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**Новый и малоизвестные виды палеарктических Sericini
(Coleoptera: Scarabaeidae: Melolonthinae)***

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Ключевые слова: Coleoptera, Scarabaeidae, Melolonthinae, Sericini, новый вид, таксономия, фаунистика, Палеарктика.

Key words: Coleoptera, Scarabaeidae, Melolonthinae, Sericini, new species, taxonomy, faunistics, Palaearctic.

Резюме: Из Таджикистана (Джартеппа) описан новый вид *Cycloserica ustинovi* Gusakov, sp. n. Для фауны России (о. Кунашир, Третьяково) впервые указан *Serica incurvata* (Nomura, 1971). В роде *Omaloplia* установлена новая синонимия: *O. r. ruricola* (Fabricius, 1775) = *Homaloplia kiritshenkoi* Medvedev, 1952 syn. n.

Abstract: *Cycloserica ustинovi* Gusakov, sp. n. is described from Tajikistan (Jarteppa). *Serica incurvata* (Nomura, 1971) is recorded from Russia (Kunashir Island, Tret'yakovo) for the first time. New synonymy is established: *Omaloplia ruricola* (Fabricius, 1775) = *Homaloplia kiritshenkoi* Medvedev, 1952 syn. n.

[**Gusakov A.A.¹, Ustinov V.E.²** A new and little known species of Palaearctic Sericini (Coleoptera: Scarabaeidae: Melolonthinae)]

При работе с оказавшимися в нашем распоряжении материалами по палеарктическим хрущиковидным трибы Sericini выявлен и описан новый для науки вид, для двух других видов установлена новая синонимия и новое местонахождение. Следующие сокращения использованы для обозначения мест хранения изученного материала: ЗММУ - Зоологический музей МГУ (Москва), ЗИН - Зоологический институт РАН (С.-

*Работа выполнена в рамках государственного задания Московского государственного университета им. М.В. Ломоносова; тема № 121032300105-0.

Петербург); ВУ - частная коллекция В.Е. Устинова (Москва).

Cycloserica (s. str.) *ustinovi* Gusakov, sp. n.

Рис. 1-4

Описание. Голотип (Рис. 1). Самец. Тело продолговатое, выпуклое, слабо блестящее, в умеренном шелковистом налёте, большей частью красновато-коричневое; края наличника, переднеспинки, конечности и ротовые придатки отчасти затемнены; глаза чёрные; усики светлые, коричневато-жёлтые; волоски, более либо чуть менее густо местами располагающиеся на теле, светлые, желтоватые; щетинки рыжие. Длина 8.2 мм. (Общая длина даётся как сумма длин головы, измеренная от переднего края наличника до линии мысленно соединяющей задние края глаз, и тела, измеренная от середины переднего края переднеспинки до вершин надкрылий.) Наибольшая ширина тела, находящаяся немного за серединой надкрылий, 4.0 мм.

Голова в 1.6 раза уже переднеспинки; наличник сравнительно сильно вытянутый, трапециевидный, с сильно выступающими передними углами и глубокой угловатой выемкой на переднем крае (форма выемки V-образная при осмотре сверху, W-образная при осмотре спереди или сверху и несколько сзади); поверхность наличника умеренно морщинисто пунктированная, посередине с сильной выпуклостью, по обе стороны от которой расположена пара крепких щетинок, торчащих почти вертикально; граница между лбом и наличником хорошо выраженная; поверхность лба голая, явственно шагренированная, равномерно редко и тонко пунктированная. Предглазные лопасти в самом узком месте с одной щетинкой. Глаза сравнительно небольшие. Усики 10-члениковые с очень короткой 3-члениковой булавой, длина которой едва меньше длины жгутика усика (2-7-го члеников). Последний членик челюстных щупиков к вершине слабо расширяющийся, закруглённый. Подбородок большой, с плоским сравнительно сильным вдавлением на вершине.

Переднеспинка едва уже основания надкрылий, примерно в 1.7 раза шире своей длины, наиболее широкая посередине, кпереди сужающаяся сильнее, чем к основанию, выпуклая; на

боках с острым ровным дуговидным краем, усаженным немногочисленными щетинками; на переднем крае с тонкой каймой и коротким рядом щетинок за ней, в области острых передних углов; задний край без каймы; поверхность переднеспинки явственно шагренированная и густо пунктированная довольно крупными, но не глубокими точками, заметно сгущающимися на боковых поверхностях.

Надкрылья примерно в 1.3 раза длиннее своей общей ширины, наиболее широкие за серединой, практически голые, шагренированные, с тонкими бороздками и плоскими, густо пунктированными промежутками; эпиплевры, достигающие предвершинного закругления надкрылий, с прослеживающимся на всём протяжении рядом щетинок; задний край почти прямой, с узкой кожистой каймой. Щиток несколько шире своей длины, треугольный, примерно в 8.7 раза короче надкрылий, голый, сильно пунктированный. Заднегрудь посередине с глубоким продольным вдавлением, ограниченным с боков неправильным продольным рядом довольно частых длинных щетинок, на боках сравнительно грубо пунктированная. Эпистерны заднегруди голые, густо пунктированные. Крылья хорошо развитые.

Передние голени снаружи с двумя зубцами, на внутреннем крае с плавно изогнутой вниз крепкой шпорой. Средние голени узкие, задние умеренно расширенные, в очень редких тонких точках. Задние тазики сравнительно блестящие, с продольным рядом крепких щетинок вдоль наружного края, крупно пунктированные густыми круглыми точками. Задние бёдра умеренно расширенные и пунктированные. Передние лапки короче, средние и задние много длиннее соответствующих голеней. Нижние поверхности члеников средних и, в особенности, задних лапок, помимо шипов в вершинной части члеников, также с отдельными чрезвычайно нерегулярными и короткими щетинками. Коготки сравнительно короткие и сильно изогнутые.

Поверхности брюшных стернитов с одним поперечным рядом щетинок, более или менее густо беспорядочно пунктированные. Пропигидий в коротких, прилегающих волосках, не скрывающих основной поверхности кутикулы. Пигидия умеренно выпуклый, почти голый (в единичных и

очень коротких торчащих волосках близ заднего края), шагренированный и тонко пунктированный.

Параметры (Рис. 2-4) сильно склеротизованные, асимметричные; левая параметра очень широкая (Рис. 3).

Изменчивость. Паратипы. Булава усиков немного короче жгутика усика или примерно такой же длины. Щетинок верхней поверхности наличника может быть от двух до восьми. Пунктировка пигидия может быть заметно более грубой, у отдельных самцов частично продольно-морщинистой.

Внешне самки практически неотличимы от самцов, с такой же маленькой булавой усиков и такими же крепкими сильно изогнутыми шпорами передних голеней.

Длина самцов 7.0-8.2 мм. Длина самок 7.2-8.7 мм.

Замечания. Маленький субэндемичный среднеазиатский род *Cycloserica* Reitter, 1896 объединяет виды с короткой, без выраженного полового диморфизма, булавой усиков и сравнительно вытянутым трапециевидным наличником. В роде 4 вида: *Cycloserica (Cycloserica) excisiceps* Reitter, 1896, *C. (C.) golovjankoi* Medvedev, 1952, *C. (C.) ustinovi* Gusakov, sp. n. и *C. (Leucoserica) arenicola* (Solsky, 1876).

C. ustinovi наиболее сходен с недостаточно описанным из Туркмении (Кушка) и известным мне только по первоописанию (Медведев, 1952: 147) *C. golovjankoi*, отличаясь от него строением усиков, особенностями кутикулы надкрыльй и размерами. Усики *C. ustinovi* 10-члениковые, длина булавы усика заметно меньше длины жгутика усика (2-7-го члеников) или примерно равна ей, надкрылья с умеренным шелковистым налётом, общая длина больше (7.0-8.7 мм). Усики *C. golovjankoi* 9-члениковые, длина булавы усика равна длине жгутика усика (2-6-го члеников), надкрылья без шелковистого налёта («без иризирующего блеска»), общая длина меньше (6.0-7.2 мм).

Материал. Голотип, самец № ZMMU Col 03166 (ЗММУ) с четырьмя этикетками: 1) красная, печатная: «HOLOTYPE | *Cycloserica* | *USTINOVI* | Gusakov»; 2) белая, печатная: «Таджикистан | Джартеппа, на свет | 38°30'31.6" N, 68°58'25.7" E | 16.06.2018 | В.Е. Устинов, М. Курбанов» [= Tajikistan, Jarteppa, at light, 38°30'31.6" N, 68°58'25.7" E, 16.06.2018, V.E. Ustinov, M. Kurbanov leg.]; 3) белая, печатная: «*Cycloserica* | aff. *golovjankoi*

♂ | (Medvedev, 1952) | А. А. Gusakov det. 2018»; 4) розовая, печатная: «Зоомузей МГУ (Москва, РОССИЯ) | № ZMMU Col 03166 | Zool. Mus. Mosq. Univ. | (Mosquae, ROSSIA) | Donator: V.E. Ustinov». Голотип - экземпляр очень хорошей сохранности, препарирован и смонтирован на плашке из плотного картона; эдеагус наклеен (клей водорастворимый) на картонный прямоугольник, подколотый на той же булавке. Паратипы: 9 самцов, 5 самок, в т. ч. 4 самца №№ ZMMU Col 03167-03170, 3 самки №№ ZMMU Col 03171-03173 (ЗММУ), 5 самцов, 2 самки (ВУ), собранных вместе и одновременно с голотипом.

Распространение. Западный Таджикистан, юго-восточнее Душанбе, Джартиппа. Все собранные экземпляры прилетели на свет в середине июня.

Этимология. Патроним. Назван в честь сборщика, Вадима Евгеньевича Устинова, передавшего в коллекцию Зоологического музея МГУ большую часть типовой серии этого нового вида вместе со многими другими интересными жуками из своих сборов.

Serica incurvata (Nomura, 1971)

Рис. 5-7

Trichoserica incurvata Nomura, 1971: 67 (Япония, «Hokkaido & Honshu»; голотип с Хонсю, «Yunotaira spa, Gunma Pref.»). Другие ссылки опущены.

Материал. Россия: 1 самец № ZMMU Col 03165, 1 самка № ZMMU Col 03193 (ЗММУ), «о. Кунашир | Третьяково | 31.VII.1985 | [Н.Б.] Никитский» / A.A. Gusakov det. 2009, 2021; 2 самки №№ ZMMU Col 03194-03195 (ЗММУ), там же, 21.07.1985, Н.Б. Никитский / A.A. Gusakov det. 2021.

Распространение. Япония (Хоккайдо, Хонсю), Россия (Кунашир). Для фауны России указывается впервые.

Замечания. На Кунашире *S. incurvata* обитает вместе с более часто встречающимся и внешне похожим *Serica k. karafutoensis* Nijjima et Kinoshita, 1923, от которого лучше всего отличается строением средних голеней и параметров. У *S. incurvata* средние голени в вершинной трети расширенные и уплощенные (у самок

этот признак выражен значительно слабее), правая парамера сверху широкая, с почти прямым внутренним краем, левая парамера с длинным торчащим серповидным, сильно выступающим за контуры основания парамер выростом (Рис. 5-7). У *S. k. karafutoensis* средние голени не расширенные, правая парамера сверху менее широкая, перед вершиной с глубокой выемкой на внутреннем крае, левая парамера с очень коротким, не выступающим за контур основания парамер выростом.

Omaloplia ruricola ruricola (Fabricius, 1775)

Melolontha ruricola Fabricius, 1775: 38 (Великобритания, «Anglia»).

Homaloplia kiritshenkoi Medvedev, 1952 [Медведев, 1952]: 163 (Россия, Крым, «Агармыш близ Старого Крыма») **syn. n.** Другие ссылки опущены.

Материал. Россия: 2 самца (ЗИН), «Krim | Agarmisch | 22.V.[19]06.», «к[оллекция]. Кириченко» / А.А. Gusakov det. 2006.

Распространение. Широко распространён в Европе и на Кавказе; указан также для Ирана (Ahrens, Bezděk, 2016).

Замечания. *Omaloplia kiritshenkoi* (Medvedev, 1952) недостаточно описан по сборам А.Н. Кириченко с горного массива Агармыш в Восточном Крыму, как вид близкий к широко распространённому *Omaloplia ruricola* (Fabricius, 1775). В первоописании для различения выше названных форм предложены только внешние, подверженные значительной изменчивости, признаки: плотность пунктировки и выраженность бороздок надкрылий, густота и цвет опушения тела, степень округлённости вершин надкрылий, относительная длина верхней шпоры задних голеней и прочее (Медведев, 1952: 160, 163). Типовую серию в коллекции ЗИН, где она должна храниться, обнаружить не удалось; велика вероятность, что она утрачена. Нами изучены два самца *O. r. ruricola*, собранные в типовой местности *O. kiritshenkoi* тем же сборщиком и в том же году, что и типовая серия последнего. Надкрылья этих экземпляров с почти прямым задним краем, что соответствует описанию *O. kiritshenkoi* (Медведев, 1952: 163). По Медведеву, у *O. r. ruricola*, задний край надкрылий слабо закруглённый (Медведев, 1952: 165). Несмотря на то, что другие экземпляры

O. ruricola с почти прямым задним краем надкрылий нам пока не известны, строением гениталий самцы с Агармыша ничем не отличаются от просмотренных нами самцов *O. r. ruricola* из Германии, Донецкой области, Дагестана и Грузии. Это обстоятельство позволяет нам предложить новую синонимию: *Omaloplia r. ruricola* (Fabricius, 1775) = *Homaloplia kiritshenkoi* Medvedev, 1952 **syn. n.**

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1

Рис. 1. *Cycloserica* (s. str.) *ustinovi* Gusakov, sp. n., самец, голотип, общий вид сверху. Автор снимка: К.В. Макаров.



Рис. 2-4. *Cycloserica* (s. str.) *ustinovi* Gusakov, sp. n., парамеры голотипа: 2 - вид справа; 3 - вид сверху; 4 - вид слева.

Рис. 5-7. *Serica incurvata* (Nomura, 1971), парамеры, самец № ZMMU Col 03165 (Россия, Кунашир, Третьяково): 5 - вид справа; 6 - вид сверху; 7 - вид слева. Автор снимков: К.В. Макаров.

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**A new species of the genus *Dorcadion* Dalman, 1917 (Coleoptera,
Cerambycidae) from Xinjiang, China**

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Key words: Coleoptera, Cerambycidae, Lamiinae, *Dorcadion*, new species, status restored, Xinjiang, China, Kazakhstan, Dzhungarsky Alatau.

Abstract: *Dorcadion (Cribridorcadion) gazanchidisi* sp. n. close to *D. (C.) apicipenne* Jakovlev, 1899, stat. rest. is described from China (Yining env., Xinjiang). The distinguishing characters are discussed.

D. (C.) apicipenne Jakovlev, 1899, stat. rest. traditionally regarded as a synonym of *D. (C.) sokolowi* Jakovlev, 1899 is restored as a species name.

Introduction

Recently a series of 3 *Dorcadion* males and 9 females collected in Yining env. (Xinjiang, China) by unknown local collector, was received by Viktor Gazanchidis (Moscow) for his own collection. All specimens were sent to me for study and were used for the description of a new species.

Abbreviations of collections:

MD - collection of M. Danilevsky (Moscow, Russia)

VG - collection of V. Gazanchidis (Moscow, Russia)

Results

The taxonomy and morphology of three closely related taxa are shown below.

Dorcadion (Cribridorcadion) gazanchidisi sp. n.
Figs 1-5

Type locality. China, Xinjiang, Yining.

Description. Body big, usually totally black, including legs and antennae; frons in males glabrous shining, with big scattered

punctuation; in females partly covered with pale-brownish recumbent pubescence concentrated around deep furrow along frontal middle; vertex with bigger and denser conjugating punctuation, in males glabrous, in females with dense, very short dark pubescence, but sometimes also glabrous; genae, occiput and areas around eyes with pale pubescence.

Antennae thin, male antennae reaching apical elytral fifth, female antennae surpassing elytral middle; usually black with black 1st joint, but one female (with black elytral pubescence) with dark-red 1st antennal joint; 1st joint shining, with strong short oblique black setae, but in females also with dense fine pubescence; other joints in males look glabrous, in females - with fine black indistinct pubescence, but 2nd joint and 3rd joint basally with pale pubescence; 1st joint much longer than 3rd, 3rd longer than 4th.

Prothorax transverse, in males about 1.1-1.2 times shorter than basal width, in females - 1.2-1.4 times; anteriorly wider than posteriorly; with acute lateral spines; pronotum regularly convex, slightly exposed posteriorly at middle, with narrow pale central line; in males looks nearly glabrous, with very dense, big, conjugating irregular punctuation; bases of lateral spines with fine light pubescence; in females pronotum with smaller punctuation, covered by very short brown or black pubescence not hiding punctures, but sometimes looks glabrous; lateral thoracic sides with pale pubescence; scutellum small, triangular, with pale pubescence.

Elytra strongly convex, oval, widest before middle, rounded apically; in males about 1.8 times longer than wide, in females - about 1.6-1.8 times; humeral carinae well developed anteriorly, especially in females; external dorsal carinae distinct in females only; 4 white elytral stripes present on each elytron; ground elytral pubescence in males black; in females - black, brown or pale-brown, pale elytral pubescence a little lightened along suture; brown and pale brown pubescence with numerous velvety-black spots along suture; marginal elytral stripe is the widest, covering in males about half of curved margin, with straight internal border; marginal stripes in one male with black central area; in females marginal stripes cover from total to about half of curved margin, sometimes with irregular internal border; humeral stripes wide, about two times wider than dorsal stripes; dorsal stripes very narrow, fused or not apically with humeral stripes, often

with small black dots; sutural stripes also narrow, about as wide as dorsal stripes; internal dorsal stripes always absent.

Legs usually totally black, but one female (with black ground elytral pubescence and reddish 1st antennal joint) has reddish femora; male tarsi moderately widened: 3rd tarsal joints of anterior legs in males elongated, in females - transverse.

Body length in males: 14.7-15.2 mm, width: 5.6-5.7 mm; body length in females: 15.5-20.2 mm, width: 6.8-8.1 mm.

Material. Holotype, male, “China, Xinjiang, Yining, 05.2020” - MD; 11 paratypes: 2 males and 9 females from same locality; 1 male with same label as holotype - VG; 1 male, 08.2019 - VG; 1 female with same label as holotype - MD; 4 females with same label as holotype - VG; 2 females, 08.2019 - VG; 2 females, 05.2020 - VG.

Differential diagnosis. The new species is very close to *Dorcadion apicipenne* Jakovlev, 1899b, **stat. rest.** (described from about same geographical area), which was before accepted as a synonym (Breuning, 1958; Plavilstshikov, 1958; Danilevsky (1993, 2010, 2020b) of *Dorcadion sokolowi* Jakovlev, 1899a. The holotype of *D. apicipenne* Jakovlev, 1899b is unknown (Lazarev, 2011). So, the true nature of the species could be determined on the base of original description only.

D. sokolowi is rather variable. Several hundreds of specimens are known to the author, including big series from the type locality (Dzharkent environs in Kazakhstan, according to Danilevsky, 1992). That is why it is difficult to find any distinguishing character in the original description of *D. apicipenne*, which could prove its separate species rank. But such characters exist. The holotype-male of *D. apicipenne* was rather big - 15 mm long. Males of *D. sokolowi* are usually smaller (especially males of eastern populations from near Khorgos - 12-17mm), with usually well developed internal dorsal elytral stripes - absent in *D. gazanchidisi* sp. n. and in the holotype of *D. apicipenne*. Holotype of *D. apicipenne* had 5th antennal joint longer than 3rd (“d'un cinquième plus long que le 3-e”). In *D. sokolowi* and in *D. gazanchidisi* sp. n. 5th antennal joint is much shorter than 3rd. White pubescence was described in 3rd antennal joint of the holotype of *D. apicipenne* (“couvert au cote externe de duvet blanchâtre diffuse”) - never in *D. sokolowi*, neither in *D. gazanchidisi* sp. n. The apical antennal lightening described in

M.L. Danilevsky

D. apicipenne is absent in *D. sokolowi* and in *D. gazanchidisi* sp. n. Elytral apices truncated in *D. apicipenne* (“Elytres ... manifestement découpés de chaque côté à l’extrême, qui forme une large dent suturale”), but never in *D. sokolowi*, or *D. gazanchidisi* sp. n. - both with rounded elytra. Internal femora surfaces in *D. apicipenne* densely covered with pale pubescence (“densément revêtue de poils blanchâtre”).

Besides, *D. sokolowi* strongly differs from *D. gazanchidisi* sp. n. by more elongated border.

Dorcadion dsungaricum Pic, 1907 also described from nearby (“Dsungarie, Borochoro”) could be a real synonym of *D. sokolowi*, because of elongated body, red legs and 1st antennal joint.

Etymology. The new species is dedicated to Viktor Gazanchidis (Moscow), the owner of the most part of the type series, who provided me with material for the study.

Dorcadion (Cribridorcadion) sokolowi Jakovlev, 1899

Figs 6-15

Dorcadion (Compsodorcadion) sokolowi Jakovlev [Jakovleff], 1899a: 150-151 - “Prov. de Sémpalatinsk”; Pic, 1901: 70, part. - “Asie C^{le}”.

Dorcadion jacobsoni Jakovlev, 1899c: 243 - “in prov. Heptapotamiae valle Iliense, occidentem versus a Kuldza”.

Dorcadion (s. str.) *jacobsoni*, Pic, 1901: 71, part. - “Asie C^{le}”.

Dorcadion (Compsodorcadion) amymon Jakovlev, 1906: 276 - [mountains along Ili river near Dzharkent].

Dorcadion dsungaricum Pic, 1907a: 9, 11 - “Dsungarie, Borochoro”; Suvorov, 1913: 69.

Dorcadion dsungaricum var. *melandolicum* Pic, 1907b: 111 (“Même origine que la forme type”) - the name was used by Suvorov (1913) as valid - Art.45.6.4.1.

Dorcadion (s. str.) *amymon*, Semenov, 1910: 27 (including ab. *melandolica* Pic).

Dorcadion dsungaricum melancholicum, Suvorov, 1913: 70.

Dorcadion melanchalicum, Suvorov, 1913: 70 (misprint).

Dorcadion (Compsodorcadion) sokolovi Winkler, 1929: 1185 (unjustified emendation, see also Danilevsky, 2020a: 6); Plavilstshikov, 1932: 192, part. - [Semipalt.].

Dorcadion (s. str.) *amymon*, Plavilstshikov, 1932: 192 - [Semir., Dzhung.].

Dorcadion (Pedestredorcadion) lucae, Breuning, 1946: 129-130 - “Kouldja, Dzoungarie”, “Monts Borochoro, Dzoungarie”, “Djarkent, Dzoungarie”; 1958: 28, part. - “Turkestan”; 1962: 437 (= *apicipenne* Jak. = *sokolovi* Jak. = *musarti* Pic = *dsungaricum* Pic = *amymon* Jak. = *melancholicum* Pic) - “Kuldja”, “Dsungarei: Djarkent, Mts. Borochoro etc.”.

Dorcadion (Pedestredorcadion) conicolle Breuning, 1946: 130 - “Djarkent,

M.L. Danilevsky

- Dzoungarie”; 1958: 28, part.; 1962: 440 - “Djarkent”.
- Dorcadion (Pedestredorcadion) merzbacheri* Breuning, 1946: 130-131 - “Tian-Shan”; 1958: 28 - “Turkestan”; 1962: 441 - “Thian-Shan”.
- Dorcadion (Pedestredorcadion) jacobsoni*, Breuning, 1946: 131-132, part. (= *obtusicolle* Pic) - “Tian-Shan”, “Kouldja, Monts Borochoro, Dzoungarie”; 1958: 28 - “Turkestan”; 1962: 441 - “Dsungarie: Kouldja, Mts. Borochoro, Oremdji”; Danilevsky, 1992: 94-95 (= *sokolowi* Pic = *conicollis* Breun. = *lucae*, sensu Breun. non Pic).
- Dorcadion (Pedestredorcadion) amymon*, Gressitt, 1951: 332, 334, part. (= *dsungaricum* Pic = *melancholicum* Pic) - “China: Sinkiang (Turkistan, Dsungaria; Atshal R.”).
- Dorcadion (Pedestredorcadion) apicipenne*, Gressitt, 1951: 332, 334, part. - “China: Sinkiang (Dsungaria)”.
- Dorcadion (Autodorcadion) sokolovi* Plavilstshikov, 1958: 270, part. [unjustified emendation, see also Danilevsky, 2020a: 6] (= *apicipenne* Jak. *amymon* Jak. = *musarti* Pic = *dsungaricum* Pic); Kostin, 1973: 212, 221; Lobanov et al., 1982: 263; Ovtchinnikov, 1996: 163 - Kirgizia.
- Dorcadion (Autodorcadion) merzbacheri*, Plavilstshikov, 1958: 275, part.
- Dorcadion (Autodorcadion) conicollis*, Plavilstshikov, 1958: 275, part.
- Dorcadion (Autodorcadion) jacobsoni*, Plavilstshikov, 1958: 275, part.
- Dorcadion (Dzungarodorcadion) jacobsoni*, Danilevsky, 1993: 48 (= *apicipenne* Jak. = *sokolowi* Jak. = *amymon* Jak. = *dsungaricum* Pic = *melancholicum* Pic = *conicollis* Breun. = *merzbacheri* Breun.) - “Kazakhstan - South West part of Dzungarskii Alatau and adjacent regions of Ili valley near Dzharkent, Sarybel, Baskunchi, Khorgos; China - Boro-Khoro Mts, Kuldza environs.”
- Dorcadion (Cribridorcadion) jacobsoni*, Danilevsky et al., 2005: 137 (endophallus); Danilevsky, 2010: 248 (= *amymon* Jak. = *apicipenne* Jak. = *conicollis* Breun. = *dsungaricum* Pic = *melancholicum* Pic = *merzbacheri* Breun. = *sokolovi* Plav. = *sokolowi* Jak.) - Kazakhstan, Xinjiang; Lazarev, 2011: 169-170 (type material of *D. jacobsoni* Jak., *D. apicipenne* Jak., *D. sokolowi* Jak. and *D. amymon* Jak. was not found).
- Dorcadion (Cribridorcadion) sokolowi*, Toropov, Milko, 2013: 14, 48, part. (= *amymon* Jak. = *apicipenne* Jak. = *conicollis* Breun. = *dsungaricum* Pic = *melancholicum* Pic = *merzbacheri* Breun. = *sokolovi* Plav. = *jacobsoni* Jak.); Lazarev, 2016: 292; Lin & Yang, 2019: 369 - “China: Xinjiang, Kazakhstan”; Karpiński et al., 2018: 104 - “Almaty Region: 7 km N of Sarymbel (44°29'N, 80°04'E), 1725 m”; Danilevsky, 2020: 357 - Kazakhstan, Xinjiang.

