Studies and Reports
Taxonomical Series 14 (1): 137-143, 2018

Trichioaparammoecius angusi, a new genus and new species from China (Coleoptera: Scarabaeidae: Aphodiinae)

Łukasz MINKINA

os. Polana Szaflarska 4/39, 34-400 Nowy Targ, Poland
e-mail: klekel@interia.eu

Taxonomy, new genus, new species, Scarabaeidae, Aphodiinae, Aphodiini, *Trichioaparammoecius*, China

Abstract. Based on single male specimen of Aphodiini from China a new genus and a new species *Trichioaparammoecius angusi* gen. nov., sp. nov. are described. The diagnosis of the new genus and species are given. Photographs of the new taxon are presented.

INTRODUCTION

During examination of materials from my collection I found a single specimen of undescribed Aphodiini species from China, which didn`t quality for any known genus. At first glance new genus looks like *Aparammoecius* Petrovitz, 1958 with denticulate clypeus, but can be easily distinguished from it by a number of features mentioned in differential diagnosis.

MATERIAL AND METHODS

The specimen was observed with a Nikon SMZ-U stereoscopic microscope. The photos published here were taken by the use of the Canon EOS 5D Mark III connected with Canon MP-E 65mm macro lens. Photographs were edited in Helicon Focus programme.

For morphological terms used in the description I followed Dellacasa et al. (2001).

The holotype of the new species is indicated by a red, printed label added to the same pin and bearing the status of the specimen, sex, its name, name of the author, month and year of the designation.

The specimen and its aedeagus are glued with a water-soluble solution of polyvinylic acid, the epipharynx is sunk in Aqua-Mount by Thermo Scientific - medium soluble in water.

The holotype is deposited in the author's private collection, deposited in Institute of Systematics and Evolution of Animals in Krakow.

Addenda and remarks are found in brackets, separate label lines are indicated by slash (/), separate labels by double slash (//).

Trichioaparammoecius gen. nov.

Type species. *Trichioaparammoecius angusi* sp. nov. by the original designation.

Diagnosis. Small (3.6 mm), elongate, convex, rather shiny, clypeus, apex and sides of elytra with protruding, thin macrosetae.

Head and pronotum reddish-brown, elytra yellowish, on sides and before apex reddish brown, with blackish longitudinal spots. Head convex, wide with genae slightly more protruding than eyes. Clypeus anteriorly distinctly sinuate at middle, with distinct, upturned teeth on each side. Frontoclypeal suture scarcely visible, not tuberculate.

Pronotum rather distinctly convex, transverse. Anterior margin not bordered; sides and hind angles bordered; base bodered: clearly bordered nearby hind angles, rather weakly bordered in the remaining part, with very shallow, but quite wide groove before basal margin. Pronotum before hind angles very slightly sinuate.

Punctation of pronotum double. Scutellum small, triangular, with sides slightly ogival, with a few punctures in the middle. Elytra elongate, distinctly convex, with ten striae and ten intervals, and with small but distinct humeral denticles. Striae very distinct, rather wide basally, very wide before apex (only slightly narrower than intervals), with distinct, moderately large, transverse punctures. Punctures in striae distinctly indenting the margins of intervals basally, and only very slightly indenting the margins of intervals before apex. Intervals rather shiny, with microreticulation, distinctly convex, with simple punctation.

Protibia distinctly tridentate on outer margin; proximally faintly serrulate. In male, apical spur of protibia downwardly and outwardly bent. In male mesotibiae inferior apical spur downwardly kinked, bifurcate when visible from below, widely triangular when visible from the side. Metatibiae superior apical spur shorter than basal metatarsomere. Metatibia apex fimbriate with rather short spinules of progressively unequal length. In male meso-metaventral plate slightly concave.

Aedeagus elongate, rather broad, with paramere only slightly shorter than phallobasis, with apex distinctly downturned when visible from the side.

