Redescription of *Styphlus orthochaetinus* (Reitter, 1916) from Siberia with new taxonomic data

ANDREI A. LEGALOV\(^1,2,3^*\) & SERGEI V. RESHETNIKOV\(^4\)

\(^1\) Institute of Systematics and Ecology of Animals, SB RAS, Frunze street 11, Novosibirsk, 630091, Russia.
\(^2\) Altai State University, Lenina 61, Barnaul, 656049, Russia.
\(^3\) Tomsk State University, Lenina Prospekt 36, 634050 Tomsk, Russia
\(^4\) Kropotkina street 273, Novosibirsk, 630111, Russia. E-mail: reshetnikov-art@yandex.ru

\(^*\) Corresponding author. E-mail: fossilweevils@gmail.com

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**Abstract**

*Styphlus (Styphlomimus) orthochaetinus* (Reitter, 1916), comb. and placem. nov. is redescribed and illustrated. The species was transferred from the genus *Pseudostyphlus* Tournier, 1874 to the genus *Styphlus* Schoenherr, 1826. Key for *S. orthochaetinus* and similar species and distribution map of *Styphlomimus* subgenus are given.

**Key words:** Biodiversity, Curculionoidea, Curculioninae, *Styphlomimus*, Russia, Altai.

**Introduction**

The genus *Styphlus* Schoenherr, 1826, with the re-described here one, currently contains 18 valid species, distributed from Spain to Central Asia (Caldara 2013; Germann and Winkelmann 2016; Alonso-Zarazaga et al. 2017). The genus is subdivided into two subgenera, *Styphlus* s. str. (nine species) and *Styphlomimus* (also nine) Osella et Zuppa, 1994 (Fig. 4). The subgenus *Styphlus* comprises species where no scutellum is visible, narrow forehead, an elytral base without pronounced humeral angles, whereas members of the subgenus *Styphlomimus* show a punctiform, glossy scutellum and the basal margin of the elytra is strongly constricted with acute humeral angles (Davidian and Savitsky 2000).

In 2019, a male and a female of the genus *Styphlus* were again collected from Western Altai, confirming the occurrence of this weevil in Siberia, confirmed by an earlier find from 1912 (Reitter 1916).

A picture of the type of *Pseudostyphlus orthochaetinus* Reitter, 1916 allowing identification of the collected specimens was obtained courtesy by Dr. O. Merkl from the Hungarian Natural History Museum. This species was described from Altai without more precise indication and placed in the genus *Pseudostyphlus* Tournier, 1874. Davidian and Savitsky (2000) did the assumption that the species may belong to the subgenus *Styphlomimus* G. Osella et Zuppa, 1994 of the genus *Styphlus* Schoenherr, 1826. Zabaluev (2016) in the electronic catalogue of Russian Curculionidae brought this species into the genus...
Styphlus referring to the article of Davidian and Savitsky (2000) but did not establish a new combination and a new systematic position. This species is considered in the genus Pseudostyphlus, in the latest version of the Palaearctic Curculionoidea catalog (Alonso-Zarazaga et al. 2017).

Here we give a redescription and illustrations of Styphlus orthochaetinus, and establish a new name combination.

Material and methods

Specimens are kept in the CSRN = the private collection of S.V. Reshetnikov (Novosibirsk) and HNHM = Hungarian Natural History Museum (Budapest).

Holotype of Pseudostyphlus orthochaetinus (Fig. 3) was photographed of by Tamás Németh (Hungarian Natural History Museum).

The distribution (Fig. 4) of species of the subgenus Styphlomimus of the genus Styphlus is given based on the collection of the Zoological Institute of the Russian Academy of Sciences, CSRN and works of González (1967), and Davidian and Savitsky (2000).

Descriptions and body measurements were prepared using the Zeiss Stemi 2000-C dissecting stereomicroscope.

The terminology of the weevil body is according to Lawrence et al. (2010).

