



NEW SPECIES of *DORYSTHENES* (*PARAPHRUS*) FROM LAOS (CERAMBYCIDAE, PRIONINAE)

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HERGOVITS, R. 2022. New species of *Dorysthenes* (*Paraphrus*) from Laos (Cerambycidae, Prioninae). *Entomofauna carpathica*, 34(2): 7-15.

Abstract: A subgenus *Paraphrus* Thomson, 1861 of *Dorysthenes* Vigors, 1826 (Coleoptera, Cerambycidae, Prioninae) is revised. A **new species** *Dorysthenes* (*Paraphrus*) *bucseki* **sp. nov.** is described from Laos. In addition, faunistic data are summarized and photographs are provided for all species of the subgenus *Paraphrus*. *Dorysthenes* (*P.*) *granulosus* is **first recorded** in Cambodia.

Key words: Oriental region, taxonomy, Laos, sp. nov.

INTRODUCTION

A longhorn beetle genus *Dorysthenes* Vigors, 1826 comprises seven subgenera: *Dorysthenes* Vigors, 1826; *Baladeva* Waterhouse, 1840; *Cyrtognathus* Dejean, 1835; *Dissosternus* Hope, 1833; *Lophosternus* Guérin-Méneville, 1844; *Paraphrus* Thomson, 1861 and *Prionomimus* Lameere, 1912 (DRUMONT & KOMIYA 2010; TAVAKILIAN & CHEVILLOTTE 2019). The species of *Dorysthenes* are distributed in Oriental and south-eastern part of Palaearctic region.

In this study is described a new species belonging to the subgenus *Paraphrus* from Laos. Diagnostic characters of subgenera distributed in Laos, are described in studies with original descriptions (WATERHOUSE 1840, GUÉRIN-MÉNEVILLE 1844, THOMSON 1860-1861). These subgenera may be distinguished according the keys after GRESSITT (1951) and GRESSITT & RONDON (1970):

1. Prosternum somewhat produced anteriorly and ventrally ***Baladeva***
– Prosternum not produced anteriorly, evenly convex below 2
2. Antennal tubercles widely separated ***Lophosternus***
– Antennal tubercles adjacent, narrowly separated ***Paraphrus***

The subgenus *Paraphrus* comprises 2 species: *D. (P.) granulosus* (Thomson, 1861), *D. (P.) planicollis* (Bates, 1878) (TAVAKILIAN & CHEVILLOTTE 2020). Types of these species are photographed in the monograph on the Internet Prioninae of the world (2022). Species of this subgenus are distributed in the Oriental region and south-eastern part of Palaearctic region.

MATERIAL AND METHODS

The description is kept concise, characters evident from illustrations are omitted. Locality data of examined specimens are cited verbatim (in quotes – “ ”). Type specimens of *D. (P.) bucseki* **sp. nov.** are labeled with the red label with status (holotype or paratype), the name of the species, its author and year, and with inscription R. Hergovits det. 2022.

The photos of adults were made with NIKON D700 by the author.

The study is based on examination of the types material from Belgium Bruxelles – Institut Royal des Sciences naturelles de Belgique Bruxelles, from the collection of Alain Drumont and the collection of Roman Hergovits.

Collection codens. **RHCS:** collection of Roman Hergovits, Slovak Republic; **ADCB:** collection of Alain Drumont, Belgium; **IRSNB:** Institut Royal des Sciences naturelles de Belgique Bruxelles.

TAXONOMY

***Dorysthenes* Vigors, 1826**

genus type: *Prionus rostratus* Fabricius, 1793

***Dorysthenes (Paraphrus)* Thomson, 1861**

subgenus type: *Cyrtognathus granulosus* Thomson, 1861

***Dorysthenes (Paraphrus) granulosus* (Thomson, 1861)**

(Figs 1A, B, 3C, F, 4B, F, 5B)

