral bristle. *Femur I* ventrally on basal half with a row of five short bristles and with a row of six stronger posteroventrals in the apical half (as long as femur is deep; Fig.2). *Tibia I* with two anterodorsals and some very short and weak posterodorsal bristles, hardly discernible from the hairs. *Tarsus I*: First segment spinulose ventrally. Length ratio tibia I and the five tarsal segments: 20:8.5:4:3:2:3. *Coxae II* anteriorly with some black bristles and a row of apical bristles, all of them not very strong; a black external bristle. Trochanters with some tiny hairs and a small hairlike bristle ventrally. *Femur II* ventrally with a row of very short and weak bristles; a small bristle posteriorly near apex. *Tibia II* with 2 ad, 2 small pd and a circlet of weak apical bristles. *Tarsus II* with apex of second and whole of third and fourth segments ventrally spinulose. Length ratio tibia II and tarsal segments: 24:14:6:4:2.5:3. *Coxae III* with a black external bristle and an apical black bristle anteriorly. Trochanters with some tiny hairs and two black bristles ventrally. *Femur III* without bristles. *Tibia III* with 3 ad, 3 dorsal and 2 short ventral bristles. *Tarsus III*: First segment about as long as second segment, ventrally spinulose; segments 1 to 4 with some long apical bristles. Length ratio tibia III and the five tarsal segments: 35:9:8:5:3.5:3.75.

**Wings.** Brownish tinged; dark shades on tp and on 'wing boss'. Veins brownish

black. Diastinal vein ends in  $r_1$ .  $M_{1+2}$  evenly bent upwards some distance after tp then running parallel with  $r_{3+4}$ .  $T_1$  straight, a little longer than apical part of  $m_{3+4}$ . Basal half of anal vein present. Fringe along hind margin of wing short. Halteres whitish yellow. Squamulae yellowish with a white ciliation.

**Abdomen.** Shining dark green with coppery, purple and blue reflections; last tergite purple. Tergites with short black hairs and bristles. Sternites dark green with remarkably long brownish black hairs. Hypopygium enclosed, black. Cerci brownish black, oblong, with short whitish hairs. Both cerci joined, only separated at tip. Aedeagus with a black, flattened, enroled extension (at least four times as long as aedeagus; Fig.3).

**Body length.** 3.25 mm, wing length 2.75 mm.

#### Female

General morphology and coloration as in male. Antennae can be lighter coloured: second segment partly yellowish ventrally. Legs may be less darkened: coxae I almost completely yellow; tarsi less distinctly annulated. Only three to four posteroventral bristles on front femora distinct and shorter than in male. Whole of tarsus I spinulose ventrally. Wings as in male; shades on tp and 'wing boss' rather faint. Sternites with short hairs. Genital parts with two rows of short black 'dornen'.

**Body length:** 3.7-3.9 mm; wing length: 3.3-3.5 mm.

#### Type material

Holotype male: Boroï village (Bogia, Madang province), 17.6.1982 (sample no. 1349, leg. P. Grootaert; I.G. 26.480); genitalia macerated in slide no.83.01.12.01.

Allotype female and one paratype female: same data as holotype; one paratype male, Boroï, 17.6.1982 (sample no.1344).

#### Type locality and habitat

Boroï village (Bogia, Madang province). The specimens were collected by sweeping along the border of a small and heavily polluted river running through the village. They were found in the presence of large numbers of small Dolichopodidae such as *Acropsilus* and *Teuchophorus* species and many Ephydriidae.

#### Derivatio nominis

This species is named *flagellatus* because of the long enroled extension on the aedeagus.

