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A new species of the genus *Celebia* Thomson, 1857 (Coleoptera: Curculionidae: Eupholini) from Leyte island, Philippines

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One new species of the genus *Celebia* Thomson, 1857 from the Leyte Island (Philippines) is described and illustrated: *C. leytensis* sp. nov.. External morphology analyses including shape of male aedeagus as well as eversion of endophallus is used for species delimitation.

Key words: Coleoptera, Curculionidae, Eupholini, *Celebia*, Philippines, Leyte Island, taxonomy, new species

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INTRODUCTION

The genus *Celebia* Thomson, 1857 (Entiminae: Eupholini) currently contains 23 species, 9 of which are known from the Philippine Islands: *C. barsevskisi* Leināne & Rukmane, 2019, *C. iligana* Schultze, 1922, *C. merrilli* Schultze, 1919, *C. mindanaoensis* Leitāne & Rukmane, 2019, *C. philippinica* Heller, 1921 all known from Mindanao Island, *C. negrosensis* Leitāne & Rukmane, 2019 known from Negros Island, Philippine widespread *C. lactospreta* Heller, 1924 and *C. mundocostata* Heller, 1929, *C. samarana* Schultze, 1934 known from Samar Island (Thomson 1857; Heller 1921, 1929; Schultze 1919, 1922, 1934; Leitāne & Rukmane 2019).

During our taxonomic study of the current genus, we observed three closely related species populations, one from Samar Island (*C. mundocostata* Heller, 1929), one from Mindanao Island (*C. merrilli* Schultze, 1919) and one from Leyte Island. External morphological analyses together with comparison of shape of everted endophallus revealed, that populations belong to different species. The new species is described and illustrated herein.

Eversion of endophallus is used for a first time for the genus *Celebia* Thomson, 1857, although such method is widely used within taxonomists of the various groups of Coleoptera (Janovska et. al. 2013; Bollino et. al. 2020).

MATERIAL AND METHODS

The study was based on specimens deposited at the Daugavpils University Beetle Collection (DUBC, Daugavpils, Latvia) and Senckenberg Naturhistorische Sammlungen, Dresden (MTD, Dresden, Germany; curator: O. Jager).

The laboratory research and measurements have been carried out using Nikon SMZ 745T and NIS – Elements 6D software. The illustrations were made using digital camera Canon EOS 6D with Canon MP – E 65mm macro lens, using stack shot system and Helicon Focus auto montage, subsequently edited using Photoshop.

Label data are cited verbatim. Number of specimens examined is written in brackets after citation of the label. Abbreviation system follows Leitāne & Rukmane (2019).

Endophallus eversion methodology follows Janovska et. al. (2013).

RESULTS

***Celebia leytensis* sp. nov.**
Fig. 1A-B, 2B, 3.

Type material. Holotype, Male: ''PHILIPPINES / Leyte, Mahaplag / IV. 2017 / local collector leg.'' (white rectangular label, printed); ''HOLOTYPE / Male / *Celebia leytensis* / Leitane & Rukmane, 2020'' (red rectangular label, printed) (DUBC). Paratypes (7 males, 4 females): 1 male, ''PHILIPPINES / S Leyte, Sogod / V. 2016 / local collector leg.''; 2 males, 1 female, ''PHILIPPINES / Leyte, Mahaplag / IV. 2017 / local collector leg.''; 1 female, same as previous, but VII. 2017; 1 male, same as previous, X. 2017; 1 female, same as previous, but V. 2018; 2 males, same as previous, but VI. 2019; 1 male, ''PHILIPPINES / Mahaplag, Leyte, Mt. Balocave / V. 2017 / local collector leg.''; 1 female, same as previous, but VIII. 2017. (all on white rectangular labels). All with additional red label: ''PARATYPE / *Celebia leytensis* / Leitane & Rukmane, 2020''.

Distribution. Leyte Island.

Description. Male. Measurements (n=5): LB: 16.2 – 18.2 (holotype 16.3; mean 16.98); LR: 2.8 – 3.0 (holotype 2.9; mean 2.92); WR: 1.9 – 2.0 (holotype 2.0; mean 1.98); LP: 3.8 – 4.0 (holotype 3.9; mean 3.92); WP: 3.7 – 3.9 (holotype 3.8; mean 3.82); LE: 8.9 – 9.7 (holotype 9.1; mean 9.2); WE: 5.7 – 6.0 (holotype 5.7; mean 5.8). Pronotum nearly same length and width, LP/WP 1.03, elytra distinctly longer than wide, LE/WE 1.60, more than twice as long as pronotum, LE/LP 2.33, wider, WE/WP 1.5, rostrum longer than wide, LR/WR 1.45.

