Studies and Reports
Taxonomical Series 20 (1): 235-247, 2024

New species of Clytini Mulsant, 1839 from Asia (Coleoptera: Cerambycidae: Cerambycinae)

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Taxonomy, new species, Coleoptera, Cerambycidae, Clytini, *Demonax*, *Rhaphuma*, *Xylotrechus*, China, India, Philippines

Abstract. The following new species are described: *Demonax immortalis* sp. nov. from India (Tamil Nadu), *Rhaphuma petrkabateki* sp. nov. from China (Sichuan) and *Xylotrechus excelsus* sp. nov. from Philippines (Mindanao - Davao del Sur). All the habitus and male genitalia are illustrated.

INTRODUCTION

The tribus Clytini Mulsant, 1839 is one of the most numerous (in terms of species) tribes of Cerambycidae. Species of the tribe Clytini are known from all biogeographic zones of the earth except the Antarctic Region. The tribe Clytini is currently divided into approximately 70 genera. From the Palaearctic, Oriental and Australian biogeographic regions approximately 1600 species have been described so far. Within these regions, the genera *Demonax* J. Thomson, 1861, *Chlorophorus* Chevrolat, 1863, *Xylotrechus* Chevrolat, 1860 and *Rhaphuma* Pascoe, 1858 include the most species.

In the present paper, the following three Clytini species are described: *Demonax immortalis* sp. nov. from India (Tamil Nadu), *Rhaphuma petrkabateki* sp. nov. from China (Sichuan) and *Xylotrechus excelsus* sp. nov. from Philippines (Mindanao - Davao del Sur). All the habitus and male genitalia are illustrated.

The new species are compared to the congeners (*Demonax dimidiatus* (Chevrolat, 1863), *Rhaphuma gracilipes* (Faldermann, 1835), *Rhaphuma xenisca* (Bates, 1884) and *Xylotrechus pulcher* Aurivillius, 1911), which are also illustrated.

MATERIAL AND METHODS

Observation and photography. The habitus of all specimens and genitalia photographs were taken with a Canon MP-E 65mm/2.8 1–5× Macrolens on bellows attached to a Canon EOS 550D camera. Each photograph was taken as several partially focused images and afterwards composed in the Helicon Focus 3.20.2 Pro software. The photographs were modified using Adobe Photoshop CC.

Specimens examined including type materials are deposited in the following collections:
CLD collection of Luboš Dembický, Brno, Czech Republic;
CPV collection of Petr Viktora, Kutná Hora, Czech Republic.

Slash (/) separates data in different lines on locality and determination labels.

TAXONOMY

Tribe Clytini Mulsant, 1839

Genus *Demonax* Thomson, 1861

Type species. *Demonax nigrofasciatus* J. Thomson, 1861.

Demonax immortalis sp. nov.
(Figs. 1-2)

Type locality. S India, Tamil Nadu, Nilgiri Hills, 11km SE Kotagiri, Kunchappanai, 1100±100m alt., 11°24´N 76°56´E.