Cyrtognathus granulosus Thomson, 1861

Paraphrus granulosus Thomson, 1864

Material examined. Body length: 23–63 mm. 10 ♂, 2 ♀ (RHCS), “Laos centr., 27.4.-1.5.1997, 70 km NE Vientiane, Ban Phabat env., 150 m, N 18°16.1', E 103°10,9', R. Hergovits & M. Štrba leg.”, 1 ♂, 1 ♀ (RHCS), “Laos, Centr., Bolikhamxai pr., Ban Nape, N18°22,3' E105°09', 18.4.-1.5.1996 alt. 600m, R. Hergovits leg.”, 1 ♀, (RHCS), “LAOS centr., Khammouan prov., NAKAI env., 4.-8.5.1998, Route No 8, alt 560 ± 20m, N 17°42.8', E 105°08,9' (GPS). E. Jendek & O. Šauša leg.”, 1 ♂, 1 ♀ (RHCS), “Laos, Houaphanh prov., Mt. Phou Pane, 1200-1900m, Ban Saluei vill. env, 3.-13.5.2019, 20°12N; 103°59'E, R. & A. Hergovits leg.”, 1 ♂, 2 ♀ “LAOS centr., Khammouan pr., Ban Khoun Ngeun vill. env., 19.-23.4.2016, 300 m, R. & A. Hergovits leg.”, 2 ♂ (RHCS), “LAOS centr., Khammouan pr., Ban Khoun Ngeun vill. env., 17.5.-6.6.2007, 300m, R. Mlčoch & M. Štrba leg.”, 1 ♂ (RHCS) “Laos, Vientiane Prefecture, 50 km NE of Vientian, Ban Pako env., 18°9'32"N, 102°51'30"E, 9.-14.6. 2007, R. Mlčoch leg.”, 2 ♂ (RHCS), “Vietnam N., 15.5.-16.6.1991, 75 km NW from Hanoi, Tam Dao, E. Jendek leg.”, 1 ♂, 1 ♀ (ADCB), “Kiew

Taloun, 1360m, Mt. Phoudan, 19°35'877" N - 102°14'324" E, Louang Prabang prov. LAOS, 2.5.2017, leg. Mare Vandume", 1 ♂ (ADCB), "Cambodia, Pailin env. 2700 m, 6.-16.5.2006, S. Murzin leg."

Distribution. India: (Sikkim: Mungphu; UP: Tetara; Jharkhand: Kunbir; WB), Caren Hills, Lashio; China: Zhejiang, Fujian, Guangdong, Hong Kong, Hainan, Guangxi, Guizhou, Yunnan; Vietnam, Laos, Myanmar, Thailand (KARIYANNA et al 2017), Cambodia (R. Hergovits, **new location**).

***Dorysthenes (Paraphrus) planicollis* (Bates, 1878)**

(Figs 1C, D, 3D, 4D)

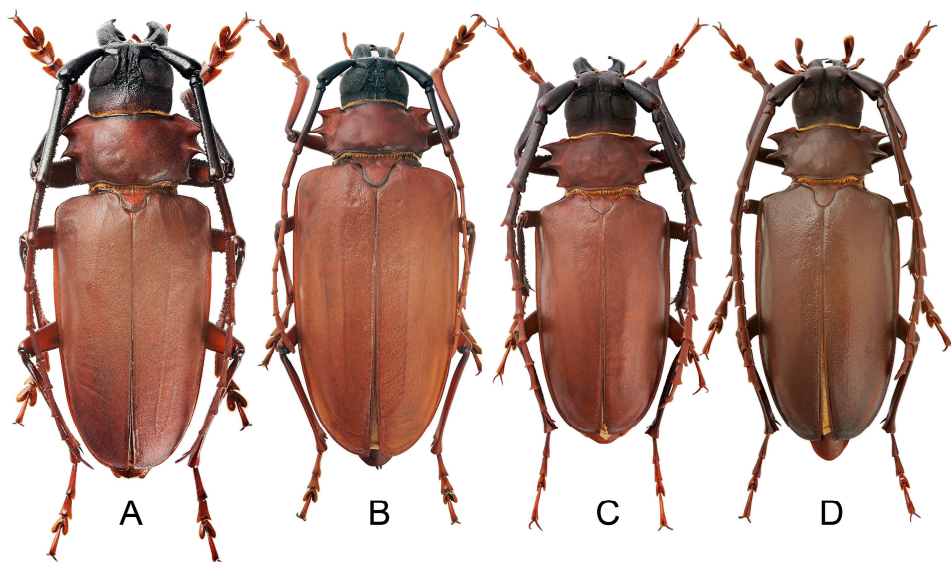
Cyrtognathus planicollis Bates, 1878

Dorysthenes (Paraphrus) planicollis var. *Weyersi* Lammeere, 1911

Logaeus gymnostethus Heller, 1940

Material examined. 1 ♂ (RHCS): "N. Borneo, Sabah, Crocker Range, Trus Madi, 4. 2016, leg. loc. coll.", 1 ♀ (RHCS): same locality, date "April 2018".

