

***Tanyproctus (Tanyproctus) zuzanae* sp. nov.**
(Coleoptera: Scarabaeidae: Pachydemini) from Laos

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Abstract. A new pachydemine chafer beetle, *Tanyproctus (Tanyproctus) zuzanae* sp. nov., is described from the Louang Prabang Province in northern Laos. The description is based on external morphology including male genitalia.

INTRODUCTION

Pachydemini (also often as Tanyproctini, see Bouchard et al. 2011, Bezděk 2016 or Smith & Mondaca 2016, for details) is a species-rich but poorly studied tribe for which Lacroix (2007) listed altogether 119 genera and 564 valid species. According to a recent molecular study by Eberle et al. (2019), this group is believed to be polyphyletic. *Tanyproctus* Ménétériès, 1832 is a widely distributed genus, known from southeastern Europe (Greece and Transcaucasia), North Africa, Turkey, Near East including Sinai, Middle Asia, Afghanistan, Pakistan, Iran, Iraq to southwestern and central China, Myanmar and Thailand (see e.g. Král & Bezděk 2016, Lacroix 2007, Keith 2009). The relatively large genus with 104 formally described species (Lacroix 2007, Keith 2009, Schoolmeesters 2020) is recently classified into three subgenera (Lacroix 2007). They are *Tanyproctocera* Reitter, 1902, *Tanyproctus* and *Tetraproctus* lablokoff-Khnzorian, 1953. All so far known *Tanyproctus* species known from Southeast Asia (including species described in the present paper) could be classified into the nominotypical subgenus due to the following diagnostic characters: antennal club pentamerous (tetramerous in *Tetraproctus*) and outline of clypeus semicircular or trapezoidal with straight or emarginate anterior margin (anterior margin semicircular in *Tanyproctocera*).

Recently collected *Tanyproctus* material from the Louang Prabang Province in northern Laos, revealed another, undescribed species whose formal description is presented below. Until now, no information has been reported on the occurrence of any *Tanyproctus* in Laos.

MATERIAL AND METHODS

The material was examined with an Olympus SZ61 stereomicroscope, measurements were taken with an ocular grid. Specimens of the newly described species are provided with one red printed label "*Tanyproctus* | (*Tanyproctus*) | *zuzanae* sp. nov. | HOLOTYPE [or] PARATYPE ♂ | David Král det 2020". Verbatim label data are cited for the type material examined. Individual lines of every label are separated by a vertical bar ("|"). Information in quotation marks (" ") indicates the original spelling. Remarks and additional comments are found in brackets ("[]"). Morphological terminology used in the description mainly follows Král et al. (2012).

TAXONOMY

Type locality. Laos, Louang Prabang [Province], Xieng Ngeun [approximately 19°45'N 102°10'E].

Type material. Laos: Louang Prabang Province: Holotype, ♂, "LAOS, v.2000 | Louang Prabang | Xieng Ngeun [printed]". Paratypes: (2 ♂♂): same data as holotype. Material deposited in the National Museum, Prague, Czech Republic.

Description of holotype (♂). Body elongate, relatively slender; surface dark brown to black coloured, appendages and sutural elytral interval somewhat lighter; shiny; macrosetation pale to greyish (Fig. 1).

Head (Fig. 1). Labrum small, bilobed; lobes rounded, coarsely, irregularly punctate; whole clypeus outline semicircular, with distinctly upturned margin; surface remarkably depressed along margin and flat centrally; punctation coarse and dense, almost evenly distributed; punctures separated by approximately their diameter, each puncture bearing short, semierect seta. Genae narrow, rounded. Frontoclypeal suture feebly arcuate, considerably impressed. Eyes moderately large, only slightly exceeding genae externally in dorsal aspect; distance between eyes considerably larger than eye diameter in ventral aspect. Frons rather rugose; punctures separated by less than their diameter to confluent, bare. Antennae (Figs. 1-2) with 10 antennomeres; antennomere 2 short, approximately as long as wide; antennomeres 3-5 elongate. Club (Fig. 2) pentamerous, straight, longer than antennal shaft (antennomeres 1-5 combined), distinctly curved distally. Antennomeres 1-5 with sparse, long setae, club with sparse, short setae. Terminal maxillary palpomeres elongate, rounded apically, absent from depression, approximately of same length as palpomeres 2 and 3 combined.

Pronotum (Fig. 1) moderately convex, approximately circular. Anterior corners prominent, projecting over anterior margin, with rounded apex; lateral margin weakly emarginate to rounded posterior corners, posterior margin very broadly rounded. Anterior bead flat, narrow, distinctly widened medially, impunctate; lateral margins finely crenate, with row of long setae; basal margin not bordered, impunctate. Surface coarsely, slightly irregularly punctate, punctures separated by 2-4 their diameters, bare.

