

РОССИЙСКАЯ АКАДЕМИЯ НАУК
Южный научный центр

RUSSIAN ACADEMY OF SCIENCES
Southern Scientific Centre



Кавказский Энтомологический Бюллетень

CAUCASIAN ENTOMOLOGICAL BULLETIN

Том 22. Вып. 1

Vol. 22. Iss. 1



Ростов-на-Дону
2026

Contribution to the knowledge of the genus *Micipsa* Lucas, 1855 (Coleoptera: Tenebrionidae: Tentyriini) from Iraq, Iran and Qatar

© M.V. Nabozhenko^{1,2}, F. Eshraghi Mofrad³

¹Precaspian Institute of Biological Resources of the Daghestan Federal Research Centre of the Russian Academy of Sciences, M. Gadzhiev Street, 45, Makhachkala, Republic of Dagestan 367000 Russia. E-mail: nalassus@mail.ru

²Dagestan State University, M. Gadzhiev Street, 43a, Makhachkala, Republic of Dagestan 367000 Russia

³Department of Entomology, Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran. E-mail: eshraghi.farhad94@gmail.com

Abstract. The genus *Micipsa* Lucas, 1855 is reviewed for Iraq, Iran and Qatar. The following synonymy is resurrected: *Micipsa* Lucas, 1855 = *Cirsa* Lucas, 1857 = *Cyrta* Lacordaire, 1859 = *Cirta* Gemminger, 1870, **syn. ressur.** The rank of the genus *Girardius* Soldati, 2009, **stat. n.** is downgraded to a subgenus within the genus *Micipsa*. The following species are included in this subgenus: *M. persica* Baudi di Selve, 1874, **comb. resurr.** (= *M. agnesae* Schuster, 1935, **syn. n.**; Iran, Qatar), *M. mesopotamica* **sp. n.** (Iraq, Iran), *M. pubescens* Haag-Rutenberg, 1875, **sp. resurr.** (resurrected from the junior synonym of *M. persica*; Iraq, Iran), *M. similis* Haag-Rutenberg, 1875 (Iran). One species from Iraq, *M. monilifera* Carl, 1991, belongs to the nominotypical subgenus. Variability, external structures, male genitalia and female genital tubes of *Micipsa* are discussed. A key to species from mentioned countries is given.

Key words: taxonomy, morphology, *Micipsa*, *Girardius*, Tenebrionidae, Pimeliinae, Middle East.

Вклад в познание рода *Micipsa* Lucas, 1855 (Coleoptera: Tenebrionidae: Tentyriini) Ирака, Ирана и Катара

© М.В. Набоженко^{1,2}, Ф. Эшраги Мофрад³

¹Прикаспийский институт биологических ресурсов – обособленное подразделение Дагестанского федерального исследовательского центра Российской академии наук, ул. М. Гаджиева, 45, Махачкала, Республика Дагестан 367000 Россия. E-mail: nalassus@mail.ru

²Дагестанский государственный университет, ул. М. Гаджиева, 43а, Махачкала, Республика Дагестан 367000 Россия

³Кафедра энтомологии, Сельскохозяйственный факультет, Университет Тарбиат Модарес, Тегеран, Иран. E-mail: eshraghi.farhad94@gmail.com

Резюме. Сделан обзор рода *Micipsa* Lucas, 1855 Ирака, Ирана и Катара. Восстановлена синонимия: *Micipsa* Lucas, 1855 = *Cirsa* Lucas, 1857 = *Cyrta* Lacordaire, 1859 = *Cirta* Gemminger, 1870, **syn. ressur.** Ранг рода *Girardius* Soldati, 2009, **stat. n.** понижен до подрода в составе *Micipsa*. В этот подрод включены следующие виды: *M. persica* Baudi di Selve, 1874, **comb. resurr.** (= *M. agnesae* Schuster, 1935, **syn. n.**; Иран, Катар), *M. mesopotamica* **sp. n.** (Ирак, Иран), *M. pubescens* Haag-Rutenberg, 1875, **sp. resurr.** (восстановлен из младшего синонима *M. persica*; Ирак, Иран), *M. similis* Haag-Rutenberg, 1875 (Иран). Вид *M. monilifera* Carl, 1991 из Ирака относится к номинативному подроду. Обсуждаются изменчивость, наружные структуры, гениталии самцов и половые протоки самок *Micipsa*. Дана определительная таблица видов для упомянутых стран.

Ключевые слова: таксономия, морфология, *Micipsa*, *Girardius*, Tenebrionidae, Pimeliinae, Ближний Восток.

The paper is dedicated to the 95th anniversary of the birth of Gleb Sergeevich Medvedev, one the world's leading specialist in Tenebrionidae and the teacher of the first co-author

Micipsa Lucas, 1855 and *Girardius* Soldati, 2009 are very similar tenebrionid genera of the tribe Tentyriini characterized by usually robust body and widened, strongly convex elytra, often near semispherical in females. Members of both genera occur in various types of deserts and semideserts (sand, clay, gravel) in plains, foothills and low mountains of the Western Palearctic. The first genus is widely distributed in North Africa and the Middle East from Morocco to the east of the Mesopotamia region [Iwan et al., 2020], the second one was until recently known from several localities around the Persian Gulf in Qatar and southern Iran [Soldati, 2009]. The last revision of *Micipsa* was published by Reitter [1900]. Later, several species and subspecies were described from North Africa [Pic, 1922; Peyerimhoff, 1926; Koch, 1937] and the Middle

East [Schuster, 1935; Kaszab, 1981; Carl, 1991]. Lillig and Pavlíček [2022] briefly reviewed *Micipsa* from the Sinai Peninsula but quite rightly noted that the genus needs revision. Now *Micipsa* comprises 23 species and three subspecies and divided into two subgenera, nominotypical and *Cirsa* Lucas, 1857 [Iwan et al., 2020]. The second subgenus includes three species from Algeria and Morocco.

The monotypical genus *Girardius* was erected by Laurent Soldati for one species *Micipsa persica* Baudi di Selve, 1874 [Soldati, 2009]. It differs from *Micipsa* in the absence of sexual dimorphism in the shape of the last antennomere and the shorter first metatarsomere [Soldati, 2009]. A revision of type specimens and examination of additional material from Iraq and Iran have shown that

Girardius is not a monotypic group, but includes a whole complex of species having a range from eastern Iraq to central Iran with an exclave in the Qatar Peninsula.

Below we change the generic rank of *Girardius*, reducing it to a subgenus within the genus *Micipsa* and also revise all species known from Iraq, Iran and Qatar, with the description of a new species from Iraq and Iran.

Material and methods

The studied material is deposited in the following institutions:

HMIM – Hayk Mirzayans Insect Museum (Tehran, Iran);

MSNG – Museo Civico di Storia Naturale “Giacomo Doria” (Genova, Italy);

NHMB – Naturhistorisches Museum Basel (Basel, Switzerland);

NHMUK – Natural History Museum (London, United Kingdom);

PCML – private collection of Martin Lillig (Saarbrücken, Germany);

ZIN – Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia);

ZMMU – Zoological Museum of Moscow State University (Moscow, Russia).

The first author examined beetles using a Micromed MC-4 Zoom LED binocular microscope. Beetle photographs were taken using a Canon EOS 5D Mark IV camera body, a Canon MP-E 65 mm f/2.8 macro lens, and a Canon Macro Twin Lite MT-26EX-RT flash. Stacking was done using Stack-shot 3X with enlarged macro rails s/n 3734. The photosystem was installed on a Kaiser Copy Stand RS 1 reproduction machine. Images were stacked using Helicon Focus 7.7.4 Pro software. Genitalia and female genital tubes were placed in glycerin between the slide and cover glass and then photographed.

The second author examined beetles using an Olympus SZX-FOF binocular microscope. Photographs were taken using a binocular equipped with a Canon 750D digital camera. A series of 10–15 captured images were merged into a single in-focus image, using the image-stacking software Helicon Focus 8.1.0. After preparation, the male genitalia were placed on a glass slide in a drop of glycerin and covered with a glass coverslip. They were then studied and photographed (as above) with a microscope Olympus U-CA.

Since the aedeagus in living beetles of *Micipsa* spp. is inverted (the ventral side of the parameres and basal piece is located dorsally, and the penis is ventral), we use the sides of the parameres and basal piece in the unfolded (not inverted) state.

We absolutely agree with the criticism of the depersonalization of zoological labels [Silva et al., 2026] and provide the labels as much detail as possible or simply quote them.

Subgenus *Micipsa* Lucas, 1855

Type species *Micipsa rufitarsis* P.H. Lucas, 1855 (= *Pimelia mulsanti* Levrat, 1853), by monotypy.

Diagnosis. Male antennomere 11 long, minimum 2 times as long as antennomeres 9 and 10 together. Female antennomere 11 short, slightly longer or subequal in length to 10th. First metatarsomere 1.3 times and more as long as metatarsomeres 2 and 3 together.

Micipsa (Micipsa) monilifera Carl, 1991
(Figs 1–8)

Micipsa schaumii Kraatz, 1865 sensu Holdhaus, 1919: 44; sensu Schuster, 1937: 45; nec. *M. schaumii* Kraatz, 1865.

Micipsa monilifera Carl, 1991: 141.

Type material. 1♂, holotype (HNHM), “IRAQ, Al-Anbar Rutba, singled at 30 km W of town, 9.I.1978”; “No351 Topál & Zilahy”; “HOLOTYPUS MICIPSA MONILIFERA det. Carl 1990”. Paratypes are listed in the paper of Carl [1991].

Material. 1♂ (PCML), “MUSÉUM PARIS Nihiwe Irak?” (now, Iraq, Nineveh (= Ninive) inside Mosul), “MUSÉUM PARIS Escalera Rec. 1899”; “*Micipsa monilifera* Carl det. M. Carl, 1991”; “coll. Lillig ex coll. Carl”; 1♀ (HNHM), “IRAQ, Al-Anbar Hadita, singled 25 km NW of town 22.X.1977”; “♀”; “No118 Topál & Zilahy”; “MICIPSA MONILIFERA PARATYPUS”.