Type locality. Kazakhstan; Dzharkent in Dzungarsky Alatau according to the similarity of the type material and available specimens (Danilevsky, 1992). Syntype labels were marked with a single label “Ozernoe”.

M.L. Danilevsky

Diagnosis. Small or middle size beetles; body relatively narrow elongated; each elytron with 4 or 5 narrow white lines; internal dorsal lines present or absent, but never complete, often as a row of rudimentary spots; specimens in typical populations (Dzharkent environs – Figs 6-10) with red legs (excepting black tarsi) and red 1st antennal joint; specimens in eastern populations (near Khorgos - Figs 11-15) smaller with usually black legs and 1st antennal joint; male elytra always with black ground pubescence, female elytra often brown or light brown; body length in males: 12-16 mm, in females: 13-20 mm.

Distribution. Kazakhstan; south-east of Dzhungarsky Alatau from Dzharkent to Khorgos; big series were collected by the author near Sarybel (Tyshkan, 1500m, 44°26'16"N, 80°4'E) and near Dzharkent-city (620m), as well as eastwards Pidzhim (740m, 44°13'N, 80°14'E). Single specimens were observed in dune sands southwards Dzharkent towards Ili River. Smaller specimens with back legs and antennae dominated at China border near Khorgos (850m, 44°14'5"N, 80°23'7"E).

The species is also distributed in China eastwards to about Kuldzha (Yining), where specimens transitional to *D. obtusicolle* Pic, 1926 occur.

The records for left bank of Ili River in Kazakhstan and corresponding dots on the map (Toropov & Milko, 2013: 14) with Boguty and Syugaty mountains were quite doubtful and could be connected with another species - *D. morozovi* Danilevsky, 1992, described from south limits of Syugaty Valley, and Kegen Valley is the center of *D. morozovi* area.

The species is impossible in Kirgizia. The record by Plavilstshikov (1958): “north-east of Kirgizia (east part of Terskey Alatau, Sary-Dzhas)” was referred to Kazakhstan (42°54'45"C, 79°36'20"B) and connected with *D. morozovi*. Most probably that information was the base of the modern record for Kirgizia (Ovtchinnikov, 1996).

Material. 25 males, 28 females, Kazakhstan, Dzharkent env., 20.4.1984, M. Danilevsky leg. - MD; 1 male, 1 female, Kazakhstan, Pidzhim env., 29.4.1984, M. Danilevsky leg. - MD; 18 males, 8 females, Kazakhstan, Khorgos env., 21.4.1991, M. Danilevsky leg. – MD.

M.L. Danilevsky

Besides, many hundreds of specimens of both populations were observed by the author in both populations (Dzharkent and Khorgos environs).

Dorcadion (Cribridorcadion) apicipenne Jakovlev, 1899, **stat. rest.**

Dorcadion apicipenne Jakovlev, 1899b: 61 - "Dshungarie Chinoise: riv. Atschal, non loin de Kuldsha"; Semenov, 1910: 27, part. (= *dsungaricum* Pic).

Dorcadion (s. str.) *apicipenne*, Plavilstshikov, 1932: 192 - Dzungaria.

Dorcadion (Pedestredorcadion) lucae, Breuning, 1962: 437, part. (= *apicipenne* Jak. = *sokolovi* Jak. = *musarti* Pic = *dsungaricum* Pic = *amymon* Jak. = *melancholicum* Pic) - "Kuldja", "Dsungarei: Djarkent, Mts. Borochoro etc." [not Pic, 1898 = *D. arietinum* Jakovlev, 1898].

Dorcadion (Pedestredorcadion) apicipenne, Gressitt, 1951: 332, 334, part. - "China: Sinkiang (Dsungaria)".

Dorcadion (Autodorcadion) sokolovi Plavilstshikov, 1958: 270, part. [unjustified emendation, see also Danilevsky, 2020a: 6] (= *apicipenne* Jak. = *amymon* Jak. = *musarti* Pic = *dsungaricum* Pic).

Dorcadion (Dzungarodorcadion) jacobsoni, Danilevsky, 1993: 48, part. (= *apicipenne* Jak. = *sokolowi* Jak. = *amymon* Jak. = *dsungaricum* Pic = *melancholicum* Pic = *conicolle* Breun. = *merzbacheri* Breun.) - "Kazakhstan – South West part of Dzungarskii Alatau and adjacent regions of Ili valley near Dzharkent, Sarybel, Baskunchi, Khorgos; China - Boro-Khoro Mts, Kuldza environs."

Dorcadion (Cribridorcadion) jacobsoni, Danilevsky, 2010: 248, part. (= *amymon* Jak. = *apicipenne* Jak. = *conicolle* Breun. = *dsungaricum* Pic = *melancholicum* Pic = *merzbacheri* Breun. = *sokolovi* Plav. = *sokolowi* Jak.) – Kazakhstan, Xinjiang; Lazarev, 2011: 169-170, part. (type material of *D. jacobsoni* Jak., *D. apicipenne* Jak., *D. sokolowi* Jak. and *D. amymon* Jak. was not found).

Dorcadion (Cribridorcadion) sokolowi, Toropov & Milko, 2013: 14, 48, part. (= *amymon* Jak. = *apicipenne* Jak. = *conicolle* Breun. = *dsungaricum* Pic = *melancholicum* Pic = *merzbacheri* Breun. = *sokolovi* Plav. = *jacobsoni* Jak.); Lin & Yang, 2019: 369, part. (= *amymon* Jak. = *apicipenne* Jak. = *conicolle* Breun. = *dsungaricum* Pic = *melancholicum* Pic = *merzbacheri* Breun. = *sokolovi* Plav. = *sokolowi* Jak.) - "China: Xinjiang, Kazakhstan"; Karpiński et al., 2018: 104, part.; Danilevsky, 2020: 357, part. - Kazakhstan (south-east of Dzungarsky Alatau), China (Xinjian).

Diagnosis. (according to the original description). Holotype, male; 1st antennal joint and legs black or red (p. 61: "1-er article des antennes et pattes (à l'exception des tarses) noirs"; p. 62: "à premier article roux rougeâtre"; p. 63: "Pattes ..., roux rougeâtre sauf les tarses, qui sont noirs"). Each elytron with 4 white lines. All femora

M.L. Danilevsky

internally densely covered with pale pubescence (“Les pattes, en général, sont dénudées, sauf la face inférieure des femurs, qui est densément revêtue de poils blanchâtre”). Body length: 15 mm, width; 5.5 mm.

Distribution. “Dshungarie Chinoise: riv. Atschal, non loin de Kuldsha”.

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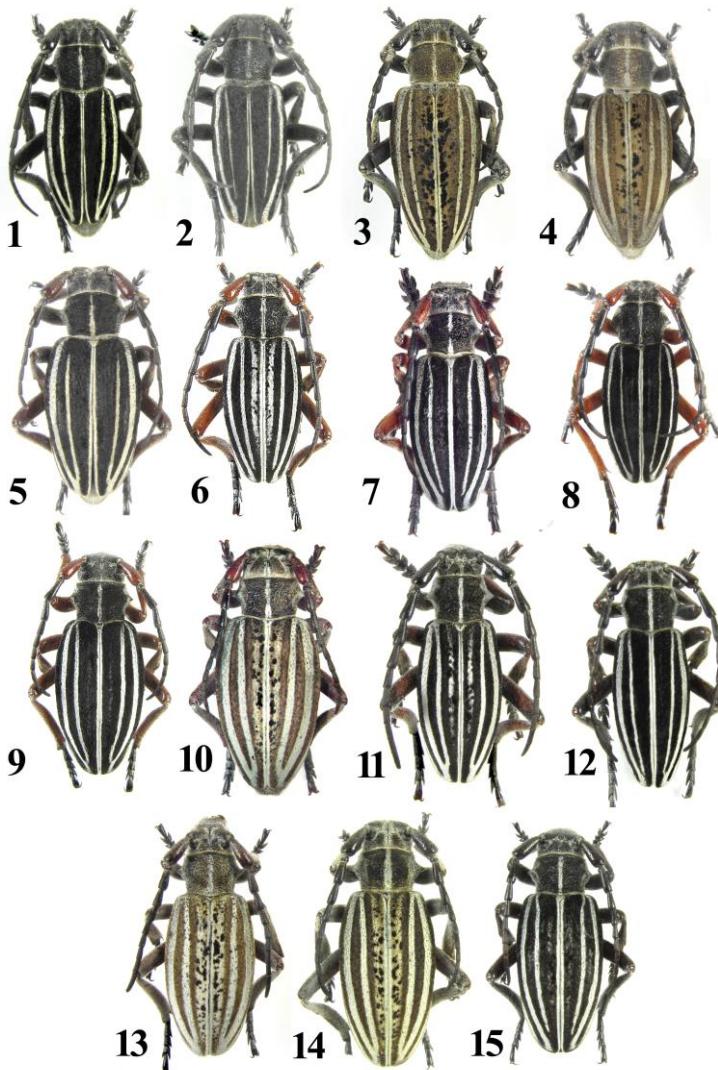
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Figs 1-15. *D. (C.) gazanchidisi* sp. n. (1-5) and *D. (C.) sokolowi* (6-15); 1 - holotype, male; 2 - paratype, male, "China, Xinjiang, Yining, 05.2020"; 3-4 - paratypes, females, "China, Xinjiang, Yining, 05.2020"; 5 - paratype, female, "China, Xinjiang, Yining, 08.2019"; 6-10 - Kazakhstan, Dzharkent env.; 6, 8 - males, 20.4.1984, M.Danilevsky leg.; 7 - male, 1.V.; 9 - female, 20.4.1984, M.Danilevsky leg.; 10 - female, 1.V.; 11-15 - Kazakhstan, Khorgos environs, 21.4.1991, 1000 m, M.Danilevsky leg.; 11-12 - males, 13-15 - females.

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**A review of Crimean *Dorcadion* Dalman, 1917 (Coleoptera,
Cerambycidae) mainly on the base of 2021 collecting season**

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Key words: Coleoptera, Cerambycidae, Lamiinae, *Dorcadion*, taxonomy, new subspecies, Crimea.

Abstract: Ten Crimean *Dorcadion* taxons are recorded for Crimean Peninsula: *D. (Carinatodorcadion) carinatum carinatum* (Pallas, 1771), *D. (Cribridorcadion) equestre vadimi* Danilevsky, **ssp. n.** (Crimean endemic), *D. (C.) holosericeum ustинovi* Danilevsky, **ssp. n.** (distributed all over peninsula), *D. (C.) cinerarium panticapaeum* Plavilstshikov, 1951, *D. (C.) cinerarium bartenevi* Lazarev, 2011, *D. (C.) cinerarium mosyakini* Danilevsky, **ssp. n.** (western Crimea), *D. (C.) cinerarium perroudi* Pic, 1942, *D. (C.) sericatum* Sahlberg, 1823, *D. (C.) pusillum pusillum* Küster, 1847 and *D. (C.) ciscaucasicum mokrzeckii* Jakovlev, 1902.

Introduction

Dorcadion fauna of Crimean Peninsula is relatively well investigated (Bartenev, 2003). It traditionally includes (Danilevsky, 2020) 7 species and 9 taxons (with subspecies).

- D. (Carinatodorcadion) carinatum carinatum* (Pallas, 1771)
- D. (Cribridorcadion) equestre equestre* (Laxmann, 1770)
- D. (C.) holosericeum holosericeum* Krynicki, 1832
- D. (C.) cinerarium panticapaeum* Plavilstshikov, 1951
- D. (C.) cinerarium bartenevi* Lazarev, 2011
- D. (C.) cinerarium perroudi* Pic, 1942
- D. (C.) sericatum* Sahlberg, 1823
- D. (C.) pusillum pusillum* Küster, 1847
- D. (C.) ciscaucasicum mokrzeckii* Jakovlev, 1902

M.L. Danilevsky, G.B. Danilevskaya

Crimean *D. holosericeum* Krynicki, 1832, Crimean *D. equestre* (Laxmann, 1770) and small pubescent *D. cinerarium* (Fabricius, 1787) from near Evpatoria are described below as three new subspecies: *D. (C.) holosericeum ustinovi* Danilevsky, ssp. n., *D. (C.) equestre vadimi* ssp. n. and *D. cinerarium mosyakini* Danilevsky, ssp. n.

The records of *D. fulvum* (Scopoli, 1763) and *D. tauricum* Waltl, 1838 for Crimea by Plavilstshikov (1958) were wrong (no specimens were known), as well as a number of subsequent repetitions.

D. pedestre (Poda von Neuhaus, 1761) is also absent in Crimea (Plavilstshikov, 1958). The publication by Keppen (1882) for South Coast of Crimea was definitely connected with numerous local populations of *D. cinerarium* (Fabricius, 1787), as well as recent record of *D. pedestre* by Kasatkin (1999) for Chatyr-Dag Mt.

The authors arranged three expeditions (April-May: 2018, 2019, 2021) to study Cerambycidae distribution and taxonomy of the peninsula. The most interesting and numerous material was collected in 2021, when a big part of the peninsula was investigated (Fig. 1). Sergey Mosyakin joined us for several excursions near Simferopol in 2018. Sergey Murzin and Vadim Ustinov took part in our expedition in 2021. Many new localities were discovered, many hundreds of specimens were collected. New material allowed us to identify three new subspecies described below.

All specimens collected by S.V. Murzin and V.E. Ustinov are preserved in their own collections, all other specimens mentioned in the publication are preserved in the collection of M.L. Danilevsky.

Abbreviations of collections:

MD - collection of M. Danilevsky (Moscow)

SM - collection of S. Mosyakin (Simferopol)

VU - collection of V. Ustinov (Moscow)

Results

Dorcadion (Carinatodorcadion) carinatum carinatum (Pallas, 1771)
Cerambyx carinatus Pallas, 1771: 465 - "circa Volgam obseruatus".

Dorcadion (Carinatodorcadion) carinatum carinatum, Danilevsky, 1998b: 136;

M.L. Danilevsky, G.B. Danilevskaya

2020: 339 - Central and Southern Russia, Ukraine, Kazakhstan; Bartenev, 2009: 294 - Ukraine (including Crimea), South Russia, North-West Kazakhstan.

Type locality. South of Volga Region.

Diagnosis. Body relatively big and wide; legs and antennae always completely black; humeral carinae well developed; body proportions, shape of thoracic spines, pronotal and elytral punctuation are rather different in different populations; body length in males: 18.0-23.5 mm, width: 6.0-7.0 mm, body length in females: 17.2-25.0 mm, width: 6.3-8.3 mm.

Crimean material. 3 males, 1 female, Eastern Crimea, Fontan environs, 45°16'N, 35°55'19"E, 70 m, 26.4.1992, Danilevsky leg. (MD); 1 male, Central Crimea, Krasnogvardeyskoe, 45°30'N, 34°18'E, 56 m, 25.4.2018, K. Efetov leg. (MD); 1 male, Eastern Crimea, Cape Kazantip, about 45°28'12"N, 35°50'41"E, 40 m, 9.6.1985, I. Plyushch leg. (MD); 1 female, Northern Crimea, Kalinino, about 45°36'N, 34°13'E, 23.5.1985, I. Plyushch leg. (MD); 1 female, Vladislavovka, 45°9'18"N, 35°22'16"E, 50 m, 15.4.2021, Ustinov leg. (VU); 1 male, Central Crimea, Simferopol, 1.6.1989, B. Moseichuk leg. (MD); 1 female, Western Crimea, Donuzlav Lake, 45°25'3"N, 33°9'43"E, 19 m, 4.7.1988, K. Efetov leg. (MD); 1 female, Podgornoe (northwards Koktebel, 45°0'42"N, 35°16'23"E, 130 m), 21.5.2019, Danilevsky leg. (MD); 1 female, South Crimea, northwards Partizanskoe, 44°51'21"N, 34°5'30"E, 410 m, 4.5.2018, Danilevsky leg. (MD).

Material used for comparison. Big series of *D. c. carinatum* from Russia: Samara, Saratov, Belgorod, Rostov, Volgograd, Stavropol, Krasnodar and Orenburg regions, as well as from Adygeya and Kabardino-Balkaria; several specimens are available from Ukraine (Kharkov, Donetsk) and North-West Kazakhstan (Dzhanybek).

Distribution in Crimea. The taxon seems to be distributed all over Crimea Peninsula, though a few localities are definitely known: Cape Kazantip (about 45°28'12"N, 35°50'41"E, 40 m), Fontan environs (45°16'N, 35°55'19"E, 70 m), Vladislavovka (45°9'18"N, 35°22'16"E, 50 m), Krasnogvardeyskoe env. (about 45°30'N, 34°18'E), Kalinino (about 45°36'N, 34°13'E), Simferopol-city, northwards Partizanskoe (44°51'21"N, 34°5'30"E, 410 m), Podgornoe (northwards Koktebel, 45°0'42"N, 35°16'23"E, 130 m),

M.L. Danilevsky, G.B. Danilevskaya

Donuzlav Lake ($45^{\circ}25'3''N$, $33^{\circ}9'43''E$, 19 m).

Besides the south coast of Crimea (between Alushta and Baydar) was mentioned by Plavilstshikov (1958: 95).

Remark. We did not discover any dense population in Crimea; single specimens only were collected in several localities. Available Crimean specimens are among the biggest known in the taxon, but we were not able to detect stable distinguishing characters to separate peninsula populations from mainland populations. In general, pronotal and elytral punctuation is not too much dense, neither coarse.

Dorcadion (Cribridorcadion) equestre vadimi Danilevsky, ssp. n.

Figs 3-4

Dorcadion cruciatum, Thomson, 1867: 58 - "Tauria, Crimea".

Dorcadion equestre, Zahaikevitch, 1991: 153 - mountain Crimea.

Dorcadion (Cribridorcadion) equestre equestre, Bartenev, 2009: 310, part. - Crimea; Peks, 2010: 219 - "Crimea Jalta".

Type locality. Crimea, Klyuchi, $44^{\circ}57'31''N$, $33^{\circ}59'14''E$, 223 m.

Diagnosis. The taxon is similar to *D. e. equestre* (Laxmann, 1770 - South Russia) because of big size, completely black (including antennae and legs) wide body; prothorax with narrow sharpened lateral spines; elytra with strong humeral carinae; in females external dorsal carinae also well developed; humeral pale lines in males always absent; dorsal elytral side usually with wide contrast white cruciform design, which can be sometimes reduced to a pair of spots or to a sutural line only; in females dirty-grey pale humeral line often distinct.

D. e. vadimi ssp. n. differs from the nominative subspecies by very bright-white pale elytral design in males (usually dirty-white in the nominative subspecies) and by glabrous pronotum without central white line; pronotum in the nominative subspecies usually more or less pubescent with distinct central white line; body length in males: 14.0-18.0 mm, width: 6.0-7.5 mm; body length in females: 17.0-20.0 mm, width: 7.6-9.0 mm.

Distribution in Crimea. The taxon is known from Simferopol and its western (Klyuchi, $44^{\circ}57'31''N$, $33^{\circ}59'14''E$, 223 m) and eastern (Lozovoe) suburbs. Very old specimens with labels "Sevastopol" and "Laspi Bay" are preserved in Zoological Museum of Moscow

M.L. Danilevsky, G.B. Danilevskaya

University. Besides the species was recorded from Yalta (Peks, 2010: 219).

Material. Holotype, male, Crimea, Klyuchi, 44°57'31"N, 33°59'14"E, 223 m, 29.4-3.5.2021, M. Danilevsky and G. Danilevskaya leg. (MD); 101 paratypes (90 males, 11 females): 18 males, 2 females, with same label (MD); 67 males, 8 females, same dates and same locality, V. Ustinov leg. (VU); 4 males, 1 female, Simferopol, 22.5.1987, 6.5.1991, K. Efetov leg. (MD); 1 male, Lozovoe (SE Simferopol env.), 1.5.1987, K. Efetov leg. (MD).

Material used for comparison (MD). Big series of *D. e. equestre* from Russia: Rostov, Volgograd, Belgorod and Kursk regions, as well as from North Ossetia; many specimens are available from Ukraine: Kharkov, Dnepropetrovsk (Dnepr), Voroshilovgrad (Lugansk) and Kiev regions.

Etymology. The new subspecies is dedicated to Vadim Ustinov (Moscow), who collected the most part of the type series.

Dorcadion (Cribridorcadion) holosericeum ustinovi Danilevsky, ssp. n.

Figs 5-6

Dorcadion (Cribridorcadion) holosericeum holosericeum, Bartenev, 2009: 307, part. - Crimea; Danilevsky, 2020: 347, part.

Type locality. Crimea, Perevalnoe, 15 km N Sudak, 44°58'10"N, 34°58'8"E, 427 m.

Description. The taxon is characterized by very stable elytral design in males and in females; male elytra black with more or less short velvety-black dorsal elytral stripes; female elytra dark-brown, nearly black, also with short velvety-black strokes; humeral elytral stripes in males and in females absent (usually present in the nominate subspecies), that is why the new taxon looks very similar to *D. striolatum* Kraatz, 1873; females in the nominate subspecies are often more or less pale, and pale males are also known; body length in males: 12.7-17.1 mm, width: 4.7-6.3 mm; body length in females: 14.3-18.5 mm, width: 6.3-7.4 mm.

Type material. Holotype, male, Crimea, Perevalnoe, 44°58'10"N, 34°58'8"E, 427 m, 15-16.5.2021, Danilevsky leg. (MD); 195 paratypes; 64 males, 21 females, same locality and dates, Danilevsky & Danilevskaya leg. (MD); 79 males, 14 females, same

locality and dates, Ustinov leg. (VU); 1 male, Simferopol-city, 44°56'14"N, 34°2'25"E, 290 m, 3.5.2021, Danilevskaya leg. (MD); 1 male, 1 km NW Armyansk, 46°7'32"N, 33°40'6"E, 157 m, 24.4.2021, Danilevsky leg. (MD); 1 male, Crimea, Gvardeyskoe, 45°6'27"N, 34°1'30"E, 148 m, 26.4.2021, Danilevsky leg. (MD); 2 males, Crimea, Simferopol, 18 and 27.4.1992, K. Efetov leg. (MD); 3 males, Crimea, Simferopol, Salgirka Park, 44°56'28"N, 34°7'53"E, 255 m, 8.5.1987, K. Efetov leg. (MD); 1 female, Crimea, Simferopol, 8.4.1990, K. Efetov leg. (MD); 2 females, Crimea, Simferopol, 29.4.1988, K. Efetov leg. (MD); 1 male, 1 female, 1 km N Klyuchi, 44°57'53"N, 33°58'8"E, 230 m, 27.4.2021, V. Ustinov leg. (VU); 1 female, Crimea, Klyuchi, 44°57'31"N, 33°59'14"E, 223m, 1.4.2021, V. Ustinov leg. (VU); 1 male, 2 females, Crimea, Kerch Peninsula, Ivanovka, 45°17'34"N, 36°14'44"E, 84 m, 14.4.-20.5.2021 (pitfall traps), V. Ustinov leg. (VU).

Etymology. The new subspecies is dedicated to Vadim Ustinov (Moscow), who collected the most part of the type series.

Dorcadion (Cribridorcadion) cinerarium panticapaeum Plavilstshikov, 1951

Fig. 2

Dorcadion (s. str.) *panticapaeum* Plavilstshikov [Плавильщиков], 1951: 116 - Crimea, Kerch environs.

Dorcadion (Cribridorcadion) cinerarium panticapaeum, Danilevsky, 2009: 707; Lazarev, 2011: 282 - "Perekop Isthmus, Chongar Peninsula, east part of Crimean Peninsula including Kerch Peninsula (Ukraine) and Taman Peninsula (Krasnodar Region, Russia)".

Type locality. Crimea, Kerch environs, according to the original description.

Diagnosis. Small beetles with partly or totally pubescent elytra; pronotum about always with distinct black setae along white central line; very often pubescent elytral areas in males are distinct along elytral depressions only; diffused humeral pale line in males sometimes can be seen; very rare fragments of external dorsal pale stripes also present; males with glabrous elytra (with white sutural and marginal stripes) are also known and can dominate in certain populations; females about always autochromal (no androchromal females are known from Crimea) with more or less pale elytral pubescence, with or without diffused dark elytral stripes and dots;

sometimes with contrast white dorsal lines; females with dark elytral pubescence are very rare, glabrous females unknown; legs and 1st antennal joints dark-red, sometimes nearly black; body length in males: 7.4-13.0 mm, in females: 9.7-13.5 mm.

The taxon is rather variable. Each population is more or less peculiar, usually with a number of males without pubescence between marginal and sutural elytral stripes and so with strongly shining elytra. Such glabrous shining specimens dominate in one population only (Vladislavovka env., 45°9'18"N, 35°22'16"E), but here glabrous males also with white central pronotal line (usually absent in *D. c. perroudi*). From the other side glabrous males near Dolinka (45°51'9"N, 34°28'8"E) are very rare. A big number of such forms was observed near Oktyabrskoe (45°24'55"N, 34°55'57"E).

Distribution in Crimea. Crimean steppe areas, north, east and center of the peninsula. Many populations are known: Kerch-city (Mt. Mitridat, 45°21'3"N, 36°28'13"E, 70 m), Ivanovka (45°17'34"N, 36°14'44"E, 84 m), Vladislavovka env. (45°9'18"N, 35°22'16"E, 50 m), Primorsky (near 45°8'N, 35°30'E, 30 m); Bagerovo (45°22'38"N, 36°16'15"E, 93 m), Chokrak Lake (45°28'34"N, 36°17'34"E, 60 m), Opuk Mt. (45°2'12"N, 36°14'3"E, 14 m), Fontan env. (45°16'N, 35°55'19"E, 70 m), Cape Kazantip (45°28'12"N, 35°50'41"E, 40 m), Izobilnoe env. (45°34'N, 34°57'5"E, 5 m), Kondratovo env. (45°38'29"N, 34°29'8"E, 17 m), Martynovka env. (45°51'21"N, 34°19'7"E, 14m), Yasnopolyanskoe env. (45°56'32"N, 34°20'9"E, 7 m), Turetzky Val (about 46°8'16"N, 33°38'40"E, 11 m), Ishun env. (Chatyrlyk River, 45°52'52"N, 33°48'16"E, 3 m), Dolinka env. (45°51'9"N, 34°28'8"E, 3 m), Privolnoe env. (45°39'3"N, 33°42'30"E, 38 m), Zvezdnoe env. (45°16'36"N, 34°3'47"E, 80 m).

Two interesting localities were mentioned by Lazarev (2011): Uyutnoe (45°31'N, 34°35'E), Pyatikhatka (45°19'N, 34°16'E).

