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Two new species of the genus *Pseudapocyrtus* Heller, 1912 (Coleoptera: Curculionidae: Pachyrhynchini) from Luzon Island, Philippines

Anita Rukmane-Bārbale

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Two new species of the genus *Pseudapocyrtus* Heller, 1912 of the tribe Pachyrhynchini are described from Luzon Island, Philippines: *P. madelaensis* sp. nov. and *P. robertsstasinskisi* sp. nov. Description, photos of habitus, as well as male or female genitalia are included. Members of the genus *Pseudapocyrtus* are listed, new distribution records are reported, images of related speciesare provided.

Key words: Pachyrhynchini, *Pseudapocyrtus*, taxonomy, new species, fauna, Luzon, Philippines.

Anita Rukmane-Bārbale, Daugavpils University, Institute of Life Sciences and Technology, Coleopterological Research Center, Vienības Str. 13, Daugavpils, Latvia, LV - 5401; e-mail: anita.rukmane@du.lv

INTRODUCTION

The genus *Pseudapocyrtus* Heller, 1912 (Type species *Pseudapocyrtus imitator* Heller, 1912) is one of the 17 genus within the tribe Pachyrhynchini. Genus currently contains ten species described in period from 1912 to 2012: *P. exsectus* Heller, 1912 (Philippines), *P. formicarius* Heller, 1912 (Luzon Orientalis), *P. imitator* Heller, 1912 (Luzon, Benguet Province), *P. schandenbergi* Heller, 1912 (Luzon), *P. productus* Heller, 1912 (Philippines), *P. multipunctatus* Schultze, 1918 (Luzon), *P. apicatus* Schultze, 1922 (Luzon, Bontoc Province), *P. catanduanensis* Schultze, 1922 (Catanduanes, Virac), *P. multianulatus* Heller, 1929 (Luzon, Nueva Vizcaya Province) and recently described *P. legoskyi* Link & Zettel, 2012 (Luzon, Bicol). All known species are distributed at Greater Luzon region.

During revision of the genus, two new species from Luzon Island were discovered, those new species are described herein.

MATERIAL AND METHODS

The study was based on specimens deposited at the Daugavpils University Beetle Collection (Daugavpils, Latvia) - DUBC, and Dresden Museum of Zoology Coleoptera Collection (Dresden, Germany) - MTD.

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*, where / = different lines.

Measurement system follows the one used in Rukmane & Barševskis, 2016.

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

RESULTS

Genus *Pseudapocyrtus* Heller, 1912

Type species: *Pseudapocyrtus imitator* Heller, 1912

Rostrum convex dorsally, with weak transverse medial groove between rostrum and forehead and pronounced longitudinal medial groove at forehead in all length. Eyes small, undistinct or slightly distinct from outline of the head. Antennal scrobe reaching inner edge of the eye. Antellal scape surpass farest edge of the eye. Prothorax truncate at base, dorsally with longitudinal medial groove. Elytra convex, flattened, apex strongly raised in females.

***1. Pseudapocyrtus imitator* Heller, 1912**
(Fig. 1A - B)

Material examined: (Holotype) +2ex. (Paratypes) +38ex. from Luzon (MTD).

1 male ''PHILIPPINES / Luzon, Aurora, Dingalan / VIII. 2013 / local collector leg.''; 1 female ''PHILIPPINES / Luzon, Mt. Province / VIII. 2016 / local collector leg.''; 1 female ''PHILIPPINES / Luzon, Nueva Vizcaya / III. 2016 / local collector leg.''; 2 males ''PHILIPPINES / Luzon, Ifugao, Banaue / VII. 2015 / local collector leg.'' (DUBC).

***2. Pseudapocyrtus schandenbergi* Heller, 1912**
(Fig. 2A)

Material examined: male (Holotype) and 2@& from Luzon, Ilocos Province, Mt. Palimlim (MTD).

***3. Pseudapocyrtus productus* Heller, 1912**
(Fig. 1C - D)

Material examined: female (Holotype) +9ex. from Nueva Vizcaya and Benguet Provinces (MTD). 1 female ''PHILIPPINES / Luzon, Madela, Disimungal / II. 2018 / local collector leg.''; 1 male same locality but X. 2015; 1 male same locality but XII. 2015; 1 female ''PHILIPPINES / Luzon, Aurora, Labuyo / V. 2014 / local collector leg.''; 1 female ''PHILIPPINES / Luzon, Nueva Vizcaya, Dupax / VII. 2018 / local collector leg.''; 1 male same locality but XI. 2018; 1 male same locality but X. 2019; 1 male ''PHILIPPINES / Luzon, Aurora, Dingalan / VIII. 2013 / local collector leg.'' (DUBC).

