

TWO NEW SPECIES OF THE GENUS *MACROCYRTUS* SUBGENUS *EXMACROCYRTUS* SCHULTZE, 1924 (COLEOPTERA: CURCULIONIDAE: ENTIMINEA) FROM LUZON ISLAND, PHILIPPINES

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Two new *Macrocyrtus* species of the tribe Pachyrhynchini are described from Luzon Island, Philippines in the subgenus *Exmacrocyrtus*: *Macrocyrtus (Exmacrocyrtus) caerulans* sp. nov. and *M. (E.) fulgidus* sp. nov.. Description, photos of habitus, as well as male genitalia are included.

Key words: *Macrocyrtus*, *Exmacrocyrtus*, *Pachyrhynchini*, Luzon Island, Philippines, taxonomy.

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INTRODUCTION

The subgenus *Exmacrocyrtus* Schultze, 1924 (type species: *Apocyrtus erosus* Pascoe, 1871) is one of the two subgenera of the genus *Macrocyrtus* Heller, 1912 (type species: *Apocyrtus nigrans* Pascoe, 1881) and is characterised by the following features: general form of elytra in the male oblong-oval or elliptical, more or less strongly convex; in the female the elytra broader, more convex than in the male, the apical part forming a short projection with a distinct triangular sutural excision at apex (Schultze, 1924). Subgenus *Exmacrocyrtus* includes following species: *M. (E.) erosus* (Pascoe, 1871), *M. (E.) ilocanus* Schultze, 1918, *M. (E.) negrito* Heller, 1912, *M. (E.) pseudopolitus* Heller, 1921 (Schultze, 1924; Janczyk, 1956; Rukmane, 2019).

After careful examination of undetermined material available in DUBC I concluded, that two closely related species are new for science. Those species are from two nearly located provinces in North Luzon: Mt. Province and Ifugao Province. Species were compared with type specimens of *M. (E.) erosus* ssp. *auroanulatus* Heller, 1929 (Nueva Vizcaya Province) (Heller, 1929), yet, due the morphological differences (see differential analyses) species were divided and described as new.

MATERIAL AND METHODS

The study was based on specimens deposited at the Daugavpils University Beetle Collection (DUBC).

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 was edited using Photoshop.

Label data are cited *verbatim*. In the text the following symbols and abbreviations were used:

/ = different lines

// = different labels

LB = body length, from apical margin of pronotum to the apex of elytra

LE – elytral length

LP = pronotal length

LR = length of the rostrum

WE = maximum width of the elytra

WP = maximum width of the pronotum

WR = maximum width of the rostrum

Number of specimens examined is written in brackets after citation of the label.

RESULTS

Macrocyrtus (Exmacrocyrtus) caerulans sp. nov.

Fig. 1A-B, Fig. 2E-H.

Differential analyses. *Macrocyrtus (Macrocyrtus) caerulans* sp. nov. on general appearance is similar to *Macrocyrtus (E.) erosus* ssp. *auroanulatus* Heller, 1929 but is readily distinguishable from this species by various morphological features: 1) elytra of *Macrocyrtus (Macrocyrtus) caerulans* sp. nov. narrower, with unique scaly markings, with expressed intervals, finely punctured, elytra of *M. (E.) erosus* ssp. *auroanulatus* smooth, wider, without expressed intervals; 2) different dorsal contour of elytra; 3) prothorax of the new species narrower, less rounded in dorsal contour.

Description. Male. Dimensions. LB: 11,9; LR: 1,9; WR: 1,6; LP: 3,1; WP: 3,3; LE: 8,8; WE: 5,8. N=1 for all measurements. Habitus as shown in Figs. 1A.

Integument black, shiny; body, antennae and legs

black, shiny, with markings of dark blue scales; underside with weaker lustre, with dark blue round scales on metasternum, ventrites mingled with long, light hairs laterally, strongly pubescent; metacoxa with line of elongated dark blue scales along internal margin.

