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A NEW SPECIES OF THE GENUS *PHILHAMMUS* FAIRMAIRE, 1871 (COLEOPTERA: TENEBRIONIDAE) FROM UZBEKISTAN

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Summary. A new species of darkling beetles of the genus *Philhammus* Fairmaire, 1871 is described from Amudarya bank, Khorezm Region, Uzbekistan: *Ph. dilaramae* Nabozhenko et N. Bekchanov, **sp. n.** This first representative of the genus in the country belongs to the nominotypical subgenus and most similar to Pre-Caspian *Ph. zaitsevi* G.S. Medvedev, 1979. The new species differs from the latter in the structure of genae, eyes and pronotum.

Key words: taxonomy, new species, Cnemeplatiini, *Philhammus*, Middle Asia.

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Резюме. Новый вид жуков-чернотелок рода *Philhammus* Fairmaire, 1871 описан с берега Амударьи, Хорезмская область, Узбекистан: *Ph. dilaramae* Nabozhenko et N. Bekchanov, **sp. n.** Этот первый представитель рода в стране относится к номинативному подроду и наиболее похож на прикаспийского *Ph. zaitsevi* G.S. Medvedev, 1979, от которого отличается строением щек, глаз и переднеспинки.

INTRODUCTION

The genus *Philhammus* Fairmaire, 1871 (Pimeliinae: Cnemeplatiini) comprises 11 species (Schawaller *et al.*, 2014; Schawaller & Steiner, 2018, Iwan *et al.*, 2020) distributed in sandy deserts and subdeserts of the Palaearctic and the Afrotropic. The genus was revised by Kaszab (1938), who distinguished *Philhammus* and *Cnemeplatia* A. Costa, 1847 and presented clear diagnostic characters for these genera. Later, he divided *Philhammus* on two subgenera (Kaszab, 1962, 1967): nominotypical one and *Philhammelus* Kaszab, 1962. Representatives of the first subgenus occur only in the Palaearctic (from Iran to western China) (Iwan *et al.*, 2020); they have trapezoidal and elytral intervals partly or completely convex. Species of the second subgenus are distributed in the Afrotropic from south of Arabian Peninsula to South Africa (Schawaller *et al.*, 2014; Schawaller & Steiner, 2018) and the Palaearctic from Maghreb to Western Turkmenistan (Iwan *et al.*, 2020); they characterized by rectangular pronotum and flat elytral intervals. Schawaller *et al.* (2014) presented complete bibliography on this genus, synonymized three taxa described from Africa, and compiled the catalogue to species of *Philhammus*, where *Ph. cribratellus* Reitter, 1901 was omitted. Later Ferrer (2016) added taxonomic, morphological and distributional information about African *Philhammus*, and Schawaller & Steiner (2018) described an additional species from the continent and compiled a key to Afrotropical species. Two Middle Asian representatives of the genus were described by Medvedev (1979, 1991). Caucasian species were revised by Abdurakhmanov & Nabozhenko (2011) with further important information on one Transcaucasian taxon (Nabozhenko *et al.*, 2021). Nassezadeh *et al.* (2019) revised Iranian species of *Philhammus*.

Until now, only one representative of the nominotypical subgenus has been known from Middle Asia: *Ph. zaitsevi* G.S. Medvedev, 1979. This species is distributed on sands around the Caspian Sea in Russia (Dagestan and Chechen republics, Astrakhan Region), western Kazakhstan (Mangyshlak and western part of Ustyurt Plateau) and western Turkmenistan (Akhcha-Kuyma, Balkan Region). We collected a new species of the subgenus in the Amudarya valley of Uzbekistan, the easternmost border of the subgeneric range.

MATERIAL AND METHODS

We use a light trap Naturaliste 150 and UV lamp Camelion 26W for collection of beetles in Uzbekistan. Beetles in Dagestan were collected by sand sifting.

Beetles were studied using binocular microscope Micromed MC-4 Zoom Led. Beetle photographs were taken with a Canon EOS 5D Mark IV Body, Canon MP-E65MM F2.8 Macro lens and Canon Macro Twin Lite MT-26X-RT flash bulb, and stacking was done using Stack-shot 3X with enlarged macro rails s/n 3734; the photosystem is installed on a Kaiser Copy Stand RS 1 reproduction machine. Images were stacked in Helicon Focus 7.7.4 Pro.