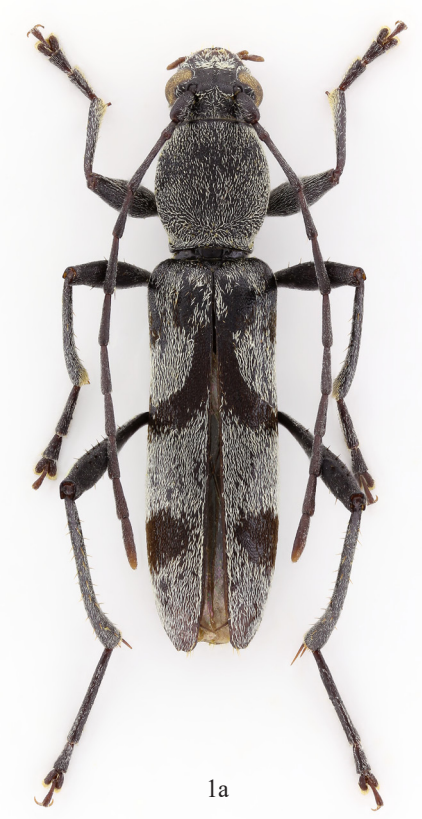
Type material. Holotype (♂): ´S INDIA, TAMIL NADU, Nilgiri Hills´ / ´11km SE Kotagiri, 1100±100m,´ / ´11°24´N 76°56´E, Kunchappanai´ / ´P. Pacholátko leg., 7.-22.v.2000´, (CPV); Paratypes: (2 ♂♂, 6 ♀♀): ´S INDIA; TAMIL NADU;´ / ´15km SE Kotagiri; Kunchappanai;´ / ´11°22´N 76°56´E; 7.-22.v.2000;´ / ´P. Pacholátko leg.´, (CLD, CPV).
The types are provided with a printed red label: ´Demonax immortalis sp. nov.´ / ´HOLOTYPUS [respective PARATYPUS]´ / ´P. Viktora det., 2023´.

Description. Habitus of male holotype as in Fig. 1a. Body from blackish brown to black (largely black), elongate, parallel, punctate, with pubescence. Body length from head to elytral apex 7.33 mm (male paratypes from 5.7 to 6.0 mm), the widest at humeral part of elytra (1.58 mm), 4.64 times longer than wide.

Head black, narrow, the widest through eyes, narrower than pronotum at the widest point. Dorsal surface punctured by dense small-sized granulate/reticulate punctation and micropunctation. Head partly covered by greyish recumbent pubescence (the most distinct at anterior part). Interspace between antennal insertions narrow, antennal insertions prolonged into a spine on inner side. Eyes golden, emarginate. Clypeus and labrum pale ochre yellow, shiny, partly punctured, with long yellowish setation in edges. Mandibles from brown to blackish brown with narrowly black tip, shiny, with greyish pubescence and longer pale setae on edges.

Maxillary palpus reddish brown, semi-glossy. Palpomeres short, widened apically, covered by sparse pale setation. Last palpomere the longest and the largest, distinctly widened apically, knife-shaped with slightly rounded apical margin.

Antennae narrow, reaching five sixths elytral length. Antennomeres from brown to blackish brown, slightly widened apically, punctured by shallow small-sized punctation, covered by short greyish pubescence (the longest on antennal scape), antennomeres 1-6 semi-glossy, partly with yellowish setation on inner side of apex. Antennomeres without



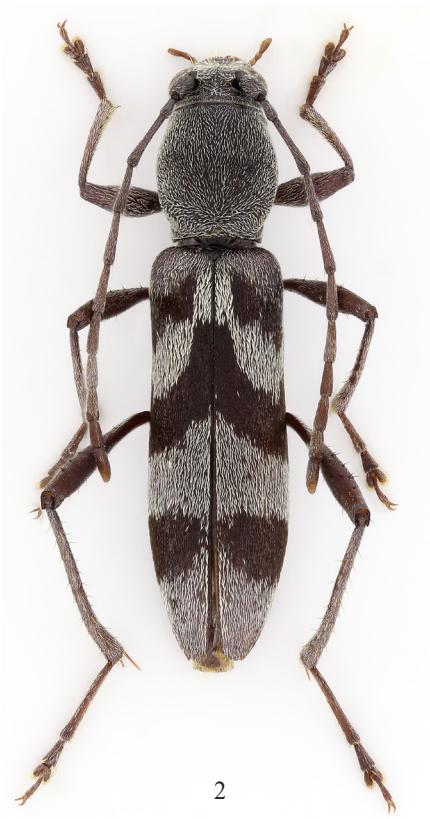


Fig. 1. *Demonax immortalis* sp. nov.: a- male holotype; b- male genitalia.

