

## First finding of the genus *Paramaechidius* Frey, 1969 from the Indonesian province Maluku (Coleoptera: Scarabaeidae: Melolonthinae)

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*Paramaechidius agnellus* spec. nov. is described from Seram Island (Maluku province, Indonesia). It is very similar to *P. pauxillus* (Heller, 1910) and *P. speciosus* Frey, 1969 in appearance, but can be easily distinguished from these species by the structure of the aedeagus. The genus *Paramaechidius* is recorded outside of New Guinea and the nearby islands for the first time.

Key words: Maechidiini, *Paramaechidius agnellus* spec. nov., Moluccas, Indonesia

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### INTRODUCTION

The maechidiine genus *Paramaechidius* Frey, 1969 contains 8 species distributed on New Guinea and adjacent islands of Waigeu and New Britain (Frey, 1969). During my sampling trip to Seram (= Ceram) Island in southern Moluccas I had collected a pair of beetles belonging to this genus. At first glance these specimens are similar to the widely distributed and highly variable New Guinean species *P. pauxillus* (Heller, 1910); however, an examination of the male genitalia confirms their separation. Only two maechidiine species were formerly described from Wallacea: *Maechidius peregrinus* Lansberge, 1886 (southern Celebes) and *M. moluccanus* Moser, 1920 (Moluccas: Ceram and Gorom) (Lansberge

1886; Moser 1920), though several dozens species of this tribe have been described from Australia and New Guinea (Britton 1957; Frey 1969). However, it is probable that the diversity of Maechidiini on the East Indonesian islands between the Wallace's and Lydekker's Lines is largely underestimated because of a collection bias, and my current record confirms this speculation.

### MATERIAL AND METHODS

All the measurements of the entire specimens are based on the combined length of the head, pronotum and elytra measured individually. The following collections containing the Maechidiini specimens were studied for the

comparative analysis (their curators are listed in brackets).

cAP the author's working collection, Moscow, Russia

BM Natural History Museum, London, Great Britain [M. Barclay, M. Geiser]

NHMB Naturhistorisches Museum Basel, Switzerland [E. Sprecher-Uebersax, I. Zuercher]

SMTD Staatliches Museum für Tierkunde, Dresden, Germany [K.-D. Klass, O. Jaeger]

ZMB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany [J. Frisch, J. Willers]

ZMH Zoologisches Museum, Universität Hamburg, Germany [T. Dalsgaard]

## SYSTEMATIC PART

### *Paramaechidius agnellus*, sp. nov.

(Figs 1-5)