Systematics

Insecta: Coleoptera: Curculionidae: Curculioninae: Styphlini
Genus: Styphlus Schoenherr, 1826
Subgenus: Styphlomimus G. Osella & Zuppa, 1994

Styphlus (Styphlomimus) orthochaetinus (Reitter, 1916), comb. and placem. nov.
Pseudostyphlus orthochaetinus Reitter, 1916: 197.
(Figs. 1-3)

Material: Holotype. Female (HNHM), “Altai”, “Siberia, Altai”, “Pseudostyphlus orthochaetinus, mi, 1912, Fn. Germ.”, “Coll. Reitter”, “Holotypus, 1916, Pseudostyphlus orthochaetinus Reitter”. Specimens: 1 male (CSRN), 1 female (CSRN), Russia, Altaiskii Krai, Charyshskii District, Korgon mountain range, 25 km SSW Vladimirovka, E of Antonov Korgon River, 1960 m a.s.l., alpine meadow, 50°51’56.9” N, 84°00’14.8” E, 3-4.VII. 2019, S.V. Reshetnikov.

Description

Body red-brown, covered with narrow decumbent light scales. Antennae and legs lighter. Even elytral interstriae with decumbent scales and odd interstriae with appressed scales.

Male. Rostrum equal in length to pronotum, subcylindrical, 3.5 times as long as wide, distinctly curved, with three longitudinal carinas, punctate. Antennal scrobes directed to base of rostrum, close located to lower edge of rostrum. Eyes quite large, coarsely-faceted, slightly convex, located towards bottom. Forehead flattened, punctuate, barely wider than width of rostrum basally. Temples slightly longer than eye. Vertex convex, densely punctate. Head widened behind eyes. Antennae inserted subbasally of rostrum. Scape long, 5.3 times as long as wide at apex, not reaching eye. Antennomeres 2-7 conical. Antennomere 2 about 2.0 times as long as wide in apex, 0.4 times as long as and 0.8 times as narrow as scape. Antennomere 3 1.2 times as long as wide in middle, 0.4 times as long as and 0.7 times as narrow as antennomere 2. Antennomere 4 equal in length and wide, 0.8 times as long as and slightly narrower than antennomere 3. Antennomere 5 0.9 times as long as wide, slightly shorter and wider than antennomere 4. Antennomere 6 0.8 times as long as wide, equal in length and slightly wider than antennomere 5. Antennomere 7 0.8 times as long as wide, 0.9 times as long as and 1.1 times as wide as antennomere 6. Antennomere 8 rounded, 0.7 times as long as wide, equal in length and 1.2 times as wide as antennomere 7. Antennal club compact, 2.1 times as long as wide in middle, 0.6 times as long as antennomeres 2-8 combined. Pronotum campanulate, 1.4 times as long as wide at apex, 1.1 times as long as wide in middle, 1.2 times as long as wide at base, with
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Figure 1. Styphlus (Styphlomimus) orthochaetinus: a - male, dorsally, b - male, ventrally, c - female, dorsally, d - female, ventrally. Scale bar for b and d = 1.0 mm.
almost straight sides. Maximal wide before base. Disk convex, coarsely punctate. Distances between points much less diameter of points. Scutellum small, flat, semi-oval. Elytra 2.3 times as long as wide at base, 1.9 times as long as wide at middle, 3.1 times as long as wide at apical fourth, 2.5 times as long as pronotum. Humeri slightly flattened. Elytral striae distinct. Stria 9 long, not merging with stria 10 near level of metacoxa. Interstriae wide, weakly convex, 2.0-3.0 times as wide as elytral stria, finely punctate. Odd interstriae more convex. Prosternum punctate, without impression. Precoxal portion of prosternum slightly longer than length of procoxal cavity. Procoxal cavities contiguous. Postcoxal portion of prosternum two times shorter than length of procoxal cavity. Metanepisternum quite narrow, punctate. Metaventrite 1.7 times as long as length of metacoxal cavity, flattened, punctate. Abdomen flattened, densely punctate. Abdominal ventrite 1 1.2 times as long as metacoxal length. Ventrite 2 1.3 times as long as ventrite 1. Ventrites 1 and 2 weakly impressed in middle. Ventrite 3 0.5 times as long as ventrite 2. Ventrite 4 equal in length to ventrite 3. Ventrite 5 2.4 times as long as ventrite 4, without anal setae. Procoxae large, conical. Mesocoxae narrowly separated. Metacoxae transverse. Femora thickened, without tooth. Tibiae almost biconcave, with small uncus. Tarsi quite long. Tarsomere 1 conical. Tarsomere 2 wide-conical. Tarsomere 3 bilobed. Tarsomere 5 elongate. Claws free, without teeth. Length of body (without rostrum): 3.1 mm. Length of rostrum: 0.7 mm.