#### *Thinophilus (Thinophilus) govaerei* sp.nov. (Figs.4-6)

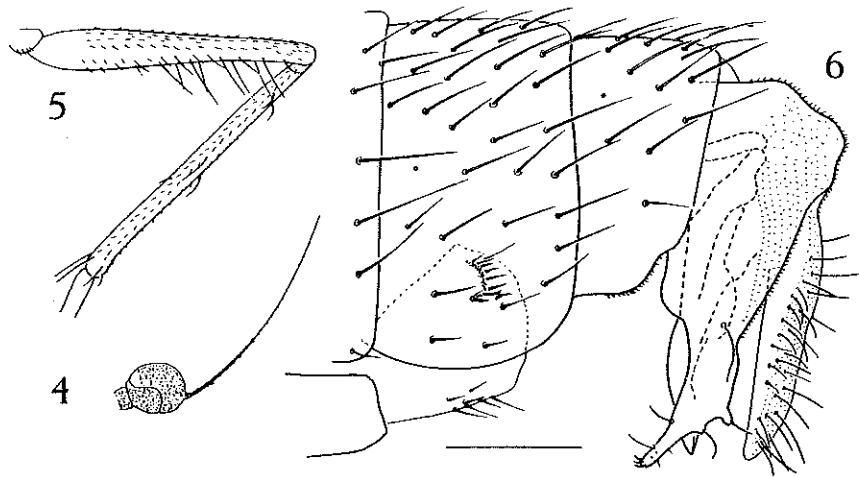
Medium-sized, metallic shining species with yellowish palpi and front coxae. Mid femora with long antero- and posteroventral bristles in apical half. Aedeagus without extension.

#### Male

**Head.** Frons and face shining metallic green with coppery reflections. Face narrowing from frons downwards to about middle and from thereon widening again. At the narrowest point the face as wide as the ocellar tubercle. Clypeus much shorter than epistoma, broader than long, projecting. Palpi large, yellowish, with sparse, short black hairs. Rostrum large, black. Occiput shining dark metallic green, convex. Chetotaxy: 2 ocellars, pointing sideways; 2 verticals, pointing forwards and inwards; 2 tiny postocellars; 2 postverticals, clearly distinct from the postoculars and inserted below their row. Postoculars black and uniseriate above, white and irregularly multiseriate below (forming favoris). Rostrum with some long hairs behind. **Antennae** short, black; third segment brownish below. First segment short, bare; second segment encompassing partly the third segment on inner side, bearing minute marginal bristles dorsally. Third segment kidney-shaped, bare (Fig.4). Arista three times as long as antenna, very shortly pubescent, nearly bare, inserted on upper margin of the third segment; first arisal segment hardly longer than broad.

**Thorax** and scutellum shining metallic green, with purple and coppery reflections; pleura less shining. Two purple stripes run from front of mesonotum down to scutellum, having between them a shining green stripe without purple reflection; behind humeri a dull black spot. All bristles black. Chetotaxy: no acr; 6 dc (anterior one very short) increasing in size towards scutellum, along the outer borders of the two purple stripes; 1 humeral, flanked by a small hairlike bristle; 1 weak posthumeral; 1 strong notopleural; 1 postsutural, 2 intraalar; scutellum with two large marginal bristles. Prothoracic collar with a row of black bristles. Four yellowish prothoracic bristles (2 upper, 2 lower). Pleura further bare.

**Legs.** Yellow. Coxae I yellow with a brownish base; coxae II brown with a yellow tip; coxae III paler brown. Tibia I with tip darkened; tarsus I darkened from tip of first segment. Legs II with only fifth tarsal segment somewhat darkened. Tarsus III darkened from tip of first segment. All femora slender, thickest at their base. **Coxae I** anteriorly with sparse tiny hairs and some weak hairlike bristles beneath; at apex a row of bristles. Trochanters with some tiny bristles. **Femur I** with a row of very short and weak hairlike bristles antero- and posteroventrally. **Tibia I** with two anterodorsal and two posterodorsal bristles as long as tibia is deep; a circlet of small apical bristles. **Tarsus I:** segment 1-4 with weak apical bristles ventrally. Length ratio tibia I and the five tarsal segments: 20:9:4:3:2:3. **Coxae II** anteriorly with some hairs and a row of very short hairlike bristles at apex; a small black external bristle. Trochanters with some small bristles. **Femur II** (Fig.5) ventrally with two rows of thin but long black bristles, increasing in length towards apex; the longest two times as long as femur is deep. **Tibia II** with 2 ad and 2 pd; a very small pv about middle; a circlet of strong apical bristles. **Tarsus II:** segments 1-4 with apical spinules. Length ratio tibia II, tarsal segments: 25:15:5:4:2.5:3. **Coxae III** with a black external bristle. Trochanters bare. **Femur III** with a small anterodorsal bristle at one fourth from apex. **Tibia III** with 3 ad and some tiny bristles, hardly discernible between the dorsal row of hairs; ventrally three short bristles; a circlet



Figures 4-6. *Thinophilus govaerei* sp.nov. holotype male: 4. Antenna; 5. Mid femur in posterior view; 6. Hypopygium. Scale 0.2 mm.

of apical bristles. *Tarsus III*: first segment nearly as long as second segment. Segments 1-4 with ventral apical bristles. Length ratio tibia III and tarsal segments: 32:8:8:4:3:3.5.