Distribution. Malaysia: Borneo: Sabah (Mount Kinabalu)



Figures 1A-D. *Dorysthenes (Paraphrus)* spp., habitus (dorsal view). **A:** *D. (P.) granulatus* ♂, 63 mm; **B:** *D. (P.) granulatus* ♀; **C:** *D. (P.) planicollis* ♂, 42 mm; **D:** *D. (P.) planicollis* ♀.

Dorysthenes (Paraphrus) bucseki sp. nov.

(Figs 2A, B, 3A, B, E, 4A, C, E, G, H, I, 5A)

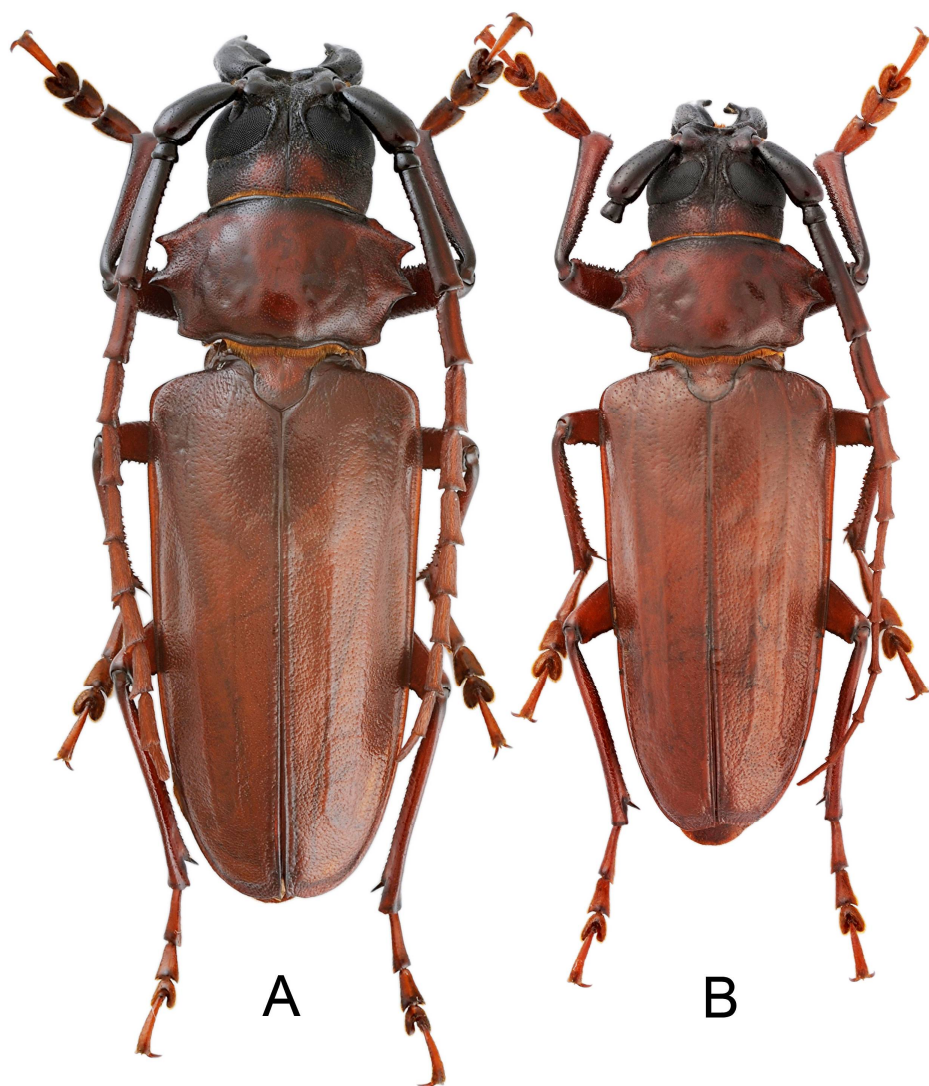
Type locality. Laos, Houaphanh province, Mount Phu Pane, altitude 1200-1900 m, Ban Saluei village, 20°12'N; 103°59'E.

Type specimens. Holotype ♂ (RHCS): “N Laos, Houaphanh prov., Mt. Phu Pane, 1200-1900 m, Ban Saluei vill. env, 3.-13.5.2019, 20°12'N; 103°59'E, R. & A. Hergovits leg.”.

