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Short contribution to distribution and appearance of *Pachyrhynchus decussatus* Waterhouse, 1841 (Entimine: Pachyrhynchini) with description of one new taxon from Catanduanes Island, Philippines

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One new subspecies of the genus *Pachyrhynchus* Germar, 1824 (Coleoptera: Curculionidae: Entimine: Pachyrhynchini) from the Catanduanes Island (Philippines) is described and illustrated: *P. decussatus catanduanensis* subsp. nov.. Distribution and appearance of *P. decussatus decussatus* Waterhouse, as well as *Pachyrhynchus* fauna of Catanduanes Island is presented.

Key words: Coleoptera, Curculionidae, Pachyrhynchini, *Pachyrhynchus*, fauna, taxonomy, new subspecies, Catanduanes, Philippines

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INTRODUCTION

Pachyrhynchus decussatus Waterhouse, 1841 is a typical representative of the genus *Pachyrhynchus* Germar, 1824, tribe Pachyrhynchini Schönherr, 1826, subfamily Entimine Schönherr, 1826. In original description species was described from The Philippine Islands, and Schultze was the first to report on species distribution from Catanduanes Island (Schultze, 1923). Recently, I had an opportunity to examine number of specimens of this species from South Luzon, and, after careful comparison with type specimen, as well as series of this species from NHML (London, UK) and MTD (Dresden, Germany) I concluded, that Schultze was wrong in his considerations, and actual distribution of *P. decussatus decussatus* is related to South Luzon. Population from Catanduanes Island, however, form a distinct subspecies *P. decussatus catanduanensis* subsp. nov. and it is described herein.

Currently there are four species of the genus *Pachyrhynchus* reported from Catanduanes Island: *P. circulatus* Heller, 1912, *P. decussatus* Waterhouse, 1841, *P. moniliferus* Germar, 1824 and *P. phalareatus* Waterhouse. All listed species share confluent colour pattern of orange scally markings. For the listed species such colour pattern, according to my own observations of number of specimens of various collections, is characteristic only for populations from Catanduanes Island.

MATERIAL AND METHODS

The study was based on specimens deposited at the following collections:
DUBC – Daugavpils University Beetle Collection (Daugavpils, Latvia)
NHML – Natural History Museum (London, UK)
MTD – Senckenberg Natural History Collections, Dresden, Germany (O. Jäger)

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.

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

RESULTS

***Poachyrhynchus decussatus* ssp. *decussatus* Waterhouse, 1841**
(Fig. 2)

Type locality: Philippine Islands.
Type in NHML, examined.
Male. *Type* (white round label, marked with red circle); 75 / 36 (white round label); *decussatus* (white label).

Material examined. 1 male, 1 female. S. Luzon; 1 male, 1 female. *Philippines / S. Luzon*; 1 female without geographical label (NHML). 1 male, 1 female PHILIPPINES / Luzon, Mt. Bulusan / VI. 2018 / local collector leg. (DUBC).

Note. In original description, Waterhouse did not indicate exact distribution of the species, and Schultze was the one to report it from Catanduanes Island. However, part of the material from NHML together with new, reliable data from DUBC, that corresponds morphological features of the Type specimen, suggests, that real distribution of the species is S Luzon. With this I propose, that the exact locality of the *P. decussatus* ssp. *decussatus* Waterhouse is S Luzon.

***Pachyrhynchus phaleratus* ssp. *catanduanensis* subsp. nov.**
(Fig.1, 4)

Type material. Holotype: Male: (Fig. 1.1-3, 1.6): PHILIPPINES / Catanduanes. Isl., Pandan / July 2016 / local collector leg. (white label); ''HOLOTYPE / *Pachyrhynchus decussatus* ssp. *catanduanensis* / Rukmane, 2020'' (red label) (DUBC).

Paratype: 1 female. PHILIPPINES / Catanduanes Isl., Pandan / July 2016 / local collector leg. (white label); ''PARATYPE / *Pachyrhynchus decussatus* ssp. *catanduanensis* / Rukmane, 2020'' (red label) (DUBC).

Distribution. Catanduanes Island.

