ZooKeys 1116: 23–32 (2022)
doi: 10.3897/zookeys.1116.86906
https://zookeys.pensoft.net

RESEARCH ARTICLE

A peer-reviewed open-access journal
ZooKeys
Launched to accelerate biodiversity research

Catalog of the genus *Cylindrepomus* Blanchard (Coleoptera, Cerambycidae, Dorcaschematini) in the Philippines, with description of a new species from northern Mindanao

Milton Norman D. Medina[1], Melbert James G. Baul[2], Analyn A. Cabras[1]

1 *Coleoptera Research Center, University of Mindanao, Davao City, Philippines* **2** *Human Resources for Health Network, Department of Health Center for Health Development - Northern Mindanao, J.V. Seriña Street, Carmen, Cagayan de Oro City, Philippines*

Corresponding author: Milton Norman D. Medina (mnd_medina@umindanao.edu.ph)

Academic editor: Francesco Vitali | Received 24 May 2022 | Accepted 19 July 2022 | Published 4 August 2022

https://zoobank.org/997F8571-0D22-4C83-92C7-F57610409705

Citation: Medina MND, Baul MJG, Cabras AA (2022) Catalog of the genus *Cylindrepomus* Blanchard (Coleoptera, Cerambycidae, Dorcaschematini) in the Philippines, with description of a new species from northern Mindanao. ZooKeys 1116: 23–32. https://doi.org/10.3897/zookeys.1116.86906

Abstract

A catalog of the genus *Cylindrepomus* Blanchard, 1853 in the Philippines, along with the description of a new species from northern Mindanao, is presented. Notes on the ecology, threats, and conservation of the new species are also provided.

Keywords

Beetle, conservation, Davao City, Dorcaschematini, Mindanao, Philippines

Introduction

Cylindrepomus Blanchard, 1853 is a tropical genus of long-horn beetles (Cerambycidae) (type species *Cylindrepomus nigrofasciatus* Blanchard, 1853) distributed within South China, Southeast Asia, and Oceania. They are easily distinguished from other members of Dorcaschematini for having highly punctate, tomentose elytra covered with recumbent hairs, a bulbous and coarsely granulated scape, and 3rd antennomere 2–4 times longer than scape.

There are 14 species and one subspecies of *Cylindrepomus* in the Philippines; all are endemic to the country, with the majority distributed in a specific island or mountain range. There are four species described from Mindanao Island: *Cylindrepomus bivitticollis* Breuning, 1947, *Cylindrepomus elisabethae* Hüdepohl, 1987, *Cylindrepomus peregrinus samarensis* Dillon & Dillon, 1948, and *Cylindrepomus sexlineatus* Schultze, 1934. The most recent addition to the Philippine fauna is *Cylindrepomus nigerrimus* Vives, 2017 from northern Luzon.

The 2022 Philippine Coleopterological Expedition conducted by the Daugavpils University Beetle Research Team and the University of Mindanao Coleoptera Research Center yielded a diverse collection of beetles from different mountain ranges in Mindanao. Included in this collection was the new species of *Cylindrepomus* from northern Mindanao described herein, the fifth species of the genus known from Mindanao Island. An updated catalog of *Cylindrepomus* in the Philippines is included in this paper.

Materials and methods

The new *Cylindrepomus* material was obtained during the 2022 Philippine Coleopterological Expedition through the Erasmus+ Mobility Programme of Daugavpils University in Latvia and the University of Mindanao Coleoptera Research Center, Philippines. The project aimed to document the coleopteran fauna in various mountain ranges in Mindanao, Philippines. The specimens under study were collected using hand nets along riparian fields at an elevation of approximately 600–700 m a.s.l.; specimens were killed with ethyl acetate. The habitat consists of an old-growth secondary forest with relatively high moisture and semi-open foliage allowing daylight to filter through.

