Studies and Reports
Taxonomical Series 19 (1): 181-187, 2023

Two new species of the genus *Chlorophorus* Chevrolat, 1863 from Vietnam (Coleoptera: Cerambycidae: Cerambycinae: Clytini)

Petr VIKTORA

Trebišovská 605, CZ-28401 Kutná Hora, Czech Republic
e-mail: viktora_print@centrum.cz

Taxonomy, new species, Coleoptera, Cerambycidae, *Chlorophorus*, Vietnam

Abstract. *Chlorophorus goliath* sp. nov. from Vietnam (Yen Bai) and *Chlorophorus giganteus* sp. nov. from Vietnam (Dak Lak) are described and illustrated.

INTRODUCTION

The tribus Clytini Mulsant, 1839 is one of the most numerous - in terms of species - tribi of Cerambycidae. Species of the tribus Clytini are known from all biogeographic zones of the Earth except the Antarctic Region. The tribus Clytini is currently divided into approximately 70 genera. From the Palaearctic, Oriental and Australian biogeographic regions more than 1500 species have been described so far (Tavakilian & Chevillotte, 2022). Within these regions, the most numerous genera are *Demonax* J. Thomson, 1861, *Chlorophorus* Chevrolat, 1863, *Xylotrechus* Chevrolat, 1860 and *Rhaphuma* Pascoe, 1858.

In the present paper, I describe two new species of the genus *Chlorophorus* from Vietnam as *Chlorophorus goliath* sp. nov. and *Chlorophorus giganteus* sp. nov. The specimens were recently collected by local collectors. Both new species belong to the largest species of the genus, they are compared to a related species *Chlorophorus vehemens* Holzschuh, 2009, described from Houaphanh province of Laos. The type material is illustrated.

MATERIAL AND METHODS

Observation and photography. The habitus photos of *C. goliath* sp. nov. and *C. giganteus* sp. nov. were taken by the Canon EOS 350D digital camera with the Sigma 105 mm macro lens. Composite images were created using the software Image Stacking Software Combine ZP. The photographs were modified using Adobe Photoshop CC.

Specimens examined including type materials are deposited in the following collections:
CCH collection of Carolus Holzschuh, Villach, Austria;
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 *Chlorophorus* Chevrolat, 1863

Type species: *Callidium annulare* Fabricius, 1787.

Chlorophorus goliath sp. nov.
(Fig. 1)

Type locality. Vietnam, Yen Bai Province, Mu Cang Chai District.

Type material. Holotype (♀): ´Vietnam´ / ´Yen Bai´ / ´Mu Cang Chai´ / ´1800-2100 m´ / ´5/2022´, (CPV).
The type is provided with a printed red label: ´Chlorophorus goliath sp. nov.´ / ´HOLOTYPUS´ / ´P. Viktora det., 2022´.

Description. Habitus of female holotype as in Fig. 1. Body from blackish brown to black, elongate, slightly narrowing apically, punctate, with pubescence. Body large, body length from head to elytral apex 17.0 mm, the widest at humeral part of elytra (4.9 mm), 3.47 times longer than wide.

Head black with partly blackish brown anterior part, short, narrow, distinctly narrower than pronotum at the widest point, the widest through eyes. Dorsal surface punctured by irregular punctation (coarser and large-sized granulate punctation in posterior part, shallower and smaller-sized granulate punctation in anterior part), frons with dense small-sized corrugated granulation with dense micropunctation between granules. Head covered by sparse yellowish grey pubescence and partly by long yellowish setation (the densest and the longest under eyes). Interspace between antennal insertions narrow, antennal insertions with distinct sharp elevation on inner side. Eyes large, dark brown, emarginate. Clypeus and labrum pale brown, shiny, with yellowish setation in edges. Mandibles blackish brown, partly shiny, with sparse yellowish grey pubescence and longer pale setae in edges.

