# Clarification of confusions in the taxonomy and nomenclature in the genus *Leiodes* Latreille, 1796 (Coleoptera: Leiodidae: Leiodini). Part II.

#### Zdeněk ŠVEC

Kamenická 4, CZ-170 00 Praha 7, Czech Republic e-mail: zd.svec@volny.cz

New species, nomenclature, taxonomy, synonymy, faunistics, Leiodidae, Leiodinae, Leiodes

**Abstract.** *L. rhodesica* sp. nov. from Greece: Rhodos and *L. reuteri* sp. nov. from Lebanon are described and compared to the similar species. The lectotype and the paralectotype of *L. subtilis* Reitter, 1889 are designated. The status of *Anisotoma minima* (Rey, 1889) is clarified - the species is proposed as a junior synonym of *L. calcarata* (Erichson, 1845). *L. matthiasi* Švec, 1999 is proposed as a junior synonym to *L. subtilis*. New faunistic records of *Leiodes* species are presented.

#### INTRODUCTION

The present contribution follows the first part of the paper (Švec 2020). The aim of the part I was to contribute to the solution of the question about the gender of the name *Leiodes*, further to contribute to the clarification of the concept of *Leiodes subtilis* Reitter, 1885, to discuss the status of specimens labelled as the types of *L. subtilis* preserved in both the National Museum, Prague and the Hungarian Natural History Museum, Budapest and to describe new species of the genus *Leiodes*.

Altogether two specimens labelled as the holotype and of *Leiodes subtilis* Reitter, 1885, two specimens labelled as the paratypes of *L. subtilis* the types of *L. transcaspica* Hlisnikovský, in litt. and *L. afghana* Hlisnikovský, 1964 were assessed within the studies published in the part I of the present paper (Švec 2020). The basic information about a hypothetical type specimen deposited in the Grouvelle's collection in National History Museum, Paris obtained meanwhile enabled to set and designate the specimens housed in the National Museum, Prague and the Hungarian Natural History Museum, Budapest for the lectotype and the paralectotype of *L. subtilis* in this part of the present paper. The setting of the lectotype also made possible to propose a new younger synonym of *L. subtilis* in this part of the paper.

The descriptions of two new species and new distributional data of twelve *Leiodes* species are presented below.

#### ABBREVIATIONS, TERMINOLOGY, MATERIAL AND METHODS

Abbreviations of body parts and measurements:

AII-AXI antennomeres II-XI, TI-TIV tarsomeres I-IV,

L length, W width,

L/W or W/L ratio between measurements.

Abbreviation of the deposition sites of the type and other examined material.

DSPC David Sommer, private collection, Praha, Czech Republic; HNHM Hungarian Natural History Museum, Budapest, Hungary;

MCLP Museum of Confluences, Lyon, France; NHMP National History Museum, Paris, France; NKME Naturkundemuseum, Erfurt, Germany; NMPC National Museum, Praha, Czech Republic;

SMNC State Museum of Natural History, Stuttgart, Germany; ZSPC Zdeněk Švec, private collection, Praha, Czech Republic.

The geographic abbreviations of the countries follow those in the Catalogue of the Palaearctic catalogue (Löbl & Löbl 2015). Beside them, the abbreviation ER is used for the region European Russia.

Terminology of the mesoventral longitudinal carina in the genus *Leiodes* Latreille, 1797 follows that in Švec (2008).

This paper is based on the type and other leiodid material deposited in the collections mentioned above.

Collecting data cited in quotation marks are taken from the locality labels accompanying the specimens examined. The individual lines from the original locality labels are separated by a slash "/"; the individual labels are separated by double slash "/" and the text on the reverse side of a label follows after colon ":" in this work. My remarks are presented in square brackets - e.g.: [hw] = hand written, [p] - printed. The holotype, the paratypes, the lectotype and the paralectotype are indicated by red labels bearing the status of the specimen, name of the species, the name of the author of the species or the author of the designation, the relevant year and attached to the same pin as the corresponding specimen. The labelling of *Anisotoma minima* Rey, 1889 is an exception. Only a red label bearing the expression "Holotypus" was added to the type specimen of the species mentioned to avoid any confusion in the future about the identification of the specimen.

The specimens examined selected for the dissection was first relaxed in 4% acetic acid, then rinsed in water and dissected in a drop of water. The male genitalia were mounted in polyvinylpyrrolidine (Lompe 1986) on a transparent slide added to the same pin as the dissected specimen; the female genitalia were not examined as the spermatheca is membranous in *Leiodes*.

