

A Remarkable New Species of the Genus *Acrocyrtidus* JORDAN (Coleoptera, Cerambycidae) from the Malay Peninsula, with Proposal of a New Subgenus

Tatsuya NIISATO¹⁾, Tomáš TICHÝ²⁾ and Luboš DEMBICKÝ³⁾

¹⁾Bioindicator Co., Ltd., Nikkô-Kagurazaka Building, Iwato-chô 18, Shinjuku, Tokyo, 162–0832 Japan

²⁾VSB-Technical University of Ostrava, Sokolská třída 33, CZ-701 21, Ostrava 1, Czech Republic

³⁾Moravian Museum, Department of Entomology, Hviezdoslavova 29a, 627 00 Brno, Czech Republic

Abstract A new species of the genus *Acrocyrtidus* JORDAN, 1894 is described from the Malay Peninsula. Though it is a very unique species in having the vertically thickened body, shortened palpomere, very stout antennae with punctured basal five antennomeres, and totally cylindrical endophallus in male genitalia, other basic features are almost agreed with known members of the genus. A new subgenus is established for the peculiarity of the new species.

Introduction

The longhorned beetles of the genus *Acrocyrtidus* JORDAN, 1894 (Cerambycinae, Compsocerini) is characterised by the deeply emarginate eyes, untufted antennomeres, tapered elytra and long slender hind femora, and presently comprises fifteen species and two subspecies from tropical to subtropical Asia (NIISATO & LIEN, 2019; NIISATO *et al.*, 2019; TAVAKILIAN & CHEVILLOTTE, 2020). In the course of our investigation, we found an additional species of the genus from the Malay Peninsula. The new species has very unique features such as the vertically thickened body, shortened palpomere, very stout antennae with punctured basal five antennomeres, and also the totally cylindrical endophallus in male genitalia. A new subgenus is established with the new species as a type species based on these unique features.

Material and Methods

Specimens used in the present study were mainly from the private collections of the authors. The holotype is preserved in the National Museum of Nature and Science, Tsukuba (NMNST), and the paratypes are in the private collections of Takao ARAI (CTAT), Luboš DEMBICKÝ (CLDC), Manfred EGGER (CMEA) and Tomáš TICHÝ (CTTC). Label data of the type series were quoted verbatim, attached labels were separated by a slash (/), and lines of the same label were demarcated by double quotations (“ ”).

Specimens were observed and photographed under a stereoscopic microscope (Leica S9E). Habitus of specimens and genitalia were photographed by a Canon digital camera EOS 5Ds with macro photo lens EF 50mm, or MP-E 65mm with Life-size Converter EF. Observational method and terminology of endophallus refers to YAMASAKO and LIN (2018).

Abbreviations used for the ratios of measurements when describing species are as follows: HW — maximum width of head across eyes; 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; M — arithmetic mean.

Taxonomy

Genus *Acrocyrtidus* JORDAN, 1894

Acrocyrtidus JORDAN, 1894: 499; type species: *Acrocyrtidus fasciatus* JORDAN, 1894. — AURIVILLIUS, 1912: 326 [catalogue]. — GRESSITT & RONDON, 1970: 467 [key & synonymy]. — NIISATO, 2007: 467 [redescription & synonymy]. — LIN, 2015: 134 [synonymy].

Mausaridaeus PIC, 1903: 29; type species: *Mausaridaeus argenteofasciatus* PIC, 1903. — AURIVILLIUS, 1912: 326 [catalogue]. Synonymised by GRESSITT & RONDON, 1970: 467.

Lautitia MATSUSHITA, 1933: 226; type species: *Lautitia elegantula* MATSUSHITA, 1933. Synonymised by HAYASHI, 1962: 10.

Subgenus *Paracrocyrtidus* nov.

Type species: *Acrocyrtidus aphrodite* sp. nov.

Gender: Masculine, according to the gender of the genus.