Diagnosis. Male (holotype). Body length 8–11 mm. Body robust, black, opaque, pronotum and head slightly shinier than elytra, antennae and legs brown. Eyes strongly convex. Antennae comparatively long, last antennomere strongly elongate (holotype: 1.08 times as long as antennomeres 10 and 9 together; 1.3 times shorter than antennomeres 8–10 together), constricted between apical sensorial and basal portions, extending beyond posterolateral angles of pronotum. Pronotum strongly transverse (1.53 times as wide as long), widest at middle, lateral margins strongly rounded, much wider at middle portion than elytra at humeral level; disc entirely strongly strigose, without smooth punctured area in middle. Prothoracic hypomera with longitudinal wrinkles from procoxae to outer margin. Mesepisterna with small elongate sparse granules. Elytra widely elliptical, widest at middle, with slightly separated not elongate apex. Elytra entirely with long yellowish setae (each come from raduliform puncture); setation denser and longer laterally and apically.

Female. Body much more robust. Last antennomere shorter, 1.33 times as long as penultimate one. Pronotum ~1.8 times as wide as long. Elytra almost spherical, without setation in middle of anterior half.

Notes. Carl [1991] pointed out that some of the paratypes of *Micipsa monilifera* belong to the species studied by Adrian Schuster and identified by him as *Micipsa schaumii* [Schuster, 1937]. He also tentatively assigned the female identified by Holdhaus [1919] as *M. schaumii* to the species *Micipsa monilifera*, but since this female has not yet been studied by anyone after 1919, this remains only a guess.

Carl [1991] included 82 paratypes from Iraq (Ar Rutbah, Zurbatiyah (Zurbatiye), Ukhaidir) to the type series, but he did not include one female from Hadita, despite the fact that this specimen was marked as paratype in the collection of HNHM.

Distribution. Central Iraq (from western to eastern borders).

Subgenus *Girardius* Soldati, 2009, **stat. nov.**

Type species *Micipsa persica* Baudi, 1874, by original designation.

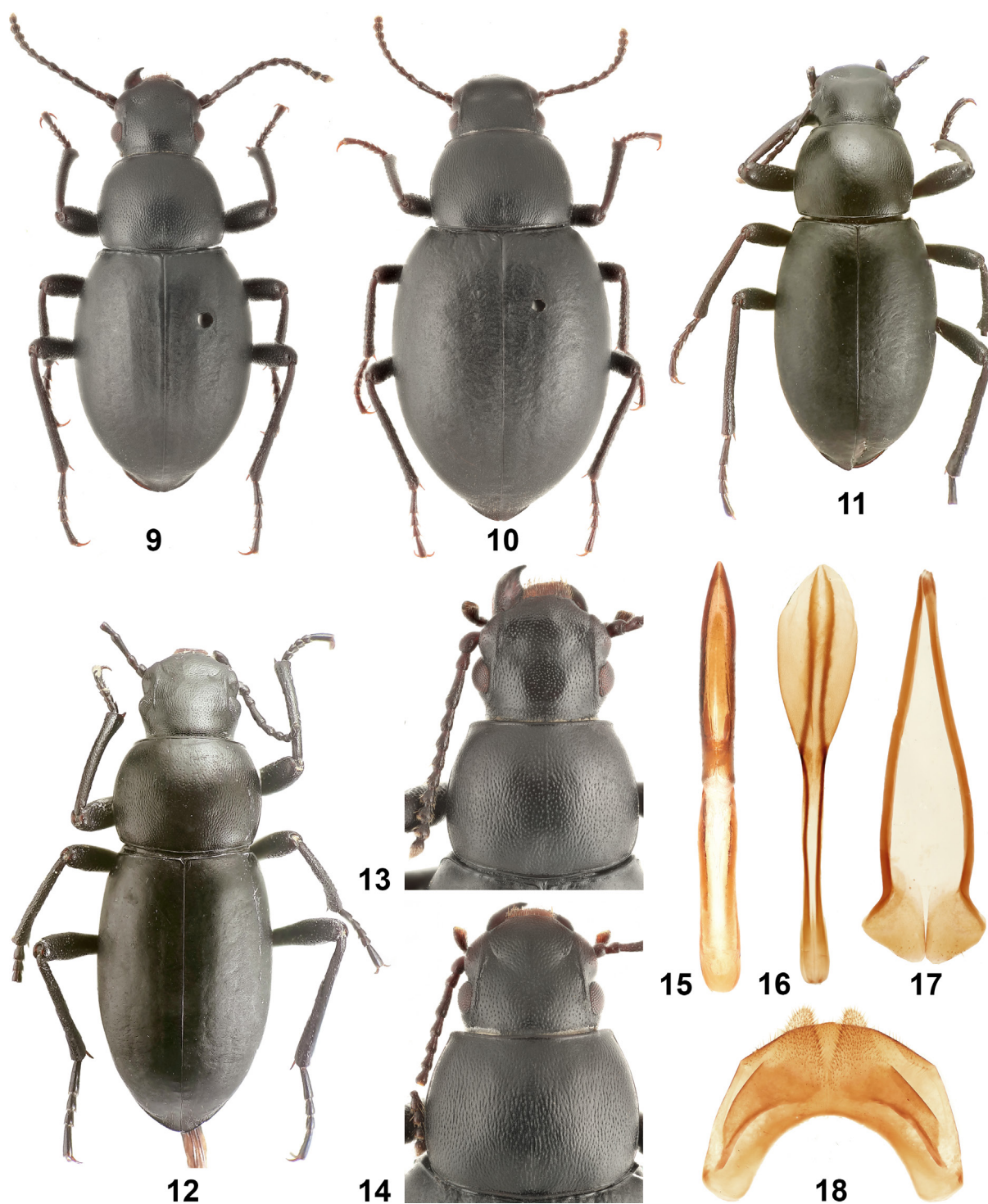


Figs 1–8. *Micipsa* (s. str.) *monilifera*, habitus, details, labels.

1, 3–4, 6–7 – male, holotype; 2, 5 – female, non-type specimen; 1–2 – habitus; 3 – elytral setation; 4–5 – head and pronotum; 6 – parameres and basal piece, dorsal view; 7 – penis; 8 – labels of male, holotype (upper) and female, non-type (lower). Images courtesy Aranka Grabant (© HHM).

Рис. 1–8. *Micipsa* (s. str.) *monilifera*, габитус, детали строения, этикетки.

1, 3–4, 6–7 – самец, голотип; 2, 5 – самка, не типовой экземпляр; 1–2 – габитус; 3 – опушение надкрылий; 4–5 – голова и переднеспинка; 6 – параметры и базальная доля, дорсально; 7 – пенис; 8 – этикетки самца, голотипа (вверху) и самки, не типовой экземпляра (внизу). Изображения любезно предоставлены Аранкой Грабант (© HHM).



Figs 9–18. *Micipsa (Girardius) mesopotamica* sp. n., habitus, details.

9–12 – habitus, dorsal view; 13–14 – head and pronotum (male and female from Iraq); 9 – male (gynomorphic), holotype; 10 – female, paratype from the type locality; 11 – intermediate male from Ilam Province (Iran); 12 – andromorphic male (same locality); 15 – parameres and basal piece, dorsal view; 16 – penis; 17 – spiculum gastrale; 18 – male inner abdominal segment VIII.

Рис. 9–18. *Micipsa (Girardius) mesopotamica* sp. n., габитус, детали строения.

9–12 – габитус, дорсально; 13–14 – голова и переднеспинка (самец и самка из Ирака); 9 – самец (гиноморфный), голотип; 10 – самка, паратип из типового местонахождения; 11 – самец с промежуточными признаками из провинции Илам (Иран); 12 – андроморфный самец (то же местонахождение); 15 – парамеры и базальная доля, дорсально; 16 – пенис; 17 – spiculum gastrale; 18 – внутренний брюшной сегмент VIII самца.

Diagnosis. Male and female antennomere 11 short, slightly longer or subequal to 10th. Metatarsomere 1 subequal or slightly longer (no more 1.2 times as long as 2nd and 3rd metatarsomeres) than metatarsomeres 2 and 3 together.

Micipsa (Girardius) mesopotamica **sp. n.**
(Figs 9–18)

Girardius persicus: sensu Grimm, 2015: 307 (part.; Iran: Ilam Province, SW Dehloran, near Zarinabad).

Material. Holotype, ♂ (ZMMU): “Мендели, Месопотамия, 7.IV.914 Нестеров” (Mendeli, Mesopotamia, Nesterov; now: Iraq, Diyala Prov., Mandali, 33°44'N / 45°33'E). Paratypes: 1♀ (ZMMU), data as in the holotype; 2♂ (HMIM), “Iran, Ilam Prov., Dehloran, Dehloran-Mehran rd., 47 km S Mehran, 22.Apr.2007, 32°59'5.5"N, 46°37'23.9"E, leg. H. Naserzadeh”.

Description. Male (holotype, gynomorph) (Figs 9, 13, 15–18). Body length 10 mm, width 4.5 mm. Body robust, black, convex. Body dorsally opaque, including epistome, ventrally subopaque, with slightly shinier abdominal ventrites at middle. Head widest at eye level. Eyes large, slightly convex. Lateral margin of head shallowly emarginated between epistome and gena. Apical margin of epistome rounded, slightly serrate. Punctuation of head moderately coarse and sparse (puncture diameter 2–3 times as shorter as space between punctures). Lateral keel long, from middle of gena to posterior margin of eye. Basal half of gena smooth, without punctuation. Ventral side of head with a lacquer shine; epicranium with deep transverse smooth impression along mouthparts; lateral surface sparsely finely punctured, vertex with transverse wrinkles. Mentum with coarse punctuation. Antennae moderately long, slightly extending beyond posterolateral angles of pronotum. Antennomeres 10 and 11 subequal in length; antennomeres 9–10 dilated, sub-triangular.

Prothorax. Pronotum bell-shaped, slightly transverse (1.22 times as wide as long), widest behind middle, at basal third, 1.36 times as wide as head. Anterior margin straight, base slightly rounded, lateral margins slightly rounded, shortly sinuate near anterolateral angles. Base 1.14 times as wide as anterior margin. Pronotum at widest portion shorter than elytra at humeri. Anterolateral angles turned downwards, acute, posterolateral angles obtuse, rounded. All edges margined. Disc of pronotum convex. Surface of disc smooth, not strigose (only laterally with disappearing wrinkles). Prosternum smooth, with sparse smooth punctuation, almost disappearing in middle. Prosternal process smooth (without punctuation), widely margined and depressed in middle, apical portion slightly extending beyond procoxae. Prothoracic hypomera with shallow wrinkles near procoxae, disappearing in middle, outer half of surface smooth.

