

**METAPOCYRTUS (ORTHOCYRTUS) KATALISTA SP. N., A NEW SPECIES
OF JEWEL WEEVIL (COLEOPTERA: CURCULIONIDAE: ENTIMINAE)
FROM BAGANGA, DAVAO ORIENTAL, PHILIPPINES**

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Summary. A new species *Metapocyrtus katalista* sp. n. (Coleoptera: Curculionidae: Entiminae: Pachyrhynchini), is described from the Municipality of Baganga, Davao Oriental, Southeastern Philippines.

Key words: weevils, Pachyrhynchini, taxonomy, Eastern Mindanao Biodiversity Corridor, Oriental Region.

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Резюме. Из муниципалитета Баганга, Восточный Давао, юго-восточная часть Филиппин описывается и иллюстрируется *Metapocyrtus katalista* sp. n. (Coleoptera: Curculionidae: Entiminae: Pachyrhynchini).

INTRODUCTION

The genus *Metapocyrtus* Heller, 1912 is a group of broad-nosed and flightless weevils belonging to the tribe Pachyrhynchini. The Philippine archipelago is the center for diversity of the said genus with over 260 species described (Schultze, 1923, 1925; Bollino *et al.*, 2020; Cabras *et al.*, 2021a; Van Dam *et al.*, 2022).

Over the recent coleopterological expeditions on the Eastern Mindanao Biodiversity Corridor (EMBC), a long stretch of fragmented lowland forests along the east coast of Mindanao Island in the Philippines (PEF, CIP & DENR, 2008), numerous species were collected, including several that belong to the subgenus *Orthocyrtus* Heller, 1912. The subgenus *Orthocyrtus* is endemic to the Philippines. They are currently distinguished from other subgenera of *Metapocyrtus* for having: 1) large size, except a few known species; 2) medium length rostrum, dorsally straight, mostly in a plane with the front (exceptionally slightly declinate) and rectangularly declined at the base; and 3) females are without any secondary sexual structural characters aside from a stouter form, except a few exceptions, and similar to the males (Schultze 1925; Cabras *et al.*, 2018). Recent discoveries in this subgenus include *Metapocyrtus (Orthocyrtus) davaoensis* Cabras, Medina et Bollino, 2021, *M. (O.) hirakui* Cabras, Medina et Bollino, 2021, *M. (O.) mansaka* Cabras, Bollino et Medina, 2018, and *M. (O.) flomlok* Cabras et Medina, 2022 (Cabras *et al.*, 2018, 2021a,b).

During the Cave Assessment Project implemented by the Community Environment and Natural Resources Office (CENRO) – Baganga in Barangay Binondo, Municipality of Baganga, on July 23, 2024, the Davao Oriental State University (DOrSU) Coleoptera Research Team was invited to take part in the biodiversity surveys. The third author collected the specimens, later confirmed as a new species by the first author at the Terrestrial Invertebrate Research Laboratory of DOrSU. In this paper, we present the description of this new species, including notes on its habitat, distribution, and conservation.

MATERIAL AND METHODS

Morphological characters were observed under Luxeo 4D and Nikon SMZ745T stereo-microscopes. The treatment of the genitals follows Yoshitake (2011). Female genitalia are not illustrated as very few chitinous structures are used to identify and characterize different species of Pachyrhynchini (Cabras *et al.*, 2012). Images of the habitus were taken using a Nikon D5300 digital camera with a Sigma18–250 macro lens. Images were stacked using Helicon Remote ver 4.3.0 W Registered Version and processed using Helicon Focus 8.1.1 Registered ProLifetime. Photos were cleaned and brightness adjusted using Photoshop CS6 Portable.

Abbreviations and symbols mentioned in this paper are abbreviated as follows: LB – body length, from the apical margin of pronotum to the apex of elytra; LR – length of rostrum; LP – pronotal length, from the base to apex along the midline; LE – elytral length, from the level of the basal margins to the apex of elytra; WR – maximum width across the rostrum; WP – maximum width across the pronotum; WE – maximum width across the elytra.