Description. Body broad and somewhat thickened vertically. Head large including prominent eyes, almost as wide as maximum width of pronotum; frons subquadrate, parallel-sided; antennal cavities widely separated from one another; labial and maxillary palpi shortened in each palpomere. Antennae distinctly stout, clearly punctured on basal five antennomeres, almost shagreened on the rests. Pronotum subquadrate, gently arcuate on sides. Elytra short and broad, about 2.5–2.6 times as long as humeral width, not distinctly narrowed posteriad, widely truncate at apices. Legs very long. Male genitalia with endophallus almost wholly cylindrical, with boundary between median and apical phallobomeres uncleared, provided with rows of sclerites on median phallobomere. Female genitalia with coxite produced anteriad beyond level of apex of proctiger, vagina moderately long though shorter than ovipositor.

Etymology. The new subgenus name is a combination of the Greek prefix ‘παρά (para)’ = ‘at the side of’, and *Acrocyrtidus*, denoting its relation to the nominotypical subgenus.

Range. Malaysia (Malay Peninsula).

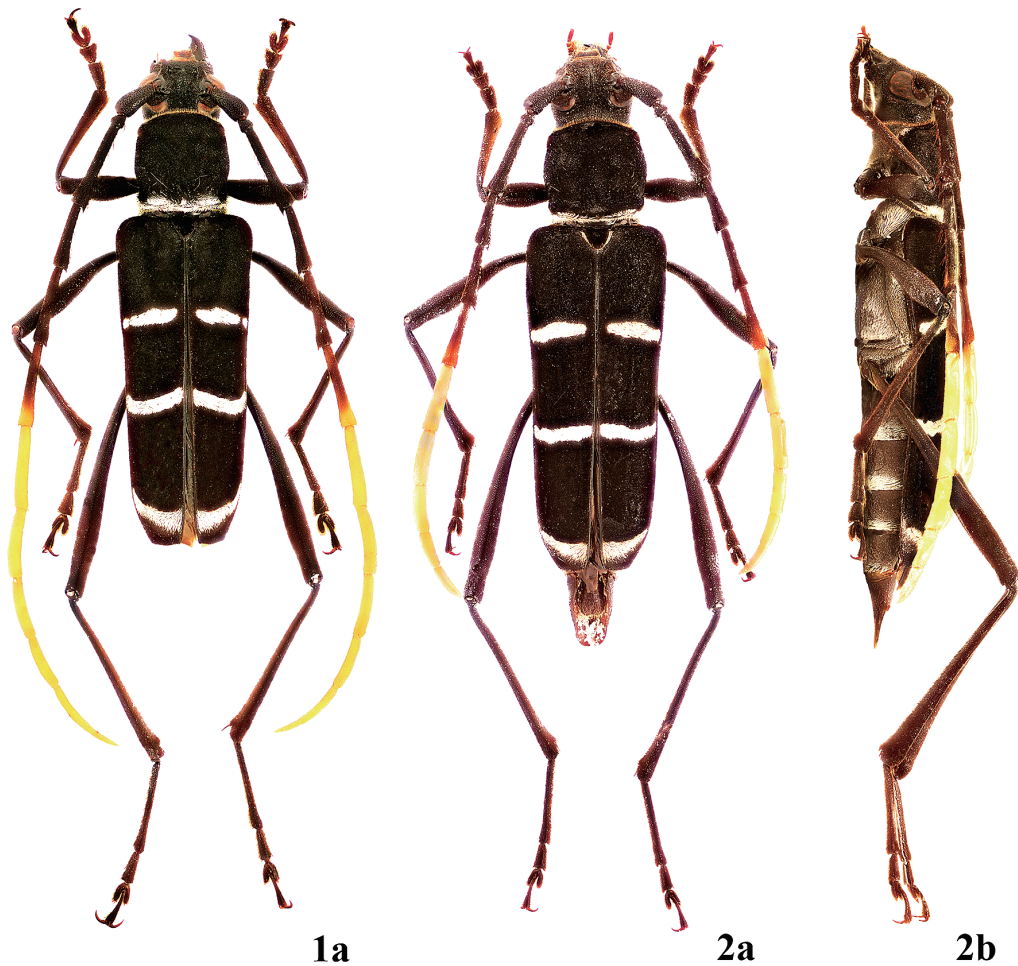
Diagnosis. This new subgenus can be easily distinguished from the nominotypical subgenus by a combination of features as the vertically thickened body, shortened palpomere in labium and maxilla, stout antennae with basal five antennomeres finely but clearly punctured, totally cylindrical endophallus in male genitalia and somewhat produced coxite and shorter vagina in female genitalia.