Description. Measurements (n=1): LB: 12.5; LR: 2.0; WR: 2.1; LP: 4.3; WP: 4.8; LE: 7.7; WE: 5.5. Body black, with markings of pale orange round to recumbent scales on body. Head with fine puncture. Eyes small, very minutely prominent from outline of head, with peak just in the middle. Forehead with small dorsal bulge from base of forehead to base of rostrum, two times as wide as eye width, with longitudinal medial scale line in all length. Rostrum slightly wider than long (WR/LR 1.05), dorsally with longitudinal groove from base of rostrum to medial portion of rostrum; rostrum with small, subtriangular impression on basal part, transverse patch of scales along impression; bulge on apical part; rostrum pubescent dorsally; in dorsal contour nearly straight, slightly widened along medial portion; laterally with two scale patches, one on genae and one on apical part; long, light golden hairs on latero-ventral part and near mouth. Antennal scrobe incurved ventrally, mingled with short, light golden hairs. Antenna without general scales; scape strongly widened at apical part, with long, light hairs from medial portion to apex; basal antennomere two times as long as wide, longer than antennomere II; antennomere II 1.5

Fig. 1. Male of *P. decussatus* ssp. *catanduanensis* ssp. nov.. 1-3 - dorsal view, 4 - aedeagus (lateral view), 5 – aedeagus (ventral view), 6 – lateral view

