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A new *Leptognatha* species of the subgenus *Thylacina* from New Guinea

(Coleoptera, Cicindelidae)

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Abstract

Comparison with type specimens of *Leptognatha* (*Thylacina*) *spinilabris* RIVALIER, 1972 (RIVALIER, 1972), described from northern Indonesian Papua (Jayapura region), revealed a new, similar species from the same area. It is here described as *L.* (*T.*) *longipenis* **sp.n.**. Moreover, the male specimen described by CASSOLA & WERNER (1998) as being the male of *L. spinilabris*, was compared to the type specimens and its identification can be confirmed. Five additional *L. spinilabris* specimens were also recently collected in the same area as the new species.

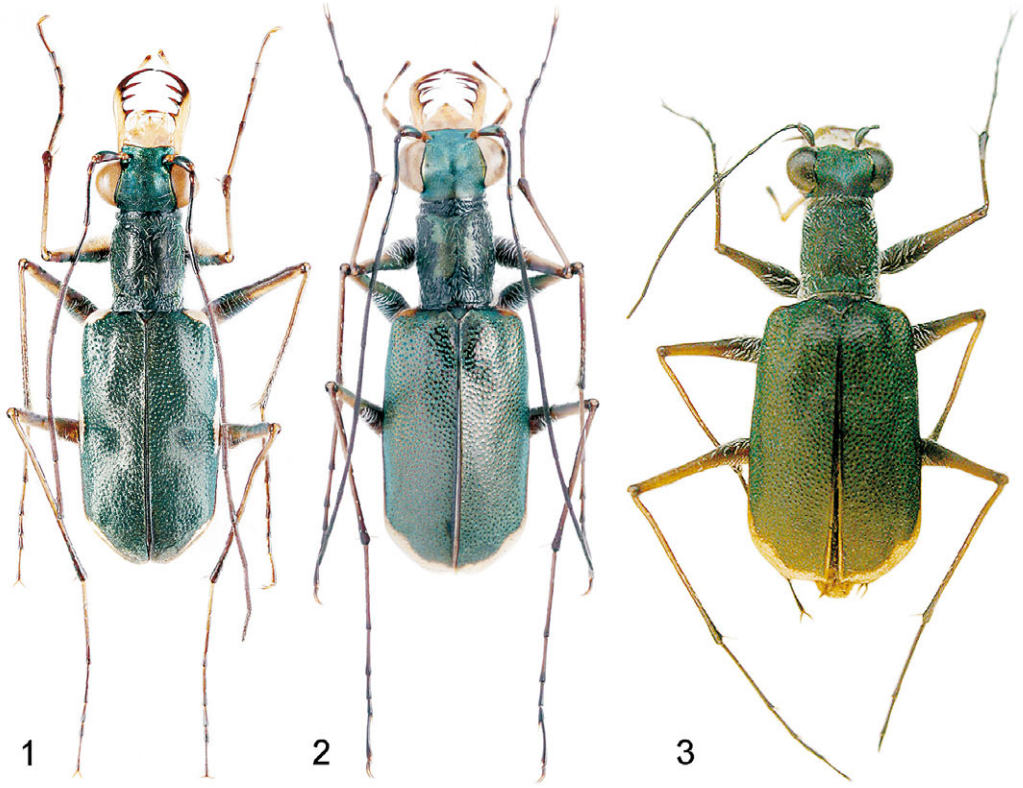
Introduction

RIVALIER (1972) described *Leptognatha* (*Thylacina*) *spinilabris* based on seven female specimens, all collected at light in northern Indonesian Papua, south of Jayapura, which were characterized by a pubescent pronotum and a long pointed labrum, protruding in front (female). CASSOLA & WERNER (1998) described what seemed to be the male of *L. spinilabris*, based on a single specimen also having a partly pubescent pronotum and also collected at light, however from the east of New Guinea island (Papua New Guinea, Morobe Province). More recently, however, five additional *L. spinilabris* specimens (Jayapura region, Depapre and Nimbontong) as well as two specimens (♂♂) of another new *Leptognatha* (*Thylacina*) species, also having a pubescent pronotum but a completely different aedeagus (thus clearly representing a different species from the first one) were collected. Doubts were raised whether the apparently new ♂♂ specimens could well represent instead the true ♂ of *L. spinilabris*, while the ♂ from the Morobe province in Papua New Guinea, which had been described by CASSOLA & WERNER (1998) as the male of *L. spinilabris* ♂, could represent a new species instead. Comparison between these ♂♂ and the *L. spinilabris* type specimens became clearly mandatory. Thanks to the kind loan of two ♀ type specimens of *L. spinilabris* (from MNHN, Paris, France) and the ♂ specimen from WERNER'S collection (presently in ZSM, Munich, Germany), such a comparison was made finally possible, and the previous identification by CASSOLA & WERNER (1998) was confirmed. The new species is described below.

Leptognatha (*Thylacina*) *longipenis* sp. n.