Comparative materials and specimens used in the study are deposited in the following institutional collections: CMNC – Canadian Museum of Nature, Ottawa, Ontario, Canada; PNM – Philippine National Museum, National Museum of Natural History, Manila, Philippines; SMTD – Senckenberg Natural History Collections, Dresden, Germany; TIRL – Terrestrial Invertebrate Research Laboratory, Davao Oriental State University, City of Mati, Davao Oriental, Philippines.

TAXONOMY

Genus *Metapocyrtus* Heller, 1912

Subgenus *Orthocyrtus* Heller, 1912

***Metapocyrtus katalista* Cabras, Villegas et Medina, sp. n.**

<https://zoobank.org/NomenclaturalActs/11E0BC3A-1557-4770-BAFA-7C05A60063E0>

Figs 1, 2

MATERIAL. Holotype: ♂, **Philippines:** “Philippines – Mindanao Island, Davao Oriental, Baganga/ July 22 to 26, 2024 / leg. M. N. Medina (typed on white card) // HOLOTYPE male / *Metapocyrtus katalista* / CABRAS, VILLEGAS & MEDINA 2025 (typed on red card)” (presently at TIRL, to be deposited at PNM). Paratypes: 3♂, 5♀, same data as holotype (all in TIRL, to be deposited at PNM, SMTD, and CMN).

DESCRIPTION. Male. Integument of antenna, head, rostrum, pronotum, elytra, femora, tibiae, and tarsi black. Body and pronotal surface, rostrum, head, legs, and underside weakly lustrous.

Head dorsal surface mostly covered with appressed golden yellow iridescent round contiguous scales; lateral side below the eye with a patch of appressed golden yellow iridescent round imbricate scales interspersed with similar color piliform scales; forehead with distinct median furrow not reaching vertex; eyes medium-sized and weakly convex not protruding on the outline of head.



Fig. 1. *Metapocyrtus katalista* sp. n. A – male holotype, dorsal view; B – female, dorsal view; C – male holotype, lateral view; D – female, lateral view.

Rostrum separated from head by a deep and distinct transverse groove, coarsely rugopunctate on basal two-thirds, finely punctured on apical third with sparse appressed golden yellow iridescent scales on basal half, and few sparse colored piliform scales, as long as wide (LR 3.8 mm; WR 3.8 mm), lateral sides with deep pit below dorsolateral margin near the base and with a patch of appressed golden yellow iridescent round imbricate scales continuous with the head, lateral sides below antennal scrobe covered with suberect golden yellow piliform scales; dorsum with distinct median furrow reaching beyond the middle; dorsal contour in lateral view almost flat then subapically gradually declined towards apex, lateral contour in dorsal view anteriorly widened; dorsolateral margin weakly rounded, not angled. Antennal scape and funicle subequal in length. Scape with subappressed colored piliform scales on outer margin, funicle with suberect, light-colored setae. Antennae with segments 1 and 2 subequal in length, 2.5 times longer than wide; segment 3 half the length of segment 2 but longer than segments 4-6; segments 4 to 6 nearly as long as wide; segment 7 slightly longer and wider than segments 4 to 6; club elliptical, nearly three times longer than wide.



Fig. 2. Male of *Metapocyrtus katalista* sp. n. A – genitalia, dorsal view; B – genitalia, lateral view; C – sternite IX, dorsal view.

Prothorax subglobular, tapered basally and apically; moderately punctate and sparsely covered with very fine setae; significantly wider than long (LP 4.2 mm; WP 5.2 mm), dorsal contour in lateral view weakly convex, lateral contour in dorsal moderately arcuate; dorsum with the following scaly marks of appressed golden yellow iridescent round imbricate scales: a) thin stripes on basal and apical margin, b) thin longitudinal stripe at middle, c) two rhomboid shape patch on each side of dorsum, and d) band near lateral margin before coxa contiguous with basal and apical stripes.

Elytra ovate, longer than wide (LE 8.6mm; WE 6.9mm), slightly wider and twice longer than prothorax (WE 6.9mm; WP 5.2 mm; LE 8.6 mm; LP 4.2 mm), body surface irregularly punctured and mostly with scales; dorsum with three lateral bands of appressed golden yellow iridescent round contiguous scales, one basally, one at middle and apicad; dorsal contour in lateral view uniformly and moderately convex with a gradual apical declivity; lateral contour in dorsal view uniformly and strongly arcuate, narrow at base then gradually widens towards middle and uniformly tapers towards a pointed apex.

