

A NEW SPECIES OF *EUPHOLUS* BOISDUVAL (COLEOPTERA: CURCULIONIDAE: ENTIMINAE) FROM WEST NEW GUINEA

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ABSTRACT: In the present paper a new species of *Eupholus* Boisduval 1835 from Jayapura area of West New Guinea is described as new: *Eupholus bhaskarai* sp. nov. The adults and genitalia are depicted.

KEY WORDS: West New Guinea, Jayapura, *Eupholus*, *bhaskarai*, new species

Eupholus is one of the most beautiful and collected genus. The species usually show dense metallic and coloured scales. Many species were described in recent years (Porion, 2000; Riedel, 2010; Limoges & Le Tirant, 2019). The majority of specimens come from New Guinea. Sometimes specimens that belong to undescribed species are interspersed with more common ones. Here is described a species closely related to *Eupholus loriae* (Gestro, 1902); the type's locality is from Sentani lake environment, Jayapura district.

MATERIALS AND METHODS

This study is based on 19 specimens, ten of them purchased by the collector Kelly Price, Fabrizio Bortolussi and the author, in May 2019, from Faisal Latutuapraya, the export dealer who usually works in Bali and West Papua. The study of such specimens (presently preserved in the author's collection, later they will be deposited in different collections named as below) allowed to ascertain the presence of a new species of the genus *Eupholus* in Jayapura province. The Holotype will be deposited from author's collection to an official and renowned Natural History Museum collection.

Habitus illustrations were made using a Canon 5Ds (50.3 MP) equipped with MP-E 65 1-5x macro lens and a Hasselblad CFV 50c digital back (51.3 MP) equipped with 80mm CF and macro tubes. The pictures were taken at different focal levels and processed with Zerene stacker on MAC platform. Measurements were taken with Zeiss stemi 305 and pictures of genitalia were captured with integrated camera. All images were enhanced with Photoshop CC 2019.

Depositories are cited using the following codens:

- MGC Matteo Grasso collection, Turin, IT
- KPC Kelly Price collection, VT 05301, USA
- FBC Fabrizio Bortolussi collection, San Daniele del Friuli, Udine, IT
- LFC Leonardo Falletti collection, Buttigliera Alta, Turin, IT
- MUC Marco Uliana collection, Venice, IT
- STMI Stephane Le Tirant Montreal Insectarium, Quebec, CA

TAXONOMY

Eupholus loriae (Gestro)

(Plate 1: C; Figs. 5-8, 10, 12)

Material examined. Papua New Guinea, Morobe prov.: 1 male, Aseki, Hiyewini village, 18.V.2005, local collector (MUC); 1 female, Aseki, Hiyewini village, 16.II.2005, local collector (MUC); 1 male and 1 female, Aseki, Kamanea village, 24.V.2005, local collector (MGC, FBC); 4 males, Aseki, Hamoini village, 3.VII.1997 (LFC); Gulf prov.: 1 male, Kaintiba Kerema 3.V.1997 (LFC).

Diagnosis: an *Eupholus* species with a glabrous median ridge on the rostrum; the longitudinal glabrous area most often starts on pronotum and follows to the elytral suture as far as the apex. Two glabrous sidebands on pronotum are finely dispersed by points with reddish setae. Below a key is proposed to distinguish it from two others *Eupholus* species.

Original description by Gestro, 1902, Boll. Soc. Ent. Ital., pp. 48-49: "Questa specie si avvicina all'*humeridens* Heller. Ha il corpo ricoperto di squamette, le quali al disopra sono di un azzurro tendente al verde e al disotto, nonchè sui femori posteriori, sono azzurre. Le squamule del rostro e soprattutto quelle del funicolo delle antenne sono più chiare; la clava, eccettuata la base del primo articolo, è di un nero di velluto.

Il rostro è percorso nel mezzo da una linea longitudinale nera, che si continua sul capo fino al di là del margine posteriore degli occhi. Il torace presenta tre larghe striscie longitudinali, nere e opache, una mediana ed una per ciascun lato. Gli elitri hanno la sutura nel terzo basale, l'angolo omerale e la carena laterale che gli fa seguito e il tubercolo apicale, neri e lucenti. Il capo presenta in mezzo agli occhi un brevissimo solco longitudinale. Il torace ha i lati paralleli pei due terzi posteriori, convergenti e leggermente arrotondati nel terzo anteriore e con una lieve strozzatura presso gli angoli anteriori; nel mezzo del disco è fortemente depresso e liscio; ai lati della linea mediana è scolpito di punti scarsi ed irregolari, più appariscenti sulle due strisce nere laterali denudate di squame, e ciascuno di questi punti porta una setola brevissima rossastra.

