

TWO NEW SPECIES OF THE GENUS *EUPYRGOPS* BERG, 1898 (COLEOPTERA: CURCULIONIDAE: CELEUTHETINI) FROM THE LUZON ISLAND (PHILIPPINES)

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Two new species of the genus *Eupyrigops* Berg, 1898 from the Luzon Island are described and illustrated: *E. mitoraji* Bramanti & Bramanti sp. nov. and *E. sabatiensis* Bramanti & Bramanti sp. nov..

Key words: Coleoptera, Curculionidae, *Eupyrigops*, taxonomy, new species, Luzon Island, Philippines.

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INTRODUCTION

The genus *Eupyrigops* Berg, 1898 (= *Eucyrtus* Faust, 1897, type species *Eucyrtus subannulatus* Faust, 1897) (= *Kashotonus* Kono, 1942, type species *Kashotonus multipunctatus* Kono, 1942 (= *Pachyrhynchus waltonianus* Adams, 1848)) currently comprises seven species, six of which are distributed on Luzon Island, Philippines: *E. amabilis* Yoshitake, 2017, *E. granulatus* Faust, 1897, *E. maquilungi* Heller, 1934, *E. semperi* Faust, 1897 (= *E. banahaonis* Heller, 1915 (Heller, 1934)), *E. subannulatus* Faust, 1897, *E. variabilis* Yoshitake, 2017 and one species distributed in Taiwan, Luda Island: *E. waltonianus* Adams, 1848.

The last being the most discussable, *E. waltonianus* Adams, 1848 described current species from Green Island, placing species in genus *Platyrhynchus*. In 1935 Kano described current species from the same island, giving it the name *Apocyrtus kashotonis* (*Apocyrtus kashotonis* Kashotno, 1935). In 1940 the same beetle was rewritten by Miwa and Hirayama as *Konorrhinchus samasanensis* (*Konorrhinchus samasanensis* Miwa & Hirayama, 1940). In 1942 the species was rewritten again by Kono as *Hashotonus multipunctatus* (*Kashotonus multipunctatus* Kono, 1942). Finally, in 1992 Kurosawa (Kurosawa 1992) reported a thoughtful study of the Sama-Sana (Green Island) species comparing it in particular with the *Eupyrigops* species described from the Philippines by Faust and Heller, concluding that the species can be

attributed to this genus considering also that similar specimens have also been found on mountain Camiguin on the Babuyan Island. Thus, author considered species as *Eupyrigops samasanensis* Miwa & Hirayama, 1940. In 1999 Alonso-Zarazaga & Lial recognized the namesake between *Eupyrigops* Berg, 1898 and *Konorrhinchus* Miwa & Hirayama, 1940 (Kurosawa 1992).

During our extent study, we had a possibility to compare type specimens of early described species with specimens from several new collections. Study revealed, that additionally to new geographic records, new specimens also include two species, that are new for science. We present both of the new species in the current article and keep additional material for further revision of the genus.

MATERIAL AND METHODS

The studied material is deposited in the following collections:

SMTD – Senckenberg Natural History Collections (Dresden, Germany) (O. Jäger).

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

DUBC – Daugavpils University Beetle Collection (Daugavpils, Latvia) (A. Barševskis).

To observe morphological characters we used Nokon SMZ745T stereomicroscope with Nikon DS-Fil digital camera. Images were taken with Panasonic Lumix DMC-FZ20 with macro lens Raynox DCR150, stacking system MJKZZ Q-Rail 250Plus, software Adobe Photoshop. All measurements are in mm., label data are cited verbatim, measurement technology as well as abbreviations are same as used in Bramanti et al. 2020.

RESULTS

Eupyrigops mitoraji sp. nov.

(Fig. 1.1-1.4, 2.1, 7, 8)

Type material. Holotype. Female: PHILIPPINES / Luzon, Quezon prov., Real, Maragondon / V. 2008 / leg. Davis J. (white label) // HOLOTYPE / *Eupyrigops mitoraji* Bramanti & Bramanti 2020 (red label) (BRAA).

