

TO THE KNOWLEDGE OF THE GENUS *PACHYRHYNCHUS* GERMAR, 1824 (COLEOPTERA: CURCULIONIDAE: PACHYRHYNCHINI) SPECIES FROM HUF (BUDAPEST, HUNGARY), WITH DESCRIPTION OF A NEW SPECIES FROM THE MINDANAO ISLAND (PHILIPPINES)

Anita Rukmane

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Checklist of the *Pachyrhynchus* Germar, 1824 (Coleoptera: Curculionidae: Pachyrhynchini) species, available from HUF collections (Hungarian Museum of the Natural History) is presented. Collection comprises a total of 31 *Pachyrhynchus* species and 5 subspecies. One new species from the Mindanao Island was found during the observation, species in general appearance is similar to *P. amabilis* Schultze, 1922 (see differential analyses), this new species is described herein. Photos of the habitus, as well as pictures of male and female genitalia are presented.

Key words: HUF, Pachyrhynchini, *Pachyrhynchus*, Mindanao, taxonomy, new species.

Anita Rukmane. Daugavpils University, Institute of Life Sciences and Technology, Coleopterological Research Center, Vienības Str. 13, Daugavpils, LV – 5401. Latvia, E-mail: anitakraslava@inbox.lv

INTRODUCTION

Knowledge on the genus *Pachyrhynchus* Germar, 1824 has went far beyond in past few years, as many foreign and local scientists has contributed to taxonomy, ecology and distribution (Cabras & Rukmane 2016, Rukmane & Barševskis 2016). As this particular genus is admitted to be highly commercial, it is widely present among various museum collections. Observation of the old museum collections can reveal new data on taxonomy and biogeography of the current genus, such example are some previous works of the author, which presents few new species and

additional distributional information of various species (Rukmane 2019). As for *Pachyrhynchus* species collection of the Hungarian Museum of the Natural History, 31 species was determined and are listed herein, moreover, one species were identified as new to science. Here I provide a list of the species from the HUF.

Pachyrhynchus amabilis species group currently comprises 7 species, distributed on various parts of the Mindanao Island: *P. amabilis* Schultze, 1922; *P. banglas* Bollino, Sandel & Rukmane, 2018; *P. chamissoi* Schultze, 1922; *P. pseudamabilis* Yoshitake, 2012; *P. subamabilis*

Yoshitake, 2012; *P. zamboanganus* Yoshitake, 2012; *P. tiko* Rukmane, 2016. Members of this group share common morphological features (Bollino, Sandel & Rukmane, 2017). During the study of the HUF *Pachyrhynchus* material, one new species was found, after careful examination it was clear, that this new species belongs to *Pachyrhynchus amabilis* species group, yet, is easily distinguishable from any of the species by various morphological features (see differential analyses). According to the labelled distribution data, this new species is distributed on the Northern part of the Mindanao Island, Bukidnon province, Maluko, which is part of the Mount Kitanglad range, 4th highest peak of the Philippine Islands.

MATERIAL AND METHODS

The study was based on specimens deposited at the Hungarian Museum of the Natural History, Budapest, Hungary (HUF), species were compared to morphologically similar species from Daugavpils University Beetle Collection material (DUBC). The methods and equipment used in this study were the same as explained in Rukmane (2019). The type specimens of the new species described in this paper are temporary preserved in the Daugavpils University, Study and Research Center "Ilgas" (DUBC), but after publishing of this paper they will be returned to the HUF.

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

/ = different lines

// = different labels

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

RESULTS

Pachyrhynchus ottomerkli sp. nov.

(Fig. 1A, 1B, 2A-G)

Type material. Holotype: Male (Fig. 1A) "Mindanao, P. I. / Bukidnon Prov. / Maluko" (white rectangular card, printed); "Coll. W.

Schultze / Ankauf 1942" (white rectangular card, printed); "HOLOTYPE / Male / *Pachyrhynchus ottomerkli* / Rukmane, 2019 / det. Rukmane A. 2019; (red rectangular card, printed).