*Wings*. Tinged brownish with dark brown veins. Diastinal vein ends in  $r_1$ . Apical part of  $m_{1+2}$  gradually bent upwards to  $r_{3+4}$  and running parallel to it in apical third.  $tp$  straight, about as long as the apical part of  $m_{3+4}$ . Length ratio of basal to apical part of  $m_{1+2}$ :9:14. Anal vein present, fading after half its length towards wing margin. Fringe along hind margin of wing short. Halteres white. Squamulae whitish with yellowish hairs.

*Abdomen*. Longer than thorax, shining purplish blue and green, with short black hairs and bristles. Sternites brownish black. Hypopygium (Fig.6) enclosed in tip of abdomen. Fifth sternite medioventrally with two areas bearing spines. Aedeagus not exceeding the cerci in length. Cerci oblong, blackish, forming a cup, joined on basal half.

Body length: 3.3 mm; wing length: 3.2 mm.

#### Female

Unknown.

#### Type material

Holotype male: Boroï village (Bogia, Madang province), 17.6.1982 sample no.1349, leg. P.Grootaert; I.G. no.26.480) preserved in alcohol; genitalia macerated in slide no.83.01.12.02 (coll. I.R.S.N.B.).

Paratype: 1 ♂ with same data.

#### Type locality and habitat

Boroï village (Bogia, Madang province). *T.govaerei* was collected together with the previous species *T.flagellatus* sp.nov. along the border of the same river.

#### Derivatio nominis

*Thinophilus govaerei* sp.nov. is dedicated to Dr Jan Govaere, companion of the first author during the expedition in Papua New Guinea.

#### Remarks

*T.govaerei* sp.nov. is closely related to *T.taylori* Parent, 1939, described from New Ireland. In the latter, the front coxae are black, while they are yellow in *T.govaerei*. Further there are prothoracic bristles present in *T.govaerei* which are apparently absent in *T.taylori* Parent.

#### *Thinophilus (Thinophilus) vangoethemi* sp.nov. (Figs.7-9)

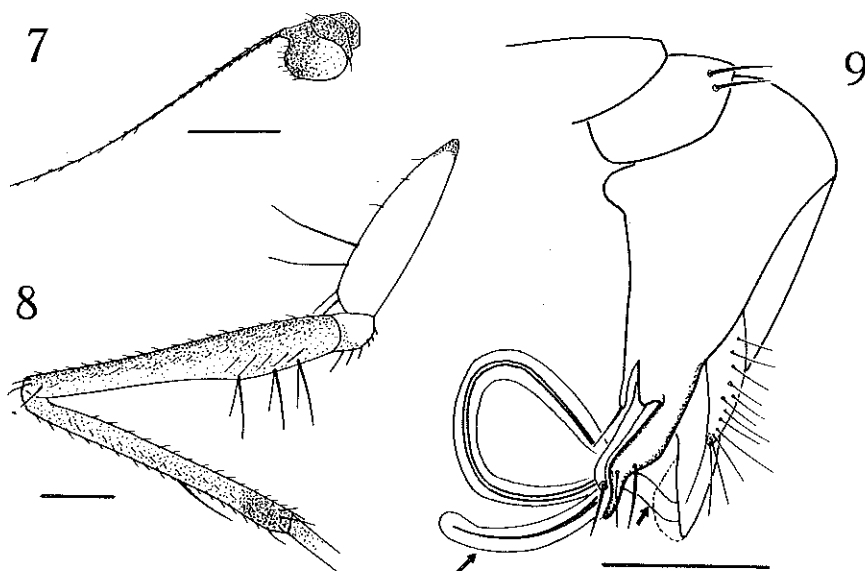
Medium-sized metallic shining species with yellowish-brown palpi. Anterior four femora and all tibiae brown. Front coxae with two long bristles. Front femora with six long ventral bristles in basal third. Cerci pale, very short.