Paratypes (4 females): 1 female - PHILIPPINES / Luzon, Quezon prov., Real, Maragondon / V. 2008 / leg. Davis J. (white label) (BRAA); 3 females - PHILIPPINES / Luzon, Laguna prov., Santa Maria / III. 2018 / local collector leg. (white label) (DUBC). All with additional red label: "PARATYPE / *Eupyrigops mitoraji* Bramanti & Bramanti 2020".

Distribution. Luzon Island, Quezon and Laguna provinces (Fig. 8).

Description. Female. Body length: 13.7 – 14.8 (mean 14.23, n=3); width: 7.1 – 8.2 (mean 7.8, n=3). Integument black, body surface shiny except underside with weaker luster, with markings of yellow to orange round to recumbent scales with golden reflections.

Head slightly pubescent, with general puncture. Forehead slightly raised dorsally, with general round scales between the eyes; clearly divided from the rostrum by a transverse groove. Eyes rather big, two times as wide as forehead, strongly prominent from the outline of the head, peak just after the middle. Rostrum strongly bulging dorsally, in lateral view metarostrum straight, with deep puncture, prorostrum oblique, with weaker puncture. Antennal scrobe short, do not reach anterior margin of the eye. Scape nearly same length as funicle; scape and antennomers mingled with shorter to longer yellowish hairs in all length; antennomers I-II subequal in size, twice as long as wide, two times as long as each of antennomer III-VII; antennomers III-VII subequal in size, same length and width.

Prothorax strongly punctured. With the following three scally markings: 1) sub-triangular bimodal patch medially on disc along basal margin, patch in some cases separated in the middle into two smaller patches; 2) transverse band along apical margin in all length, patch raised along medial

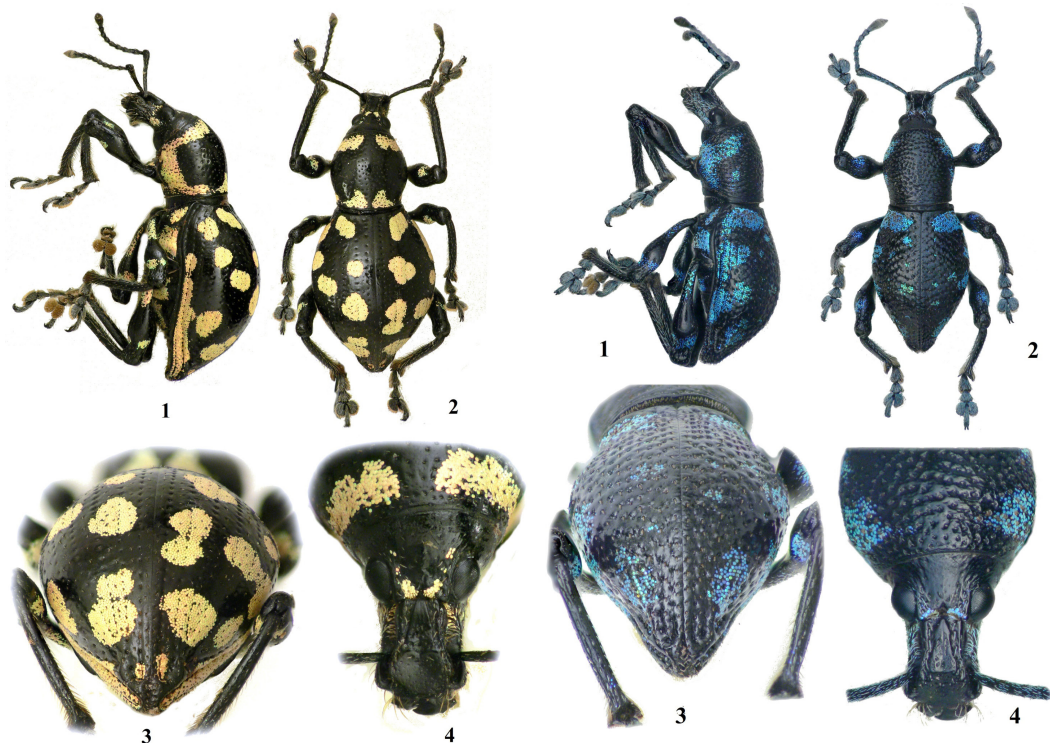


Fig. 1. *E. mitoraji* sp. nov., female. 1 – lateral view; 2 – dorsal view; 3 – abdominal area; 4 – head and rostrum in dorsal view.