Paratypes: 1 ♂ (RHCS): same locality and date as the holotype, 1 ♂ (ADCB): “Phouxang, Namo district, Oudomxay prov., LAOS, 10-26.6.2008, leg. Li Jingke”, and 2 ♂ (IRSNB) same locality as the holotype, “06/2011, Leg. S. Collard”.

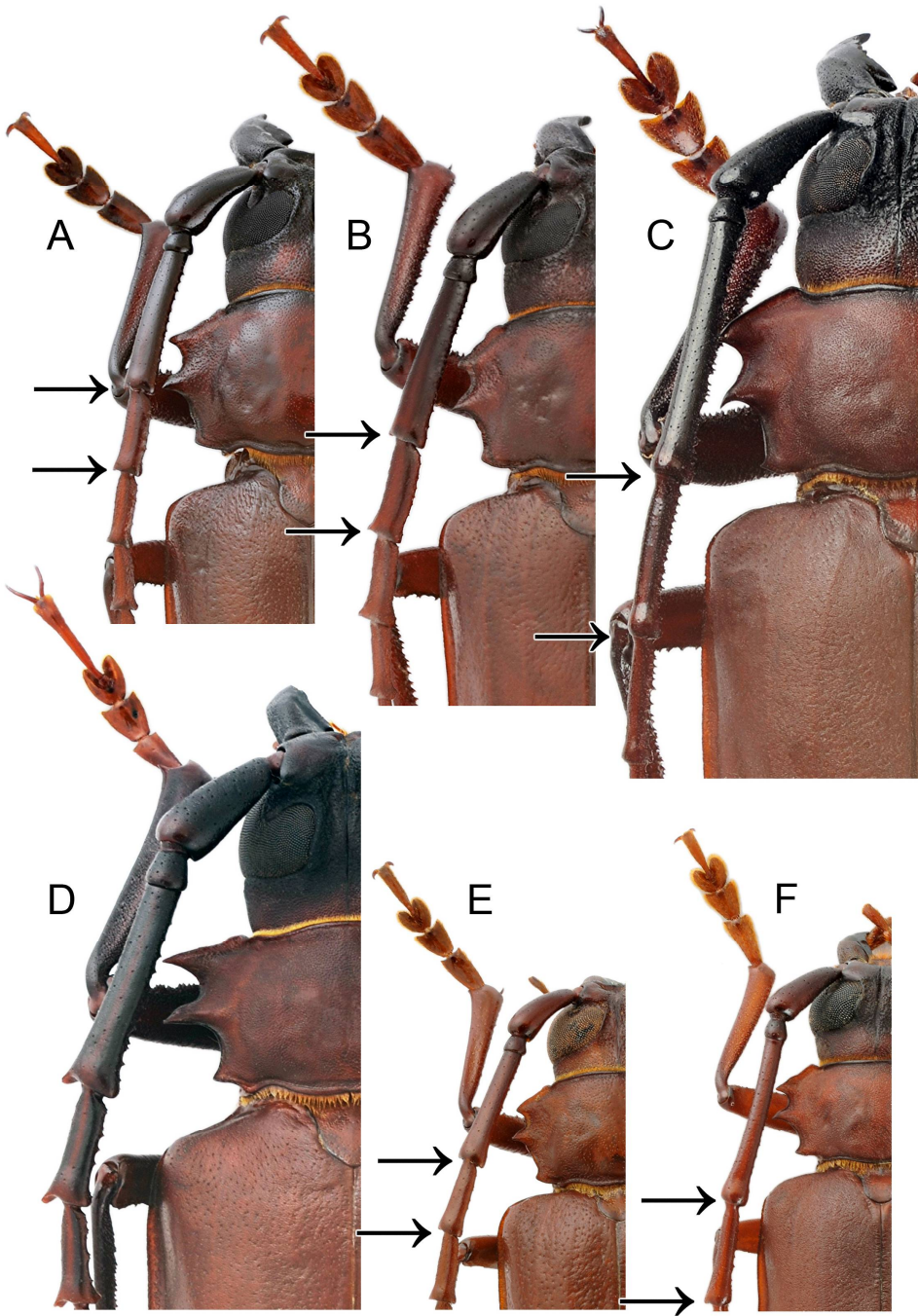
Description. Middle-sized species from the subgenus *Paraphrus* recorded to date in Laos only. **Body** brown-red, 45 mm long, 14.4 mm wide across humeri (holotype); prolonged, narrowing to the end of elytra (Fig. 2A). Eyes, mandibles, base of antennae, fortification surrounding inner part of eyes, first 2-3 antennomeres and joints of legs from dark-brown to black in colour. **Head** massive, with thick dots, indistinct medial furrow (Figs 2A, B). **Eyes** large, composed of two lobes, the lower twice the size extending to the lower part of the head. **Mandibles** black, basal half and inner side glossy, apical half strongly granular strong, slightly shorter than head with two tubercles on outer edge in apical half, and with asymmetric dentation on inner edge. **Palps** brown, last maxillary palpomere slightly dilated apically. **Clypeus** covered by yellow bristles. **Antennae** broad, ventral side with numerous nodules, very pronounced on antennomeres 1-3, following antennomeres with fine