Crimean material. 3 males, Kerch Peninsula, Ivanovka, 45°17'34"N, 36°14'44"E, 84 m, 13-14.4.2021, Murzin leg.; 60 males, 16 females, same locality, 20.5.2021 (pitfall traps), Ustinov leg.; 25 males, 3 females, SE Crimea, Vladislavovka env., 50 m 15.4.2021, 45°9'18"N, 35°22'16"E, Danilevsky & Danilevskaya leg.; 47 males, 18 females, same locality and dates, Ustinov leg.; 1 male, 1 female, Crimea, Primorsky env. (about 45°8'N, 35°30'E, 30m), 14-24.5.1979, G. Petrovsky leg.; 7 males, 2 females, Sovetsky,

M.L. Danilevsky, G.B. Danilevskaya

45°20'8"N, 34°55'14"E, 17m 16.4.2021, Ustinov leg.; 78 males, 25 females, E Crimea, Oktyabrskoe, 14 m, 45°24'55"N, 34°55'57"E, 16-17.4.2021, Danilevsky & Danilevskaya leg.; 51 males, 14 females, same locality and dates, Ustinov leg.; 23 males, 54 females, NE Crimea, Kondratovo env., 17 m, 45°38'29"N, 34°29'8"E, 18-19.4.2021, Danilevsky & Danilevskaya leg.; 88 males, 46 females, same locality and dates, Ustinov leg.; 21 male, 6 female, same locality and dates, Murzin leg.; 1 male, 2 females, Crimea, Maslovo, 45°47'56"N, 34°22'40"E, 9 m, 21.4.2021, Ustinov leg.; 1 male, N Crimea, Martynovka, 14m, 45°51'21"N, 34°19'7"E, 22.4.2021, Danilevsky & Danilevskaya leg.; 34 males, 7 females, N Crimea, Dolinka, 3 m, 45°51'9"N, 34°28'8"E, 22-23.4.2021, Danilevsky & Danilevskaya leg.; 21 males, 4 females, same locality and dates, Ustinov leg.; 5 males, 1 female, same locality and dates, Murzin leg.; 4 males, 1 female, N Crimea, Chatyrlyk River, Ishun, 3 m, 45°52'52"N, 33°48'16"E, 25.4.2021, Danilevsky & Danilevskaya; 7 males, 1 female, same locality and dates, Ustinov leg.; 2 males, N Crimea, Privolnoe, 38 m, 45°39'3"N, 33°42'30"E, 25.4.2021, Danilevsky & Danilevskaya leg.; 1 male, Crimea, Skvortzovo, 67 m, 45°3'25"N, 33°47'52"E, 27.4.2021, Ustinov leg.; 1 male, Crimea, Veseloe, 149 m, 45°1'16"N, 33°57'8"E, 27.4.2021, Ustinov leg.; 38 males, 5 females, C Crimea, Zvezdnoe, 80 m, 45°16'36"N, 34°3'47"E, 28.4.2021, Danilevsky & Danilevskaya leg.; 12 males, 1 female, same locality and dates, Ustinov leg.; 1 male, 1 female, Crimea, Iskra, 45°16'48"N, 34°9'57"E, 80 m, 28.4.2021, Ustinov leg.; 88 males, 8 females, Crimea, Kerch Peninsula, Opuk Mt., 14 m, 45°2'12"N, 36°14'3"E, 17-25.4.2018, 5.5.2018, Danilevsky & Danilevskaya leg.; 17 males, 5 females, Crimea, Kerch Peninsula, Chokrak Lake, Kurortnoe, 60 m, 45°28'34"N, 36°17'34"E, 15.5.2019, Danilevsky & Danilevskaya leg.; Crimea, Kerch-city: 3 males, 10.4.1906, W. Pliginski leg.; 2 females, Kerch, IV.1908, A. Leb. leg.; 1 male, 3.5.1992, K. Efetov leg.; 1 female, Crimea, Cape Kazantip (about 40 m, 45°28'12"N, 35°50'41"E), 2.5.1923, Arnoldi leg.; 15 males, 17 females, about same locality, 2.5.1987, 9.5.1987, 16.5.1987, 31.5.1987, K. Efetov leg.; 2 males, 2 females, about same locality, 21-25.4.1992, Danilevsky leg.; 8 males, 1 female, Crimea, Kerch Peninsula, Bagerovo, 93 m, 45°22'38"N, 36°16'15"E, 28.4.1992, Danilevsky leg.; 8 males,

M.L. Danilevsky, G.B. Danilevskaya

1 female, Crimea, Kerch Peninsula, W Fontan env., 70 m, 45°16'N, 35°55'19"E, 26.4.1992, Danilevsky leg.; 1 male, 1 female, Crimea, Izobilnoe (before Primorye), 5 m, 45°34'N, 34°57'5"E, 18.5.1956, Topchiev leg.; 2 males, 3 females, Kherson Region, Chongar, 25.4.-1.5.1996, R. Mishustin leg.; 1 male, Turetskiy Val, 4.1992.

Dorcadion (Cribridorcadion) cinerarium bartenevi Lazarev, 2011

Fig. 2

Dorcadion (Cribridorcadion) cinerarium bartenevi Lazarev, 2011: 287 - "cape Tarkhankut, the most western part of Crimean Peninsula"; Danilevsky, 2020: 343 - "Crimea, Tarkhancut Cape".

Type locality. Crimea, western most point of the peninsula - Cape Tarkhankut (about 45°20'30"N, 32°31'30"E).

Diagnosis. The taxon is similar to *D. c. panticapaeum* because of same small size and pubescent elytra between marginal and sutural white stripes, but lateral thoracic tubercles sharpened (never rounded as in *D. c. panticapaeum*); pronotal punctation less dense; 1st antennal joint and legs rather dark, sometimes nearly black; glabrous forms are not known (numerous in certain populations of *D. c. panticapaeum*); all known females are very pale (dark females are rare in *D. c. panticapaeum*), with distinct and contrast pale dorsal elytral lines; body length in males: 10.5-13.0 mm, in females: 10.2-14.0 mm.

Distribution. All known specimens were collected inside a very small area, about 5 km along the seashore southwards Olenyevka village.

Material. 1 male, holotype, Crimea, Tarkhankut Peninsula, 2.6.1985, I. Plyushch leg. (MD); 7 males, 1 female, Tarkhankut Peninsula, 28.4.-2.5.2018, 15 m, Danilevsky & Danilevskaya leg. (MD); 7 males, 2 females, Tarkhankut Peninsula, 30.4.-2.5.2018, 28 m, Danilevsky leg. (MD).

Dorcadion (Cribridorcadion) cinerarium mosyakini Danilevsky, ssp. n.

Figs 2, 7-12

Type locality. Crimea, Evpatoria environs northwards Suvorovskoe, 45°15'30"N, 33°23'26"E, 4 m.

Description. The taxon is very close to *D. c. bartenevi*, but on average smaller and wider; prothorax narrower, its base in males about

as wide as prothoracic length; lateral thoracic spines about as sharp as in *D. c. bartenevi*, but sometimes oblique; pronotum with moderate punctuation; humeral white spot in males often completely absent; rudiments of humeral and dorsal elytral lines usually absent; females brown, considerably darker, than females of *D. c. bartenevi*; dorsal elytral lines in females are usually indistinct; body length in males: 8.5-11.3 mm, width: 3.0-4.3 mm; body length in females: 9.0-11.5 mm; width: 4.0-4.8 mm.

Distribution. West Crimea, Evpatoria env., steppe area northwards Suvorovskoe ($45^{\circ}15'30''N$, $33^{\circ}23'26''E$, 4 m and $45^{\circ}15'31''N$, $33^{\circ}22'43''E$, 24 m); park inside Saki-city ($45^{\circ}7'30''N$, $33^{\circ}36'E$, 8 m).

Type material. Holotype male, Crimea, Evpatoria env. northwards Suvorovskoe, $45^{\circ}15'30''N$, $33^{\circ}23'26''E$, 4 m, 27.4.2018, Danilevsky leg. (MD); 117 paratypes (87 males, 30 females): 30 males and 13 females with same label (MD); 50 males and 15 females, Crimea, Suvorovskoe, 20.4.2000, 14.4.2001, 30.4.2001, 9.5.2001, 29.5.2001, 4.4.2002, 13.4.2002, 25.4.2003, 9.5.2011, 15.4.2018, S. Mosyakin leg. (MD, SM); 7 males and 2 females, Crimea, Saki, park, 12.4.2016, 2.4.2018, S. Mosyakin leg. (MD, SM).

Etymology. The taxon is dedicated to a well-known Crimean Chrysomelidae specialist Sergey Aleksandrovich Mosyakin (Simferopol), who collected the most part of the type series.

Dorcadiion (Cribridorcadion) cinerarium perroudi Pic, 1942

Fig. 2

Dorcadiion sericatum var. *perroudi* Pic, 1942: 2 - "de Crimée".

Dorcadiion (Cribridorcadion) cinerarium perroudi, Lazarev, 2011: 270 - "Ukraine, south half of Crimean Peninsula, southwards $45^{\circ}30''N$ ".

Type locality. Crimea, Simferopol environs (Lazarev. 2011).

Diagnosis. Medium sized beetles, usually bigger than the previous subspecies, with shining, glabrous elytra in males with only sutural and marginal white lines; pronotum in males shining, with reduced central white line (often totally absent); females about always autochromal with more or less pale elytral pubescence, with or without diffused dark elytral stripes and dots, often with contrast white dorsal lines; two forms of androchromal females are very rare, but known (with glabrous elytra or with elytra totally covered with

black pubescence); legs and 1st antennal joints red, often bright-red; body length in males: 9.3-14.5 mm, in females: 9.7-15.0 mm.

The taxon is rather variable. Each population is more or less peculiar; a small number of males with totally pubescent elytra are known from near Simferopol only. Males from north-western populations are usually with very rough punctuation (Simferopol environs), while pronotum in males from eastern populations (Koktebel, Schebetovka, Belya Skala) is often very smooth. Probably it is an evidence of subspecies rank of eastern populations. Elytra in males from near Klyuchi often with pubescence along elytral furrows, just as in *D. c. panticapaeum*, though local specimens are rather big, much bigger than similar *D. c. panticapaeum*. Besides there are several females from near Klyuchi with densely pubescent black elytra, that is impossible in *D. c. panticapaeum*. The biggest specimens were observed near Simferopol, in Chernorechye and Pavlovka environs, rather big males were collected in high localities of Ay-Petri Yayla and near Perevalnoe (northwards Sudak).

Distribution. Mountains and foothills of the south part of Crimean Peninsula, generally southwards 45°N, but the northern most population is known from near Belya Skala (45°5'59"N, 34°37'39"E) northwards Belogorsk. Many populations are known: Simferopol city (Central Park); Dubki env. (44°55'45"N, 34°2'15"E), Klyuchi env. (44°57'31"N, 33°59'14"E, 223 m), Trudolyubovo env. (44°53'35"N, 33°58'54"E, 255 m), Alimova Balka (44°41'41"N, 33°52'54"E, 160 m), Chernorechye env. (44°33'37"N, 33°40'28"E, 73 m), Sevastopol env., Balaklava env., Inkerman env., Pavlovka env. (44°27'6"N, 33°47'56"E, 270 m), Mt. Ay-Petri (44°28'18"N, 34°3'58"E, 1167 m), Yalta env., Gurzuf env., Alyshya env. (Verkhnyaya Kutuzovka), Mt. North Demerdzhi, Kyzyl-Koba (15km SE Simferopol, 44°51'43"N, 34°20'E, 844 m), Generalskoe env. (44°48'11"N, 34°28'52"E, 348 m), Privetnoe env. (44°48'56"N, 34°39'34"E, 300 m), Sudak (44°50'33"N, 34°57'26"E, 57 m), Schebetovka env. (45°55'50"N, 35°7'27"E, 144 m), Mt. Kara-Dag (44°57'37"N, 35°12'2"E, 136 m), Belya Skala env. (45°5'59"N, 34°37'39"E, 156 m).

Several interesting localities were published by Lazarev (2011): Laspi (44°25'N, 33°43'E), Orlinoe (44°26'N, 33°46'E), Foros (44°23'N, 33°47'E), Parkovoe (44°24'N, 33°54'E), Simeiz

M.L. Danilevsky, G.B. Danilevskaya

(44°24'N, 33°59'E), Alupka (44°25'N, 34°02'E), Miskhor (44°25'N, 34°05'E), Gaspra (44°25'N, 34°06'E), Koreiz (44°25'N, 34°05'E), Yalta (44°29'N, 34°09'E), Yaltinskaya Yayla (44°33'N, 34°08'E), Gurzuf (44°33'N, 34°17'E), Zaprudnoe (44°35'N, 34°19'), Alushta (44°40'N, 34°24'E), Luchistoe (44°44'N, 34°24'E), Mt. Chatyr-Dag (44°46'N, 34°17'E), Marino (44°55'N, 34°08'E), Lozovoe (44°54'N, 34°09'E), Kamenka (44°59'N, 34°10'E), Kurskoe (45°01'N, 34°56'E), Mt. Agarmysh, Staryi Krym (45°01'N, 35°05'E).

Material. 177 males, 28 females, Crimea, Klyuchi, NW Simferopol, 44°57'31"N, 33°59'14"E, 223 m, 29.4-2.5.2021, Danilevsky & Danilevskaya leg.; 195 males, 42 females, same locality and dates, Ustinov leg.; 19 males, 7 females, same locality, 2.5.2021, Murzin leg.; 103 males, 14 females, Crimea, Trudolyubovo, 44°53'35"N, 33°58'54"E, 255 m, 3.5.2021, Danilevsky & Danilevskaya leg.; 51 males, 11 female, same locality and dates, Ustinov leg.; 2 males, Crimea, Alimova Balka, 44°41'41"N, 33°52'54"E, 160 m, 5.5.2021, Danilevskaya leg.; 5 males, same locality and date, Ustinov leg.; 3 males, same locality and date, Murzin leg.; 6 males, 1 female, Crimea, Chernorechye, 44°33'37"N, 33°40'28"E, 73 m, 7-9.5.2021, Danilevsky & Danilevskaya leg.; 13 males, 1 female, same locality and dates, V. Ustinov leg.; 5 males, 1 female, same locality, 19.5.2021, Ustinov leg.; 175 males, 54 females, Crimea, Pavlovka, 44°27'6"N, 33°47'56"E, 270 m, 10-13.5.2021, Danilevsky & Danilevskaya leg.; 189 males, 47 females, same locality and dates, Ustinov leg.; 23 males, 4 females, Crimea, Privetnoe, 44°48'56"N, 34°39'34"E, 300 m, 14-15.5.2021, Danilevsky & Danilevskaya leg.; 65 males, 3 females, same locality and dates, Ustinov leg.; 153 males, 24 females, Crimea, Perevalnoe, 44°58'10"N, 34°58'8"E, 427 m, 15-16.5.2021, Danilevsky & Danilevskaya leg.; 261 males, 64 females, same locality and dates, Ustinov leg.; 16 males, 2 females, Crimea, Schebetovka, 45°55'50"N, 35°7'27"E, 144 m, 18-19.5.2021, Danilevsky & Danilevskaya leg.; 14 males, same locality and dates, Ustinov leg.; 6 males, 1 female, Crimea, Belya Skala, 156 m, 45°5'59"N, 34°37'39"E, 20-21.5.2021, Danilevsky & Danilevskaya leg.; 2 males, 2 females, Crimea, Chatyr-Dag, Perevalnoe, 44°50'9"N, 34°17'54"E, 450m, 6.5.2021, K. Efetov leg.; 1 male, Simferopol, 30.3.1957; 2 males, 1 female, Simferopol, 18.4.1969, 27.4.1970, E. Berlov leg.; 25 males, 22 females, Crimea,

M.L. Danilevsky, G.B. Danilevskaya

Simferopol and Simferopol (Salgirka Park, 44°56'28"N, 34°7'53"E, 255 m), 5-8.5.1987, 1.5.1991, K. Efetov leg.; 1 male, Sevastopol, 10.4.1911, V. Kizeritzky leg.; 2 females, Balaklava, 4.1903; 1 female, Inkerman, 30.4.1938, Arnoldi leg.; 1 male, 1 female, Crimea, Simferopol, Dubki, 44°55'45"N, 34°2'15"E, 300 m, 4.5.2018, Danilevsky leg.; 3 males, 6 females, Crimea, Ay-Petri Mt., 1167 m, 44°28'18"N, 34° 3'58"E, 21.5.2018, Danilevsky & Danilevskaya leg.; 1 male, 3 females, Yalta, 4.1900, 4.1903, 1.4.1903, 22.4.1973; 1 female, Gurzuf, 13.4.1948, K. Arnoldi leg.; 2 males, Alyshka, Verkhnyaya Kutuzovka, 7.6.1987, 8.4.1989, K. Efetov leg.; 1 male, Crimea, Mt. North Demerdzhi, 15.4.1989, K. Efetov leg.; 2 males, Crimea, Kyzyl-Koba, 15km SE Simferopol, 44°51'43"N, 34°20'E, 844 m, 19.5.2018, M. Danilevsky leg.; 1 male, 1 female, Crimea, Generalskoe (Ulu-Uzen), 44°48'11"N, 34°28'52"E, 348m, 2.6.2019, Danilevsky leg.; 2 males, 1 female, Crimea, Sudak, 9.4.1989, 14.4.1991, K. Efetov leg.; 1 male, Sudak, 44°50'33"N, 34°57'26"E, 57 m, 17.5.2018, Danilevsky leg.; 1 male, 1 female, Crimea, Kara-Dag, 6.4.1989, I. Plyushch leg.; 1 female, Crimea, Kara-Dag, 44°57'37"N, 35°12'2"E, 136 m, 15.5.2018, Danilevsky leg.

Several specimens were observed by us in Simferopol Central Park (2018).

Dorcadion (Cribridorcadion) sericatum Sahlberg, 1823

Dorcadion sericatum Sahlberg, 1823: 53 - "Tauria".

Dorcadion (Autodorcadion) arenarium sericatum, Plavilstshikov, 1958: 145 - Crimea (southern coast and steppe area as well).

Dorcadion (Pedestredorcadion) sericatum, Breuning, 1962: 345 - "Krim".

Dorcadion (Cribridorcadion) sericatum, Danilevsky, 2020: 357 - southern Crimean coast.

Type locality. Crimea (on the base of original description and taxon area).

Diagnosis. Medium sized beetles with totally pubescent elytra without dorsal and humeral lines in males and females; ground elytral pubescence is usually black; very rare autochromal females have brown or dirty white ground elytral pubescence; a single exceptional female has diffused hardly visible pale humeral and external dorsal elytral lines; antennae and legs red; body length in males: 10.0-15.0 mm, in females: 12.0-17.0 mm.

Distribution. Endemic of South Crimean Coast; all records from steppe Crimean areas were wrong; several records from South

M.L. Danilevsky, G.B. Danilevskaya

Crimea look doubtful as could be connected with pubescent forms of *D. cinerarium perroudi*. Many rather different localities are known: Sudak, Simeiz, Alushta, Yalta, Yayla above Yalta, Kastropol (now Beregovoe), Laspi, Sevastopol, Kuchuk-Koy (now Parkovoe), Novyi Svet, Karadag Mt. The authors observed mass activity of the species (2018, 2021) above Privetnoe near Sudak.

Material. 241 males, 42 females, Crimea, Sudak environs, 1.5 km SW Privetnoe, 44°48'56"N, 34°39'33"E, 300 m, 18-19.5.2018, Danilevsky & Danilevskaya leg.; 13 males, 3 females, same locality, 14-15.5.2021, Danilevsky & Danilevskaya leg.; 120 males, 30 females, same locality and dates, Ustinov leg.; 11 males, 8 females, Crimea, Sudak, 29.3.1986, 6.4.1986, 9.4.1989, 21.4.1991, K. Efetov leg.; 1 female, Sudak env., Veseloe, 22.5.1988, K. Efetov leg.; 1 male, Kuru-Uzen (now Solnechnogorskoe), 5.5.1910, G. & K. Khristoforov leg.; 1 male, Crimea, Laspi Bay, 6.5.1971, N. Dubrovin leg.

Dorcadion (Cribridorcadion) pusillum pusillum Küster, 1847

Dorcadion pusillum Küster, 1847: 90 - "In Podolien, dem südlichen Russland und in Griechenland"; *Dorcadion (Pedestredorcadion) pusillum*, Bartenev, 2009: 304 - Ukraine (including Crimea).

Dorcadion (Cribridorcadion) pusillum pusillum, Danilevsky et al., 2005: 137; Dascălu, 2018: 44.

Type locality. Podolia (Vinnitsa and Khmelnitsky regions of Ukraine with neighbor areas of Moldova), South Ukraine and South Russia eastwards to about Rostov-on-Don (on the base of original description and taxon area).

Original geographical record covers about whole area of the species. The species is absent in Greece. The record of Greece in the original description was connected with local species described later. Type material is not known (probably it is preserved in "Naturhistorisches Museum" Nürnberg). Lectotype was not designated. Type locality must be situated (Dascălu, 2018) between Vinnitsa and Khmelnitsky.

Diagnosis. Very small beetle; elytra in males and females always completely pubescent with white sutural and marginal lines and

usually with scattered back spots; male elytra dark-brown, sometimes pale humeral and dorsal lines slightly pronounced; females usually much paler with distinct pale humeral and dorsal lines, very rare pale elytral lines undistinguished because of too pale ground elytral pubescence; strong erect short elytral setae indistinct; body length in available males (big series from Odessa, Nikolaev, Kherson, Kirovograd, Cherkassy and Dnepropetrovsk regions, Crimea and Moldova): 8.0-10.5 mm; width: 3.4-4.0 mm; body length in available females: 9.6-12.0 mm, width: 3.9-4.7 mm. According to Dascălu (2018), body length in males: 7.4-12.1 mm, width: 2.8-4.6 mm, body length in females: 9.0-13.9 mm.

Distribution in Crimea. Only two populations are definitely known in the northernmost area of the Peninsula in Armyansk environs: 1km NW Armyansk, 46°7'32"N, 33°40'7"E, 15 m and 1 km westwards Voloshino, 46°6'25"N, 33°39'58"E.

Several Crimean specimens collected in the beginning of XX century are preserved in Zoological Institute (St.-Petersburg) with labels "Kerch" and "Yalta", but those data need confirmation. The record (Bartenev, 2009: 304) from Cape Tarkhankut (Olenevka) was most probably connected with wrong identification of *D. cinerarium bartenevi*.

Crimean material. 9 males, 2 females, Crimea, 1 km NW Armyansk, 46°7'32"N, 33°40'7"E, 15 m, 24.4.2021, M. Danilevsky leg. (MD); 1 male, 2 females, same date and same locality, Ustinov leg. (VU); 1 male, Crimea, Voloshino, 46°6'25"N, 33°39'58"E, 9 m, 24.4.2021, Danilevsky leg. (MD).

Material used for comparison (MD). Big series of specimens from Ukraine: environs of Odessa, Ochakov, Cherkassy, Dnepropetrovsk, Kherson and from Moldova. No records are known from Kharkov, Lugansk or Donetsk regions.

Remark. Available Crimean specimens do not demonstrate any distinguishing characters to separate peninsula population from mainland populations of the nominative subspecies.

M.L. Danilevsky, G.B. Danilevskaya

Dorcadion (Cribridorcadion) ciscaucasicum mokrzeckii Jakovlev, 1902

Dorcadion mokrzeckii Jakovlev, 1902: 148 - "Crimée: env. de Kertch".

Dorcadion (Cribridorcadion) ciscaucasicum mokrzeckii, Lazarev, 2009: 13 - Kerch-city and Mt. Opuk.

Type locality. Kerch environs.

Diagnosis. Elytra completely pubescent with very contrast dorsal stripes in males and females; several semi erect short black setae are distinct among pale-yellow or dirty-white recumbent pubescence of humeral and dorsal pale stripes, as well as in pronotal stripe; all available females authochromal with brown dark elytral pubescence; body length in males: 11.3-13.2 mm, width: 3.9-4.6 mm; body length in females: 13.2-14.5 mm, width: 5.3-6.0 mm

Distribution. Endemic of Crimea; only two localities are known: Mt. Mitridat ($45^{\circ}21'3''N$, $36^{\circ}28'13''E$, 70m) in the center of Kerch-city and Mt. Opuk (104 m, $45^{\circ}2'4''N$, $36^{\circ}12'54''E$; 64m, $45^{\circ}2'39''N$, $36^{\circ}14'28''E$) at the south coast of Kerch Peninsula.

Material (MD). 1 male, 1 female, Kerch, 16.3.1906; 3.4.1906; 1 male, 1 female, Kerch, 25.4.1923, Arnoldi leg.; 2 males, 1 female, Kerch, 28.4.1991, 3.5.1992, K. Efetov leg.; 1 male, 1 female, Crimea, Mt. Opuk, 16.4.1999, R. V. Andreeva leg.; 1 male, Crimea, Mt. Opuk, $45^{\circ}2'39''N$, $36^{\circ}14'28''E$, 64m, 21.4.2018, M. Danilevsky leg.

