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Catalog of the genus *Plocia* Newman, 1842 (Cerambycidae: Lamiinae: Apomecynini) of the Philippines with the description of a new species from Davao De Oro Mindanao Island

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This paper presents the catalog of the genus *Plocia* Newman 1842 of the Philippines including a description of *P. maglanai* sp. nov. a new species from Davao De Oro Philippines. The Philippines has four species and three non-nominal subspecies of *Plocia* wherein majorly are mainly distributed in the Luzon region and two in Mindanao Island. New distribution records of *Plocia diverseguttata* s. str. Heller, 1924 is also noted.

Key words: Beetles, new species, catalog, Philippine beetles

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INTRODUCTION

The Philippines is an archipelagic country that contains high species richness and endemism thus considered one of the mega-diverse countries in the world (Myers et al. 2000; Suarez & Sajise 2010). The Cerambycidae fauna in the Philippines is one of the most diverse species in the world with more roughly 1400-1500 species being listed (Tavakilian & Chevillotte 2023) and the presently described species constitutes around 70% of the Cerambycidae fauna of the archipelago (Vives et al. 2005). Hence, hundreds more are waiting to be discovered for Philippine fauna, particularly in unexplored mountains in Mindanao Island (Medina et al. 2021a,b; 2022; 2023).

Davao de Oro, formerly known as Compostela Valley, is a province in the Philippines situated in the Davao region, occupying Mindanao's south eastern section (PhilAtlas 2023). The province was covered by a total land area of 4,666.09 square kilometers. The province's terrain consists of flat, rolling, hilly, and mountainous portions evenly distributed throughout the area (National Economic and Development Authority 2023). The province is part of the Eastern Mindanao Biodiversity Corridor (EMBC), a large old-growth secondary forest in Eastern Mindanao which is considered as the last frontier in terms of species diversity and endemism in Mindanao Philippines. Additionally, pairs of Philippine Eagles, considered apex predators and critically endangered species in the Philippines (*Pithecophaga jefferyi*) were sighted in the province particularly at Mt. Candalaga in the municipality of Maragusan, proving the province's rich biodiversity and relatively intact ecosystem (DENR 2022; PEF 2008). Most of the province's land area is converted into agricultural lands mostly banana and coconut plantations. Despite several threats to the forest ecosystems of Davao de Oro, several endemic and new coleopteran species were recorded for example in the genus *Metapocyrtus* Heller 1912, e.i *M. dagtum* Cabras et al. 2021, *M.* (*O.*) *mansaka* Cabras et al. 2018, and *M. kueli* Cabras et al. 2021. Some endemic species of *Glenea* are also recorded in the province, e.i *G. versuta* Heller, 1832 and *G. albolineata mindanaonis*Aurivillius, 1926 (Medina et al. 2021b).

Apomecynini Thomson 1860, includes almost 1900 species distributed in 246 genera in America, Africa, Asia, and Oceania (Tavakilian & Chevillotte 2023). *Plocia* Newman 1842 consists of 7 species and subspecies (4 species and 3 non-nominal subspecies) worldwide, six are endemic in the Philippines, *P. diverseguttata* sensu stricto Heller, 1924; *P. diverseguttata albopunctata* (Breuning 1982); *P. diverseguttata boholensis* (Breuning, 1982); *P. diverseguttata mindanaonis* (Breuning 1982); *P. puncticollis* Breuning, 1965; *P. splendens* Hüdepohl 1995 and one species occurring both in Taiwan and Philippines, *P. notata* Newman 1842 (Tavakilian & Chevillotte 2023). The genus is easily distinguished from other members of Apomecynini for having a "*conspicuous white tomentation of the 7th antennal joint*" (Weigel & Skale 2021, p.354).

In Mindanao, there are two *Plocia* species recorded, e.i *P. diverseguttata* sensu stricto Heller, 1924, *P. diverseguttata mindanaonis* (Breuning, 1982). One of the recorded *Plocia* species, *P. diverseguttata mindanaonis* (Breuning, 1982) is distributed in the Davao region specifically in Mt. Apo, and the other species *P. diverseguttata* sensu stricto Heller, 1924 is distributed in Surigao and Bukidnon. However, there is no record of *Plocia* species in the province of Davao De Oro. Thus, *Plocia maglanai* sp. nov. will be the first new species in the province.

This paper provides a list of *Plocia* in the Philippines with the description of *Plocia maglanai* sp. nov., a new species from Davao de Oro, Mindanao, Philippines.