Epipharynx transverse, with sides widely rounded, anteriorly slightly sinuate on each side of corypha. Corypha protruding with four celtes; two middle distinctly longer. Epitorma shaped like an isosceles triangle. Tormae long.

Differential diagnosis. See differential diagnosis below.

Etymology. Combination of „Trichio-„ (from clypeus and elytra with macrosetae), and „Aparammoecius" (name of a most closely related genus). Masculine in gender.

Trichioaparammoecius angusi sp. nov.
(Figs. 1-9)

Type material. Holotype (♂): CHINA: N Yunnan [C2005-07] / Diqing Tibet Aut. Pref. / Deqin Co., Meili Xue Shan, E - side / 12 km SW Dequin, 2890 m. / 28°25.30´N/98°48.47´E [white printed label] // small creek valley, mixed forest / with bamboo, leaf liter, moss / dead wood, sifted, 09.06.2005 / leg. M. Schűlke [C2005-07] [white printed label]. // HOLOTYPE (♂) / *Trichioaparammoecius* gen. nov./ *angusi* sp. nov. / det. Ł. Minkina (12.2016) [red printed label].

Description of holotype (♂). Dorsum (Fig. 1). Total body length 3.6 mm. Body elongate, rather distinctly convex, head and pronotum except for somewhat paler extremities reddish-brown, elytra yellowish, on sides and before apex reddish brown, with blackish longitudinal spots, rather shiny.

Head (Fig. 8) wide, convex, rather shiny, with distinct microreticulation. Clypeus anteriorly bordered, distinctly sinuate at middle, with distinct, upturned teeth on each side, not notched before genae, on border with very short macrosetae. Genae widely rounded, slightly more protruding than eyes, with few very short macrosetae. Frontoclypeal suture almost invisible, not tuberculate. Epistome gibbous. Clypeus very distinctly punctate, punctation variable - in anterior part from moderately fine to rather coarse, very dense, frequently with adjacent punctures touching, structure of clypeus here is crinkled; in posterior part from rather coarse to coarse, dense, punctures which do not touch adjacent ones. The structure of the clypeus here is normal. In anterior part of clypeus, there are moderately long, protruding, very thin macrosetae, more clearly visible in lateral view (Fig. 9).

Pronotum transverse, wide, with the same width as base of elytra, widest in basal part, rather distinctly convex, shiny, with rather weak microreticulation, with double punctation: smaller, rather regular in size, moderately fine, rather dense, rather regularly spaced punctures, and larger ones, slightly irregular in size, very coarse, very dense but distinctly sparser in the anterior part. Anterior angles rounded; before hind angles very slightly sinuate. Sides and hind angles bordered, with few short, sparsely located macrosetae; anterior margin not bordered; base bodered: clearly bordered nearby hind angles, rather weakly bordered in the rest part, with very shallow, but quite wide groove before basal margin.

Scutellum small, trianglular, with sides slightly ogival, with a few small punctures in the middle; rather shiny; with rather weak microreticulation.

Elytra elongate, distinctly convex, widened posteriorly, widest behind middle, with ten striae and ten intervals, with small but distinct humeral denticles, with rather short, protrudes, very thin macrosetae at apex and on sides; rather shiny. Striae very distinct, rather wide basally, very wide before apex (only slightly narrowed than intervals), with distinct, moderately large, transverse punctures, shiny. Punctures in striae distinctly indenting the margins of intervals basally, and only very slightly intending the margins of intervals before apex. First and tenth, second and ninth, third and fourth, fifth, and seventh joined together before apex; sixth to eighth striae shortened before elytral base. Intervals rather shiny, with microreticulation, distinctly convex, with simple, irregularly spaced, fine punctuation.

