

To the knowledge on the Philippine weevils of the genus *Episomus* Schoenherr, 1826 (Coleoptera: Curculionidae: Entiminae) with description of one new species from Palawan Island

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One new species of the genus *Episomus* Schoenherr, 1826 (Coleoptera: Curculionidae: Entiminae) from Palawan Island (Philippines) is described and illustrated: *Episomus lumawigi* sp. nov. External morphology analyses is used for species delimitation. New distributional records for *Episomus lentus* Erichson, 1834 is presented.

Key words: Coleoptera, Curculionidae, Entiminae, *Episomus*, Philippines, Palawan Island, taxonomy, new species

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INTRODUCTION

Weevils of the genus *Episomus* Schoenherr, 1826 are predominantly Oriental in distribution, with 106 species known worldwide: 33 found in Indonesia; 28 occur in India; followed by 21 in Malaysia; 17 in Myanmar; 8 in China; 5 in Cambodia and Vietnam; 4 in Japan, Sri Lanka, Taiwan, Thailand; 2 commonly occur in Bangladesh and Singapore and one in Korea and another just in Philippines (Schoenherr, 1823; Schoenherr, 1834; Erichson & Burmeister, 1834; Eydoux & Souleyet, 1841; Eydoux & Souleyet, 1851; Schoenherr, 1842;

Chevrolat, 1883; Faust, 1897; Zarazaga & Lyal, 1999, Shanas & Ramamurthy, 2009).

E. lentus Erichson, 1834 (Erichson in Bohemann, 1834: 263; Schoenherr, 1842: 94; Chevrolat, 1883: 76; *Episomus (Simallus) lentus* Faust, 1897: 122, 197; = *Episomus lateralis* Eydoux in Bohemann, 1839: 266; Schenherr, 1842: 93; Faust, 1897: 197) was, until now, the only species definitely belonging to the fauna of the Philippines. Faust (1897) recognized first the synonym of this species with *E. lateralis* Eydoux, 1839 (*E. lateralis* = *E. lentus*) while recently Shanas &

Ramammurthy (2009) redescribed *E. lentus* with a single male specimen from Los Banos, Luzon. The same authors attributed to the fauna of the Philippines *E. incomptus* Faust, 1897 but actually this species must be placed in the beetle fauna of Thailand as the single female holotype described by the author is coming from the Salanga Island which is one of the old names of the current island of Puket.

During our research we identified several specimens of *E. lentus* that cover various parts of Luzon Island, including new distribution records and extending species distribution range. New distribution records are added to date.

During our taxonomic research of Entiminae we observed several specimens distributed at the Palawan Island (Philippines). To date, none of the *Episomus* species has been previously reported from Palawan. Considering specific fauna of the island and after careful morphological examination, we concluded that this new species differ from all known *Episomus*. Description and illustrations of the new species is included in the current paper.

MATERIAL AND METHODS

The studied material is deposited in the following collections:

BRAA - Bramanti Andrea and Alessandro's private collection, Pietrasanta (Lucca), Italy

DUBC - Daugavpils University Beetle Collection, Daugavpils, Latvia

Morphological studies were carried out using Nikon SMZ745T stereo microscope with NikonDS-Fi1 digital camera. Images were taken with Panasonic Lumix DMC-FZ20 with macro lens Raynox DCR150, stacking system MJKZZ Q-Rail250Plus. To examine male and female terminalia, specimens were macerated in hot water and dissected under the stereoscopic microscope.

Labels are cited verbatim, with the following signs:

/ - different line

// - different label

Number of specimens with the same label are cited in the brackets.

RESULTS

Episomus lentus Erichson, 1834

Fig. 1, 6.

Material examined: PHILIPPINES / Luzon, Nueva Vizcaya, Kayapa / X. 2015 / local collector leg. (5) // XI. 2015 (2) // III. 2016 (2) // VI. 2016 (2) // VIII. 2016 (2) (all in DUBC) // XI. 2017 (1 male, 2 females) (all in BRAA) // PHILIPPINES / Luzon, Batangas / III. 2014 / local collector leg. (1) (all in DUBC) // III. 2014 (1 male, 1 female) // PHILIPPINES / S Luzon isl. / Bataan prov. / Mariveles / XI. 2017 / local collector leg. (1 female) (all in BRAA). Total: 20 ex.. Dorsal habitus as shown in Fig. 1.

Distribution notes: Species is reported from several points of the Luzon Island: Kayapa, Nueva Vizcaya province in Central part of the island and Batangas and Mariveles at the far south of the island. Previous known record for the species distribution was Los Banos, Laguna province at the southern part of the Luzon. New data reveals higher species distribution range of the species, that covers from far south up to central part of the island.

