

A New Clytine Genus Related to *Psilomerus* CHEVROLAT (Coleoptera, Cerambycidae) from Hainan, Southwestern China

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Abstract A new genus and species of the tribe Clytini is described from Hainan, southwestern China. It may have some relationship with the genus *Psilomerus* CHEVROLAT, but clearly distinguished from the latter by the peculiar structure of antennae and fore femur.

Introduction

During the taxonomic study on the clytine genus *Psilomerus* (CHEVROLAT, 1863) and its similar groups, we found a very strange beetle from Hainan, southwestern China. The clytine is similar in general appearance to *Psilomerus* species, especially in having the antennal segment 3 with an elongate stem. However, it has some unique structures on the antennae and legs which are seldom observed in other members of the tribe. These features are considered of generic importance in the light of the recent classification of the clytine longicorn beetles.

In this paper, we are going to describe and illustrate the clytine beetle in question as new under a new genus for the reason of its peculiarity.

Materials and Methods

Materials used in the present study were from the collections of the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZAS), and Bin Insect Taxonomy Studio, Beijing, China (BITS). The collecting data of specimens examined are described in the original spellings, though several Chinese characters were translated to English and described in parenthesis when necessary.

Specimens were observed under a stereoscopic microscope (OLYMPUS SZX16), an optical microscope (OLYMPUS BX53M) with a microscope digital camera (OLYMPUS DP73), and an image analysis software (OLYMPUS Cell Scens). SEM images were taken by a Keyence VHK-D500 Ultra Depth Multi-Angle Observation System. The drawing of male genital organs was made by using Adobe Illustrator CS3.

The abbreviations used for the ratio of the measurements in the description are as follows: HW — maximum width of head across tempora just behind lower eye-lobes; PL — length of pronotum; PW — maximum width of pronotum near middle; PA — apical width of pronotum; PB — basal width of pronotum; EL — length of elytra; EW — humeral width of elytra.

Taxonomy

Genus *Chaetopsilomerus* nov.

Type species: *Chaetopsilomerus hainanensis* sp. nov.

As having the elongate stem in the antennal segment 3, the new genus is almost identical with *Psilomerus* CHEVROLAT, especially in some of its members with the elongate body, antennae, and legs. However, it is clearly distinguished from *Psilomerus* by the unique structures of antennae and fore femora as shown in the following description.

Head moderately narrowed ventrad in frontal view, with prominent eyes. Antennae remarkably long, about twice the length of body in ♂; segments 3 slightly longer than segment 4 (distinctly shorter in that of *Psilomerus*); segment 4 gradually dilated to apex (cylindrical and weakly thickened at apex in that of *Psilomerus*), nearly 1/4 the length of segment 5; segments 5–11 cylindrical, not thickened at apices, gradually become longer to the longest terminal segment, finely shagreened, clothed with short uniform pubescence in dense regular lines (without such arrangement of pubescence in any other members of the Clytini). Pronotum elongate, distinctly longer than the maximum width. Elytra slender, elongate, nearly three times as long as the humeral width. Legs remarkably long, with fore femur provided with elongate shallow depression with dense bristle on under side at least in ♂ (without hairy depression in any members of the Clytini). Male genitalia basically identical with those of *Psilomerus*, and the detailed structures referred to in the description of type species.

Etymology. The name of this new genus is derived from the uniform arrangement of pubescence on the antennal segments 5–11. The gender is masculine.

Range. So far only been known from Hainan of China, the type locality of type species.

Notes. The affinities of this new genus with other Clytini genera will be explained in the section of Discussion.