Legs with moderately clavate femorae mostly covered with colored subappressed piliform scales, and apically with appressed yellow orange and purple iridescent round scales. Tibiae covered with subadpressed brown setae and colored piliform scales on outer surface and long suberect dense setae on inner surface; protibiae denticulated and mucronate at apex; mesotibiae denticulated. Tarsi moderately long and pubescent. Tarsomere 1 and 2 subtriangular and subequal in length; tarsomere 3 bilobed, slightly longer than tarsomere 1 and 2; tarsomere 5 subequal with Tarsomere 1 and 2 combined; tarsal claws free.

The anterior part of the procoxae with thick transverse patch of imbricate round elliptical green-ochre and golden yellow-ochre scales; medial area covered with fine pubescence, with appressed long white setae and bronze elliptical scales; posterior half sparsely pubescent with short appressed white setae. In some male paratypes, the anterior half covered with subappressed white piliform scales. Mesocoxae sparsely covered with short appressed white setae, teal and bronze piliform scales, and few bronze elliptical scales. Metacoxae, particularly around trochanter, sparsely pubescent with appressed white setae; with few sub-erect long white setae towards center of metasternum.

Male genitalia and sternite IX as shown in Fig. 2 A–C.

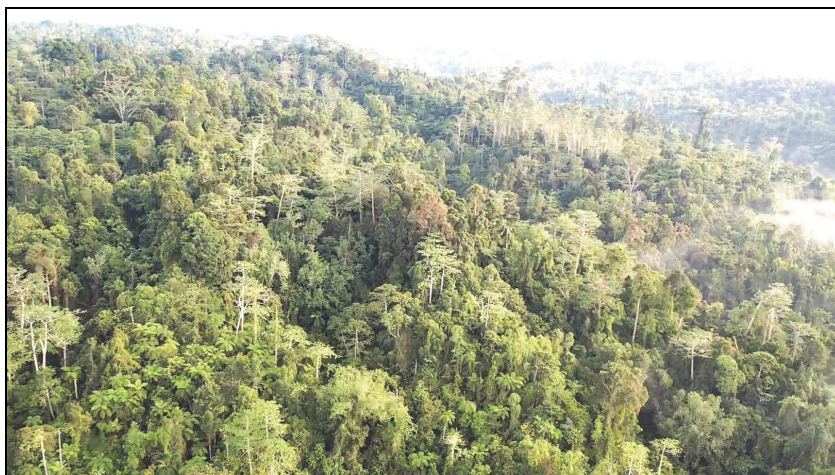


Fig. 3. Aerial view of the habitat of *Metapocyrtus katalista* sp. n. Photo by Ch. Jarencio.

Female. Habitus as shown in Fig. 1 B, D.

Female differ from males in the following characters: a) transverse groove between head and rostrum deeper; b) pronotum less globular and lateral contour on dorsal view less arcuate; c) pronotum narrower and shorter; d) elytra longer and wider (LE/WE 10.2mm/7.2mm, WE/WP 7.2mm/5.0mm, LE/LP 10.2mm/4.2mm) than male; e) lateral contour of elytra in

dorsal view subapically interrupted; f) apical declivity gradual but subapically interrupted then abruptly declines towards apex; g) scaly markings with turquoise scales h) with Ventrite 1 slightly convex in the middle; i) ventrite 5 deeply concave. Otherwise, females similar to the male.

MEASUREMENTS (in mm). Male (N=4): LB: 13.8–16.6 (holotype 16.6); LR: 3.1– 3.8 (holotype: 3.8); WR: 2.8–3.8 (holotype 3.8); LP: 3.8–4.2 (holotype 4.2); WP: 3.9–5.2 (holotype 5.2); LE: 6.8–8.6 (holotype 8.6); WE: 5.2–6.9 (holotype 6.9). Female (N=6): LB: 15.2–17.5; LR: 2.9–3.1; WR: 2.6–2.9; LP: 3.9–4.2; WP: 4.1–5.0; LE: 8.8–10.2; WE: 6.2–7.2.