Fig. 2. *Demonax immortalis* sp. nov.: female paratype.

spines (antennomeres 3-5 with sharp edge on inner side of apex), antennomeres 1-2 rounded apically. Antennomere 2 the shortest, antennomere 3 the longest. Ratios of relative lengths of antennomeres 1-11 equal to: 0.52 : 0.34 : 1.00 : 0.80 : 0.91 : 0.84 : 0.76 : 0.66 : 0.63 : 0.64 : 0.83.

Pronotum black, slightly elongate, slightly narrower than elytra at humeri (shape of pronotum as in Fig. 1a). Pronotum 1.51 times longer than wide at base and 1.11 times longer than wide at the widest point (middle of pronotum). Lateral margins arcuate, anterior margin and base almost straight. Dorsal surface with dense, small-sized granulate punctation with micropunctation between granules. Pronotum almost completely covered by recumbent greyish pubescence. Pronotum with a few long colorless setae on basal third.

Scutellum black, small, triangular, covered by sparse greyish pubescence.

Elytra 4.8 mm long and 1.58 mm wide (3 times longer than wide), black with brown apex. Elytra only slightly narrowing apically, punctured by dense small-sized punctation (partly granulate punctation on basal half), completely semi-glossy. Elytra covered by sparse dark pubescence with golden lustre in dark places and longer, recumbent greyish pubescence (as in Fig. 1a). Apex truncate, distinctly undulate, lateral angle with short spine, sutural angle almost smoothly rounded. Apical margin partly with long yellowish setae.

Pygidium ochre yellow, shiny, punctured by shallow punctation and micropunctation, covered by sparse, indistinct pale pubescence, margins with yellowish setae. Apex rounded.

Legs long and narrow, blackish brown, punctured by small-sized shallow punctation, partly covered by sparse, greyish shiny pubescence (meso- and metafemora largely glabrous on inner side) and long yellowish setation (the densest on apical part of tibiae). Tibiae widened apically, profemora the widest, metatibiae and metafemora distinctly longer than pro- and mesotibiae and pro- and mesofemora. Protibial spurs wide with truncate tip. Tarsi long and narrow, blackish brown (claws brown), with dense, small-sized shallow punctation, covered with greyish shiny pubescence and yellowish setation. Metatarsi the longest, metatarsomere 1 2.12 times longer than metatarsomeres 2 and 3 together.

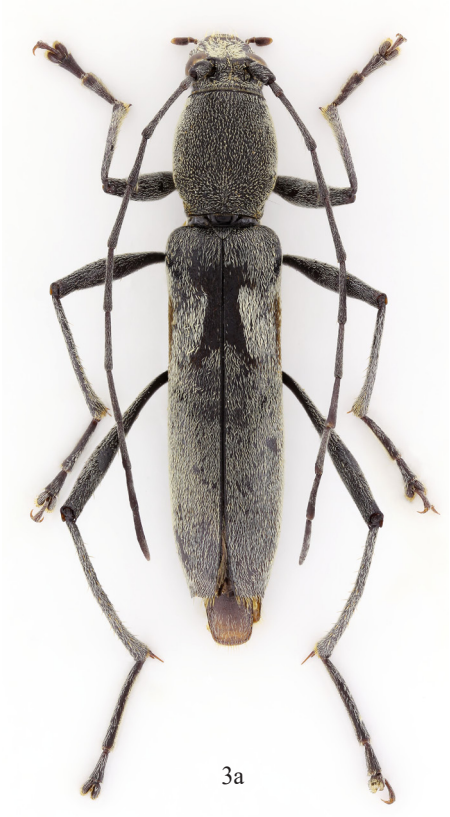
Ventral side of body from blackish brown to black (largely black), partly punctured with small-sized punctation, largely covered by dense greyish pubescence (pubescence denser than on elytra), ventrites with admixture of long yellowish setation. Elytral epipleura blackish, distinctly undulate, punctured by dense micropunctation, partly covered by indistinct, pale shiny pubescence.

