

## Three new species of the genus *Drilonius* (Coleoptera: Omethidae) from Indochina

### Три новых вида рода *Drilonius* (Coleoptera: Omethidae) из Индокитая

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Three new omethid species, *Drilonius fedorenkoi* sp. nov. from Vietnam, as well as *D. holzschuhi* sp. nov. and *D. nyx* sp. nov. from Laos are described. Male habitus and aedeagi of the new species are figured.

Описаны три новых вида ометид: *Drilonius fedorenkoi* sp. nov. из Вьетнама, а также *D. holzschuhi* sp. nov. и *D. nyx* sp. nov. из Лаоса. Для новых видов приведены иллюстрации внешнего вида самца и эдеагуса.

**Key words:** omethids, taxonomy, Oriental region, Indochina, Coleoptera, Omethidae, *Drilonius*, new species

**Ключевые слова:** ометиды, таксономия, Ориентальный регион, Индокитай, Coleoptera, Omethidae, *Drilonius*, новые виды

## INTRODUCTION

The family Omethidae was erected in 1972 to accommodate three branches of cantharoids: Omethinae, previously in Cantharidae; Matheteinae, previously in Lampyridae; and Driloniinae, previously in Drilidae (Crowson 1972).

The subfamily Omethinae has a trans-Beringian, Nearctic – Eastern Palaearctic distribution and is known by five genera and seven species from North America and one genus (*Omethes* LeConte, 1861) and one species from Japan. Matheteinae (with two genera and three species) is exclusively Nearctic, while Driloniinae (including only *Drilonius* Kiesenwetter, 1874 with approximately two dozen species) is confined to eastern Asia (Ramsdale, 2010).

Although the family is very poorly known morphologically as well as systematically (e.g. Ramsdale, 2010), little has been done recently to this end. Exceptions were

publications on *Drilonius* (Wittmer, 1995; Kazantsev, 2009, 2010).

A possibility to study omethids collected in eastern Asia allows to further contribute to the knowledge of the representatives of this beetle group. Three new *Drilonius* species were found in the material from Vietnam and Laos. Descriptions of the new species are given below.

## MATERIAL AND METHODS

The studied material was glued on cardboard plates. For examination, the beetles were relaxed in water, then their detached abdomina were put for several hours in 10% KOH at room temperature. The KOH treated aedeagi and terminal abdominal segments were placed in microvials with glycerin. MSP-1 zoom stereoscopic dissecting microscope with  $\times 8 - \times 80$  magnification range was used. Photographs were taken

with Canon EOS 6D camera with Canon MP-E 65 mm lens.

The following acronyms are used in this paper: ICM, Insect Center, Moscow; ZMMU, Zoological Museum of Moscow University; ZIN, Zoological Institute, Russian Academy of Sciences, St Petersburg.

## TAXONOMY

### Order COLEOPTERA

### Family OMETHIDAE

### Subfamily DRILONIINAE

Genus *Drilonius* Kiesenwetter, 1874

#### *Drilonius fedorenkoi* sp. nov.

(Figs 1, 2)

*Holotype*. Male; **Southern Vietnam**, *Lam Dong Prov.*, Bi Doup – Nui Ba Nature Reserve, environs of Long Lanh, 12°10'N, 108°40'E, 1400–1800 m, 1–22 Apr. 2008, coll. D. Fedorenko (ICM).

*Description*. Male. Dark brown to black; elytral apices red; elytral pubescence reddish brown (Fig. 1).

Eyes small (interocular distance about 1.8 times greater than eye diameter). Antennae flabellate, attaining to elytral two thirds, with antennomere 3 about 2.5 times longer than antennomere 2 and 1.3 times shorter than antennomere 4; flabellum of antennomere 8 about 1.2 times longer than antennomere (Fig. 1).

Pronotum transverse, about 1.8 times wider than long, semicircularly produced anteriorly and bisinuate posteriorly, strongly narrowed anteriorly, glabrous and shining medially, with deep longitudinal depressions in middle of each half and acute posterior angles. Scutellum elongate, parallel-sided, rounded at apex (Fig. 1).

Elytra long, about 3.1 times longer than wide at humeri, noticeably concave at sides; all four longitudinal costae reaching elytral apices; interstices with regular rows of transverse rectangular cells; pubescence short and relatively dense, denser on longitudinal costae (Fig. 1).

Aedeagus with elongate distally produced and curved parameres; ventral lobe with long narrow incision and acutely produced dents; laterophyses distally produced, with two rows of brushes (Fig. 2).

Female. Unknown.

Length: 5.45 mm. Width (humeraly): 1.45 mm.

*Comparison*. *Drilonius fedorenkoi* sp. nov. is easily distinguishable from all congeners by the semicircular anteriorly pronotum with acute posterior angles and reddish elytral pubescence (Fig. 1), as well as by the long narrow incision with acutely produced dents of the ventral lobe of parameres and other details of the aedeagus (Fig. 2).

*Etymology*. The new species is named after Dmitry N. Fedorenko (Moscow, Russia), the collector of its unique type specimen.