#### Male

*Head*. Frons and face shining metallic green. Face narrowing from frons downwards to about middle, then almost parallel to clypeus. Clypeus rather small, about a third of length of epistoma; trapezoid, slightly protruding, higher than broad. Palpi long, as long as epistoma, brownish at base, paler (yellowish) at tip; covered with sparse, fine short bristles which are longer at margins. Rostrum large, black with some pale hairs. Occiput convex, shining green. Chetotaxy: two very long but fine ocellars (half as long as arista), two verticals, two tiny postocellars, two small post-verticals close to the postocular row but longer. Postoculars black and uniseriate above, long, white and multiseriate below (forming 'favoris'). Labium with a few whitish hairs.

*Antennae*. Short, brownish. Third segment yellowish below. First antennal segment short. Second segment encompassing third segment dorsally and bearing several black bristles on upper and lower margin. Third segment (Fig.7) rounded with rather long pale pubescence at tip. Arista nearly as long as eyes are high; pubescence short at base; longer and outstanding in apical half. Basal aristal segment very short.

*Thorax*. Mesonotum and scutellum shining purplish black. Pleura brownish with purple reflections. Sternopleura darkened in front and a black spot on anterior margin of pteropleura. Chetotaxy: no acr; 5 strong nearly equal long dc, preceded by a short bristle and some fine bristles decreasing in length towards head; 1 humeral, 1 posthumeral (longer than humeral), 1 notopleural, 1 supraalar; scutellum with



Figures 7-9. *Thinophilus vangoethemi* sp.nov. holotype male: 7. Antenna; 8. Front femur in posterior view; 9. Hypopygium, enroled extension on aedeagus indicated by arrows. Scale 0.2 mm.

two long marginals. Propleura with a long pale bristle. Prothoracic collar with a row of short black bristles. Pleura further bare.

*Legs.* yellowish brown with all bristles and pubescence black. Coxae I, brownish at base, very pale brownish exteriorly, yellow interiorly. Femur I and II and all tibiae brown. Tibiae I and II with apex darkened. Tarsal segments paler than tibiae except for the brownish terminal segment. *Coxa I* with some tiny hairs in basal half, and two hairlike bristles in apical half, nearly twice as long as coxa is deep (Fig.8); tip of coxa with at most three fine hairlike bristles (remnants of transversal row). Trochanters with a row of fine bristles. *Femur I* slender, only swollen in basal third (Fig.8). In basal third, a double row of ventral bristles, slightly longer than femur is deep (three in each row). A row of fine and short posteroventral bristles also restricted to basal third and a long preapical in posteroventral position. *Tibia I* as long as femur I, with a strong anteroventral bristle; apical circler of bristles hardly differentiated. Tarsal segments ventrally spinulose. *Coxa II* with a fine, black external bristle and numerous fine bristles at tip. *Femur II* slightly swollen on basal half, ventrally with a row of short bristles. Posterior side practically without pubescence. *Tibia II* with two strong ad and a hardly differentiated dorsal bristle; a circler of strong apical bristles present. All tarsal segments ventrally spinulose, apical spinules prominent. *Coxa III* with an external bristle and fine hairs at tip. *Femur III* slender, slightly swollen on basal half; no bristles dif-

ferentiated. *Tibia III* with 2 ad and a tiny dorsal near base; a circler of apical bristles present but weaker than on tibia II. *Tarsus III*: first segment as long as second; all segments ventrally spinulose with short apical spinules.

*Wings.* Shorter than body, brownish with brownish black veins. Diastinal vein ends in  $r_1$ .  $R_{3+4}$  slightly diverging from  $r_2$  and turning upwards just before wing tip. Apical part of  $m_{1+2}$  straight.  $T_p$  slightly shorter than apical section of  $m_{3+4}$ . Anal vein present but fading in apical half, not reaching wing margin.

*Abdomen.* Tergites shining metallic green except for the more brownish first tergite. First sternite whitish, not sclerotized. Following three sternites brownish. Tergites with short black bristles. Marginal bristles on first tergite longer than on following segments. Fine whitish bristles on sternites. Hypopygium brown, as illustrated in Figure 9. Cerci short, pale (whitish) with white hairs.

Body length: 3.2 mm; wing length: 2.6 mm.

#### Female

Face slightly broader than in male. Palpi almost black. Front coxae brownish on basal half. Chetotaxy of legs identical to male. Pleura shining metallic green, not brownish as in male.

