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A new genus of the tribe Polycatini Marshal, 1956 (Coleoptera: Curculionidae: Entiminae) from the Philippines

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A new entimine weevils genus and species from Palawan Island of the Philippines, *Evrostopolycatus palawanensis* gen. nov. et sp. n (Polycatini), is described and illustrated. The new genus is similar to the genus *Polycatus* Heller, 1912, but differs by less enclosed tibial corbel, antennal club with three more or less equal segments, wider mesosternum, more convex mesepimeron and the shape of the antennal scrobe, reaching outer margin of the eye along midline. This new taxon is a new example of the mimetic relationship with *Expachyrhynchus palawanensis* Rukmane, 2019.

Key words: Coleoptera, Curculionidae, Polycatini, *Evrostopolycatus*, taxonomy, new genus, new species, Palawan, Philippines, mimicry.

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INTRODUCTION

The tribe Polycatini Marshal, 1956 of the subfamily Entiminae is represented in the Oriental region by the genus *Polycatus* Heller, 1912. This genus characterized by the following morphological features: tibial corbel broadly enclosed, bevel closely squamosal, with a dense fringle of long spiniform setae along inner margin, rostrum entirely continuous with the head, metepisternal suture complete, scutellum distinct, squamose, rostrum with distinct epistome, antennal club with the first segment much longer than preceding segments together with its basal half narrowed into a conspicuous peduncle, sulcus curved, well-defined, broad, directed to the lower half of the eye (Marshal 1956).

During our taxonomic research of the Polycatini, we had an opportunity to examine specimens of one undetermined species from Palawan Island (Philippines). After careful examination, we concluded that this species share several morphological features of generic importance that is new to science and cannot be applied to the classification system of polycatini genera. Therefore,

here we describe this new species and establish a new genus for it.

Along the subfamily Entiminae, the new genus is the second entiminae genus from the Palawan island. We found, that the new genus consist in mimetic relationship with one species of *Expachyrhynchus* Yoshitake, 2013 of the tribe Pachyrhynchini from the same locality.

MATERIAL AND METHODS

The studied material is deposited in the following collections:
DUBC – Daugavpils University beetle collection, Daugavpils, Latvia
BRAA – Bramanti Andrea and Alessandro's private collection, Pietrasanta (Lucca), Italy

Morphological studies were carried out using Nikon SMZ745T stereomicroscope with Nikon DS-Fi1 digital camera. Images were taken with Panasonic Lumix DMC-FZ20 with macro lens Raynox DCR150, stacking system MJKZZ Q-Rail 250Plus. To examine male and female terminalia, specimens were macerated in hot water and dissected under the stereoscopic microscope.

Abbreviations and measurement technology follow Bollino et al. (2017).

RESULTS

***Evrostopolycatus* gen. nov.**
Type species: *Evrostopolycatus palawanensis* sp. nov.

Description. Body medium-sized, females significantly larger than males. Forehead wider than eye width, without distinct grooves, slightly convex in dorsal portion and along inner margin of each eye (Fig.1.7-8). Eyes prominent, if see dorsally (Fig.1.8). Rostrum longer than wide; dorsal surface with longitudinal medial groove, with medial impression from apical 2/3 to apex, frontal part gradually narrowed apically, ventral part gradually widened apically; dorsal contour of forehead and rostrum more or less straight, continuous, with lateral sides widened apically; lateral surface with antennal scrobe, reaching eye along medial portion, antennal scrobe straight to base of antennal scape, incurved ventrally, upper and lower margin of antennal scrobe strongly bulging, upper margin less convex, basal margin more convex, widened apically, basal surface of this part interrupted by deep longitudinal groove; ventral surface with deep longitudinal medial groove and one more transverse medial groove, sides of which redirected basally; basal margins of antennal scrobe strongly prominent, if see ventrally (Fig.1.7-9). Each mandible with more than ten lateral setae, without additional short hairs (Fig.1.1). Antennae with scape reaching just after the posterior margin of eye, scape straight, widened apically, longer than funicle; club at least twice as long as wide, divided into three more or less equal parts with transverse grooves (Fig.1.6). Basal margin of prothorax wider than apical; subbasal constriction strong ventrally to lateral ½ and absent dorsally; subapical constriction stronger than subbasal, becoming narrower laterally and indistinct dorsally; pronotum with strong, rugose punctation; subapical margin of pronotum with less rugosity in dorsal portion, with few short, dark hairs on disc and deep lanceolate, longitudinal impression in middle of disc; dorsal contour weakly convex, lateral contour nearly straight, slightly widened basally. Elytra oblong-ovate, very weakly convex dorsally, basal part widened, slightly widened toward middle and gradually narrowing to rounded, narrow apex; coarsely striate-punctured, puncture followed by very short, dark hairs that longer apically and become much longer along apex; lateral parts of elytra gradually rounded, depressed along apical ½, depression much stronger in female; basal margin slightly convex apically, 1/3 times narrower than width of elytra; apical declivity gradual, stronger in females; internal margins of apices simple, fringed with short, sparse light hairs in females; underside of abdomen as Fig. 1.5; mesosternum wide, mesepimerons bulging apically (Fig. 1.5). Tibia strongly serrate in all length, mucronate apically