nodules; antennomeres 1-3 slightly punctate, glossy, 4th antennomere dull from above, glossy from below, antennomeres 5-11 with protruding rough veined, dull. The antennomere 11 on the apical third with signs of 12th antennomere. Antennae not reaching end of elytra (Fig. 2A). Lengths [mm] of antennomeres 1–11 equal to: 4.7 : 0.9 : 7.1 : 3.8 : 3.5 : 3.1 : 3.1 : 2.8 : 2.8 : 2.8 : 4.7. **Pronotum** (Figs 4A, C, E) oval, finely, sparsely punctated, glossy. Spikes at lateral margin short, minute. Length 7.8 mm, width 14.1 mm. In well grown individuals nearly as wide as elytra in humeral region. Spikes at lateral margin short, minute. Pronotum slightly dentate from apical spike up to apical margin. Median spike short, slightly bent ventrad (Fig. 4A). Bottom spike creates slightly rounded ledge of obtuse angle. Apical margin and posterior margin at connection with head and elytra covered by yellow-golden hairs (Fig. 4A). Scutellum oval to slightly pointed, finely dotted, like the head and pronotum (Figs 4A, C, E). Elytra finely punctated, with fine structure, glossy, prolonged, narrowing to the apex (Figs 2A, B). Each elytra with two weakly indicated ribs merging before the apex. Basal quarter of elytra, just behind shoulders, remarkably squeezed laterally (Figs 2A, B).