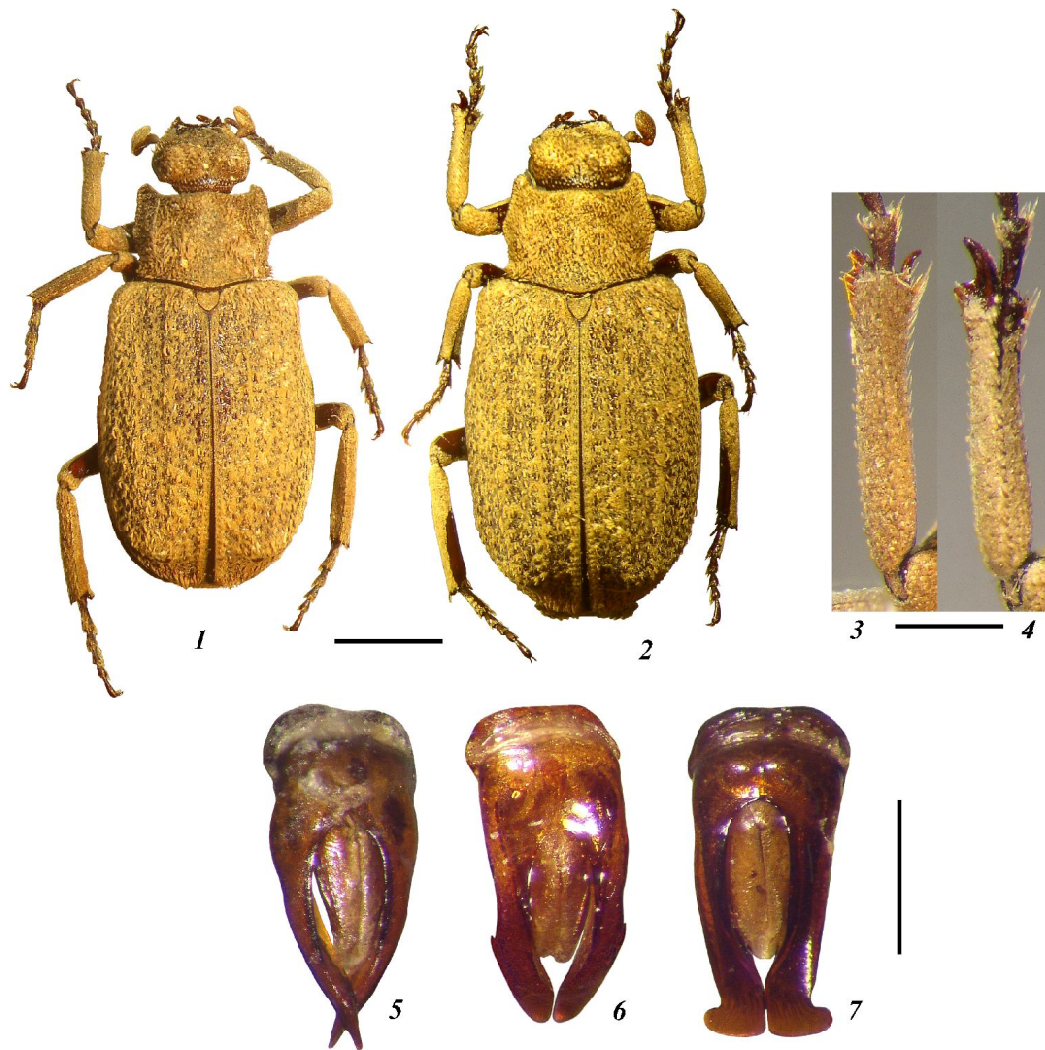
**Material.** Holotype, male (Fig. 1), Indonesia, Maluku prov., Seram I., Elpa Putih, ~ 40 km N Sahulau vill., kecamatan Waipia, on light, 11 XI 2011, leg. A.M. Prokofiev (cAP). Paratype, female (Fig. 2), same data as for holotype (cAP).

**Description of holotype.** Male. Length 6.5 mm, greatest width 3.0 mm. Body flattened. Reddish-brown, covered with pale grayish-fulvous tomentose coating, except glabrous and shining clypeus, vertex, ventral surface of head, inner sides of pronotal hypomera, mesosternum, apical umbones of elytra, inner sides of all tibiae and opposite sides of coxae, teeth of protibiae, last two tarsal joints and proximal halves of the remaining tarsal joints; setae pale grayish-fulvous.

Clypeus broadly arcuately concave, with outer angles produced as teeth, forming nearly straight angle with frons; posterior half of clypeus with small tubercle in center; frons with thick round protrusion above each eye; eyes large, somewhat

bulging. Pronotum transverse, width : length ratio = 1.5; anterior margin with deep trough-like concavity and with long and sharp, anteriorly produced anterior angles; posterior margin regularly convex. Sides of pronotum bisinuate, distinctly more concave in posterior half than in anterior half, not crenulated; posterior angles of pronotum conspicuous, obtuse. Dorsal surface of head and pronotum covered with dense round punctures (interspaces between punctures smaller than their diameter) bearing moderately long, thick, flattened setae, except punctures of glabrous areas and of irregular area on center of pronotal disc, which is tomentose but lacks setae. Labrum setose; mentum glabrous, pentagonal, bearing sparse fine punctures; apical maxillary palpomere glabrous, fusiform. Antennae 9-jointed, with 3-jointed club; scapus tomentose, with sparse long setae; 2<sup>nd</sup> to 6<sup>th</sup> joints of funicle glabrous; club tomentose, densely covered with short setae; length of club slightly shorter than length of funicle. Anterior edge of pronotal hypomera produced forwards to form blade-like free edge enclosing antennal pocket. Prosternal process large, flat, triangular. Setae of pronotal hypomera long and flattened below anterior and posterior angles of pronotum, otherwise much reduced.