Notes. The broad pronotum with less arcuate sides, short broad elytra, and long legs disproportionate to short body may be useful to distinguish the subgenus *Paracrocyrtidus* nov. from most members of the nominotypical subgenus. However, these features are not necessarily the autapomorphy of *Paracrocyrtidus*, because they are also common with a somewhat heretical species within the genus, such as *A. fulvus* GRESSITT et RONDON, 1970 from Laos and Hainan, and *A. griseofasciatus* HAYASHI, 1979 from the Malay Peninsula. As in the case of *Paracrocyrtidus*, the genus *Acrocyrtidus* is somewhat polymorphic group in the tribe Compsocerini THOMSON, 1864 and should be necessary to revise at least at the subgenus level.

Acrocyrtidus (Paracrocyrtidus) aphrodite sp. nov.

(Figs. 1–12)

Description. Body length (measured from apical margin of clypeus to elytral apices) 17.76 mm in ♂, 20.18–24.84 mm in ♀.



Figs. 1–2. Habitus of *Acrocyrtidus* (*Paracrocyrtidus*) *aphrodite* sp. nov. — 1, Holotype, male; 2, paratype, female. — a, Dorsal view; b, lateral view.

Colour almost entirely black, partly with faint brown tinge in mesonotum and anal ventrite, matt in general; mouthparts yellowish brown except for black mandibles; antennae black in basal five antennomeres of which IV & V tinged with brown, entirely chestnut brown or same colour with light yellow apex in VI, and light yellow in VII–XI; legs black, dark chestnut brown in coxae, trochanters and tarsi. Body densely clothed with velvety dark brown pubescence and scattered with a few long pale hairs; antennae provided with rows of semilong dark brown hairs along inner sides of antennomeres II–VI; pronotum provided with a pair of transverse maculations of recumbent silvery white pubescence just before base, and fringed with same coloured pubescence along whole basal margin; elytra each provided with three narrow bands of recumbent silvery white pubescence, of which slightly oblique band on basal 3/10, and two arcuate bands just behind middle and near apex; ventral sides of thoraces and abdomen densely clothed with recumbent light gray pubescence, partly with dense silvery white pubescence at apical corners of prosternum, sides of meso- and metathoraces including hind coxae, and apical half or so of ventrites I–IV.

M a l e. Head distinctly convex, slightly wider than apical or slightly narrower than maximum width of pronotum, closely and somewhat scabrously punctured throughout; frons slightly wider than long, depressed, with a deep median groove extending to vertex which is narrowly concave along midline; front-clypeal suture recognised as a deep transverse depression; occiput faintly depressed near middle between upper eye-lobes; genae $3/5$ depth of lower eye-lobe in frontal view; eyes large, moderately prominent. Antennae moderately long, about 1.5 times as long as body, with middle of antennomere VIII surpassing elytral apices, provided with an acute spine at each apico-internal corner of III–VI; scape slightly clavate, moderately provided with deep punctures; III longest, 1.8 times as long as scape, 1.3 times as long as IV; VI and VII almost same length; XI moderately arcuate, about 1.5 times as long as X.