Body length: 2.9 mm; wing length: 2.8 mm.

#### Type material

Holotype male: Nubia village (Bogia, Madang province), 6.7.1981 (sample no.446; leg. M.Magap, P.Janssens, J.van Goethem; I.G. 26.373) preserved in alcohol; genitalia in slide no.83.08.24.01 (coll. I.R.S.N.B.).

Allotype female: Boroi river (Bogia, Madang province) 17.6.1982 (sample no. 1343, leg. P.Grootaert).

#### Type locality

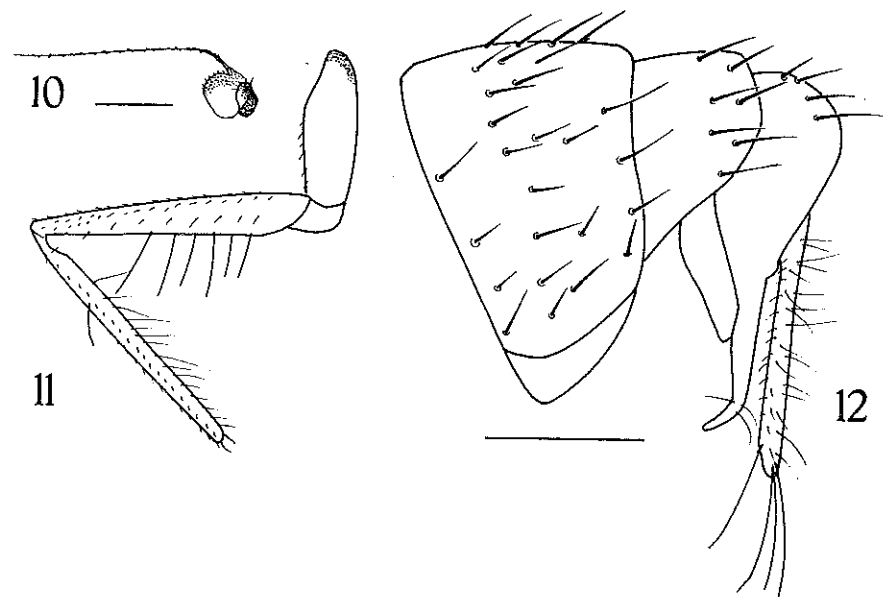
Nubia village (Bogia, Madang province). The holotype was caught with a light trap that was placed near a small river at the border of the village. The female was swept from the muddy embankment of the Boroi river.

#### Derivatio nominis

*Thinophilus vangoethemi* sp.nov. is dedicated to Dr J.van Goethem who collected many Diptera during his expeditions in Papua New Guinea.

#### *Thinophilus (Schoenophilus) splendens* sp.nov. (Figs.10-12)

Shining metallic green species without any dusting, with yellow legs. Four nearly equally long dorsocentrals (subgenus *Schoenophilus* Mik). All femora and tibia I ventrally bristled.



Figures 10-12. *Thinophilus splendens* sp.nov. holotype male: 10. Antenna; 11. Front femur in posterior view; 12. Hypopygium. Scale 0.2 mm.

#### Male

**Head.** Frons and occiput shining dark metallic green. Face somewhat duller, more bronzy-green, with a rather coarse granulation. At its narrowest point the face is a little broader than the distance between the ocellar bristles. Clypeus somewhat protruding, rather dull, trapezium shaped, broader than high. Palpi large, yellowish, with sparse short black bristles. Rostrum dark brown. Chetotaxy: 2 ocellars, 2 verticals, 2 postverticals (converging and clearly separated from the uppermost postoculars). Postoculars uniseriate and black above, multiseriate and white below (forming 'favoris'). **Antennae** yellow, all segments dark brownish above, third segment also on its anterior margin. First segment very short, bare; second segment encompassing partly third segment dorsally, distinctly so on inner side, bearing only short black bristles dorsally. Third segment rounded (Fig.10), bearing rather long, pale hairs. Arista inserted dorsally, very short pubescent, shorter than head is high; first aristal segment very short.

**Thorax.** Including scutellum and pleura, shining metallic dark green, undusted. Mesonotum with two purplish longitudinal stripes, running along the inside of the dc, not reaching the scutellum. Chetotaxy: no acr; 4 strong dc, nearly equally long; 1 humeral, 1 posthumeral, 1 notopleural, 1 sutural, 1 postsutural and 2 supraalars. Scutellum with two strong marginal bristles. Propleura bearing two short and thin pale hairlike bristles. Prothoracic collar with some short pale bristles. Pleura bare.