Femora with rather irregularly spaced, irregular in size (from fine to rather coarse) punctation; some punctures bearing more or less distinct macrosetae. All femora rather matt with distinct microreticulation. Protibiae distinctly tridentate on outer margin; proximally

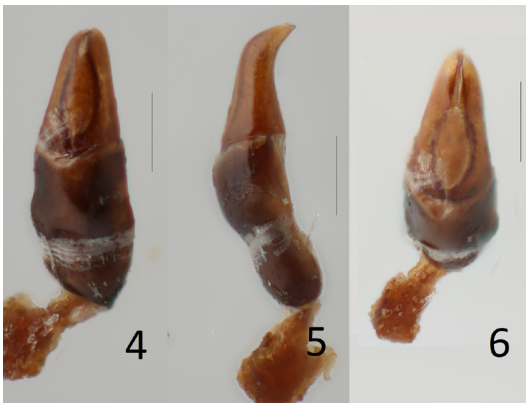
faintly serrulate, upper side smooth, shiny, with a few extremely small punctures, with downwardly and outwardly bent apical spur. Meso- and metatibiae with distinct transverse carinae, apically fimbriate, with rather short spinules of progressively unequal length (however when visible from above they seem to be short with equal length). Mesotibiae

Figs. 1-3. *Trichioaparammoecius angusi* sp. nov., ♂: 1- dorsal view; 2- ventral view; 3- lateral view. Figs. 1-3: scale line: 1.0 mm.

with inferior apical spur downwardly kinked, bifurcate when viewed from below, widely triangular when viewed from the side. Metatibiae with superior apical spur shorter than basal metatarsomere, latter nearly as long as next three combined. Claws small, narrow, but rather distinctly arcuate.

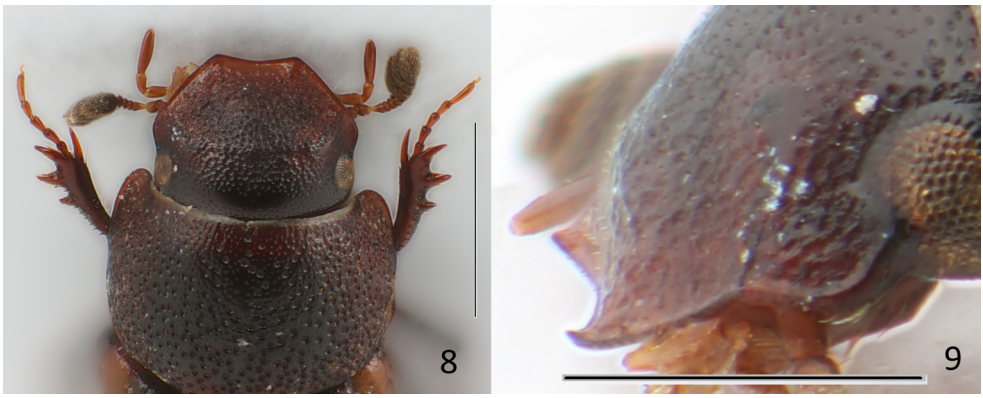
Macropterous.

Venter (Fig. 2). Meso-metaventral plate rather shiny, very slightly concave in middle, with irregular in size (from fine to rather coarse) and rather sparse, punctation, this denser medially, and with weak microreticulation. Sternites rather not shiny, very densely, moderately coarsely punctate; with distinct microreticulation. All punctures on sternites with long, very thin macrosetae. Pygidium with similar structure to sternites.



Figs. 4-6. *Trichioaparammoecius angusi* sp. nov., ♂: 4- aedeagus, dorsal view; 5- aedeagus, lateral view; 6- apex of aedeagus. Figs. 4-6: scale line: 0.2 mm.

Fig. 7. *Trichioaparammoecius angusi* sp. nov., ♂ - epipharynx. Fig. 7: scale line: 0.2 mm.



Figs. 8-9. *Trichioaparammoecius angusi* sp. nov., ♂: 8- head and protibiae; 9- head in lateral view. Fig. 8: scale line: 1.0 mm. Fig. 9: scale line: 0.5 mm.

Aedeagus (Figs. 4-6) elongate, rather broad, with paramere only slightly shorter than phallobasis, with apex distinctly downturned when visible from the side.