Ventral side of body densely punctate with rugose structure, metathorax, ventral side of head, prosternum and abdominal sternites nude, glossy. Metasternum covered by contiguous yellow hairs

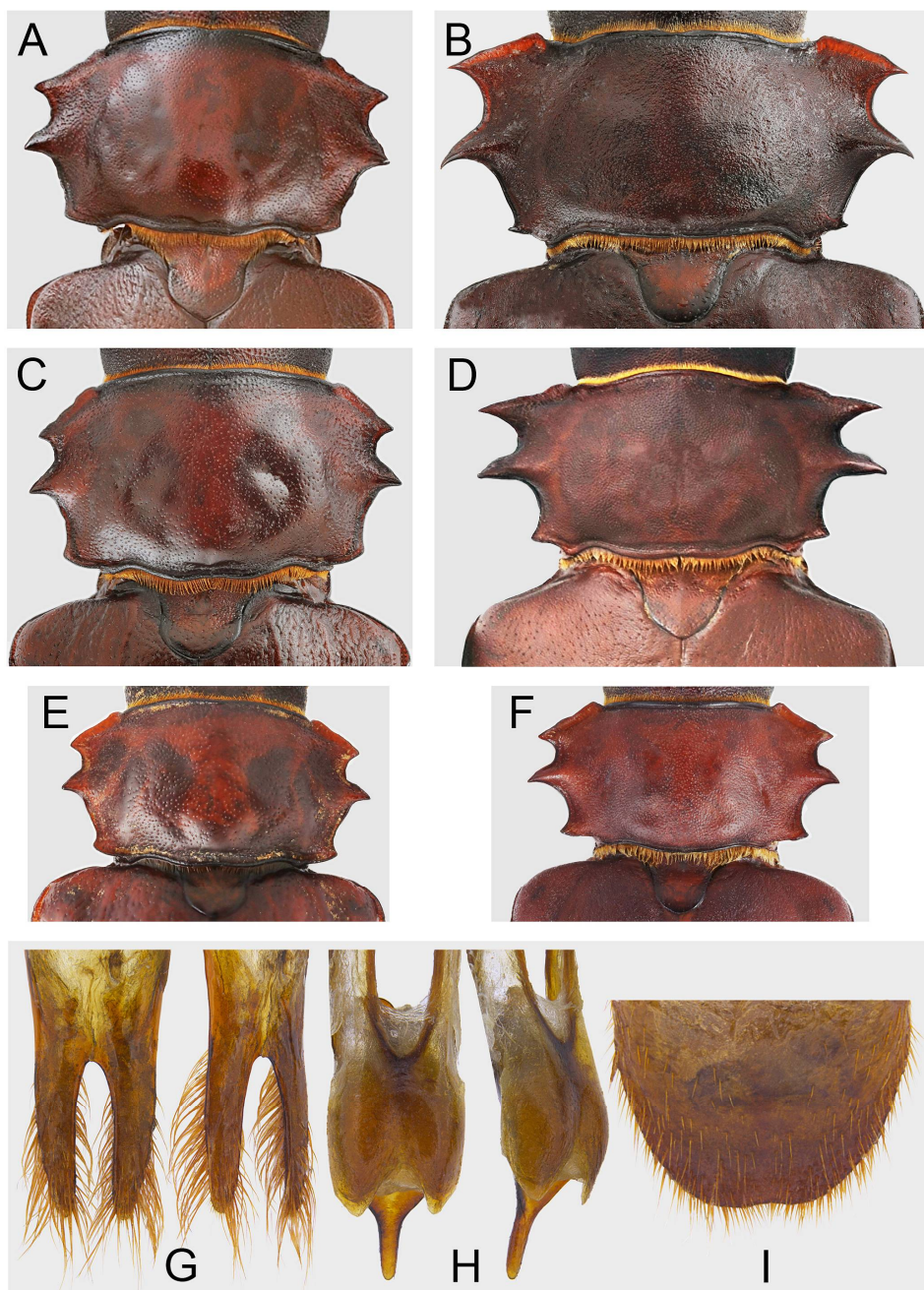


Figures 2A-B. *Dorysthenes (Paraphrus) bucseki* sp. nov., habitus (dorsal view).
A: Holotype ♂; B: Paratype ♂.

Variability. As holotype was chosen the grown specimen, 45 mm long. Proportions of the body changes with the body size. Smaller specimens of this species show smaller pronotum in proportion to the body, their elytra are more parallel-sided, and the bases of antennae and head are less intensively black. (Fig. 4A; 23 mm long). This rule was observed also in *D. (P.) granulatus* (Fig. 4B; 23 mm long). Therefore, caution must be taken with identification of small individuals of these two species.