Gli elitri sono percorsi da dieci serie regolari di punti piuttosto piccoli, delle quali sei fra la sutura e la carena laterale e quattro fra questa ed il margine laterale. La sporgenza omerale è molto marcata e sotto forma di un dente rivolto in addietro; la carena che si continua con essa è robusta, e va, diminuendo gradatamente, a terminare a livello del tubercolo apicale. Questo tubercolo è nero, lucente, conico e si trova nell'intervallo fra la quarta e la quinta serie di punti. I piedi sono squamulosi e sparsi di punti setigeri. L'unico esemplare che rappresenta il tipo di questa specie fu raccolto dal Dott. Lamberto Loria, nell'autunno del 1892 lungo il fiume Paumomu (S. Giuseppe)."

Distribution: Morobe province, Eastern Highlands province, Goilala district.

Key to species of *Eupholus* Boisduval with longitudinal stripe that starts from pronotum and follows to elytral suture in addition to two sidebands on pronotum that end at ½ elytra

1. Rostrum with a glabrous median line forming two barely hinted longitudinal subcylindrical protuberances, elytron without lateral carina 2
 -. Rostrum with a glabrous median ridge, elytron with lateral carina 4
 2(1). Pronotum with two not glabrous but violet blue lateral stripes
 *E. detanii* Limoges & Porion
 -. Pronotum with two glabrous lateral stripes 3
 3(2'). Elytra with elongated shape, no lateral carina and two glabrous lateral stripes which end around ½ elytra *E. faisali* Grasso
 4(1'). Lateral glabrous stripes on pronotum with scattered points and reddish setae inside *E. loriae* Gestro
 -. Lateral glabrous stripes on pronotum with small points and black setae inside ...
 *E. bhaskarai* sp. nov.

***Eupholus bhaskarai* sp. nov.**

(Plate 1: A-B; Figs. 1-4, 9, 11)

Holotype (male): [Indonesia], Irian Jaya, Jayapura province, Klaisu, South Gresi, V.2019 local collector, in MGC.

Paratypes (5 males, 4 females (one female marked as “allotype”)): same date and location as holotype, in KPC, MGC and STMI.

Diagnosis: An *Eupholus* species with a large, vertical stripe that starts by pronotum and ends at 2/3 of the elytra. Sometimes the stripe appears just visible, because of this, is easy to confuse *Eupholus bhaskarai* sp. nov. with *Eupholus loriae* (Gestro, 1902).

Description: total length 19.92 mm; pronotum+elytron 14.82 mm.

Head dorsal surface covered with green and light blue metallic oval scales, sometimes milky except for glabrous areas located between and laterally behind the eyes. Distance between the eyes 2.12 mm.

Rostrum width at the base 1.68 mm, 3.50 mm height, maximum width in front of antennal insertion. Dorsal area densely covered with suboval light green and light blue scales, interspersed with subrecumbent setiform scales; medially with low glabrous costa. Antennal scrobe complete in not dilated pterigo. Apex of the rostrum with suberect yellowish colored setae. Epistome heart-shaped with no ridges and with elongated scales posteriorly, glabrous anteriorly.

Antenna with funicle+club 7.43 mm; scape and funicle densely covered with suboval green and light blue scales mixed with whitish setae. Funicle slender and elongate. Scape retracted ends at 1/3 of the eye. Funicles covered with whitish setae. Club dark brown.

Pronotum base 4.81 mm, 3.68 mm height; characterized in the dorsal part by wide black glabrous median depression, more deep in median area. Two lateral glabrous stripes give way for two subequal areas covered by subrotund light blue and green scales.

Scutellum glabrous and almost covered by elytra.

Elytron distance between the humeri 6,30 mm, 11,14 mm height. Humeral callosity with rectangular projection; a glabrous ridge continue behind humeral

callus to 1/3 of elytron. Almost completely absent apical calluses. Median longitudinal and glabra stripe, large at base and thinner towards the scutellum, likely to connect itself with the one which starts at base of the pronotum; elytron densely covered with light blue-green circular scales, striae punctures deeply impressed and quite large, with subrotund shape.