Maxillary palpus brown (last palpomere narrowly paler at apical margin), palpomeres short, semi-gloss, widened apically, covered by short and sparse yellowish setation. Last palpomere the longest and the largest, axe-shaped with distinctly cut apex.

Antennae narrow, filiform, reaching four sevenths elytral length. Antennomeres blackish brown, slightly widened apically, rounded in apex. Antennomeres 7-10 slightly serrate on outer side. Antennomeres without spines, punctured by dense small-sized punctation, covered by yellowish grey pubescence (the longest and the most distinct in antennomeres 1-4). Antennomeres 2-7 with long yellowish setation on inner side. Antennomere 2 the shortest, antennomere 3 the longest. Antennal scape distinctly widened apically with extended upper edge. Ratios of relative lengths of antennomeres 1-11 equal to: 0.67 : 0.20 : 1.00 : 0.71 : 0.81 : 0.71 : 0.70 : 0.57 : 0.50 : 0.42 : 0.58.

Pronotum black, slightly narrower than elytra at humeri, shape of pronotum as in Fig. 1. Pronotum 1.27 times longer than wide at base and 1.04 times longer than wide at the

widest point (middle of pronotum), the narrowest at anterior margin. Lateral margins arcuate, anterior margin and base almost straight. Dorsal surface with distinct, dense, relatively small-sized reticulation, cells of reticulation with microstructure inside. Pronotum covered by short dark pubescence (darker places on pronotal disc as in Fig. 1) and yellowish grey pubescence with admixture of longer yellowish grey pubescence (the densest in basal angles). Pronotal disc with long, erect colorless setation, the densest in basal half.

Scutellum black, shield-shaped with rounded apex, almost completely covered by recumbent pale yellowish pubescence (the densest at apical margin).

Elytra 11.42 mm long and 4.9 mm wide (2.33 times longer than wide), black, elongate, distinctly narrowing apically, matte. Elytra completely punctured by small-sized punctation (punctation larger-sized and slightly granulate in basal third), covered by dark pubescence with goldenish luster and longer pale yellowish pubescence (as in Fig. 1). Elytral apex straight cut, sutural angle with short broad thorn, lateral angle sharply angular. Apical margin with long pale setation.

Pygidium blackish, punctured by dense small-sized shallow punctation and micropunctation, covered by long, recumbent yellowish pubescence, apex gently rounded.

Legs from blackish brown to black, punctured by small-sized shallow punctation, partly covered by yellowish grey pubescence (the most distinct in profemora) and yellowish setation (the densest in apical part of tibiae). Tibiae widened apically, metatibiae and metafemora longer than pro- and mesotibiae and pro- and mesofemora. Femora club-shaped, distinctly narrowed apically. Tarsi blackish brown, punctured by dense micropunctation, covered by relatively dense yellowish setation. Protarsi broad, metatarsi narrow. Metatarsomere 1 1.63 times longer than metatarsomeres 2 and 3 together.

Ventral side of body largely blackish (some ventrites partly brown), punctured by irregular, partly granulate punctation (the largest and the most visible in mesepisternum), largely covered by long colorless setation (the densest in front half of body). Mesepisternum with spot of whitish pubescence in apical quarter, metepisternum, metasternum and ventrites 1 and 2 largely covered by dense whitish pubescence, ventrites 3-5 largely covered by pale yellowish setation. Elytral epipleura black, narrow, slightly undulate, punctured by dense small-sized punctation, covered by relatively dense dark pubescence.

Male. Unknown.

Differential diagnosis. The most similar species are *Chlorophorus vehemens* Holzschuh, 2009 (Fig. 2) and *Chlorophorus giganteus* sp. nov. (Fig. 3).