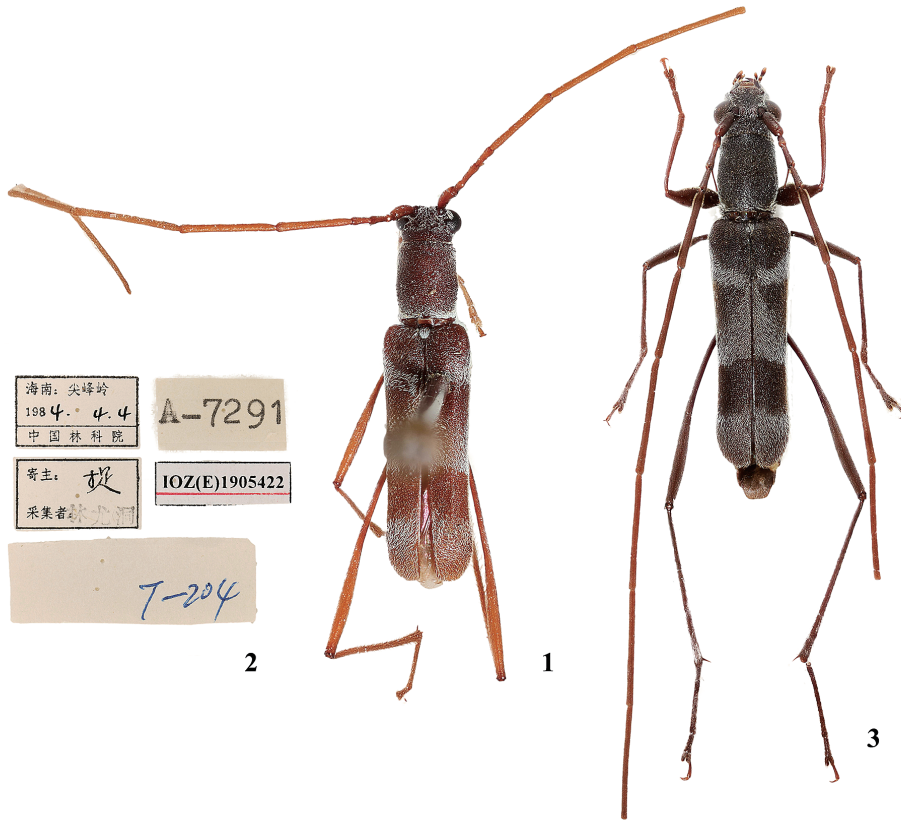
Chaetopsilomerus hainanensis sp. nov.

(Figs. 1–14)

Body length: 7.1–7.6 mm (from apical margin of clypeus to elytral apices).

Slender and blackish coloured clytine with markedly long antennae. Colour dark chestnut brown (holotype) or black (paratype); antennae and legs paler; claws yellowish brown; mouthparts matted in general, except for margins of mandibles and basal half of terminal segments of palpi black. Body densely clothed with pale brown pubescence and scattered with a few pale yellow hairs, densely with white pubescence on head except for underside, linear basal margin of pronotum, scutellum, and most of ventral surface including coxae; antennae clothed with irregular-sized dark brown hairs on basal four segments, uniformly and densely with dull green fine setae on the rest segments; elytron decorated with three bands of bluish gray pubescence: 1) an arcuate band in basal fifth, with anterior margin dilated externally, 2) a broad band at a level between basal and apical 2/5, with anterior margin distinctly oblique, extending along suture and barely reaching the first band, posterior margin slightly oblique, 3) a transverse band in apical sixth, distinctly dilated to suture in both anterior and posterior margins, the rest of apical narrow part clothed with brownish gray pubescence; legs clothed with short brown hairs, which are more or less become longer on hind tibiae; fore femora densely clothed with medium-sized light green hairs on underside.

Head closely provided with irregular-sized punctures, HW/PA 1.30 & 1.33, HW/PW 1.04 &