**Legs.** Yellow. Coxae I yellow with only extreme base darkened brownish. Coxae II and III dark brown with yellow apex. Tarsi progressively darkened towards tip. Pubescence and bristles black except for the long yellow hairs on front femora and pale hairs on coxae. **Coxae I** with only few short pale hairs; at tip a few short pale bristles. Trochanters practically bare. All femora slender, equally deep, slightly thickened at their base. **Femur I** (Fig.11) ventrally with a row of long, thin, pale bristles of unequal length; the longest, more than two times as long as femur is deep, are situated near the middle. A second row of similar but shorter bristles starts anteriorly at a fourth from the base and runs obliquely downwards to become anteroventral near the apex. This row is flanked above by some similar bristles anteriorly in the third quarter. **Tibia I** hardly shorter than femur I, ventrally with two rows of hairlike brown bristles, a little longer than tibia is deep; anterodorsally a row of short black bristles, giving the impression of a 'serration'; a rather strong black pd at a fourth from base. **Tarsus I**: first segment ventrally rather densely haired (longest hairs longer than tarsus is deep). Length ratio tibia I to tarsal segments: 21:8:2.5:2.5:2:3.

**Coxae II** without bristles. Trochanters with some tiny black hairs. **Femur II** ventrally nearly bare but on basal half a row of very short and weak bristles (half as long as femur is deep); anteriorly in apical half a row of very short black bristles growing somewhat longer towards tip of femur; a weak preapical pv. **Tibia II** a little longer than femur II; 1 ad and 1 pd; an apical circlet of short black bristles. **Tarsus II**: segments 1-4 with small apical spinules ventrally. Length ratio of tibia II to tarsal segments: 27:11:4.5:4:3:3.5. **Coxae III** with a weak, pale external bristle. Trochanters bare. **Femur III** with an irregular row of black ventral bristles of unequal length in the apical two-thirds; the strongest of these bristles about as long as femur is deep. A very weak preapical av and a similar preapical pv. **Tibia III** a little longer than femur III. A very short and weak dorsal bristle at one-third from base and some apical bristles that do not form an apical circlet. **Tarsus III**: segments 1 and 2 rather densely set with short bristly hairs. Apical spinules on segments 1 to 4 weak and short. Length ratio of tibia III to tarsal segments: 27:5:6.5:4:3:4.

**Wings.** Almost hyaline with brown, towards base yellowish veins. Mediastinal vein ends in  $r_1$ .  $R_{3+4}$  and  $m_{1+2}$  from tp onwards parallel, only slightly convergent before reaching the costa. Tp distinctly shorter than apical part of  $m_{3+4}$ . Anal vein present, not reaching wing margin. Fringe along hind margin of wing rather short. Halteres pale yellow. Squamulae pale yellow with very short pale cilia.

**Abdomen.** Shining dark metallic green. Tergites with short black hairs and short marginal bristles that are somewhat longer on tergite I. Sternites with sparse, very short pale hairs. Hypopygium globular, rather small, dark brown with black hairs. Cerci yellow, long, rod-shaped, with long pale hairs (Fig.12).

Body length: 2.25 mm; wing length: 2.2 mm.

#### Female

Face broader, at its narrowest point more than one and a half times as broad as

the distance between the ocellar bristles. Femur I and tibia I without rows of long hairlike bristles; 1 short pd on tibia I. Femur II with only a preapical pv; tibia II with the same bristles as in male. Femur III without ventral bristles and without preapicals; 1 ad at some distance before apex, absent in male. Tarsus III: hairs on segments 1 and 2 shorter than in male. Marginal abdominal bristles somewhat longer. Genital parts yellow with a row of very short black 'dornen'.

Body length: 2.2-2.6 mm; wing length: 2.4 mm.

#### *Type material*

Holotype male: Awar Point (Bogia, Madang province), 14.6.1982 (sample no.1301, I.G. 26.480; leg. P.Grootaert); preserved in alcohol; genitalia macerated in slide no.83.01.12.03.

Allotype: female, same data.

Paratypes: 4 females, same data.