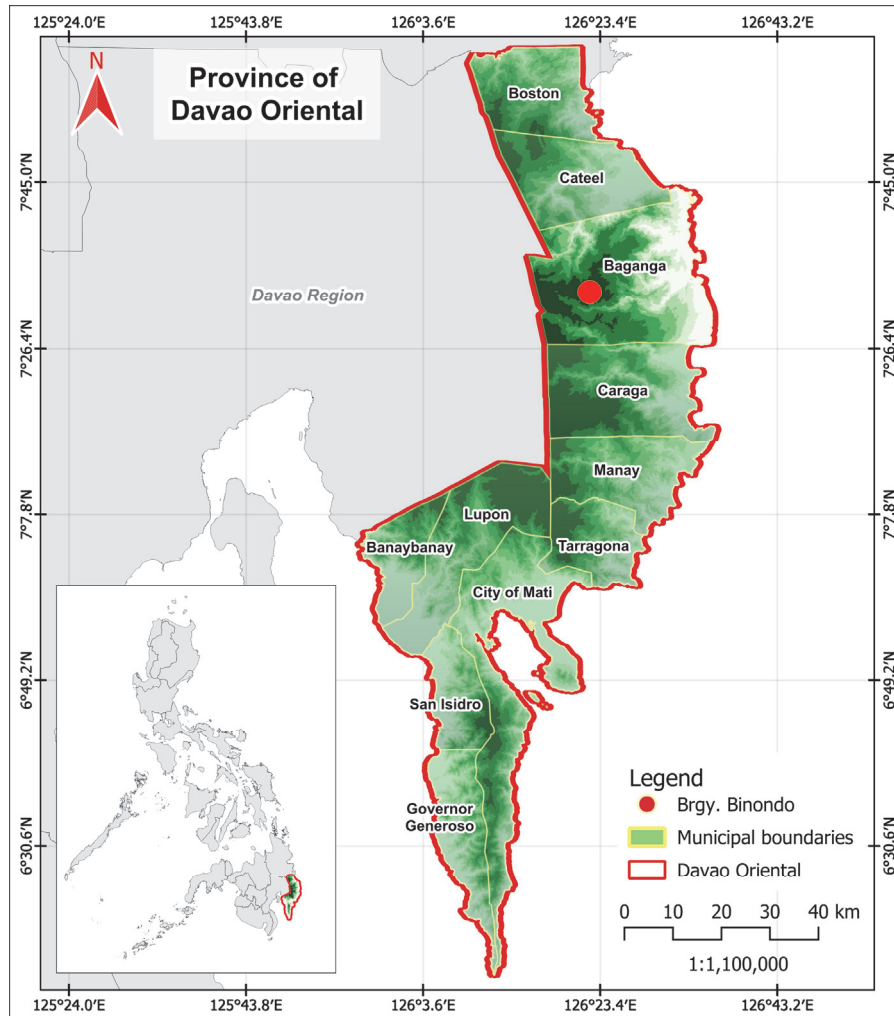


Fig. 4. Distribution map of *Metapocyrtus katalista* sp. n. Cartographer: R.C. Verzosa.

DIAGNOSIS. This species belongs to the *Orthocyrthus mansaka* group based on the following characteristics prescribed by Schultze (1925) and Cabras *et al.* (2018). *Metapocyrtus katalista* sp. n. is closely related to *Metapocyrtus* (*O.*) *mansaka* and *M.* (*O.*) *barsevskisi*. It is uncannily similar to *M. mansaka* for having three large bands on the elytra but differs for its significantly large size, the presence of two rhomboid shape scaly marks on each side of pronotum, longitudinal stripe at middle of pronotum (which resembles *M. barsevskisi*), and differently shaped apex of the median lobe.

NOTES. New species found at elevations between 600 and 700 meters above sea level in a relatively secluded habitat (Fig. 3). The area is only accessible through a newly opened road, indicating limited human intrusion, which may have contributed to preserving its environment. The lower elevation is primarily dominated by *Paraserianthes falcataria*, commonly known as Falcata, a fast-growing commercial tree species used for paper, plywood, and veneer production (Province of Davao Oriental, 2019). These were planted under the National Greening Program (NGP) of the Department of Environment and Natural Resources (DENR) in the Philippines (DENR-FMB, 2022). The surrounding area also contains a few remaining patches of secondary forests, particularly near the Binondo cave, suggesting that these remnants of original vegetation may serve as important refuges for biodiversity, supporting the ecological requirements of *M. katalista* sp. n.