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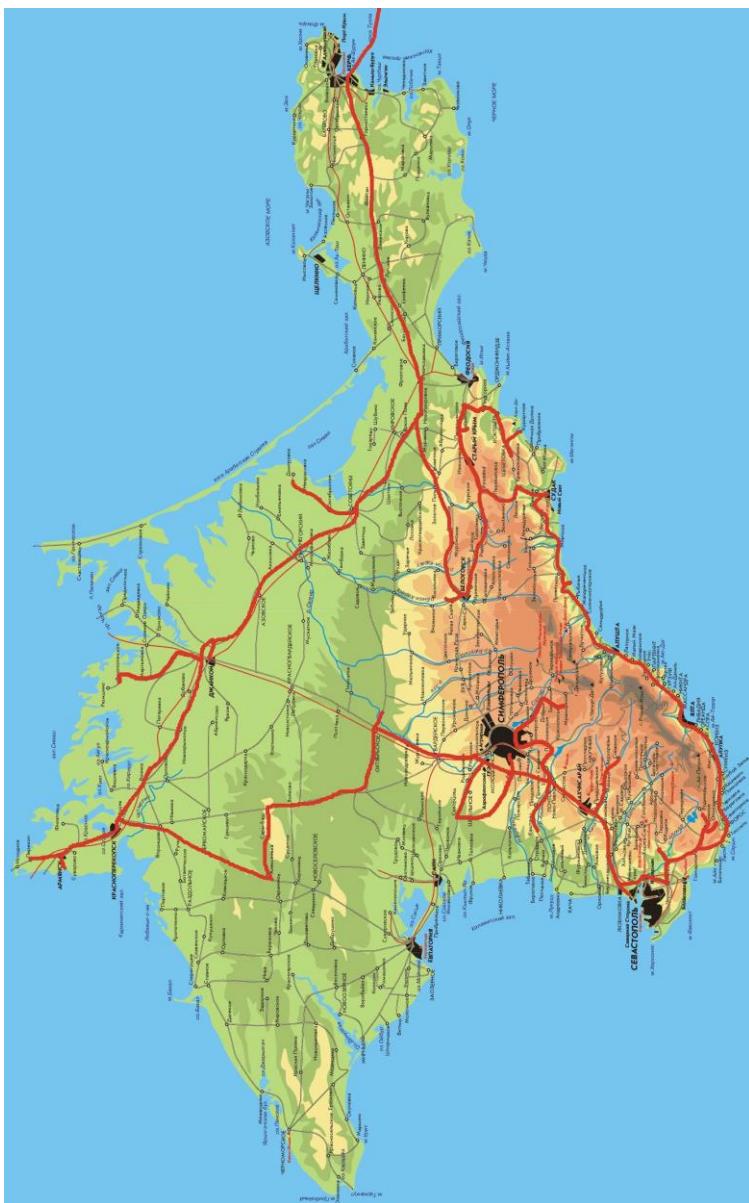


Fig. 1. Way of the authors' collecting trip 2021

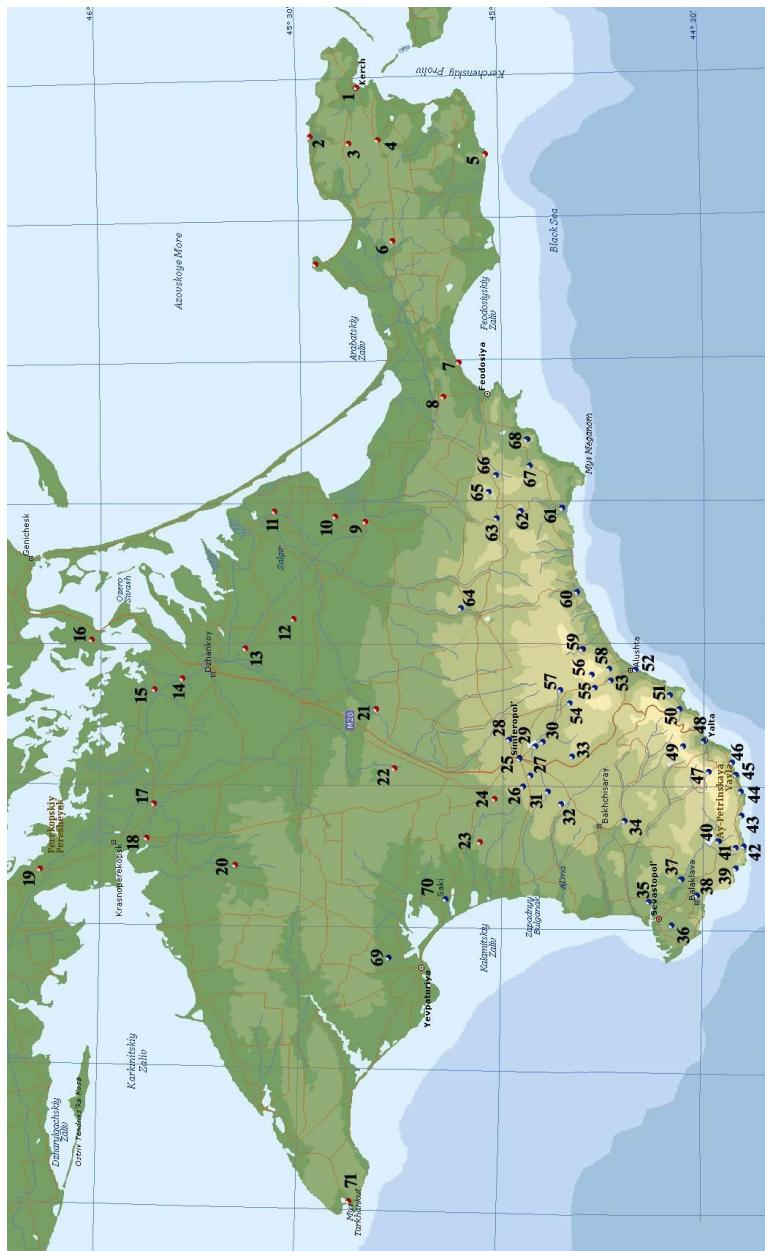


Fig. 2. Localities of *Dorcadion cinerarium* in Crimea (*D. c. panitcapaeum*, *D. c. perroudi*, *D. c. mosyakini* Danilevsky, ssp. n., *D. c. bartenevi*).

M.L. Danilevsky, G.B. Danilevskaya

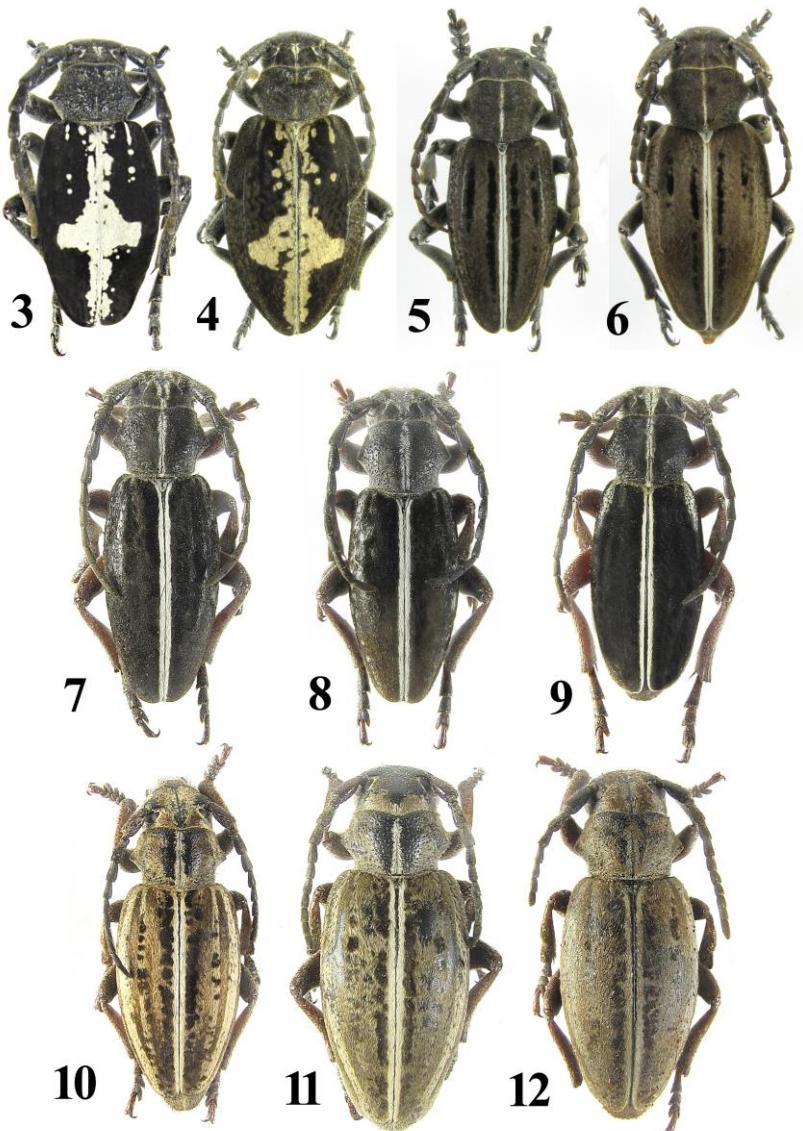
Fig. 2. Localities of *Dorcadion cinerarium* in Crimea (*D. c. panticapaeum*, *D. c. perroudi*, *D. c. mosyakini* Danilevsky, ssp. n., *D. c. bartenevi*).

D. c. panticapaeum: 1 - Kerch, 2 - Chokrak Lake, 3 - Bagerovo, 4 - Ivanovka, 5 - Mt. Opuk, 6 - Fontan, 7 - Primorsky, 8 - Vladislavovka, 9 - Sovetsky, 10 - Oktyabrskoe, 11 - Izobilnoe, 12 - Uyutnoe, 13 - Kondratovo, 14 - Maslovo, 15 - Martynovka, 16 - Chongar, 17 - Dolinka, 18 - Ishun, 19 - Turetsky Val, 20 - Privolnoe, 21 - Zvezdnoe, 22 - Pyatikhatka, 23 - Skvortsovo, 24 - Veseloe.

D. c. perroudi: 25 - Simferopol, 26 - Klyuchi, 27 - Dubki, 28 - Kamenka, 29 - Marino, 30 - Lozovoe, 31 - Trudolyubovo, 32 - Kazanki, 33 - Partizanskoe, 34 - Alimova Balka, 35 - Inkerman, 36 - Sevastopol, 37 - Chernorechenskoe, 38 - Balaklava, 39 - Laspi, 40 - Pavlovka, 41 - Orlinoe, 42 - Foros, 43 - Parkovoe, 44 - Simeiz, 45 - Alupka, 46 - Miskhor, 47 - Ay-Petri, 48 - Yalta, 49 - Yaltinskaya Yayla, 50 - Gurzuf, 51 - Zaprudnoe, 52 - Alushta, 53 - Verkhnyaya Kutuzovka, 54 - Chatyr-Dag, 55 - Angarsky Pass, 56 - Severnaya Demerdzhi, 57 - Kyzyl-Koba, 58 - Luchistoe, 59 - Generalskoe, 60 - Privetnoe, 61 - Sudak, 62 - Perevalnoe, 63 - Kurskoe, 64 - Belya Skala, 65 - Agarmysh, 66 - Staryy Krym, 67 - Schebetovka, 68 - Kara-Dag.

D. c. mosyakini Danilevsky, ssp. n.: 69 - Suvorovskoe, 70 - Saki.

D. c. bartenevi: 71 - Cape Tarkhankut.



Figs 3-4. *D. equestre vadimi* ssp. n.: 3 - male, holotype; 4 - female, paratype, Klyuchi environs.

Figs 5-6. *D. holosericeum ustinovi* Danilevsky, ssp. n.: 5 - male, holotype; 6 - female, paratype, Perevalnoe.

Figs 7-12. *D. cinerarium mosyakini* Danilevsky, ssp. n.: 7 - male, holotype; 8 - male, paratype, Suvorovskoe, 15.4.2019, S. Mosyakin leg.; 9 - male, paratype, Saki, 2.4.2018, S. Mosyakin leg.; 10 - female, paratype, Suvorovskoe, 15.4.2019, S. Mosyakin leg.; 11 - female, paratype, Suvorovskoe, 27.4.2018, M. Danilevsky leg.; 12 - female, paratype, Suvorovskoe, 9.5.2001, S. Mosyakin leg.

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**New taxa of the genus *Dorcadion* Dalman, 1917 (Coleoptera,
Cerambycidae) from Kirgizia**

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Key words: Coleoptera, Cerambycidae, Lamiinae, *Dorcadion*, taxonomy, new subspecies, Kirgizia.

Abstract: *Dorcadion (Cribridorcadion) semenovi aleksandrae* ssp. n. is described from the eastern most area of Issyk-Kul depression. The new taxon is close to *D. (C.) s. hauseri* Reitter, 1895, but differs by very stable external appearance without dorsal elytral lines. *D. (Acutodorcadion) darjae kungeyensis* ssp. n. is described from the left side of Chong-Kemin Canyon. It differs from the nominate subspecies by rather wide body. *D. (A.) d. kemiminum* ssp. n. is described from the right side of Chong-Kemin Canyon. It differs from the nominate subspecies by wider body and less convex prothorax. *D. (A.) kastekum kichikeminum* ssp. n. is described from south slope of Zailiysky Alatau above Kichi-Kemin village. It differs from the nominate subspecies by less wide body. *D. (A.) k. aktyuzum* ssp. n. is described from the highest-level Ak-Tyuz Canyon on south slope of Zailiysky Alatau. The new subspecies differs by a number of small characters: black 1st antennal joint, poor fine pubescent of basal antennal joints and legs, completely white pale dorsal pubescence.

Introduction

Kirgizia rests a very popular area for entomologists up to now. A very lucky beetle-collector A. Rubenyan (Moscow) arranged a short collecting trip to Kirgizia in April-May 2021. His route ran around Issyk-Kul Lake and along two rivers Chong-Kemin and Kichi-Kemin with surrounding mountains. Several series of very interesting *Dorcadion* were collected. Five taxa are described below as new.

Abbreviations of collections:

AR - collection of A.A. Rubenyan (Moscow, Russia)

MD - collection of M.L. Danilevsky (Moscow, Russia)

Results

Dorcadion (Cribridorcadion) semenovi aleksandrae ssp. n.

Figs 1-4, Map 1 (1-2)

Description. Body black with completely black antennae; legs black with partly red tibiae: anterior tibiae red with black apices or with black apical half, other tibiae with red basal third; male antennae reaching apical elytral third, female antennae a little surpassing elytral middle; prothorax with acute lateral spines; pronotum more or less convex, glabrous, shining, with very rough sculpture, usually with narrow white central line; elytra smooth, without dorsal carinae, densely uniformly covered with whitish-pale pubescence; without longitudinal dorsal or sutural lines; sometimes ground elytral pubescence yellowish with diffused sutural white line, poor traces of dorsal lines can be visible; short basal rudiments of internal dorsal lines longer or shorter, very rare produced backwards to about middle along slightly raised basal parts of internal dorsal carinae; one male has longer internal dorsal line and carinae to about elytral middle; two females with poor central rudiments of external dorsal elytral lines; black humeral lines very narrow and strongly reduced apically in males, but in females sometimes nearly complete; humeral carinae moderately developed anteriorly and near middle, but obliterated apically; humeral elytral area and curved lateral elytral margin without big punctures; body length in males: 12.3-15.0 mm, width: 4.2-5.3 mm; body length in females: 13.5-15.9 mm, width: 5.5-6.5 mm.

Differential diagnosis. The new subspecies is very close to its geographical neighbor *D. s. hauseri* Reitter, 1895 (Figs 5-12), but differs by exclusively stable habitus. According to Danilevsky (2002: 9), *D. s. hauseri* Reitter, 1895 was described from Karakol environs in Kirgizia. It is characterized by very strong level of individual variability in each population, while *D. s. aleksandrae* ssp. n. is

exceptionally stable. Several males and females of *D. s. hauseri* have complete set of elytral lines as in the nominative subspecies - each elytron with two dorsal lines, or each dorsal line is more or less reduced, or both dorsal lines completely absent; or only external dorsal lines absent, or only internal dorsal lines absent; humeral carinae and humeral black lines in *D. s. hauseri* always well developed, while in *D. s. aleksandrae* ssp. n. both are more or less reduced; humeral elytral area and curved lateral elytral margin anteriorly in *D. s. hauseri* with big punctures; *D. s. hauseri* is usually smaller: body length in males: 11.9-14.7 mm, width: 4.0-5.2 mm; body length in females: 13.0-17.4 mm, width: 5.3-6.6 mm.

Material. Holotype, male, Kirgizia, 4 km NE Dzhergalan, 42°40'25"N, 78°54'5"E, 1970 m, 27.4.2021, A. Rubenyan leg. - MD; 53 paratypes; 27 males, 9 females, with same label - MD & AR; 9 males, 8 females, Kirgizia, 2 km N Ak-Chiy, 42°40'12"N, 78°47'26"E, 1911 m, 27.4.2021, A. Rubenyan leg. - MD & AR.

Material used for comparison. *Dorcadion semenovi hauseri* Reiter, 1895, Map 1 (3-6): 2 males, 4 females, Kirgizia, Karakol, 1700 m, 7.5.2000, S. Toropov leg. - MD; 19 males, 5 females, Kirgizia, 19 km E Karakol, Novovoznesenovka, 42°35'51"N, 78°45'33"E, 1808 m, 27.4.2021, A. Rubenyan leg. - MD & AR; 72 males, 24 females, 15 km S Karakol, Teploklyuchenka, 42°28'16"N, 78°31'44"E, 1904 m, 27.4.2021, A. Rubenyan leg. - MD & AR; 26 males, 9 females, 17 km NW Karakol, Tyup env., 42°44'N, 78°23'49"B, 1620 m, 28.4.2021, A. Rubenyan leg. - MD & AR; 2 males, Kirgizia, 14 km SW Karakol, Djety-Oguz, 42°23'54"N, 78°13'17"E, 1855 m, 26.4.2021, A. Rubenyan leg. - MD; 27 males, 11 females, Kirgizia, NE Issyk-Kul Lake, between Oytal and Oybulak, 42°44'40"N, 78°02'41"E, 1649 m, 28.4.2021, A. Rubenyan leg. - MD, AR.

Distribution. Two populations are known in East Kirgizia: 4 km north-eastwards Dzhergalan, 42°40'25"N, 78°54'5"E, 1970m and 2 km northwards Ak-Chiy, 42°40'12"N, 78°47'26"E, 1911 m.

Remarks. Specimens of *D. s. hauseri* mentioned by Danilevsky (2002: 12) as allegedly from "Dzhergalan (about 50 km eastwards Karakol), 2000m" were definitely wrongly labelled, and were in fact collected in the nearest environs of Karakol in Dzhergalan River Valley (about 1700m). The locality near Dzhergalan (about 50 km eastwards Karakol, 2000 m) was not mentioned for the taxon by

Toropov & Milko (2013: 47). *D. s. hauseri* was not observed near Dzhergalan by A. Rubenyan in 2021.

Etymology. The new subspecies is named after the wife and reliable travel partner of Artem Rubenyan, Alexandra Sycheva.

Dorcadiion (Acutodorcadion) darjae kungeyensis ssp. n.
Figs 14-18, Map 2 (2-3)

Description. Body big, short and wide, black, antennae with dark-red basal half of 1st joint; anterior tibiae about completely dark-red, slightly darkened apically; other tibiae and all femora dark-red with black apices; pale pubescence of head, thorax and elytra yellowish (white in *D. darjae darjae*); antennae long, reaching posterior elytral fifth; prothorax strongly transverse, in males about 1.2 times shorter than basal width, lateral spines moderately long, acute, curved backwards (in the holotype of *D. darjae* Danilevsky, 2001 prothorax longer than its basal width); pronotum strongly convex (about as convex as in *D. d. darjae*), without posterior swelling (distinct posterior swelling can be observed in *D. kastekum* Danilevsky, 1996); in males about 3.3 times shorter than elytral length (in *D. d. darjae* - about 3 times); central pronotal stripe relatively wide, especially in female; elytra relatively short and wide (in males about 1.9 times longer than middle width, in males of *D. d. darjae* - about 2.1 times), regularly oval laterally (about parallel sided anteriorly in *D. kastekum*); less convex than in *D. d. darjae*; humeral and external elytral stripes more or less wide; internal elytral lines usually present, usually long and wide, but sometimes in form of hardly visible poor rudiments; internal side of middle and hind tibiae with very dense pale pubescence; only androchromal females known; female elytra exceptionally wide, about 1.5-1.7 times longer than middle width; body length in males: 18.3-22.3 mm; width (at elytral middle): 6.1-7.6 mm; body length in females: 19.2-20.9 mm, width (at elytral middle): 7.8-8.0 mm.

Differential diagnosis. The new taxon differs from *D. d. darjae* Danilevsky, 2001 (Map 2-1) first of all by short and wide body with transverse prothorax, but antennae relatively longer.

Material. Holotype, male, Kirgizia, left slope of Chong-Kemin River Canyon, Kaiyndy environs, 1726 m, 42°44'37"N, 76°10'32"E,

M.L. Danilevsky, A.A. Rubenyan

30.4.2021, A. Rubenyan leg. - MD; 23 paratypes; 14 males, 8 females with same label - MD & AR; 1 male, Kirgizia, Chong-Kemin River, Sholakkaiyndy, 1688 m, 42°44'N, 76°08'34"E, 25.4.2021, A. Rubenyan leg. - MD.

Material used for comparison. Holotype of *Dorcadion darjae* Danilevsky, 2001 (Fig. 13, Map. 2-1), male with the label: "Kirgizia, north slope of Kungei Alatau [wrong label, in fact south slope of Kemin Ridge, 42°43'59"N, 75°58'34"E, 1800m - according to the personal message of S. Toropov], Chong-Kemin River Valley, 1800m, 1-10.6.1994, S. Toropov leg." - MD; 1 paratype, male with the label: "Kirgizia, north slope of Kungei Alatau [in fact south slope of Kemin Ridge - same locality as in holotype], Chong-Kemin River Valley, Ak-Tashkoro River Narrow, Tortkul, 20.5.2000, S. Toropov leg." - MD".

Distribution. Two localities in Kirgizia (north slope of Kungey Alatau, left slope of Chong-Kemin River Canyon) are known: 1 km eastwards Kaindy, 1726 m; 42°44'37"N, 76°10'32"E and east environs of Sholakkaindy, 1688 m, 42°44'N, 76°08'34"E - Map 2 (2-3).

Etymology. The new subspecies is named after Kungey Alatau Mountain Ridge, where the new taxon is distributed.

Dorcadion (Acutodorcadion) darjae keminum ssp. n.
Figs 19-22, Map 2 (4-5)

Description. Close to the previous subspecies, with about same color of all parts, but red color is a little lighter; body relatively longer; antennae similarly long; prothorax less transverse, usually as long as its basal width, but in holotype a little longer; pronotum less convex, also without posterior swelling, with narrow central line; in males about 3.3-3.4 times shorter than elytral length; elytra longer, in males about 2 times longer than middle width, elytral sides often nearly parallel anteriorly; humeral and external elytral stripes narrow, sometimes - very narrow; internal elytral lines often completely absent, but usually present in form of several spots and strokes; internal side of middle and hind tibiae with very dense pale pubescence; two androchromal females are known; female elytra about 1.7-1.8 times longer than middle width; body length in males: 20.8-25.0 mm; width (at elytral middle): 6.5-7.6 mm; body length in females: 22.0-22.5 mm, width (at elytral middle): 8.7-8.8 mm.

Differential diagnosis. The new taxon is also wider than the nominate subspecies, but not so wide as *D. d. kungeyensis* ssp. n.; prothorax usually less transverse; male elytra often with nearly parallel sides anteriorly.

Material. Holotype, male, Kirgizia, right slope of Chong-Kemin River Canyon, 3 km eastwards Tegirmenty, 42°45'40"N, 76°12'25"E, 1715 m, 25.4.2021, A. Rubenyan leg. - MD; 20 paratypes; 18 males, 1 female with same label – MD & AR; 1 female with the label (in Russian): Kungey, Novorossiya (now Shabdan, about 6 km westwards Tegirmenty), 25.5.1969, Kostin leg. - MD.

Distribution. Two populations known: in the Chong-Kemin River Canyon along its right slope, south slope of Kemin Ridge: 3 km eastwards Tegirmenty, 42°45'40"N, 76°12'25"E, 1715 m and near Novorossiya.

Etymology. The new subspecies is named after Kemin Mountain Ridge, where the new taxon is distributed.

Dorcadion (Acutodorcadion) kastekum kichikeminum ssp. n.

Figs 23-27, Map 2 (7-9)

Description. Body big in high mountain populations and middle sized in lower populations, just as in *D. (A.) kastekum kastekum* Danilevsky, 1996 (Map 2-6); new subspecies is characterized by a number of small rather variable characters; in general prothorax narrower, less convex posteriorly; elytra usually narrower, general elytral shape more or less oval, though sometimes anterior elytral sides nearly parallel; elytral lines and pronotal white lines usually narrower; red parts of antennae and legs darker; body size in 3 different populations is different: low population (1400 m), body length in males: 19.3-22.5 mm, width (at widest elytral point): 6.0-6.7 mm, body length in females: 20.0-24.5 mm, width (at elytral middle): 7.4-9.0 mm; middle level population (1600 m), body length in males: 20.0-23.5 mm, width: 6.4-7.4 mm, body length in females: 22.3-24.5 mm, width: 8.7-9.0 mm; high population (1670 m), body length in males: 20.0-24.2 mm, width: 6.3-8.0 mm, body length in female: 25.0 mm, width: 8.8 mm.

Material. Holotype, male, Kirgizia, south of Zailiysky Alatau Ridge, right slope of Kichi-Kemin Canyon above Kichi-Kemin village, 42°51'06"N, 75°53'15"E, 1670 m, 30.4.2021, A. Rubenyan leg. - MD;

40 paratypes; 7 males and 1 female with same label - MD & AR; 11 males, 4 females, Kirgizia, south of Zailiysky Alatau Ridge, right slope of Kichi-Kemin Canyon, 42°49'18"N, 75°53'43"E, 1600 m, 30.4.2021, A. Rubenyan leg. - MD & AR; 8 males, 5 females, Kirgizia, south of Zailiysky Alatau Ridge, right slope of Kichi-Kemin Canyon, 1400 m, 42°47'54"N, 75°54'12"E, 1400 m, 30.4.2021, A. Rubenyan leg. - MD & AR.

Material used for comparison. Holotype and paratypes (24 males, 11 females) of *D. globithorax kastekum* Danilevsky, 1996, Kazakhstan, W Zailisky Alatau, Kastek Pass, 2300 m (42°57'53"N, 75°46'39"E), 9.5.1991, M. Danilevsky leg. (Map 2-6).

Distribution. Kirgizia, North of Zailiysky Alatau, right slope of Kichi-Kemin Canyon above Kichi-Kemin village from 1400 m to 1670 m.

Etymology. The new subspecies is named after Kichi-Kemin Canyon, where the new taxon is distributed.

Dorcadion (Acutodorcadion) kastekum aktyuzum ssp. n.

Figs 28-32, Map 2 (10)

Dorcadion (s. str.) *globithorax kastekum* Danilevsky, 1996: 415, part. - "high mountains in west part of Zailiiski Alatau and eastern part of Zhetyzhel mountain ridge".

Description. The taxon is very similar to the previous one, but 1st antennal joint completely black; fine white pubescence of 1st antennal joint nearly indistinct; fine white femora pubescence less dense; pale elytral and prothorax pubescence white, without tints of yellow; body length in males: 18.7- 24.5 mm; width: 6.5- 8.0 mm; body length in females: 20.8-23.8 mm, width: 7.9-9.0 mm.

Material. Holotype, male, Kirgizia, Zailiysky Alatau, upper level of Ak-Tyuz Canyon near Ak-Tyuz village, 42°53'12"N, 76°7'43"E, 2487 m, 15.5.1997, A. Klimenko leg. - MD; 8 paratypes: 4 males, 4 females with same label - MD.

Distribution. Kirgizia, Zailiysky Alatau, upper level of Ak-Tyuz Canyon near Ak-Tyuz village, 42°53'12"N, 76°7'43"E, 2487 m.