The description of the new species is based on the holotype. Variability is mentioned in the paragraph "Variation" and includes features exhibited by the paratypes. Important characters of the sexual dimorphism are also included in the paragraph mentioned. Those characters that seem to be usual in the genus - e.g. micro-sculpture of venter, setosity on antennae, legs and venter are not mentioned in the description.

The measurements of the total body length mentioned in the original description were taken from all specimens examined. Specific measurements of the individual body parts were taken from the holotype only. The measurements of morphologic body parts were measured to the first decimal place of millimetre, the measurements of the genitalia were measured to the second decimal place of millimetre.

#### **TAXONOMY**

## Leiodes rhodesica sp. nov. (Figs. 1-2)

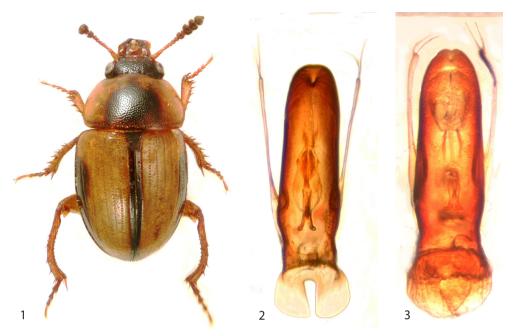
Type material. Holotype ( $\circlearrowleft$ ): "GRAECIA, 25.3. 2019 / Rhodos (centr.), Salakos env. / Profitis Ilias, 500-700 m / S. Benedikt lgt., woodland", (ZSPC).

**Description.** Length 3.7 mm. Length of body parts: head 0.6 mm, pronotum 0.9 mm, elytra 2.2 mm, antenna 1.1 mm, aedeagus 0.78 mm. Maximum width of body parts: head 1.0 mm, pronotum 1.5 mm between basal third and mid-length, elytra 1.8 mm approximately between basal third and half of their length. Dorsum without transverse strigosites or micro-sculpture except of puncturation. Oblong oval (Fig. 1); head brown-black with clypeus and small spots above antennal insertion lighter. Mouthparts reddish, mandible with median blade and apex darker. Pronotum yellow red with large brown-black spot on disc. Scutellum brown-black. Elytra yellow-red with dark brown strip along suture and broad dark brown stain along lateral margins reaching from basal fifth of elytral length up to elytral apex. Lateral stain takes up space between sixth elytral stria and lateral margin anteriorly, becoming narrower and lighter apically. Legs yellow-red, antennomeres AI-AVI yellow-red, AVII + AVIII slightly infuscate, AIX-AXI brown-black. Venter chest-nut coloured, longitudinal mesoventral carina darker.

Head. Dorsal surface with very distinct, very dense, strong a rough puncturation. Spaces between punctures predominantly narrower than diameters of punctures or punctures at most separated by about one diameter in some places. Rare micro- punctures interposed. Vertex with 4 large punctures. Last antennomere a little longer than wide; distinctly narrower than AX. AVIII short, well visible between the neighbours. Ratio of length of antennomeres AII-AXI (AII=1.0): 1.0-1.3-0.7-0.8-0.8-1.0-0.5-1.3-1.3-2.0. Ratio of width of antennomeres AII-AXI (AII=1.0): 1.0-1.0-1.1-1.1-1.3-2.3-1.6-3.1-3.2-2.6. W/L AII-AXI: 0.7-0.5-1.1-0.9-1.0-1.5-2.2-1.6-1.6-0.9.

Pronotum. Widest between basal third and pronotal mid-length. Sides distinctly roundly tapered toward both anterior and posterior angles in dorsal view; flatly angular near mid-length in lateral view. Posterior angles very obtuse, rounded in dorsal view; very obtuse very broadly rounded in lateral view. Base almost straight feebly bowed backward. Puncturation similar to that on head, a little sparser. Punctures separated by about 0.5-2 times their own diameter. Rare micro-punctures interposed. With several large punctures behind anterior margin and with pre-basal punctures a little larger than discal punctures aligned transversally.