Thoracic venter densely squamose with green and light blue, round to lanceolate and recumbent scales. Posteriorly, area between forecoxae process glabrous.

Legs evenly covered by green light blue round scales on femora and tibiae, scales become blue-violet and interspersed with setae, elongated and lying on the tarsi.

Genitalia. Aedeagus (Figs. 1-2) with subparallel sides until apical orifice, then in quite straight line converging to rounded apex. In lateral view somewhat of weakly swollen and quite truncate. Endophallus with symmetrical transfer apparatus as in picture 3. Tegmen with two thin and elongated parameres, barely rounded at apex (Fig. 4).

Differential diagnosis: as mentioned *E. bhaskarai* sp. nov. looks related to *E. loriae* (Gestro, 1902) from which often differs by the presence of the large glabrous median and longitudinal stripe on the elytra. A larger and deeper striae punctures, a glabrous elytral suture only up to 2/3 of elytra (*E. loriae* has all glabrous elytra suture) and a different genitalia as in figs. 1-4 and 5-8 with illustrated tegmen by both species as in figs. 4, 8 make possible to confirm validity of *E. bhaskarai* sp. nov. It is often possible to observe a glabrous transversal band in apical calluses for *E. bhaskarai* (as in plate 1: B) and could be easy to think it is barely hinted in apical calluses of *E. loriae* but this feature is never showed and as Gestro writes for this last species, both the glabrous stripes laterally on pronotum are dispersed with points which has reddish setae inside; instead *E. bhaskarai* has easy to see black setae in the same place.

Distribution: the new species is known from [Indonesia], Irian Jaya, Jayapura province, Klaisu, South Gresi.

Etymology: this species is named in honor of Edy Bhaskara (East Java, Indonesia) who helped the author to recognize the new species.

DISCUSSION

The habitus similarity between *E. loriae* (Gestro, 1902) and *E. bhaskarai* sp. nov. is analyzed more deeply. Both the species belong to *E. loriae*-group of *Eupholus* as suggested by Riedel (2002); the specimen of *E. loriae*, selected for dissection has the following data: [Papua New Guinea], Morobe province, Aseki, Kamanea village, 24.V.2005 (MGC). As we can see, besides some minor differences of habitus like stripes and bands, genitalia are quite different in shape (aedeagus apex more rounded in *E. loriae*, as in fig. 5) and tegments as in figs. 4, 8 and the distribution areas are definitely far. As reported in picture 13, by Gestro the type locality is situated in Goilala district (PNG), along the banks of the river Paumomu (S. Giuseppe). That river comes from Yule mount and Lamberto Loria, the collector of *E. loriae* holotype introduces us to his journey by way of correspondence. In plate 1: D is illustrated female Allotype of *Eupholus faisali* (Grasso, 2019); the belonging of this species to *E. schoenherii* group (Riedel, 2002) combined to a very different habitus (humeral projection, apical callosity

and body shape) allow us to identify the two species without a close scrutiny. *E. bhaskarai* sp. nov. specimens could superficially resemble *E. detanii* (Limoges & Porion, 2004) but due to a far geographic distribution and its three different colours, no glabrous areas and lack of prominent humeral and apical calluses in *E. detanii* give to *E. bhaskarai* another status. The specimen illustrated in previous work (Grasso, M. 2019; Sugapa digital 12(1): figs. 2, 9-10) is now determined as *E. bhaskarai* because everything confirms the value of this new *Eupholus* species. In the same paper were cited the holotype humeri callosity of *Eupholus faisali* with a rectangular projection and genitalia without transfer apparatus (given as lost during dissection), both the statements are wrong: humeri callosity are little prominent with obtuse projection and transfer apparatus is intact. Furthermore female paratype of *E. faisali* and one male paratype of *E. casadioi* (Grasso, 2019) were marked as “allotype” at the time of description.