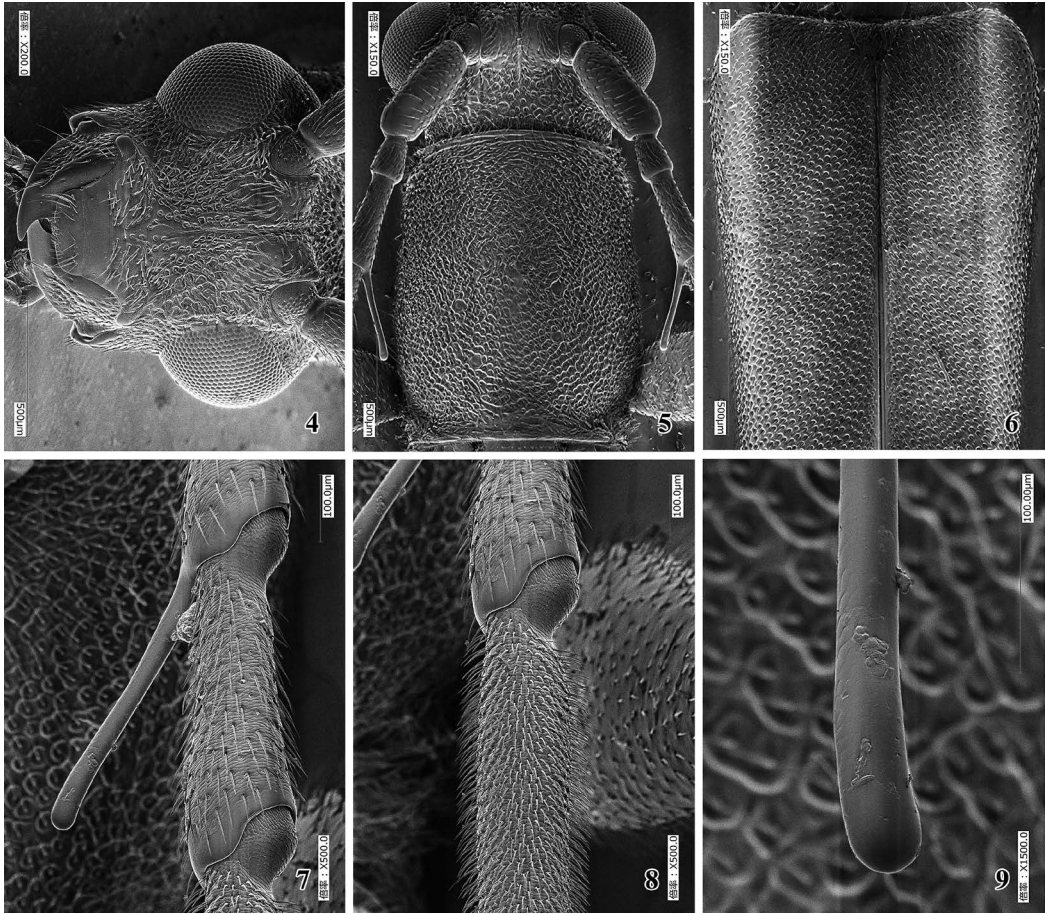


Figs. 1–2. *Chaetopsilomerus hainanensis* gen. et sp. nov., from Hainan, China. — 1, Holotype ♂, dorsal habitus; 2, ditto, labels; 3, paratype ♂, dorsal habitus.

1.05; frons 3/5 the length of width, almost flattened, with a fine median groove in basal half, closely punctured though more or less sparse near base and a median triangular area in apical half; genae 2/3 the depth of lower eye-lobes in frontal view; occiput strongly constricted posteriad behind eyes; eyes moderately prominent, less than half the width of frons in frontal view. Antennae about twice the length of body, surpassed the elytral apices at apical third of segment 7; scape not so stout, gently arcuate in profile, shallowly punctured, a little shorter than segment 3, segment 3 with a stem 9/10 the length of the segment, segment 4 slightly shorter than the preceding, segments 5–9 gradually become longer, terminal segment almost straight, a little longer than segment 9.

Pronotum elongate, slightly convergent apicad; PL/PA 1.45 & 1.48, PL/PW 1.18 & 1.24, PA/PB 0.88 & 0.91, PL/EL 0.30; sides slightly dilated in weak arcuate line to the widest point at basal third, hardly constricted near apex and base; disc weakly evenly convex in gently arcuate line, even near apex and base, with fine close punctures which are confluent with each other along midline, transversely rugose near apex and base. Scutellum tongue-shaped, coarsely shagreened.

Elytra long and slender, EL/EW 2.98 & 3.10; sides with humeri weakly prominent anteriad, arcuately emarginate between basal tenth and just before swollen part in apical fifth; apices almost rounded; disc hardly convex, almost flattened above except for very weak depressions near suture, finely, closely and sub-uniformly punctured.



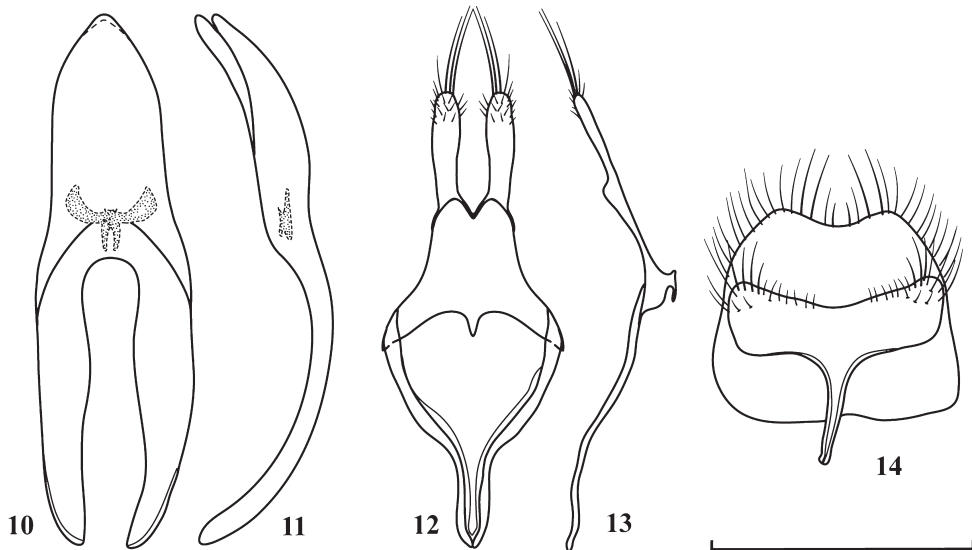
Figs. 4–9. SEM images of *Chaetopsilomerus hainanensis* gen. et sp. nov., paratype ♂, from Hainan, China. — 4, Head, in frontal view; 5, head and pronotum, in dorsal view; 6, basal halves of elytra, in dorsal view; 7, antennal segments 3–5; 8, ditto, extremely showing the pubescence on segment 5; 9, stem of antennal segment 3.