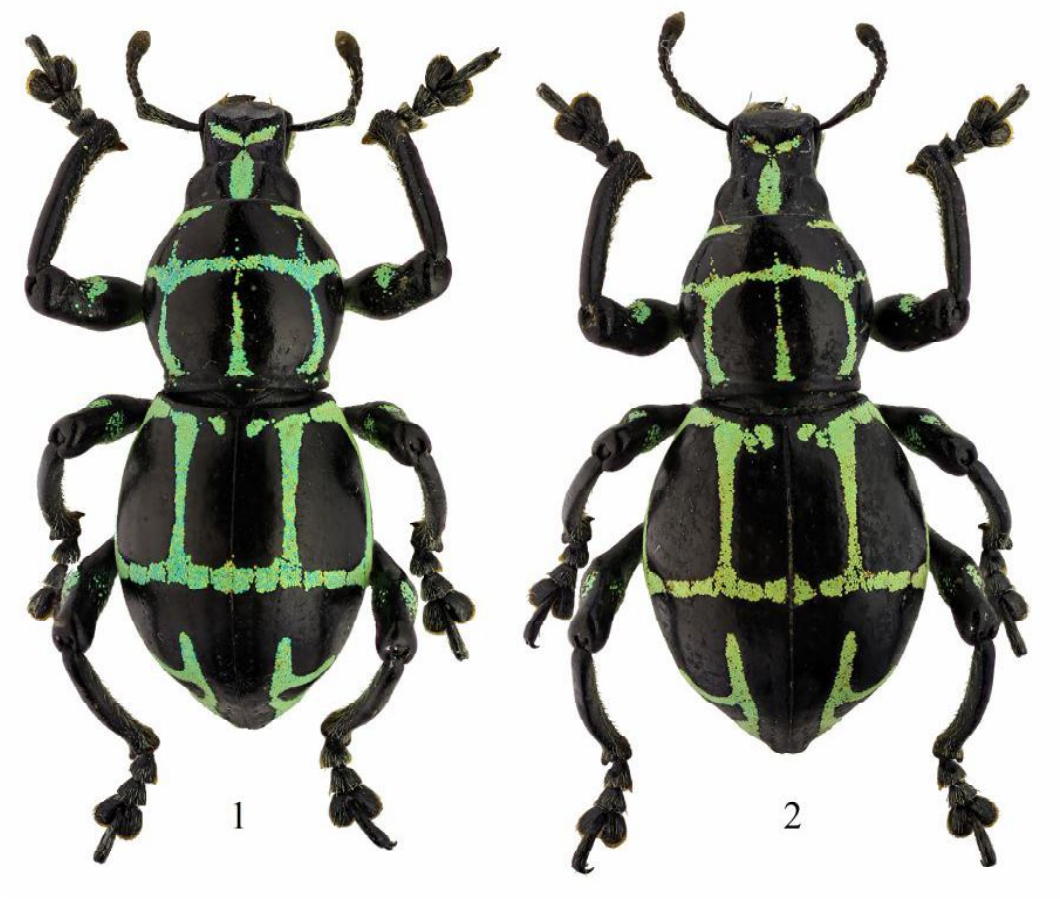

Fig. 2. *P. decussatus* ssp. *decussatus* Waterhouse, 1841. 1 - male, 2 - female

times as long as wide, longer than antennomeres III-V; antennomeres III-V sub-equal in size, shorter than antennomere VI-VII; club short, strongly curved, nearly 1.5 times as long as wide. Prothorax nearly without puncture, with small pubescence at subapical part; wider than long (WP/LP 1.12), posterior edge straight, anterior edge curved; markings correspond description given by Waterhouse (Waterhouse, 1841). Elytra distinctly rounded, LE/WE 1.4, smooth, with weakly expressed intervals of punctured rows, minutely pubescent near apex; each elytron with the following scaly markings: 1) three longitudinal lines in all length, one along interval III, line curved laterally at apical 1/3, one along interval VII, one along lateral margin; 2) two short longitudinal lines at subbasal part, one along interval II, one along interval IV; 3) transverse medial line at medial portion of elytron; 4) short, transverse line at apical 1/3, line connecter with first longitudinal line; 5) two small patches near apex; elytra in dorsal contour widest just before the middle; LE/LP 1.71, WE/WP 1.15. Scutellum very small, triangular. Aedeagus as in Fig. 1.4-5.

Female. Measurements (n=1): LB: 11.8; LR: 1.9; WR: 2.0; LP: 3.9; WP: 3.8; LE: 7.0; WE: 5.7. No specific size difference from males. Pronotum significantly narrower than elytra (WP/WE 0.69), elytra more strongly curved. Otherwise as in males.

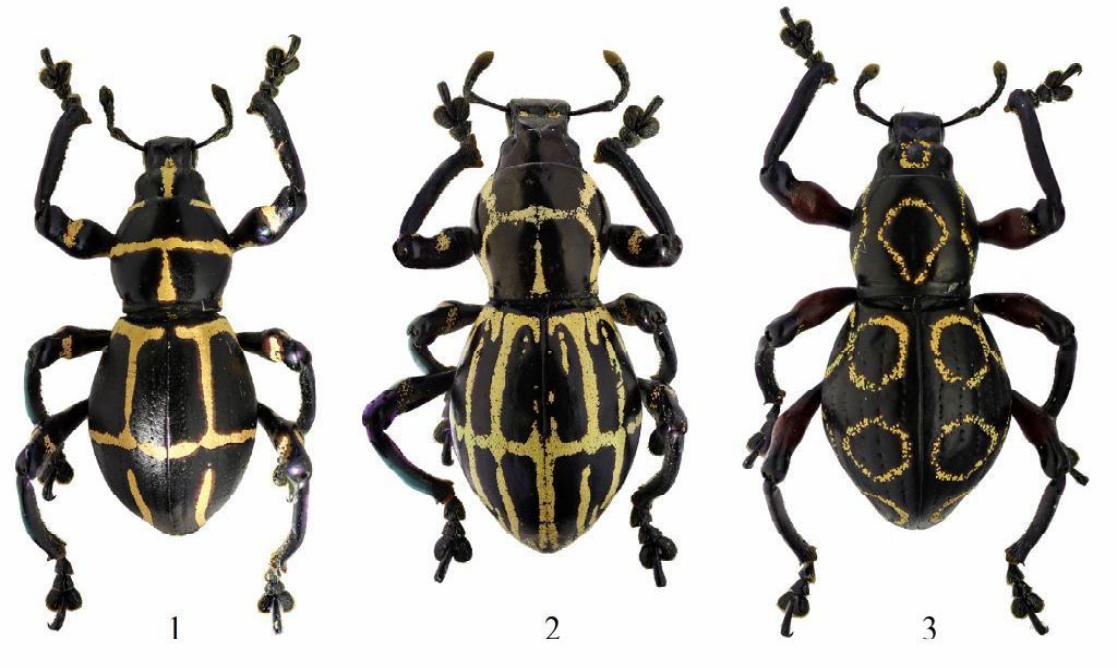

Fig. 3. 1 - *P. moniliferus* Germar, 1824 (male), 2 - *P. phaleratus* Waterhouse, 1841 (female), 3 - *P. circulatus* Waterhouse, 1841(male)

Differential analyses. The new species may be easily distinguished from *P. decussatus* ssp. *desuccatus* by the following features: 1) markings on the body of pale orange color in *P. decussatus* ssp. *catanduanensis* ssp. nov., markings of greet color, with metallic tingle in *P. decussatus* ssp. *decussatus*; 2) short, longitudinal lines on subbasal part of elytra in *P. decussatus* ssp. *catanduanensis* ssp. nov. that lack in *P. decussatus* ssp. *decussatus;* 3) smooth prothorax in *P. decussatus* ssp. *catanduanensis* ssp. nov. and punctured prothorax in *P. decussatus* ssp. *decussatus.* Together with distinct distribution of both taxons.

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

Note. The new subspecies tend to appear continuously together with *P. circulatus*, *P. phaleratus*, *P. moniliferus*, all species share same color pattern of scaly markings (Fig. 3).

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