Morphological characters were observed under Luxeo 4D and Nikon SMZ745T stereomicroscopes. Habitus images were taken with a Canon EOS 6D digital camera equipped with an MP-E macro lens. All images were then stacked using Helicon Focus and processed using a licensed version of the Photoshop CS6 Portable software.

Measurements of the various body parts follow Yoshitake and Yamasako (2016), with slight modifications concerning body length: **LB** = length of body from antennal support to apices of clothed elytra; **WH** = maximum width across head from the outer margin of a gena to that of another; **LG** = length of gena from upper margin to lower margin; **LL** = length of lower eye lobe from upper margin to lower margin; **WL** = maximum width across lower eye lobe; **LP** = length of pronotum from base to apex along midline; **WP** = maximum width across pronotum; **LE** = length of elytra from level of basal margins to apices of clothed elytra; **WEH** = width of elytra at humeri; / separates different lines on a label; // separates different labels. All measurements are given in millimeters.

Comparative materials and specimens used in this study are deposited in the following institutional collections:

ANSP Academy of Natural Sciences of Philadelphia, USA;
MMCP Milton Medina Collections, Mindanao, Philippines;
MTKD Senckenberg Naturhistorische Sammlungen Dresden, Germany;

NRM Naturhistoriska Riksmuseet, Stockholm, Sweden;
SMF Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt am Main, Germany;
UMCRC University of Mindanao Coleoptera Research Center, Mindanao, Philippines;
USNM National Museum of Natural History (Smithsonian), Washington, D.C., USA;
ZSM Zoologische Staaatssamlung des Bayerischen Staates München, Germany.

Catalog

***Cylindrepomus albomaculatus* Breuning, 1947**

Arkiv för Zoologi, Uppsala, 39: p. 26; Breuning 1962: p. 417; Hüdepohl 1987: p. 74.
Distribution: Philippines.
Type and depository information: Holotype male, NRM.

***Cylindrepomus albosignatus* Breuning, 1974**

Reichenbachia, Dresden, 15(5): p. 38; Hüdepohl 1987: p. 74.
Distribution: Philippines (Luzon: Panay, Gulasi, Zambales; Visayas: Mt. Macosolon in Capiz Western Visayas; Mindanao: Zamboanga).
Type and depository information: Holotype, MTKD.

***Cylindrepomus astyochus* Dillon & Dillon, 1948**

Transactions of the American Entomological Society, Philadelphia, 73: pp. 258, 262, pl. IX, fig. 14; Breuning 1962: p. 417; Hüdepohl 1987: p. 73.
Distribution: Philippines (Palawan; Visayas, Negros).
Type and depository information: Holotype male, ANSP.

***Cylindrepomus atropos* Dillon & Dillon, 1948**

Transactions of the American Entomological Society, Philadelphia, 73: pp. 257, 260, pl. IX, fig. 17; Breuning 1962: p. 416; Hüdepohl 1987: p. 73; Lingafelter et al. 2014: p. 21; Vives 2017: p. 52.
Distribution: Philippines (Luzon: Apayao; Visayas: Mt. Halcon in Mindoro, Samar).
Type and depository information: Holotype female, USNM.

***Cylindrepomus bayanii* Hüdepohl, 1987**

Entomologische Arbeiten aus dem Museum G. Frey, Tutzing bei München 35/36: pp. 74, 76, fig. 2.
Distribution: Philippines (Romblon).
Type and depository information: Holotype male, ZSM.

***Cylindrepomus bivitticollis* Breuning, 1947**

Arkiv för Zoologi, Uppsala, 39(6): p. 27; Breuning 1962: p. 416; Hüdepohl 1987: p. 74; Vives 2013: p. 72, fig. 12.

Distribution: Philippines (Mindanao: Mt. Kitanglad in Bukidnon).

Type and depository information: Holotype male, NRM.

***Cylindrepomus cicindeloides* Schwarzer, 1926**

Senckenbergiana, Frankfurt am Main, 8: p. 290, pl. 5, fig. 7; Breuning 1940: pp. 528, 537; Breuning 1962: p. 417; Hüdepohl 1987: p. 74.