Pterothorax. Scutellar shield very small. Elytra ellipsoid, widest at middle (1.32 times as long as wide), 1.4 times as wide as pronotum, 1.9 times as wide as head. Apical portion shortly roundly narrowed at apex, but not acutely elongate. Elytra without striae and visible punctuation; apical small portion pubescent with very short and fine poorly visible whitish subrecumbent setae, without stronger yellowish setae. Base of elytra entirely margined. Epipleura slightly depressed only at base, reaching sutural angle. Mesoventrite densely and finely punctured at anterior portion, almost smooth at middle and convex and rugose along mesocoxae; mesosternal process with wrinkles laterally. Mesepisterna with slightly rasp-like punctuation. Metepisterna and metaventrite laterally smooth (without punctuation); metaventrite at middle finely and sparsely punctured.

Legs long and slender. Pro- and mesotibiae slightly curved, metatibiae straight. Ultimate metatarsomere slightly shorter than first one.

Abdomen. Abdominal ventrites opaque laterally and with dull shine at middle; ventrites 1 and 2 without punctures laterally and with sparse fine punctuation in middle; ventrites 3–5 finely

and sparsely punctured. Aedeagus long and narrow, basal piece little longer than apical piece. Penis with strongly widened saccular expansion with a funnel-shaped depression inside. Blades of spiculum gastrale triangular, with straight inner and outer margins and large outer extensions.

Male (intermediate from Iran, Dehloran) (Fig. 11). Pronotum as in the holotype. Elytra more slender, both elytra combined 1.5 times as long as wide, 1.33 times as wide as pronotum, 1.8 times as wide as head. Body length 9.1 mm.

Male (andromorphic from Iran, Dehloran) (Fig. 12). Pronotum widest at middle, where has the same width as elytra at humeri. Elytra more slender, both elytra combined 1.57 times as long as wide, 1.17 times as wide as pronotum, 1.7 times as wide as head. Body length 11.4 mm.

Female (paratype from the type locality) (Figs 10, 14). Body length 10.5 mm, width 5.2 mm. Body more robust, elytra more spherical, legs shorter, tibiae not curved. Eyes more flattened. Antennae not reaching posterolateral angles of pronotum. Pronotum wider than in male (1.3 times as wide as long), with indistinct smooth wrinkles basally and laterally. Elytra with sparse stronger yellowish setae among fine whitish setae.

Comparative diagnosis. This new species is most similar to *M. pubescens* (Haag-Rutenberg, 1875), having female antennae short, not reaching posterolateral angles of the pronotum and triangular blades of the spiculum gastrale. It differs from the latter in longer male antennomeres, slightly extending beyond the base of the pronotum (much shorter in *M. pubescens*) and usually bell-shaped, more elongate and narrower pronotum (except for one andromorphic male from Dehloran, having the pronotum widest at middle). In addition, *M. mesopotamica* **sp. n.** has opaque ventral side with slightly shiny middle of metaventrite and abdomen, while *M. pubescens* is with strongly (lacquered) shiny ventral side. The new species is different from other members of the subgenus *Girardius* in the smooth outer half of the prohypomera (from shallowly to coarsely strigose in other species) and punctured mesepimera (shallowly granulated in other *Girardius*).

Notes. *Micipsa mesopotamica* **sp. n.** has andromorphic and gynomorphic males, as well as males with intermediate characters, as *M. pubescens*.

Micipsa (Girardius) persica Baudi di Selve, 1874,
comb. resurr.
(Figs 19–50)

Micipsa persica Baudi di Selve, 1874: 102; Baudi di Selve, 1875: 58; Marseul, 1879: 109; Reitter, 1900: 186; Gebien, 1910: 75; Schuster, 1935: 24 (in comparative diagnosis of *M. agnesae*); Gebien, 1937: 636; Kühnelt, 1957: 74, 83; Kaszab, 1981: 344 (in comparison with *M. arabica* Kaszab, 1981); Löbl et al., 2008: 195.

Girardius persicus: Soldati, 2009: 73; Grimm, 2015: 307 (part.; Iran: Hormozgan Province).

Girardius persica: Iwan et al., 2020: 226.

= *Micipsa agnesae* Schuster, 1935: 24; Gebien, 1937: 636; Kaszab, 1981: 344 (in comparative diagnosis of *M. arabica*); Löbl et al., 2008: 195; Iwan et al., 2020: 233, **syn. n.**

Type material (Figs 28–42). *Micipsa persica*: 1♂, lectotype (MSNG), hereby designated, “Persia merid. 1862–63 Coll. G. Doria” (yellow, handwritten), “*Micipsa persica* Doria Persia merid. Bender Abbas G. Doria!” (yellow, handwritten by Giacomo Doria), “Syntypus *Micipsa persica* Baudi, 1874” (red-orange, handwritten by the curator Roberto Poggi), “Museo Civico di Genova” (white, print); 1♂, paralectotype (MSNG), “Persia merid. 1862–63 Coll. G. Doria” (yellow, handwritten), “*Micipsa persica* nov. sp.

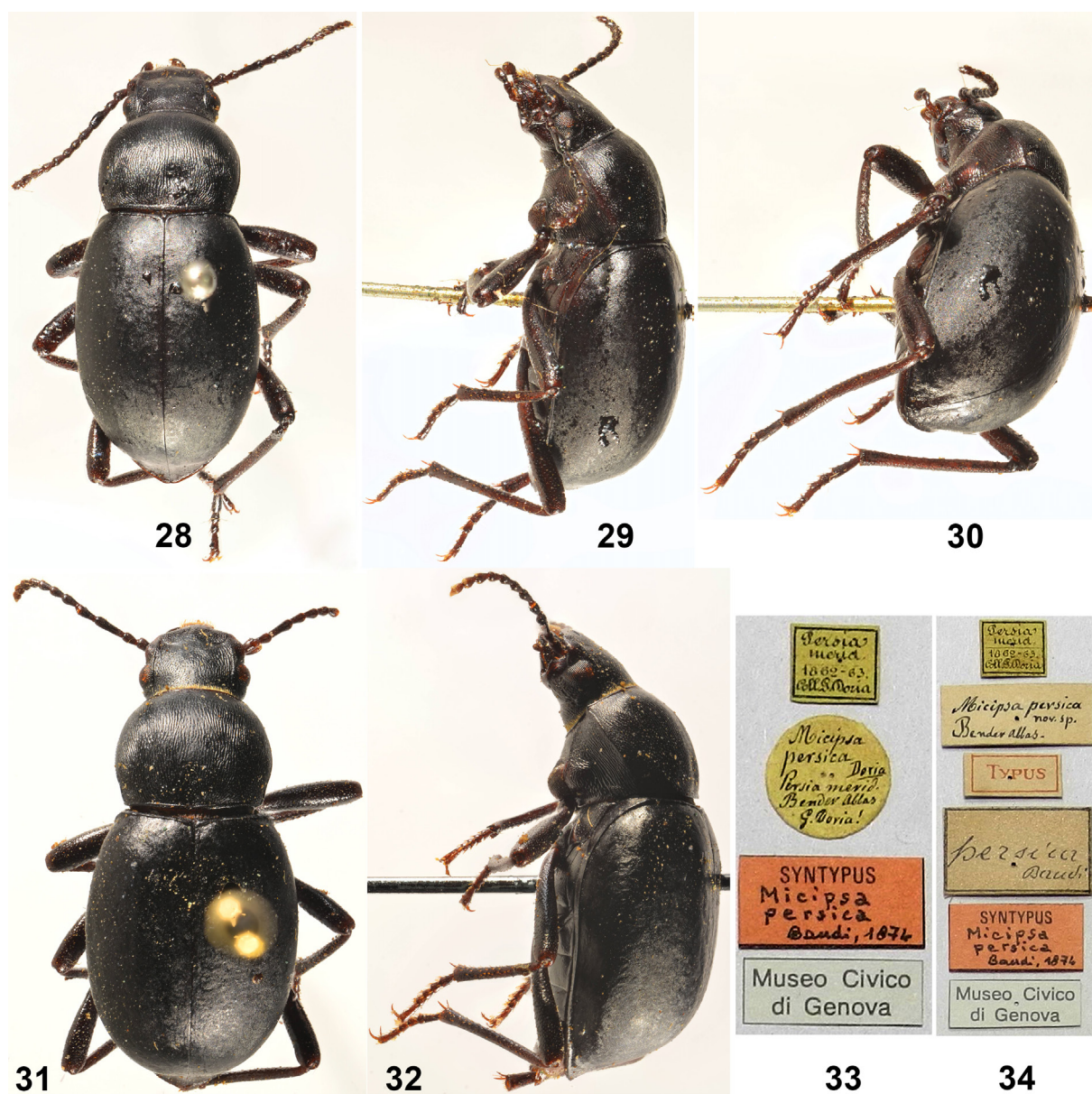


Figs 19–27. *Micipsa (Girardius) persica* (Kerman Province, Iran), habitus, details.

19, 21, 23–27 – male; 20, 22 – female; 19, 20 – habitus, dorsal view; 21–22 – head and pronotum; 23 – aedeagus, lateral view; 24 – parameres, dorsal view; 25 – penis; 26 – spiculum gastrale; 27 – inner abdominal segment VIII.

Рис. 19–27. *Micipsa (Girardius) persica* (провинция Керман, Иран), габитус, детали строения.

19, 21, 23–27 – самец; 20, 22 – самка; 19, 20 – габитус, дорсально; 21–22 – голова и переднеспинка; 23 – эдегус, латерально; 24 – парамеры, дорсально; 25 – пенис; 26 – spiculum gastrale; 27 – внутренний брюшной сегмент VIII самца.



Figs 28–34. *Micipsa (Girardius) persica*, type specimens, habitus, labels.

28–30, 33 – male, lectotype; 31–32, 34 – male, paralectotype; 28, 31 – dorsal view; 29, 32 – lateral view; 30 – latero-posterior view; 33–34 – labels. Images courtesy Roberto Poggi (© MSNG).

Рис. 28–34. *Micipsa (Girardius) persica*, типовые экземпляры, габитус, этикетки.

28–30, 33 – самец, лектотип; 31–32, 34 – самец, паралектотип; 28, 31 – дорсально; 29, 32 – латерально; 30 – сзади и латерально; 33–34 – этикетки. Изображения любезно предоставлены Роберто Поджи (© MSNG).