The studied material is deposited in Zoological Institute of the Russian Academy of Sciences (ZIN, St Petersburg, Russia) and private collection of Maxim Nabozhenko (PCMN, Rostov-on-Don, Russia).

We did not dissect genitalia and determine a sex of a new species, because the beetle is very fragile and in a single copy (holotype).

DESCRIPTION OF NEW SPECIES

Philhammus (s. str.) *dilaramae* Nabozhenko et N. Bekchanov, **sp. n.**

<https://zoobank.org/NomenclaturalActs/0C70D3DD-D2B2-4C40-B5B6-4F94E136FFEF>

Figs 1, 3, 5

Philhammus (s. str.) sp.: Bekchanov *et al.*, 2023: 164

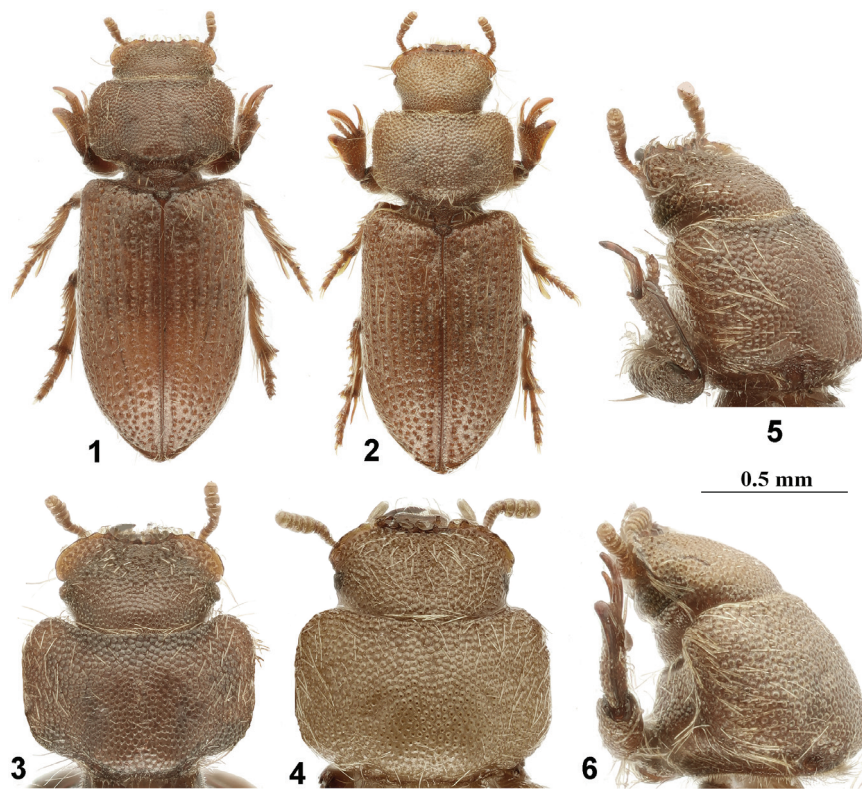
TYPE MATERIAL. Holotype (sex unknown), **Uzbekistan**: Khorezm Region, Xonqa District, Amudarya bank, 41°27'04.7" N, 60°59'11.3" E, 13.04.2023, light trap, M.V. and S.V. Nabozhenko, N.Kh. and Kh.U. Bekchanov leg. (ZIN).

MATERIAL EXAMINED FOR COMPARISON. *Philhammus zaitsevi* (Figs 2, 4, 6) – holotype, ♂ and 37 paratypes, **Western Kazakhstan**, Senek near the Caspian Sea, 15.05.1978, G.S. Medvedev leg. (ZIN); 30 paratypes, **Kazakhstan**, Ustyurt, 25 km NE Akdzhit, 24.05.1978, G.S. Medvedev leg. (ZIN); 1 paratype, **Turkmenistan**, Akhcha-Kuyma, 10.05.1976, G.S. Medvedev leg. (ZIN); 3 specimens, **Russia**, Daghestan, 21 km N Makhachkala, N of Shura-Uzen' River mouth, sand dunes near the Caspian Sea, 6.08.2015, 43°06'28.16" N, 47°28'16.70" E, M.V. and S.V. Nabozhenko leg. (PCMN); 2 specimens, **Russia**, Daghestan / Chechnya, Karagayly Kum subdesert, 44°00' N, 45°29' E, 10.08.2016, M.V. and S.V. Nabozhenko leg. (PCMN).