MATERIALS AND METHODS

Hand net and handpicking were employed during the sampling at Sitio Maligaya, Baranggay Tagugpo, Pantukan Davao de Oro. The specimens were killed using 70% ethyl alcohol and temporarily stored in vials. The collected specimens were deposited at MMCP. Morphological characters were observed under the Leica MZ 12.5 stereomicroscope. Habitus images were taken using a Canon EOS 6D digital camera equipped with an MP-E 65mm macro lens mounted in Stack Shot macro rail automated with Helicon Remote version 4.3.0.w. All images were stacked using Helicon Focus version 8.1.1 and processed using a licensed Photoshop CS6 Portable software version.

Measurements of the various body parts as follows:
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 the 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 (mm).

Comparative material and type specimens are deposited in the following collections:
BMNH Natural History Museum, London.
EUB Ehime University and Ohbayashi collection, Matsuyama.
MMCP Milton Medina Collections, Tagum City, Philippines.
SNSD Senckenberg Naturhistorische Sammlungen Dresden, Germany.
ZMB Museum fur Naturkunde–Leibniz Institute for Evolution and Biodiversity Science, Berlin
ZSM Zooloische Staatssammlung Des Bayerischen Staates Munchen.
Species new distribution record*

CATALOG

Family: Cerambycidae
Sub-family: Laminae
Tribe: Apomecynini
Type species: *Plocia notata* (Newman, 1842)

***Plocia diverseguttata* sensu stricto Heller, 1924**

Heller, 1924: 205; Breuning, 1949:19; Breuning, 1960: 139; Breuning,1964: 79,80,302; Tavakilan & Jiroux, 2015: 78; Weigel & Skale, 2021: 351.

Type information and deposition: *Plocia diverseguttata* Heller, 1924, Holotype, SNSD; *Mimoplocia diverseguttata* m. *plurinotata* Breuning, 1964, Holotype, SNSD; *Mimoplocia diverseguttata diversenotata* Breuning, 1964, Holotype, SNSD.
Synonym: *Mimoplocia diverseguttata* m. *plurinotata* Breuning, 1964; *Mimoplocia diverseguttata diversenotata* Breuning, 1964

Distribution: Philippines (Luzon: Cabalian. Mindanao: Surigao, Bukidnon, Lindabon, Gingoog*, Cateel, Davao Oriental*).

***Plocia diverseguttata albopunctata* (Breuning, 1982)**

Breuning, 1982: 141; Tavakilan & Jiroux, 2015: 78; Weigel & Skale, 2021: 353.
Type information and deposition: *Mimoplocia diverseguttata* ssp. *albopunctata* Breuning, 1982, Holotype, EUB.
Synonym: *Mimoplocia diverseguttata* ssp. *albopunctata* Breuning, 1982.
Distribution: Philippines (Visayas: Leyte, Cangtoktok).

***Plocia diverseguttata boholensis* (Breuning, 1982)**

Breuning, 1982: 141; Tavakilan & Jiroux, 2015: 78; Weigel & Skale, 2021: 353.
Type of information and deposition: *Mimplocia diverseguttata* ssp. *Boholensis* Breuning 1982, Holotype, EUB.
Synonym: *Mimplocia diverseguttata* ssp. *boholensis* Breuning 1982.
Distribution: Philippines (Visayas: Bohol, Bilar).

***Plocia diverseguttata mindanaonis* (Breuning, 1982)**

Breuning, 1982: 142; Tavakilian & Jiroux, 2015: 28; Weigel & Skale, 2021: 353.
Type information and deposition: *Mimoplocia diverseguttata* ssp. *Mindanaonis* Breuning, 1982, Holotype, EUB.
Synonym: *Mimoplocia diverseguttata* ssp. *mindanaonis* Breuning, 1982.
Distribution: Philippines (Mindanao: Mt. Apo, Lake Agko; Baclayon- Mainit Hot Spring).

***Plocia notata* Newman, 1842**

Newman, 1842: 292; Thomsom, 1864: 45; Lacordaire, 1872: 610; Gemmainger & Harold, 1873: 3103; Heyrovsky, 1935: 19, 20; Kano, 1939: 32; Breuning, 1949: 49; Breuning, 1960:139; Breuning, 1964: 79; Hua, 2002: 216; Tavakilian & Jiroux, 2015: 78; Barsevskis, 2017: 185; Weigel & Skale, 2021: 351.
Type information and deposition: *Plocia notata* Newman, 1842, Holotype, BMNH; *Epaphra albicornis* Heyrovsky 1935, Syntypes (4), Prague National Museum.
Synonym: *Plocia notata* Newman, 1842; *Epaphra albicornis* Heyrovsky 1935.
Distribution: Philippines (Luzon: Manila; Mt. Makiling, Laguna).