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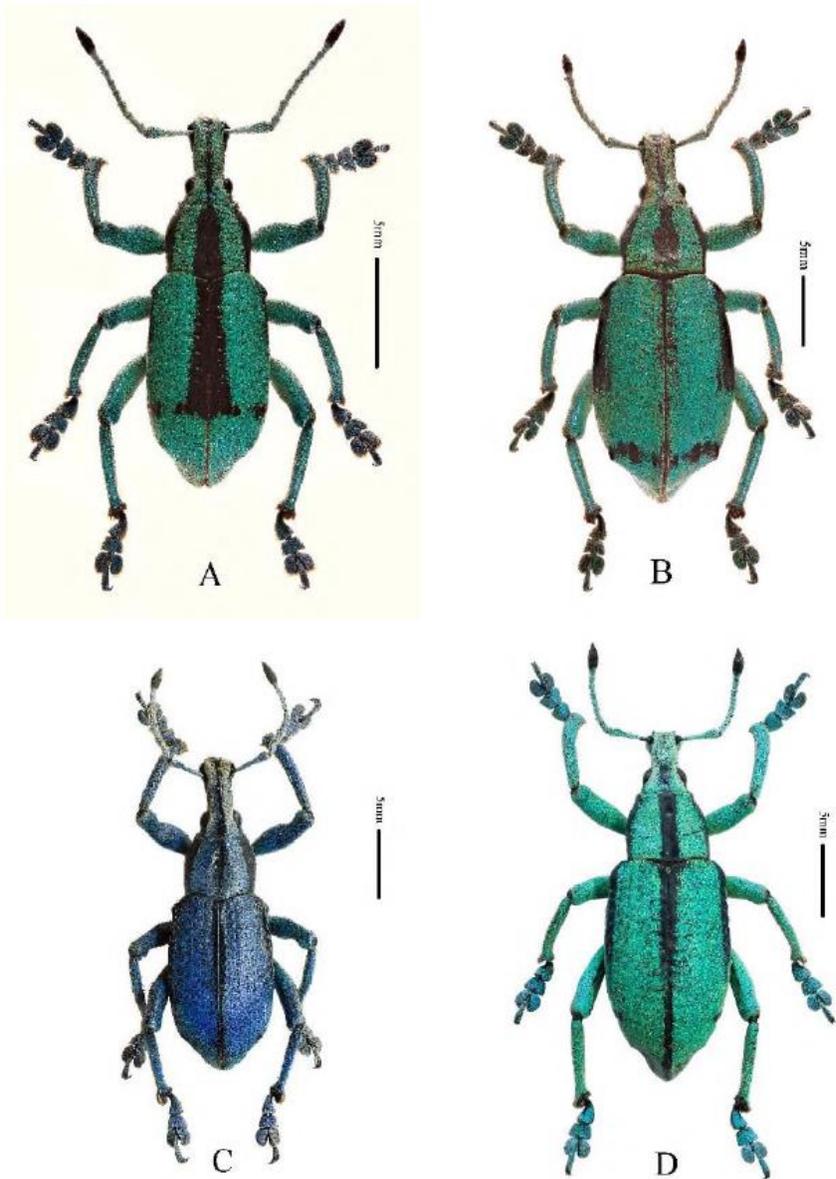


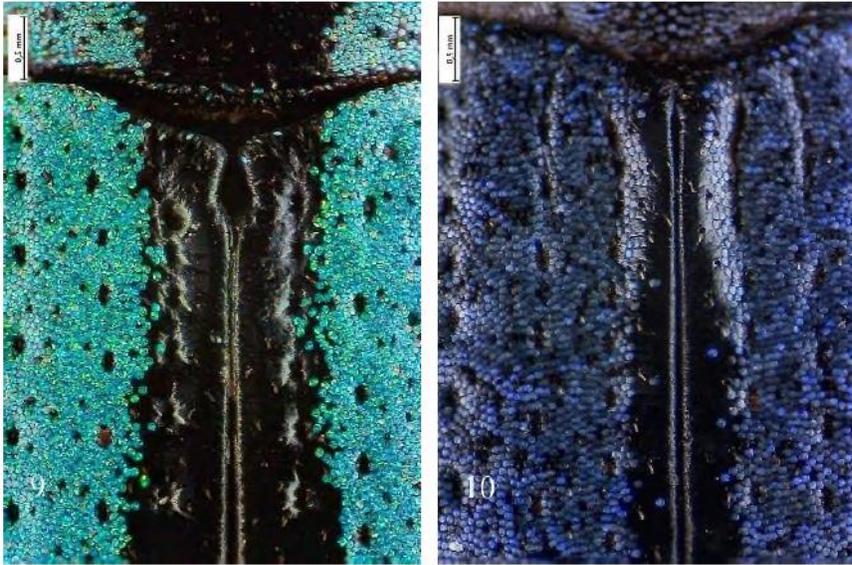
Plate 1. Habitus of *Eupholus* species; A: *Eupholus bhaskarai*, male holotype; B: *Eupholus bhaskarai*, female allotype; C: *Eupholus loriae* (Gestro, 1902), male; D: *Eupholus faisali*, female allotype.