Fig. 3. *E. sabatiensis* sp. nov., male. 1 – lateral view; 2 – dorsal view; 3 – abdominal area; 4 – head and rostrum in dorsal view.

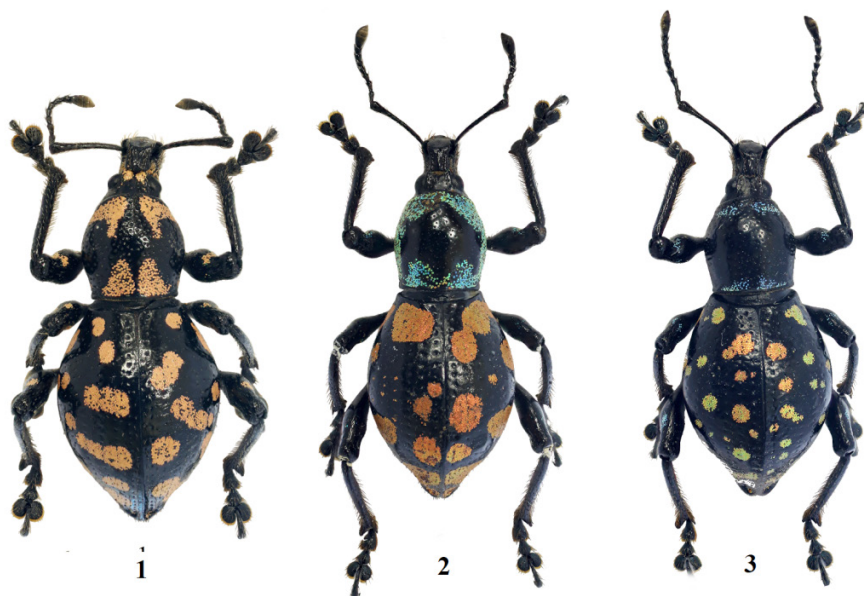


Fig. 2. 1 - Dorsal habitus of *E. mitoraji* sp. nov., female; 2–3 Dorsal habitus of two different variations of *E. variabilis* Yoshitake, 2017.

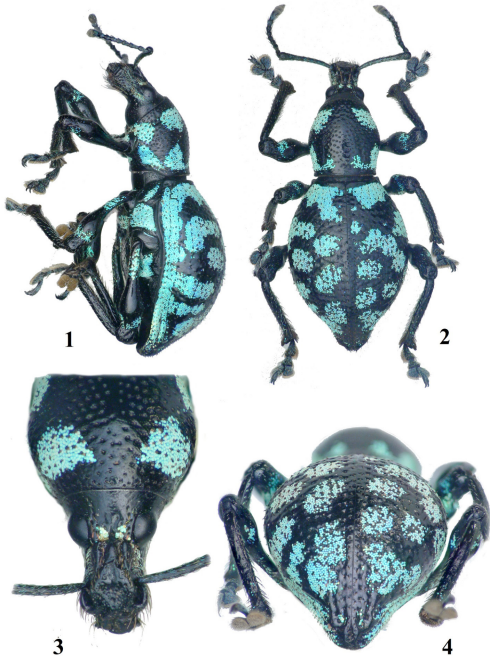


Fig. 4. *E. sabatiensis* sp. nov., female. 1 – lateral view; 2 – dorsal view; 3 – abdominal area; 4 – head and rostrum in dorsal view.

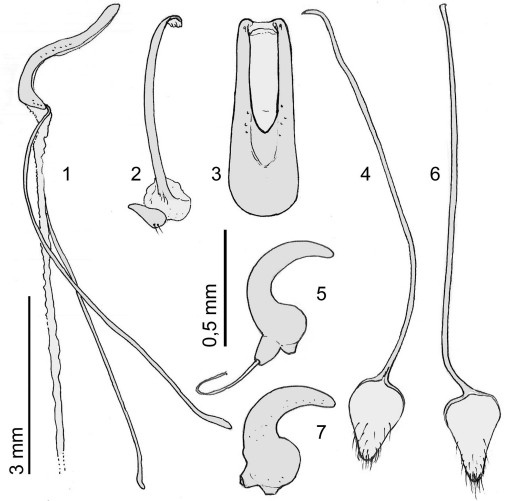


Fig. 6. Genitalia of *E. sabatiensis* sp. nov. 1 – aedeagus in lateral view; 2 – male spicula; 3 – apex of aedeagus in dorsal view; 4, 6 – female spicula; 5, 7 - spermatheca.