Ventral surface finely closely punctured.

Legs markedly long; hind femora surpassed elytral apices by about apical third; tarsal segment 1 2.5 times as long as the following two segments combined.

Male genitalia. Median lobe broad and short, weakly arcuate in profile; ventral plate a little longer than dorsal plate, moderately narrowed in arcuate line to apex which is bluntly pointed. Parameres nearly half the length of tegmen, distinctly narrowed to basal half, divided in apical half; lobes widely separated in U-shape from each other, with inner sides slightly inclined externally, apical part thickened and provided with three long and several short setae. Eighth tergite semi-trapezoidal, as long as wide, weakly emarginate on apical margin, provided with long setae along margin. Eighth sternite transverse quadrate, slightly emarginate on apical margin, provided with several long setae near sides of apical margin.

Type series. Holotype: ♂ (in IZAS), “海南：尖峰岭 (Hainan: Jianfengling) / 1984. 4. 4 (white card with black margin) / 中国林科院” “寄主：捉 / 采集者：林允洞 (white card with black margin) (Collector: Youdong LIN)” “A-7291” “T-204” “IOZ(E)1905422 (white card with black margin and red line)”;



Figs. 10–14. Male genitalia of *Chaetopsilomerus hainanensis* gen. et sp. nov., paratype ♂, from Hainan, China. — 10, Median lobe, in ventral view; 11, ditto, in lateral view; 12, tegmen, in ventral view; 13, ditto, in lateral view; 14, abdominal segment 8, in ventral view. Scale: 0.5 mm.

stems of left and right antennal segments 3 are broken, and apical five segments of right antenna and right mid leg are missing. Paratype: 1 ♂ (in BITS), “Mingfeng Valley, 991 m / 18°44′31.7″/108°50′32.1″ / Mt. Jianfengling, Ledong / Hainan, SW. CHINA / 3.V.2014, LIU Bin leg. / Collected by sweeping”; terminal segment of left antenna and apical three segments of right antenna are missing.

Etymology. The name of this new species is derived from the type locality.

Distribution. China: Hainan.

Notes. This new clytine beetle seems to be very rare, since only two male type series have so far been collected in the past 30 years. According to Mr. Bin LIU, the male paratype was collected by random sweeping the broad leaved trees.

Discussion

Within the Clytini, *Chaetopsilomerus* gen. nov. is probably close to *Psilomerus* CHEVROLAT since the species belonging to these genera possess an apical elongate stem on the antennal segment 3. As far as we know, this feature has been recognised as an autapomorphy of *Psilomerus* until the present study. On the other hand, the antennal segment 4 in *Psilomerus* is always longer than segment 3 and as long as or a little longer than segment 5. In *Chaetopsilomerus*, however, the antennal segment 4 is shorter than segment 3 as in most genera of the tribe Clytini, such as *Demonax* (THOMSON, 1860). In addition, the cylindrical apical six segments of antennae providing with short uniform pubescence in dense regular lines and the presence of hairy depressions on the fore femora are probably autapomorphic to the new genus, of which the latter character may be a secondary sexual trait of the male. These

characters may support the taxonomic identity of *Chaetopsilomerus* as an independent genus in the tribe Clytini.

要 約

新里達也・韓昌道：海南島から見つかった *Psilomerus* 属に近縁のトラカミキリ族の新属（鞘翅目カミキリムシ科）。——— 中国海南島から、*Psilomerus* 属に近縁のトラカミキリの新属新種を記載した。本新属は、触角第3節端部に棍棒状の突起をそなえる点で *Psilomerus* 属に似ているが、触角は雄で体長の2倍に達するほど長い。第3節は第4節より長く、第5節以降の各節は先端節に向かうほど次第に長くなり、その表面は整列した微毛群に被われるなどの特異な形質をそなえている。また、雄の前腿節腹面には微毛群に覆われた浅い窪みをもつ点も、他のトラカミキリの諸属には認められない形質である。なお、本新属のタイプ種は、これまで雄の2点の標本だけが知られているにすぎない。

Acknowledgements

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