Genitalia as in Fig. 1b.

Female. Habitus of female paratype as in Fig. 2. Body length from head to elytral apex (female paratypes) from 5.9 to 6.9 mm. Colour of female similar to male. Female without distinct differences, body less elongate, tarsi and antennae shorter shorter than in male. Protibial spurs in male wide with truncate tip while narrow and sharp in female.

Differential diagnosis. The most similar species is *Demonax dimidiatus* (Chevrolat, 1863) (Figs. 3-4).

Demonax immortalis sp. nov. (based on comparison of males) differs from the similar species *D. dimidiatus* by wider and less elongate body, by wider pronotum with more arcuate lateral margins, by wider and shorter antennomeres in proportion to antennomeres in *D. dimidiatus*,



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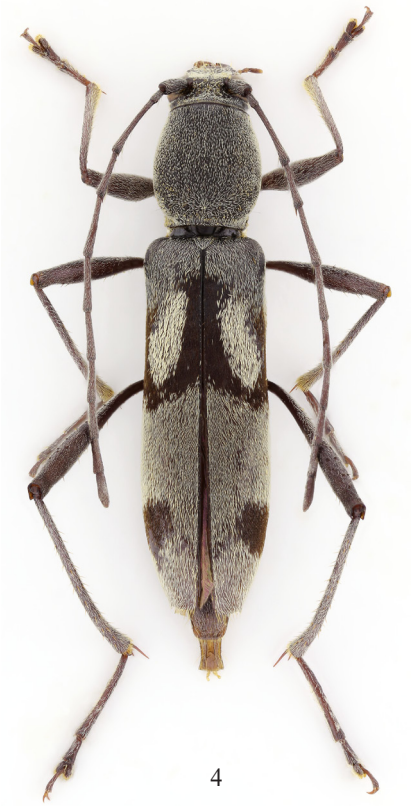

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3b

Fig. 3. *Demonax dimidiatus* (Chevrolat, 1863): a- male from India (Tamil Nadu), (CPV); b- male genitalia.

Fig. 4. *Demonax dimidiatus* (Chevrolat, 1863): female from India (Tamil Nadu), (CPV).

by antennomere 4 without spine (antennomere 4 with distinct sharp spine on inner side of apex in *D. dimidiatus*) (as in Figs. 1a and 3a). Species also differ in shape of tegmen and mainly by shape of abdominal segment 8 (as in Figs. 1b and 3b).

Etymology. From Latin *immortalis* (it means ”immortal”).

Distribution. India (Tamil Nadu).

Genus *Rhaphuma* Pascoe, 1858

Type species. *Clytus quadricolor* Castelnau & Gory, 1841.

Rhaphuma petrkabateki sp. nov.
(Fig. 5)

Type locality. China, Sichuan prov., 31 km NW Jiuzhaigou, 2048 m, Zhongcha village, 33°18.615´N, 103°58.537´E.

Type material. Holotype (♂): ´C China, Sichuan prov., 31´ / ´km NW Jiuzhaigou, 2048 m´ / ´Zhongcha vill., 33°18.615´N´ / ´103°58.537´E´, 3. and´ / ´5. VII. 2012, leg. P. Kabátek´, (CPV).
The type is provided with a printed red label: ´Rhaphuma petrkabateki sp. nov.´ / ´HOLOTYPUS´ / ´P. Viktora det., 2023´.

Description. Habitus of male holotype as in Fig. 5a. Body from dark brown to black, elongate, narrow, almost parallel, punctate, with pubescence. Body length from head to elytral apex 10.1 mm, the widest at humeral part of elytra (2.45 mm), 4.12 times longer than wide.