Chlorophorus goliath sp. nov. differs from the similar species *C. vehemens* (based on comparison of females) by elytra more elongate and more narrowing apically, by different shape of less elongate pronotum, by longer antennae (antennae reaching four sevenths elytral length in *C. goliath*, while not reaching half elytral length in *C. vehemens*), by different shape of wider scutellum in *C. goliath*, by narrower transverse stripes of pale pubescence at elytral base and elytral apex, by distinctly different shape of curved stripes of pale pubescence in basal elytral third as in Figs. 1 and 2 (more sharply refracted and more closer to suture at bottom, more closer to scutellum above in *C. goliath*, while more open and significantly

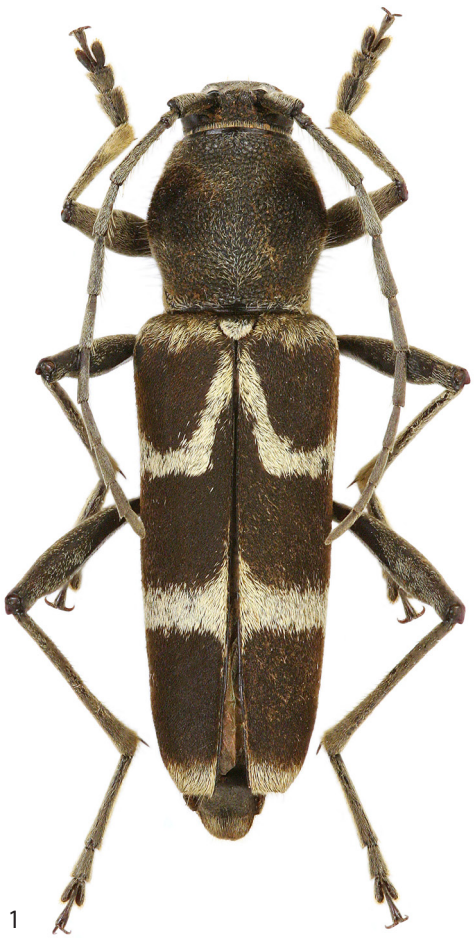

Fig. 1. *Chlorophorus goliath* sp. nov.: female holotype.
Fig. 2. *Chlorophorus vehemens* Holzschuh, 2009: female holotype, (CCH). Photo: Luboš Dembický.

rounded curve less closer to suture at bottom, less closer to scutellum above in *C. vehemens*), and by lateral angle of elytral apex sharply angular in *C. goliath* (lateral angle arcuate in *C. vehemens*).

C. goliath sp. nov. differs from the similar species *C. giganteus* (based on comparison of females) by distinctly shorter and wider protarsi, by distinctly shorter meso- and metatarsi, by more regular reticulation of pronotal disc (reticulation more irregular and granulate in *C. giganteus*), by different shape of pronotum as in Figs. 1 and 3 (the widest point at middle of pronotum in *C. goliath*, while the widest point before middle of pronotum from base to apex in *C. giganteus*), by more elongate elytra, by different colour of pubescence on elytra as in Figs. 1 and 3 (dark pubescence with goldenish luster and longer pale yellowish pubescence in *C. goliath*, while shorter dark pubescence, longer ginger pubescence and pale yellowish/

whitish pubescence in *C. giganteus*), by elytral apical third covered by dense pale ochre yellow pubescence in *C. giganteus* (completely absent in *C. goliath*), and by different shape of wider scutellum in *C. goliath*.

Etymology. Name refers to large size of the species, *Goliath* as a symbol of greatness.

Distribution. Vietnam (Yen Bai).

***Chlorophorus giganteus* sp. nov.**
(Fig. 3)

Type locality. Vietnam, Dak Lak Province.

Type material. Holotype (♀): ´Vietnam´ / ´Dak Lak´ / ´4/2021´, (CPV).
The type is provided with a printed red label: ´Chlorophorus giganteus sp. nov.´ / ´HOLOTYPUS´ / ´P. Viktora det., 2022´.

Description. Habitus of female holotype as in Fig. 3. Body from dark brown to black, elongate, almost parallel, punctate, with pubescence. Body large, body length from head to elytral apex 16.6 mm, the widest at humeral part of elytra (4.8 mm), 3.45 times longer than wide.