***4. Pseudapocyrtus exsectus* Heller, 1912**
(Fig. 1E - F)

Material examined: (Holotype) +4ex. from Philippines (MTD).

1 male, 2 females ''PHILIPPINES / Luzon, Disimungal, Madela / X. 2015 / local collector leg.''; 2 males same locality but V. 2016; 1 female same locality but VII. 2016; 2 males, 4 females ''PHILIPPINES / Luzon, Aurora, Labuyo / V. 2015 / local collector leg.''; 1 male same locality but XII. 2018; 1 male same locality but I. 2019; 1 male, 1 female ''PHILIPPINES / Luzon, Quirino / XII. 2015 / local collector leg.'' (DUBC).

***5. Pseudapocyrtus formicarius* Heller, 1912**
(Fig. 3A - B)

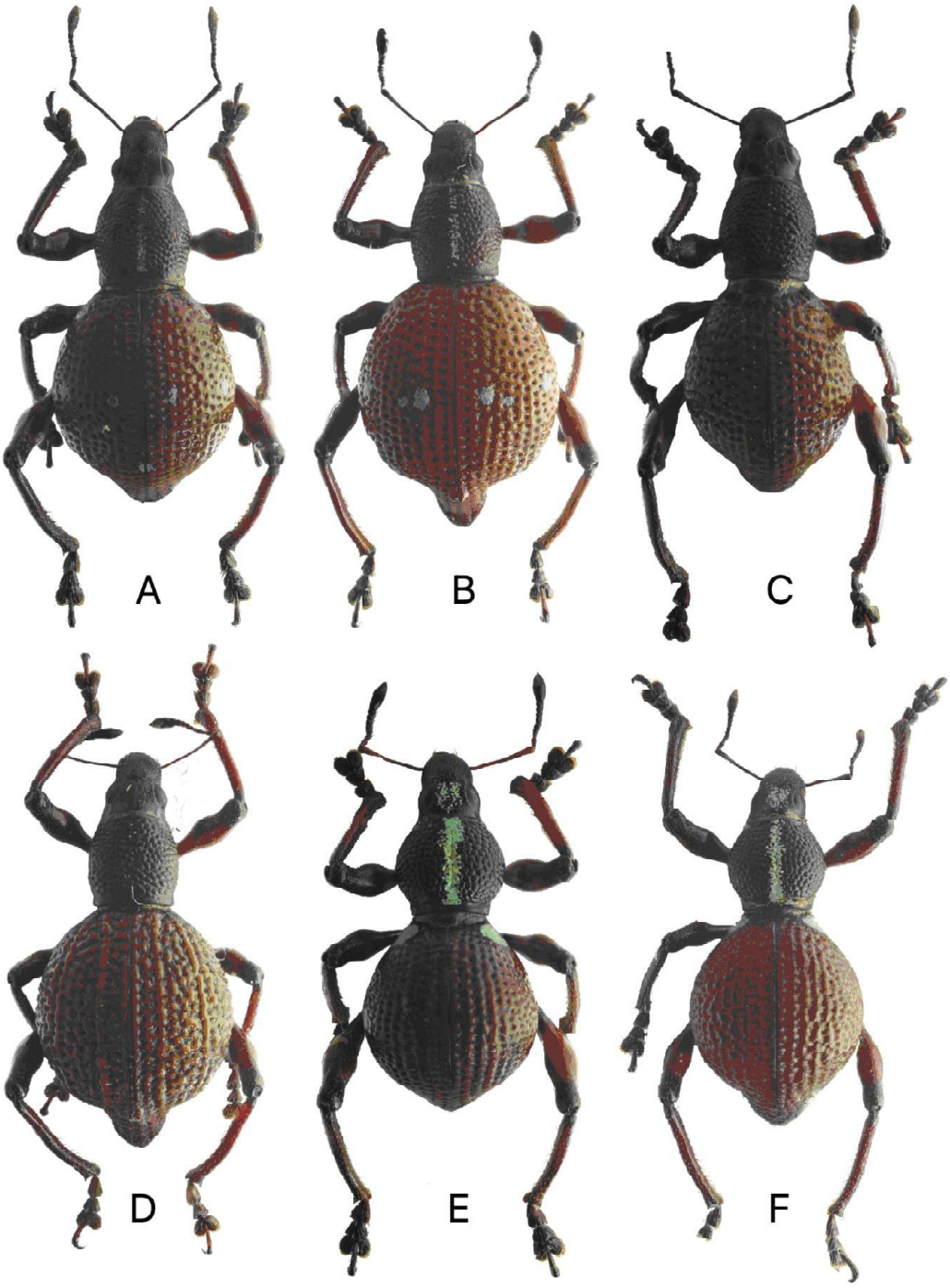

Fig. 1. Habitus of *Pseudapocyrtus* species: A - male, B – female of *P. imitator* Heller, 1912; C - male, D – female of *P. productus* Heller, 1912; – of *P. exsectus* Heller, 1912

Fig. 2. A - *P. schandenbergi* Heller, 1912, B - *P. multimaculatus* Schultze, 1918, C - *P. apicatus* Schultze, 1922, D - *P. multianulatus* Heller, 1929

Material examined: 1ex.(Syntype) +9ex. from Polillo Island (MTD).
1 male ‘’PHILIPPINES / Luzon, Aurora, Dingalan / IV. 2018 / local collector leg.’’; 1 female same locality but V. 2018; 2 males same locality but X. 2018; 1 male, 3 females ‘’PHILIPPINES / Pollilo Island / X. 2018 / local collector leg.’’ (DUBC).

***6. Pseudapocyrtus multimaculatus* Schultze, 1918** (Fig. 2B)

Material examined: B&(Holotype) from Luzon, Ilocos Province (MTD).

***7. Pseudapocyrtus apicatus* Schultze, 1922** (Fig. 2C)

Material examined: female (Holotype) +1ex. from Luzon, Bontoc Province (MTD).

***8. Pseudapocyrtus catanduanensis* Schultze, 1922** (Fig. 3C - D)

Material examined: male (Holotype) +3ex. (Paratypes) +3ex. from Catanduanes Island (MTD).