Elytra. With nine very distinctly densely punctured striae. Stria 9 short, parallel, approached to lateral margin, separated by about one time its punctures diameter from lateral margin, joining lateral channel approximately at basal third of elytral length. Punctured striae a little deepened. Strial punctures well expressed, separated predominantly less than one their own diameter on disc, becoming sparser laterally up to distance 2 times their own diameter. Interval punctures fine and small, separated by about 4-6 times their diameters, tending to seriate close to each primary stria. Numerous micro- punctures interposed separated by about 3-4 times their own diameter. Sparse large punctures in odd intervals as large as strial punctures. Sutural stria deepened all along its length, reaching basal fifth



Figs. 1, 2. Leiodes rhodesica sp. nov., holotype: 1- body; dorsal view; 2- aedeagus, dorsal view. Fig. 3. Leiodes hiemalis Abeille de Perrin, 1901: 3- aedeagus, dorsal view.

of elytral length. Lateral channel visible all along its length in dorsal view without; larger punctures or foveae. Epipleura without setae; elytral margins and apex with few short erect setae.

Legs. Anterior tibiae of usual width, inner terminal thorn of anterior tibia straight with simple tip, longer than lateral one. Tarsomeres TI-TIV of anterior and mid-legs distinctly widened with long tennent setae. Meso-tibiae simply curved. Hind margin of metafemur with distinct triangular tooth on both dorsal and ventral sides apically. Hind tibiae distinctly double curved. TI-TIII of posterior tarsi conically widened apically.

Mesoventrite. Longitudinal carina of type A.

Membranous wings developed.

Metaventrite. Without specific characters.

Genitalia. Aedeagus as in Fig. 2. Each paramere with two apical setae.

**Differential diagnosis.** Leiodes rhodesica sp. nov. can be compared with L. hiemalis Abeille de Perrin, 1901 and L. reuteri sp. nov. The species are similar in the shape and colour of body, the type of mesoventral carina, narrow AXI and also by the shape of the aedeagus. L. rhodesica sp. nov. differs from both other species by strongly and very densely punctured head, from L. hiemalis also by more distinctly punctured elytral intervals. The punctures on head and pronotum are separated by about 2-4 (L. hiemalis) or 1-3 times their intervals (L. reuteri) respectively. The punctures of elytra intervals are separated by about

4-6 times their diameter in *L. rhodesica*, 8-10 or more times their intervals in *L. hiemalis*. The antennal club is brown-black in *L. rhodesica*, while antennae are completely lightly coloured or at most partly a little infuscate in *L. hiemalis*. The head and pronotum is smooth except the puncturation while the same body parts are covered beside puncturation also by the micro-reticulation in *L. hiemalis*. The tegmen of *L. rhodesica* is roundly truncate apically with distinct deep depression on dorsal surface just before apex, while *L. hiemalis* possesses tegmen rounded apically, usually with small apical emargination and unobtrusive small preapical depression (Fig. 3); nevertheless the intensity and the presence of the apical emargination and the preapical depression can vary in *L. hiemalis*. The endophallus possesses specific characters in all compared species (Figs. 2, 3, 5).

**Etymology.** The name of the new species is derived from the place of its origin - the Rhodes Island

## Leiodes reuteri sp. nov. (Figs. 4-5)

**Type material.** Holotype (♂): "LEBANON, Rafoun / cca 33°58′N, 35° 42′E / mix. oak for., ~900 m/ 9.-18.xii. 2017 / pitfall trap, leg Reuter", (NKME). Paratypes: (1 ♀): the same data, (NKME); (1 ♀): the same data but 14.ii.-31. iii. 2016, (NKME); (1 ♂): "LEBANON, Rafoun/ cca 33°59′N, 35° 42′E / mix. oak for., ~900 m/ 11.-23.i. 2018 / pitfall trap, leg Reuter", (ZSPC).

**Description.** Length 3.1-3.8 mm, 3.2 mm in holotype. Length of body parts in holotype: head 0.5 mm, pronotum 0.8 mm, elytra 1.9 mm, antenna 1.0 mm, aedeagus 0.75 mm. Maximum width of body parts in holotype: head 0.9 mm, pronotum 1.5 mm approximately at posterior angles, elytra 1.7 mm approximately at half of their length. Dorsum without transverse strigosites or micro-sculpture except of puncturation. Oblong oval (Fig. 4); head brown-black with clypeus and small spots above antennal insertion lighter. Mouthparts reddish, mandible partly infuscate. Pronotum brown-black, lateral sides and base yellow brown. Scutellum brown-black. Elytra yellow-red with dark brown strip along suture and oblong dark brown stain along lateral margins reaching from basal fifth of elytral length just before elytral apex. Lateral stain takes up space between fifth elytral stria and lateral margin anteriorly, becoming narrower and lighter apically. Legs yellow-red, antennomeres AI-AVI yellow-red, AVII-XI black. Venter chest-nut coloured, longitudinal mesoventral carina darker.