Head sub ovate, finely punctured and firmly pubescent; genae with patch of pale blue elongated scales, mingled with long white hairs up to ventral part; forehead slightly wrinkled between eyes, with slight medial impression, nearly 1,7 times as wide as eye width, without scales; rostrum strongly pubescent, with moderate long light hairs from antennal scape to labrum; in dorsal contour widened at apical $\frac{1}{2}$, slightly narrowed to basal $\frac{1}{2}$ and slightly widened to base; dorsally with longitudinal groove from middle of rostrum to middle of forehead, with lanceolate impression; eyes slightly convex, relatively big, moderately prominent from the outline of the head. Antennae slender; segment I longer than segment II, nearly 4 times as long as wide; segment II nearly 3 times as long as wide, 2,2 times as long as segment III, segments III to VII sub equal in size; club lanceolate, nearly 2,5 times as long as wide. Rostrum longer than wide, LR/WR 1,19.

Prothorax sub cylindrical, nearly sub equal in length and width, LP/WP: 1,06, with the following scaly markings: 1) line of dark blue scales along apical margin from one lateroventral part to other; 2) a pair of patches on disc along basal margin, each redirected laterally; 3) ovate patch of scales on each lateroventral part; nearly smooth, slightly pubescent; widest just before middle, in dorsal contour smallest width along apical margin, then increased and widest just before the midline, firmly rounded and weakly decreased in direction to basal margin, along sub-basal part slightly incurved.

Elytra sub-lanceolate, widest just in the middle; in dorsal contour gradually increased from basal margin to widest middle, then gradually decreased to apex; each elytron with the following scaly markings: 1) one round and one oval patch of dark blue scales on basal part, first centred, second

redirected laterally; 2) small oblong patch on lateral margin along just before midline; 3) two patches along medial part, one round, nearly from suture to interval IV, second sub oval, extended transverse, ends just before lateral margin, both patches connected; 4) elongated transverse patch from just after the middle to apical ½ along interval I to just before lateral margin; 5) small elongated patch near apex along interval III; LE/WE: 1,52; wider and longer than prothorax, WE/WP: 1,76, LE/LP: 2,84; smooth on entire length, with finely expressed intervals, pubescent from apical 1/3 to apex.

Front and middle coxa without scaly markings; front coxa with short, light hairs; femora without scaly markings, sparsely covered with longer or shorter light hairs, pubescent; tibia with long light hairs along internal margin and on apical part; tibia with protrusions along internal margin, each prostration with brownish spike, spikes shorter than in *M. (E.) fulgidus* sp. nov., protrusions on hind tibia fairly bigger than those on the from tibia.

Aedegal body as shown in Fig. 2E-H.

Female. Dimensions: LB: 11,9 – 13,3 (mean 12,82); LR: 1,8 – 1,9 (mean 1,88); WR: 1,6 – 1,7 (mean 1,63); LP: 2,8 – 3,3 (mean 3,15); WP: 3,0 – 3,4 (mean 3,28); LE: 8,8 – 10,1 (mean 9,66); WE:

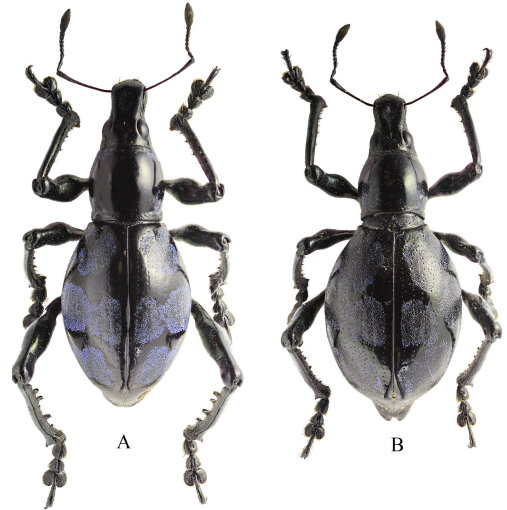


Fig. 1. Dorsal habitus of *M. (E.) caerulans* sp. nov.; A – male; B – female.



Fig. 2. Male genitalia of *M. (E.) fulgidus* sp. nov. (A – D); *M. (E.) caerulans* sp. nov. (E – H); A, E – aedeagus in lateral view; B, F – aedeagus in ventral view; C, G – sternite IX in ventral view; D, H – tegmen in ventral view.