Head black (blackish brown in anterior margin), short, narrow, the widest through eyes, narrower than pronotum at the widest point. Head punctured by dense small-sized punctation and micropunctation in anterior part and granulate large-sized granulation on basal part. Head partly covered by very sparse, recumbent pale yellowish grey pubescence, below eyes with distinct, long, erect colorless setation. Interspace between antennal insertions narrow, antennal insertions prolonged into a sharp spine on inner side. Eyes golden, emarginate. Clypeus and labrum pale ochre yellow, shiny, partly with punctation in edges and long yellowish setation. Mandibles from brown to blackish brown (largely blackish brown) with black tip, shiny, margins with yellowish grey pubescence and longer yellowish setation.

Maxillary palpus pale brown, semi-glossy, palpomeres short, with micropunctation and indistinct short setation. Last palpomere the longest and the largest, drop-shaped with rounded apical margin.

Antennae narrow, filiform, reaching five sevenths elytral length. Antennomeres from pale brown antennomere 11 to blackish brown antennal scape. Antennomeres indistinctly widened apically, with shallow micropunctation, covered by pale yellowish grey pubescence (the longest on antennal scape), antennomeres 1-6 semi-glossy, remainder of antennomeres semi-matte. Antennomeres 2-6 with long yellowish setation on inner side. Antennomeres without spines. Antennomere 2 the shortest, antennomere 5 the longest. Ratios of relative lengths of antennomeres 1-11 equal to: 0.64 : 0.22 : 1.00 : 0.84 : 1.09 : 1.06 : 0.96 : 0.73 : 0.65 : 0.58 : 0.72.

Fig. 5. *Rhaphuma petrkabateki* sp. nov.: a- male holotype; b- male genitalia.

Fig. 6. *Rhaphuma gracilipes* (Faldermann, 1835): a- male from China (Heilongjiang), (CPV); b- male genitalia.

Fig. 7. *Rhaphuma xenisca* (Bates, 1884): a- male from Japan (Honshu - Nara Prefecture), (CPV); b- male genitalia.

Pronotum black, elongate, narrower than elytra at humeri (shape of pronotum as in Fig. 5a). Pronotum 1.47 times longer than wide at base and 1.13 times longer than wide at the widest point (before middle of pronotum from base to apex). Lateral margins arcuate, anterior margin and base slightly undulate. Dorsal surface with dense granulation (with microgranulation between granules), covered by sparse, pale yellowish pubescence, pronotal disc with small places with darker pubescence with golden lustre (as in Fig. 5a). Pronotum partly covered by long, erect colorless setation (mainly on basal half).

Scutellum blackish, widely shield-shaped, with dense micropunctation, covered by pale yellowish grey recumbent pubescence.

Elytra 6.53 mm long and 2.45 mm wide (2.66 times longer than wide), black. Elytral surface on basal quarter corrugated with distinct depression below scutellum and in humeri. Elytra indistinctly narrowing apically, basal fifth semi-matte, apical part semi-gloss, punctured by small-sized punctation, covered by pale yellowish grey pubescence, whitish pubescence in elytral apex and dark pubescence with golden lustre in dark places (as in Fig. 5a). Apex truncate, indistinctly undulate, lateral and sutural angle with short but distinct spine. Apical margin with very long yellowish setae.

Pygidium largely pale brown, punctured by dense shallow micropunctation, covered by sparse pale pubescence, margins with yellowish setae. Apex rounded.

Legs long and narrow, from brown to blackish brown, punctured with shallow small-sized punctation, partly covered by yellowish grey pubescence (meso- and metafemora partly glabrous on inner side) and long yellowish setation (the densest on apical part of tibiae). Meso- and metatibiae and meso- and metafemora with longer, erect yellowish setae on ventral side. Tibiae widened apically, metatibiae and metafemora distinctly longer than pro- and mesotibiae and pro- and mesofemora. Tarsi long and narrow (metatarsi the longest), brown, claws and tibial spurs pale reddish brown. Tarsi punctured by very dense micropunctation, covered by pale yellowish pubescence and pale setation. Metatarsomere 1 2.27 times longer than metatarsomeres 2 and 3 together.