Episomus lumawigi Bramanti, Bramanti & Rukmane sp. nov.

Fig. 2, 3, 4, 5, 7.

Type material. Holotype. Male. (Fig. 2) "PHILIPPINES / Palawan isl. / Palawan prov. / Roxas / X. 2020 / local collector leg." (white label); "HOLOTYPE / *Episomus lumawigi* Bramanti, Bramanti & Rukmane, 2021" (red label) (BRAA). **Paratypes.** PHILIPPINES / Palawan isl. / Palawan prov. / Roxas / VI. 2020 / local collector leg. (4females) // VII. 2020 (1 female) // X. 2020 (1female) /



Fig. 1. Habitus of *Episomus lentus* Erichson, 1834. (Top left - lateral view, top right - dorsal view, bottom left - head and rostrum dorsally, bottom right - apical part of elytra)

/ III. 2021 (3females) (all in BRAA) // VII. 2020 (1female) (DUBC). Total: 10 females (Fig. 3).

Distribution. Palawan Island (Fig. 7).

Description. Male. General color light to dark brown above and below. Head without lateral impressions, 2.5 times as long as rostrum, 2.1 times as long as apical emargination and 2.2 times as long as prothorax. Base slightly wider than rostrum, 1.88 as broad as distance between scrobes and 1.57 as broad as apical emargination. Central furrow broad and deep, 3.5 times as long as apical emargination. Rostrum with lateral costae strongly impressed at posterior margin, 1.19 times as long as broad, in lateral contour dorsum slightly impressed along basal 1/2, straight to apical 1/2, impressed along apical 1/2 and increased to bulged apex. Dorsum and forehead covered with long dark brown setae. Eyes big, strongly prominent from the outer line of the head, 1.6 times as long as broad dorsally and

same length and width laterally; distance between anterior margin 1.37 as distance between middle of eyes; distance between posterior margins 1.16 times as that between middle and 1.05 times as that between anterior margins; space between eyes at middle 1.36 times as distance between scrobes. Antennae light brown. Scape broadened 2.2 times from the subbasal part to apex, 2.21 times as long as club, with long dark brown setae from subbasal part to apex and rest of the antennomers, club with shorter, dark brown hairs. Funicle 0.93 as long as scape and 2 times as long as club; segments nearly equal in length, with II longer than others, segment VII broadest of all. Club 2.33 times as long as wide.

Prothorax plicate, covered with short dark brown setae, with transverse impressed line along api-



Fig. 2. Male of *Episomus lumawigi* sp. nov. (Top left - dorsal view, top right - lateral view, bottom left - head and rostrum dorsally, bottom right - rostrum in lateral view)



Fig. 3. Female of *Episomus lumawigi* **sp. nov.** (Top left - dorsal view, top right - lateral view, bottom left - head and rostrum dorsally, bottom right - apical part of elytra)

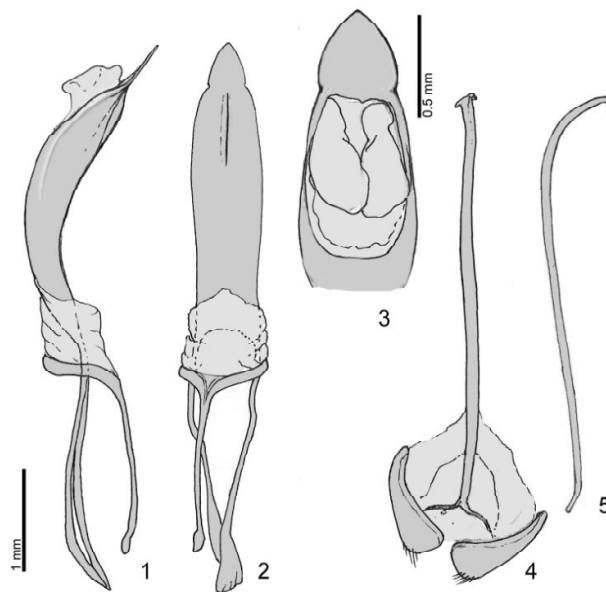


Fig. 4. Male genitalia of *Episomus lumawigi* **sp. nov.** (1 - Aedeagal body in lateral view, 2 - aedeagal body in dorsal view, 3 - vertex of aedeagal body in ventral view, 4-5 - sternite IX in dorsal view)