6,0–6,7 (mean 6,45). N=4 for all measurements. LR WR 1,15; WP/LP 1,06; LE/WE: 1,5; LE/LP: 3,07; WE/WP: 1,97. Elytra strongly wider than in males, in dorsal contour evenly rounded from base to apical 1/5, apex strongly extended, apical margin wrinkled out at apex, with few long light hairs; prostrations on internal margin of hind tibia smaller than in males. Rest as in males.

Type material. Holotype: "PHILIPPINES. N Luzon /Ifugao, Banaue / I.2016 / local collector leg." (typed on a white card); "HOLOTYPE / Male / *Macrocyrtus (Exmacrocyrtus) caeruleans* / Rukmane, 2019 / det. Rukmane, 2019" (typed on a red card).

Paratypes (6 females): "PHILIPPINES / N Luzon, Ifugao, Banaue / IX.2015 / local collector leg." (typed on a white card); "PHILIPPINES / N Luzon, Ifugao, Banaue / I.2016 / local collector leg." (typed on a white card); "PHILIPPINES / N Luzon, Ifugao, Banaue / IV.2016 / local collector leg." (2) (typed on a white card); "PHILIPPINES / N Luzon, Ifugao, Mt. Amuyao / VIII.2018 / local collector leg." (2) (typed on a white card); All with additional red printed card: "PARATYPE / Female / *Macrocyrtus (Exmacrocyrtus) caeruleans* / Rukmane, 2019 / det. Rukmane, 2019" (all in DUBC).

Distribution. Philippines, Luzon Island., Ifugao Province.

Etymology. This species is named after its indigo-blue markings. Blue on Latin – caeruleum.

Macrocyrtus (Exmacrocyrtus) fulgidus sp. nov. Fig. 2A-D, 3.

Differential analyses. *Macrocyrtus (Macrocyrtus) fulgidus* sp. nov. on general appearance is similar to *Macrocyrtus (E.) erosus* ssp. *auroanulatus* Heller, 1929 but is readily distinguishable from this species by various morphological features: 1) elytra of the new species smooth, slim, apex extended, in *M. (E.) erosus* ssp. *auroanulatus* elytra wider, gradually rounded in direction to apex, apex not extended; 2) unique markings on elytra and pronotum; 3) rostrum of the new species with relatively deep (for the current



Fig. 3. Dorsal habitus of *M. (E.) fulgidus* sp. nov., male.



Fig. 4. Type specimen of *M. erosus* ssp. *auroanulatus* Heller, 1929; A – male, B – female.

genus) lanceolate impression, that is shallow in *M. (E.) erosus* ssp. *auromaculatus* (Fig.4).

Description. Male. Dimensions. LB: 12,8 – 13,4 (Holotype 13,4; mean 13,1); LR: 1,9 (Holotype 1,9; mean 1,9); WR: 1,5 (Holotype 1,5; mean 1,5); LP: 3,5 – 3,7 (Holotype 3,7; mean 3,6); WP: 3,3 – 3,4 (Holotype 3,4; mean 3,35); LE: 9,2 – 9,9 (Holotype 9,9; mean 9,55); WE: 6,0 – 6,2 (Holotype 6,2; mean 6,1). N=2 for all measurements. Habitus as shown in Fig. 3.

Integument black, shiny; body, antennae and legs black, shiny, with markings of dazzling blue to green scales; underside with weaker lustre, with markings of dazzling blue to green round to recumbent scales on metasternum, mingled with long, light hairs, strongly pubescent; metacoxa with line of elongated green dazzling scales along internal margin.

Head sub ovate, finely punctured and slightly pubescent; genae with few elongated scales, mingled with long white hairs up to ventral part; forehead wrinkled between eyes, nearly 1,5 times as wide as eye width, without scales; rostrum strongly pubescent, with moderate long light hairs from antennal scape to labrum; in dorsal contour nearly straight; dorsally with longitudinal groove from middle of rostrum to sub basal part of forehead, lanceolate impression; eyes slightly convex, relatively big, moderately prominent from the outline of the head. Antennae slender; segments I and II sub-equal in size, nearly 3 times longer than wide; segments III to VII sub equal in size, gradually increasing from segment III to VII; club lanceolate, nearly 2,5 times as long as wide. Rostrum longer than wide, LR/WR 1,27. Prothorax sub cylindrical, almost sub equal in length and width, LP/WP: 1,09, with the following scaly markings: 1) two patches consisting of few scales along apical margin, each redirected laterally; 2) a pair of patches consisting of few recumbent scales slightly below middling, each redirected laterally; 3) ovate patch of scales on each lateroventral part; finely punctured, moderately pubescent; widest just in the middle, in dorsal contour smallest width along apical margin, then increased to widest

midline, firmly rounded and weakly decreased in direction to basal margin, along sub-basal part slightly incurved.