Ventral side of body largely black, with dense small-sized punctation, largely covered with recumbent setation with golden lustre, partly covered by dense whitish pubescence (apical part of mesepisternum, metepisternum and stripes on apical part of ventrites 1 and 2. Ventral side largely with long, erect colorless setation. Elytral epipleura blackish, slightly undulate, with micropunctation, covered by short, shiny yellowish pubescence.

Genitalia as in Fig. 5b.

Female. Unknown.

Differential diagnosis. The most similar species are *Rhaphuma gracilipes* (Faldermann, 1835) (Fig. 6) and *Rhaphuma xenisca* (Bates, 1884) (Fig. 7).
Rhaphuma petrkabateki sp. nov. (based on comparison of males) differs from similar species *R. gracilipes* and *R. xenisca* mainly by distinctly shorter antennae (antennae reaching five sevenths elytral length in *R. petrkabateki*, while antennae exceeding elytral apex in *R. gracilipes* and *R. xenisca*), by pronotal disc covered by shorter pale pubescence, and by distinctly shorter and narrower protarsi (as in Figs. 5a, 6a and 7a). *R. petrkabateki* distinctly differs from *R. gracilipes* and *R. xenisca* by different shape of abdominal segment 8 and tegmen (as in Figs. 5b, 6b and 7b).

Etymology. This new species is dedicated to Petr Kabátek, my friend and an excellent insect collector, who collected this species.

Distribution. China (Sichuan).

Genus *Xylotrechus* Chevrolat, 1860

Type species. *Clytus sartorii* Chevrolat, 1860.

Xylotrechus excelsus sp. nov.
(Fig. 8)

Type locality. Philippines, Mindanao, Davao del Sur province, Gumitan.

Type material. Holotype (♀): ´Philippines´ / ´Mindanao´ / ´Davao Del Sur´ / ´Gumitan´ / ´III. 2021´, (CPV). The type is provided with a printed red label: ´Xylotrechus excelsus sp. nov.´ / ´HOLOTYPUS´ / ´P. Viktora det., 2023´.

Description. Habitus of female holotype as in Fig. 8a. Body from pale reddish brown to black, elongate, parallel, punctate, with pubescence. Body length from head to elytral apex 11.35 mm, the widest at humeral part of elytra (2.98 mm), 3.8 times longer than wide.

Head black with narrowly brown at anterior margin, short, the widest through eyes, narrower than pronotum at the widest point. Head punctured with irregular granulate punctation and microgranulation (punctures/granules larger on basal part), frons with three distinct longitudinal carinae (shape of carinae as in Fig. 8b). Head largely covered by dense yellow pubescence, partly with long, erect pale setae (mainly below eyes). Antennal insertions with raised edge on inner side. Eyes golden brown, strongly emarginate. Clypeus and labrum pale reddish brown, shiny, with a few yellowish setae on edges. Mandibles pale reddish brown with black margins and tip, shiny, margins with yellow pubescence and yellowish setae (as in Fig. 8b).

Maxillary palpus pale ochre yellow, palpomeres short, with micropunctation, with very sparse yellowish setation. Last palpomere the longest and the largest, widened apically with rounded apical angles.

Antennae relatively short, reaching one third elytral length (as in Fig. 8a). Antennomeres ochre yellow (antennomeres 4-7 darker), widened apically. Antennae with shallow small-sized punctation, partly covered with pale yellowish pubescence, partly with dark pubescence (the most distinct on antennomeres 4-7). Pubescence the longest on antennal scape, the shortest on antennomeres 8-11. Antennomeres 2-8 with long yellowish setation on inner side (as in Fig. 8a). Antennomeres without spines. Antennomere 2 the shortest, antennomere 1 the longest. Ratios of relative lengths of antennomeres 1-11 equal to: 1.05 : 0.34 : 1.00 : 0.83 : 0.85 : 0.69 : 0.78 : 0.61 : 0.66 : 0.57 : 0.78.