Distribution: Philippines (Luzon: Mt. Banahao).

Type and depository information: Holotype, SMF.

***Cylindrepomus elisabethae* Hüdepohl, 1987**

Entomologische Arbeiten aus dem Museum G. Frey, Tutzing bei München 35/36: pp. 74–75, fig. 1.

Distribution: Philippines (Mindanao: Tandag Surigao del Sur).

Type and depository information: Holotype female, ZSM.

***Cylindrepomus flavicollis* Breuning, 1947**

Reichenbachia, Dresden, 15(5): pp. 25 ; Breuning 1962: p. 416; Hüdepohl 1987: p. 74.

Distribution: Philippines.

Type and depository information: Holotype male, NRM.

***Cylindrepomus mucronatus* Schwarzer, 1926**

Senckenbergiana, Frankfurt am Main, 8: p. 290, pl. 5, fig. 6 ; Breuning 1940: pp. 528, 537 ; Breuning 1962: p. 416; Hüdepohl 1987: p. 73.

Distribution: Philippines (Luzon: Imugan).

Type and depository information: Holotype male, SMF.

***Cylindrepomus nigerrimus* Vives, 2017**

Les Cahiers Magellanes, 25: p. 52, fig. 10.

Distribution: Philippines, Luzon, Nueva Vizcaya, Dupax del Sur.

Type and depository information: Holotype male, Collection E. Vives, Terrassa, Barcelona, Spain.

***Cylindrepomus peregrinus samarensis* Dillon & Dillon, 1948**

Transactions of the American Entomological Society, Philadelphia, 73: p. 264, pl. IX, fig. 10; Breuning 1962: p. 417; Hüdepohl 1987: p. 74; Lingafelter et al. 2014: p. 297.

Distribution: Philippines (Luzon: Panay; Visayas: Negros, Samar; Mindanao).

Type and depository information: Holotype male, USNM.

***Cylindrepomus rufofemoratus* Breuning, 1947**

Arkiv för Zoologi, Uppsala, 39(6): p. 47; Breuning 1962: p. 418; Hüdepohl 1987: p. 73.

Distribution: Philippines.

Type and depository information: Holotype male, NRM.

***Cylindrepomus sexlineatus* Schultze, 1934**

The Philippine Journal of Science 53 (3): p. 312, pl. 1, fig. 3; Breuning 1940: pp. 529, 538; Breuning 1947: p. 6; Breuning 1950: p. 527; Breuning 1962: p. 416; Hüdepohl 1987: p. 74.

Distribution: Philippines (Mindanao: Lanao Province).

Type and depository information: Holotype female, MTKD.

Synonyms: *Cylindrepomus sexlineatus* m. *ininterruptus* Breuning, 1950; *Cylindrepomus sexlineatus* m. *reductevittatus* Breuning, 1947.

***Cylindrepomus ysmaeli* Hüdepohl, 1987**

Entomologische Arbeiten aus dem Museum G. Frey, Tutzing bei München 35/36: pp. 74, 77, fig. 3.

Distribution: Philippines (Luzon: Mountain Province).

Type and depository information: Holotype female, ZSM.

Taxonomy

***Cylindrepomus ansihagani* Medina & Cabras, sp. nov.**
https://zoobank.org/AF70CDCE-A5E7-445E-B5B0-FFA2AD50E42E
Fig. 1A–D

Holotype (Fig. 1), male: Philippines – Mindanao / Northern Mindanao / Misamis Oriental III.2022 / local collector (MMCP), to be deposited at PNM.

Other material examined. *Cylindrepomus bivitticollis* Breuning, 1947, holotype male, NRM; *C. sexlineatus* Schultze, 1934, holotype female, MTKD.