The specimens of *M. katalista* sp. n. were primarily collected from *Ziziphus jujuba* Mill trees (locally known as *Mansanitas*). This species of tree, known for its small, sweet fruits, is the suspected host plant for *M. katalista* sp. n. These trees have grown naturally because of the seed dispersal activities of Sunbirds. As with other *Metapocyrtus* species, the distribution of *M. katalista* sp. n. is likely dependent on the environmental conditions in its natural habitat. The distribution of new species may be highly localized, depending on the ecosystem health and anthropogenic activities. This highlights the importance of habitat preservation, forest regeneration, and careful monitoring of human activities that may further alter the species distribution.

DISTRIBUTION. Philippines (Mindanao: Davao Oriental, Baganga, Brgy. Binondo) (Fig. 4).

ETYMOLOGY. “*Katalista*” is the Cebuano term of the word “Catalyst,” the registered name of the official yearbook publication of the Davao Oriental State University in the City of Mati, Davao Oriental, Philippines. This is in recognition of the organization’s enabling support to the Coleoptera Research Team.

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REFERENCES

- Bollino, M., Medina, M.N. & Cabras, A.A. 2020. Three new *Metapocyrtus* Heller, 1912 (Curculionidae, Entiminae, Pachyrhynchini) from Mindanao Island, Philippines. *Journal of Tropical Coleopterology*, 1(1): 26–38.
- Cabras, A.A., Bollino, M., & Medina, M.N. 2018. A new species of the subgenus *Orthocyrtus*, genus *Metapocyrtus* (Coleoptera, Curculionidae, Entiminae, Pachyrhynchini) from Mindanao, with notes on its ecology. *Baltic Journal of Coleopterology*, 18(1): 39–46.
- Cabras, A.A., Medina, M.N. & Bollino, M. 2021a. Two new species of the genus *Metapocyrtus* Heller, 1912 (Coleoptera, Curculionidae, Entiminae, Pachyrhynchini), subgenus *Orthocyrtus* Heller, 1912, from Mindanao Island, Philippines. *ZooKeys*, 1029: 139–154.
- Cabras, A.A., Villanueva, R.J. & Medina, M.N. 2021b. Two new species of *Metapocyrtus* Heller 1912 (Coleoptera: Curculionidae: Entiminae: Pachyrhynchini) from Davao de Oro, Mindanao Island, Philippines. *Baltic Journal of Coleopterology*, 21(1): 95–103.
- DENR-FMB. 2022. *Department of Environment and Natural Resources - Forest Management Bureau. What is NGP?* Enhanced Forestry Information System. Available from: <https://fmb.denr.gov.ph/ngp/what-is-ngp/> [accessed 25 September 2024]
- PEF, CIP & DENR. 2008. *Philippine Eagle Foundation, Conservation International – Philippines, Department of Environment and Natural Resources. Eastern Mindanao Biodiversity Corridor Conservation Framework*. Davao City, Philippines. 95 pp.
- Province of Davao Oriental. 2019. *Falcata industry*. Available from: <https://davaooriental.gov.ph/invest/industry-profile-and-investment-leads/falcata-industry/> [accessed 25 September 2024]
- Schultze, W. 1923. A monograph of the pachyrhynchid group of the Brachyderinae, Curculionidae: part I. The genus *Pachyrhynchus* Germar. *Philippine Journal of Science*, 23(6): 609–673.
- Schultze, W. 1925. A monograph of the pachyrhynchid group of the Brachyderinae, Curculionidae: part III. The genera *Apocyrtdius* Heller and *Metapocyrtus* Heller. *Philippine Journal of Science*, 26(10): 131–310.
- Van Dam, M., Cabras, A.A. & Lam, A.W. (2023). How the Easter Egg Weevils Got Their Spots: Phylogenomics Reveals Müllerian Mimicry in *Pachyrhynchus* (Coleoptera, Curculionidae). *Systematic Biology*, 72(3): 516–529.

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