Bender Abbas" (yellow, handwritten by Giacomo Doria), "*Persica Baudi*", "Syntypus *Micipsa persica* Baudi, 1874" (red-orange, handwritten by the curator Roberto Poggi), "Museo Civico di Genova" (white, print); 3♂, 5♀, paralectotypes (MSNG), "Persia merid. 1862–63 Coll. G. Doria" (yellow, handwritten), "Syntypus *Micipsa persica* Baudi, 1874" (red-orange, handwritten by the curator Roberto Poggi), "Museo Civico di Genova" (white, print). Lectotype and paralectotypes from MSNG labeled also as: "Lectotype *Micipsa persica* Baudi, 1874 des. M.V. Nabozhenko & F. Eshraghi Mofrad" and "Paralectotype *Micipsa persica* Baudi, 1874 det. M.V. Nabozhenko & F. Eshraghi Mofrad".

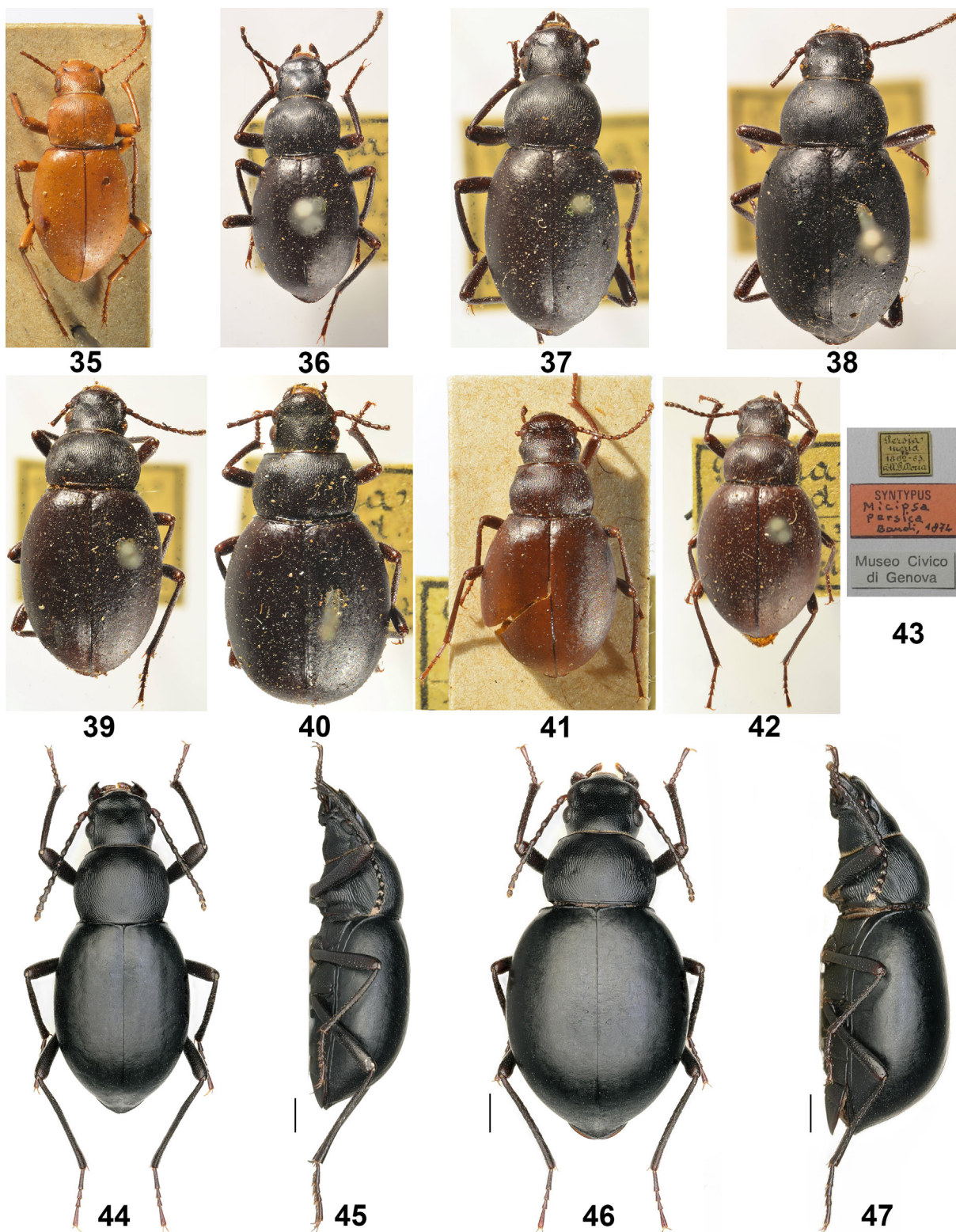
Micipsa agnesae (Figs 48–50): 1♀, holotype (NHMB), "Pers. Safidab", "Pfaundler", "Agnesae" (all three labels handwritten), "TYPUS" (print, red), "Sammlung Adr. Schuster" (print, white).

Material. Iran. 2♀ (ZIN), West Persia, Enarek (now Anarak, Isfahan Prov.), 10–12.11.1909 (N. Zarudny) (Russian Cyrillic label); 1♂,

4♀ (ZIN), 1♂, 1♀ (ZMMU), SE Persia, Kerman, 23.03.1928 (V. Kuznetsov) (Russian Cyrillic label); 1♂ (HMIM), Bushehr Prov., Bandar-e Taheri, 10 m, 26.11.1998 (E. Ghilasian, H. Barari, M. Mofidi); 1♂ (HMIM), Fars Prov., Jahrom, Abbarik, 22.03.1965 (M. Safavi); 1♂ (PCML), "IRAN LAR. 22.3.", "MUSEUM PARIS Mission Franco-Irannienne 1965", "*M. persica*" coll. Lillig ex coll. Carl".

Qatar. 1♀ (Figs 46, 47), Al Ghuwairiya, Rawdat al Faras, 25°48'16.7"N / 51°20'49.6"E 2.03.2003 (C. Cocquempot) (examined by photographs); 1♂ (Figs 44, 45), Al Jemaiya, Walhat Ghubathah 8 km N-W village, 25°39'23"N / 50°57'18.7"E, 5.03.2003 (C. Cocquempot) (examined by photographs).

Remark. One paralectotype with the label "Persia merid. 1862–63 Coll. G. Doria" is deposited in Muséum national d'Histoire naturelle (Paris, France) [Soldati, 2009].

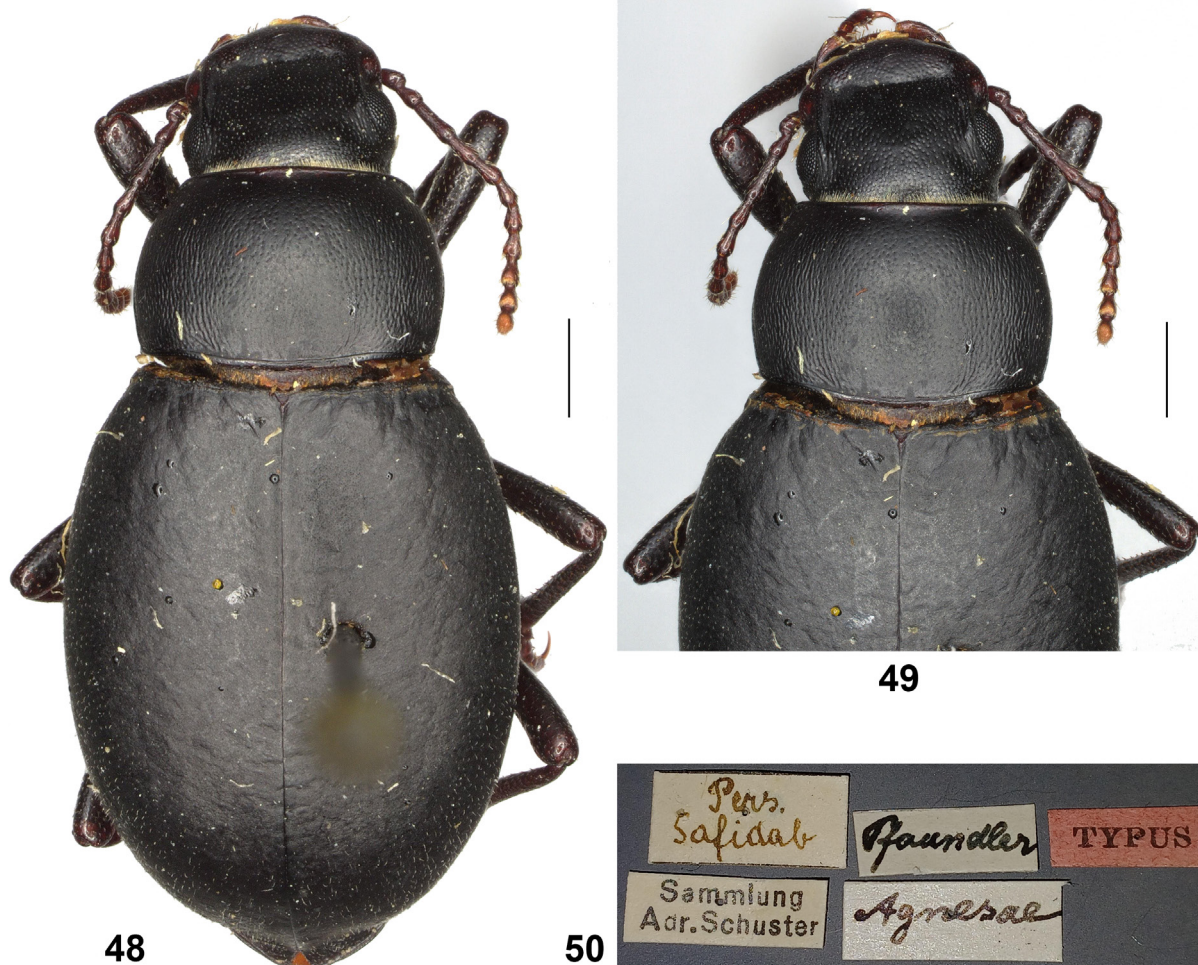


Figs 35–47. *Micipsa (Girardius) persica*, habitus, labels.

35–42 – type series from MSNG, paralectotypes; 43 – label of imaged paralectotypes; 44–47 – specimens from Qatar, non-types. 35–37, 44–45 – males; 38–42, 46–47 – females; 35–42, 44, 46 – dorsal view; 45, 47 – lateral view. Scale bars 1 mm. Images 35–43 courtesy Roberto Poggi (© MSNG), images 44–47 courtesy Laurent Soldati.

Рис. 35–47. *Micipsa (Girardius) persica*, габитус, этикетки.