Dorsal habitus as shown in Fig. 1A.

Body black, glossy except underside, with markings of metallic green, yellow to gold round scales. Head subovate, densely covered with metallic scales around the eyes; forehead two times as wide as eye width; rostrum with longitudinal medial area without scales from apex to base of forehead, in dorsal view narrowing towards middle, widened to base; two impressions at basal ½, one at each dorso-lateral part; in lateral view bulging along apical ½, impressed just at middle, increased to base. Antenna densely covered with elongated scales; basal antennomer and antennomer II subequal in length, basal antennomer slightly wider at apical part, wider than antennomer II; antennomers III-V subequal in size, two times shorter and basal antennomer, 1.5 times shorter than subequal VI-VII; club strongly granulate, nearly three times as long as wide, segment I longer than segments II-III together, transition between segments very smooth.

Pronotum subcylindrical, in dorsal contour widest just before the middle, straight to base; disc with black longitudinal line in middle, deep ovate impression medially along apical 2/3 and shallow medial impression just after the midline; two impressions medially on disc, each redirected laterally from the longitudinal line; lateral parts densely covered with general scales, dorso-lateral margin with fine sub-dorsal groove.

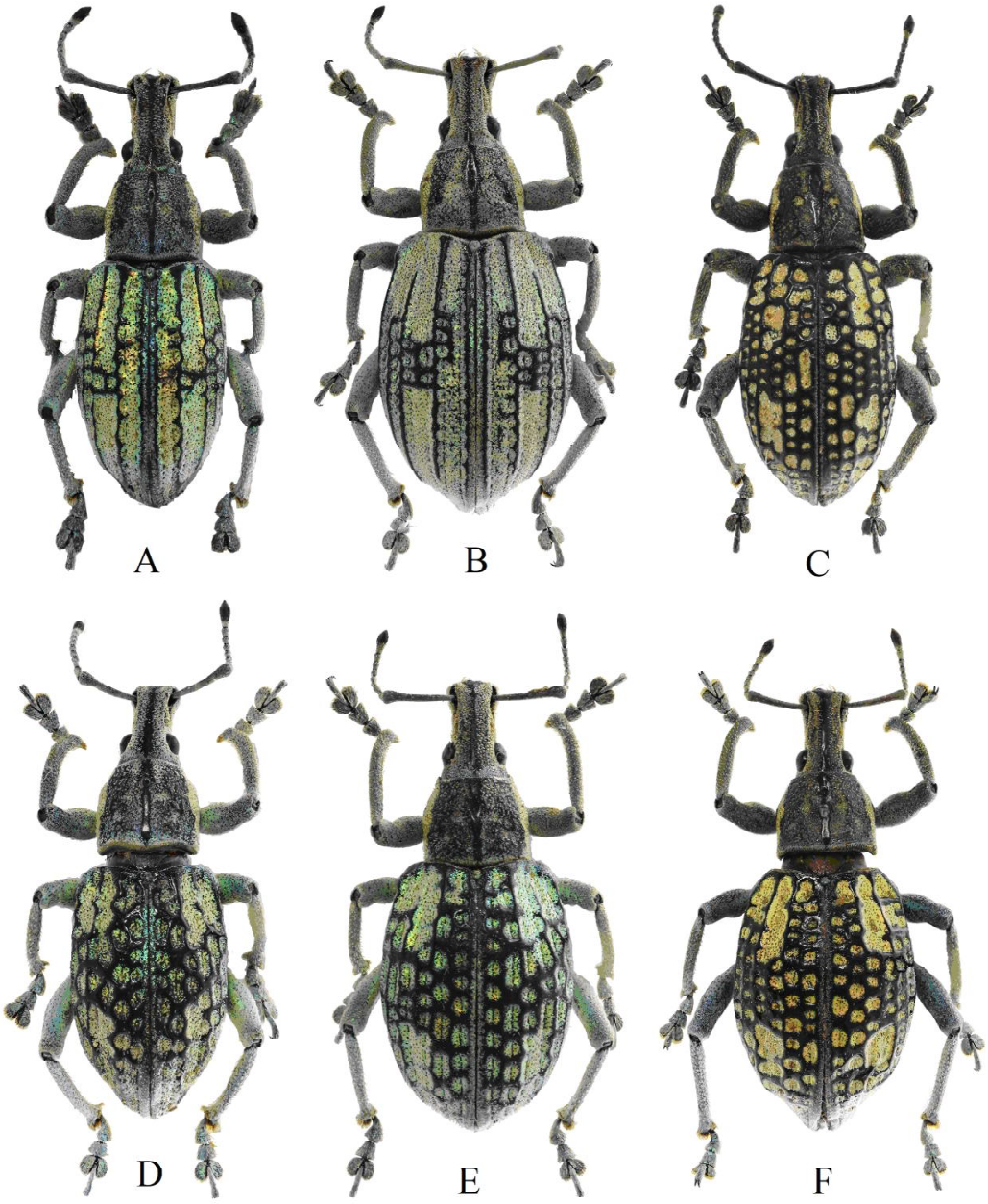

Fig. 1. *C. leytensis* sp. nov., A – male, B – female; *C. merrilli* Schultze, 1919, C – male, F – female; *C. mundocostata* Heller, 1929, D – male, E – female

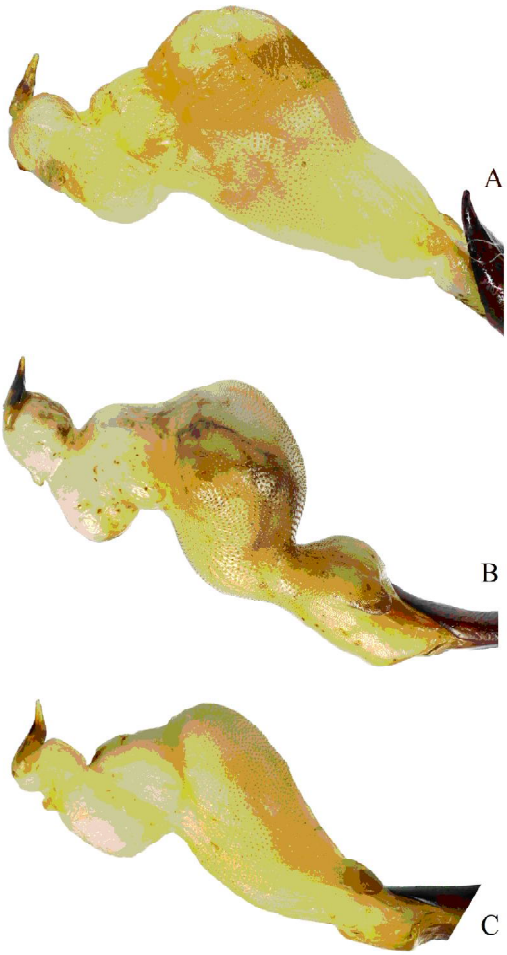

Fig. 2. Everted endophallus in lateral view. A – *C. mundocostata* Heller, 1929; B – *C. leytensis* sp. nov.; C – *C. merrilli* Schultze, 1919

Elytra straight in general, slightly widened along midline, narrowed at apex, strongly rugose, divided by black furrows that do not correspond intervals; furrows inside densely covered with metallic scales, at medial portion of elytra furrows interrupted by circular impressions filled with metallic scales; basal margin curved at dorsolateral part.

Aedeagus as in Fig. 3.

Female. Dorsal habitus as shown in Fig. 1B. Measurements: LB: 18.2 – 20 (mean 19.53); LR: 2.8 – 2.9 (mean 2.85); WR: 2 – 2.4 (mean 2.28); LP: 3.8 – 4.1 (mean 3.95); WP: 4.2 – 4.8 (mean 4.4); LE: 11 – 11.9 (mean 11.38); WE: 7.7 – 8.7 (mean 8.25). N=4 for all measurements.