***Plocia puncticollis* (Breuning, 1965)**

Breuning, 1965: 182; Weigel & Skale, 2021: 353.
Type information and deposition: *Parepilysta* (s. s.) *puncticollis* Breuning, 1965, Holotype, ZMB.
Synonym: *Parepilysta* (s. s.) *puncticollis* Breuning, 1965.
Distribution: Philippines (Luzon).

***Plocia splendens* (Hüdepohl, 1995)**

Hudephol, 1995: 285; Tavakilan & Jiroux, 2015: 78; Weigel & Skale, 2021: 353.
Type Information and deposition: *Mimoplocia splendens* Hudephol 1995, Holotype, ZSM.
Synonym: *Mimoplocia splendens* Hudephol 1965.
Distribution: Philippines (Luzon: Sibuyan; Romblon Province)

Taxonomy

***Plocia maglanai* Medina sp. nov.**
Fig. 1.

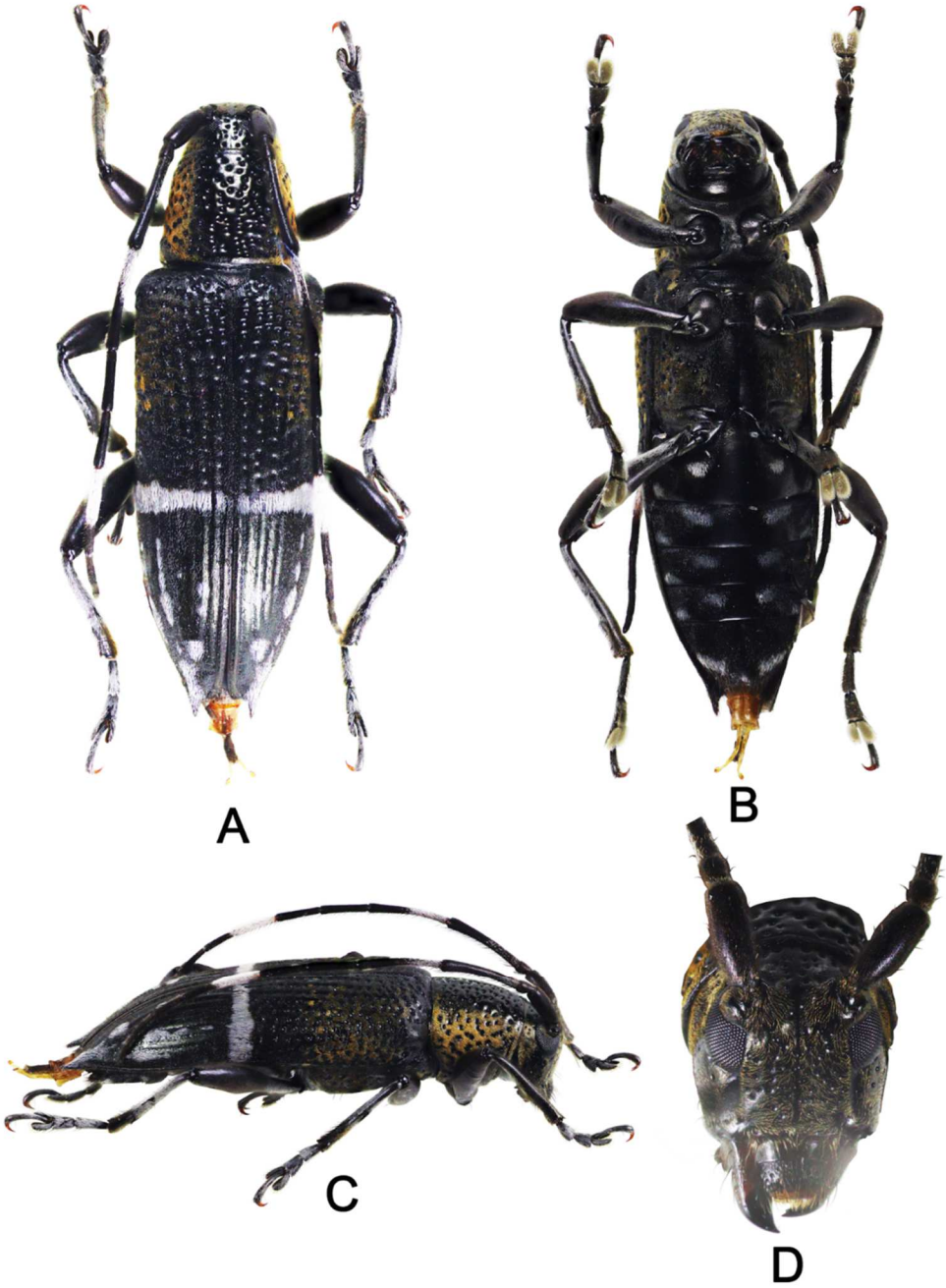

Fig. 1. Habitus of *Plocia maglanai* sp. nov.: A. Dorsal, B. Ventral, C. Lateral, D. Frons.