on all legs. Underside of tarsus with deep longitudinal medial groove on all segments; with sparse light hairs dorsally (Fig. 1.2-3).

Differential analyses. Regarding the shape of tibial corbel enclosed, with a dense fringle of long spiniform setae along inner margin, rostrum entirely continuous with the head and the presence of distinct metepisternal suture, *Evrostopolycatus* gen. nov. is similar to the genus *Polycatus*. However, *Evrostopolycatus* gen. nov. can be easily distinguished from *Polycatus* with the following morphological features: tibial corbel less enclosed, enclosure as wide as half of tibial width (tibial corbel of *Polycatus* broadly enclosed, enclosure nearly as wide as tibial width); antennal club divided into three segments of the same length (antennal club of *Polycatus* with the first segment much longer than the rest together); mesosternum wide, with mesepimeron bulging (mesosternum in *Polycatus* narrower, mesepimeron flattened); basal part of scutellum strongly arched medially, prominent from the outline of dorsoapical part in *Evrostopolycatus* gen. nov., basal part of scutellum not arched, not prominent from the outline of dorsoapical part in *Polycatus*; antennal scrobe reaching medial edge of the eye (antennal scrobe interrupted just before the medial edge of the eye in *Polycatus*).

Distribution. Philippines, Palawan Island.

Etymology. The generic name is derived from the greek εύρωστος what means robust, character reflected to the harsh body. The second part alludes to the similarity with closely related genus *Polycatus.*

***Evrostopolycatus palawanensis* sp. nov.**
(Fig. 1.1-17, Fig. 2)

Type material. Holotype, male (Fig. 1.1-4): PHILIPPINES / Palawan, Roxas, Magara / V. 2019 / local collector leg. (white label); ''HOLOTYPE / *Evrostopolycatus palawanensis* / Rukmane, Bramanti & Bramanti des. 2020'' (red label) (BRAA).

Paratypes (1 male, 3 females): 1B&, 1@& PHILIPPINES / Palawan, Roxas, Magara / IX. 2019 / local collector leg. (white label, DUBC); 2@& Philippines / Palawan, Rizal / VI. 2019 / local collector leg. (white label, BRAA). All with additional red label: ''PARATYPE / *Evrostopolycatus palawanensis* / Rukmane, Bramanti & Bramanti des. 2020''.

Distribution. Palawan Island (Fig.3).

Description. Measurements (n=2): LB: 13.3-14.9 (holotype 14.9; mean 14.1); LR: 2.1 (holotype 2.1; mean 2.1); WR: 1.5-1.6 (holotype 1.5; mean 1.55); LP: 3.2-3.3 (holotype 3.3; mean 3.25); WP: 3.0-3.1 (holotype 3.0; mean 3.05); LE: 8.2-8.8 (holotype 8.8; mean 8.5); WE: 5.0-5.3 (holotype 5.3; mean 5.15).

Body black, shiny except for ventral side with weaker lustre, with markings of metallic blue, green to yellow scales on all parts except for femur, tibia and dorso-lateral part of prothorax, mixed with pale brown scales; single scales round, groups of scales recumbent; scales on antenna and coxa elongate. Dorsal surface of head with indistinct punctuation, lateral portions with strong punctation, distinctly engraved in posterior portion behind the eyes. Eyes small, strongly prominent, if see dorsally. Dorsoapical portion weakly bulging dorsally along ½ of the forehead, three times as wide as eye. Rostrum 1.5 times as long as head, longer than wide (LR/WR 1.4) with distinct longitudinal medial groove stretching from base of dorsal part of forehead to apical 1/3, and with sparse light brown hairs on basal part to middle of forehead; two large elevated portions on each side of longitudinal medial groove, bulges narrowing along apical part and extended to base; apical part with distinct transverse groove along apical third; deep subovate impression from apical ½ to mouthparts, impression distinctly incurved on apex; two large bulges on each side of impres-