Pronotum nearly subquadrate, almost as wide as long, gently arcuate on sides though slightly constricted behind apex and before base; disc provided with two pairs of faint sub-transverse swellings just before middle and on basal third, and also with a small swelling along midline just before posterior pair, with intervening areas between swellings rather distinctly depressed; surface rugoso-reticulately punctured. Scutellum large, subtriangular, slightly concave along midline.

Elytra relatively short and very wide, about 2.6 times as long as humeral width; sides with humeri roundly quadrate, slightly narrowed in a gently arcuate line to apical fifth; apices widely truncate in a weak arcuate line, with a blunt dent at each sutural corner; disc almost flattened above, narrowly depressed along suture in basal $2/3$, shallowly reticulate though difficult to observe owing to dense velvety pubescence.

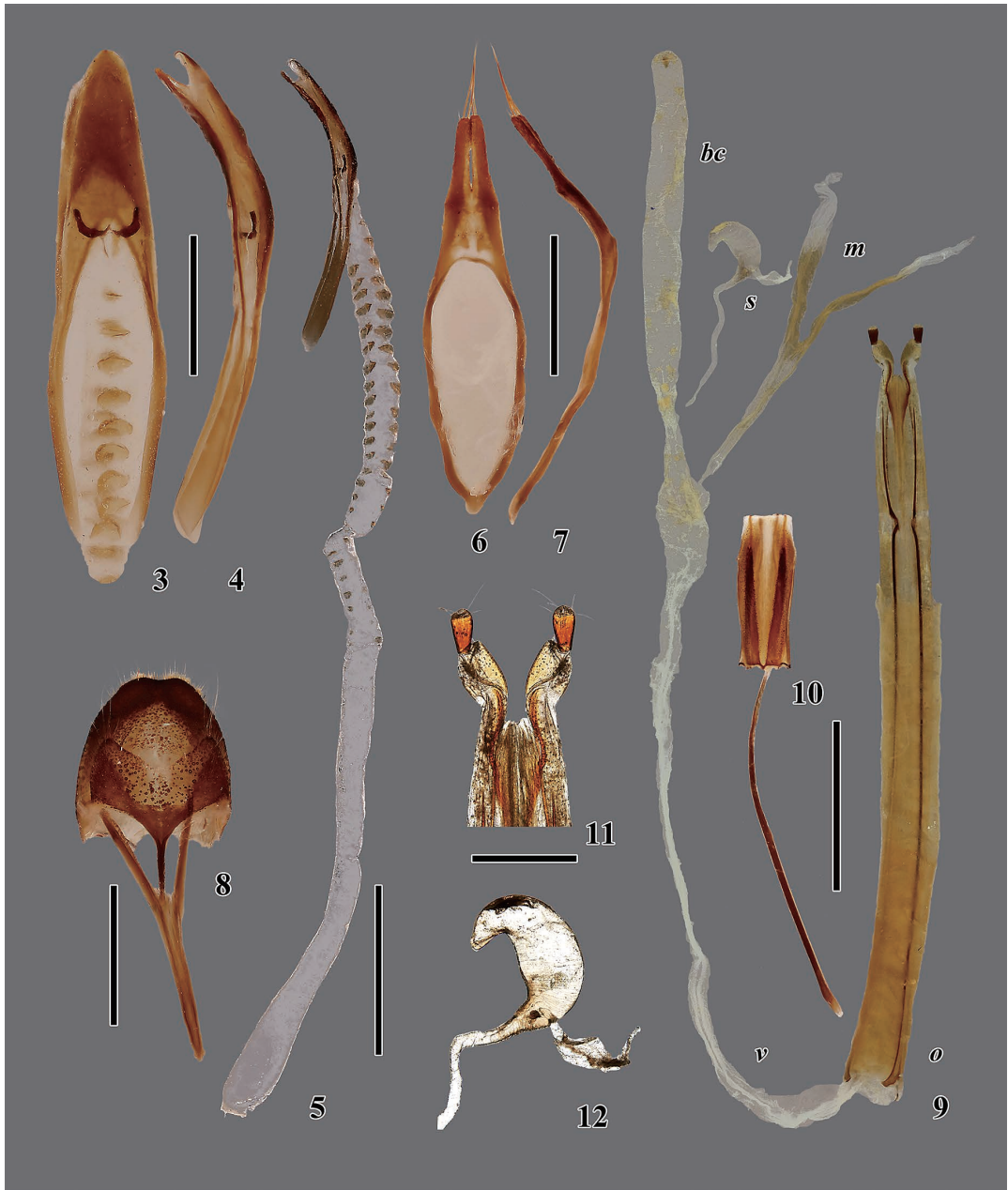
Prosternum transversely rugose, mingled with small punctures; prosternal process wide, slightly dilated apicad, with a weak ridge along midline. Mesosternum coarsely rugose; mesosternal process very wide, slightly dilated apicad, deeply concave along mid-line, deeply emarginate in trapezi-form on apical margin; metasternum finely and densely punctured. Abdomen strongly narrowed apicad, densely provided with fine shallow punctures; anal ventrite subtriangular.