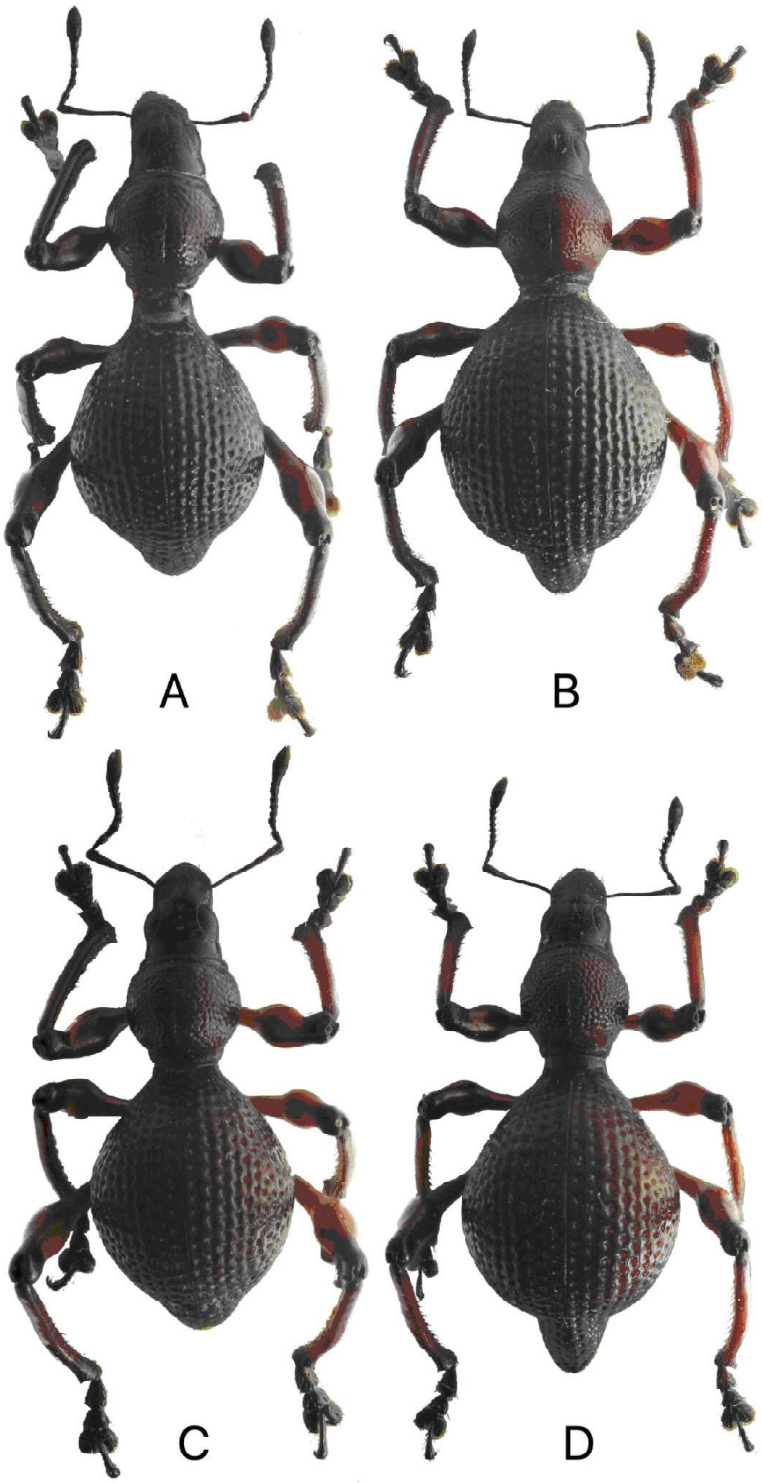

Fig. 3. *P. formicarius* Heller, 1912, A - male, B - female; *P. catanduanensis* Schultze, 1922, A - male, B - female

1 female ''PHILIPPINES / Camarines, Bicol / IX. 2017 / local collector leg.''; 1 female same locality, but XII. 2018; 1 male ''PHILIPPINES / Camarines / Lagonoy / IX. 2017 / local collector leg.''; 1 male same locality but XII. 2018; 1 male same locality but VI. 2019 (DUBC).

***9. Pseudapocyrtus multianulatus* Heller, 1929**
(Fig. 2D)

Material examined: female (Holotype) + 6ex. Paratypes + 3ex. from Luzon Island (MTD).

***10. Pseudapocyrtus legorskyi* Link & Zettel, 2012**

Material examined: 2ex. (Paratypes) from Luzon (MTD).

***Pseudapocyrtus madelaensis* sp. nov.**
(Figs 4A – B and 5)

Type material. Holotype, female: /PHILIPPINES / Luzon, Madela, Disimungal / X. 2015 / local collector leg. / (typed on a white rectangular label); /HOLOTYPE / Female / *Pseudapocyrtus madelaensis* Rukmane-Bārbale, 2021 / det. Rukmane-Bārbale, 2021''(typed on a red rectangular label).

Distribution. Philippines, Luzon Island, Madela Province.

Description. Female. Measurements: LB = 14.2; LR = 1.13; WR = 1.56; LP = 3.2; WP = 3.83; LE = 8.23; WE = 7.52. N = 1 for all measurements. Dorsal habitus as shown in (Fig. 4A).

Head, prothorax, antennae and tarsus black, elytra, underside and legs red. Markings of shiny, metallic green, round to recumbent unevenly dispersed rare scales on prothorax dorsally, rest of boby without shiny scales.

Head moderately punctured, pubescent, lateral parts smooth. Eyes small, flat, unprominent from the outline of the head, peak just in the middle. Forehead 1.8 times as wide as eye width, nearly flat, dosrally with longitudinal medial groove from base to subapical part. Rostrum strongly pubescent, WR/LR = 1.38, dorsally bulging, with moderate transverse groove that does not reach inner edge of each eye. Antenna mingled with long, light hairs; scape widened apically; basal antennomere three times as long as wide, widened apically, 1.5 times longer than antennomere II; antennomere II 2 times as long as wide, longer than antennomere III; antennomeres III - VI subequal in size, same length and width, shorter than antennomere VII; antennomere VII subequal in size. Club nearly two times shorter than antennomeres I - VII together, nearly three times as long as wide.