sion; lateral and ventral parts covered with metallic green to golden scales; short, wide, light brown hairs on apical part; antennal scrobe reaching anterior margin of eye, two large bulges on sides of antennal scrobe, bulges distinct from dorsal surface of rostrum; in dorsal contour rostrum wider in basal part, narrowing toward middle and distinctly raised to apex; ventroapical portion of rostrum strongly widened and markedly convex; in lateral contour distinctly rounded from base to apex. Antennal scape covered with white pink scales along internal margin; scape straight, widened to apex; antennal scape with short and strong variable hairs, arranged in longitudinal rows; basal antennomere twice as long as wide, slightly widened to apex, same length as antenomere II; antenomere II 1.5 times as long as wide along apex and two times as long as wide along basal part, twice longer than antenomeres III-VI; III-VI subequal in size, same length and width, same length with VII, but narrower; club straight from base to just before the medial portion widest at apical 1/2, three times as long as wide. Prothorax strongly rugose, sub-rectangular, with very fine punctation, slightly longer than wide (LP/WP 1.1), anterior margin straight, slightly bulging dorsally, with hair-like scales on lateral parts, posterior margin slightly curved, with fine, deep, lanceolate medial groove on dorsum; pronotum with the following markings: 1) two longitudinal scale lines on each side of medial groove; 2) wide longitudinal scale line stretching from dorsolateral part to lateral ½; 3) patch of scales on each lateroventral part; 4) ventral part completely covered with single scales; ventral part with two transverse grooves, one along posterior, one along anterior margin; in dorsal contour widest in middle, in lateral contour without

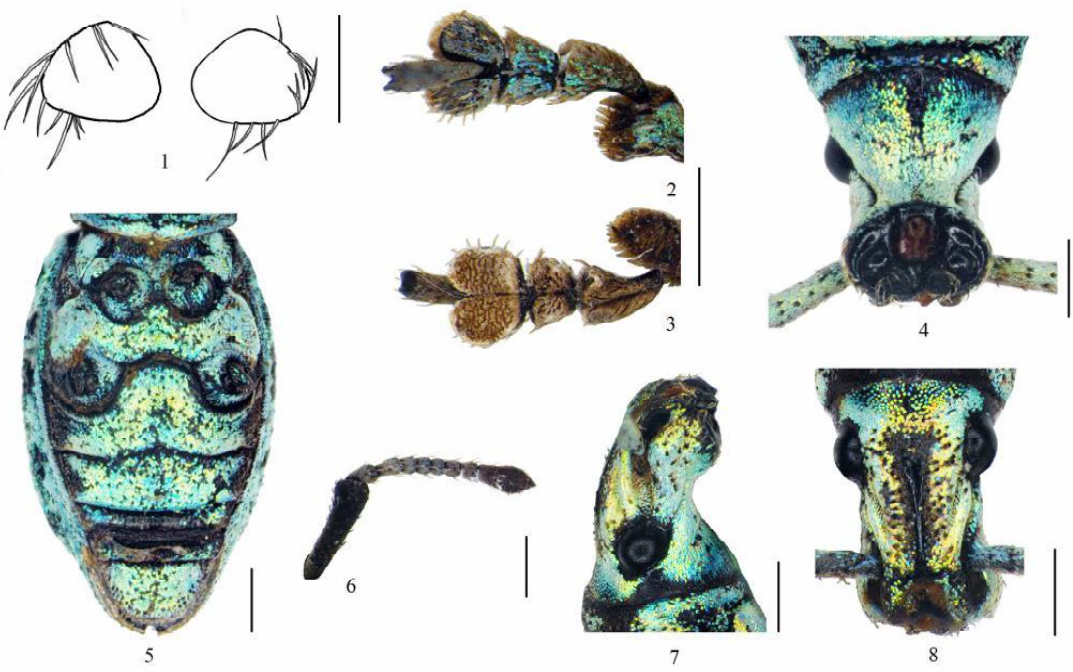

Fig. 1. 1 – mandibles, 2 – tarsus (dorsal view), 3 – tarsus (ventral view), 4 – rostrum and head (ventral view), 5 – abdomen (ventral view), 6 – antennae, 7 – rostrum and head (lateral view), 8 – rostrum and head (dorsal view). Scale bar 1mm