Epipharynx (Fig. 7) transverse, with sides widely rounded, anteriorly slightly sinuate on each side of corypha. Corypha protruding with four celtes; two middle distinctly longer. Epitorma shaped like an isosceles triangle. Tormae long.

Differential diagnosis. *Trichioaparammoecius* gen. nov., following the key to genera proposed by Dellacasa et al. (2001) could be classified as *Aparammoecius* Petrovitz, 1958, or if we decide that the pronotum is not grooved before basal margin (which is much more likely), as *Parammoecius* Seidlitz, 1891. The newly described genus seems to be closely related to both of the mentioned genera, but because of similar structure of elytral striae, shape of aedeagus, very shallow but still visible groove before basal margin of pronotum, shape of punctation of pronotum and head, and area of distribution, seems to be more closely related to *Aparammoecius* Petrovitz, 1958. From *Aparammoecius* Petrovitz, 1958 the new genus can be distinguished by: scutellum with a few small punctures in the middle (vs scutellum without punctures), head with macrosetation (vs head glabrous), mesotibiae inferior apical spur downwardly kinked, bifurcate in male when visible from below (vs mesotibiae inferior apical spur inwardly bent/hooked in males when visible from below), genae only slightly more protruding than eyes (vs genae usually distinctly more protruding than eyes), larger punctures of pronotum very coarse, very dense, distinctly sparser in anterior part of pronotum (larger punctures of pronotum very rarely so dense and so coarse, but in that case punctures are not sparser in anterior part of pronotum), structure of intervals slightly different: i.e. intervals highest in the middle, with rather flattened sides, not higher before apex of elytra (vs intervals highest in the middle, with rather rounded sides, usually higher before apex of elytra).

However, because it is much more likely to be identified as *Parammoecius* Seidlitz, 1891 I propose modification of point leading to *Parammoecius* Seidlitz, 1891 as below:

108 Anterior part of clypeus without macrosetae. Pronotum before hind angles widely rounded. Mesotibiae with inferior apical spur inwardly bent in males when viewed from below. Intervals with similar width on whole length, or only slightly wider apically than basally. Intervals highest in the middle, with rather rounded sides. Clypeus angulate or subdenticulate on sides. Aedeagus viewed from the side apically bent downwards, with projecting process on upper side. Larger punctures of head and pronotum much less coarse. ..... *Parammoecius* Seidlitz, 1891

\- Anterior part of clypeus with macrosetae. Pronotum before hind angles very slightly sinuate. Mesotibiae with inferior apical spur bifurcate in male when viewed from below. Intervals much wider apically than basally. Intervals highest in the middle, with rather flattened sides. Clypeus very distinctly denticulate on sides. Aedeagus when viewed from the side apically bent downwards without projecting process on upper side. Larger punctures of head and pronotum very coarse. .... *Trichioaparammoecius* gen. nov.

Distribution. China: Yunnan.

Etymology. The name of the new species is dedicated to my cordial, always helpful colleague - Robert Angus.

ACKNOWLEDGEMENTS. I would like to thank to Robert Angus for correcting my English, and comments.

REFERENCES

Balthasar V. 1963: *Monographie der Scarabaeidae und Aphodidae der palaearktischen und Orientalischen Region.* Tschechoslowakische Akademie der Wissenschaften Prag 1: 1-391.

Dellacasa G., Bordat P. & Dellacasa M. 2001: A revisional essay of world genus-group taxa of Aphodiinae (Coleoptera Aphodiidae). *Memorie della Società Entomologica Italiana* 79:1-482.

Dellacasa M., Dellacasa G., Král D. & Bezděk A. 2016: Tribe Aphodiini Leach, 1815. Pp. 98-155. In: Löbl I. & Löbl D. (eds.): *Catalogue of Palaearctic Coleoptera. Vol. 3. Revised and Updated Edition.* Leiden Boston: Brill, 983 pp.

Received 20.9.2017
Accepted: 10.10.2017
Printed: 31.3.2018