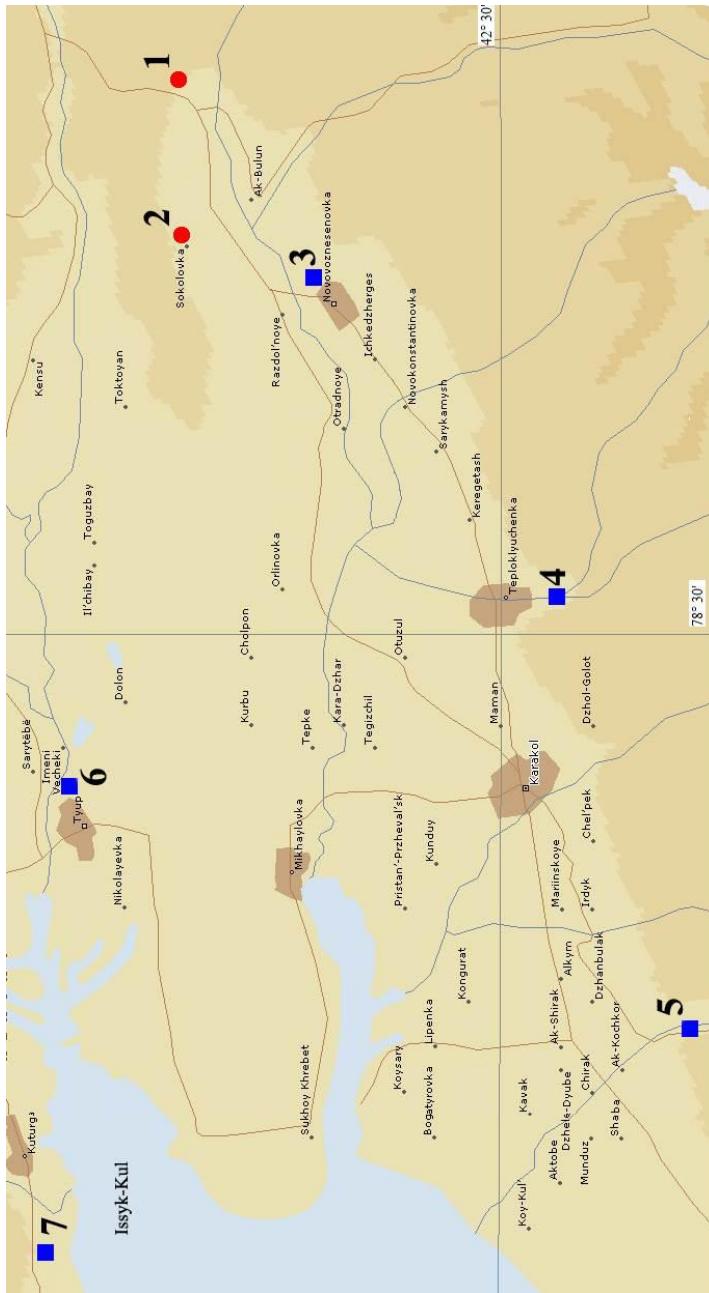
Etymology. The new subspecies is named after Ak-Tyuz Canyon, where the new taxon is distributed.

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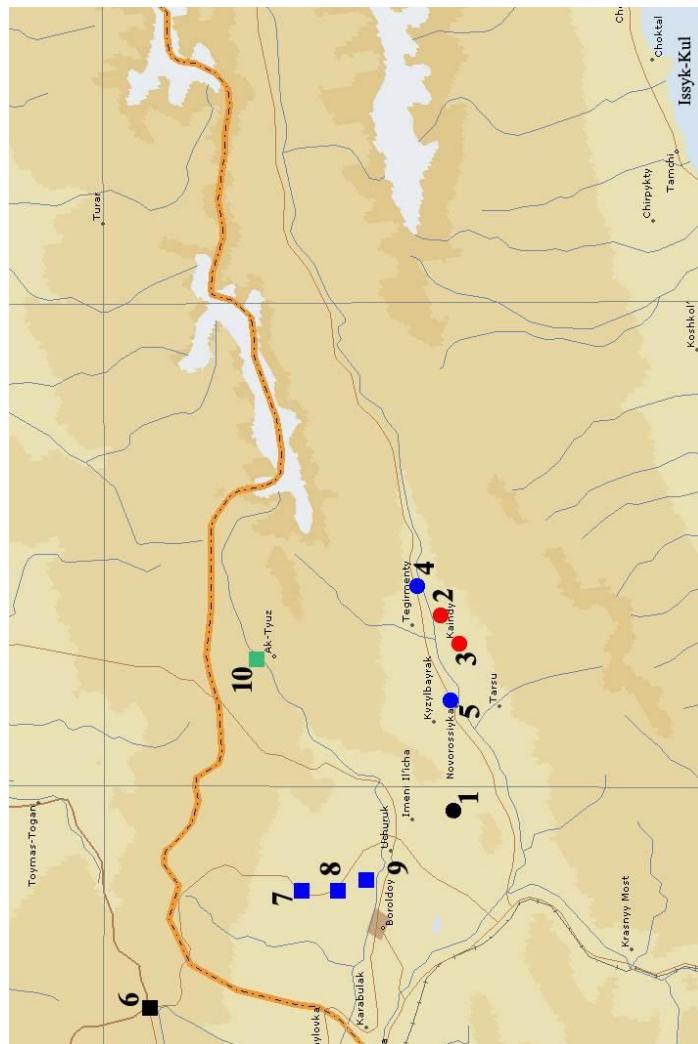
M.L. Danilevsky, A.A. Rubenyan

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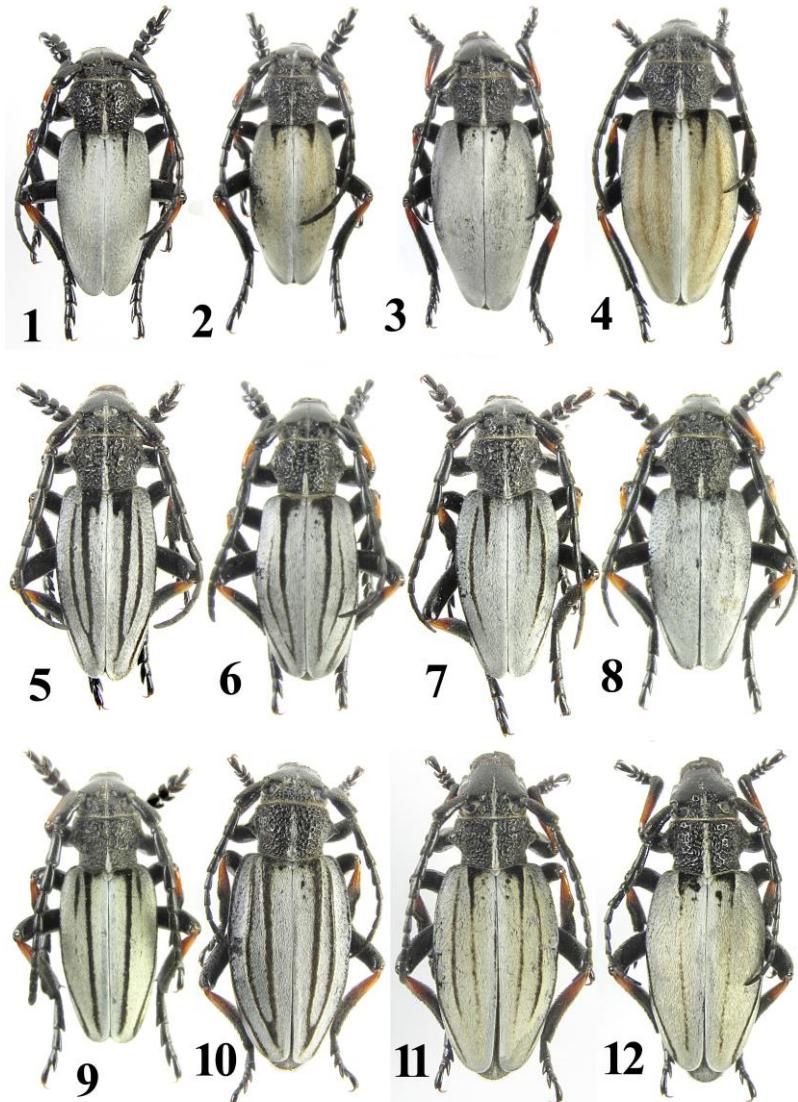
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Map 1. East of Issyk-Kul Lake, localities of *Dorcadion semenovi*. D. s. *aleksandri* ssp. n.: 1 - 4 km NE Dzhergalan, 2 - 2 km N Ak-Chiy; D. s. *hauseri*: 3 - Novovoznesenovka, 4 - Teplokiyuchensk, 5 - Djety-Oguz, 6 - Tyup, 7 - between Oytal and Oybuk.



Map 2. North-West of Issyk-Kul Lake, localities of *Dorcadion darjae* and *D. kastekum*. *D. d. darjae*: 1 - 4km N Tortkul, 1800 m; *D. d. kungeyensis* ssp. n.: 2 - Kaindy, 3 - Sholakkaiyndy; *D. d. keminum* ssp. n.: 4 - 3 km E Tegirmenty, 5 - Novorossiyka; *D. k. kastekum*: 6 - Kastek Pass; *D. k. kichikeminum* ssp. n.: 7 - 7 km N Kichi-Kemin - 1670 m, 8-3 km N Kichi-Kemin - 1600 m, 9 - 1 km N Kichi-Kemin - 1400 m; *D. k. aktyuzum* ssp. n.: 10 - Ak-Tyuz.



Figs 1-4. *Dorcadion semenovi aleksandrae* ssp. n.: 1 - male, holotype; 2 - male, paratype, 4 km NE Dzhergalan; 3 - female, paratype from same locality; 4 - female, paratype, 2 km N Ak-Chiy.

Figs 5-12. *D. s. hauseri*: 5-9 - males, Teploklyuchenka; 10 -female, same locality; 11-12 - females - Tyup.

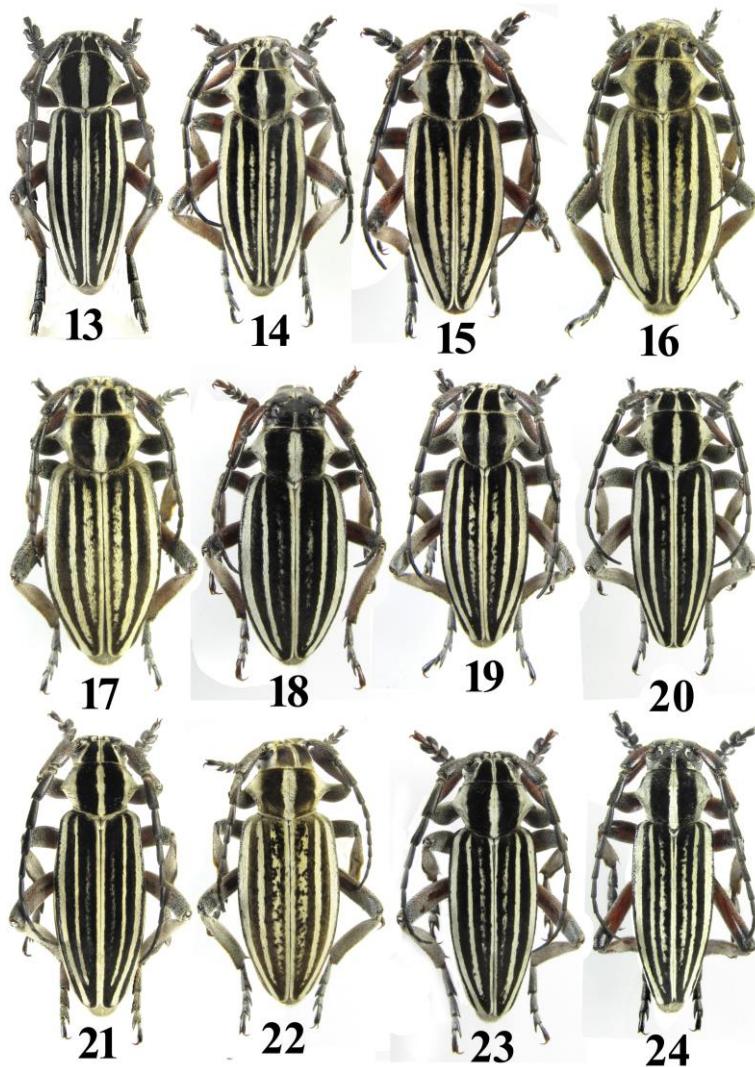
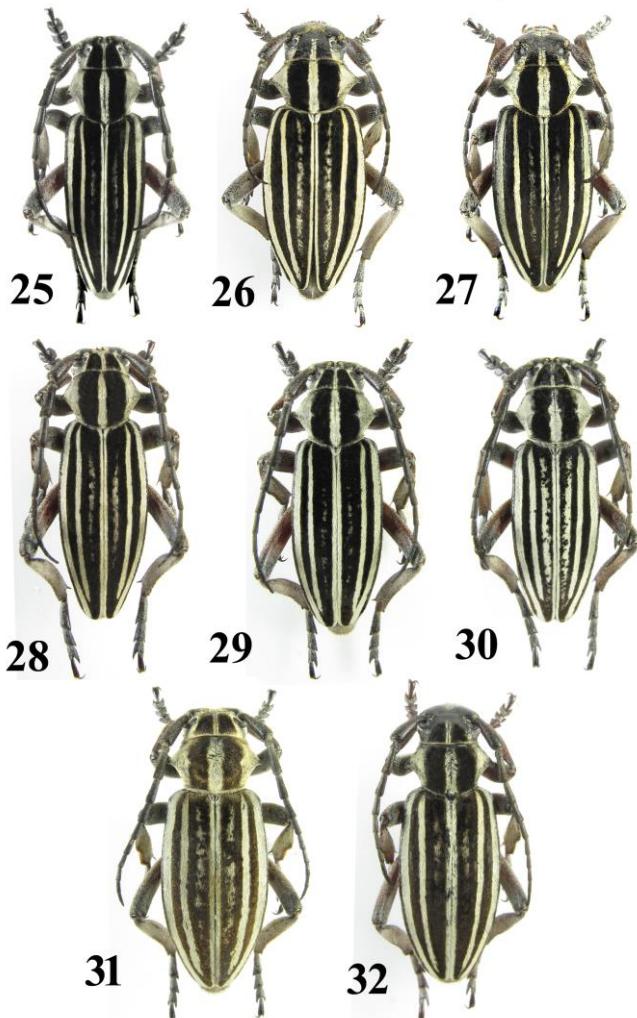


Fig. 13. *D. darjae darjae*: male, holotype.

Figs 14-18. *D. d. kungejensis* ssp. n.: 14 - male, holotype; 15 - male, paratype, Kaiyndy environs; 16-18 - females, paratypes from same locality.

Figs 19-22. *D. d. kemimum* ssp. n.: 19 - male, holotype; 20-21 - males, paratypes, 3 km eastwards Tegirmenty; 22 - female, paratype from same locality.

Figs 23-24. *D. kastekum kichikeminum* ssp. n.: 23 - male, holotype; 24 - male, paratype, 1 km N Kichi-Kemin.



Figs 25-27. *D. kastekum kichikeminum* ssp. n.: 25 - male, paratype, 3 km N Kichi-Kemin; 26-27 - females, paratypes from same locality.

Figs 28-32. *D. k. aktyuzum* ssp. n.: 28 - male, holotype; 29-30 - males, paratypes, upper level of Ak-Tyuz Canyon near Ak-Tyuz; 31-32 - females, paratypes from same locality.

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**Wikispecies Notula II. Unexpected availability of a name in
Cerambycidae leads to a reversal of precedence***

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Key words: Nomenclature, nomen protectum, Parastasia, Dorcasta, Scarabaeidae, Cerambycidae.

Abstract: The generic name *Dorcasta* (Cerambycidae: Apomecynini) is found to be predated by the earlier *Gnaphalocera* Chevrolat **syn. nov.**, and *D. dasycera* by *G. linta* **syn. nov.** References are provided that afford *Dorcasta* and *D. dasycera* the status of *nomen protectum*. Updated synonymies for *Dorcasta* and *D. linta* are provided.

Introduction

The name *Gnaphalocera* was first used by Dejean (1833-1836: 349, 1836-1837: 375), but without including any available species name, leaving it a nomen nudum under article 12.2 (ICZN, 1999). The name has been subsequently mostly ignored except by a few indexers such as Bousquet & Bouchard (2013). Most noticeably, the name is not treated by Gemminger & Harold (1873) and its only mention in Thomson (1864-1865: 132) is as one of only two cerambycid genera of Dejean that had never been synonymized or described by subsequent authors.

The availability and identity of *Gnaphalocera* Chevrolat, 1845

The first author has been involved since early 2020 in updating data surrounding the names in the second edition of Dejean's Catalogue for integration in the Interim Register of Marine

* The first notula was published in *Journal of Tropical Coleopterology*, 1 (2): 47-50.

and Nonmarine Genera (IRMNG, Rees et al., 2020). While performing a routine check on the Dejean name *Gnaphalocera*, it was noticed that contrary to Thomson's belief, the name had in fact been described.

The various *Encyclopédies* and *Dictionnaires* published in the 19th century have resulted in a number of names becoming available that have often been overlooked. This is the case with *Gnaphalocera*, one of several Dejean names which Chevrolat (1845) discussed in D'Orbigny's *Dictionnaire universel d'histoire naturelle*, and in doing so made available through either indication or description. Other such names include *Dorcaschema* Chevrolat, 1844 and *Chaetosoma* Chevrolat, 1843. The latter name was rejected in 2011 to protect *Apodasya* Pascoe (ICZN, 2011).

The description of Chevrolat (1845) is reproduced here, followed by a translation in English with added comments in square brackets:

Cette espèce est d'un gris noirâtre, à la tête tronquée obliquement en dessous, des antennes épaisses, plus longues que le corps, poilues au côté inférieur, composées de 11 articles; le cou subcylindrique; les élytres tronquées obliquement à l'extrémité de l'angle marginal à la suture; elles sont terminées en brun et fasciées au-delà de brun foncé et de blanc. Pattes courtes, épaisses; longueur, 9 millimètres.

This species is blackish grey, with the head obliquely truncated below, thick antennae, longer than the body, hairy on the inferior side, with 11 joints [a trait shared by the vast majority of cerambycids]; the neck [i.e. the pronotum] subcylindrical, the elytrae obliquely truncated at the extremity of the sutural margin, brown at the end and with mixed dark brown and white fascia. Legs short, thick; length, 9 millimeters.

This description agrees well with *Hippopsis dasycera* Erichson (1848: 574), a species also first described from French Guiana. This would make *G. linta* a senior synonym of *H. dasycera*. Since Erichson's species is currently treated as a valid taxon in *Dorcasta* Pascoe (Bezark et al., 2018), that makes *Dorcasta* Pascoe (1858: 264) a junior synonym of *Gnaphalocera* Chevrolat.

Dorcasta and *D. dasycera* have been in continuous use for a valid neotropical genus and species since their description (Bezark et al., 2018) and we see no reasons to disrupt their nomenclature over the availability of such an obscure name. For this reason, reversal of precedence under Article 23.9 (ICZN 1999) seems only appropriate here. The required 25 references published within the last 50 years (and encompassing a range of no less than 10) by 10 or more different authors, all of which use *Dorcasta dasycera* (Erichson) as a valid species of Cerambycidae and by extension *Dorcasta* Pascoe as a valid genus, are listed at the end of the article, preceding the references.

Taxonomy

***Dorcasta* Pascoe 1858**

Gnaphalocera Dejean, 1835: 349; Dejean, 1837: 375. Unavailable: no available species name included. **syn. nov.**

Gnaphalocera Chevrolat, 1845: 245. **syn. nov.** *Nomen oblitum.*

Type: *G. linta* Chevrolat, by monotypy.

Dorcasta Pascoe, 1858: 264. *Nomen protectum.*

Type: *D. oryx* Pascoe, by subsequent designation of Thomson (1864: 95)

Aegilopsis Horn 1860: 571

Type: *A. cinerea* Horn, by monotypy.

***Dorcasta dasycera* (Erichson, 1848)**

Gnaphalocera lincta Dejean, 1835: 349; Dejean, 1837: 375. Unavailable: no description. **syn. nov.**

Gnaphalocera linta Chevrolat 1845: 245. **syn. nov.** *Nomen oblitum.*

Hippopsis dasycera Erichson, 1848: 574. *Nomen protectum.*

Dorcasta oryx Pascoe, 1858: 264.

Remarks. A search of *Dorcasta* material in the collections of British Museum of Natural History (where most of Chevrolat's collection is currently conserved) failed to locate any potential type material for *Gnaphalocera linta* Chevrolat. A search of related material at the Muséum National d'Histoire Naturelle also failed to turn up any such material. Because the possibility of type material turning up in the future cannot be discounted, we refrain from designating a neotype for Chevrolat's name.

Sources for validating the status of *nomen protectum* of *Dorcasta* Pascoe, 1858 over *Gnaphalocera* Chevrolat, 1845 and of *Hippopsis dasycera* Erichson, 1849 over *Gnaphalocera linta* Chevrolat, 1845

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Interesting species of longhorn beetles (Coleoptera: Cerambycidae) from China in the collection of S. Murzin. Part 2

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Key words: Coleoptera, Cerambycidae, zoogeography, new records, China.

Abstract: 6 Cerambycidae species are newly recorded for different provinces of China.

Introduction

We continue identification and study of enormous Cerambycidae collection preserved in the apartment of S. Murzin (Moscow). The identifications of the species were arranged by the authors. The distributional data for each taxon are based on the publication by Lin and Yang (2019).

List of identified species

Demonax viduatus Holzschnuh, 2009

Fig. 1

Material. 1 female, China, Guangxi Province, Gongcheng, Mt. Dayaoshan, 1-15.06.2002.

Distribution. China: Yunnan (Wenshan county, Laojun Mts), Guangxi (new record), NE Laos (Hua Phan Province).

M.A. Lazarev, S.V. Murzin, M.-Y. Lin

Leiopus (Carinopus) holzschuhi Wallin, Kvamme & Lin, 2012
Fig. 2

Material. 1 female, China, Shaanxi Province, Houzhenzi, 1350-2000 m, 27.5.-8.6.1999. S. Murzin leg.

Distribution. China: Henan, Shaanxi, Chongqing, Sichuan, Guizhou (Wallin, Kvamme, Lin, 2012).

Leiopus (Carinopus) fallaciosus Holzschuh, 1993
Fig. 3

Material. 2 males 7 females, Guangdong, Nanling, 8.5.2009 - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS); 1 male 2 females, Fujian, Meihuashan, 6.07 - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS).

Distribution. China: Jiangxi, Fujian, Guangdong (Wallin, Kvamme, Lin, 2012).

Remarks. Wallin, Kvamme & Lin (2012) reported Guangdong based on 1 male and 2 females from Nanling on page 3, however, they did not include Guangdong on page 18. Then, Lin and Yang (2019) only included the type locality Fujian while missed both Jiangxi and Guangdong. Here we confirmed this species is distributed in Fujian, Jiangxi and Guangdong.

Paraniphona rotundipennis Breuning 1974
Fig. 4

Material. 1 female, China, Shaanxi Province, Houzhenzi, 1350-2000 m, 27.5-8.6.1999, S.Murzin leg.

Distribution. China: Shaanxi (new record), Gansu.

Xylariopsis mimica Bates 1884
Fig. 5

Material. 1 female, China, Sichuan Province, Nanping environs, 33.2589°N, 104.2236°E, 1800 m, 17-21.7.2013, M.Murzin & O.Shulga leg.; 1 male, Gansu, Zhengning, Zhongwan, 20-30.7.1979, Xiao-Hua Wang leg. - collection of Institute of Zoology, Chinese

M.A. Lazarev, S.V. Murzin, M.-Y. Lin

Academy of Sciences (IZCAS); 2 males 2 females, Beijing, Yanqing, Songshan, 10.6.2011 - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS); 1 male, Beijing, Yanqing, Badaling Senlingongyuan, 20.8.2015, Yong Wang leg. - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS).

Distribution. China: Beijing, Gansu, Jiangsu, Sichuan (new record), Shaanxi, Shanghai; Russia: Far East; Japan; ?North Korea; South Korea.

Xylotrechus (s str.) *incurvatus incurvatus* (Chevrolat, 1863)

Fig. 6

Material. 1 female, China, Guangxi, Gongcheng, Mt. Dayaoshan, 1-15.6.2002; 1 female, Guangxi, Jinxiu, Huawangshanzhuang, 600 m, 20.5.1999, Hui Xiao leg. - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS); 1 female, Guangxi, Jinxiu, Luoxiang, 200 m, 15.5.1999, Yanzhou Zhang leg. - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS); 1 male, Guangxi, Jinxiu, Laoshan, 13.9.1981, Qijing You leg. - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS); 1 female, Guangxi, Lijunheling, 18.9.1981, Qijing You leg. (IZCAS); 1 female, Guangxi, Longsheng, Baiyan, 1150 m, 18.6.1963, Shuyong Wang leg. - collection of Institute of Zoology, Chinese Academy of Sciences (IZCAS).

Distribution. China: Fujian Gansu, Guandong, Guangxi (new record), Hebei, Hongkong, Hunan, Xizang (Tibet), Yunnan, Sichuan, Taiwan; South Korea (Mt. Soyoisan); India: Sikkim, Darjeeling District; ?Bhutan; ?Nepal; Myanmar.

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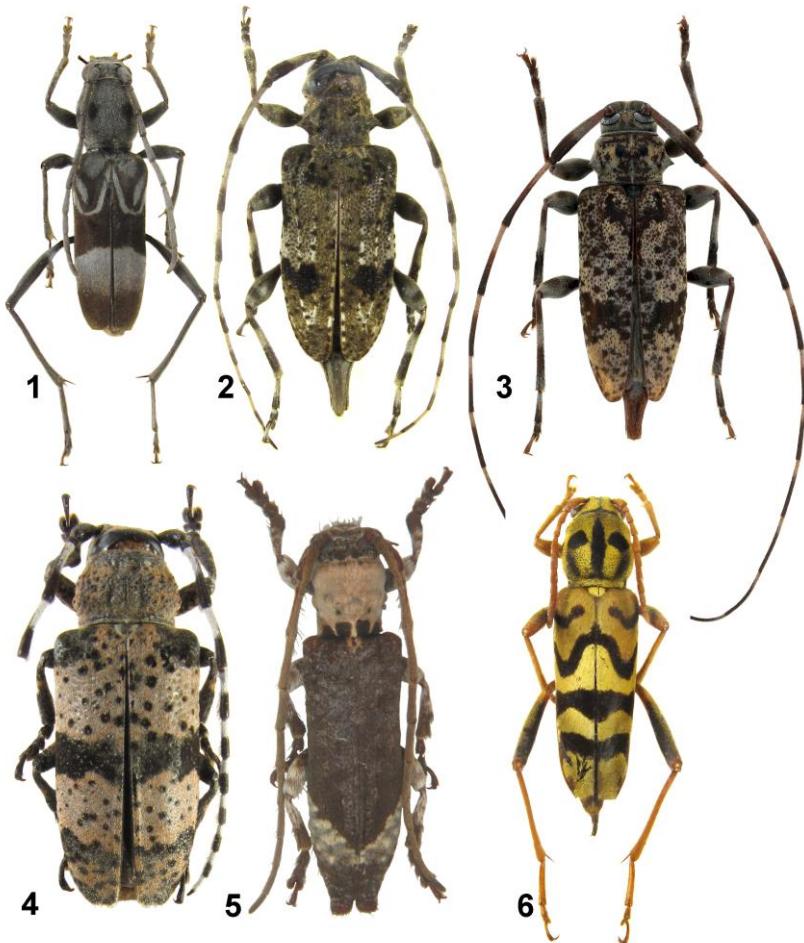


Fig. 1 *Demonax viduatus* Holzschuh, 2009 from Guangxi.