35–42 – типовая серия из MSNG, паралектотипы; 43 – этикетка для изображенных паралектотипов; 44–47 – не типовые экземпляры из Катара. 35–37, 44–45 – самцы; 38–42, 46–47 – самки; 35–42, 44, 46 – дорсально; 45, 47 – латерально. Масштабные линейки 1 мм. Изображения 35–43 любезно предоставлены Роберто Поджи (© MSNG), 44–47 – Лораном Солдати.



Figs 48–50. *Micipsa (Girardius) persica*, holotype (female) of *Micipsa agnesae*, **syn. n.**

48 – habitus, dorsal view; 49 – head and pronotum; 50 – labels. Scale bars 1 mm. Images courtesy Christoph Germann (© NHMB).

Рис. 48–50. *Micipsa (Girardius) persica*, голотип (самка) *Micipsa agnesae*, **syn. n.**

48 – габитус, дорсально; 49 – голова и переднеспинка; 50 – этикетки. Масштабные линейки 1 мм. Фотографии любезно предоставлены Христофом Германном (© NHMB).

Diagnosis. Male. Body length 7–12 mm. Body robust, black (can be reddish to brown in small immature beetles), opaque, antennae and legs black or dark-brown. Eyes slightly convex. Antennae comparatively long, extending by one apical antennomere beyond posterolateral angles of pronotum. Antennomere 11 short, slightly longer than 10th, ~1.5 times as short as antennomeres 9–10 together. Pronotum from slightly to moderately transverse (1.27–1.33 times as wide as long), widest at middle; maximum width subequal to elytral width at humeral level; disc with shallow to moderately coarse wrinkles on sides and smooth, sparsely punctured in middle. Prothoracic hypomera with longitudinal wrinkles from procoxae to outer margin. Mesepisterna with small elongate sparse granules. Elytra elliptical, widest at middle, with slightly separated not elongate apex. Apical elytral portion covered with short fine white setae and sparser slightly stronger yellowish setae almost indistinguishable from white ones. Spiculum gastrale with semicircular blades.

Female. Body length 7–13 mm. Body more robust and wider. Antennae slightly extending or reaching posterolateral angles of pronotum. Antennomeres 10

and 11 subequal in length. Pronotum more transverse, 1.47–1.58, widest at middle or rarely slightly after middle. Elytra from elliptical to almost spheroidal.

Variability. The most variable is the shape of the female elytra, which can be from ellipsoid to almost spherical (especially in small specimens) (Figs 20, 38–42, 46). One dwarf female (paralectotype) has the asymmetrical pronotum (Fig. 41): left side widest at middle and emarginated at anterior third, while right side widest at base and slightly rounded at anterior portion. The holotype (female) of *M. agnesae* has the pronotum widest slightly before middle (Fig. 49), as well as some females from the type series.

Notes. The female (holotype by monotypy) of *M. agnesae* has the strongly transverse pronotum, widest slightly behind middle. This character fits within the range of variability of *M. persica*. Females of this species usually have the pronotum widest at the middle, less commonly slightly behind the middle. The remaining characters are the same as those of *M. persica*. The strigosity of the pronotum, which A. Schuster used as the basis to distinguish these two taxa, is variable. Thus, the following new synonymy is

established: *Micipsa persica* Baudi di Selve, 1874 = *Micipsa agnesae* Schuster, 1935, **syn. n.**

Distribution. Central and Southern Iran from southern border of Dasht-e Kavir desert to the Persian Gulf coast: Kerman ([Kühnelt, 1957]; present material), Hormozgan [Baudi di Selve, 1874, 1875; Soldati, 2009; Grimm, 2015], Isfahan, Fars and Bushehr provinces (present material); Qatar [Soldati, 2009]. The Catalogue of Palaearctic Coleoptera [Iwan et al., 2020] contains only Qatar in the distribution of this species.

Micipsa (Girardius) pubescens (Haag-Rutenberg, 1875),
sp. resurr.
(Figs 51–75, 94–96, 98–101)

Micipsa pubescens Haag-Rutenberg, 1875: 90; Reitter, 1900: 188, note; Gebien, 1910: 75; Blair, 1925: 430 (in comparison with *G. similis*).

As a junior synonym of *Micipsa persica*: Gebien, 1937: 636 (synonymy first established); Kaszab, 1981: 344; Löbl et al., 2008: 195; Iwan et al., 2020: 226.

Micipsa (Girardius) similis: Blair, 1925: 430 (Iraq: Jabal Hamrin).

Type material. 1♂, holotype (by monotypy) (NHMUK) (Figs 51, 54), "Type" (print, round, white with a red border), "Ahwaz Persia" (handwritten by Bates), "*Micipsa pubescens* type Haag" (handwriting by Bates), "*Micipsa pubescens* m." (handwritten by Haag-Rutenberg), "F.Bates. 18–19." (print, white), "NHMUK 016497279 [+ QR-code]".

Material. Iran. 8♂, 5♀ (ZIN), Khuzestan Prov., Shushtar env., Tak Taku vill., 32°01'27.2"N / 48°53'14.2"E, 29.03.2023 (F. Eshraghi Mofrad), 4♂, 5♀ (HMIM), Shushtar, Pirdalu, 32°04'26.6"N / 48°53'00.2"E, 25.03.2025 (F. Eshraghi Mofrad), 13♂, 9♀ (HMIM), Shushtar env., Kuzar, 32°05'28.3"N / 49°00'23.0"E, 16.03.2025 (F. Eshraghi Mofrad); 5 ex. (HMIM), Khuzestan Prov., Masjed Sulaiman, Haftkel, Naftsefid vill., 31°38'19.5"N / 49°16'52.0"E, 24.03.2026 (F. Eshraghi Mofrad).

Iraq. 5♀ (NHMB), "MESOPOTAMIA Mosul", "Sammlung Adr. Schuster", "philitin", "Hauser" (examined by photographs); 3♂, 3♀ (NHMB), "Assur. Mesopot. Pietschmann 10", "Mesopot. Exp. Nat.O.V.1910", "philitin", "Sammlung Adr. Schuster" (examined by photographs); 1♀ (NHMUK), "№ 339 under stones Jebel Hamrin N.E. of Baghdad Mesopotamia 30.11.18 Coll: W.E. Evans", "*Micipsa persica* Baudi det.K.G.Blair = *pubescens* Bates", "Mesopotamia W.E. Evans. 1920–264", unclear handwritten (by pencil) label, "*Micipsa similis* H.-R. det. M. Carl, 1990", "NHMUK 016503686 [+ QR-code]"; 3♂, 1♀ (NHMB), "Kanakin Irak 9.IV.36.Frey" (examined by photographs).

Remark. Haag-Rutenberg [1875: 90] mentioned in the original description, that his specimen probably female: "bei meinem Exemplar, welches wohl ein ♀ ist". In fact, this is a male, and the mention of one specimen in the description indicates that this is the holotype by monotypy. Quite an accurate description matches this specimen perfectly.

Brief redescription of the holotype (Figs 51, 54). Male. Body length 11 mm. Body robust, black, dorsal side opaque, ventral side with strong lacquered shine; antennae and legs black. Eyes slightly convex. Antennae comparatively short, not reaching posterolateral angles of pronotum. Pronotum massive, strongly transverse, widest at middle, lateral margins strongly widened, much wider at middle than elytra at humeri; disc entirely strongly strigose, usually without smooth punctured area in middle or sometimes with smooth area. Prothoracic hypomera with longitudinal wrinkles from procoxae to outer margin. Mesepisterna with small elongate sparse granules. Elytra elliptical, widest at middle, with slightly separated not elongate apex. Elytra laterally and apically with dense granules, bearing strong yellowish setae; setation dense, only middle area along suture without setae and granules.

Description of specimens from Shushtar, Iran (Figs 58–65, 67–75). Male. Body length 8–10.5 mm. Body from robust (gynomorph) to slender (andromorph), black or rarely brown, anterior portion of head (at least anterior margin of epistome and genal area), antennae and legs brown. Body dorsally opaque,

excluding shiny epistome, ventral side with strong lacquered shine. Head widest at eye level. Eyes large, slightly convex. Lateral margin of head from sharply to shallowly emarginated between epistome and gena. Apical margin of epistome rounded, slightly serrate. Punctuation of head moderately coarse and dense (puncture diameter less than space between punctures). Lateral keel long, from middle of gena to posterior margin of eye. Basal half of gena smooth. Mandibles without additional dorsal tooth. Ventral side of head with a lacquer shine; epicranium with deep transverse smooth impression along mouthparts; lateral surface sparsely finely punctured, vertex with transverse wrinkles. Mentum with coarse punctuation. Antennae short, reaching only basal quarter of pronotal length. Antennomere 11 slightly longer than 10th or subequal in length; antennomeres 9–10 dilated, sub-triangular.

Prothorax. Pronotum transverse (1.26–1.31 times as wide as long), widest at middle, 1.38–1.41 times as wide as head. Anterior margin straight (one male with emarginated at middle anterior margin), base slightly rounded, lateral margins regularly rounded. Base 1.14–1.15 times as wide as anterior margin. Pronotum at middle slightly wider than elytra at humeri. Anterolateral angles turned downwards, acute, posterolateral angles obtuse, rounded. All edges margined. Disc of pronotum slightly convex, but lateral sides strongly convex. Surface of disc from almost smooth (with poorly visible wrinkles around middle) and punctured to strongly strigose and punctured only along anterior margin. Degree of rugosity of pronotum correlates with degree of rugosity of prohypomera: from shallow wrinkles to coarse longitudinal rugosity. Prosternum with sparse and fine punctuation in middle and coarser punctures laterally, wrinkled on sides in strigose specimens. Prosternal process smooth (without punctuation), widely margined and depressed in middle, apical portion slightly extending beyond procoxae.

Pterothorax. Scutellar shield very small. Elytra ellipsoid, widest at middle (1.31–1.42 times as long as wide in gynomorphs, 1.48–1.5 times in andromorphs), 1.27–1.3 times as wide as pronotum (from andromorphs to gynomorphs respectively). Apical portion more or less roundly narrowed to apex, but not acutely elongate. Elytra without striae, very finely and sparsely punctured by simple punctures; lateral sides and apical third pubescent with short fine poorly visible whitish subrecumbent setae, apical third to half additionally very densely setated by strong erected yellowish setae. Base of elytra entirely margined. Epipleura slightly depressed only at base, reaching sutural angle. Mesoventrite finely punctured and indistinctly wrinkled; mesosternal process without wrinkles. Mesepisterna with small elongate granules. Metepisterna and metaventrite laterally smooth (without punctuation) and less shiny; metaventrite at middle shiny and with fine and sparse punctuation.