**Figure 2.** *Styphlus (Styphlomimus) orthochaetinus:* a – male, laterally, b – aedeagus, dorsally, c – aedeagus, laterally, c – tegmen, dorsally, c – armament of endophallus, dorsally. Scale bar for 1 = 1.0 mm, for b-d = 0.5 mm, for e = 0.2 mm.

**Female.** Rostrum narrower, 3.9 times as long as wide as, slightly longer than pronotum. Antennae inserted in middle of rostrum. Pronotum wider, 1.2 times as long as wide at apex, slightly shorter than wide

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in middle, 1.1 times as long as wide at base. Elytra 1.9 times as long as wide at base, 1.7 times as long as wide at middle, 3.4 times as long as wide at apical fourth, 2.7 times as long as pronotum. Precoxal portion of prosternum 0.8 times as long as length of procoxal cavity. Postcoxal portion of prosternum two times shorter than length of procoxal cavity. Metaventrite 1.3 times as long as length of metacoxal cavity. Abdominal ventrite 1 0.8 times as long as metacoxal length. Ventrite 2 equal to ventrite 1. Ventrites 1 and 2 without impression in middle. Ventrite 3 0.5 times as long as ventrite 2. Ventrite 4 equal in length to ventrite 3. Ventrite 5 2.1 times as long as ventrite 4, without apical carina. Length of body (without rostrum): 4.4 mm. Length of rostrum: 0.8 mm.

Remarks: Placement of this species in the genus *Styphlus* is based on the seven-segmented antennal funicle, punctuate pronotum, subapical inserted antennae, second tarsomere bilobed, more convex odd interstriae of the elytra with decumbent scales, and odd interstriae with appressed scales. This species belongs to the subgenus *Styphlomimus* based on the forehead wider than width of the rostrum basally, distinct scutellum, and simple abdominal ventrite 5 in female.

Distribution: Western Siberia (type and present material) and probably South-Eastern Kazakhstan (Davidian & Savitsky 2000) (Fig. 4).
Figure 4. Distribution of the subgenus Styphlomimus: black circle – S. oros, red circle – S. krueperi, triangular – S. medvedevi and S. mikhaili, ring – S. manueli, rhombus – S. caelebs, star – S. bogatshevi, square – S. armeniacus, octagon – S. orthochaetinus.

Key for S. orthochaetinus and similar species based on Davidian and Savitsky (2000)

| Step | Description                                                                 | Species                                                                                         |
|------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1    | Odd interstriae of elytra with distinctly curved scales. Basal sclerite spiniform directed to base of aedeagus | S. armeniacus Reitter, 1899                                                              |
| -    | Odd interstriae of elytra with weakly curved scales. Basal sclerite lobate or spiniform directed to apex of aedeagus | 2                                                                                             |
| 2    | Elytra 7.1-8.0 times as long as wide of rostrum                              | S. manueli Davidian et Savitsky, 2000, S. bogatshevi Davidian et Savitsky, 2000               |
| -    | Elytra 8.05-10.14 times as long as wide of rostrum                          | 3                                                                                             |
| 3    | Basal sclerite lobate. Anodinal ventrite 5 without apical carina in female. Elytra 8.7-10.14 times as long as wide of rostrum | S. orthochaetinus                                                                           |
| -    | Basal sclerite spiniform. Anodinal ventrite 5 with apical carina or apical granulation in female. Elytra 8.05-8.85 times as long as wide of rostrum | S. caelebs Davidian et Savitsky, 2000, S. medvedevi Davidian et Savitsky, 2000 and S. mikhaili Davidian et Savitsky, 2000 |

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