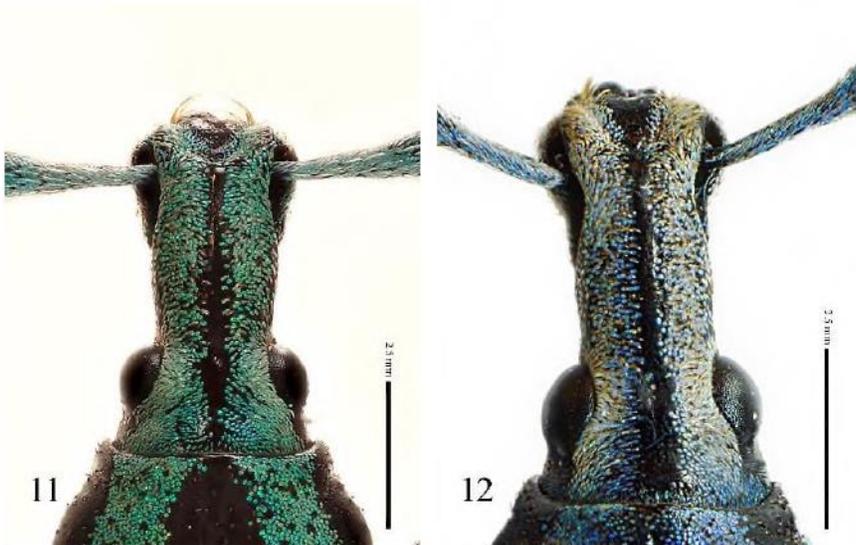
Figures 1-4. Male genitalia of *Eupholus bhaskarai* sp. nov. holotype; 1. Aedeagus in dorsal view; 2. Aedeagus in lateral view; 3. Transfer apparatus, resting position; 4. Paramers of tegmen.



Figures 5-8. Male genitalia of *Eupholus loriae*; 5. Aedeagus in dorsal view; 6. Aedeagus in lateral view; 7. Transfer apparatus, resting position; 8. Paramers of tegmen.



Figures 9-10. Details of strial punctures of *Eupholus* species; 9. *Eupholus bhaskarai* sp. nov. holotype; 10. *Eupholus loriae*.



Figures 11-12. Head and rostrum of *Eupholus* species; 11. *Eupholus bhaskarai* sp. nov. holotype; 12. *Eupholus loriae*.

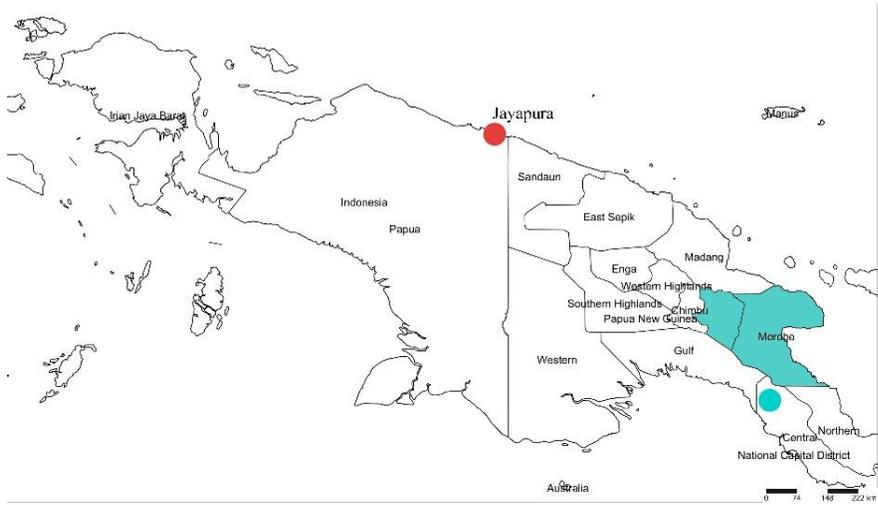


Figure 13. Locality of *Euphohus* species; *E. bhaskarai* (red dot); *E. loriae* (blue dot and blue areas).