(Figs 1, 4, 6, 8, 10, 11)

Type specimens. Holotype, male, labeled: "INDONESIA, Papua: Jayapura region, Nimbontong vill., 95 m, 2.62702ºS - 140.01510ºE, 21 - 25.IV.2009, A. Sokolov leg.", in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia. Paratype, male, with same label data, but: "S. Vaschenko leg." in first author's collection (to be kept in the future by the Museo Civico di Zoologia, Rome, Italy).



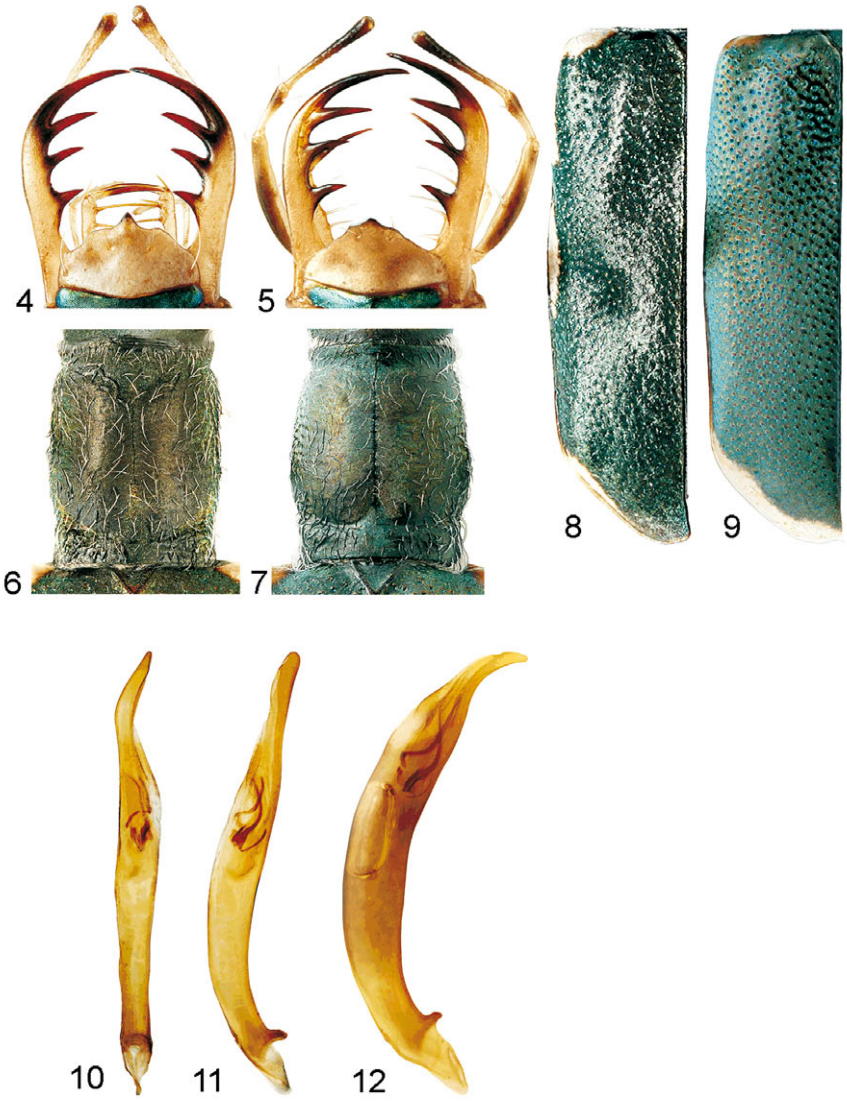
Figs 1-3. *Leptognatha* (*Thylacina*) spp., habitus: **1.** *L.* (*Th.*) *longipenis* **sp.n.** , holotype ♂; **2**. *L.* (*Th.*) *spinilabris* Rivalier, 1972, ♂ (specimen from Jayapura Region, northern Indonesian Papua); **3.** *L.* (*Th.*) *spinilabris*, paratype ♀.

Diagnosis. A *Leptognatha* of the subgenus *Thylacina*, black coloured with green reflections, obviously darker than *L. spinilabris*. Labrum much shorter than in ♀ *spinilabris* (as it is to be expected in a ♂ specimen), subtriangular in front, testaceous, shortly blackened on front tip, with 4 submarginal setae. Antennae longer than the body length (most likely shorter in the unknown ♀), black, the joints 1- 4 with a metallic shine, antennomeres 5 - 11 dull, finely and evenly pubescent. Pronotum black, longer than wide, pubescent on disc, with proepisterna evenly setose, the other thoracic pieces glabrous. Metepisterna and sternum testaceous. Elytra black, with strong greenish reflections in front half especially. Elytral markings made of an humeral complete lunule, an elongate marginal spot in the middle of the lateral sides and a short subapical line which represents the front part of an apical lunule. Legs dark, mostly metallic above, the femora slightly club-shaped, greenish and pubescent basally above, mostly testaceous below, more or less rufescent on “knees” and the basal half of tibiae. Aedeagus characteristic, very long, straight, apically prolonged in a slightly turning downwards beak.