Prothorax wrinkled, nearly globular, WP/LP = 1.19, disc with medial longitudinal groove; in dorsal view widest just after the middle; anterior edge slightly curved apically, posterior edge with subbasal groove, curved apically. Elytra strongly plumped, LE/WE = 1.09, strongly punctured, pubescent, each elytron dorsally with three longitudinal furrows; in dorsal view strongly widened from base to subbasal part, evenly widened to widest middle, gradually decreased to subapical part, apex raised; in lateral view rised to subbasal part, gradually widened to widest just before the middle, then gradually decreased, apex strongly elongated, curved downwards; LE/LP = 2.57, WE/WP = 1.96. Coxa and femur pubescent, tibia and tarsus mingled with light, longer hairs; apical part of femur darker, nearly black.
Female genitalia as illutrated in (Fig. 4B).
Male unknown.

Differential diagnosis. The new species can be easily distinguished from rest of the species by shape of elytra dorsally: strongly widened, apex less raised and wider, and additional three furrows on each elytron that are not present for any

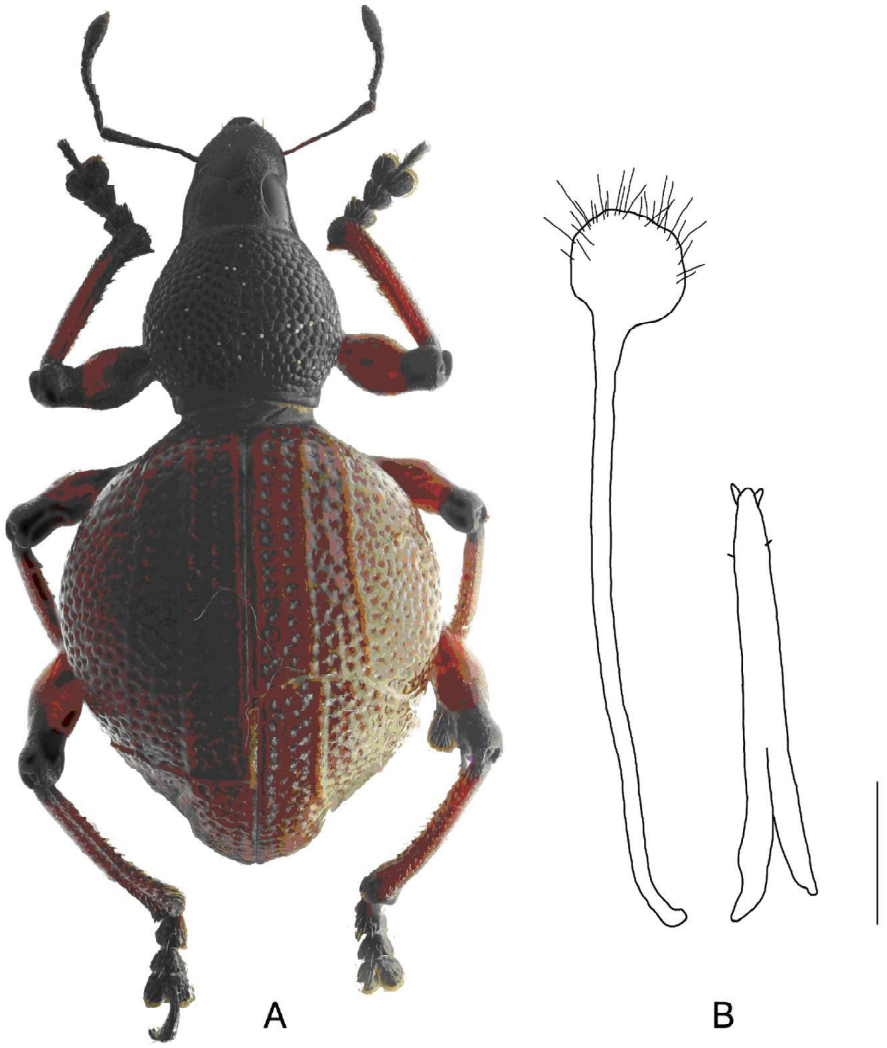

Fig. 4. Habitus and genitalia of *P. madelaensis* sp. nov. Holotype, female

other species; laterally apex strongly elongated and curved downwards, much bigger than in rest of the known species (Fig. 5). Eyes are strongly flattened compared to rest of the species

Etymology. The species name is dedicated to geographic locality where species is originally reported.

***Pseudapocyrtus robertsstasinskisi* sp. nov.**
(Fig. 6A - B, 7A)

Type material. Holotype, Male: ''PHILIPPINES / Luzon, Ifugao, Banaue / VIII. 2016 / local collector leg.''(white rectangular label); ''HOLOTYPE / Male / *Pseudapocyrtus robertsstasinskisi* Rukmane-Bārbale, 2021 / det. Rukmane-Bārbale, 2021''(typed on a red rectangular label).

