

A new species of the genus *Pentagonica* Schmidt-Goebel, 1846 from the Oriental Region (Coleoptera: Carabidae: Pentagonicini). “3rd Supplement to the genus *Pentagonica* Schmidt-Goebel in the Oriental, Papuan, and Australian Regions”

Martin BAEHR

Zoologische Staatssammlung, Münchhausenstr. 21, D-81247 München, Germany
e-mail: martin.baehr@zsm.mwn.de

Taxonomy, description, Coleoptera, Carabidae, Pentagonicini, *Pentagonica*, Malaysia

Abstract. A new species of the carabid genus *Pentagonica* Schmidt-Goebel, 1846 (Pentagonicini) is described from Malaysia: *Pentagonica cechovskyi* sp. nov. It belongs in the *ruficollis*-group of the genus which is characterized by dark head and elytra, but yellow, rufous, or pale brown pronotum lacking a transverse ridge at the base.

INTRODUCTION

By courtesy of J. Bašta, I received a specimen of the genus *Pentagonica* Schmidt-Goebel, 1846 from Malaysia which belongs to the *ruficollis*-group of this genus, in the sense of Baehr (2012), but turned out to represent a new species which is described in the present paper.

Because the Oriental-Australian species of the genus *Pentagonica* Schmidt-Goebel were recently revised (Baehr 2012, 2013, 2014), the distinction of the new species is rather easy.

MATERIAL AND METHODS

Format and style of the description, as well as measurements and ratios follow those used in my revision (Baehr, 2012). Measurements were made under a stereo microscope using an ocular micrometer. The body length was measured from the apical margin of the labrum to the apex of the elytra. The length of the prothorax was taken along the midline, the width of the prothorax base at the position of the posterior marginal seta, the width of apex between the most advanced points of the apex.

The habitus photograph was obtained with a digital camera using ProgRes CapturePro 2.6 and AutoMontage and subsequently was worked with Corel Photo Paint X4.

The holotype of the new species is located in the working collection of the author in Zoologische Staatssammlung, München (CBM).

ABBREVIATIONS

- > - larger or longer than
- < - smaller or shorter than

TAXONOMY

Genus *Pentagonica* Schmidt-Goebel, 1846

Pentagonica Schmidt-Goebel 1846: 47.

For additional citations see Baehr (2012: 7, 2013: 153, 2014: 110).

Type species. *Pentagonica ruficollis* Schmidt-Goebel, 1846, by subsequent designation (Andrewes 1939).

For extensive diagnosis of the genus see the revision (Baehr 2012). The genus is characterized by its pentagonal or trapezoidal pronotum, large, laterad markedly protruded eyes, non-sericeous, usually non-metallic elytra, which usually bear three minute setiferous punctures and which are at most minutely denticulate at their apex, and glabrous tarsal claws. It covers as well vividly coloured as uniformly yellow or black species.

This large genus is distributed in tropical, subtropical, and warm temperate regions of all continents except Europa, but mainly circumtropical areas in the Oriental, Papuan-Australian, Ethiopic, and Neotropical Regions. Two species, however, occur in the U.S.A., several species also in the eastern Palaearctic Region (Japan, China, Taiwan, Far Eastern Siberia). At the present state of knowledge, in the Oriental-Papuan-Australian Region (including the eastern Palaearctic), 34 species were acknowledged, of which 28 were recorded from Asia. Fewer species (including some widely distributed ones) were enumerated from New Guinea (6 species), Australia including Norfolk Island (7 species), New Caledonia (3 species), New Zealand (1 species), and certain islands in Micronesia (4 species).

This picture, however, needs some revaluation, not only because additional species may exist in particular in Australia, New Guinea, and Indonesia, but also because a couple of old records may be based on incorrect determinations, and moreover, because species of *Pentagonica* also exist in areas outside the mentioned range, e.g. on Solomon Islands.

According to certain external character states, e.g. shape and structure of pronotum, shape of elytra, size of eyes, microsculpture of elytra, and shape and structure of the aedeagus, the species treated in Baehr (2012) were divided into several species-groups which are confidently believed to constitute monophyletic units. Within these groups, species are differentiated to quite different extents. Whereas in some groups there are differences in genitals and external morphological characters are rather distinct in other groups, the distinction of species is almost exclusively based on the shape and structure of the male aedeagus. The grade of morphological distinctness is believed to depend on various stages of species the differentiation and thus, on the age of the respective group and its species. To some extent, the distribution of the species-groups also is different: whereas some groups prevail in the northern parts of the genus range, some others mainly occur in the southern part.

***Pentagonica cechovskyi* sp. nov.**

(Fig. 1)

Type material. Holotype (♀): MALAYSIA, W. KELANTAN, 70 km NW of Gua Mt. Chamah, 1900 m. Kampong P, 17.iv.-8.v.2014, Petr Čechovský lgt., (CBM).

Diagnosis. Distinguished from other species of the *ruficollis*- group that possess a yellow or rufous pronotum, by combination of rufous antenna that is only black at base, pale rufous legs, well striate, at apex, barely denticulate elytra, and comparatively wide pronotum, the lateral margins of which are not connected at base.

Description. Measurements. Length: 5.3 mm; width: 2.2 mm. Ratios. Width/length of prothorax: 1.72; width of prothorax/width of head: 1.11; length of eye/length of orbit: 2.8; length/width of elytra: 1.50; width of elytra/width of prothorax: 1.75; length/width of 6th antennomere: 3.1.