A comparison with two *L. spinilabris* ♀ type specimens (Fig. 3) showed that *L.* (*T.*) *longipenis* **sp. n.**, although a close relative of it because of the pubescent pronotum (Figs 6, 7), is a well-separated species, by reason of several important divergent characters, such as the darker upside colour, the elytral markings (Figs 7, 8) and the very different aedeagus (Figs 10, 11, 12).

Description.

Head black with strong green reflections on clypeus, frons and the orbital plates; eyes yellow, laterally protruding. Sculpture isodiametric, very fine, almost lacking also on the orbital declivities; fully glabrous, except for two setigerous punctures at fixed loci near the eyes. Labrum short, subtriangular, fully testaceous in colour, shortly blackened in front, with four submarginal setae, two inserted near the base at the lateral



Figs 4-12. *Leptognatha* (*Thylacina*), details: **4-5**, male labrum and mandibles; **6-7**, pronotum; **8-9**, left elytron; **10-12**, aedeagus. Figs **4, 6, 8, 10-11:** *L.* (*Th.*) *longipenis* **sp.n.** , holotype ♂. Figs **5, 7, 9, 12:** *L.* (*Th.*) *spinipennis* Rivalier, 1972, ♂ (specimen from Jayapura Region, northern Indonesian Papua). Figs 4-10: dorsal view; Figs 11-12: left view.

angles, two in front middle (Fig. 4). Antennae longer than the body length (expectedly shorter in ♀), black, the joints 1 - 4 with a metallic shine, antennomeres 5 - 11 dull, finely and evenly pubescent. Mandibles narrow, testaceous, blackened in front, somewhat rufescent on teeth. Palpi testaceous with the last joint briefly blackened on tip.

Thorax. Pronotum black, longer than wide, pubescent on disc (Fig. 6). Proepisterna evenly setose, the other thoracic pieces glabrous. Metepisterna and sternum testaceous.

Elytra black, with strong greenish reflections in front half especially. Shoulders well marked with a complete humeral lunule. Elytral markings moreover made of an elongate marginal spot in the middle of the lateral sides and a short subapical line which represents the first part of an apical lunule (Fig. 8).

Abdomen. Underside and abdominal sternites mostly testaceous, the first sternites briefly darkened in the middle. Legs dark, mostly metallic above, the femora slightly club-shaped, greenish and pubescent above basally, mostly testaceous below, more or less rufescent on "knees" and the basal half of tibiae.

Aedeagus characteristic, unusually long and straight, apically prolonged in a slightly turning downwards beak (Figs 10, 11).

Length (without labrum): holotype, 7.2 mm; paratype, 7.0 mm.

Female unknown.

Etymology. This new *Leptognatha* (*Thylacina*) species is so named to underline the unusual length and shape of its aedeagus.

Remarks. A comparison with two spinilabris ♀ type specimens (Fig. 3) showed that *L. (T.) longipenis* **sp. n.**, although a close relative of it because of the pubescent pronotum (Figs 6, 7), is a well-separated species, by reason of several important divergent characters, such as the darker upside colour (figs 6, 7, 8, 9), the elytral markings (Figs 8, 9) and the very different aedeagus (Figs 10, 11, 12).

Key to the *Leptognatha* species of the subgenus *Thylacina*

1. Mandibles (male) with just one single inner tooth . . . . . *nigrivestis* B. v. Nidek, 1959
- Mandibles in both sexes normally shaped 2

2. Elytral colour black 3
- Elytral colour more or less metallic green, with greenish reflections on shoulders at least. 6

3. Elytra longer in proportion . . . . . *gracilipes* Rivalier, 1972
- Elytra shorter in proportion 4

4. Aedeagus straight, apical angle shortly bent on the left side . . . . . *rivalieri* B. v. Nidek, 1959
- Apex of aedeagus strongly bent downwards (ventral side) 5

5. Aedeagus apex robust, wide . . . . . *rudolfbennigseni* W. Horn, 1912
- Aedeagus apex thin .. . . . . *sumliniana* Cassola, 1987

6. Pronotum glabrous 7
- Pronotum pubescent 9

7. Male labrum elongated in front middle, spiniform . . . . . *inexspectata* Cassola, 1987
- Male labrum short, subtriangular in front 8

8. Larger species (♂ 10 mm) .. . . . . *fraudulenta* Cassola, 1987
- Smaller species (8-9 mm) . . . . . *bishopi* Cassola, 1987

9. Pronotum subparallel-sided. Apical lunule and middle band incomplete . . . . . *longipenis* **n. sp.**
- Sides of pronotum slightly convergent in front, apical lunule wide and complete, middle band absent . . . . . *spinilabris* Rivalier, 1972

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Zusammenfassung

Leptognatha (*Thylacina*) *spinilabris* wurde mit den Typusexemplaren verglichen und der Artstatus bestätigt. *L.* (*T.*) *longipenis* **sp. n.** wird aus Neuguinea beschrieben. Ein Bestimmungsschlüssel wird für die Arten der Untergattung *Thylacina* vorgestellt.

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