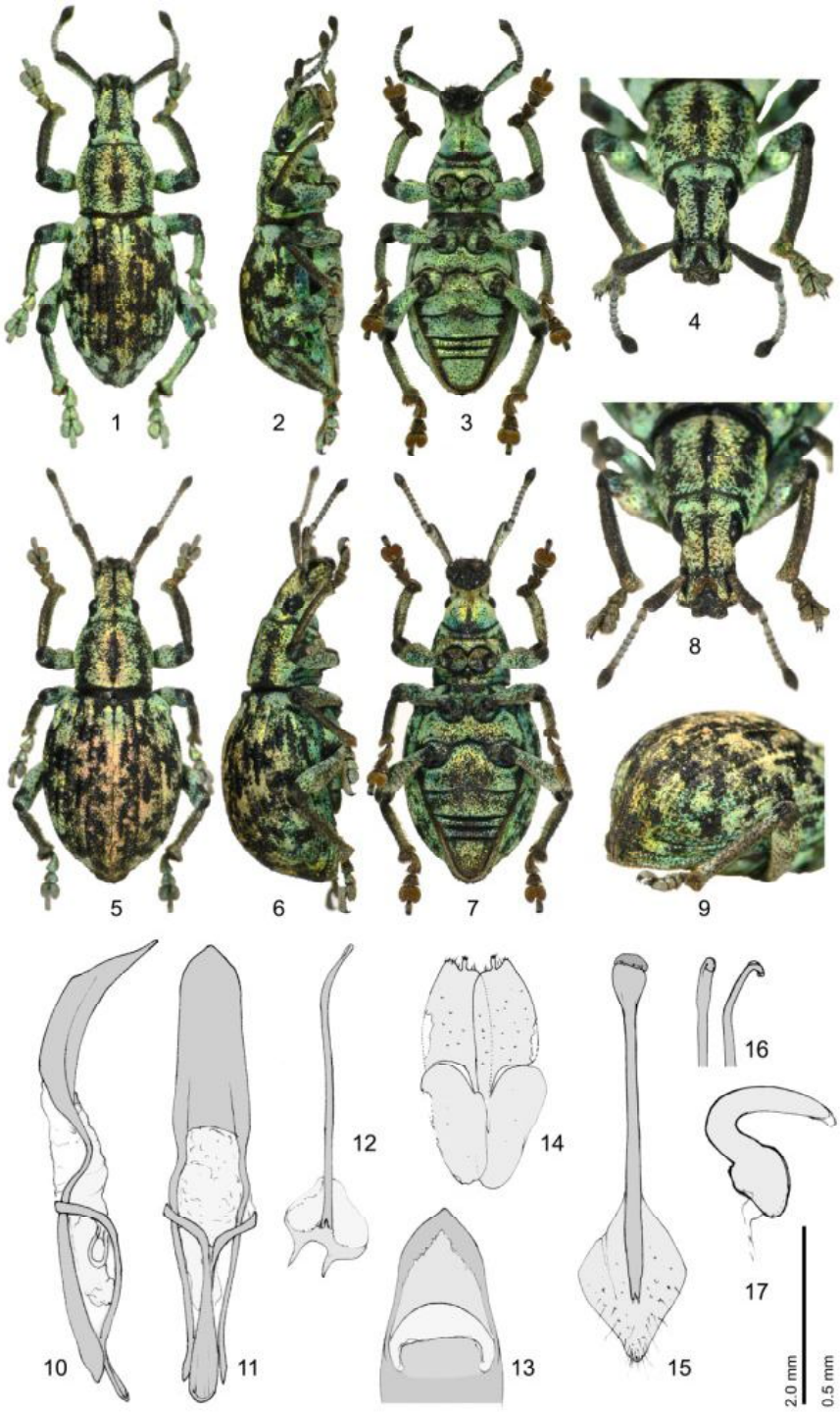

Fig. 2. 1-4 - male of *Evrostopolycatus palawanensis* sp. nov., 5-9 - female of *Evrostopolycatus palawanensis* sp. nov., 10 - aedeagus (lateral view), 11 - aedeagus (dorsal view), 12 - sternite IX, 13 – aedeagus (ventral view), 14 – ovipositor, 15-16 - sternite VIII, 17 - spermatheca

Fig. 3. Distribution of *Evrostopolycatus palawanensis* sp. nov. on Palawan Island

bulges, with narrow impression at apical half. Elytra slender, LE/WE 1.66, with deep longitudinal grooves, strongly rugose, punctation very indistinct, corresponds groves, short, brown hairs in all length, hairs longer and denser from apical half of elytra to apex; each elytron with fine longitudinal scale line at suture and one more at lateral margin, with number of chaotically dispersed scally spots, number of scally spots vary in some specimens; elytra distinctly narrowed toward apical third, with slightly rounded apical margins; LE/LP 2.67, WE/WP 1.77; elytra more convex in middle, if see laterally, with incurved laterobasal margin; ventral surface of the body completely covered with single scales except for ventrites III-IV with few single scales at lateral parts; ventrite V with brown hair-like scales along outer margin. Coxa covered with elongated scales (procoxa completely, mid and hind coxa in inner part); femur densely covered with single scales in all length except for apical half, without or with few scales, two rows of long, dark brown hairs, one at inner margin, one in outer margin; tibia with line of scales at inner margin, mingled with long, dark hairs in all length; tarsus with small, round scales, mingled with short, pale hairs; tarsite I and II subequal in size, tarsite III larger. Aedeagus as in Fig. 2.10-13.