Fig. 2 *Leiopus (Carinopus) holzschuhi* Wallin, Kvamme & Lin, 2012 from Shaanxi.

Fig. 3 *Leiopus (Carinopus) fallaciosus* Holzschuh, 1993 from Guangdong.

Fig. 4 *Paraniphona rotundipennis* Breuning, 1974 from Shaanxi.

Fig. 5 *Xylariopsis mimica* Bates, 1884 from Sichuan.

Fig. 6 *Xylotrechus* (s str.) *incurvatus incurvatus* (Chevrolat, 1863) from Guangxi.

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**Новый вид подрода *Vedopranus* рода *Otiorhynchus*
(Coleoptera, Curculionidae)***

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Ключевые слова: Coleoptera, Curculionidae, *Otiorhynchus*, *Vedopranus*,
новый вид, Кавказ.

Key words: Coleoptera, Curculionidae, *Otiorhynchus*, *Vedopranus*, new species,
Caucasus.

Резюме: Описан новый вид *Otiorhynchus (Vedopranus) panfilovi* sp. n. с
Западного Кавказа.

Abstract: A new species *Otiorhynchus (Vedopranus) panfilovi* sp. n. is described
from the Western Caucasus.

[**Savitsky V.Yu.** A new species of the subgenus *Vedopranus* genus *Otiorhynchus*
(Coleoptera, Curculionidae)]

Введение

Подрод *Vedopranus* Reitter, 1912 включает 3 вида,
распространенных на Кавказе, в Крыму и Северо-Восточной
Турции (Давидьян, Савицкий, 2006; Савицкий, Давидьян, 2007;
Alonso-Zarazaga et al., 2017). В настоящей работе описывается
еще один вид этого подрода с Западного Кавказа.

Материал и методы

Материалом для настоящей работы послужили коллекция
Зоологического музея Московского государственного
университета (ЗММУ, Москва) и сборы, предоставленные

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коллегами.

Длину тела измеряли окуляр-микрометром от переднего края глаз до вершины надкрыльй. При изучении гениталий и терминалей использовано увеличение до $\times 200$. Фотографии гениталий и терминалей выполнены с препаратов в глицерине на микроскопе Микромед-3 с помощью видеоокуляра Toupcam 9.0 MP.

Результаты

Род *Otiorhynchus* Germar, 1822

Подрод *Vedopranus* Reitter, 1912

Типовой вид *Otiorhynchus retowskii* Reitter, 1885 по первоначальному обозначению.

Otiorhynchus panfilovi Savitsky, sp. n.

Рис. 1-6, 10, 11, 14, 16-18, 21-23, 26-35

Типовая местность. Западный Кавказ, гора Абаго, 2300 м.

Type locality. The Western Caucasus, Abago Mt., 2300 m.

Описание. Самка. Тело черное, слабо блестящее.

Голова конически сужена к птеригиям, немного длиннее переднеспинки. Головотрубка одинаковой длины и ширины или слабо поперечная, в 1.13-1.22 раза уже головной капсулы, на нижней стороне по бокам с глубокой узкой поперечной бороздкой. Мандибулы на внешней стороне с 3 хетами. Птеригии довольно крупные, сильно выступающие. Спинка головотрубки наиболее узкая на уровне заднего края птеригий, одинаковой ширины в основании и на вершине, перед эпистомом с продольными латеральными вдавлениями, которые разделены треугольной площадкой, а сзади ограничены поперечным валиком, узко прерванным посередине, в основной части слабо продольно углублена или почти плоская, с довольно узким, невысоким, иногда сильно сложенным срединным килем. Бока спинки головотрубки валикообразные, в основной части более широкие, слабо или едва приподняты. Эпистом с угловидной вырезкой посередине вершинного края, эпистомальный киль развит только по бокам, эпистомальные углы слабо выступают за контур головы.

Глаза коротко-овальные, слабо выпуклые, немного меньше птеригий, не выступают из контуров головы, сверху ограничены невысоким валиком, их передне-нижний край угловидно оттянут или округлен. Расстояние от глаз до птеригий равно длине глаза или немного меньше. Лоб слабо выпуклый, посередине с небольшой углубленной точкой, в 1.15-1.25 раза шире спинки головотрубки и в 2-2.2 раза шире глаза. Спинка головотрубки, лоб и темя в довольно густых, мелких, местами сливающихся точках.

Рукоять усиков немного длиннее жгутика, слабо дуговидно изогнута, почти одинаковой толщины по всей длине, в вершинной четверти едва булавовидно утолщена. 1-й членник жгутика примерно в 2 раза длиннее своей ширины и в 1.2-1.3 раза короче 2-го, 2-й в 2.2-2.3 раза длиннее своей ширины, 3-й слабо удлинен, 4-7-й членники почти круглые, 5-й заметно меньше соседних. Булава усиков широковеретеновидная, в 2.2-2.5 раза длиннее ширины, в 1.5-1.7 раза шире жгутика, примерно такой же длины как 4-7-й членники жгутика вместе взятые. 1-й членник булавы немного короче остальных членников вместе взятых.

Переднеспинка поперечная, в 1.15-1.3 раза шире своей длины, наиболее широкая дистальнее середины, ее бока округлены, в основной части слабо сдавлены, верхинный и основной край почти прямые. Основание переднеспинки тонко, местами неясно окаймлено. Диск переднеспинки слабо выпуклый в продольном направлении, в густых, крупных, уплощенных блестящих зернышках, которые разделены очень узкими линиевидными промежутками. Срединная линия диска узкая, извилистая, в средней части иногда расширена, но не шире соседних зернышек. Щетинконосные точки лежат у наружного края зернышек, который направлен примерно к центру диска переднеспинки. Бока переднеспинки в менее крупных и более выпуклых зернышках. Мезэпистерн и мезэпимер в редких, метэпистерн в умеренно густых мелких щетинконосных зернышках. Эпистернальный шов развит лишь у переднего края заднегруди.

Надкрылья яйцевидные, наиболее широкие перед серединой, с равномерно округленными боками, в 1.38-1.52 раза

длиннее своей ширины, в 3-3.25 раза длиннее и в 1.68-1.85 раза шире переднеспинки. Диск надкрылий слабо выпуклый, вдоль шва обычно уплощен, боковой край S-образно изогнут, вершинный скат отвесный или слегка подогнут. Бороздки надкрылий образованы углубленными точками с неясно ограниченными краями, их передний край с очень маленьким щетинконосным зернышком. Перемычки между точками примерно одинакового с ними размера, лежат в одной плоскости с промежутками надкрылий. Промежутки слабо выпуклые, примерно такой же ширины как бороздки, с 1 рядом щетинконосных зернышек, местами с поперечными и косыми морщинками, на диске надкрылий зернышки крупные, уплощенные, сильно сглаженные, на боках и вершинном скате они меньше и более выпуклые.

Ноги довольно стройные. Бедра с хорошо развитым зубцом, наиболее крупным на задних ногах. Передние голени прямые, их наружный вершинный угол довольно сильно скошен, внутренний край слабо S-образно изогнут, дистальнее основной трети или половины со скошенными зернышками и зубчиками. Средние и задние голени по наружному краю почти прямые, в вершинной трети обычно заметно изогнуты внутрь, на внутренней стороне с довольно крупными зернышками. Все голени с хорошо развитым мукро, на вершине с 1 шпорой. 1-й и 2-й членики лапок почти одинаковой ширины, 2-й - слабо поперечный или одинаковой длины и ширины, 3-й в 1.5-1.7 раза шире своей длины и в 1.6-1.8 раза шире 2-го, коготковый членик почти в 2 раза длиннее 3-го и заметно короче 1-го и 2-го члеников вместе взятых.

Брюшко в 1.16-1.18 раза длиннее ширины. Межтазиковый выступ 1-го вентрита в 2.9-3.6 раза шире тазиковых впадин. 1-й и 2-й вентриты в средней части слабо выпуклые, в тонкой поперечно-морщинистой скульптуре, на боках в зернышках. Анальный вентрит в дистальной половине слабо выпуклый, перед вершинным краем плоский или едва вдавлен, в довольно густых точках, местами или на большей части его поверхности сливающихся в поперечные бороздки. Вершина анального вентрита на дорсальной стороне без выступа.

Лепестки провентрикулуса в дистальной части со

сросшимися пластинами, широко округлены на вершине. Зоб у границы с провентрикулусом с длинными, неравномерно расположеннымми спикулами, направленными к вершинам лепестков, дистальнее его стенки лишь на отдельных участках в мелких, редких спикалах.

Ламелла *spiculum ventrale* примерно в 1.5 раза длиннее ширины, в средней части не склеротизована, ее вершинный край с довольно глубокой угловидной выемкой. Манубриум в 1.7-1.9 раза длиннее ламеллы, узкий, почти одинаковой ширины по всей длине, сарут маленький. 7-й и 8-й тергиты с широко округленным или почти прямым в средней части вершинным краем.

Кокситы удлиненные, умеренно склеротизованы, стилусы субапикальные, небольшие, слабо удлиненные, выступают за вершины кокситов. Половые пути самки без склеротизованных образований, вагина примерно в 2 раза длиннее кокситов, совокупительная сумка примерно в 2 раза короче вагины. Сорни сперматеки серповидный, сильно изогнут в основании, ramus и collum расставлены и направлены в разные стороны, ramus маленький, collum длиннее, изогнут вбок по отношению к плоскости сперматеки. Большая часть поверхности сперматеки почти гладкая, collum и ramus в тонкой ячеистой микроскульптуре.

Опущение тела редкое из мелких прижатых голубых и золотисто-зеленых чешуек и приподнятых волосков. Овальные и удлиненно-овальные чешуйки, длина которых составляет примерно половину ширины промежутков, образуют на надкрыльях неясный пятнистый рисунок. Такие же чешуйки имеются на верхней стороне головы, на боках и вдоль основания переднеспинки. Низ тела, бедра и голени помимо волосков в волосковидных чешуйках. Промежутки надкрылий с 1 рядом приподнятых, слабо изогнутых волосков, длина которых в 2-3 раза меньше ширины промежутков. Волоски в точках бороздок в 1.5-2 раза короче и тоньше волосков на промежутках надкрылий.

Длина тела 6.6-7.8 мм, ширина - 3.3-3.9 мм, у голотипа соответственно 7.8 и 3.9 мм.

Самец. Срединный киль спинки головотрубки сильно сглажен. Лоб в 1.8-2.1 раза шире глаза. 1-й вентрит в средней части широко вдавлен, 2-й - почти плоский, оба на фоне

поперечно-морщинистой скульптуры с редкими зернышками.

Пенис дорсовентрально сдавлен, в вершинной половине равномерно изогнут, его дорсальная стенка мемброзная. Ламелла пениса постепенно сужена к широко притупленной вершине, перед вершиной слабо оттянута. Апофизы короче трубки пениса. Непарный остиальный склерит сильно склеротизован, довольно узкий. Эндофаллус немного выступает между апофизами, типичного строения для видов подрода *Vedopranus* и близких подродов (Савицкий, Давидьян, 2007) с лигулой Н-образной формы и сложной формы аггонопорием, имеющим один роговидный и два пластинчатых выроста в вершинной части. Тегмен с длинным манубриумом и параметрами, сросшимися в основной трети.

Длина тела 6.8-6.9, ширина - 3.2-3.4 мм.

Дифференциальный диагноз. *O. panfilovi* sp. n. наиболее близок к *O. retowskii*, от которого отличается более толстыми усиками (рис. 10-13), более крупным зубцом на передних бедрах, более тонкими голенями и сильнее скошенным наружным вершинным углом передних голеней (рис. 3-5, 7-9, 14, 15), более узким 2-м и более широким 3-м члеником лапок (рис. 16-25), более узкими надкрыльями и брюшком. У *O. retowskii* надкрылья в 1.24-1.38 раза длиннее своей ширины, брюшко в 1-1.07 раза длиннее ширины (Давидьян, Савицкий, 2006).

Differential diagnosis. *O. panfilovi* sp. n. is most closely related to *O. retowskii* but differs in thicker antennae (Figs. 10-13), in larger denticle on fore femora, more slender tibiae and more beveled outer apical angle of the fore tibia (Figs. 3-5, 7-9, 14, 15), in narrower 2nd tarsomere and wider 3rd tarsomere (Figs. 16-25), in narrower elytra and abdomen. In *O. retowskii* elytra 1.24-1.38 times as long as wide, abdomen 1-1.07 times as long as wide (Давидьян, Савицкий, 2006).

Материал. Голотип: самка, Западный Кавказ, Кавказский заповедник, гора Абаго, 2300 м, 26.06.1959 (Д.В. Панфилов). Паратипы: 2 самца, 1 самка, собраны вместе с голотипом; 3 самки, там же, гора Абаго, 27.06.1999 (Ю. Третьяков).

Голотип наклеен на прямоугольную пластинку из прозрачного пластика. Жук целый, гениталии и терминалы у него не от препаратированы. Голотип и 5 паратипов хранятся в коллекции ЗММУ, 1 паратип, собранный Ю. Третьяковым - в

коллекции М.Э. Смирнова.

Голотип *O. panfilovi* sp. n. снабжен печатной инвентарной этикеткой на розовой бумаге: «Зоомузей МГУ (Москва, РОССИЯ) № ZMMU Col 03187 Zool. Mus. Mosq. Univ. (Mosquae, ROSSIA)». Паратипы из коллекции ЗММУ имеют инвентарные номера с № ZMMU Col 03188 по № ZMMU Col 03192.

Распространение. Известен только с горы Абаго на Западном Кавказе.

Экология. Судя по высоте, указанной на этикетках экземпляров, собранных Д.В. Панфиловым, *O. panfilovi* sp. n. встречается в альпийском поясе.

Этимология. Вид назван именем известного советского энтомолога, палеонтолога и зоогеографа Дмитрия Викторовича Панфилова (1923-1995), собравшего этот и другие интересные виды насекомых, хранящиеся в коллекции Зоологического музея МГУ.

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Рис. 1. *Otiorhynchus panfilovi* sp. n., самка, голотип.



Рис. 2-6. *Otiorhynchus panfilovi* sp. n. (2, 5 - самка, голотип, 3 - самец, паратип, 4, 6 - самка, паратип): 2 - голова и переднеспинка сверху, 3-5 - передняя правая нога, 6 - брюшко снизу.

Рис. 7-9. *Otiorhynchus retowskii* Reitter, передняя правая нога: 7 - самец, приют Фишт, 8, 9 - самка, перевал Черкесский.



Рис. 10, 11, 14. *Otiorhynchus panfilovi* sp. n.: 10 - правый усик, самец, паратип, 11 - левый усик, самка, паратип, 14 - задняя правая нога, самка, голотип.

Рис. 12, 13, 15. *Otiorhynchus retowskii* Reitter: 12 - правый усик, самец, перевал Белореченский, 13 - правый усик, самка, перевал Черкесский, 15 - задняя правая нога, самец, приют Фишт.



Рис. 16-18, 21-23. *Otiorhynchus panfilovi* sp. n.
(16, 17, 21, 22 - самец, паратип, 18, 23 - самка, голотип):
16-18 - передняя левая лапка, 21, 23 - задняя левая лапка,
22 - задняя правая лапка.

Рис. 19, 20, 24, 25. *Otiorhynchus retowskii* Reitter (19, 24 - самец,
перевал Белореченский, 20, 25 - самка, перевал Черкесский):
19, 20 - передняя левая лапка, 24 - задняя левая лапка,
25 - задняя правая лапка.



Рис. 26-29. *Otiorhynchus panfilovi* sp. n., самец, паратипы: 26 - эдеагус сверху, 27 - эдеагус сбоку, 28, 29 - вершина эдеагуса сверху.



Рис. 30-35. *Otiorhynchus panfilovi* sp. n., самка, паратипы: 30, 32 - spiculum ventrale снизу, 31 - spiculum ventrale сбоку, 33 - кокситы сверху, 34, 35 - сперматека. Рис. 30-32, 34 и 35 выполнены в одинаковом масштабе, рис. 33 по сравнению с ними увеличен в 1.5 раза.

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**A faunistic study on Ichneumonidae (Hymenoptera:
Ichneumonoidea) from Ardebil and East Azarbayjan provinces,
Northwestern Iran**

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Key words: Ichneumonidae, species diversity, distribution, host, new records, Iran.

Abstract: This paper deals with ichneumonid species (Hymenoptera: Ichneumonidae) which were collected from Ardebil and East Azarbayjan provinces (Northwestern Iran). In total, 43 species within 33 genera and nine subfamilies (Banchinae, Campopleginae, Cryptinae, Ctenopelmatinae, Eucerotinae, Ichneumoninae, Phygadeuontinae, Poemeniinae and Xoridinae) are represented in this paper which 10 species are new records for the fauna of Iran: *Apophua cicatricosa* (Ratzeburg, 1848) (Banchinae), *Casinaria nigripes* (Gravenhorst, 1829), *Diadegma claripenne* (Thomson, 1887) (Campopleginae), *Azelus erythropalpus* (Gmelin, 1790) (Ctenopelmatinae), *Euceros albifarsus* Curtis, 1837 (Eucerotinae), *Chasmias lugens* (Gravenhorst, 1829) (Ichneumoninae), *Charitopes gastricus* (Holmgren, 1868), *Odontoneura annulicornis* (Thomson, 1884) (Phygadeuontinae), *Poemenia collaris* (Haupt, 1917) (Poemeniinae) and *Xorides filiformis* (Gravenhorst, 1829) (Xoridinae).

Introduction

Biodiversity has been considered one of the main objects of study of the scientific community, but despite being widely studied, there is often a lack of scientific data and information about many

insect groups, although they represent 2/3 of living animals (Loreau et al. 2002; Gaston & Spicer 2004; Gonzalez-Moreno & Bordera 2012). Parasitic wasps are known to play an important role in ecosystems through complex interactions within communities of host species, including an ability to suppress populations of agricultural pests (Gaston, 1991; Godfray 1994; Hilszczajski et al., 2005). Despite their evolutionary success, hymenopteran parasitoids are quite susceptible to environmental disturbances (La Salle and Gauld, 1993). The diversity of parasitic wasps is enormous and their taxonomy and ecology are to a large extent poorly studied. The highly diverse families Braconidae and Ichneumonidae are among the least known groups (Quicke 2015).

The Ichneumonidae is a hyperdiverse family of Hymenoptera, including over 24,000 described (Yu et al. 2016) and with 100,000 estimated species worldwide (Gauld 2000). Ichneumonids are confined to the shade of forests and to areas with comparatively high humidity (Townes 1969). Adults are usually active during day time and feed on flowers or honey dew. The Ichneumonidae species are important parasitoids on different stages of a wide range of invertebrates, and play an essential role in the functioning of most ecosystems. In recent years they have been successfully used as biocontrol agents and, given the largely undocumented fauna, there is surely a huge potential for their utilization in managed biocontrol programs (Gupta 1991; Wahl 1993).

Due to the great diversity and difficulties in identification of many species in this group, our knowledge of the Iranian fauna remains insufficient. The purpose of this paper is to record the species of Ichneumonidae of the Ardebil and East Azarbayjan provinces as part of ongoing faunistic studies of Ichneumonidae in Iran. In the present study, totally 39 ichneumonid species were collected, of which eight species are recorded for the first time from Iran.

Material and methods

The specimens of the present study were collected during 2011-2016 by Malaise traps and sweeping net from different areas of Ardebil and East Azarbayjan provinces (Northwestern Iran) (Fig. 1). Some materials were reared in optimum conditions at laboratory

condition or incubator (26 ± 3 °C; 60 ± 10 RH; 14: 10 L: D). The specimens of this research are preserved in the collections of the authors. Here we follow Yu *et al.* (2016) for nomenclature, classification and distributional data.



Fig. 1. Map of Iran with boundaries of provinces (Ardebil and East Azarbayan provinces are the sampled regions of the present research).

Results

This faunistic paper on Iranian Ichneumonidae comprises 43 species within 33 genera and 9 subfamilies: Banchinae (5 species, 4 genera), Campopleginae (8 species, 6 genera), Cryptinae (5 species, 4 genera), Ctenopelmatinae (4 species, 4 genera), Eucerotinae (2 species, one genus), Ichneumoninae (7 species, 5 genera), Phygadeuontinae (8 species, 7 genera), Poemeniinae (2 species, one genus) and Xoridinae (2 species, one genus). Eight species are newly

recorded from Iran. The list of species is given below alphabetically.

Subfamily Banchinae Wesmael, 1845

Genus *Apophua* Morley, 1913

***Apophua cicatricosa* (Ratzeburg, 1848)**

Material examined: Ardebil province, Meshginshahr (Shabanloo), 3♀♀, 17.vii.2013, ex *Tortrix viridana* Linnaeus, 1758 (Lepidoptera: Tortricidae). *New record for Iran.*

General distribution: Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Kazakhstan, Lithuania, Moldova, Netherlands, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Genus *Cryptopimpla* Taschenberg, 1863

***Cryptopimpla errabunda* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Kaleybar (Sardarabad), 1♀, 11.viii.2014.

General distribution: Austria, Belgium, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Moldova, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, United Kingdom.

Genus *Exetastes* Gravenhorst, 1829

***Exetastes robustus* Gravenhorst, 1829**

Material examined: East Azarbayjan province, Azarshahr (Ghadamgah), 1♀, 1♂, 8.viii.2014.

General distribution: Austria, Belarus, Bulgaria, China, former Czechoslovakia, France, Germany, Hungary, Italy, Japan, Moldova, Mongolia, Poland, Romania, Russia, Sweden, Turkey, Ukraine.

Genus *Lissonota* Gravenhorst, 1829

***Lissonota nigridens* Thomson, 1889**

Material examined: East Azarbayjan province, Horand, 1♀, 2♂♂, 24.viii.2016.

General distribution: Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Italy, Moldova, Norway, Poland, Russia, Russia-St. Petersberg, Spain, Sweden, Switzerland, United Kingdom

***Lissonota setosa* (Geoffroy, 1785)**

Material examined: Ardebil province, Aslanduz, 3♀, 14.vi.2015, ex *Zeuzera pyrina* (Linnaeus, 1761) (Lepidoptera: Cossidae).

General distribution: Austria, Belgium, China, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Ukraine, United Kingdom.

Subfamily Campopleginae Förster, 1869

Genus *Campoletis* Förster, 1869

***Campoletis annulata* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Absh-Ahmad, 4♀♀, 2♂, 21.v.2016, ex *Agrotis segetum* (Denis & Schiffermüller, 1775) (Lepidoptera: Noctuidae).

General distribution: Afghanistan, Austria, Belgium, Bulgaria, China, former Czechoslovakia, Denmark, Faeroe Islands, Finland, France, Germany, Hungary, India, Ireland, Israel, Italy, Latvia, Netherlands, Poland, Romania, Russia, Spain, Sweden, Tunisia, United Kingdom.

***Campoletis raptor* (Zetterstedt, 1838)**

Material examined: Ardebil province, Namin (Khanghah-Olya), 1♀, 17.vi.2015.

General distribution: Austria, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Latvia, Norway, Poland, Romania, Russia, Spain, Sweden, United Kingdom.

Genus *Casinaria* Holmgren, 1859

***Casinaria nigripes* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Maragheh (Yunjalooy), 1♀, 38.viii.2016. *New record for Iran.*

General distribution: Austria, Belgium, China, Czech Republic, Finland, France, Germany, Hungary, Japan, Moldova, Netherlands, Poland, Russia, Switzerland, Ukraine.

Genus *Diadegma* Förster, 1869

***Diadegma claripenne* (Thomson, 1887)**

Material examined: Ardebil province, Tazeh Kandi, 2♂♂, 19.vi.2015. *New record for Iran.*

General distribution: Austria, Belgium, Bulgaria, Egypt, France, Germany, Hungary, Ireland, Israel, Latvia, Poland, Romania, Sweden, Turkey, Ukraine, United Kingdom.

Genus *Dusona* Cameron, 1900

***Dusona circumcinctus* (Förster, 1868)**

Material examined: East Azarbayjan province, Absh-Ahmad, 1♂, 21.v.2016.

General distribution: Azerbaijan, Belgium, China, Czech Republic, Finland, France, Germany, Japan, Moldova, Netherlands, Poland, Romania, Russia, Sweden.

***Dusona falcator* (Fabricius, 1775)**

Material examined: Ardebil province, Aslanduz, 3♀♀, 1♂, 13.vi.2015, ex *Lymantria dispar* (Linnaeus, 1758) (Lepidoptera: Erebidae).

General distribution: Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Kazakhstan, Netherlands, Norway, Poland, Romania, Russia, Sweden, Turkey, Ukraine, United Kingdom.

Genus *Hyposoter* Förster, 1869

***Hyposoter brischkei* (Bridgman, 1882)**

Material examined: Ardebil province, Bilehsavar, 1♀, 7.vii.2011.

General distribution: Austria, Finland, France, Germany, Hungary, Latvia, Norway, Poland, Romania, Russia, Slovakia, United Kingdom.

Genus *Nemeritis* Holmgren, 1860

***Nemeritis macrocentra* (Gravenhorst, 1829)**

Material examined: Ardebil province, Aslanduz, 2♀♀, 2♂♂, 14.vi.2015, ex *Yponomeuta malinellus* (Zeller, 1838) (Lepidoptera: Yponomeutidae).

General distribution: Austria, Azerbaijan, Belarus, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Romania, Russia, Sweden, Ukraine, United Kingdom.

Subfamily Cryptinae Kirby, 1837
Genus *Aptesis* Förster, 1850

***Aptesis nigritula* (Thomson, 1885)**

Material examined: Ardebil province, Khalkhal (Andabil), 3♀♀, 16.vii.2015.