Head black with blackish brown anterior margins, short, narrow, distinctly narrower than pronotum at the widest point, the widest through eyes. Dorsal surface punctured by irregular punctation (coarse punctation in posterior part, shallower and smaller-sized punctation with distinct wrinkling in anterior part), frons with dense small-sized punctation in combination with distinct, mainly longitudinal wrinkling. Frons with relatively large triangular elevation in middle. Head covered by sparse yellowish grey pubescence and partly by long pale setation (the densest and the longest under eyes). Interspace between antennal insertions narrow, antennal insertions with elevation on inner and outer side. Eyes large, goldenish brown, emarginate. Clypeus and labrum pale brown, shiny, with yellowish setation in edges. Mandibles blackish, partly shiny, lateral sides wrinkled with sparse yellowish grey pubescence and longer pale setae.

Maxillary palpus pale brown (last palpomere darker with narrowly paler apical margin), palpomeres semi-gloss, widened apically, covered by sparse pale setation. Last palpomere the longest and the largest, with oval longitudinal depression in middle, axe-shaped with gently rounded apical margin.

Antennae are missing in the type specimen.

Pronotum black, slightly narrower than elytra at humeri, shape of pronotum as in Fig. 3. Pronotum 1.31 times longer than wide at base and 1.04 times longer than wide at the widest point (before middle of pronotum from base to apex), the narrowest at anterior margin. Lateral margins arcuate, anterior margin almost straight, base indistinctly undulate. Dorsal surface with distinct, dense, relatively small-sized, irregular narrow granulation forming irregular reticulation, cells of reticulation with microstructure inside. Pronotum covered by short dark pubescence (darker places on pronotal disc as in Fig. 3) and yellowish grey pubescence with admixture of longer yellowish grey pubescence (the densest in basal angles). Pronotal disc

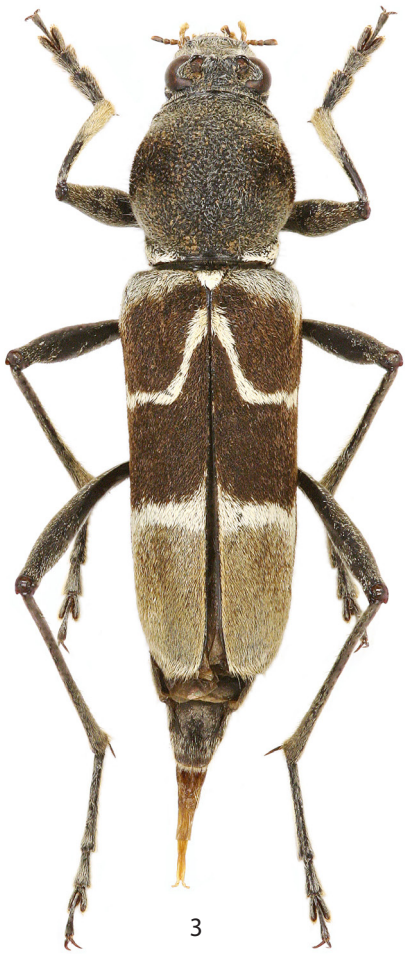

Fig. 3. *Chlorophorus giganteus* sp. nov.: female holotype.

with long, sparse, erect colorless setation.

Scutellum black, triangular with rounded apex, almost completely covered by recumbent whitish pubescence (the densest at apical half).

Elytra 10.64 mm long and 4.8 mm wide (2.21 times longer than wide), black, elongate, slightly narrowing apically, matte. Elytra completely punctured by small-sized punctation (punctation larger-sized and slightly granulate in basal third), covered by shorter dark pubescence, by longer ginger pubescence and pale yellowish/whitish pubescence (as in Fig. 3). Apical third covered by dense pale ochre yellow pubescence. Elytral apex cut, indistincly undulate, sutural and lateral angle sharply angular without thorns. Apical margin with very dense, long pale setation.

Pygidium blackish, punctured by dense small-sized punctation and micropunctation in basal half, covered by long, but indistinct recumbent pale pubescence in apical part, margins with dense pale setation, apex gently rounded.