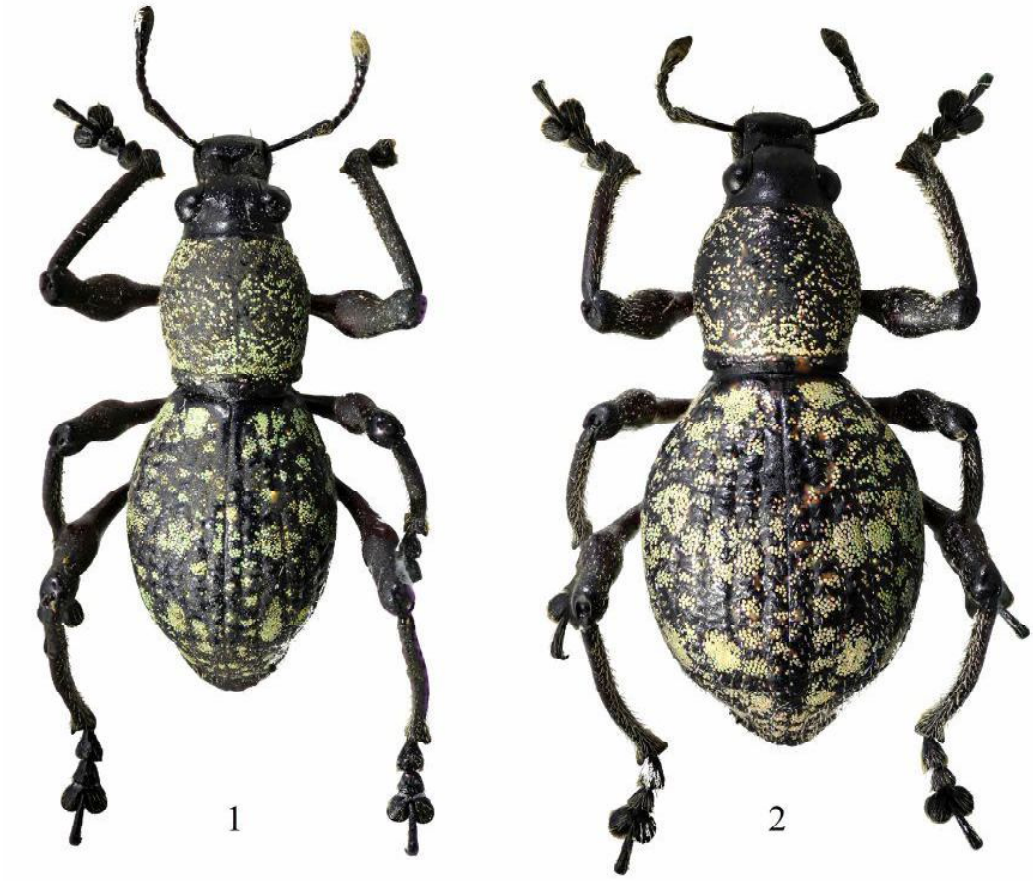

Fig. 4. *Expachyrhynchus palawanensis* Rukmane, 2019: 1- male, 2 - female

Female. Measurements (n=3): LB: 15.1-15.5 (mean 15.27); LR: 2.5-2.7 (mean 2.6); WR: 1.3-1.6 (mean 1.43); LP 3.0-3.4 (mean 3.23); WP: 3.8-4.2 (mean 4.0); LE: 8.6-9.2 (mean 8.8); WE: 5.6-6.9 (mean 6.43). Larger, elytra widest just at the middle, in lateral contour incurved at sub-basal part, widened to widest middle and slightly narrowed to apical ½, after sharply decreased to apex. Genitalia as shown in Fig. 2.14-17.

Etymology. The specific epithet is the Latinised adjective derived from the area the specimens were collected from.

Mimicry. The colour pattern of this species corresponds to *Expachyrhynchus palawanensis* Rukmane, 2019 (Fig. 4), which was described from the same location in Palawan Island (Rukmane 2019).

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