Paratypes (2 males, 1 female): 1B& ''PHILIPPINES / Luzon, Ifugao, Banaue / VIII. 2015 / local collector leg.'' (all on white rectangular labels); 1 male ''PHILIPPINES / Luzon, Mt. Province, Barlig / XI. 2015 / local collector leg.''; 1 female ''PHILIPPINES / Luzon, Mt. Province, Barlig / VIII. 2016 / local collector leg.''. All with additional red label: ''PARATYPE / *Pseudapocyrtus robertsstasinskisi* Rukmane-Bārbale, 2021 / det. Rukmane-Bārbale, 2021''.

Distribution. Philippines, Luzon Island, Ifugao and Mountain Provinces.

Description. Male. Measurements: LB = 12.2; LR = 1.22; WR = 1.46; LP = 3.05; WP = 3.05; LE = 6.46; WE = 5.85. N = 1 for all measurements. Dorsal habitus as shown in Fig. 6A.

Body black, shiny, without scally markings. Head punctured, slightly pubescent, space between eyes slightly wrinkled, lateral parts smooth. Eyes rather strongly prominent from the outline of the head, peak slightly after the middle. Forehead 2.6 times as wide as eye width, nearly flat, dorsally with longitudinal medial groove from subbasal part of ferehead to subapical part. Rostrum bulging dorsally, in dorsal contour slightly widened from apex to base, WR/LR = 1.19; without transverse groove. Basal antennomere 2.2 times as long as wide, 1.5 times longer than antennomere II; antennomere II 1.8 times as long as wide, 2.5 times longer than antennomere III; antennomeres III - VII subequal in size, nearly same lenght and width. Club less than two times shorter than antennomeres I - VII together.

Prothorax subcylindrical, LP/WP = 1, disc with very shallow medial groove; in dorsal view widest just at the middle; anterior edge strongly curved apically, posterior edge with very weak subbasal groove, strongly curved apically. Elytra with rows of deep punctures,dispersed in even intervals, LE/WE = 1.1, in dorsal view gradually widened to widest middle, then evenly decreased to apical 1/2, then stronly decreased to just after the apical 1/2, then straightened and slightly decreased to apex; each elytron at subapical part with moderate impression; LE/LP = 2.11, WE/WP = 1.91. Coxa and femur nearly smooth, with very slight pubescence, apical part of femur wrinkled; tibia pubescent in all lenght and with longer light hairs at subapical part.

Genitalia as illustrated in Fig. 7A.

Female. Measurements: LB = 12.5; LR = 1.12; WR = 1.5; LP = 3.12; WP = 3; LE = 7.62; WE = 6. WR/LR = 1.33; LP/WP = 1.04; LE/WE = 1.27; LE/LP = 2.45; WE/WP = 2. N = 1 for all measurements. Dorsal habitus as shown in Fig. 6B.

Rostrum and head more strongly pubescent, less wrinkled. Anterior and posterior edge of prothorax nearly straight. Apex of elytra more strongly expressed, shape conical, not cutted as in males; each elytron at subapical part without impression. Legs more strongly pubescent, with long, light hairs at all parts. Otherwise essentially as in males.

Differential diagnosis. The new species can be easily distinguished from the rest of the species by completely black body without any scally markings (in *P. imitator* Heller, 1912, *P. productus* Heller, 1912; *P. exsectus* Heller, 1912 and *P. multipunctatus* Heller, 1929 elytra are reddish; in *P. catanduanensis* Schultze, 1922; *P. formicarius* Heller, 1912 and *P. legorskyi* Link & Zettel share reddish prothorax, and all otherspecies have scally markings on prothorax and elytra). The new species has rahter big eyes, that are strongly prominent from the outline of the head and big-