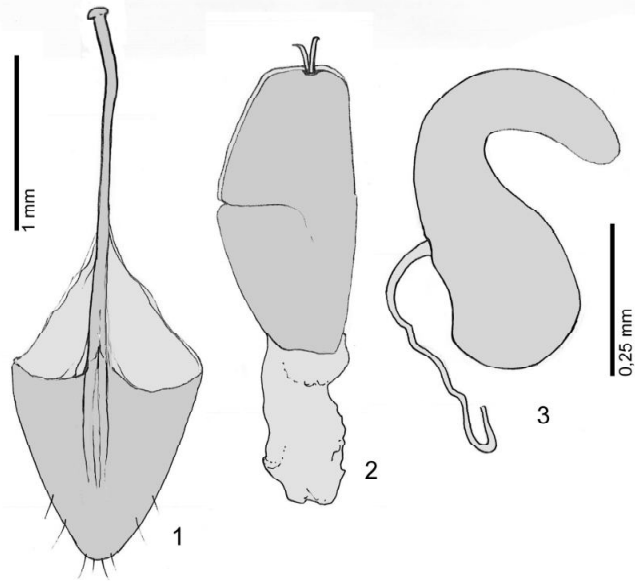


Fig. 5. Female genitalia of *Episomus lumawigi* sp. nov. (1 - female spicula, 2 - ovipositor, 3 - spermatheca)

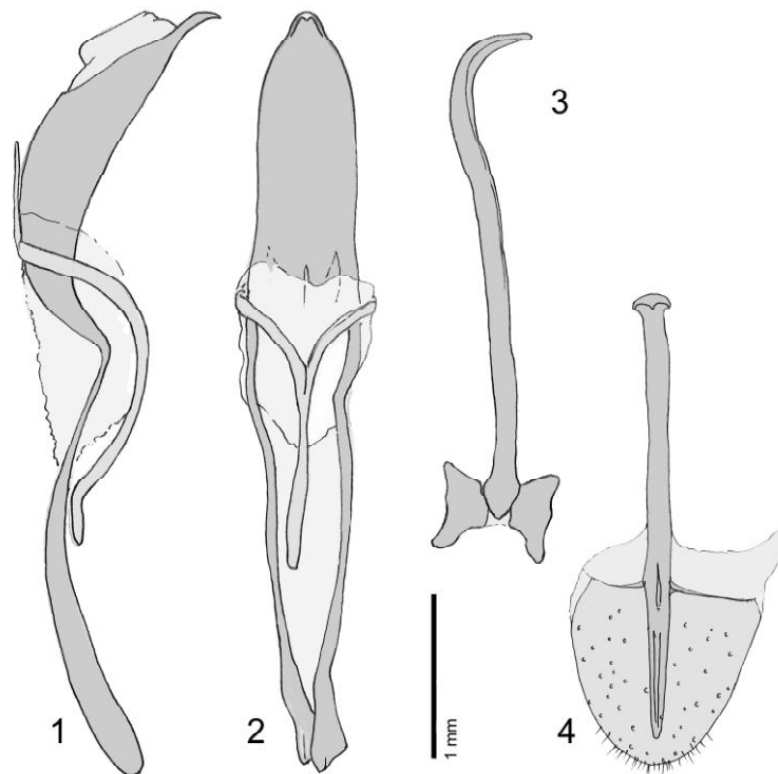


Fig. 6. Genitalia of *Episomus lentus* Erichson, 1834. (1 - Aedeagal body in lateral view, 2 - aedeagal body in dorsal view, 3 - sternite IX in dorsal view, 4 - female spicula)

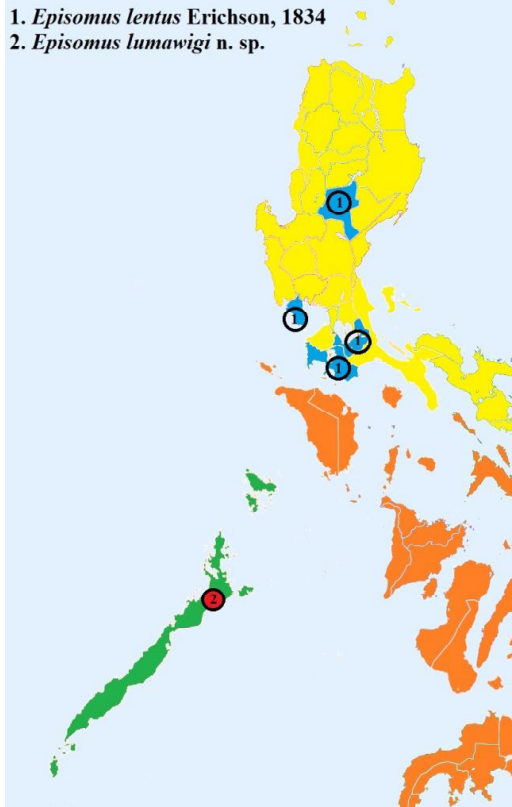


Fig. 7. Distribution map of Philippine *Episomus* species. (1 - Records of *E. lentus* Erichson, 1834, 2 - Records of *E. lumawigi* sp. nov.)