#### *Derivatio nominis*

Since no dusting is present, this brilliantly shining species is called *splendens*.

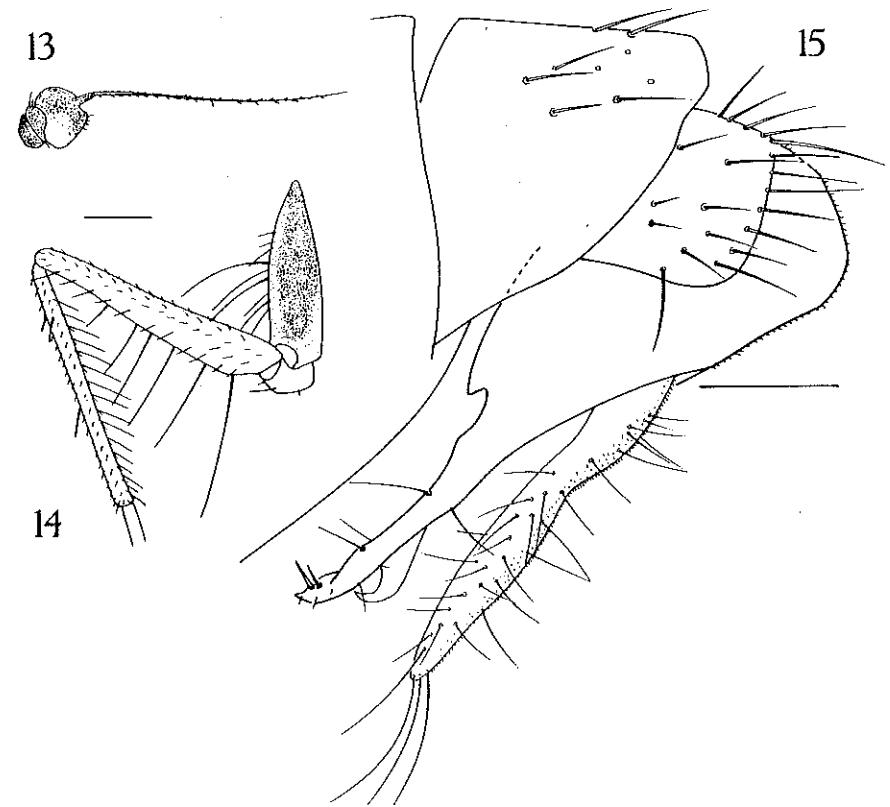
#### ***Thinophilus (Schoenophilus) fuscicoxalis* sp.nov.** (Figs.13-15)

A large metallic shining species with yellow palpi and yellow legs. Front coxae exteriorly darkened and with long, black bristles anteriorly. Very long bristles in the posterior ventral row of front femora.

#### *Male*

*Head.* Frons and occiput shining metallic, blackish green. Face more bronzy green with a coarse granulation. Face at its narrowest point above clypeus as wide as distance between ocellar bristles. Clypeus slightly protruding, trapezium-shaped, as broad below as high. Palpi large, yellowish, with 14 black bristles; subterminal bristle being the longest, half as long as palpus. Rostrum dark brown with pale hairs. Chetotaxy: two strong ocellars, a pair of finer verticals, two small post-verticals (converging and well-separated from postoculars). Postoculars black and uniseriate above, pale and almost uniserial below. *Antennae* yellowish-brown. First segment short, bare. Second segment brown, dorsally encompassing third segment and with three black bristles on its upper margin and some on its lower margin. Third segment (Fig.13) heart-shaped, brown on upper half, yellowish below; some long pubescence on its tip. Arista inserted dorsally, shortly pubescent; four times as long as all antennal segments together. First arisal segment very short.

*Thorax.* Mesonotum, scutellum and pleura metallic blackish green. Chetotaxy: no acr, 4 nearly equally long, strong dc, preceded by some fine hairs, 1 humeral, 1 posthumeral, 1 notopleural, 1 sutural and a long supraalar. Scutellum with two strong marginals. Propleura with three to four black bristles. Prothoracic collar with some short, pale hairs. Pleura further bare.



Figures 13-15. *Thinophilus fuscicoxalis* sp.nov. holotype male: 13. Antenna; 14. Front femur in posterior view; 15. Hypopygium. Scale 0.2 mm.