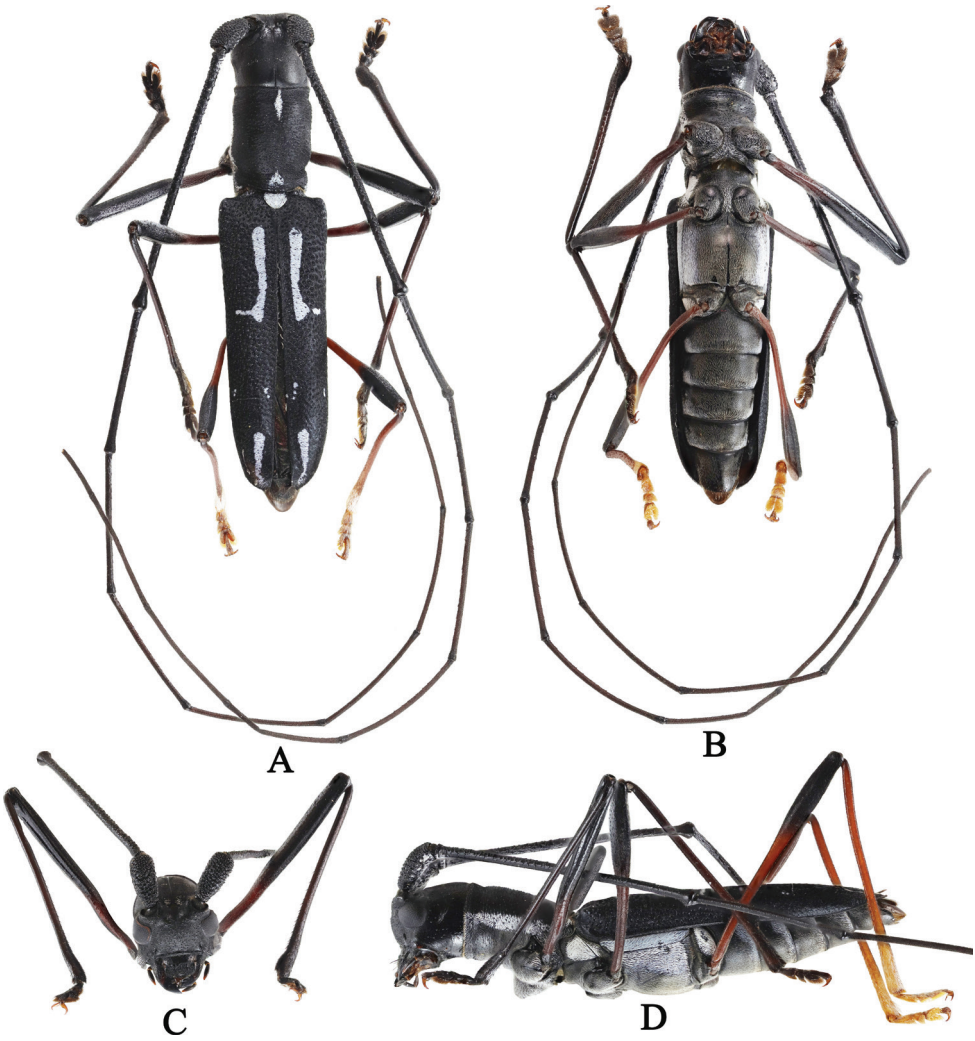

Figure 1. *Cylindrepomus ansihagani* sp. nov. male holotype, habitus **A** dorsal aspect **B** ventral aspect **C** frons **D** lateral aspect.

Description. Male. Dimensions (n = 1): LB: 14.0 mm. WH: 2.0 mm. LG: 1.5 mm. LL: 1.0 mm. WL: 1.0 mm. LP: 3.0 mm. WP: 2.0 mm. LE: 8.5 mm. WEH: 3.0 mm.

Teguments generally matt black, pro- and mesotibia reddish-brown near base; metatibia reddish-brown up to apical third; mid tarsus pale brown; hind tibia, tarsus, and claw light brown. Ventral side matt black, tomentose, covered with white recumbent pubescence on prosternum, prothorax, and abdomen.

