A new termitophilous species of *Termitoptocinus* Silvestri from New Guinea and a redescription of the genus (Coleoptera, Staphylinidae, Aleocharinae, Corotocini)*

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ABSTRACT: The genus *Termitoptocinus* is redescribed and illustrated. *T. australiensis* is also redescribed, and a new species *Troisini* from Papua New Guinea is described. A stenogastric form of this genus is illustrated for the first time.


1. INTRODUCTION

Recently we described two genera from New Guinea and reported the presence of a third all belonging to the termitophilous tribe Corotocini (Pastels & Jacobson 1984). These represented the first records of Corotocini from New Guinea. Both of the new genera were found in the nests of *Nasutitermes princeps* (Desneux). One of the new genera, *Neoguineella*, is closely related to the genus *Termitoptocinus* Silvestri formerly known from only a single adult collected in Australia. Since then, we have received a new species of *Termitoptocinus* from Papua New Guinea that was collected by Yves Roisin of the Université libre de Bruxelles. This species is also found with *N. princeps*. J.A.L. Watson of C.S.I.R.O., Division of Entomology, Australia, had also sent us specimens of *Termitoptocinus australiensis* that he had recently collected. These represent the first recapture of this species since it was originally described from a single specimen by Silvestri (1921). Later Watson found in the C.S.I.R.O. collection, an additional specimen of this species collected by G.F. Hill, the person who had collected the original specimen. This genus is of particular interest because it is the first genus of the tribe Corotocini to be recorded from both Australia and New Guinea. The affinities of the Australian and south east Asian Corotocini with those of South America were discussed in the earlier paper by Pastels & Jacobson (1984).

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The purpose of this paper is to redescribe the genus based upon this new material. The methods used for this study are the same as those described by Pasteels & Jacobson (1984). All measurements are in millimeters.

2. SYSTEMATIC ACCOUNT

_Termiptococinus_ Silvestri

_Termiptococinus_ Silvestri, 1921: 15, adult only, type species _Termiptococinus australiensis_ Silvestri by original designation and monotypy; Reichensperger 1922: 35; comparison to _Termiptopillus_ Blackwelder, 1952: 379, discussion of genotype; Seevers 1957: 39, phylogeny, 148, mentioned; Kistner 1969: 537, phylogenetic tree.

Most closely related to _Neogenuella_ Pasteels & Jacobson by the shape of the head and thorax, and the extent of abdominal physogastry, but distinguished from this genus by the absence of abdominal secondary sclerotization, reduced physogastry on the posterior part of the prothorax, and the absence of sclerotized anterior, finger-like projections on the scutellum. Head and thorax similar in build to _Eburniola_ Mann, but separated from this genus by its distinctly greater abdominal physogastry and metacoxae that are nearly twice as long as wide.

Overall shape as in Figure 2A. Lateral margins nearly straight, slightly expanded posteriorly, widest across the foramen magnum which is expanded to include the entire posterior margin. Dorsal surface smoothly and broadly convex, nearly flat. Eyes well-developed with many laterally and posteriorly directed facets. Antennae (Fig.2E), 11-segmented; scape long, about equal to the next five segments combined; segments 2-6 transverse; segments 7-9, subquadrate; apical segment with two groups of coeloconic sensillae, and segment 3 with one. Mentum, submentum and gula fused. Gula with short posterior extensions (Fig.2A). Mandibles shaped as in Figures 2B, C, 4A, B, somewhat variable by species. Maxillae shaped as in Figures 2D, 4F; palpi 4-segmented, segments 2 and 3 subequal and suboval, segment 3 somewhat broader than 2; segment 4 extremely thin, awl-shaped. Labium shaped as in Figures 2F, 4D; palpi 2-segmented with a long spine extending from the last segment. Labrum shaped as in Figure 4C.