Legs slender. Pro- and mesotibiae slightly curved, metatibiae straight. Ultimate metatarsomere shorter than first one.

Abdomen. Abdominal ventrites shiny; ventrites 1 and 2 without punctures laterally and with sparse fine punctuation in middle; ventrites 3 and 4 finely punctured in middle and with coarser punctuation laterally; ventrite 5 rounded at apex, with coarse sparse punctures at basal two thirds and much finer punctures at apical third. Aedeagus long and narrow, basal piece little longer than apical piece. Penis with strongly widened saccular expansion with a funnel-shaped depression inside. Blades of spiculum gastrale subtriangular, with straight inner and outer margins and large outer extensions.

Female. Body length 9.3–12 mm. Body more robust, elytra more spherical, legs shorter, tibiae not curved. Pronotum wider than in male (1.41–1.47 times as wide as long; near 1.6 times as wide as long in specimen from Iraq), from slightly to strongly strigose. Antennae the same as in male. Genital tubes: vagina strongly expanded terminally, spermatheca short, but distinct, strongly sclerotized, curved; accessory gland falls into spermatheca basally. Specimens from Iran have pronotum widest at middle, from Iraq – widest after middle.



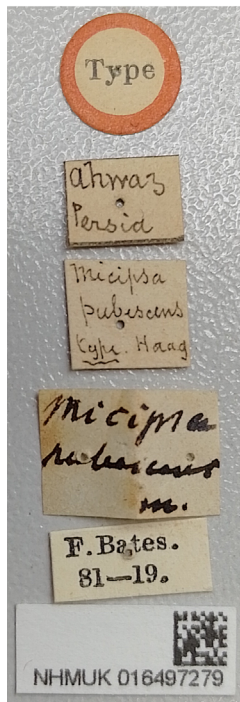
51



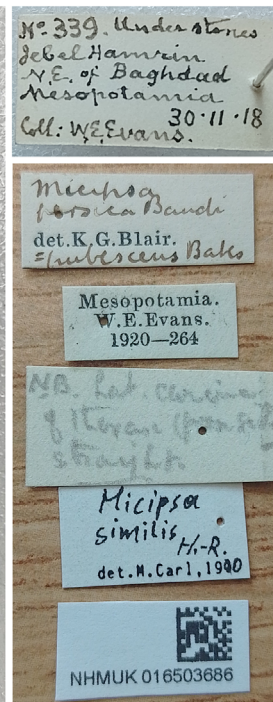
52



53



54



55



56



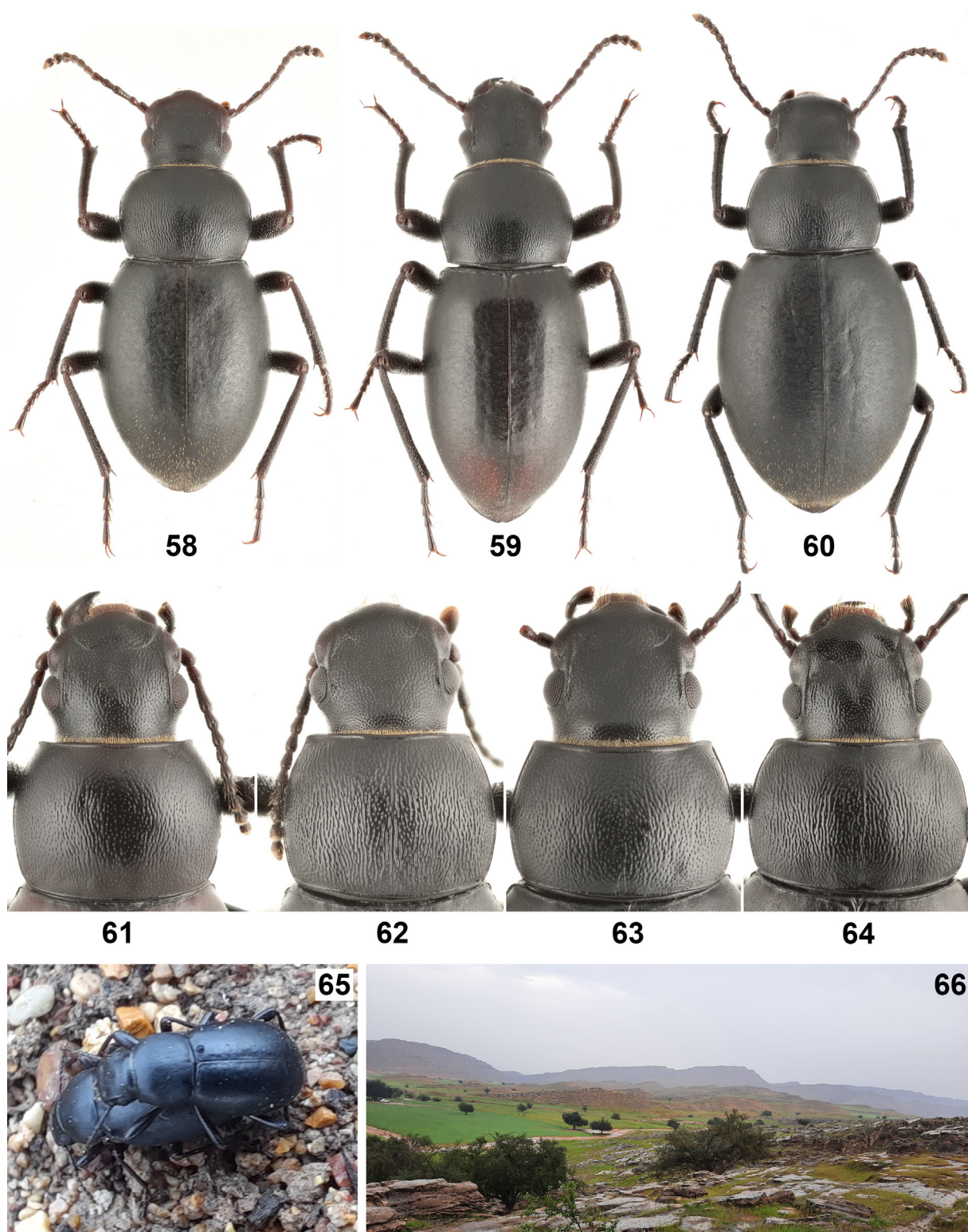
57

Figs 51–57. *Micipsa (Girardius) pubescens*, habitus, labels.

51 – male, holotype, dorsal view; 52–53 – female (Iraq: Jebel Hamrin): 52 – dorsal view, 53 – lateral view; 54 – labels of the holotype; 55 – labels of the female from Jebel Hamrin; 56 – specimens in nature (Iran: Shushtar, Kuzar, November 2025); 57 – same, male and female. Images 51–55 courtesy Dmitry Telnov (© NHMUK).

Рис. 51–57. *Micipsa (Girardius) pubescens*, габитус, этикетки.

51 – самец, голотип, дорсально; 52–53 – самка (Ирак: Хамрин): 52 – дорсально, 53 – латерально; 54 – этикетки голотипа; 55 – этикетки самки с гор Хамрин; 56 – особи в природе (Иран: окрестности Шуштера, ноябрь 2025 года); 57 – то же, самец и самка. Изображения 51–55 любезно предоставлены Дмитрием Тельновым (© NHMUK).

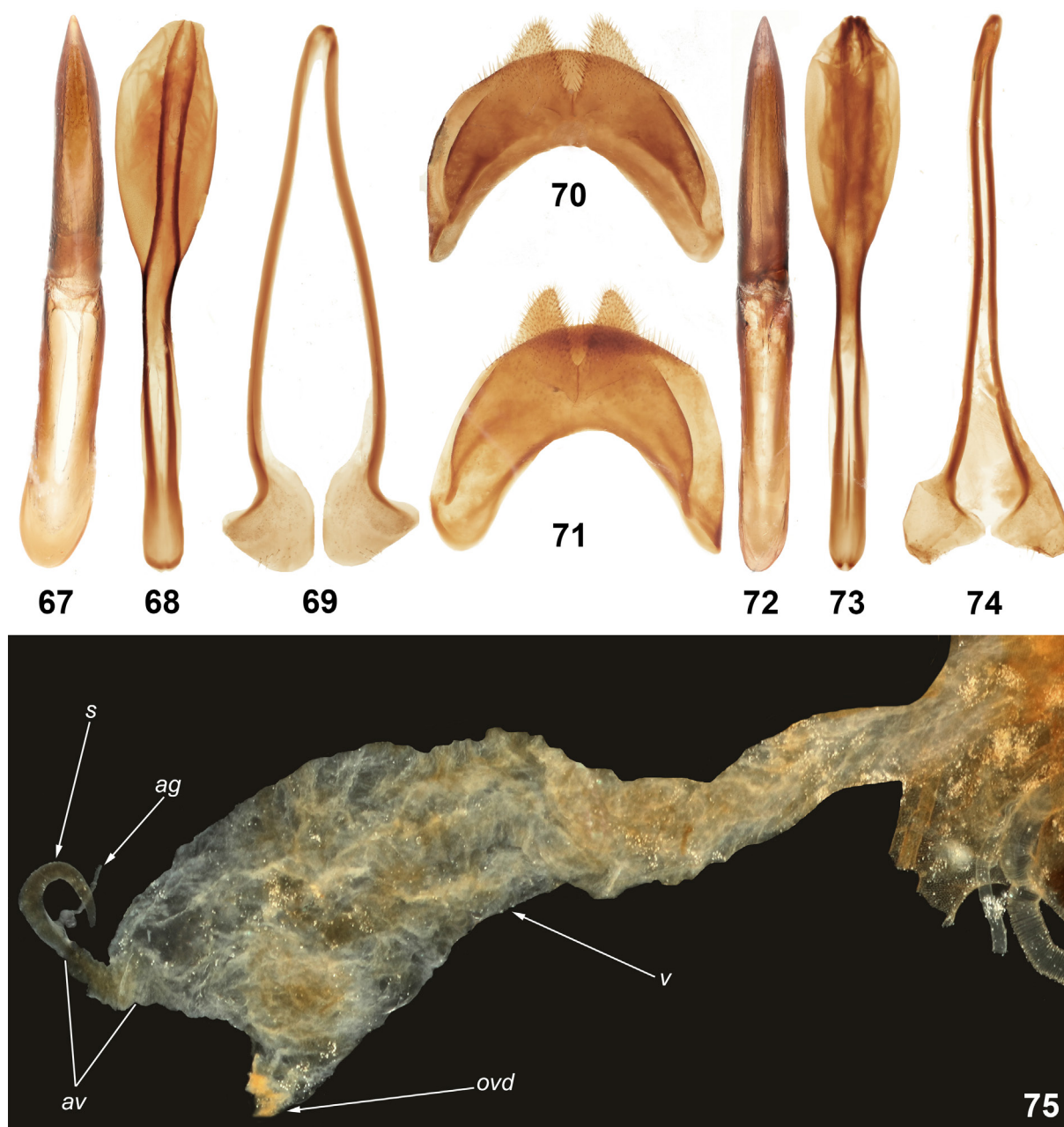


Figs 58–66. *Micipsa (Girardius) pubescens* (Iran: Shushtar environs), habitus, details, habitat.