Head. Dorsal surface with distinct dense strong puncturation. Punctures separated by about 1-3 times their diameter. Rare micro-punctures interposed. Vertex with 4 large punctures. Last antennomere a little wider than long; distinctly narrower than AX. AVIII short, well visible between the neighbours. Ratio of length of antennomeres AII-AXI (AII=1.0): 1.0-1.4-0.8-0.9-0.8-1.2-0.7-1.4-1.4-2.0. Ratio of width of antennomeres AII-AXI (AII=1.0): 1.0-1.0-1.1-1.3-1.1-2.3-1.6-3.0-3.1-2.6. W/L AII-AXI: 0.8-0.6-1.1-1.1-1.1-1.5-1.9-1.7-1.8-1.1.

Pronotum. Widest approximately at posterior angles. Sides distinctly roundly tapered toward anterior angles in dorsal view; flatly rounded in lateral view. Posterior angles



Figs. 4-5. Leiodes reuteri sp. nov., holotype: 4- body, dorsal view; 5- aedeagus dorsal view.

obtuse, very rounded in dorsal view; obtuse shortly rounded in lateral view. Base straight. Puncturation similar to that on head in its strength, a more regular and a little denser than that on head. Punctures separated by about 1-3 times their own diameter. Rare micro-punctures interposed. With several large punctures behind anterior margin and with pre-basal punctures a little larger than discal punctures aligned transversally.

Elytra. With nine very distinctly densely punctured striae. Stria 9 short, oblique, approached to lateral margin, separated by about 2 times its punctures diameter from lateral margin, joining lateral channel approximately at basal quarter of elytral length. Punctured striae deepened, most of them 8<sup>th</sup> stria. Strial punctures well expressed, separated predominantly by 0.5-1.0 times their diameter on disc, becoming sparser laterally up to distance 2 times their own diameter. Interval punctures distinct, similar to those on pronotum, separated by about 2-3 times their diameters. Very numerous micro-punctures interposed. Sparse large punctures in odd intervals as large as strial punctures. Sutural stria deepened up to basal quarter of its length. Lateral channel without larger punctures or foveae, visible all along its length in dorsal view. Epipleura with several setae detectable in lateral view; elytral margins and apex with few short erect setae.

Legs. Anterior tibiae of usual width, inner terminal thorn of anterior tibia straight with simple tip, longer than lateral one. Tarsomeres TI-TIV of anterior and mid-legs distinctly widened with long tennent setae. Meso-tibiae simply curved. Hind margin of metafemur

with distinct triangular tooth on both dorsal and ventral side. Hind tibiae distinctly double curved. TI-TIII of posterior tarsi conically widened apically.

Mesoventrite. Longitudinal carina of type A.

Membranous wings developed.

Metaventrite. Without specific characters.

Genitalia. Aedeagus as in Fig. 5. Each paramere with two apical setae.

**Variation.** The dark elytral lateral stain reaches apex of elytra in the male paratype. The 8<sup>th</sup> elytral stria a little irregular in the same paratype.

**Differential diagnosis.** Leiodes reuteri sp. nov. can be compared with L. hiemalis Abeille de Perrin, 1901 and L. rhodesica sp. nov. The species are similar in the shape and colour of body, the type of mesoventral carina, narrow AXI and also by the shape of the aedeagus. L. reuteri differs from both other species by strongly and densely punctured elytral intervals that are finely and less densely punctured in the both compared species It differs from L. rhodesica by pronotum narrowed from base to anterior angles and by less densely punctured head (see the paragraph Differential diagnosis in L. rhodesica). The antennal club is black in L. reuteri, while antennae are completely lightly coloured or at most partly a little infuscate in L. hiemalis. The head and pronotum is smooth except the puncturation while those body parts are also covered by the micro-reticulation beside puncturation in L. hiemalis. The tegmen of L. reuteri is shortly rounded while the same is roundly truncate apically with large dorsal preapical depression in L. rhodesica while L. hiemalis possesses tegmen moderately rounded apically, usually with small apical emargination and unobtrusive small preapical depression (Fig. 3) although the intensity and the presence of the apical emargination and the preapical depression can vary in L. hiemalis. The endophallus possesses specific characters in all the compared species (Figs. 2, 3, 5).