Scutellum approximately as wide as long, triangulate, sides broadly arcuate, apex acute; impunctate.

Elytra (Fig. 1) convex, slightly dilated posteriad, sutural angle rounded; striae excepting sutural stria missing; punctation coarse, dense, almost regular; punctures separated by 1-2 their diameters; each puncture bearing long, erect seta laterally and apically, disc bare. Sutural interval slightly convex, sutural stria with row of irregularly distributed punctures; lateral margin distinctly bordered with row of long, erect setae.

Macropterous.

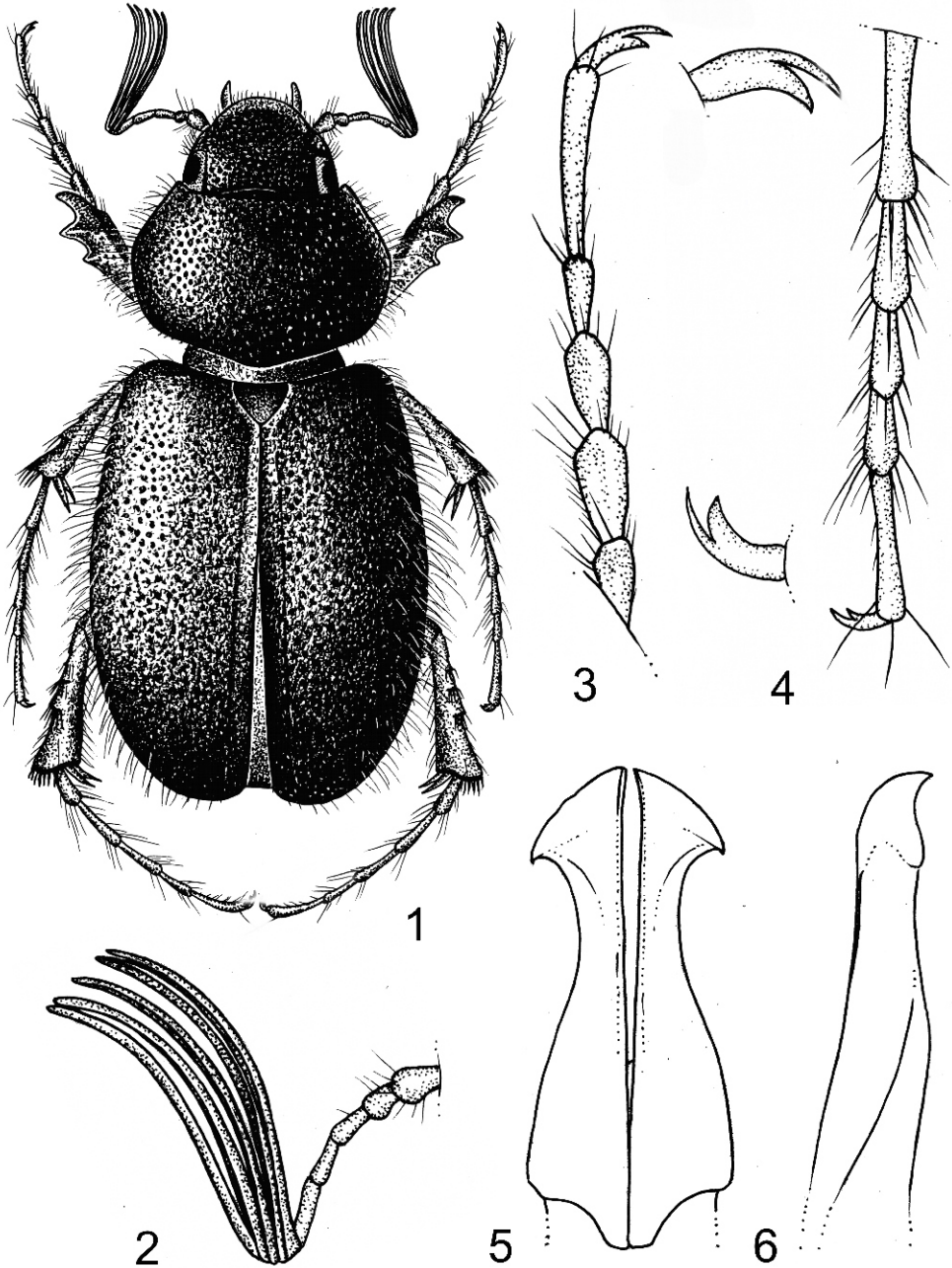
Legs. Femora moderately shiny, surface very sparsely, irregularly punctate, punctures bearing long, recumbent setae. Protibia tridentate; basal tooth weaker; terminal spine long, straight, acute apically, inserted against basal tooth. Meso- and metatibia slightly expanded apicad, with two setiferous transversal carinae. Mesotibial terminal spines equal in length, flattened, acute apically. Metatibial terminal spines equal in length, considerably flattened, acute apically. Protarsomeres 2-4 considerably dilated, protarsomere 2 with length-width ratio: 1:2 (Fig. 3). Mesotarsomeres 2-4 remarkably more slightly dilated than those of protibiae (Fig. 4); protarsomeres and mesotarsomeres 1-4 with shortly and densely setaceous pads ventrally; metatarsomeres covered with long sparse setae ventrally. Claws bifid, cleft in one half of length (Figs. 3-4).