58–59, 61–62 – male; 60, 63–64 – female; 58–60 – habitus; 61–64 – head and pronotum; 65 – copulating male and female in nature; 66 – habitat.

Рис. 58–66. *Micipsa (Girardius) pubescens* (Иран: окрестности Шуштера), габитус, детали строения, биотоп.

58–59, 61–62 – самец; 60, 63–64 – самка; 58–60 – габитус; 61–64 – голова и переднеспинка; 65 – спаривающиеся самец и самка в природе; 66 – биотоп.



Figs 67–75. *Micipsa (Girardius) pubescens* (Iran: Shushtar environs), male genitalia and terminalia, female genital tubes. 67–70 – gynomorphic male; 71–74 – andromorphic male; 67, 72 – parameres and basal piece, dorsal view; 68, 73 – penis; 69, 74 – spiculum gastrale; 70–71 – male inner abdominal segment VIII; 75 – female genital tubes: *ag* – accessory gland, *av* – annulate portion of vagina, *ovd* – oviduct, *s* – spermatheca, *v* – vagina.

Рис. 67–75. *Micipsa (Girardius) pubescens* (Иран: окрестности Шуштера), гениталии и терминалии самца, половые протоки самки. 67–70 – гиноморфный самец; 71–74 – андроморфный самец; 67, 72 – парамеры и базальная доля, дорсально; 68, 73 – пенис; 69, 74 – spiculum gastrale; 70, 71 – внутренний брюшной сегмент VIII самца; 75 – половые протоки самки: *ag* – железа сперматеки, *av* – кольчатый участок вагины, *ovd* – яйцевод, *s* – сперматека, *v* – вагина.

Variability. The sculpture of the pronotum can be very variable, from almost smooth (Figs 59, 61, 63) to strongly strigose (Figs 51, 52, 62, 64). The most variable is the habitus of male (especially elytra) which can be from slender (so called andromorphes) (Fig. 59) to robust (gynomorphes) (Fig. 58). Some males have intermediate proportions of elytral length / width. The female from Iraq has the pronotum widest behind middle, but it is

strongly transverse, and elytral setation the same dense as in Iranian specimens and consists of strong yellowish erected setae (Figs 52, 53). The male holotype differs from other specimens in the pronotum much wider than elytra at humeral level and elytra covered with microgranules and rasp-like punctures, bearing setae (Fig. 51). Both, males from Shushtar and Ahvaz have short antennae, not reaching posterolateral angles of the pronotum. Therefore,



Figs 76–82. *Micipsa (Girardius) similis*, males, habitus, genitalia, labels.

76 – holotype, dorsal view; 77 – genitalia of holotype, glued on one cardboard plate with beetle; 78 – labels of the holotype; 79 – specimen from Isfahan Province (Iran), dorsal view; 80, 81 – specimens from Fars Province (Iran), dorsal view; 82 – same as 81, ventral view. Images 76–78 courtesy Dmitry Telnov (© NHMUK).

Рис. 76–82. *Micipsa (Girardius) similis*, самец, габитус, гениталии, этикетки.

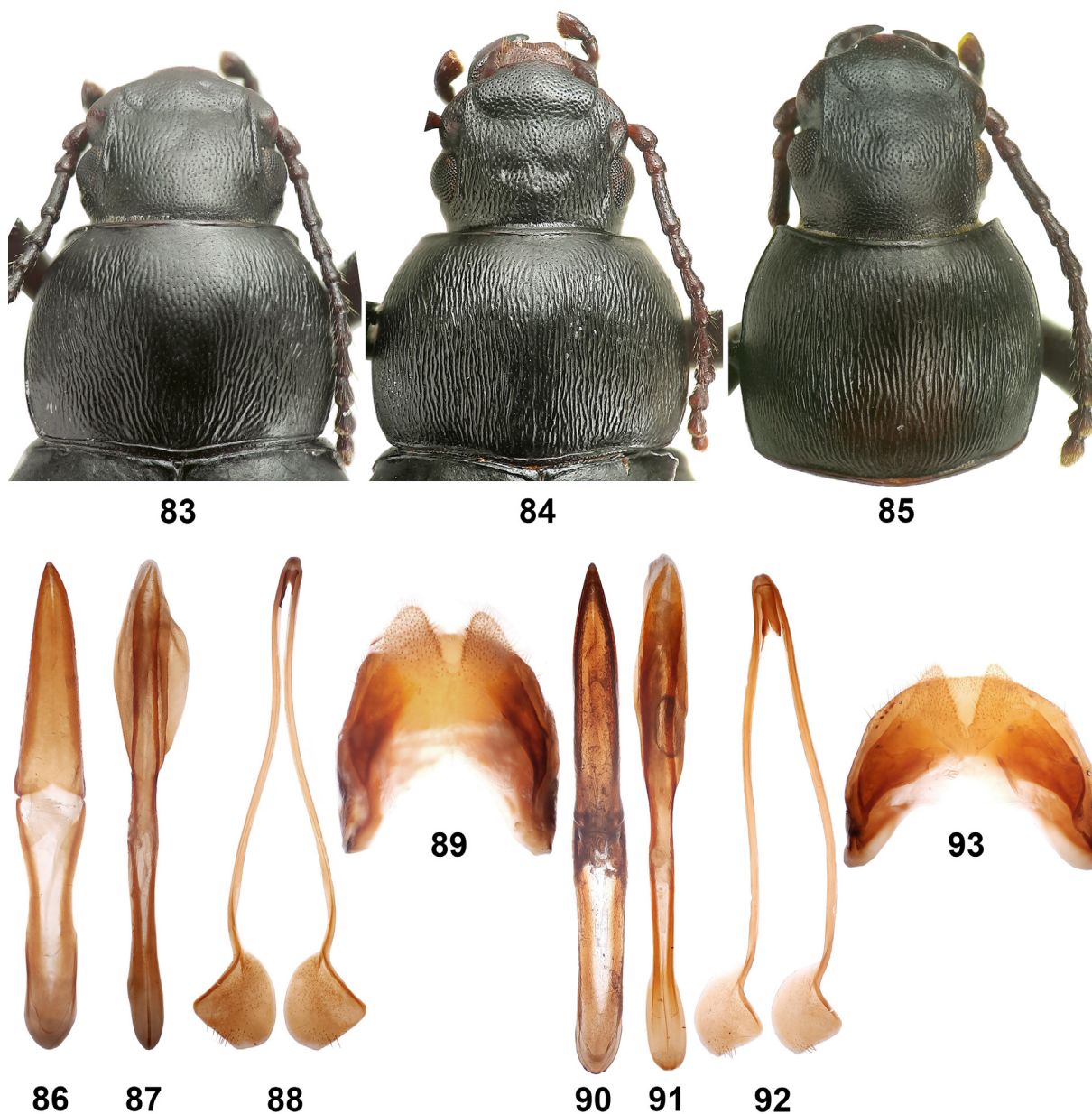
76 – голотип, дорсально; 77 – гениталии голотипа, наклеенные на одну плашку с жуком; 78 – этикетки голотипа; 79 – экземпляр из провинции Исфахан (Иран), дорсально; 80, 81 – экземпляры из провинции Фарс (Иран), дорсально; 82 – тот же самец, что на рисунке 81, вентрально. Изображения 76–78 любезно предоставлены Дмитрием Тельновым (© NHMUK).

we believe that both of these populations belong to the same species. In addition, specimens from Shushtar and Ahvaz have lacquered shiny ventral side of body that distinguishes *M. pubescens* from other species from Iraq and Iran.

Setation of the elytra is also variable. Specimens from the valley of the Karun River in Iran and Jebel Hamri and Mosul in Iraq are the most densely pubescent, while some specimens from Assur in Iraq are pubescent only at elytral apical quarter or near elytral apex.

Notes. This species was synonymized with *Micipsa persica* by Gebien [1937] without any explanation.

Unfortunately, the holotype has broken antennae, only 1–3 right antennomeres and 1–2 left ones are preserved. However, the original description is very accurate, and the holotype originally had complete antennomeres, because Haag-Rutenberg mentioned that the antennae are short and do not reach the base of the pronotum. Furthermore, the short antennae and very dense pubescence of the elytra consisting of strong yellowish setae suggests that the *Micipsa pubescens* is a good species and distinctly distinguished from other members of the subgenus *Girardius*, so we resurrect it from the junior synonyms