Pronotum shaped as in Figure 2H; transverse. Anterior margin broadly pointed at the midline, lateral margins smoothly convex and continuous with the convex posterior margin. Prosternum transverse, ventral surface smoothly convex, posterior margin hyaline. Anterior angles extended to meet the reflexed lateral borders of the pronotum forming the anterior half of the procoxal cavities. Posterior angles extended, short, not closing the coxal cavities behind. Mesothoracic peritrees weakly sclerotized, reduced and surrounded by membrane. Scutellum shaped as in Figures 2I (arrow), 5B. Meso- and metanotum shaped as in Figures 2I, K, 5B; length of the mesonotum slightly less than that of the metanotum. Meso- and metasternum (Fig.3E) fused. Mesosternal intercoxal process wide, acarinate. Lateral portions of the posterior margin of the metasternum strongly

Figure 1. _Termiptococinus rotini_. A. Lateral view; B. Dorsal view.
Figure 2. Termiteocinus australiensis. A. Head capsule, ventral view; B. Left mandible; C. Right mandible; D. Maxillae; E. Antenna; F. Submentum (thick arrow), labium (arrows on segments 1 and 2 of the palp); G. Elytron; H. Pronotum; I. Mesonotum, scutellum (arrow); J. Stenogastric form (arrow on abdomen); K. Meso-, metanotum, and abdominal tergite I (arrow on spiracle of tergite I).

Figure 3. Termiteocinus australiensis. A. Proleg; B. Mesopleg; C. Metaleg; D. Male genitalia (short arrow on median lobe, long arrow on lateral lobe); E. Meso-, metasternum (arrow on medial metasternal articulating process); F. Abdomen, overall; G. Male abdominal segment IX (arrow on apodeme); H. Abdominal sclerites, sternite VII (arrow) without macrochaetae.
Figure 4. *Termiotoptocinus rosinii*. A. Left mandible; B. Right mandible; C. Labrum; D. Labium (arrow on segments 1 and 2 of palpus); E. Sternite VIII; F. Maxillae; G. Elytron with marginal seta.

Figure 5. *Termiotoptocinus rosinii*. A. Abdominal tergites II-IX (arrows on long male apodemes); B. Scutellum, meso-, and metanotum; C. Median lobe of male genitalia; D. Abdominal sternites III-VII; E. Lateral lobes of male genitalia; F. Spermatheca.
oblique; medial metasternal articulating process (Fig.3E, arrow) well-developed, long, extended, separating the metacoxae from the metasternum along most of its length. Elytra shaped as in Figures 2G; 4G; outer lateral margins about 1.5x the length of the inner margins, posterior margin oblique. Wings present. Pro-, meso-, and metalegs shaped as in Figures 3A, 3B, and 3C respectively. Tarsal formula 4-4-4.

Abdomen (Figs.1A, B; 3F) strongly physogastric, carried nearly parallel over the thorax, widest across segment IV. Segment I (Fig.2K) represented by a reduced tergite fused to the metanotum. Segment II (Fig.5A) represented by a short, transverse tergite only. Segments III-VIII represented by one tergite and one sternite. Tergites III-V (Fig.5A) short, transverse, lightly sclerotized with anterior margins more heavily sclerotized and more broadly extended. Tergites VI-VIII (Fig.5A) quadrat to elongate. Sternite III reduced. Sternites VI-VII (Fig.5D) short, transverse with the anterior margin more heavily sclerotized and more laterally extended. Sternite VIII shaped as in Figure 4E, with two long apodemes. Sternite IX of the male trilobed with long apodemes, shaped as in Figures 3G, 5A, female without long apodemes. Male genitalia lightly sclerotized, trilobed; median lobe bulbous, lateral lobes broad. Spermatheca sclerotized.

Type species: Termiptocinus australiensis Silvestri.

Termiptocinus australiensis Silvestri (Figs.2, 3)

Termiptocinus australiensis Silvestri 1921: 5 description of species. Host: Eutermes fumipennis

Most closely related to Troisini in overall size, shape, and appearance, but distinguished by the macrochaetotaxy of the abdominal tergites and sternites, slight differences in the mandibles, and the absence of setae on the outer lateral margins of the elytra.