Fig. 5. Elytral apex of *P. medelaensis* sp. nov.; lateral view

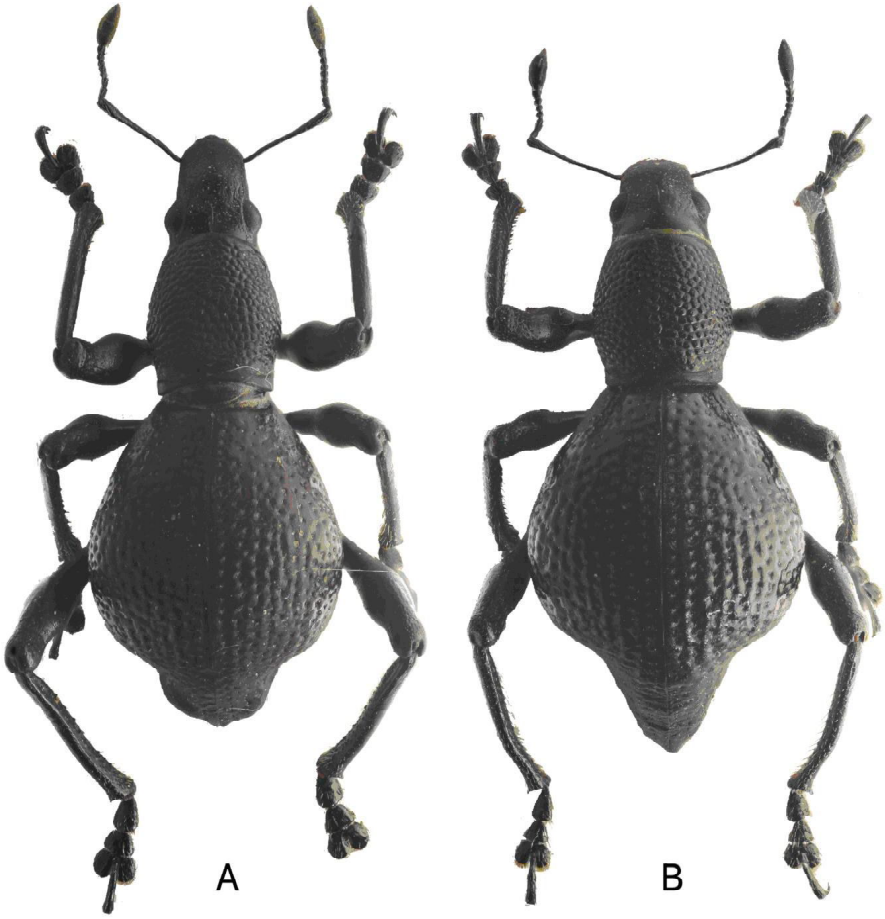

Fig. 6. Habitus of *P. robertsstasinskisi* sp. nov., A - male, B – female; dorsal view

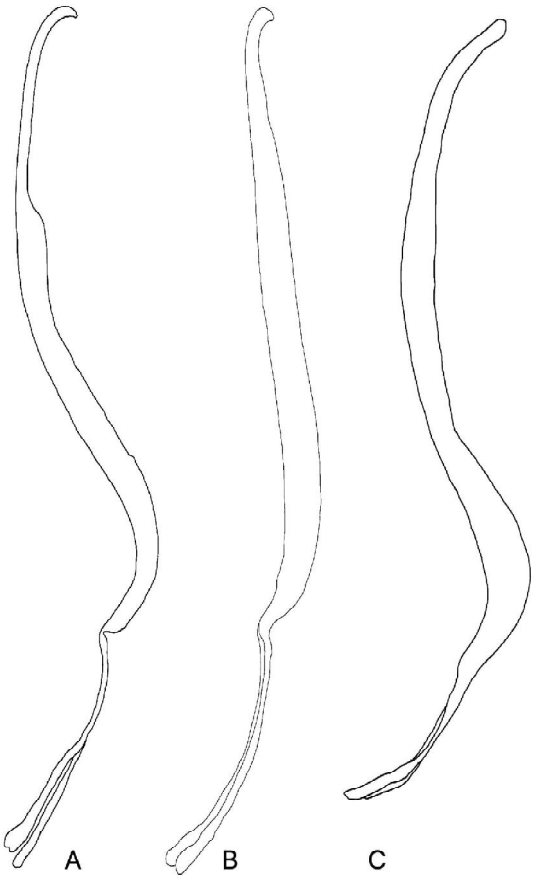

Fig. 7. Lateral view of aedegus: A - *P. robertsstasinskisi* sp. nov., B - *P. exsectus* Heller, 1912, C - *P. formicarius* Heller, 1912

ger than in the rest of the species. Additionally the new species has rather short and wide rostrum, which usually is longer than wide in rest of the species.

Etymology. The new species is named after briliant Latvian doctor Roberts Stašinskis, who helped our family to get trought dark times and saved our lifes. We are more than gratefull for professionalism, straight explanation of situation and best possible decisions.

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