Scutellum cardiform, with tomentose coating but lacking punctures and setae. Elytra slightly broadened at mid-length, with conspicuous humeral and apical umbones and three very indistinct longitudinal ridges on disc (innermost one being somewhat more pronounced); sutural margin only slightly raised; apical sutural angles of elytra not produced. Elytra densely covered with annulate setigerous punctures; setae moderately long, thick, flattened along basal and apical margins of elytra, but more rounded in cross-section on disc. Propygidium covered with elytra, very finely and shallowly punctured, glabrous, tomentose along distal margin only. Pygidium densely punctured, punctures deep, round to oblong, interspaces between punctures much smaller than their diameter. Punctures of the middle third of pygidium lacking setae, while



Figs 1-7. *Paramaechidius* spp.: 1-5 - *P. agnellus* spec. nov. (1 - male, holotype; 2 - female, paratype; 3 - protibia of male; 4 - protibia of female; 5 - aedeagus, frontal view); 6 - *P. pauxillus* (Hell.), Dutch New Guinea: Cyclops Mts., Sabron 2,000 ft.vi.1936 (BM), aedeagus, frontal view; 7 - *P. speciosus* Frey, holotype, New Guinea: Madang Dist., Finisterre Mts. Budemu c. 4000 ft, 15-24.x.1964 (BM), aedeagus, frontal view. Scale bars: 1, 2 - 1.5 mm (common bar); 3-7 - 1.0 mm (bars are common for 3 and 4 and for 5-7).

those of the lateral thirds bearing moderately long, thick and flat setae; apical margin of pygidium bearing a row of thin villiform setae. Mesosternum densely punctured; punctures deep, round, lacking setae. Metasternum moderately densely punctured (interspaces between punctures somewhat exceeding their

diameter); punctures setigerous, those on sides bearing very short setae not exceeding diameter of the corresponding puncture in length; punctures on disc of metasternum bearing setae much longer than their diameter; all setae flat, those on sides almost round in shape; setae on disc distinctly expanded distally; mid-line of

disc with smooth but tomentose longitudinal stripe. Sides of abdomen strongly carinate; abdominal ventrites punctured similarly to that on metasternum; none ventrites fused to each other. Punctures of all but last visible abdominal ventrite bearing minute setae except a small area just along mid-line of abdomen where setae being much longer, similar in length to those on disc of metasternum; similar long setae being developed on uppermost reaches of penultimate abdominal ventrite also; last abdominal ventrite bearing such long setae on all its surface.

Legs thin, moderate in length. Protibiae with two minute closely spaced apical teeth; spur small, curved, attached at anteromedial angle of protibia (Fig. 3). Meso- and metatibiae with two spurs; longer spur of metatibiae twice shorter than depth of posterior margin of metatibia. Dorsal and ventral sides of meso- and metatibiae weakly carinate. Setae on tarsal joints sparse, not forming tufts along ventral surface of joints. Claws simple, with membranous appendages (pulvilli).

Aedeagus, as on Fig. 5.

**Female (paratype).** Length 7.0 mm, greatest width 3.3 mm. Most of surface of clypeus covered with tomentose coating. Pronotum fully covered with setigerous punctures; area without setae on disc of pygidium much smaller than in male. Teeth of protibiae better developed than in male, with apical tooth much longer; spur minute (Fig. 4). Longer spur of metatibiae slightly exceeding depth of posterior margin of metatibia in length. All tarsi shorter than in male. Claws lacking pulvilli.

**Diagnosis.** The new species is similar to *P. pauxillus* and *P. speciosus* due to the presence of the almost complete tomentose coating of the integument and the elongated and flattened setae densely covering the dorsal surface of the body, the pygidium and the disc of metasternum; the arcuately concave clypeus with the tooth-like outer angles, and the horizontally oriented

sides of the pronotum. These three species can be separated only by the shape of the parameres of the male genitalia (Figs 5-7), which are distinctively longer and narrower in the new species, with the pointed and crossing tips.

**Etymology.** Named from “agnellus” (Latin), a lamb; noun in apposition.

### KEY TO THE SPECIES OF MAECHIDIINI KNOWN FROM WALLACEA

1a. Integument with tomentose coating; punctures of dorsal surface of body and of pygidium bearing flattened setae; outer angles of clypeus produced as teeth; frons with protrusions above each eye; sides of pronotum concave in posterior halves; teeth of protibia poorly developed, especially in males ..... *Paramaechidius agnellus*

1b. Integument lacking tomentose coating, shining; setigerous punctures bearing simple pointed setae; outer angles of clypeus not tooth-like; frons lacking protrusions; sides of pronotum without concavities along their posterior halves; teeth of protibia normally developed ..... 2

2a. Clypeus sparsely punctured (much sparser than frons), with anterior margin indistinctly concave; punctures of elytra smaller and sparser than of pronotum ..... *Maechidius moluccanus*

2b. Clypeus punctured as dense as frons, with anterior margin triangularly indented; punctures of elytra larger than of pronotum and of similar density ..... *Maechidius peregrinus*

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