**Etymology.** The new species is dedicated to its collector Christoph Reuter (Germany), journalist, entomologist, well known specialist in the genus *Carabus*.

#### Leiodes subtilis Reitter, 1885

Liodes subglobosa J. Sahlberg, 1903.
Liodes (Oosphaerula) fleischeri Jacobson, 1910.
Liodes fleischeri Joy, 1911. [New name for L. similata Ganglbauer, 1899].
Liodes fleischeriana Roubal, 1917. [New name for L. fleischeri Joy, 1911].
Liodes alaiensis Portevin, 1942.
Liodes (Oosphaerula) afghana Hlisnikovský, 1964.
Liodes similata Ganglbauer, 1899.
Leiodes matthiasi Švec, 1999; syn. nov.

**Type material examined:** Lectotype (here designated with the aim to fix the type of the species as more specimens were wrongfully labelled as the types before), (3): transparent slide with aedeagus, "genitalia in/polyvinylpyrrolidine [p] // Namagan/ Taschkent [hw] // 3 [p] // Liodes / subtilis m: Edmund Reitter / scribsit [hw] // Type [p, red label] // LIODES 3 [holotyp/ SUBTILIS Reitt. [hw] // Hlisnikowski 19[p]32 [hw, pink label] // ex. coll J. Hlisnikowsky / National Museum / Prague, Czech republic [p]", (NMPC). Paralectotype (here designated),

\$\,\text{\cong}\$, "Namagan / Turkst./ Staudgr. 85 [p] // coll. Reitter [p] // Holotypus [red, p] 1885 [hw] / Liodes / subtilis / Reitter [hw] [white label, red margin] // Liodes/ subtilis m. / 1885 [hw] //", (HNHM).

**Remarks.** Beside the material cited above more than 280 specimens mentioned in the first part of this paper were also studied (Švec 2020). Among them two specimens from Chawat, Turkestan deposited in the collection NMPC labelled as paratypes. Despite the labelling it is obvious that any of those two specimens cannot be the paratypes of *L. subtilis* because Reitter (1885 in Kraatz & Heyden) described the species coming from the locality site Namagan, Taschkent.

A possibility of the existence of further types was also taken into account. It was known, that the part of the Reitter's collection, coming from the period when *L. subtilis* was originally described, was sold to some French entomologists (Cambefort 2006). Those Reitter's leiodids were included in the Grouvelle's collection deposited in the National History Museum in Paris (NHMP). According to information from NHMP any types of *L. subtilis* coming from the locality Namagan, Taschkent are housed in the museum. Therefore only the specimens housed in the NMPC and HNHM presented in the "Type material examined" (see above) should be considered for the type series.

Diagnosis of *Leiodes subtilis*, the images of the specimen and its labelling, here designated as the lectotype, and also the drawing of its aedeagus and further the image of the specimen designated here as the paralectotype, was presented in the first part of this paper (Švec 2020).

The study of the lectotype enabled me to find out the identity of *Leiodes matthiasi* Švec, 1999 with *L. subtilis*. Both species possess the same morphological characters including the longitudinal mesoventral carina as well as the shape of the aedeagus and the endophallus. Therefore *Leiodes matthiasi* Švec, 1999 is proposed as a junior synonym of *Leiodes subtilis* Reitter, 1885.

**Distribution.** Europe: AU, HU, IT; Asia: AF, CH, ES, IN, KI, KZ, MG, SA TM, TR, TD, UZ

New for China (Quinghai) and Tajikistan (both sub *L. matthiasi* Švec, 1999).

#### Leiodes calcarata (Erichson, 1845)

Silpha polita Marsham, 1802. [homonym (Silpha polita Sultzer, 1776)].

Leiodes maritima Rudd, 1832.

Anisotoma succinea Dufour, 1851.

Anisotoma geniculata Mulsant & Rey, 1861.

Anisotoma picta Reiche, 1862.

Anisotoma bedeli Brisout de Barneville, 1884.

Liodes calcarifera Reitter, 1885.

Anisotoma flexuosa Rey, 1889.

Liodes calcarata v. subsulcata Fleischer, 1906.

Liodes macropus subterranea Roubal, 1927.

Anisotoma minima Rey, 1889; syn. nov.