Legs with hind femora weakly clavate, a little shorter than elytra, surpassing elytral apices at apical $3/10$; hind tibiae straight, strongly compressed; hind tarsomere I almost twice length of following two combined.

Male genitalia: Median lobe relatively broad and moderate in length, flattened, weakly arcuate in lateral view; dorsal plate almost as long as ventral plate, moderately narrowed to apex which is narrowly rounded; ventral plate bluntly pointed at apex; median struts about $2/3$ length of median lobe. Endophallus not so long as in the genus, about 3.5 times as long as median lobe, subdivided into basal, median and apical phallomeres; median phallomere provided with a pair of rows of about 25 oblong sclerites, though distal and proximal pairs are small to vestigial; apical phallomere almost cylindrical though slightly thickened and brown coloured near distal part. Tegmen $4/5$ length of median lobe, slender; parameres about $1/4$ length of tegmen, narrowly dehiscent, with each lobe thin, narrowly rounded at apex, clothed with short setae along sides and apex, and two very long setae at apex. Tergite VIII elongate semicircular, shallowly emarginate at middle of apical margin, densely clothed with short setae along about apical $2/5$ of margin. Sternite VIII transverse, deeply triangularly emarginate on apical margin, clothed with long to semilong setae at each apical corner.

F e m a l e. Body slightly broader than in male. Antennae about 1.1 times as long as body, barely reaching elytral apices at base of antennomere X; V and VI almost same in length; XI gently arcuate, about 1.3 times as long as X. Abdomen with anal ventrite elongate trapezoidal, 1.5 times as long as basal width, gently emarginate at middle of apical margin.

Female genitalia: Ovipositor moderately long, about 11.0 times as long as basal width; coxite a little less than $7/10$ length of ovipositor, with baculi slightly arcuate, almost reaching base of coxite



Figs. 3–12. Genitalia of *Acrocyrtidus* (*Paracrocyrtidus*) *aphrodite* sp. nov. — 3–8, Male genitalia; 9–12, female genitalia. — 3, Median lobe, dorsal view; 4, ditto, lateral view; 5, median lobe with endophallus, lateral view *); 6, tegmen, dorsal view; 7, ditto, lateral view; 8, abdominal segments VIII & IX, ventral view; 9, genitalia, ventral view; 10, abdominal segment IX, ventral view; 11, coxite lobe and styli, ventral view; 12, spermatheca. Lettering: o, ovipositor; v, vagina; m, median oviduct; s, spermatheca; bc, bursa copulatrix. Scale: 0.50 mm for figs. 11 & 12; 1.00 mm for figs. 3, 4 & 6–8; 2.00 mm for figs. 5, 9 & 10.