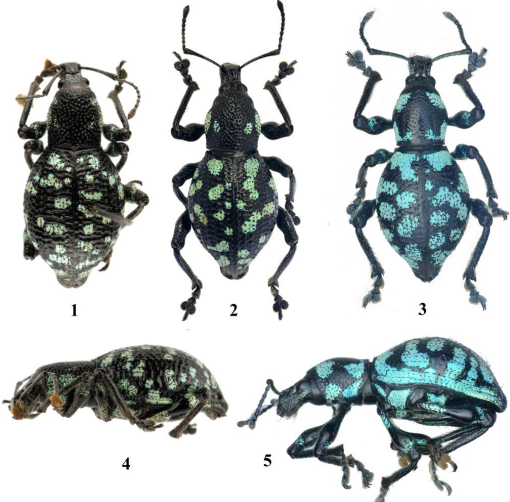


Fig. 5. 1, 4 – Dorsal and lateral view of *E. waltonianus* Adams, 1848, female, paratype from Ludao Island, Taiwan (image from Insect Type Specimen Database dhmct.digital.ntu.edu.tw); 2 – dorsal habitus of *E. waltonianus* Adams, 1848, female, Cagayan, Luzon (DUBC); 3,5 – Dorsal and lateral view of *E. sabatiensis* sp. nov., female, Ditumabao, Aurora, Luzon (BRAA).

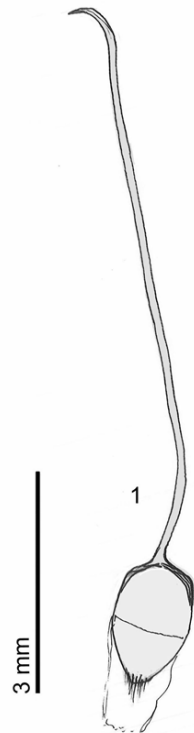


Fig. 7. Female spicula of *E. mitoraji* sp. nov.

part of the disc and interrupted along midline; 3) big patch on latero-ventral part extending to underside; In dorsal contour raised from base, widest just at the middle, then gradually narrowed to apical margin. Basal and apical margins straight. Nearly same length and width (LP/WP 1.01).

Elytra with moderate puncture rows arranged in equal intervals. Basal half rather pubescent, apical part with longer hairs that correspond puncture. Each elytron with ten to thirteen irregularly arranged ovate scally patches that vary in size and one additional longitudinal band along lateral margin from medial portion to apex. Underside with markings of yellow to orange scales. Elytra ovate, strongly convex (WE/LE 0.77) in dorsal contour widest just at the middle, then strongly narrowed to subapical constriction. Femur mingled with short light hairs in all length; strongly widened along medial margin. Tibia thin and slender, covered with long golden hairs along internal margin. Spicula as illustrated in Fig. 7. Male unknown.

Differential analyses. *E. mitoraji* sp. nov. in general appearance is similar to *E. variabilis* Yoshitake, 2017 (Fig. 2.2 – 2.3) from Cayagan Valley region, but additionally to geographic isolation, new species might be easily distinguished by more strongly convex prothorax with rather deep puncture, more strongly rounded elytra together with unique scally markings.

Etymology. The new species is named in memory of the sculptor Igor Mitoraj (1944 – 2014), are genius and nature lover.

***Eupyrigops sabatiensis* sp. nov.**
(Fig. 3.1 – 3.4, 4.1 – 3.4, 6, 8)

Type material. Holotype. Male: PHILIPPINES / Luzon, Aurora prov., San Luis, Ditumabao / IX. 2017 / local collector leg. (white label) // HOLOTYPE / *Eupyrigops sabatiensis* / Bramanti & Bramanti 2020 (red label) (BRAA).