Paratype (1 female): "Mindanao, P. I. / Bukidnon Prov. / Maluko" (white rectangular card, printed); "Coll. W. Schultze / Ankauf 1942" (white rectangular card, printed); "PARATYPE / Female / *Pachyrhynchus ottomerkli* / Rukmane 2019 / det. Rukmane A. 2019; (red rectangular card, printed).

Distribution: Philippines, Mindanao Island, Bukidnon Province.

Description. Dimensions (holotype): LB: 11.3; LE: 6.9; WE: 5.3; LP: 3.6; WP: 3.6; LR: 2.0; WR: 1.8.

Integument black, elytra matte or slightly shiny, pronotum, head, legs strongly shiny, underside with weaker luster; body nearly without markings, with few pale blue to green round recumbent scales on pronotum, laterally and dorsally on rostrum and along underside.

Rostrum longer than wide (LR/WR 1.11), rostrum covered with pubescence, bulging on apical part, with peak slightly before middle, deep triangular impression on basal half, longitudinal stripe of pale blue to green round scales from midline of the rostrum to base of the forehead, where interrupts by deep transverse groove; lateral parts covered with white hairs before antennal scrobes and long light hairs after antennal scrobes, with even longer hairs near apex, oval shape pale blue to green scales on genae; antennomers evenly covered with long light hairs, scape covered with pubescence on basal part and long light hairs on apical part; pedicel and first antennomer sub equal in length, longer than wide, antennomers II-V subspherical, sub equal in length. Head glabrous, finely punctured; eyes large, very strongly prominent from the outline of the head. Forehead with finely expressed dorsal bulge, slightly wrinkled.

Prothorax sub spherical, same length as width (LP/WP 1), widest just in the middle; weakly

punctured; pale blue to green continuous scale line on basal, lateral and apical margins, line strongly pronounced on lateral margins and very weak or almost absent on apical margin dorsally. Legs stout; coxa with few blue roundish scales and pubescence; femur without hairs or scales; tibiae incurved apically, covered with short light hairs on all length and long light hairs on internal margin, with mucrones on all legs; tarsus with long, golden setae.

Elytra sub ovate (LE/WE 1.3), with weakly pronounced intervals, nearly smooth; elytrons without scaly markings; widest just before middle; on dorsal dimension narrow at the base, where gradually increases to middle, were widest just before the middle, then roundish and gradually decreases to base up to basal 1/3 where narrows more strongly in direction to apex; apex rounded, with weak pubescence.

Elytra wider than prothorax (WE/WP 1.47), nearly twice as long as prothorax (LE/LP 1.92). Ventrites densely covered with blue to green round scales, minutely pubescent, mingled with few longer light color hairs. Genitalia as shown in Fig. 2A-D.

Female. Dimensions: LB: 12.1; LE: 8.6; WE: 5.3; LP: 3.7; WP: 3.7; LR: 2.0; WR: 1.8. Larger than male. Elytra more wide and more strongly rounded, as well as more strongly elongate apically. Genitalia as shown in Fig. 2E-G.

Differential diagnosis. According to body



Fig. 1. Dorsal habitus of *Pachyrhynchus ottomerkli* sp. nov. A – Male (Holotype); B – Female (Paratype).



Fig. 2. Male and female genitalia of *Pachyrhynchus ottomerkli* sp. nov. A – aedeagal body in lateral view; B – aedeagal body in ventral view; C – sternites in dorsal view; D – tegmen in dorsal view; E – sternite VIII in ventral view; F – ovipositor in dorsal view; G – spermatheca. Scale bar 1.00 mm.

characters and shape of male genitalia, *Pachyrhynchus ottomerkli* **sp. nov.** obviously belong to *Pachyrhynchus amanibils* species group, yet, it is easily distinguishable from any of the species involved by following characters: 1) coloration of the body - members of *Pachyrhynchus amabilis* group are usually with dark red to copper body color, shiny (except *P. subamabilis* Yoshitake, 2012 with mate elytra), some exceptions with very dark body color pattern may be found only in Wao region (DUBC collection data). This new species show unique color pattern which yet has not been presented along current species group; 2) deep transverse groove on rostrum, which is present only in *P. ottomerkli* **sp. nov.**; 3) different scally markigns, such scale pattern is not present in any of the species involved within the group; 4) shape of male aedeagal body, which is slightly longer than in other species; 5) different shape of female spermatheca.