Head and gena tomentose, covered with black recumbent pubescence; genae with few erect black hairs at the side; vertex with two small bands of white recumbent pubescence. Eyes prominent, black, as long as wide. Antennae long and slender (except scape), more than twice the body length, matt black; scape bulbous, coarsely granulated, with recumbent white setae near base, 2× longer than wide; 2nd antennomere wider

than long; 3rd antennomere coarsely granulated, 2× longer than each of antennomeres 4–11; 5th antennomere slightly granulated; antennomeres 6–11 finely granulated.

Pronotum 1.5× wider than long, tomentose, covered with black recumbent hairs; with two narrow bands of white recumbent pubescence, one at the base shaped like an elongated diamond, the other one triangle-shaped and near the margin; apical margin lined with golden setae.

Prosternum tomentose, covered with black recumbent hairs at middle and white recumbent setae at sides. Mesosternum and metasternum tomentose, covered with black and white recumbent setae. Mesepisternum and metepisternum tomentose, covered with white recumbent setae. 1st to 4th abdominal ventrites tomentose, covered with white and black recumbent setae with sparse golden setae at each side; pygidium tomentose, covered with full black recumbent setae, apex lined with golden hairs (Fig. 1B).

Elytra 2.5× longer than wide, with coarse, uniformly aligned punctatation; humeri slight recurved; suture and margin raised, slightly truncate along suture; apex lanceolate; with two thick bands of white recumbent pubescence, one at basal third longitudinal with apex expanded laterally, and one near the apex, narrowed toward the tip; a few tiny white spots near suture and margin at apical third. Scutellum tomentose, covered with white recumbent setae, obscuring surface (Fig. 1A).

Coxae tomentose, covered with whitish recumbent hairs; trochanters reddish-brown; tibia armed with two small spines at base (colored black on protibia and mesotibia, pale brown on metatibia). Profemur slightly recurved near base.

Male genitalia (Fig. 2 A–J): Tegmen ~1.5 mm long; lateral lobes slender, ~0.1 mm long and 0.6 mm wide; base with a broad central lobe bearing fine setae; apex bearing numerous golden setae, ~0.2–0.6 mm long. Aedeagus ~2.0 mm long and 0.5 mm wide, slightly recurved and tapering towards apex. Endophallus ~6.0 mm long.

Diagnosis. *Cylindrepomus ansihagani* sp. nov. is distinct from its Mindanao endemic congeners (*C. bivitticollis* and *C. sexlineatus*) in having pronotum with two narrow bands of white recumbent pubescence, one at the base, shaped like an elongated diamond, the other a triangular band of white recumbent pubescence near the margin, while *C. bivitticollis* has pronotum with a complete, pale yellow longitudinal band on each side of the disc and *C. sexlineatus* has pronotum with a yellowish spot on each side at the base.

Etymology. This new species is named after Datu Ramil P. Ansihagan, the tribal chieftain of the Higaunon Tribe, for his efforts in protecting and preserving the remaining forests in Barangay Eureka Gingoog City, Philippines.

Distribution of *Cylindrepomus ansihagani* sp. nov. Philippines: Mindanao: Northern Mindanao, Gingoog City.

Notes on ecology, threats, and conservation of *Cylindrepomus ansihagani* sp. nov. The species is known from a single specimen that was collected during the expedition. The species was collected at an elevation of approximately 1000–1100 m a.s.l. using hand nets along the boundary between an agro-ecosystem and a secondary forest. Most of the trees present are endemic species including but not limited to *Shorea negrosensis* (Red Lauan), *Shorea contorta* (White Lauan), and *Quercus subsericea* (Philippine Ulayan Tree), all of which are native to the Philippines and considered highly valued trees.