Legs from blackish brown to black, punctured by small-sized shallow punctation, partly covered by yellowish grey pubescence (the most distinct in profemora) and yellowish setation (the densest in apical part of tibiae). Tibiae widened apically, metatibiae and metafemora longer than pro- and mesotibiae and pro- and mesofemora. Femora club-shaped, distinctly narrowed apically. Tarsi blackish brown, punctured by dense micropunctation, covered by relatively dense yellowish setation. Protarsi wider than metatarsi. Metatarsomere 1 1.52 times longer than metatarsomeres 2 and 3 together.

Ventral side of body largely blackish (ventrites partly dirty pale ochre yellow), punctured by irregular, partly granulate punctation (the largest and the most visible in mesepisternum), largely covered by long colorless setation (mainly in front half of body). Mesepisternum with narrow stripe of white pubescence in apical margin, metepisternum, metasternum and ventrites 1 and 2 largely covered by dense white pubescence, ventrites 3-5 largely covered by pale yellowish setation. Elytral epipleura black, narrow, slightly undulate, punctured by dense small-sized punctation, covered by shiny goldenish pubescence (denser in apical half).

Male. Unknown.

Differential diagnosis. The most similar species are *Chlorophorus goliath* sp. nov. (Fig. 1) and *Chlorophorus vehemens* Holzschuh, 2009 (Fig. 2).
Chlorophorus giganteus sp. nov. differs from the similar species *C. goliath* (based on comparison of females) by distinctly longer and narrower protarsi, by distinctly longer meso- and metatarsi, by more irregular and granulate reticulation of pronotal disc in *C. giganteus* (reticulation more regular in *C. goliath*), by different shape of pronotum as in Figs. 1 and 3 (the widest point at middle of pronotum in *C. goliath*, while the widest point before middle of pronotum from base to apex in *C. giganteus*), by less elongate elytra, by different colour of pubescence on elytra as in Figs. 1 and 3 (dark pubescence with goldenish luster and longer pale yellowish pubescence in *C. goliath*, while shorter dark pubescence, longer ginger pubescence and pale yellowish/whitish pubescence in *C. giganteus*), by elytral apical third covered by dense pale ochre yellow pubescence in *C. giganteus* (completely absent in *C. goliath*), and by different shape of narrower scutellum in *C. giganteus*.
C. giganteus sp. nov. differs from the similar species *C. vehemens* (based on comparison of females) by wider, less elongate pronotum as in Figs. 2 and 3, by different shape of narrower scutellum, by distinctly longer and narrower protarsi, by distinctly longer meso- and metatarsi, by different colour of pubescence on elytra as in Figs. 2 and 3 (dark pubescence and longer whitish pubescence in *C. vehemens*, while shorter dark pubescence, longer ginger pubescence and pale yellowish/whitish pubescence in *C. giganteus*), by elytral apical third covered by dense pale ochre yellow pubescence in *C. giganteus* (completely absent in *C. vehemens*).

Etymology. From Latin *giganteus* (it means ”gigantic”).

Distribution. Vietnam (Dak Lak).

ACKNOWLEDGEMENTS. My sincere thanks are due to Luboš Dembický (Brno, Czech Republic) for providing me with photos of type material from Holzschuh collection.

REFERENCES

Holzschuh C. 2009: Beschreibung von 59 neuen Bockkäfern und vier neuen Gattungen aus der orientalischen und palaearktischen Region, vorwiegend aus Laos, Borneo, und China (Coleoptera, Cerambycidae). *Entomologica Basiliensia et Collectionis Frey* 31: 267-358.

Tavakilian G. (Author) & Chevillotte H. (Software) 2022: Base de données Titan sur les Cerambycidés ou Longicornes. [access: 10.2022]. [http://titan.gbif.fr/index.html].

Received: 17.11.2022
Accepted: 10.12.2022
Printed: 31.3.2023