Paratypes (1 male, 8 female): 1 female,

PHILIPPINES / Luzon, Aurora prov., San Luis, Ditumabao / IX. 2017 / local collector leg.; 1 female, same as previous, but XI. 2018; 4 female, same as previous, but XII. 2018; 2 female, PHILIPPINES / Luzon, Quirino prov., Nagtipunan, Tapsoy / I. 2020 / local collector leg. (all on white labels, all in BRAA); 1 male: PHILIPPINES / Luzon, Quirino prov., Nagtipunan, Disimungal, Maddela / XII. 2015 / local collector leg. (white label, DUBC). All with additional red label: “PARATYPE / *Eupyrigops sabatiensis* Bramanti & Bramanti, 2020”.

Distribution. Northern Luzon Island: Aurora and Quirino provinces (Fig. 8).



***Eupyrigops mitoraj* sp. n.** ●

***Eupyrigops sabatiensis* sp. n.** ●

8. Distribution map of *E. mitoraj* sp. nov. and *E. sabatiensis* sp. nov.

Description. Male. Body length: 13.1; width: 6.2. Integument black, legs, head and antenna strongly shiny, prothorax and elytra with weaker luster, with markings of turquoise round to recumbent scales.

Head strongly pubescent, punctured, with longer light hairs between eyes. Forehead with longitudinal medial groove, slightly impressed dorsally, without general scales; clearly divided from the rostrum by a transverse groove. Eyes small, three times as wide as forehead, strongly prominent from the outline of the head, peak just at the middle. Rostrum with moderate dorsal bulge. Antenna rather thin, mingled with short light hairs; antennomers I-II subequal in size, twice as long as wide, slightly longer than each of antennomer III-VII; antennomers III-VII subequal in size, longer than wide; club slender, three times as long as wide.

Prothorax with very strong puncture, each dot mingled with short yellowish hair. With the following scally markings: 1) large longitudinal patch at each lateral part of prothorax; 2) two roundish dots on disc slightly after the middle, dots might be absent in some specimens; 3) large patch from each lateroventral part to underside. In dorsal contour raised from base, widest just before the middle, then gradually narrowed to apical $\frac{1}{2}$ and nearly straight to apical margin. Slightly longer than wide (LP/WP 1.05).

Elytra very strongly punctured, with rugose undefined puncture rows; with short yellowish hairs in all length. Each elytron with various number of irregularly arranged irregularly ovate scally patches that vary in size and one additional longitudinal band along lateral margin in all length. Elytra ovate, moderately convex (WE/LE 0.71) in dorsal contour widest just at the middle, then strongly narrowed to subapical constriction. Femur mingled with short light hairs in all length; moderately widened along medial portion; with scally patch along internal delay. Male genitalia as illustrated in Fig. 6.1 – 6.3.

Female. Much bigger than male. Prothorax in dorsal view slightly widened from constricted

base to basal $\frac{1}{3}$, then impressed along basal $\frac{1}{3}$, then more strongly raised and rounded to middle, widest just after the middle, then narrowed to apical $\frac{1}{3}$, impressed, then straightened to apical margin; apices of elytra very strongly expressed, WE/LE 0.77. Genitalia as illustrated in Fig. 6.4 – 6.6. Otherwise essentially as in males.

Differential analyses. Nevertheless high similarity of *E. sabatiensis* sp. nov. to *E. waltonianus* Adams, 1848 (Fig. 5.1, 5.4) we decided to separate these two geographically distinct species by following morphological differences: 1) specific shape of prothorax in females of *E. sabatiensis* sp. nov., prothorax of *E. waltonianus* Adams, 1848 is less arched along medial portion and without expressed impression along basal and apical $\frac{1}{3}$; 2) forehead of *E. waltonianus* Adams, 1848 wider, three times as wide as eye width instead of two times in *E. sabatiensis* sp. nov.; 3) apices of *E. sabatiensis* sp. nov. more strongly expressed, more gradually delayed in dorsal contour; 4) lateral contour of elytra in *E. sabatiensis* sp. nov. more rounded than in *E. waltonianus*.

Etymology. The new species is named in honour of good friend of first two authors Jan-Paul Sabatie.

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