DESCRIPTION. Body robust, dull, light red-brown, covered with long recumbent and subrecumbent hairs (Fig. 1). Body length 2.65 mm, width 1 mm.

Anterior margin of epistoma widely emarginated, with 5 teeth and thick short yellowish setae (Figs 1, 3). Head widest at genal level. Genae large, with wide lamellar not undulate or toothed margins, their lateral margin strongly evenly rounded (Fig. 3). Eyes small dorsally, but strongly convex (Fig. 3). Head dorsally with flat contiguous granules at middle of frons, more convex granules on sides and coarse, strongly convex separate granules on lamellar part of genae. Dorsal surface of head with moderately short setae (shorter than on pronotum), ventral side with dense and long pubescence (Fig. 3). Antennae 10-segmented with clear 3-segmented club.

Pronotum (Figs 3, 5) transverse (1.6 times as wide as long), widest at anterior third, 1.37 times as wide as head. Lateral margins straight, only near angles weakly



Figs 1–6. *Philhammus* (s. str.) spp. of Middle Asia: 1, 3, 5 – *Ph. dilaramae* sp. n.; 2, 4, 6 – *Ph. zaitsevi*; 1, 2 – habitus; 2, 3 – head and pronotum dorsally; 5, 6 – head and pronotum dorso-laterally. Scale bare for figs 3–6 = 0.5 mm.

rounded. Anterior margin strongly widely emarginated. Base trisinate, with strongly protruded and widely emarginate portion in middle. Angles widely rounded. All margins without bead. Disc weakly convex, with pair of round impressions at middle and protruded convexity with depressed midline. Base with two deep depressions on sides of this convexity. Sculpture of pronotum consists of flattened granules very similar to reptile scales and long hairs between them. Prothoracic hypomera with the same sculpture and pubescence.

Elytra (Fig. 1) elongate, widest at middle, 1.6 times as long as wide, 1.04 times as wide pronotum, 1.45 times as wide as head. Elytra with scale-like flat round microsculpture. Intervals flat, covered with long sparse recumbent hairs, punctures in rows large, deep, round, not connected. Ventral side of pterothorax and abdomen with the same microsculpture and long pubescence.

Legs fossorial (Figs 1, 5). Femora with dense long pubescence on ventral side; anterior tibiae strongly widened, triangle, lamellar, with strongly projected and rounded apically outer distal tooth. Outer margin of protibiae without spines. Spurs

of protibiae large, widened to apex, where they widely rounded. Protarsi with claws subequal in length to inner spur. Meso- and metatibiae bent, with line of spines on outer margin and long pubescence.

ETYMOLOGY. The species is named in honour of Dilaram Ruzieva (Xonqa, Khorezm Region, Uzbekistan), the mother of the second and wife of the third co-authors, who provided invaluable assistance and support in servicing the expedition team.

DIFFERENTIAL DIAGNOSIS. The new species is the most similar to *Ph. zaitsevi*. Differences are presented in the key below.

Key to the Middle Asian species of the nominotypical subgenus of *Philhammus*

1. Eyes weakly convex dorsally (Fig. 4). Lamellar part of genae very narrow, accommodates only one row of acute granules (Fig. 4). Lateral margin of genae angular basally (rarely this angular edge of genae can be worn away as a result of fossorial activity) and weakly rounded from widest part to epistoma (Fig. 4). Base of pronotum widely rounded, median basal convexity not protruded back and not divided by deep longitudinal depression (Figs 4, 6). Elytra shorter, 1.47–1.55 time as long as wide (n=20) (Fig. 2) *Ph. zaitsevi* G.S. Medvedev
- Eyes strongly convex (Fig. 3). Lamellar part of genae very wide, accommodates three lines of acute granules (Fig. 3). Lateral margins of genae strongly evenly rounded (Fig. 3). Base of pronotum trisinate, median basal convexity strongly protruded back and divided by deep longitudinal depression (Figs 3, 5). Elytra longer, 1.6 times as long as wide (Fig. 1) *Ph. dilaramae* Nabozhenko et N. Bekchanov, **sp. n.**

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