General distribution: Austria, Azerbaijan, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Netherlands, Poland, Russia, Ukraine, United Kingdom.

Genus *Atractodes* Gravenhorst, 1829

***Atractodes (Asyncrita) ambiguus* Ruthe, 1859**

Material examined: Ardebil province, Khalkhal (Andabil), 1♀, 16.vii.2015.

General distribution: Austria, Bulgaria, Denmark, Faeroe Islands, Finland, Germany, Iceland, Italy, Norway, Russia, Sweden, Switzerland, USA, Ukraine, United Kingdom.

***Atractodes (Asyncrita) foveolatus* Gravenhorst, 1829**

Material examined: East Azarbayjan province, Azarshahr (Ghadamgah), 2♀♀, 8.viii.2014.

General distribution: Austria, Azerbaijan, Finland, France, Germany, Greece, Japan, Netherlands, Norway, Poland, Russia, Sweden, Switzerland, Turkey, Ukraine, United Kingdom.

Genus *Oresbius* Marshall, 1867

***Oresbius leucopsis* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Varzeghan, 3♂♂, 23.vi.2013.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Japan, Latvia, Lithuania, Netherlands, Norway, Poland,

N. Samin, R. Jussila, H. Sakenin, A.M. Penteado-Dias

Romania, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Genus *Parmortha* Townes, 1962

***Parmortha pleuralis* (Thomson, 1873)**

Material examined: Ardebil province, Bilehsavar, 1♀, 14.viii.2014.

General distribution: Belgium, Bulgaria, Canada, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Japan, Lithuania, Norway, Poland, Sweden, Turkey, USA, United Kingdom.

Subfamily Ctenopelmatinae Förster, 1869

Genus *Alexeter* Foester, 1869

***Alexeter coxalis* (Brischke, 1871)**

Material examined: Ardebil province, Germi (Sarilar), 2♂♂, 19.vi.2015.

General distribution: Austria, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Spain, Ukraine, United Kingdom.

Genus *Azelus* Förster, 1869

***Azelus erythropalpus* (Gmelin, 1790)**

Material examined: East Azarbayjan province, Mianeh, 2♀♀, 17.viii.2012 (New record for Iran).

General distribution: Austria, Belarus, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Ukraine, United Kingdom, former Yugoslavia.

Genus *Ctenopelma* Holmgren, 1855

***Ctenopelma tomentosum* (Desvignes, 1856)**

Material examined: Ardebil province, Aslanduz, 4♀♀, 2♂♂, 16.vi.2015.

General distribution: Austria, Azerbaijan, Belgium, former Czechoslovakia, Finland, France, Georgia, Germany, Hungary, Japan, Latvia, Lithuania, Moldova, Netherlands, Poland, Russia, Sweden, Switzerland, Ukraine, United Kingdom.

Genus *Oetophorus* Förster, 1869

***Oetophorus naevius* (Gmelin, 1790)**

Material examined: East Azarbayjan province, Varzeghan, 2♀♀, 23.vi.2013.

General distribution: Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Latvia, Lithuania, Moldova, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Subfamily Eucerotinae Viereck, 1919

Genus *Euceros* Gravenhorst, 1829

***Euceros albitarsus* Curtis, 1837**

Material examined: Ardebil province, Namin (Khanghah-Olya), 1♂, 17.vi.2015 (**New record for Iran**).

General distribution: Austria, Bulgaria, former Czechoslovakia, France, Germany, Hungary, Japan, Japan-main, Moldova, Netherlands, Portugal, Romania, Russia, Ukraine, United Kingdom.

***Euceros serricornis* (Haliday, 1838)**

Material examined: East Azarbayjan province, Kaleybar (Sardarabad), 1♀, 11.viii.2014.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Japan, Kazakhstan, Korea, Latvia, Moldova, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Sweden, Ukraine, United Kingdom, former Yugoslavia.

Subfamily Ichneumoninae Latreille, 1802

Genus *Aoplus* Tischbein, 1874

***Aoplus altercator* (Wesmael, 1855)**

Material examined: Ardebil province, Germi (Shahbazloo), 1♀, 18.vi.2015.

General distribution: Austria, Belarus, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Italy, Poland, Russia, Sweden, Switzerland, United Kingdom.

***Aoplus ruficeps* (Gravenhorst, 1829)**

Material examined: Ardebil province, Khalkhal, 2♀♀, 9.vii.2011.

General distribution: Austria, Belarus, Belgium, Bulgaria, Canada, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Netherlands, Norway, Poland, Russia, Sweden, Switzerland, USA, United Kingdom.

Genus *Chasmias* Ashmead, 1900

***Chasmias lugens* (Gravenhorst, 1829)**

Material examined: Ardebil province, Bilehsavar, 3♀♀, 12.viii.2014 (New record for Iran).

General distribution: Austria, Belarus, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Israel, Kazakhstan, Latvia, Netherlands, Poland, Romania, Russia, Spain, Sweden, Ukraine, United Kingdom.

***Chasmias motatorius* (Fabricius, 1775)**

Material examined: Ardebil province, Meshginshahr (Shabanloo), 3♀♀, 17.vii.2013.

General distribution: Austria, Belarus, Belgium, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Japan, Latvia, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russia, Spain, Switzerland, United Kingdom.

Genus *Ctenichneumon* Thomson, 1894

***Ctenichneumon nitens* (Christ, 1791)**

Material examined: East Azarbayjan province, Absh-Ahmad, 5♀♀, 2♂♂, 21.v.2016.

General distribution: Austria, Belgium, China, Egypt, Finland, France, Germany, Hungary, Israel, Italy, Kazakhstan, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom.

Genus *Homotherus* Förster, 1869

***Homotherus varipes* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Kaleybar, 3♀♀, 1♂, 11.viii.2014, ex *Archips rosana* (Linnaeus, 1758) (Lepidoptera: Tortricidae).

General distribution: Austria, Belarus, Belgium, former Czechoslovakia, Denmark, Finland, France, Germany, Japan, Latvia, Lithuania, Netherlands, Norway, Poland, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

Genus *Platylabus* Wesmael, 1845

***Platylabus vibratorius* (Thunberg, 1824)**

Material examined: East Azarbayan province, Azarshahr, 1♀, 8.viii.2014, ex *Zygaena manlia* Lederer, 1870 (Lepidoptera: Zygaenidae).

General distribution: Algeria, Austria, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom, former Yugoslavia.

Subfamily Phygadeuontinae Foerster, 1869

Genus *Bathythrix* Förster, 1869

***Bathythrix aerea* (Gravenhorst, 1829)**

Material examined: East Azarbayan province, Horand, 1♀, 24.viii.2016.

General distribution: Austria, Bulgaria, Canada, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Moldova, Netherlands, Poland, Russia, Sweden, Switzerland, USA, United Kingdom, former Yugoslavia.

Genus *Charitopes* Förster, 1869

***Charitopes gastricus* (Holmgren, 1868)**

Material examined: East Azarbayan province, Bostan-Abad (Tikmehdash), 2♀♀, 10.viii.2014 (**New record for Iran**).

General distribution: Austria, Bulgaria, Canada, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Japan, Latvia, Mexico, Netherlands, Poland, Romania, Russia, Spain, Sweden, USA, United Kingdom.

Genus *Gnotus* Förster, 1869

***Gnotus chionops* (Gravenhorst, 1829)**

Material examined: Ardebil province, Germi (Alivardiloo), 1♂, 18.vi.2015.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Japan, Latvia, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, USA, United Kingdom.

Genus *Hemiteles* Gravenhorst, 1829

***Hemiteles similis* (Gmelin, 1790)**

Material examined: Ardebil province, Aslanduz, 3♀♀, 2♂♂, 14.vi.2015, ex *Pieris brassicae* (Linnaeus, 1758) (Lepidoptera: Pieridae).

General distribution: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Isle of Man, Italy, Moldova, Netherlands, Norway, Poland, Russia, Slovakia, Spain, Sweden, USA, Ukraine, United Kingdom.

Genus *Mastrus* Förster, 1869

***Mastrus rufulus* (Thomson, 1884)**

Material examined: East Azarbayan province, Kaleybar (Sardarabad), 1♀, 11.viii.2014.

General distribution: Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Latvia, Madeira Islands, Poland, Romania, Spain, Sweden, United Kingdom.

Genus *Odontoneura* Förster, 1869

***Odontoneura annulicornis* (Thomson, 1884)**

Material examined: Ardebil province, Germi, 1♀, 18.vi.2015 (New record for Iran).

General distribution: Azerbaijan, former Czechoslovakia, Finland, France, Germany, Hungary, Japan, Lithuania, Moldova, Netherlands, Norway, Poland, Russia, Sweden, United Kingdom.

Genus *Zoophthonorus* Förster, 1869

***Zoophthonorus graculus* (Gravenhorst, 1829)**

Material examined: Ardebil province, Bilehsavar, 3♀♀, 3.vii.2016, ex *Hypera postica* (Gyllenhal, 1813) (Coleoptera: Curculionidae).

General distribution: Belgium, Bulgaria, Canada, former Czechoslovakia, Finland, France, Germany, Hungary, Lithuania,

Mexico, Mongolia, Netherlands, Norway, Poland, Romania, Spain, Sweden, Turkey, USA, United Kingdom.

***Zoophthorus punctiventris* (Thomson, 1884)**

Material examined: East Azarbayjan province, Absh-Ahmad, 1♂, 22.v.2016.

General distribution: Azerbaijan, Bulgaria, former Czechoslovakia, Finland, Hungary, Sweden.

Subfamily Poemeniinae Narayanan and Lal, 1953

Genus *Poemenia* Holmgren, 1859

***Poemenia collaris* (Haupt, 1917)**

Material examined: East Azarbayjan province, Absh-Ahmad, 1♀, 21.v.2016 (**New record for Iran**).

General distribution: Austria, Bulgaria, former Czechoslovakia, France, Germany, Netherlands, Norway, Poland, Romania, Sweden, United Kingdom, former Yugoslavia.

***Poemenia notata* Holmgren, 1859**

Material examined: Ardebil province, Khodafarin (Khomarloo), 2♀♀, 2♂♂, 11.vi.2012.

General distribution: Algeria, Austria, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Israel, Italy, Luxembourg, Norway, Poland, Romania, Russia, Sweden, Switzerland, United Kingdom, former Yugoslavia.

Subfamily Xoridinae Shuckard, 1840

Genus *Xorides* Latreille, 1809

***Xorides filiformis* (Gravenhorst, 1829)**

Material examined: East Azarbayjan province, Arasbaran forests, 2♀♀, 1♂, 15.viii.2015 (**New record for Iran**).

General distribution: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Italy, Latvia, Netherlands, Poland, Romania, Russia, Sweden, Turkey, Ukraine, former Yugoslavia.

***Xorides irrigator* (Fabricius, 1793)**

Material examined: Ardebil province, Aslanduz, 2♀♀, 13.vi.2015, ex *Lymantria dispar* (Linnaeus, 1758) (Lepidoptera: Erebidae).

General distribution: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Italy, Moldova, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom, former Yugoslavia.

Discussion

The results of this faunistic work indicate that the fauna of Ardebil and East Azarbayjan provinces in northwestern Iran is diverse and on the other hand unknown. In this paper, 10 species have been recorded for the first time from Iran, while all the areas of the mentioned provinces were not sampled systematically. Continue to faunistic surveys in these provinces surely will result to finding of new data (new country records, new distributional data, new host records, and probably new species). Since ichneumonid wasps have efficient role in biological control programs in various ecosystems (Gupta, 1987; Quicke, 2015), conservation of these beneficial insects will result to suppression of agricultural pests' populations (Croft, 1990; De Bach & Rosen, 1991; Barbosa, 1998). In this investigation, parasitoid-host relationships have been detected for 10 ichneumonid species as the natural enemies of host species in eight families Curculionidae (Coleoptera), Cossidae, Erebidae, Noctuidae, Pieridae, Tortricidae, Yponomeutidae and Zygaenidae (Lepidoptera). Host species of most Iranian Ichneumonidae are unknown because nearly all the faunistic researches have been done upon collecting of adult wasps by traps not rearing of hosts. So investigations on parasitoid-host relationships of Iranian Ichneumonidae can be an invaluable research topic in order to determining of efficient parasitoids of destructive agricultural pests, and establishment of effective biological control programs.

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New or interesting Dermestidae (Coleoptera) from the Oriental Region

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Key words: taxonomy, new species, new records, Coleoptera, Dermestidae, Oriental Region.

Abstract: Five new species are described, illustrated and compared with known species: *Thaumaglossa soror* sp. nov. from Malaysia, *Thaumaglossa lineata* sp. nov. from Laos, *Adelaidella laotica* sp. nov. from Laos, *Anthrenus (Nathrenus) sabahense* sp. nov. (Malaysia) and *Orphinus (Orphinus) siberutensis* sp. nov. (Indonesia: Siberut I.). New records are provided for the following species: *Thaumaglossa barclayi* Kadej & Háva, 2015 (Malaysia, Indonesia), *Thaumaglossa haucki* Háva, 2015 (Indonesia), *Thaumaglossa paratonkinea* Háva, 2008 (Indonesia), *Adelaidella thailandica* (Kadej & Háva, 2016) (China: Yunnan Province), *Attagenus indicus* Kalík, 1954 (India: Assam) and *Dermestes (Dermestinus) laniarius* Illiger, 1802 (Thailand).

Introduction

The beetle family Dermestidae (Coleoptera) currently includes about 1750 species and subspecies worldwide (Háva, 2015a, 2021). During the determination of Dermestidae from author's collection, I found five new species from Laos, Malaysia and Indonesia which are described below; additionally, six species are newly recorded from Malaysia, Indonesia, China and India.

Material and methods

The species are listed in the alphabetical order, the nomenclature and zoogeography follow the catalogue of Háva (2015a).

The following abbreviations of measurements were used (in mm):
Total length (TL) - linear distance from anterior margin of pronotum to apex of elytra.

Elytral width (EW) - maximum linear transverse distance.

Mentioned material deposited in the following collections:
JHAC - Jiří Háva, Private Entomological Laboratory & Collection,
Únětice u Prahy, Prague-West, Czech Republic;
NMPC - National Museum, Praha, Czech Republic;
NMWC - Natural Sciences National Museum Wales, Cardiff, United
Kingdom.

Specimens of the presently described species are provided with red, printed labels with the text as follows: "HOLOTYPE [or PARATYPE, respectively] *species name sp. nov.* Jiří Háva det. 2021."

Results

Thaumaglossa soror sp. nov.

Figs. 1-4

Thaumaglossa sp.: Háva, 2015b: 16.

Description. Female: Body measurements (TL 3.4, EW 2.4), strongly convex, ovate, widest at humeri, pronotum dark brown, elytra black, antennae brown, legs brown; body covered with white and yellow setation. Head black covered with yellow setation, finely punctate. Antennae with 11 antennomeres, densely covered with yellow, erect setation (Fig. 4). Antenna occupies the entire cavity of antennal fossa. Frons with median ocellus. Pronotum dark brown, densely punctate, covered with short, yellow and white setation; yellow setation forming large area discally. Elytra black, coarsely punctate on humeri and on basal half, other parts densely punctate, covered with short, white setation. The white setation leaving small, circular spots. Epipleuron black with white setation. Scutellum triangular, shiny, visible, without setation. Prosternum intensely punctate on disc, without impunctate median line, covered with white setation. Mesosternal disc with large punctures, covered with white setation. Visible abdominal ventrites brown with white setation. Pygidium brown, with yellow setation.

Male. Unknown.

Differential diagnosis. The new species belongs to the *T. rufocapillata* species group, and is very similar to *Thaumaglossa haucki* Háva, 2015 but new species differs from it by the bicolorous

setation on the pronotum (*haucki*- pronotum covered by only grey setation) and structure of terminal antennomere.

Type material. Holotype (♀): „Malaysia W, Perak 25 km NE of Ipoh, 2100 m, Banjaran Titi Wangi Mts., Korbu Mt., 4-13.iii.1998, P. Pacholátko lgt., (JHAC). Paratype: (1 ♀): “Malaysia W, Kelantan, Kg. Tunku, 1200 m, 150 km S of Jeli, 21ii.-14.iii.2013, P. Čechovský lgt.”, (JHAC).

Etymology. From Latin *soror* (meaning “sister”).

Thaumaglossa lineata sp. nov.

Figs. 5-7

Description. Male: Body measurements (TL 3.4, EW 2.6), strongly convex, ovate, widest at humeri, black on dorsal surface; antennae brown, legs brown; body covered with black setation. Head black covered by black setation, finely punctate. Antennae with 11 antennomeres, densely covered with erect, black setation (Fig. 7). Antenna occupies the entire cavity of antennal fossa. Frons with median ocellus. Pronotum black, densely punctate, covered by short, black setation. Elytra black, coarsely punctate on humeri and on basal half, other parts densely punctate, covered with black, short setation, the black setation forming longitudinal striation (visible only when viewed from the side, Fig. 6); each elytron with short longitudinal flat depressions on anterior half (Fig. 5). Epipleuron black with black setation, finely punctate. Scutellum triangular, shiny, visible, without setation. Prosternum intensely punctate on disc, without impunctate median line, covered by very short yellow setation. Mesosternal disc with large punctures, covered by very short yellow setation. Visible abdominal ventrites black with black setation. Pygidium black, with black setation. Legs brown with yellow setation.

Male. Unknown.

Differential diagnosis. The new species belongs to the *T. hilleri* species group, subgroup A, and is similar to species with black pygidium covered by black setae, abdomen black, but it differs from known species by the structure of antennae and elytral, longitudinal striations from black setation.

Type material. Holotype (♀): Laos, Louangnamtha pr., 21°09'N

J. Háva

101°19' E, Namtha Muang Sing, 5-31.v.1997, 800-1200 m, V. K. lgt., (JHAC).

Etymology. Named *lineata* according to elytral, longitudinal striation.

Thaumaglossa barclayi Kadej & Háva, 2015

Material examined. Malaysia W, Kelantan, 70 km NW of Gua Musang, Mt. Chamah, 1900 m, Kampong Perias, 17.iv.-9.v.2014, P. Čechovský lgt., 1 ♀, J. Háva det., (JHAC); Malaysia W, Kelantan, 30 km NW of Gua Musang, Ulu Lalat Mt., 800-1000 m, Kampong Sungai Om, 27.v.-19.vi.2011, P. Čechovský lgt., 1 ♀, J. Háva det., (JHAC); Indonesia, S Kalimantan, Kandangan distr., 17 km NE Loksado, 23.9.-30.10.1997, St. Jákl lgt., 1 ♀, J. Háva det., (JHAC).

Distribution. Species known from Laos, new for Malaysia and Indonesia: Kalimantan.

Thaumaglossa haucki Háva, 2015

Material examined: “Nederlands Indie, W. Java, 2500’, Tjiajoenan, ix.1941, J.M.A. van Groenendael”, 1 ♀, J. Háva det., (JHAC).

Distribution. Species known from Malaysia, new for Indonesia: Java.

Thaumaglossa paratonkinea Háva, 2008

Material examined: Borneo, Sabah, mainline West, 56 km West of Silam, 25.ix.-14.x.1987, 100 m, A.H. Kirk-Spriggs / Seven year old selectively logged forest, malaise trap sample no.20 / NMW Sabah (Borneo) expedition NMW.Z.1987.094, J. Háva det., (NMWC).

Distribution. Species known from Borneo and Sumatra, new locality data from Borneo.

Adelaidella laotica sp. nov.
Figs. 8-10

Description. Male. Body measurements: TL 2.5 mm, EW 1.5 mm; elongate and oval (Fig. 8), slightly convex; dorsally and ventrally brown, slightly shining; dorsum covered with short and erect, yellow

and white setation; thoracic underside with comparatively long and recumbent, white setation; visible abdominal ventrites with recumbent, white setation, sparser than that on thoracic surface. Head finely punctured, with intermixed white and yellow setation. Palpi brown. Frontal median ocellus present. Antennae brown, with short, yellow setation, consisting of 11 antennomeres, antennal club with 3 antennomeres (Fig. 9). Pronotum dark brown, finely punctate on the disc, coarsely punctate on lateral margins, covered by intermixed white and yellow setation. Hypomeron matte with very small punctures. Scutellum very small and triangular, matte, with rounded apex, without setation. Elytra light brown, coarsely punctate on humeri and with one humeral bump, other parts finely punctate, covered by intermixed white and yellow setation (Fig. 8). Epipleuron brown, short and broad, with short white setae. Prosternum without “collar”, mouthparts free. Prosternal process short and narrow, with white setation. Meta- and mesosternum finely punctate discally, laterally coarsely punctate, with recumbent, white setation. Abdomen dark brown, with five visible abdominal ventrites, covered by recumbent, white setation. Legs brown, covered with comparatively short and thick, yellow setation and without spines. Male genitalia as in Fig. 10.

Female. Unknown.

Differential diagnosis. The new species differs from other known species by long intermixed yellow and white setation on dorsal surfaces, structure of antennae and male genitalia.

Type material. Holotype (♂): LAOS centr., Khammouan prov., 4-16.xi., 25-30.xi.2000, Ban Khoun Ngeun env., 18°07'N 104°29'E, alt. 250 m, E. Jendek & P. Pacholátko leg., (JHAC).

Etymology. Named after the country where the species has been first collected and recorded.

Adelaidella thailandica (Kadej & Háva, 2016)

Material examined. China: S-Yunnan (Xishuangbanna), 45 km SW Jinghong, vic. Bangzhang vill. / N 21°4437', E 100°2702', 1600-1700 m, 03-05.v.2009, 1 ♀, (JHAC).

Distribution. Species known from Thailand (Zhou et al. 2020, Háva 2021), new for China: Yunnan Province.

Attagenus indicus Kalík, 1954

Material examined. “NE India, Assam, Umrongso env., 700 m, 25°27'N 92°43'E, 3-8.vi.2002, M. Trýzna & P. Benda lgt.”, 1 ♀, J. Háva det., (JHAC).

Distribution. Species known from Afghanistan, India: Madhya Pradesh, Uttar Pradesh and Nepal (Háva 2015, 2021), new for India: Assam.

Dermestes (Dermestinus) laniarius laniarius Illiger, 1802

Material examined. Thailand, Phuket, Ban Karon, Kata Beach, on road near hotel, 15-17.xi.2016, J. Větrovec lgt., 1 ♂, J. Háva det., (JHAC).

Distribution. Palaearctic species, new for Thailand as introduced species.

Anthrenus (Nathrenus) sabahense sp. nov.

Figs. 11-14

Description. Male. Body measurements TL 2.9, EW 2.2; body black, small, oval. Dorsal surface covered by brown and grey scales, ventral surface covered by grey scales. Individual scales very narrow, long, subtriangular.

Head covered by grey scales. Antennae with 11 antennomeres, antennomeres I-VIII brown, IX-XI black, antennal club with 3 antennomeres, compact (Fig. 12). Antenna occupies the entire cavity of antennal fossa. Frons with median ocellus. Eyes with median margin entire. Palpi brownish-black. Pronotum covered by grey scales only. Scutellum small, triangular without scales. Elytra with brown and grey scales; grey scales forming spots on each elytron, other parts covered by brown scales. Epipleuron with brown scales.

Ventral surface covered with grey scales. Prosternum only with grey scales. Metasternum only with grey scales, without a small patch at lateral margins from other scales. Abdominal ventrites black, covered by grey scales, I-V without spots in the middle and without large black spots at antero-lateral margins (Fig. 13). Legs dark brown with white scales and white setae. Male aedeagus (Fig. 14).

Female. Unknown.

Differential diagnosis. The new species is very similar to *A. (N.) kalimantanus* Háva, 2004: 158, but differs from it by the structure of the antennae, male genitalia and setiform, elytral scales.

Type material. Holotype (♂): “Malaysia, Sabah, 50 km E Kota Kinabalu, Crocker Mts., Gg. Emas, 16-27.4.1993, Strba & Jenis [leg.]”, (JHAC).

Etymology. Toponymy, named after where the holotype was collected (Sabah).

Orphinus (Orphinus) siberutensis sp. nov.

Figs. 15-18

Description. Male. Body oval, TL 1.7, EW 1.2. Head and pronotum black, shiny, elytra brown to black with light brown apical part (Figs. 15-16), dark brown to black on venter. Head finely punctate with long, erect, yellow setation. Palpi brown; setation on mentum denser. Eyes small, with yellow microsetae. Ocellus on front present. Antennae brown with yellow setae, with 11 antennomeres, antennal club with 2 antennomeres, terminal antennal segment circular (Fig. 17). Pronotum black, disc finely punctate, very densely foveolate posteriorly, with long, erect, yellow setae. Scutellum black, triangular, without setation. Elytra finely punctate; humeri with one small bump; elytral surface with long, erect yellow setation; dark brown to black with light brown apical part. Epipleuron black, anteriorly broad, finely punctate, with short, yellow setation. Legs dark brown with yellow setation. Mesosternum coarsely punctate laterally, otherwise finely punctate, covered by long, recumbent, yellow setation. Abdominal visible ventrites dark brown to black, with long, recumbent, yellow setation. Male genitalia (Figs. 18).

Female. Externally similar to male.

Variability. Body TL 1.7-2.5, EW 1.2-1.6.

Differential diagnosis. The new species is very similar to *Orphinus (O.) tonkineus* Pic, 1922 and *O. (O.) baliensis* Háva, 2016 but differs from them by the structure of the antennae and male genitalia.

Type material. Holotype (♂): Indonesia, West Sumatra, Mentawai Isls., Siberut I., Bojakan, 150 m, v.2004, S. Jákl lgt., (NMPC). Paratypes (34 spec.): same data as holotype, (JHAC).