HOLOTYPE female: PHILIPPINES – Mindanao, Davao de Oro / Pantukan / Brgy. Tagugpo / VIII.28.2023 / 800 masl. E.Avergonzado leg. / MMCP, printed on red card. Type specimen will be deposited at the Philippine National Museum (PNM). **PARATYPES:** 2 females, same label as holotype, MMCP. Female: PHILIPPINES – Mindanao, / Compostela Valley, / Maragusan, / New Albay, 03.2017. / local collector leg./ Specimen deposited at Daugavpils University Beetles Collection (DUBC).

Description. Dimensions of holotype: LB: 11.5 mm. WH: 1.5 mm. LL: 0.8 mm. WL: 1.0 mm. LP: 2-.0 mm. WP: 2.5 mm. LE: 8.5 mm. WEH: 4.0 mm.

Adult female. Teguments in the Head, pronotum, elytra, and legs are matte black; antennae and underside of head are dark brown. **Head** dorsally wider than long; frons, vertex, genae with punctures and lateral sides covered with recumbent yellowish pubescence; deeper punctures at frons arranged in random; dorsal median side of vertex free of yellowish recumbent pubescence; one black erect orbital setae; base of frons lined with 3-4 semi-erect black setae; genae lustrous, wider than long; clypleus lustrous, glabrous, rectangular; mandible short robust at base, covered with few long yellowish erect setae. **Antennae** short, reaching until apical third of elytra, densely covered with semi-erect short yellowish setae from scape to antennomere XI; scape robust, normal without apical cicatrix, apex rounded, a little longer than head; pedicle slightly elongated; antennomere III as long as antennomere IV; basal half of antennomere III and IV covered with whitish pubescence; antennomere VII fully covered with whitish pubescence.

Prothorax. Pronotum and Propleuron covered with deep punctures; pronotum wider than long, median line of pronotum free of yellowish pubescence, lateral sides of pronotum to pleuron covered with yellowish pubescence in line with the yellowish pubescence of the head, with few erect black setae at propleuron. Prosternum covered with fine yellowish recumbent pubescence, bottle-shaped in the middle.

Elytra twice wider than long, covered with fine semi-erect and recumbent yellowish and whitish pubescence with pronounced yellowish recumbent pubescence at basal third. Elytra densely covered with punctures at the basal half, apical half is devoid of punctures. At least 4-5 visible striae from elytral suture, gradually diminishing from the apical half towards apex. With a distinct lateral band of whitish pubescence at the middle in line with antennomere VII (fully covered with whitish pubescence). At least five longitudinal bands of whitish pubescence scattered at the apical third and elytral apex. Elytral apex caudate with a pointed sutural spine covered with semi-erect whitish and yellowish pubescence.

Legs. Coxa, underside of tibia, profemora, and mesofemora are covered with fine yellowish recumbent pubescence; dorsal side of tibia and tarsi with semi-erect whitish and yellowish pubescence; basal half of metafemora with whitish recumbent pubescence, apical half with yellowish pubescence. Claws simple, light brown, glabrous.

Mesepimeron, metepisternum, and lateral sides of **metasternum** with deep punctures arranged in random, covered with yellowish recumbent pubescence, more pronounced at the lateral sides of metasternum. Mesepisternum devoid of punctures, densely covered with fine black and yellowish pubescence. Mesosternum quadrangular, almost cube-liked, with fine yellowish pubescence. Metasternum wider than long, median line devoid of punctures and yellowish pubescence with prominent medial concavity. Abdominal

ventrite I as long as wide as metasternum; lateral sides of ventrites I to V densely covered with yellowish and bluish recumbent pubescence; median plane of ventrites I and II with very fine yellowish pubescence; ventrites III and IV devoid of pubescence; ventrite V with brownish setae with semierect whitish setae at lateral side near the apex.

Adult male. Unknown.

Differential diagnosis. The new species is unique amongst the congeners of *Plocia* spp. in the Philippines. It is distinct for having no whitish or yellowish macules in the elytra but having a transverse band of whitish pubescence in the middle, and a head including frons highly punctate. It is somewhat close to *P. notata* (Newman, 1842) for having a whitish pubescence at antennomeres IV, but distinct from *P. notata* for being two-toned tomentose at antennomere III.

Etymology. *Plocia maglanai* sp. nov. is named after Dr. Wenifredo Maglana, a medical doctor and a conservationist who dedicated his life to protecting watersheds and natural reserves in Davao de Oro, Philippines.

Distribution. Philippines: Mindanao (Davao de Oro, Pantukan, Compostela Valley).

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