Ventral surface of thorax with dense, long, recumbent setation.

Pygidium finely microsculptured; border complete; surface coarsely, almost regularly punctate, bare.

Abdominal ventrites almost remarkably coarsely and irregularly punctate, bare.

Male genitalia (Figs. 5-6). Aedeagus symmetrical; parameres slender, relatively long, only



Figs. 1-6. *Tanyproctus zuzanae* sp. nov, male holotype: 1- habitus; 2- left antenna; 3- left protarsus, with detail of claw; 4- left mesotarsus, with detail of claw; 5- parameres; 6- left paramere. 1-5- dorsal view, 6- lateral view. Not to scale.

slightly shorter than phallobase; distal part considerably lanceolate and pointed in dorsal view (Fig. 5) and also pointed apically in lateral view (Fig. 6).

Female. Unknown.

Measurements. Total body length 8.4-8.5 (holotype - 8.5) mm.

Variability. Both paratypes slightly differ in size (total body length: 8.4 mm) and with a little bit lighter coloured elytra.

Differential diagnosis. *Tanyproctus (T.) zuzanae* sp. nov. is morphologically very similar to the other Southeast Asian *Tanyproctus* species (Keith 2007, 2009, 2012). In the key to males of Southeast Asian Pachydemini (Keith 2007: 431), *T. (T.) zuzanae* sp. nov. will key to the couplet with *T. (T.) parvus* Chang & Luo, 1981. For the differentiation from this species see the complex of diagnostic characters in Table 1.

Four additional more recently described species from the same geographic region (Indochina, Sichuan and Yunnan) (Keith 2009, 2012) also seem to be morphologically similar to the new species. They are *Tanyproctus (T.) batangicus* Keith, 2009 (China: Sichuan), *T. (T.) gouverneri* Keith, 2012 (Thailand: Chiang Rai), *T. (T.) poggii* Keith, 2009 (China: Yunnan) and *T. (T.) sabatinellii* Keith, 2009 (Thailand: Fang).

Species *T. (T.) batangicus*, *T. (T.) poggii* and *T. (T.) sabatinellii* differ from the new species in anterior margin of clypeus emarginate (cf. Keith 2009, figs. 5a, 6a-b, 7), while *T. (T.) zuzanae* sp. nov. has anterior margin of clypeus semicircular. *Tanyproctus (T.) gouverneri* possesses basal antennomere of antennal club (antennomere 6) shorter than the following ones (cf. Keith 2012, fig. 2), while in the new species all club antennomeres are approximately of the same length (Figs. 1-2).

Etymology. The new species is named after the author's long-time friend Zuzana Čadová (Liberec, Czech Republic), an excellent illustrator, not just only of insects.

Collecting circumstances. Unknown.

Geographical distribution. Northern Laos, Louang Prabang Province.

Table 1. Differential characters of *Tanyproctus (T.) parvus* Chang & Luo, 1981 and *T. (T.) zuzanae* sp. nov.

species / character	<i>Tanyproctus parvus</i>	<i>Tanyproctus zuzanae</i> sp. nov.
body shape	stout	slender (Fig. 1)
punctuation of frons	finer and sparser	coarser and denser (Fig. 1)
shape of antennal club	shorter, almost straight (see Chang & Lu 1987: 56, fig. 2)	longer, distinctly curved distally (Figs. 1-2)
shape of pronotum	approximately pentagonal, lateral margin straight anteriorly, posterior corner obtuse-angulate	approximately circular, lateral margin weakly emarginate anteriorly, posterior corners regularly broadly rounded (Fig. 1)
punctuation of pygidium	finer and sparser	coarser and denser
shape of claws	cleft in one third of length (see Chang & Lu 1987, fig. 6)	cleft in one half of length (Figs. 3-4)
distribution	China (Jiangsu, Shandong)	Laos (Louang Prabang)

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