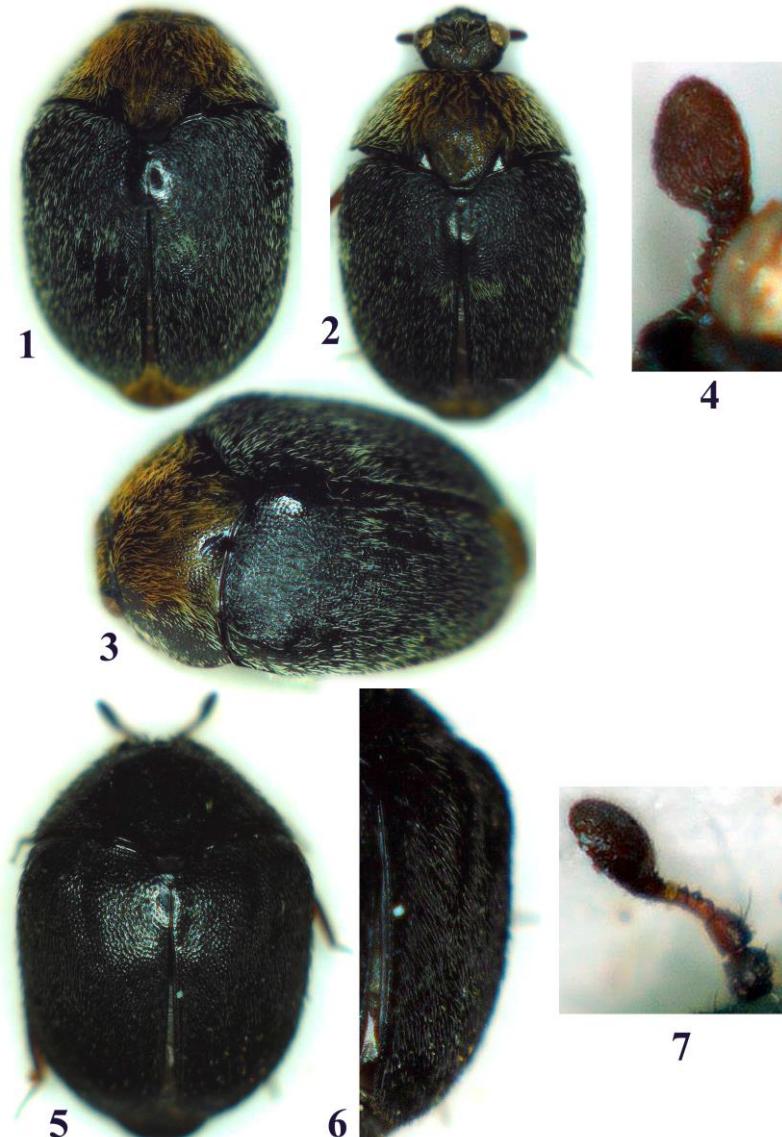
Etymology. Toponymy, named after the type locality (Siberut Island).

J. Háva

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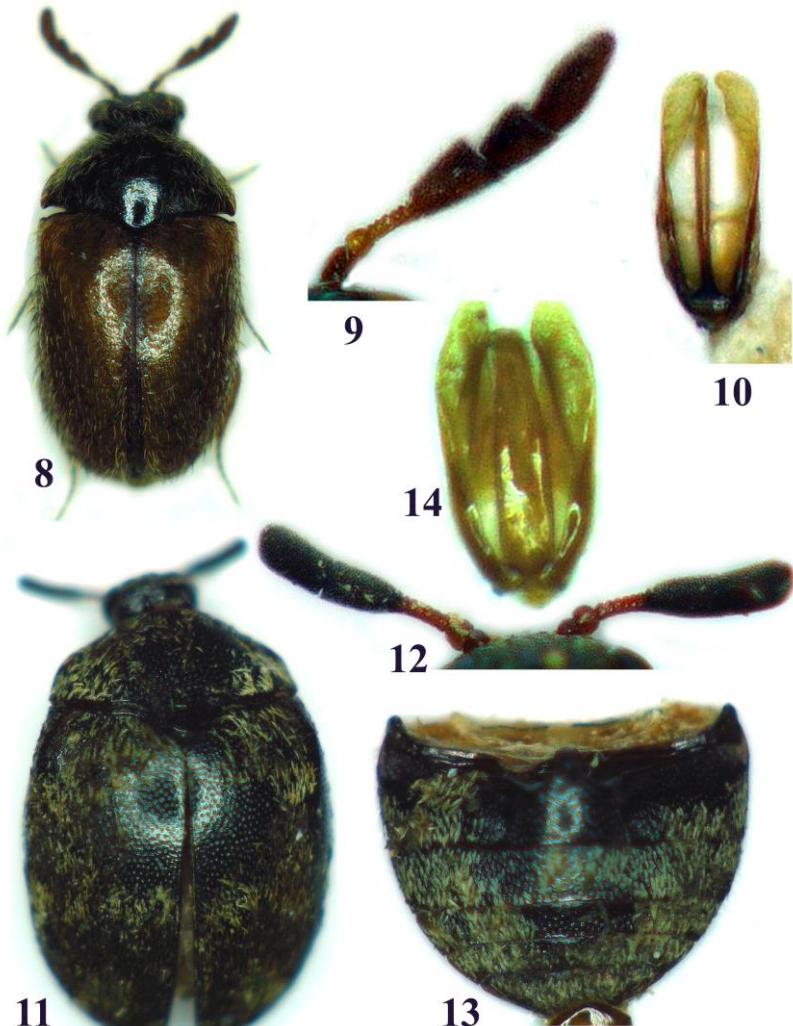
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Figs 1-4. *Thaumaglossa soror* sp. nov.: 1a - habitus, dorsal (holotype), 2 - habitus, dorsal (paratype), 3 - habitus, dorso-lateral, 4 - antenna.

Figs. 5-7. *Thaumaglossa lineata* sp. nov.: 5 - habitus, dorsal, 6 - right elytron; 7 - antenna.



Figs 8-10. *Adelaidella laotica* sp. nov.: 8 - habitus, dorsal, 9 - antennae; 10 - male genitalia.

Figs. 11-14. *Anthrenus (Nathrenus) sabahense* sp. nov.: 11 - habitus, dorsal, 12 - antenna; 13 - abdomen, 14 - male genitalia.



Figs 15-18. *Orphinus (Orphinus) siberutensis* sp. nov.: 15 - habitus, dorsal, 16 - habitus, dorso-lateral, 17 - antenna; 18 - male genitalia.

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Two new species of *Agapanthia* (*Smaragdula* Pesarini & Sabbadini, 2004) from Transcaucasia (Coleoptera: Cerambycidae: Laminae, Agapanthiini)

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Key words: taxonomy, new species, description, Coleoptera, Cerambycidae, *Agapanthia*, Armenia, Georgia.

Abstract: Two new species of the subgenus *Smaragdula* Pesarini & Sabbadini, 2004 (*Agapanthiini* Audinet-Serville, 1835) are presented in this paper. Both new species come from the Transcaucasia - Armenia and Georgia. *Agapanthia* (*Smaragdula*) *mikhaili* sp. nov. and A. (S.) *chvalkovskyi* sp. nov. fit habitually well into the homogeneous subgenus *Smaragdula*. A. (S.) *mikhaili* sp. nov. is compared with similar A. (S.) *amitina* Holzschuh, 1989 and A. (S.) *persicola* Reitter, 1894. A. (S.) *chvalkovskyi* sp. nov. is compared with A. (S.) *persicola* and A. (S.) *chalybea* Faldermann, 1837. The comparative analysis of this paper describes how to distinguish these new species well.

Introduction

There are 96 genera with 740 species currently known in the tribe Agapanthiini (Tavakilian & Chevillotte, 2018). This group includes 80 genera in the Palearctic region (Danilevsky, 2021), the genus *Agapanthia* Audinet-Serville, 1835 consisting of 10 subgenera is the largest one. There are 20 species in the subgenus of *Smaragdula* Pesarini & Sabbadini, 2004 currently known from Spain to Siberia and Kyrgyzstan. Turkey (the most species are known from) appears to be the central region of the subspecies area. *Smaragdula* is a more or less homogeneous group, which consists of more or less similar species whose connecting feature is a striking glossy metallic colour.

Materials and methods

The research used material from the following private collections:

DN - collection of David Navrátil, Litomyšl, Czech Republic

JCH - collection of Jiří Chvalkovský, Bořetín, Czech Republic

JK - collection of Josef Kadlec, Varnsdorf, Czech Republic

K. Hodek

KH - collection of Karel Hodek, Brno, Czech Republic
LS - collection of Lukáš Skořepa, Dačice, Czech Republic
MD - collection of Mikhail Danilevsky, Moscow, Russia
PJ - collection of Pavel Jelínek, Brno, Czech Republic
PŠ - collection of Pavel Štěpánek, Kladno, Czech Republic
ŠH - collection of Štěpán Hofmeister, Praha, Czech Republic
TL - collection of Tomáš Lengál, Olomouc, Czech Republic
VS - collection of Vladimír Skoupý, Kamenné Žehrovice, Czech Republic
ZK - collection of Zdeněk Koštál, Pardubice, Czech Republic

All photographs were arranged by the author.

Taxonomy

Agapanthia (Smaragdula) mikhaili sp. nov.
Figs. 1♂ Holotype, 2♀, 8, 13, 18, 20

Description. Body 6.4-9.1 mm long in males, 7.1-9.9 mm long in females; metallic, most often bright green, sometimes even blue-green; covered with noticeably long erect black setae.

Head with long erect black setae; from the frontal view rather rounded on the forehead with sparse punctures, seen from above only slightly wider than the front edge of the pronotum; eyes small, lower lobe usually as wide as long; forehead mostly smooth sometimes with white pubescence, cheeks from the edge of the lower eye lobe to the mandibles with more or less sparse white pubescence formed into two lines; a hint of white line of pubescence on the scalp sometimes present; last segment of palpus maxillare is elongated and pointed; antennae long, in males exceeding elytral apex with three to four antennomeres, in females exceeding with two to three antennomeres; scapus not too coarsely wrinkled, slightly strangled before the end; the second antennomere (Fig. 25) is noticeably elongated, in some cases short in females; third antennomere is sometimes conspicuously compressed before the end; first four antennomeres are metallically coloured, after fifth antennomere dark without a metallic shine; antennae distinctively covered with fine white tomentum after second antennomere, this tomentum does not

K. Hodek

form rings on the antennomeres; antennomeres with sparse long erect black setae on the inner side.

Pronotum longitudinal or almost as wide as long with dense punctures formed into fine transverse wrinkles on the surface, entirely strewn with sparse, long erect black setae which are longer than the setae on the head; in the middle of the back edge of pronotum with usually more or less distinct tuft of white hairs.

Elytra parallel and elongated, slightly concave behind the shoulders, elytral apex rounded; width at humeri about 2,8-3,2 times less than elytral length. Elytral punctures at the base are very distinct, finer and denser towards the apex, punctures on the surface of the elytra do not form significant transverse wrinkles. Elytra with white pubescence in the back third, sparsely studded in the frontal part with long erected black setae which shorten from the last third towards the end. Scutellum longitudinal, with dense white pubescence.

Ventral side of the body sparsely covered with short whitish pubescence, in some cases epimerone and metepisternum covered with very dense white pubescence; legs covered with white tomentum with sparse long erect black setae; tibia usually with dense white pubescence.

Genitals: parameres mostly rather straight (Fig. 20), rounded at the end, aedeagus with a short tip rounded apically (Fig. 8).

Variability. Species is not very colour-variable, body usually bright green metallic glossy or with bluish gloss, in some cases various combinations of green and blue-green; in females the second antennomere not noticeably elongated in some cases.

Differential diagnosis. *A. (S.) mikhaili sp. nov.* occurs in Armenia sympatrically with *A. (S.) persicola* (Figs. 6, 11, 15, 23) from which it can be well distinguished by the elongated second antennomere and by the distinct transverse wrinkles formed with the punctures on the pronotum. Specimens of *A. (S.) persicola* do not have the elongated second antennomere either transverse wrinkles on the surface of the shield. Specimens of *A. (S.) mikhaili* sp. nov. also have elytra without distinct-looking transverse wrinkles along the seam. The long protruding black setae extend significantly more into the back part of the elytra than in *A. (S.) persicola*. *A. (S.) mikhaili* sp. nov. is very similar to *A. (S.) amitna* (Figs. 5, 10, 14, 21) from which it can be distinguished by the metallic shine of the antennae. There is a

K. Hodek

distinct metallic coloration in *A. (S.) mikhaili sp. nov.* usually noticeable to the middle of the 4th antennomere, in *A. (S.) amitina* the metallic shine is visible about until the first third of the 3rd antennomere, from this part onwards the antennomeres are only black glossy, in some cases, the 3rd antennomeres is completely black glossy too. *A. (S.) amitina* has shorter tarsi, the 2nd and 3rd tarsomeres together are longer than the 4th tarsomers, in *A. (S.) mikhaili sp. nov.* the tarsi are longer, the 2nd and 3rd tarsomeres together are about the same size as the 4th tarsomere.

Another difference between these two species is in the shape of male genitalia - the shape of telomeres on tegmen; in *A. (S.) mikhaili sp. nov.* telomeres in front of the apex are clearly wider (Fig. 18) than the telomeres in *A. (S.) amitina* (Fig. 19), in *A. (S.) amitina* tegmen generally slightly narrower than in *A. (S.) mikhaili sp. nov.*, the shape of parameres is variable in both species (Figs 20 and 21).

Type material. Holotype ♂, Armenia, Kotayk prov., Dzhrvezh, 1613 m, 40°10'38"N, 44°37'47"E, 2.6.2018 (KH); Paratypes 52 ex. (20 ♂♂, 31 ♀♀): 13 ex., Armenia, Khosrov Forest, 23.-24.5.1990 (MD); 3 ex., Armenia, Dzhrvezh, 1.6.1983 (MD); 1 ex., Armenia-Ararat marz, Mt. Kotutsar, 1300-2046 m, 7 km NE Urtsadzor, 39°58'32.32"N, 44°50'33.46"E, 5.6.2013 (DN); 1 ex., Armenia-Vayots Dzor marz, Noravank Monastery 1500 m, 6 km SE Areni, 39°41'01.02"N, 45°14'06.19"E, 30.5.2013 (DN); 1 ex., C Armenia, NE Urtsadzor, Khosrov Forest SR, 39°58'32.N, 44°50'33"E, 5.6.2013 (TL); 1 ex., S Armenia, Ararat distr., Khosrov reservat., 3.-18.6.2003 (ZK); 1 ex., S Armenia, Ararat distr., Khosrov reservat., 3.-18.6.2003 (PJ); 1 ex., AM-Armenia, SE Goght, Geghard Monastery Road, 40°08'20"N, 44°48'27"E, 25.5.2016 (JK); 1 ex., AM-Armenia, Ktutsar mt., Urtsadzor 7 km NE, 39°58'32"N, 44°50'33"E, 5.6.2014 (JK); 1 ex., AM-Armenia, 2,8 km N, 2.6.2016 (JK); 4 ex., AM-Armenia, Zaritap 2,8 km N, 39°39'48"N, 45°30'41"E, 28.5.2016 (JK); 2 ex., Armenia, NE Urtsadzor, Khosrov Forest SR, 39°58'32.N, 44°50'33"E, 5.6.2013 (KH); 2 ex., AM-Armenia, Ktutsar mt., Urtsadzor 7 km NE, 39°58'32"N, 44°50'33"E, 5.6.2014 (KH); 1 ex., Armenia, Kotayk prov., Dzhrvezh, 1613 m, 40°10'38"N, 44°37'47"E, 2.6.2018 (KH); 3 ex., Armenia, Khosrov Forest, 3.6.2015 (VK); 6 ex., Armenia, 2,8 km N Zaritap, 1395 m n.m., 39°39'48"N, 45°30'41"E, 2.6.2016

K. Hodek

(SH); 2 ex., ARMENIA, 1395 m n.m., 2,8 km N Zaritap, 39°39'48"N, 45°30'41"E, 28.5.2016 (SH); 2 ex., Armenia, NW Martiros, 1800 m, 6.6.2014 (VS); 2 ex., Armenia, E of Vayk env., 27.5.2014 (VS); 2 ex., Armenia, H41 road N of Zarintap, 27.5.2014 (PS); 2 ex., Armenia, N of Zaritap, 1400 m, 18.6.2019 (PS).

Distribution and biology. The host plant is unknown. All specimens of *A. (S.) mikhaili sp. nov.* type series come only from the territory of Armenia.

Etymology. This taxon is named after Mikhail L. Danilevsky for his advice and help, which he provided to the author of this description over the years.

Agapanthia (Smaragdula) chvalkovskyi sp. nov.

Figs. 3 ♀, 4 ♂ Holotype, 9, 16, 22

Description. Body in males 8,6-10,5 mm long, in females 9,2-11 mm long; green, blue-green, rarely only metallically blue colored.

Head slightly oval from the frontal view, slightly wider than pronotum anteriorly; lower eye lobe only slightly longer than wide; head with dense white pubescence on the forehead and on each cheek with two more or less distinct white stripes extending from the lower eye lobe to mandibles, studded with long erected black setae; the last segment of palpus maxillare elongated and pointed; antennae long, in males elytral apex exceeded with 4 antennomeres, in females exceeded with 3-4 antennomeres; Sscapus slightly wrinkled, the first 4 antennomeres with metallic colour, the others dark without metallic shine: antennae with dense white tomentum, which can form white rings on the base of the antennomeres; after 2nd antennomeres with long black erected setae on the inner side.

Pronotum (Fig. 16) rather elongated, in the anterior half slightly constricted with punctures evenly dispersed over the entire area; pronotum with sparse, long erected black setae; pronotal surface, especially from about the center to the posterior edge on each side with a thin more or less distinct stripe of white hairs. There is also a hint of a central stripe of white pubescence at the posterior pronotal edge.

Elytra long, slightly converging backwards, with sparse long erected setae shortened posteriorly behind the half; elytral apex

rounded; elytral width at humeri about 2.5-3 times less than elytral length; the punctures at the elytral base are distinct, towards the apex finer and denser; elytral punctures form only indistinct or even no transverse wrinkles; elytra appear to be less shiny due to the strong microsculpture; back third of elytra with a distinct white pubescenceScutellum longitudinal, with dense white pubescence.

Ventral side of the body covered with sparse white pubescence; legs covered with more or less dense white tomentum, which is denser on the tibia and sometimes slightly yellowish.

Genitals: parameres slightly curved, rounded at the apex (Fig. 22); aedeagus with a short tip rounded apically (Fig. 9).

Variability. Only a minimal colour deviation was found in the type series, all specimens are almost equally slightly dull metallic green. The white stripes on the pronotum are only very faint, sometimes almost barely visible.

Differential diagnosis. *A. (S.) chvalkovskyi sp. nov.* occurs in Georgia concurrently with *A. (S.) persicola*, from which it can be well distinguished by the following characters: by pronotal stripes of white pubescencem, it is less shiny due to the strong microsculpture, the punctures on the elytra do not form as significant transverse wrinkles along the seam as in *A. (S.) persicola*. The length of the tarsi is different too - *A. (S.) chvalkovskyi sp. nov.* has markedly shorter tarsi, especially the posterior ones, than *A. (S.) persicola*. The shape of male copulatory organs is also different. *A. (S.) persicola* has longer and very slender parameres (Fig. 23), the tip of the aedeagus in *A. (S.) persicola* is clearly more elongated (Fig. 11) than in *A. (S.) chvalkovskyi sp. nov.* *A. (S.) chvalkovskyi sp. nov.* is also similar to *A. (S.) chalybea*, which can be distinguished by transverse pronotum (Fig. 17) with very well pronounced yellowish white stripes. Body structure is more bulky in *A. (S.) chalybea*, elytral punctures are finer than in *A. (S.) chvalkovskyi sp. nov.* Paramers in *A. (S.) chalybea* (Figs 12, 24) are distinctly thin and long.

Type material. Holotype ♂, Gruzie, Gori env. Sever, 22.-25.5.2007 (KH); Paratypes 25 ex. (18♂♂, 7♀♀): 3 ex., Gruzie, Gori env. Sever, 22.-25. 5. 2007; 3 ex., Gruzie, Dedoplistskalo env., JV, 19.-21. 5. 2010 (JCH, KH); 2 ex., Gruzie centr., Bochomara env., 22.5.2017, 41°54'12.8"N, 45°08'14.5"E (LS); 1 ex., Gruzie east, NP Vaschlovani, 14.5.2017, 41°15'02.7"N, 46°25'35.5"E (LS); 1 ex.,

K. Hodek

Georgia, Gori, 13.5.2017, 42°00'32.2"N, 44°09'05.3"E (LS); 2 ex., Georgia or., Dedoplistsdkaro, Vashlovani NP, 16.5.2016 (VS); 3 ex., Georgia, E of Dedoplistsdkaro, Vashlovani NP, 700 m, 1.-2.5.2017 (VS); 1 ex., Georgia, E of Dedoplistsdkaro, Vashlovani NP, 700 m, 1.-2.5.2017 (PŠ); 9 ex., Georgia, NP Vashlovani, 11.-15.5.2016, 41°15'N, 46°25'E, 200 m (PJ).

Distribution and biology. The host plant is unknown. All specimens of the type series were caught in Georgia.

Etymology. This taxon was named after its discoverer Jiří Chvalkovský.

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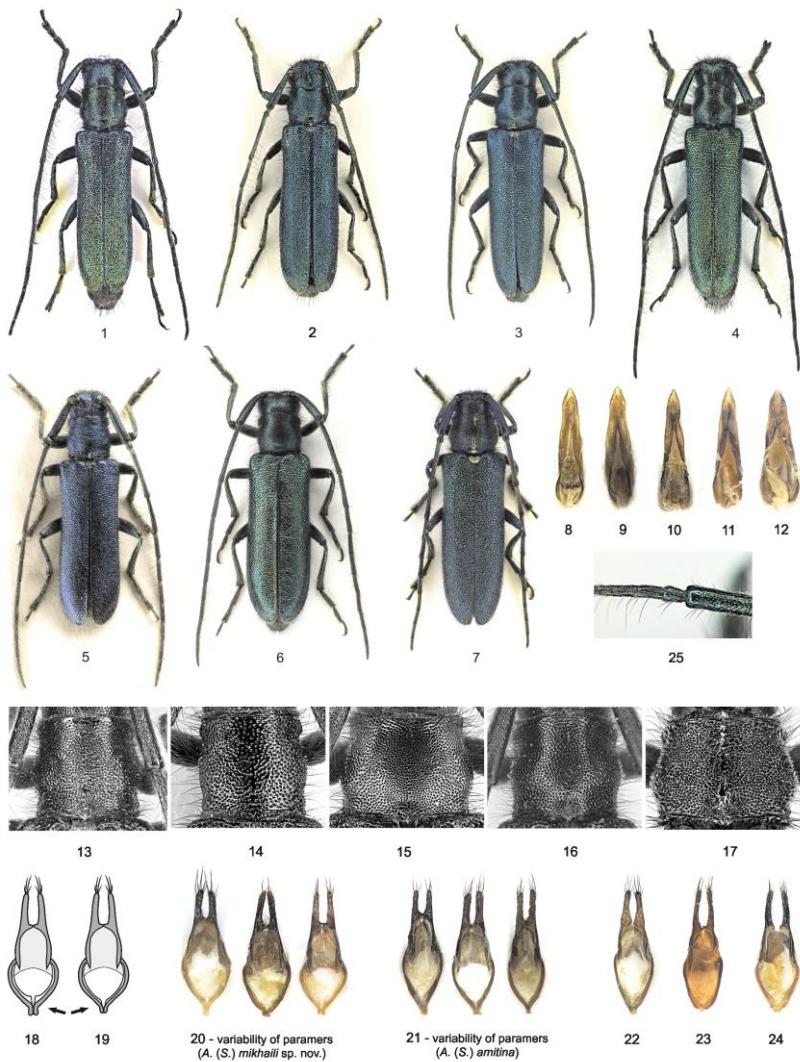
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A. (S.) mikhailli sp. nov. - 1 ♂ HOLOTYPE, 2 ♀, 8,13, 18, 20, 25; *A. (S.) chvalkovskyi* sp. nov. - 3 ♀, 4 ♂ HOLOTYPE, 9,16, 22;
A. (S.) amitina - 5 ♂, 10,14, 19, 21; *A. (S.) persicola* - 6 ♂, 11,15, 23; *A. (S.) chalybaea* - 7 ♂, 12,17, 24

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Содержание // Contents

Гусаков А.А., Устинов В.Е. Новый и малоизвестные виды палеарктических Sericini (Coleoptera: Scarabaeidae: Melolonthinae)	1054
Gusakov A.A., Ustinov V.E. A new and little known species of Palaearctic Sericini (Coleoptera: Scarabaeidae: Melolonthinae).....	1054
Данилевский М.Л. Новый вид рода <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) из Синьцзяна, Китай	1063
Danilevsky M.L. A new species of the genus <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) from Xinjiang, China.....	1063
Данилевский М.Л., Данилевская Г.Б. Обзор крымских <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) в основном по итогам сборов 2021 года	1074
Danilevsky M.L., Danilevskaya G.B. A review of Crimean <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) mainly on the base of 2021 collecting season.....	1074
Данилевский М.Л., Рубенян А.А. Новые таксоны рода <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) из Киргизии	1096
Danilevsky M.L., Rubenyan A.A. New taxa of the genus <i>Dorcadion</i> Dalman, 1917 (Coleoptera, Cerambycidae) from Kirgizia.....	1096
Жирар Ж.-С., Тавакилян Ж. Wikispecies Notula II. Неожиданное пригодное название Cerambycidae, приводящее к изменению приоритета	1109
Girard J.-S., Tavakilian G. Wikispecies Notula II. Unexpected availability of a name in Cerambycidae leads to a reversal of precedence	1109
Лазарев М.А., Мурzin С.В., Линь М.-И. Интересные виды жуков усачей (Coleoptera: Cerambycidae) из Китая в коллекции С. Мурзина. Часть 2	1117
Lazarev M.A., Murzin S.V., Lin M.-Y. Interesting species of longhorn beetles (Coleoptera: Cerambycidae) from China in the collection of S. Murzin. Part 2.....	1117
Савицкий В.Ю. Новый вид подрода <i>Vedopranus</i> рода <i>Otiorynchus</i> (Coleoptera, Curculionidae)	1121
Savitsky V.Yu. A new species of the subgenus <i>Vedopranus</i> genus <i>Otiorynchus</i> (Coleoptera, Curculionidae).....	1121

Самин Н., Юссила Р., Сакенин Х., Пентедо-Диас А.М. Фаунистическое исследование Ichneumonidae (Hymenoptera: Ichneumonoidea) из провинций Ардебиль и Восточный Азарбайджан, Северо-Западный Иран	
Samin N., Jussila R., Sakenin H., Penteado-Dias A.M. A faunistic study on Ichneumonidae (Hymenoptera: Ichneumonoidea) from Ardebil and East Azarbayjan provinces, Northwestern Iran.....	1134
Хава И. Новые и интересные Dermestidae (Coleoptera) из Ориентальной области	
Háva J. New or interesting Dermestidae (Coleoptera) from the Oriental Region.....	1149
Ходек К. Два новых вида <i>Agapanthia</i> (<i>Smaragdula</i> Pesarini & Sabbadini, 2004) из Закавказья (Coleoptera: Cerambycidae: Laminae, Agapanthiini)	
Hodek K. Two new species of <i>Agapanthia</i> (<i>Smaragdula</i> Pesarini & Sabbadini, 2004) from Transcaucasia (Coleoptera: Cerambycidae: Laminae, Agapanthiini).....	1160
О ЖУРНАЛЕ.....	1169
ABOUT THE JOURNAL.....	1170