*Legs.* Yellow. Coxae I exteriorly completely darkened, anteriorly yellow. Coxae II and III black, though coxae III paler than II. Trochanters brownish. All femora yellow, at most somewhat brown dorsally. Tibiae and tarsi brownish. Terminal tarsal segment still more darkened. All hairs and bristles black. *Coxae I* with about eight long but fine bristles anteriorly, half as long as coxa is long and a transverse row of four bristles on apex. Trochanters with a fine black bristle. *Femur I* (Fig.14) thickened on its basal half. Two rows of long ventral bristles: longest bristles in posterior row near base, four times as long as femur is deep, following bristles gently decreasing in length towards tip of femur, shortest still two times as long as femur is deep. Bristles in anterior ventral row shorter than femur is deep. A row of short posteroventrals, no anteroventrals. *Tibia I* with a ventral comb of fine bristles; longest in middle, somewhat more than twice as long as tibia is deep; 2 ad and 2 pd; apical bristles not differentiated. Tarsal segments with fine apical

bristles. *Coxae II* with a black exterior bristle and numerous hairs anteriorly. Trochanters with a few short hairs. *Femur II* slightly thickened on basal half, more slender than femur I. Ventral row of bristles double on basal fourth (some as long as femur is deep), shorter and uniserial on apical three-fourths. A row of very short posteroventrals; pubescence on posterior side remarkably short. *Tibia II* with 2 strong pv, 2 weaker pd and 1 ad near base; two strong ventral apical bristles. Tarsal segments 1-4 with two apical spinules. *Coxae III* with an exterior bristle. *Femur III* only slightly thickened on basal half, with inconspicuous ventral bristles. *Tibia III* with 1 ad, 2 dorsals, 2 preapicals and one stout apical bristle. Tarsal segments 1-4 with a pair of short apical spinules.

*Wings.* Brownish with dark brown veins. Mediastinal vein ends in  $r_1$ . Apical section of  $m_{1+2}$  gently undulated.  $T_p$  as long as apical section of  $m_{3+4}$ . Anal vein present but ending before wing margin. Squamulae pale with long black hairs. Halteres white.

*Abdomen.* Shining dark metallic green. Tergites densely covered with short black bristles, marginal bristles slightly longer. Some long bristles on sides of first tergite. Sternites with short black bristles, denser and finer on fourth sternite. Hypopygium globular, dark brown, with black hairs. Cerci pale brownish, with long bristles at tip (Fig.15).

Body length: 4 mm; wing length: 4.4 mm.

#### Female

Unknown.

#### Type material

Holotype male: Boroi (Bogia, Madang province) 17.6.1982 (sample no.1342, leg. P.Grootaert; I.G. 26.480); genitalia in slide no.83.08.24.02.

Paratype male: sample no.1343, same data as holotype.

#### Type locality and habitat

Boroi river near Boroi village (Bogia, Madang province). The specimens were caught by sweeping over the muddy embankment of the large Boroi river (14‰ salinity). The river runs through a large area with mangrove.

#### Derivatio nominis

This species is named *fuscicoxalis* because of the darkened front coxae.

#### 5 KEY TO THE MALES OF *THINOPHILUS* FROM PAPUA NEW GUINEA

1. 4 strong, nearly equally long dorsocentrals present . . . . . 2
- 5 or 6 dorsocentrals present (front one always short) . . . . . 3
2. Front coxae yellow with very short bristles (small species) . . . . .
- . . . . . *T.(S.)splendens* sp.nov.

- Front coxae darkened exteriorly and with bristles that are longer than coxa is deep (stout species) . . . . . *T.(S.)fuscicoxalis* sp.nov.
3. Wing brown with dark shades on crossvein and 'wingboss'; 5 dc, front one very short; palpi brownish black . . . . . *T.(T.)flagellatus* sp.nov.
  - Wing brown without shades; 6 dc, front one very short; palpi yellow, at most brown at base . . . . . 4
  4. Front coxae yellow . . . . . 5
  - Front coxae black . . . . . *T.(T.)taylori* Parent
  5. Front femora with 6 long ventral bristles on basal third, longer than femur is deep; cerci pale and much shorter than aedeagus. . . . . *T.(T.)yangoethemi* sp.nov.
  - Front femora with short inconspicuous ventral bristles; cerci black, as long as aedeagus . . . . . *T.(T.)govaerei* sp.nov.

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