#### *Drilonius holzschuhi* sp. nov.

(Figs 3, 4)

*Holotype*. Male; **Northeastern Laos**, *Hua Phan Prov.*, Ban Saleui, Phou Pan Mt., ~20°12'N, 104°01'E, 1300–1900 m, 1–31 May 2011, coll. C. Holzschuh (ICM).

*Paratypes*. Four males and 6 females, same data as for holotype (ICM).

*Description*. Male. Black; abdomen laterally pinkish-red.

Eyes small (interocular distance about 2 times greater than eye diameter). Antennae flabellate, attaining to elytral two thirds, with antennomere 3 about 2.3 times longer than antennomere 2 and 1.1 times shorter than antennomere 4; flabellum of antennomere 8 about 1.2 times longer than antennomere (Fig. 3).

Pronotum transverse, about 1.6 times wider than long, broadly convex anteriorly and posteriorly, with pronounced anterior and rounded posterior angles; punctuation large and sparse, with almost glabrous median elevation. Scutellum elongate, parallel-sided, shortly incised at apex (Fig. 3).

Elytra long, about 2.9 times longer than wide at humeri, almost parallel-sided, slightly concave at sides; all four longitudinal costae reaching elytral apices; interstices



**Figs 1–2.** *Drilonius fedorenkoi* sp. nov., holotype, male: **1**, general view; **2**, aedeagus, ventral view. Scale bar: 0.5 mm.



**Figs 3–4.** *Drilonius holzschuhi* sp. nov., holotype, male: **3**, general view; **4**, aedeagus, ventral view. Scale bar: 0.5 mm.

es with rows of transverse rectangular cells; pubescence uniform, short and relatively scarce (Fig. 3).

Aedeagus with elongate, distally curved parameres; ventral lobe with long narrow incision and convex distal margin; laterophyses distally transverse, with two rows of brushes (Fig. 4).

Female. Similar to male, but antennae with shorter flabellae.

Length: 5.0–5.5 mm. Width (humeral): 1.4–1.9 mm.

*Comparison.* *Drilonius holzschuhi* sp. nov. can be separated from *D. niger* (Pic, 1927) and *D. nyx* sp. nov. by the pinkish-red abdominal sides and longer antennal lamellae (Fig. 3); additionally, it is distinguishable from *D. nyx* sp. nov. by the larger and sparser pronotal punctuation (Fig. 3), as well as by the evenly rounded sides of the incision of the ventral lobe of parameres and transverse apices of laterophyses and other details of the aedeagus (Fig. 4).

*Etymology.* The new species is named after Carolus Holzschuh (Villach, Austria), who collected its type series.

### *Drilonius nyx* sp. nov. (Figs 5, 6)

*Holotype.* Male, **Northeastern Laos**, *Hua Phan Prov.*, Ban Saleui, Phou Pan Mt., ~20°12'N, 104°01'E, 1300–1900 m, 1–31 May 2011, coll. C. Holzschuh (ICM).

*Paratypes.* Twenty three males and 9 females, same data as for holotype (ICM, ZMMU, ZIN).

*Description.* Male. Dark brown to black; metatrochanters brownish; adhesive lobes of tarsomeres 3 and 4 yellowish.

Eyes small (interocular distance about 1.75 times greater than eye diameter). Antennae strongly serrate, attaining to elytral three fifths, with antennomere 3 about 1.5 times longer than antennomere 2 and 1.1 times shorter than antennomere 4; dent of antennomere 8 about 1.7 times shorter than antennomere (Fig. 5).

Pronotum transverse, about 1.5 times wider than long, convex anteriorly and posteriorly, with straight, slightly narrowing

anteriorly sides and blunt posterior angles; punctuation fine and dense. Scutellum elongate, narrow, parallel-sided, narrowly incised at apex (Fig. 5).

Elytra long, about 3.2 times longer than wide at humeri, slightly concave at middle and widening in distal third; all four longitudinal costae reaching elytral apices; interstices with rows of transverse rectangular cells; pubescence uniform, short and relatively scarce (Fig. 5).

Aedeagus with elongate, distally produced and curved parameres; ventral lobe with relatively short broad incision and straight distal margin; laterophyses distally acute, with one brushed strip, with longer bristles distally (Fig. 6).

Female. Similar to male, but antennae less serrate.

Length: 5.7–7.4 mm. Width (humeral): 1.4–2.0 mm.

*Comparison.* *Drilonius nyx* sp. nov. can be separated from *D. niger* (Pic, 1927) by the fine and dense pronotal punctuation; it is readily distinguishable from *D. holzschuhi* sp. nov. by the shorter antennal lamellae (Fig. 5), uniformly dark brown abdomen, as well as by the relatively short broad incision with straight distal margin of the incision of the ventral lobe of parameres and longitudinally produced apices of laterophyses and other details of the aedeagus (Fig. 6).

*Etymology.* The new species is named after the Greek goddess of darkness and night, alluding to its almost uniformly dark brown to black coloration.

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**Figs 5–6.** *Drilonius nyx* sp. nov., holotype, male: **5**, general view; **6**, aedeagus, ventral view. Scale bar: 0.5 mm.

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