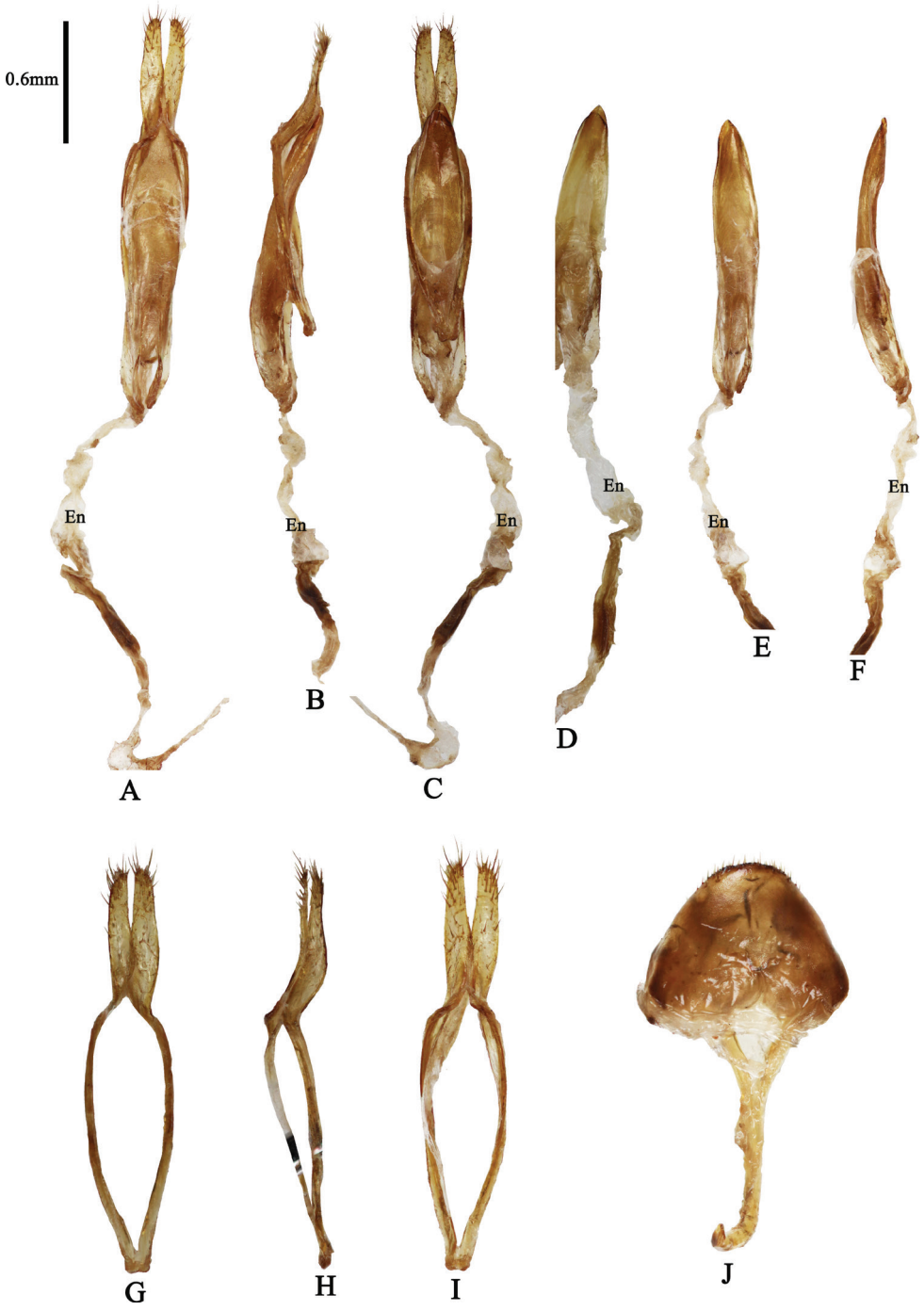

Figure 2. *Cylindrepomus ansihagani* sp. nov. **A** genitalia, dorsal aspect **B** genitalia, lateral aspect **C** genitalia, ventral aspect **D** aedeagus, ventral aspect **E** aedeagus, dorsal aspect **F** aedeagus, lateral aspect **G** tegmen, dorsal aspect **H** tegmen, lateral aspect **I** tegmen, ventral aspect **J** tergite VIII. Abbreviation: **En** – Endophallus.