Overall shape the same as Troisini in Figure 1A, B. Color of the sclerotized parts yellowish brown, membranous areas milky white. Dorsal surface of head, pronotum, and elytra smooth and shiny. Mandibles nearly symmetrical, shaped as in Figure 2B, C. Posterior angles of the pronotum each with one long, yellow seta. Elytra (Fig.2G) without long yellow setae on the outer lateral margin. Macrochaetotaxy of the abdominal tergites III-VIII: 0,0,0,2,2,4; setae increase in length from anterior to posterior tergites. Median lobe of segment IX with two black setae; lateral lobes with two black setae each. Macrochaetotaxy of abdominal sternites III-VIII: 1,1,1,0,0,4. The membranous area between the sternites with numerous long, yellow setae each arising out of a dark socket (Fig.2F); most dense around the third sternite. Median lobe of the male genitalia with lateral lobes attached shaped as in Fig.3D. Spermatheca unknown.

Measurements. Head length, 0.20; head width, 0.21; pronotum length, 0.25; pronotum width, 0.28, (measurements taken off parts mounted on a slide). Number measured, 1.

Type material examined. Holotype, Australia, Northern Territory, Black Jungle

Other material examined. Australia: 1, North Queensland, Magnetic Island, 13 July 19, ex arboreal nest of Eutermes graveolus, Coll. G.F. Hill (CSIRO); 2, Northern Territory, Leaders Creek, Gunn Point, 12 Aug. 1982, ex nest of Nasutitermes graveolus (Hill), Coll. J.A.L. Watson and R.A. Barrett (CSIRO).

Notes. Silvestri's illustration of the left mandible shows it without a tooth, but a small tooth like the one in Figure 2B was found when the type, dissected by Silvestri, was reexamined. Watson & Gay (1980) report that the correct host determination for the holotype is N. graveolus.

The stenogastric form of this species is illustrated in Figure 2J. Note the size of the abdomen (arrow) compared to the physogastric form of Troisini in Figure 1A.

**Termitoptocinus roisinii** sp. nov. (Figs. 1, 4, 5)

Most closely related to T. australiensis in nearly all respects, but distinguished by the macrochaetotaxy of the abdominal tergites and sternites, absence of a tooth on the right mandible, and the presence of setae on the outer lateral margins of the elytra.

Overall shape as in Figure 1A, B. Color of the sclerotized parts yellowish brown, membranous areas milky white. Dorsal surface of head, pronotum, and elytra smooth and shiny. Mandibles shaped as in Figure 4A, B. Pronotum with four long, yellow setae, one extending from each corner. Elytra (Fig. 4G) each with one or two long, yellow setae at the midpoint of outer lateral margin. Macrochaetotaxy of the abdominal tergites III-VIII (Fig. 5A): 0,0,0,2,4,4; setae increase in length from anterior to posterior tergites. Median lobe of segment IX with two black setae; lateral lobes with two black setae each. Macrochaetotaxy of abdominal sternites III-VIII (Figs. 4E, 5D): 1,3,3,2,0,4. The membranous area between the sternites with numerous long, yellow setae each arising out of a dark socket; most dense around the third sternite. Median lobe of the male genitalia shaped as in Figure 5C; lateral lobes shaped as in Figure 5E. Spermatheca shaped as in Figure 5F.

**Measurements.** Head length, 0.18-0.22; head width, 0.18-0.20; pronotum length, 0.22-0.26; pronotum width, 0.22-0.24; overall length with abdomen recurved, 0.97-1.28. Number measured, 10.


**Paratypes.** Papua New Guinea, Madang Province: 33, same data as holotype, one on slides, 1 sectioned; 1, Madang, 10 June 1981, ex nest PNG T-60, Coll. J.M. Pasteels; 5, Awar (Bogia), 5 May 1983, ex nest PNG T-338, Coll. Y. Roisin; 2, Awar (Bogia), 20 October 1983, ex nest PNG T-409, Coll. Y. Roisin (IRSN, JMP, DK).

**Note.** All termite hosts were determined as Nasutitermes princeps (Desneux) by J.M. Pasteels and are in his collection. All the nests were arboreal and found in coconut plantations.

This species is named for the collector whose determined efforts have added to our knowledge of this interesting tribe.

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