Colour (Fig. 1). Head and elytra black, pronotum rufous-brown, in middle slightly paler; lateral margin of elytra bright yellow; four basal antennomeres largely black, rest of antenna pale rufous; legs rufous but femora slightly darker, and tarsi paler; lower surface of prothorax pale rufous, rest of lower surface more or less dark brown to almost black; epipleurae of pronotum yellow to rufous, of elytra almost black.

Head (Fig. 1). Eye large, more than twice as long as orbit, evenly curved into orbit; upper surface in basal half with a wide and deep, transverse but concave impression; neck narrow, with a deep, narrow, transverse but convex prebasal impression; antenna very elongate, surpassing base of pronotum by > 3 antennomeres; median antennomeres 3 x as long as wide; antenna pilose from 5th antennomere; microreticulation of surface distinct but fine, about isodiametric, surface rather dull.

Pronotum (Fig. 1). Comparatively wide, apex almost straight; apical half of lateral margin convex, margin behind middle obtusely angulate; near base not angulate, slightly convex; the raised lateral border almost reaching base, without forming a transverse prebasal ridge; however, prebasal sulcus fairly deep; marginal sulcus rather deep, moderately wide, widened towards base; disk comparatively convex, but median line rather deep; microreticulation distinct, fine, almost isodiametric, surface rather dull.



Fig. 1. *Pentagonica cechovskyi* sp. nov. Habitus (Body length: 5.3 mm).

Elytra (Fig. 1). Moderately elongate, slightly widened apicad, lateral margin gently convex. in basal half slightly oblique; Humerus rounded; apex faintly sinuate, lateral angle rounded, sutural angle with a minute denticle; surface rather convex but on disk depressed; striae complete, in basal half shallow, near apex more distinctly impressed; finely punctate; intervals slightly raised, particularly towards apex; microreticulation distinct but fine, isodiametric; surface rather dull. Metathoracic wings complete.

Lower surface. Metepisternum slightly >1.5 x as long as wide. Terminal abdominal sternum in female quadrisetose.

Legs. Narrow and elongate; tarsal claws smooth; squamosity of male protarsus unknown. Legs quite similar to those of other species of the *ruficollis*-group.

Male genitalia. Unknown.

Female gonocoxites: Partly damaged, but apparently much like those of *P. ruficollis* and related species.

Variation. Unknown.

Distribution. Malaysia. Recorded from the type locality only.

Differential diagnosis. See the key below.

Key to the species of the *ruficollis*-group of the genus *Pentagonica*. (partly repeating the key in Baehr (2012)). When using this key, No. 19. is easily reached.

- 19. Antenna completely black or dark piceous, or black or brown from 4th or 5th antennomere (in that case apical antennomeres always darker than the basal ones).....(20)
- Antenna not completely black, yellow or pale rufous from 2nd or 5th antennomere, apical antennomeres always paler than the basal ones.....(19a)
- 19a. Antenna pale rufous from 5th antennomere; femora not contrastingly dark and body length 5.3 mm and lateral margins of pronotum not connected in front of basal margin, and pronotum wide, ratio width/length 1.72. Malaysia.....*cechovskyi* sp. nov.
- Antenna pale rufous from 2nd antennomere (sometimes 2nd-4th antennomere slightly darker than the apical antennomeres); either femora contrastingly dark, or body length < 5.0 mm, or lateral margins of pronotum connected in front of basal margin, or pronotum narrower.....(38)
- 38. As in Baehr (2012).

Etymology. The name is a patronym in honour of the collector, Petr Čechovský (Czech Republic).

ACKNOWLEDGEMENTS. My sincere thanks are due to J. Bašta (Brno, Czech Republic) for the kind gift of the specimen.

REFERENCES

- ANDREWES H. E. 1939: Papers on Oriental Carabidae. XXXV. On the types of some Indian genera. *The Annals and Magazine of Natural History* (11) 3: 128-139.
- BAEHR M. 2012: The genus *Pentagonica* Schmidt-Goebel in the Oriental, Papuan, and Australian Regions (Insecta, Coleoptera, Carabidae, Pentagonicipini). *Coleoptera* 15[2011]: 1-200.

- BAEHR M. 2013: New species of the genus *Pentagonica* Schmidt-Goebel from the Oriental Region (Coleoptera, Carabidae, Pentagonicipini). Supplement to "The genus *Pentagonica* Schmidt-Goebel in the Oriental, Papuan, and Australian Regions (Coleoptera, Carabidae, Pentagonicipini)". *Spixiana* 36: 153-159.
- BAEHR M. 2014: New species of the genus *Pentagonica* Schmidt-Goebel from the Oriental Region (Coleoptera, Carabidae, Pentagonicipini). 2nd supplement to "The genus *Pentagonica* Schmidt-Goebel in the Oriental, Papuan, and Australian Regions". *Mitteilungen der Münchner Entomologischen Gesellschaft* 104: 109-119.
- SCHMIDT-GOEBEL H. M. 1846: *Faunula Coleopterorum Birmaniae, adjectis nonnullis Bengaliae indigenis. I. Coleoptera. Familia prima*. Prag: G. Haase Söhne, 1-94.

Received: 5.9.2018
Accepted: 20.10.2018
Printed: 31.3.2019