Etymology. This new species is named after Otto Merkl, the curator of the HUF coleoptera collection, in appreciation of the help and support during my visit to HUF.

HUF *Pachyrhynchus* species material:

1. *Pachyrhynchus annelifer* Heller, 1912

Luzon, Benguet / Mt. Santo Tomas (3); (2♂, 1♀)

2. *Pachyrhynchus apicatus* Schultzze, 1922

Pollilo Island / Pollilo; Luzon / Mt. Banabao (4); (1♂, 3♀)

3. *Pachyrhynchus argus* Pascoe, 1873

Luzon, Benguet / Baguio 800m (1); Luzon, Benguet / Mt. Santo Tomas (2); (2♂, 1♀)

4. *Pachyrhynchus chamissoi* Schultzze, 1922

Mindanao, P.I. / Bukidnon, Lindabon (3); Pollilo (2); (3♂, 2♀)

5. *Pachyrhynchus chlorites* Chevrolat, 1881

Philippines (3); Philippines / Luzon (2); (2♂, 3♀)

6. *Pachyrhynchus circulatus* Pascoe, 1873

Catanduanes / Virac (5); Luzon / S.O. Vivac (1);

(5♂, 1♀)

7. *Pachyrhynchus confusus* Schultzze, 1923

Luzon, Laguna / Los Banos (3); Luzon / Mt. Banahao (1); Luzon, Prov. Benguet / S.P. Mt. Makiling (1); (2♂, 3♀)

8. *Pachyrhynchus congestus* Pascoe, 1873

Luzon, Benguet / Atoc (1); Luzon, Benguet / Baguio 1500m (1); Luzon, Benguet / Mt. Santo Tomas (1); Luzon, Benguet / Baguio 1600m (1); Luzon, Benguet / Mt. Trail (1); Luzon, Benguet / P.I. Atok (2); Luzon, Benguet / Mt. Pawai, 2400m (1); Luzon / Baguio (1); Philippines (4); (6♂, 7♀) **ssp. *coerulans* Kraatz, 1888**

Luzon, Bontoc / Mt. Polis (3); (1♂, 2♀)

9. *Pachyrhynchus croesus* Oberthur, 1879

Talaur Insel. (1♂)

10. *Pachyrhynchus dubiosus* Schultzze, 1922

Luzon, P.I. / Mt. Pulogloko 1921 (1); Luzon, Benguet / Loo, 2000m (2); Philippines (1); (2♂, 2♀)

11. *Pachyrhynchus erosus* Schultzze, 1920

Luzon, P.I. / Benguet (1♂)

12. *Pachyrhynchus gemmatus* Waterhouse, 1841

Philippines (1♀)

13. *Pachyrhynchus igorota* Schultzze, 1917

Luzon, Isabela / Mt. Moises (1); Luzon / Benguet (1); Luzon, Benguet / Mt. Pawai, 2400m (2); Luzon, P.I. / Benguet (1); Luzon, Bontoc / Mt. Polis (1); (3♂, 3♀)

14. *Pachyrhynchus inclytus* Schultzze, 1924

Luzon, Benguet / Mt. Trail, km. 88 (2); Ins. Luzon (2); (2♂, 2♀)