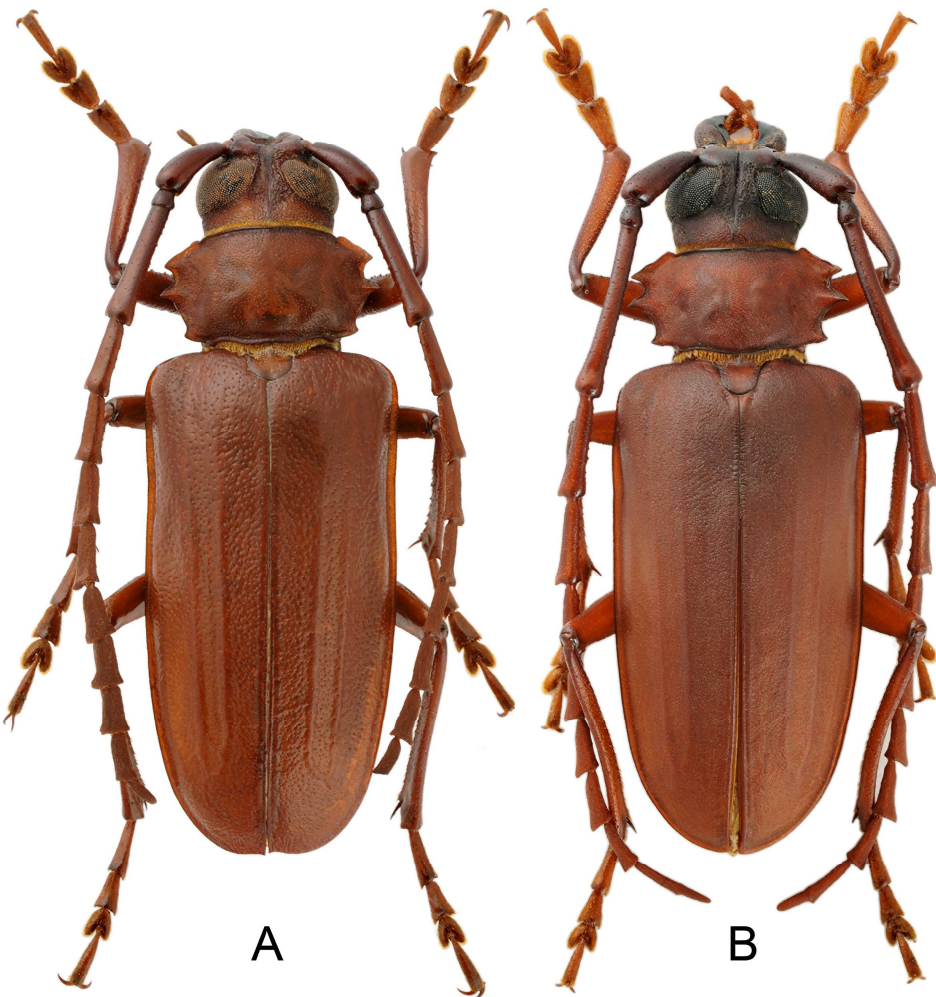


Figures 3A-F. *Dorysthenes (Paraphrus)* spp., ♂♂, detail of antennomeres (dorsal view). **A:** Holotype *D. (P.) bucseki* sp. nov., 45 mm; **B:** Paratype *D. (P.) bucseki* sp. nov., 38 mm; **C:** *D. (P.) granulatus*, 63 mm; **D:** *D. (P.) planicollis*, 42 mm; **E:** Paratype *D. (P.) bucseki* sp. nov., 23 mm; **F:** *D. (P.) granulatus*, 23 mm.



Figures 4. *Dorysthenes (Paraphrus) spp.*, ♂♂. **A-F:** pronotum (dorsal view). **A:** Holotype *D. (P.) bucseki sp. nov.*, 45 mm; **B:** *D. (P.) granulatus*, 63 mm; **C:** Paratype *D. (P.) bucseki sp. nov.*, 38 mm; **D:** *D. (P.) planicollis*, 42 mm; **E:** Paratype *D. (P.) bucseki sp. nov.*, 23 mm; **F:** *D. (P.) granulatus*, 23 mm. **G-I:** Paratype *D. (P.) bucseki sp. nov.*, 38 mm. **G:** paramere; **H:** aedeagus; **I:** last sternit. (G-I photo Ľ. Vidlička)

Differential diagnosis. *Dorysthenes (Paraphrus) bucseki* **sp. nov.** is very similar to the closest relative *Dorysthenes (Paraphrus) granulatus* (Thomson, 1861). Note that both species can occur sympatrically. The new species has slender body (Figs 2A, B); lateral spikes on anterior pronotum shorter, more robust, and less curved ventrad (Figs 4A, C, E). Antennae are more robust, broader, 3rd antennomere equally long as 4th and 5th together, 4th antennomere reaches to the humeri (Figs 3A, B, E). *D. (P.) granulatus* has 3rd antennomere shorter than 4th and 5th together and 4th antennomere markedly exceeds the humeri (Figs 3C, F). *D. (P.) bucseki* **sp. nov.** has punctuation of the pronotum and elytra sparse and the body is glossy (Figs 2A, B, 4A, C, E), whereas *D. (P.) granulatus* has dense punctuation and its body is matt (Figs 1A, B, 4B, F).



Figures 5A-B. *Dorysthenes (Paraphrus)* spp.: Habitus (dorsal view). A: Paratype, *D. (P.) bucseki* **sp. nov.**, 23 mm; B: *D. (P.) granulatus*, 23 mm.

Etymology. The species named in honour of my friend Karol Bucsek, an expert on the subfamily Arctiinae (Erebidae, Lepidoptera).

Distribution. Laos: Houaphanh prov.

ACKNOWLEDGEMENT

Thanks to Ladislav Roller (Slovak Academy of Sciences, Bratislava) and Henrich Novák for English correction. I also express my thanks to Ľubomír Vidlička (Slovak Academy of Sciences, Bratislava) for technical help during editing of the manuscript.

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