*) Endophallus is almost cylindrical throughout in normal condition, but the constriction near middle in Fig. 5 is caused by damage of membrane.

lobe; paraproct very long, with baculi almost parallel-sided; coxite lobes elongate oval; stylus short, moderately dilated apicad, moderately sclerotised, joined with external half of apical margin of coxite lobe. Bursa copulatrix extremely long, almost cylindrical, slightly narrowed at base and apex. Spermatheca drop-shaped though bent ventrad at apical third, bluntly pointed at apex; gland wide, medium in length, attached just before base of spermatheca; duct relatively short, sinuate.

Measurements. ♂ (n = 1; holotype): HW/PA 1.06; HW/PW 0.95; PL/PW 0.99; PL/PA 1.10; PB/PA 1.03; EL/EW 2.52; EL/PL 3.65. ♀ (n = 2): HW/PA 1.06–1.07 (M 1.07); HW/PW 0.88–0.93 (M 0.91); PL/PW 0.93–1.01 (M 0.97); PL/PA 1.13–1.15 (M 1.14); PB/PA 1.02–1.03 (M 1.02); EL/EW 2.58–2.66 (M 2.62); EL/PL 3.60–3.62 (M 3.61). The measurements of two female paratypes collected by P. ČECHOVSKÝ are not included, since we could not directly measure these specimens.

Type series. Holotype: ♂ (NMNST), “Cameron Highlands”, “Pahang States, West Malaysia”, “V. 1978”, “T. Mizunuma leg.” (typed on white card) / “HOLOTYPE”, “*Acrocyrtidus* (*Paracrocyrtidus*) *aphrodite*”, “Niisato, Tichý et Dembický, 2020” (red card with black margin). Paratypes: 1 ♀ (CTAT), “Cameron Highlands”, “West Malaysia”, “4. V. 1992”, “T. ARAI Coll.”; 3 ♀♀ (CLDC, CMEA & CTTC), “MALAYSIA W., 900 m”, “40km SE of IPOH”, “Banjaran Titi Wangsa”, “RINGLET, 29. iii – 15. iv”, “2004 Čechovský Petr lgt.”.

Etymology. The specific name is “Aphrodite = Αφροδίτη”, the goddess of love and beauty in Greek mythology.

Distribution. Malaysia (Malay Peninsula; known only from the type locality).

Notes. The whole black body and three transverse bands of silvery white pubescence on the elytra in *A. aphrodite* sp. nov. may remind us of the males of *A. argenteofasciatus* (PIC, 1903) from Vietnam and Hainan, and *A. elegantulus elegantulus* (MATSUSHITA, 1933) from Taiwan and its subspecies, *A. e. longicornis* HAYASHI, 1962 from the Ryukyus (Amami-Ōshima Is.). However, this new species can be easily distinguished from them by the characteristics of the subgenus *Paracrocyrtidus* nov. mentioned in the above description.

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要 約

新里達也・Tomáš TICHÝ・Luboš DEMBICKÝ：マレー半島産ハレギカミキリ属（鞘翅目カミキリムシ科）の特異な1新種および新亜属の創設。—— マレー半島からハレギカミキリ属の特異な新種 *Acrocyrtidus aphrodite* sp. nov. を記載した。本新種は、強く肥厚する体形、短い下唇肢と小腿肢、非常に太くて基部5節が明瞭に点刻される触角、全体が筒状の雄交尾器内袋など本属の既知種には認められない諸形質を備えることから、本新種をタイプ種とする新亜属 *Paracrocyrtidus* nov. を創設した。また本新種は、黒い体に3本の上翅白色帯を備える外観から、一見すると *A. argenteofasciatus* (PIC, 1903) およびヨツオビハレギカミキリ *A. elegantula* (MATSUSHITA, 1933) の雄に似ているが、前記した亜属の特徴から区別は容易である。

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