Elytra sub-lanceolate, widest just in the middle; in dorsal contour slightly squeezed out along basal margin, gradually increased to widest middle, then gradually decreased to apical 1/5 where extended in direction to apex; each elytron with the following scaly markings: 1) irregularly dispersed roundish scales along sub basal part from slightly before suture to lateral margin; 2) roundish patch medially near suture; 3) short transverse line medially along lateral margin; 4) irregularly dispersed set of scales from apical 1/2 in direction to apex; LE/WE: 1,6; wider and longer than prothorax, WE/WP: 1,82, LE/LP: 2,57; nearly smooth on entire length, without clearly expressed intervals, pubescent in all length; short, light hairs along apex.

Front and middle coxa without scaly markings; front coxa with relatively long, rare, light hairs; femora without scaly markings, sparsely covered with longer or shorter light hairs, pubescent; tibia with long light hairs along internal margin and on apical part; tibia with protrusions along internal margin, each protrusion with brownish spike, protrusions on hind tibia fairly bigger than those on the front tibia.

Aedeal body as shown in Fig. 2A-D.

Female. Elytra much wider, in dorsal contour widest in the middle; protrusions on hind tibia smaller, otherwise as in males.

Type material. Holotype: "PHILIPPINES / N Luzon, Mt. Province, Barlig / VIII.2017 / local collector leg." (typed on a white card); "HOLOTYPE / Male / *Macrocyrtus (Exmacrocyrtus) fulgidus* / Rukmane, 2019 / det. Rukmane, 2019" (typed on a red card).

Paratypes (4 males, 1 female): "PHILIPPINES / N Luzon, Mt. Province, Mt. Polis / VII.2014 / local collector leg." (1♂); "PHILIPPINES / N Luzon, Nueva Vizcaya, Malico / XI.2015 / local collector leg." (1♂); "PHILIPPINES / N Luzon, Mt. Province, Barlig / XII.2015 / local collector

leg.” (1♂); “PHILIPPINES / N Luzon, Ifugao, Asipulo / IV.2018 / local collector leg.” (1♂); “PHILIPPINES / N Luzon, Ifugao, Mt. Amuyao / VIII.2018 / local collector leg.” (1♀) (all typed on a white printed cards). All with additional red printed card: “PARATYPE / Male / *Macrocyrtus (Exmacrocyrtus) fulgidus* / Rukmane, 2019 / det. Rukmane, 2019” (DUBC).

Eupachyrrhynchus, *Macrocyrtus*, *Eumacrocyrtus*, *Apocyrtus*, *Proapocyrtus*, *Pseudapocyrtus*, *Nothapocyrtus*, and *Exnothapocyrtus*. *Philipp. J. Sci., Manila*, 25: 359-390.

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Distribution. Philippines, Luzon Island., Mt. Province, Ifugao Prvince, Nueva Vizcaya Province.

Etymology. This species is named after its dazzling blue to green markings. Dazling on Latin – fulgidus.

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REFERENCES

- Heller K. M. 1929. Faunistische, systematische und andere Notizen uber Kafer. Entomologische Blatter, Berlin, 25, 43-46.
- Janczyk F. 1956. Neue Curculioniden der zoologischen Sammlung des naturhistorischen Museums. (1. Beitrag zur Kenntnis der Curculionidae). *Annalen des Naturhistorischen Museums in Wien*, 61, 241-248.
- Rukmane A. 2019. One new species of the genus *Macrocyrtus* Heller, 1912 (Coleoptera: Curculionidae: Pachyrhynchini) from Luzon Island, Philippines. *Acta. Biol. Univ. Daugavp.*, 19(1): 37-49.
- Schultze W. 1924. A monograph of the pachyrhynchid group of the Brachyderinae, Curculionidae: Part II. The genera