**Type material examined.** *Anisotoma minima*: Holotype,  $(\mathcal{P})$ : "Autriche / Hampe", (MCLP).

**Other material examined:** *Leiodes calcarata*: (1  $\circlearrowleft$ ), "Ljubatev / Šara pl. Serbia / Dr. Purkyně // Mus. Pragense / IČ 4109", (NMPC).

**Remarks.** Daffner (1983) was searching for the type of *Anisotoma minima* Rey, 1889 in MCLP without any success. Because the original description is insufficient Daffner (1983) expressed his opinion that the identification of the species can be done only when the type will be discovered. Thanks to the kindness of Harold Labrique the type of *Anisotoma minima* was found. All the external characters, among them especially the shape of the body, dorsal sculpture, narrow AXI, four large punctures on vertex, pronotum broadest closely before base, pronotal base with emargination before hind angles, oblique 9<sup>th</sup> elytral stria, the type of mesoventral carina and the shape of hind femora and tarsi correspond with the characters of *L. calcarata* (Erichson, 1845). The holotype of *A. minima* possess unicoloured reddish antennae so the colouring differs from the black colour of antennal club that is usual in *L. calcarata*. However, it is well known that a good part of *L. calcarata* specimens also possess lightly coloured antenna. Taking into account all the morphological characters *Anisotoma minima* Rey, 1889 is proposed as the junior synonym of to *Leiodes calcarata* (Erichson, 1845).

**Distribution.** Europe: AR, AU, BE, BU, BY, CR, CZ, DE, ER, FI, FR, GB, GE, HU, IR, IT, LA, LS, LT, NR, PL, PT, RO, SB, SK, SP, SV, SZ, UK; Africa: AG, TU; Asia: TR. New for Serbia.

#### **FAUNISTICS**

### Leiodes flavicornis (Brisout de Barneville, 1884)

**Examined material:** (1 ♀), [Slovenia], "Bled Carn / 6.8.[19]12", (NMPC); (1 ♂, 6 spec.), CZ: Boh.c.Praha/Radotín, Staňkovka/ 24.5.1994, Strejček lgt.", (NMPC).

**Distribution.** Europe: AU, CZ, FR, GE, GR, HU, IT, PL, RO, SK, SL, SP, SZ; Africa: AG. New for Slovenia, confirmed in Czech Republic.

#### Leiodes hybrida (Erichson, 1845)

**Examined material:** (1  $\circlearrowleft$ ), "Peristeri / Serbia mer. / Dr. Purkyně //  $\circlearrowleft$ ", (NMPC); [Greece], "Taygetos, Pelop. / Mařan et Štěp. /1935 coll. Bartoň /  $\circlearrowleft$ ", (NMPC); (1  $\supsetneq$ ), "LEBANON, Rayfoun / ca. 33°59′N, 35°42′E / mix. oak for. - 990 m / 11.-28.ii.2018 / pitfall trap, leg. Reuter", (NKME).

**Distribution.** Europe: AU, BE, CZ, ER, FI, FR, GE, GR, HU, IT, NR, PL, SB, SK, SV, SZ, "Caucasus"; Asia: KZ, LE.

New for Serbia, Greece and Lebanon.

#### Leiodes oblonga (Erichson, 1848)

**Examined material:** (1 ♀), [Slovenia], "Kranjska Gora / 1913", (NMPC).

**Distribution.** Europe: AU, BY, CR, CZ, DE, EN, ER, FI, FR, GB, GE, HU, IT, NL, NR, PL, RO, SK, SL, SV, SZ. New for Slovenia.

#### Leiodes cinnamomea (Panzer, 1793)

Examined material: (1  $\circlearrowleft$ ), "LEBANON, Rayfoun / ca. 33°58′N, 35°42′E / mix. oak for. - 990 m/ 24.i.-18.ii.2017/ pitfall trap, leg. Reuter", (NKME).

**Distribution.** Europe: AU, CR, CZ, FR, DE, GB, GE, HU, IR, IT, NL, PL, RO, SK, SP, SZ, UK; Asia: IS, SY, TR, LE. New for Lebanon.

#### Leiodes obesa (W.L.E. Schmidt, 1841)

**Examined material:** (1 ♀), "SE KAZAKHSTAN, Charyn / Canyon W Chundzha /650 m, 29.-31.v.2001 / leg. W.SCHAWALLER", (SMNC).

**Distribution.** Europe: AU, BU, BY, CZ, DE, EN, ER, FI, FR, GB, GE, HU, IR, IT, LT, NL, NR, PL, RO, SK, SV, SZ; Asia: ES, FE, KI, KZ, MG, TM, UZ. New for Kazakhstan.