15. *Pachyrhynchus moniliferus* Germar, 1824

Luzon, P.I. / Kauayan (1); Luzon, Laguna / Mt. Banahao (1); Luzon, Rizal / Montalban (3); Luzon, Benguet / Baguio, 600m (1); Luzon, Laguna / Los Banos (1); Luzon, Rizal / Bosoboso (1); Luzon (1); Manilla (1); Philippines (5); (6♂, 9♀)

ssp. *chevrolati* Eydoux & Solayet, 1839

Catanduanes / Virac (5); Philippines (2); Philippines / Manila (2); (4♂, 5♀)
ssp. stellulifer Heller, 1912
 Luzon, Benguet / Trinidad (1); Luzon, S.L. / Benguet Subprov. (3); Luzon, Isabela / Pinablanca (1); (1♂, 4♀)

16. *Pachyrhynchus multipunctatus* Waterhouse, 1841
 Philippines (1♀)

17. *Pachyrhynchus orbifer* Waterhouse, 1841
 Luzon, Ilocos N. / Bangui (3); Luzon, Benguet / Trinidad (2); Luzon, P.I. / Ilocos Norte Prov., Mt. Nagaoatan (1); (3♂, 3♀)
ssp. gemmans Chevrolat, 1841
 Luzon, Isabela / Mt. Moises (8); Philippines (8); Philippines / Luzon (2); (12♂, 9♀)

18. *Pachyrhynchus pinorum* Pascoe, 1871
 Luzon, Benguet / Baguio, 1600m (2); Luzon, Benguet / Atoc (1); Luzon, P.I. / Benguet (2); Luzon, Benguet / Baguio, 1800m (3); Philippines (3); (7♂, 4♀)

19. *Pachyrhynchus pseudoproteus* Schultz, 1922
 Leyte / Baybey (1); Leyte (1); (2♀)

20. *Pachyrhynchus pulchellus* Behrens, 1879
 Luzon, Benguet / Mt. Trail km 59 (3); Luzon / Benguet (4); Philippines (1); Luzon, Benguet / Atoc (3); Luzon, Benguet / Baguio 1600m (2); Luzon, P.I. / Benguet Subprov. (1); Luzon / St. Thomas (1); Luzon / Prov. Bulacan, Guinnisan (1); (7♂, 9♀)

21. *Pachyrhynchus regius* Schultz, 1922
 Samar / Borongan (3); (1♂, 2♀)

22. *Pachyrhynchus reticulatus* Waterhouse, 1841
 Luzon, Laguna / Mt. Bonahao (1); Luzon, Laguna / Lilio (1); (3♂)

23. *Pachyrhynchus cruciatus* Schultz, 1923
 Philippines (1♂, 1♀)

24. *Pachyrhynchus rugicollis* Waterhouse, 1841
 Luzon / Zambales, Yba (5); (3♂, 2♀)

25. *Pachyrhynchus sarcitis* Behrens, 1887
 Philippines (2♀)
ssp. kotoensis Kano, 1930
 Taiwan / Taitung, Hsien, Lanyu Isl. / Hongtong will., Hongtong river. / 14.09.2006 (3♂)

26. *Pachyrhynchus schultzei* Schultz, 1917
 Luzon, Benguet / Loo, 2000m (1); Luzon, Benguet / Mt. Pawai, 2400m (2); (1♂, 2♀)

27. *Pachyrhynchus speciosus* Waterhouse, 1841
 Cabuntug / Sargao (1♀)

28. *Pachyrhynchus sphaericollaris* Schultz, 1923
 Luzon, Isabela / Pinablanca (2); Luzon, P.I. / Kauayan (2); (2♂, 2♀)

29. *Pachyrhynchus sumptuosus* Schultz, 1917
 Luzon / Cabagao (3); (2♂, 1♀)

30. *Pachyrhynchus venustus* Waterhouse, 1841
 Mindanao, Surig. / Surigao (3); (2♂, 1♀)

31. *Pachyrhynchus sonani* Kano, 1930
 Taiwan / Taitung, Hsien, Lanyu Isl. / Hongtong will., Hongtong river. / 14.09.2006 (1♂)

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