Pronotum black, robust, slightly narrower than elytra at humeri (shape of pronotum as in Fig. 8a). Pronotum 1.34 times longer than wide at base and 1.09 times longer than wide at the widest point (approximately middle of pronotum). Lateral margins arcuate, anterior margin and base slightly undulate. Dorsal surface with distinct, dense small-sized granulation (with micropunctation/microgranulation between granules), partly covered with dense yellow pubescence and sparser black pubescence with lustre on dark places (as in Fig. 8a), basal third with erect pale setation.

Scutellum black, large, oval, elevated, covered with dense yellow pubescence.

Elytra 7.4 mm long and 2.98 mm wide (2.48 times longer than wide), from pale

Fig. 8. *Xylotrechus excelsus* sp. nov.: a- female holotype; b- head (front view).
Fig. 9. *Xylotrechus pulcher* Aurivillius, 1911: a- female from Indonesia (East Java), (CPV); b- head (front view).

reddish brown (mainly under yellow pubescence) to black. Elytral surface with small-sized punctation. Elytra narrowing apically, matte on basal two thirds, semi-gloss on apical third, covered with yellow and black pubescence with distinct lustre (as in Fig. 8a). Apex truncate, apical margin slightly undulate, lateral and sutural angles with short sharp spine, each elytron shorter at sutural side, apical margin with long yellowish setae.

Pygidium pale reddish brown, with dense, shallow small-sized punctation, covered by golden and yellow pubescence, margins with yellowish setae. Apical angles distinctly rounded.

Legs long and narrow, from pale ochre yellow to blackish brown in femora, with shallow irregular punctation and micropunctation, partly covered by yellow pubescence (mainly on femora) and long yellowish setation (the densest on apical part of tibiae). Tibiae widened apically, metatibiae and metafemora distinctly longer than pro- and mesotibiae and pro- and mesofemora. Tarsi narrow (protarsi very short, metatarsi the longest), pale ochre yellow, tarsomeres and claws narrowly darker apically. Tarsi microwrinkled, covered by long yellowish setation. Metatarsomere 1 2.04 times longer than metatarsomeres 2 and 3 together.

Ventral side of body from pale reddish brown (coxae, edges of ventrites) to black (largely blackish), with irregular small-sized punctation, largely covered by dense yellow pubescence (except basal and apical stripes on ventrites with recumbent, sparser golden setation), and long, erect pale setation. Elytral epipleura dark brown, narrow, microwrinkled, covered with dark pubescence with lustre.

Male. Unknown.

Differential diagnosis. The most similar species is *Xylotrechus pulcher* Aurivillius, 1911 (Fig. 9).

Xylotrechus excelsus sp. nov. differs from the similar species *X. pulcher* by more robust body, by less elongate elytra, by distinctly wider pronotum of different shape, by distinctly different shape of elytral apical margin, by frons with different shape of longitudinal carinae (as in Figs. 8b and 9b), by different colour of legs (the most distinct on tibiae) and by distinctly shorter metatarsi compared to *X. pulcher*. The most significant differences are in colour and length of antennae with different shape of antennomeres (antennae distinctly shorter with wider antennomeres including antennal scape in *X. excelsus*, colour differences as in Figs. 8a and 9a).

Etymology. From Latin *excelsus* (it means ”lofty”).

Distribution. Philippines (Mindanao - Davao del Sur).

ACKNOWLEDGEMENTS. My sincere thanks are due to Luboš Dembický (Brno, Czech Republic), Petr Kabátek (Praha, Czech Republic) and Petr Pacholátko (Brno, Czech Republic) for providing me with material from their collections, and Richard Sehnal (Czech University of Life Sciences Prague, FAPPZ, Praha, Czech Republic) for help with taking pictures.

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Received: 29.10.2023
Accepted: 10.11.2023
Printed: 31.3.2024