### Leiodes rufipennis (Paykull, 1798)

Examined material: (1 ♂), "LATVIA, Stopiŋu novads, Dzidriŋas / Dârza iela 10, 56°94′06′′, 24°32′06′′E / 03.VIII.2017, dârzs, lidojumâ, leg. / D. Telnov", (NKME).

**Remarks.** *L. rufipennis* seems to be European discontinuously distributed species. As the species can be easily confused with similar *Leiodes dubia* (Fabricius, 1792) perhaps it is more a shortage of information than a discontinuous distribution.

**Distribution.** Europe: AU, DE, ER, FI, FR, GB, GE, IT, LA, PL, SK, SV, SZ, "Caucasus". New for Latvia.

#### Leiodes litura Stephens, 1835

Examined material: (1 ♂), [Czech Republic], "Boh. K. Hory / Amálka 6847/vii.-viii. 2007 / Sommer lgt. // Mounted in Dimethyl- / hydantoin formalde- / hyde (water soluble medium/ by Jan Růžička 2018)", (DSPC).

**Distribution.** Europe: AU, CZ, DE, FI, FR, GB, GE, GR, IR, IT, NL, NR, NT, SV SZ Confirmation of the occurrence in the Czech Republic.

#### Leiodes gallica Reitter, 1884

**Examined material:** (1 ♀), [Czech Republic], "BOHEMIA. mer. / Č. Krumlov 7.9. / Vyšný env. / Snížek lgt., 2012", (NMPC).

**Distribution.** Europe: CZ, DE, FR, GB, GE, HU, IT, SV, SZ. New for the Czech Republic.

## Leiodes dashennongjiaensis Cooter & Švec, 2015

Examined material: (1 &), "CHINA, Garze / Sichuan / Yajiang env., W Yalong/ river, 30.02N, 100.98E / 2800-3000 m, 12.-21.VI. / 2016, leg. Reuter", (NKME).

**Distribution.** China (Hubei, Sichuan). New to Sichuan

#### **ERRATA**

The second line on the page 296 in the first part of this paper (Švec, 2020) contains an error in the scientific name. The wrong name *Leiodes similis* Reitter, 1885 should be corrected in *Leiodes subtilis* Reitter, 1885.

ACKNOWLEDGEMENTS. My sincere thanks belongs to my entomological colleague and friend Jan Růžička (Praha, Czech Republic) for providing me with the leiodid material, to Harold Labrique (Museum of Confluences, Lyon, France), Matthias Hartmann (Naturkundemuseum, Erfurt, Germany), Ottó Merkl (Hungarian Natural History Museum, Budapest, Hungary), Wolfgang Schawaller (State Museum of Natural History, Stuttgart, Germany), and last but not least to Jiří Hájek (National Museum, Prague, Czech Republic) for allowing me to study leiodid material housed in the relevant collections.

## REFERENCES

- CAMBEFORT Y. 2006: *Des coléoptères, des collections et des hommes*. Publications Scientifiques du MuséumNational d'Histoire Naturelle, Paris, 375 pp.
- HEYDEN L. & KRAATZ G. 1885: Beitrage zur turkestanischen Coleopteren-Fauna. Deutsche entomologische Zeitschrift, 29: 273-298.
- LÖBL I. & LÖBL D. 2015: Catalogue of Palaearctic Coleoptera. Vol. 2/1. Hydrophiloidea Staphylinoidea. Revised and Updated Edition. Leiden: Koninklijke Brill, XXV + 900 pp.
- LOMPE A. 1986: Ein neues Einbettungsmittel für Insectenpräparate. In Puhtz V. Kleine Mitteilungen. *Entomologishe Blätter* 82: 119.
- ŠVEC Z. 2008: New Chinese and Nepalese *Leiodes* Latreille (Coleoptera: Leiodidae: Leiodinae). *Studies and Reports of District Museum Prague-East, Taxonomical Series* 4: 241-258.
- ŠvEC Z. 2020: Clarification of confusions in the taxonomy and the nomenclature in the genus *Leiodes* Latreille, 1796 (Coleoptera: Leiodidae: Leiodini). Part I. *Studies and Reports, Taxonomical Series* 16: 287-297.

Received: 18.5.2020 Accepted: 20.6.2020 Printed: 5.10.2020