Differential analyses. *C. leytensis* sp. nov. is similar to both *C. mundocostata* Heller, 1929 (Samar) and *C. merrilli* Schultze, 1919 (Mindanao). Species might be distinguished by different shape of everted endophallus (Fig. 2) and by various morphological features. From *C. merrilli* Schultze, 1919 by: 1) dorsal margin of elytra curved in *C. leytensis* sp. nov. but straight in *C.*

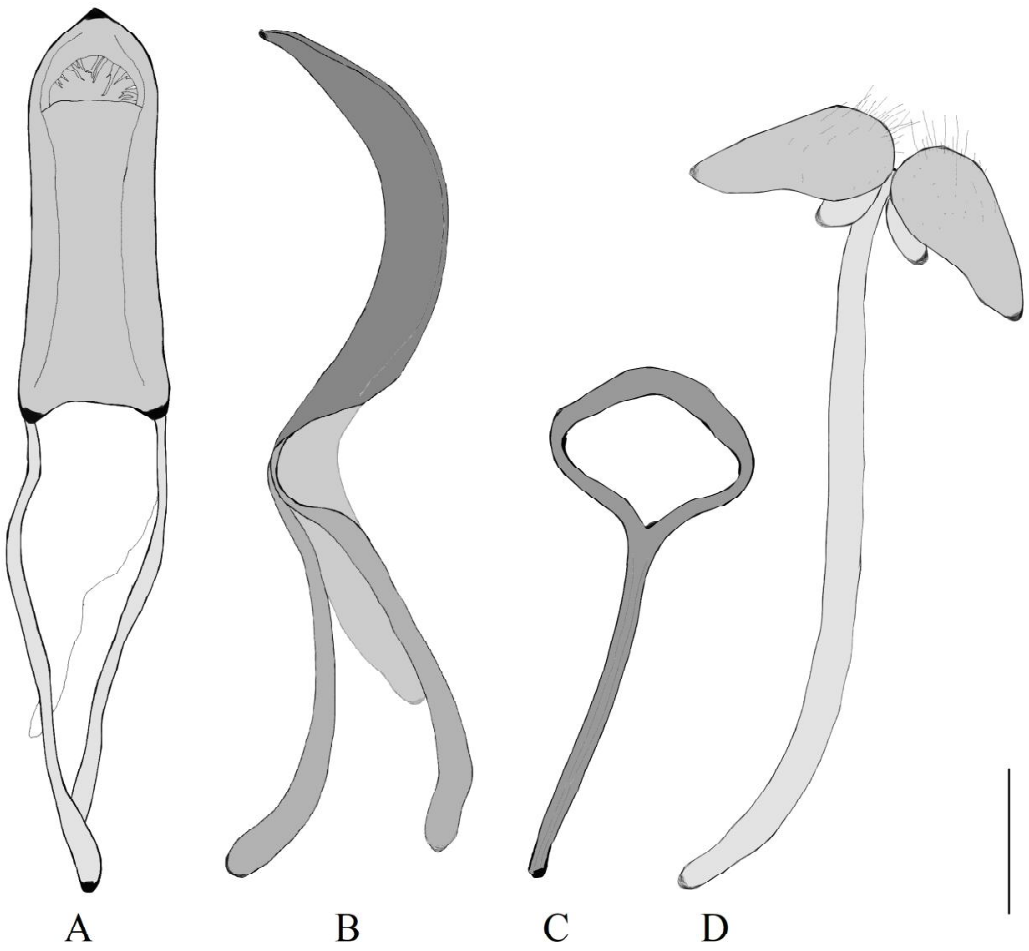

Fig. 3. Male genitalia of *C. leytensis* sp. nov. A – aedeagus in ventral view; B – aedeagus in lateral view; C – tegmen in dorsal view; D – sternite IX in dorsal view. Scale bar 1mm

merilli Schultze, 1919; 2) apical edge of hind tarsite I straight in *C. leytrnsis* sp. nov. while folded laterally in *C. merrilli* Schultze, 1919; 3) basal antennomer subequal in length with antennomer II, antennomers III-V subequal in length, shorter than subequal antennomers VI-VII in *C. leytensis* sp. nov. but in *C. merilli* Schultze, 1919 basal antennomer shorter than II, antennomers III-VI subequal in length, but shorter than antennomer VII. From *C. mundocostata* Heller, 1929: 1) elytra of *C. leytensis* sp. nov. with circular impressions only at medial part, while elytra of *C. mundocostata* Heller, 1929 with circular impressions in all length; 2) club of *C. leytensis* sp. nov. strongly elongate, three times as long as wide, while club of *C. mundocostata* Heller, 1929 shorter, two times as long as wide.

Etymology. Species name is Latinised word of Leyte Island, where species is originally found.

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