cal 1/2 and one slightly after the middle; apical margin dorsally straight, basal margin with medial concavity; in dorsal contour narrowest along subapical part and broadest along subbasal part; same length and width; dorsum strongly rugose, dorsally divided into three longitudinal intervals, with medial being dark brown, and side intervals being significantly lighter; laterally with two more short transverse medial impressed lines, in lateral contour nearly straight, with basal part slightly widened; underside strongly lighter in colour. Scutellum moderate in size, enclosed, 2.1 times as long as broad. Legs with femora 3 times as long as broad, 1.2 times as long as length of tibia and 1.89 times as broad as breadth of tibia; tibia slender, 5.1 times as long as broad.

Elytra obovate, with clearly expressed intervals of puncture rows, covered with dark brown setae in all length; upper surface with dark brown ovate medial spot at basal part, one larger dark brown spot at medial part and two rounded spots at apical part near apex, rest of the elytra covered with light brown scales; in dorsal contour narrowest at the base, then widened to just before the middle, nearly straight to apical 1/2, then narrowed to constricted apex; in lateral contour im-

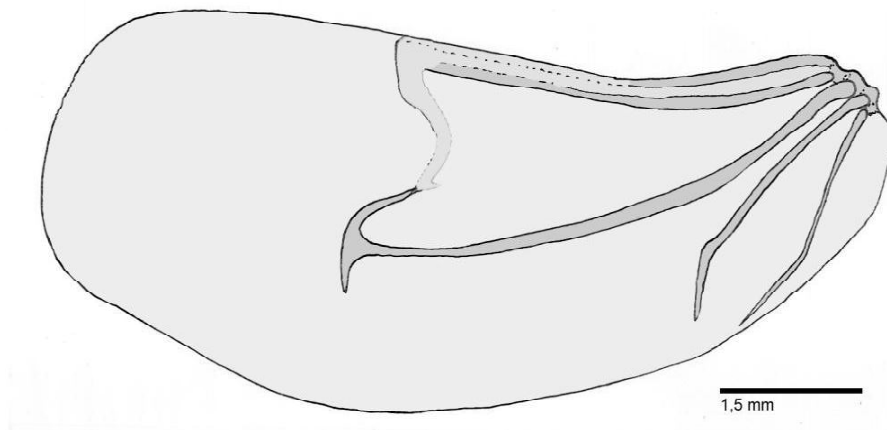


Fig. 8. Female wing of *Episomus lumawigi* sp. nov..

pressed at subbasal part, widened to widest apical 1/3, then sharply reduced to apex; lateral margin impressed along middle; base 0.6 times as wide as widest apical 1/2; dorsally elytra 1.39 times as long as wide, laterally elytra 1.57 times as long as wide.

Length: LB: 11.5; LR: 1.3; WR: 1.55; LP: 2.9; WP: 3.0; LE: 7.1; WE: 4.7. Dorsal habitus as shown in Fig. 2, genitalia as shown in Fig. 4.

Female. Scaly markings on elytra more strongly pronounced, brighter. Elytra wider both in dorsal and lateral view. Apex more strongly elongated. Otherwise essentially as in males. Dorsal habitus as shown in Fig. 3, wing veining as shown in Fig. 8. Genitalia as shown in Fig. 5.

Differential analyses. The new species is most closely related to *E. lentus* from Luzon Island, Philippines. Species can be easily distinguished by narrower and longer rostrum and bigger eyes. Shape of pronotum of the new species is less rounded dorsally, with basal margin having medial concavity that lacks *E. lentus* having straight margin instead. Elytra of the new species is narrowed at base, widest along apical 1/2 while elytra of *E. lentus* is widest at the subbasal part. Vertex of aedeagal body of *E. lumawigi* **sp. nov.** straight, while vertex of *E. lentus* curved dorsally (Fig. 6). Together with unique scaly markings at elytra and dark brown setae that lacks *E. lentus*, geographically isolated to Palawan Island *E. lumawigi* **sp. nov.** forms a new species.

Etymology. The new species is dedicated to Ismael Lumawig (Sta. Maria, Bucalan) as an appreciation for long term cooperation and providence of beetle material.

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