The current threat to the species' habitat is the continued conversion of the remaining secondary forests into agricultural lands. Farmers use various chemicals such as pesticides, herbicides, and fungicides that could affect the species' population There is a need to conduct more expeditions, covering more habitats, to find additional populations of this and other species. Hence, research identifying the exact species distribution, area of occupancy and the species' extent of occurrence is important as a guide in making a future IUCN Red List assessment of this endemic species.

Acknowledgements

Our gratitude to Guillermo P. Torres Jr. for his continued support to the UMCRC. To the ERASMUS+ Mobility Program between UMCRC and DUBC, funded by the European Union. To our local guides: Ricky, Xyrex Quin, Joshua, Jeptha, Gerwen, Jomart, and the entire Higaunon tribe in Baliguihan Gingoog City. To Alex Anichtchenko, Anastasija Vasiljeva, Felix Landim, and Dexter Patalita. To our good friend Arvids Barsevskis for the wonderful scientific collaboration throughout the years. To Mattias Forshage for the warm assistance during the first and third authors' visit at Naturhistorika Riksmuseet Stockholm Sweden. Thanks to Larry Bezark and Xavier Gouverneur for the important comments and suggestions. Special thanks to Francesco Vitali for the guidance and fruitful discussions on improving this work.

References

Breuning S (1940) Études sur les Lamiaires (Coléop. Cerambycidæ). Neuvième Tribu: Dorcaschematini Thoms. Novitates Entomologicæ, 3ème supplément (67–71): 527–568. [figs 522–582]

Breuning S (1950) Lamiaires nouveaux de la collection Lepesme. Longicornia I: 511–535. [8 figs. Paul Lechevalier, Paris]

Breuning S (1962) Catalogue des Lamiaires du Monde (Col. Cerim.). Verlag des Museums G. Frey, Tutzing bei München, 6 August 1962, 387–459.

Breuning S von (1947) Nouvelles formes de longicornes du Musée de Stockholm. Arkiv för Zoologi, Uppsala, 39, A, 6: 1–68.

Hüdepohl KE (1987) Die philippinischen Arten der Gattung *Cylindrepomus* Blanchard (Cerambycidae, Lamiinae, Dorcaschematini). Entomologische Arbeiten aus dem Museum G. Frey Tutzing bei München 35/36: 73–79.

Lingafelter SW, Nearns EH, Tavakilian GL, Monné MA, Biondi M (2014) Longhorned Woodboring Beetles (Coleoptera: Cerambycidae and Disteniidae) Primary Types of the Smithsonian Institution. Smithsonian Institution Scholarly Press, Washington D.C.,[v–xviii +] 1–390. [187 figs., ISBN: 978-1-935623-40-3]

Yoshitake H, Yamasako J (2016) A new Doliops (Coleoptera, Cerambycidae) from Bohol Island, the Philippines. Japanese Journal of Systematic Entomology 22(1): 1–5.

Vives E (2013) New or interesting Cerambycidae from the Philippines (Part VII) (Coleoptera, Cerambycidae). Les Cahiers Magellanes (NS) 11: 62–75. [15 figs]
Vives E (2017) New or interesting Cerambycidae from the Philippines (Part XV) (Coleoptera, Cerambycidae, Lamiinae). Les Cahiers Magellanes 25: 46–65.

Supplementary material 1

Figure S1

Authors: Milton Norman D. Medina, Melbert James G. Baul, Analyn A. Cabras

Data type: COL (jpg. image)

Explanation note: A catalog of the genus *Cylindrepomus* Blanchard, 1853 in the Philippines with description of a new species from Northern Mindanao is presented. Notes on the ecology, threats, and conservation of the new species is also provided.

Link: https://doi.org/10.3897/zookeys.1116.86906.suppl1