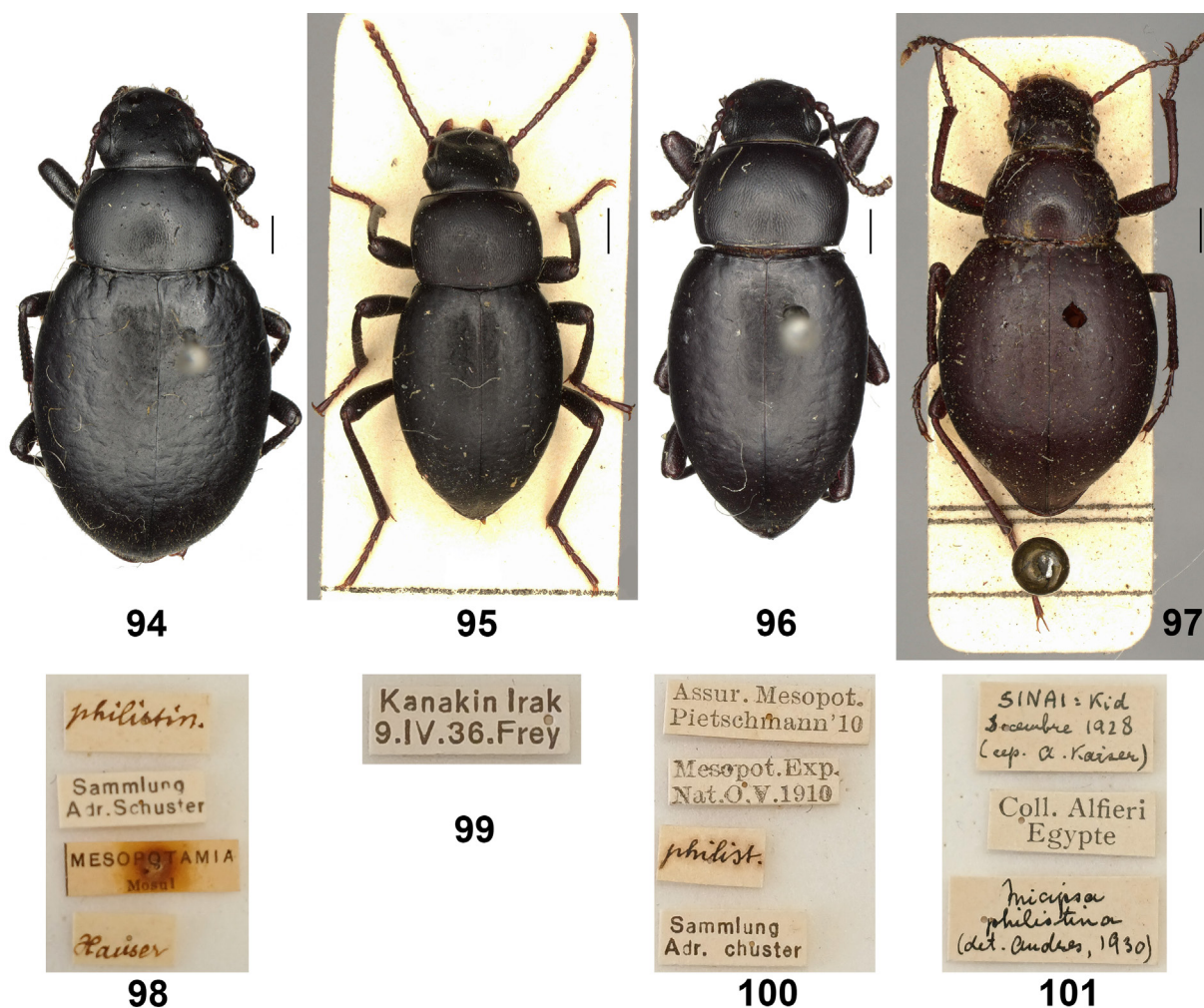


Figs 83–93. *Micipsa (Girardius) similis*, males, details.

83–85 – head and pronotum; 86, 90 – parameres and basal piece, dorsal view; 87, 91 – penis; 88, 92 – spiculum gastrale; 89, 93 – inner abdominal segment VIII; 83, 86–89 – specimen from Isfahan Province (Iran); 84–85, 90–93 – specimens from Fars Province (Iran).

Рис. 83–93. *Micipsa (Girardius) similis*, самцы, детали строения.

83–85 – голова и переднеспинка; 86, 90 – парамеры и базальная доля, дорсально; 87, 91 – пенис; 88, 92 – spiculum gastrale; 89, 93 – внутренний брюшной сегмент VIII самца; 83, 86–89 – экзemplар из провинции Исфахан (Иран); 84–85, 90–93 – экзemplары из провинции Фарс (Иран).



Figs 94–101. Specimens from NHMB determined as “*Micipsa philistina*” and their labels.
94–96, 98–100 – *M. pubescens*; 97, 101 – *M. cf. philistina*; 94, 97 – females; 95–96 – males. Scale bars 1 mm. Images courtesy Christoph Germann (© NHMB).

Рис. 94–101. Экземпляры из NHMB, определенные как «*Micipsa philistina*», и их этикетки.

94–96, 98–100 – *M. pubescens*; 97, 101 – *M. cf. philistina*; 94, 97 – самки; 95–96 – самцы. Масштабные линейки 1 мм. Изображения любезно предоставлены Христофом Германном (© NHMB).

of *M. persica*: *Micipsa pubescens* (Haag-Rutenberg, 1875), **sp. resurr.**

Distribution. Central and eastern Iraq, Iran (Khuzestan Province: Ahvaz [Haag-Rutenberg, 1875] and Shushtar environs (present material)).

Micipsa (Girardius) similis Haag-Rutenberg, 1875
(Figs 76–93)

Micipsa similis Haag-Rutenberg, 1875: 91; Reitter, 1900: 188, note; Gebien, 1910: 75; Gebien, 1937: 636; (?) Carl, 1991: 143; Löbl et al., 2008: 195; Iwan et al., 2020: 234.

Type material. 1♂, holotype (NHMUK), “Type” (print, round, white with a red border), “Shuster Persia” (handwritten by Bates; now Shushtar in Khuzestan Province), “*Micipsa similis* type Haag” (handwriting by Bates), “*Micipsa similis* m” (handwritten by Haag-Rutenberg), “F.Bates. 18–19” (print, white), “NHMUK 013664002 [+ QR-code]”.

Material. 2♂ (HMIM), Iran, Fars Prov., Shiraz, Saadatabad, 1.05.1971 (Rajabi); 1♂ (HMIM), Iran, Isfahan Prov., Koor, Arunan, Mesr road, 1161 m, 34°04'28.3"N / 54°59'56.9"E, 14.04.2010 (Moghaddam, Nemati).

Diagnosis. Male. Body length 7.5 (holotype) and 9.5–10.5 mm (non-type specimens). Body moderately

robust, black, dull, legs and antennae dark brown. Antennae comparatively long, extending by one apical antennomere beyond posterolateral angles of pronotum. Antennomeres 10 and 11 subequal in length. Pronotum from slightly to moderately transverse (1.28–1.35 times as wide as long), widest at middle or slightly after middle; maximum width subequal to elytral width at humeral level; disc from moderately (with smooth sparsely punctured middle) to coarsely (without smooth punctured areas) strigose. Prothoracic hypomera with longitudinal wrinkles from procoxae to outer margin. Mesepisterna with small elongate sparse granules. Elytra oviform, widest at middle, with acutely elongate apical quarter. Surface of elytra smooth, not granulated. Apical elytral portion covered with short fine white setae and sparser slightly stronger yellowish setae almost indistinguishable from white ones, but the holotype with denser setation of yellowish setae at apical third and lateral sides. Blades of spiculum gastrale with triangle outer portion and semicircular inner portion.

Female unknown.

Variability. The sculpture of the pronotum is variable as in other *Girardius*: from moderately (Fig. 83) to strongly and coarsely strigose as in males from Saadatabad (Figs 84, 85). Elytral setation in the holotype is denser and consisting of mainly strong yellowish short setae, while in other examined specimens with mainly whitish finer and sparser setae. Pronotum can be more and less transverse and with more and less rounded lateral margins even in one micropopulation.

Notes. Haag-Rutenberg [1875] mentioned in the original description, that *M. similis* has longer antennae than in *M. pubescens*, with each antennomere more elongate, but with the same width as in the latter species. Unfortunately, now antennomeres are broken in the holotype (only five right antennomeres are presented), but at least right antenna is complete on the photograph of the holotype in the paper of Carl [1991: fig. 4]. We can see that on the mentioned photograph antennomeres are long and slightly extending beyond the posterolateral angles of the pronotum (according to our measurements).

The species distinctly belongs to the subgenus *Girardius* having male antennomeres 10 and 11 subequal in length.

Distribution. Iran: Khuzestan (Shushtar) [Haag-Rutenberg, 1875], Shiraz and Esfahan Provinces (present material). The holotype of *M. similis* originates from the vicinity of Shushtar but we do not know whether it lives sympatrically with *M. pubescens*. Carl [1991] wrote that two species can be found in one locality, as for example *M. monilifera* and “*M. similis*” (we don't know, what species he meant by this name) in Zurbatiyah (Iraq). However, in this case, it is also not clear whether the species live sympatrically or occupy different habitats.

Key to species of *Micipsa* from Iraq and Iran (males)

1. Eyes small, strongly convex (Fig. 4). Length of apical antennomere subequal to length of 9 and 10 antennomeres together (Fig. 4) *M. monilifera*
– Eyes large, slightly convex (Figs 13, 14, 21, 22, 49, 61–64, 83–85). Apical antennomere subequal or slightly longer than 10th antennomere (Figs 13, 21, 58, 59, 62, 83–85) 2
2. Antennae short, far not reaching posterolateral angles of pronotum (Figs 61, 62) *M. pubescens*
– Antennae long, slightly extending beyond posterolateral angles of pronotum (Figs 13, 21, 83–85) 3
3. Outer half of prohypomeron smooth, without longitudinal wrinkles. Pronotum usually narrow, bell-shaped, widest at basal third (Figs 11, 13), rarely (in some andromorphes) widest at middle (Fig. 12)
..... *M. mesopotamica* **sp. n.**
– Outer half of prohypomeron with shallow or coarse longitudinal wrinkles. Pronotum widest at middle (Figs 21, 31, 34, 51, 61, 62, 76, 83–85), not bell-shaped 4
4. Elytra oviform, with acutely elongate apical quarter (Figs 76, 79–81) *M. similis*
– Elytra ellipsoid, with rounded, slightly protruded, obtuse apex (Figs 19, 28, 31, 36, 37, 44) *M. persica*

Key to species of *Micipsa* from Iraq and Iran (known females)

1. Pronotum short and strongly transverse, more than 1.75 times as wide as long (Fig. 5) *M. monilifera*
– Pronotum less transverse, no more than 1.6 times as wide as long (Figs 14, 22, 38–42, 46, 49, 52, 63, 64) 2
2. Antennae slightly extending beyond posterolateral angles of pronotum (Fig. 22) *M. persica*
– Antennae not reaching posterolateral angles of pronotum (Fig. 14) 3
3. Pronotum more transverse, 1.4–1.6 times as wide as long (Figs 63, 64). Outer half of prohypomera wrinkled (finely distinctly wrinkled even in the smoothest specimens). Abdominal ventrites with a varnish sheen. Elytra often with dense comparatively strong yellowish setae apically and laterally (Fig. 60)
..... *M. pubescens*
– Pronotum narrower, 1.3 times as wide as long (Fig. 14). Outer half of prohypomera smooth, without wrinkles. Abdominal ventrites dull. Elytra always with sparse and short whitish and yellowish setae only apically
..... *M. mesopotamica* **sp. n.**

The species excluded from the fauna of Iraq

Micipsa philistina Reiche et Saulcy, 1857

Holdhaus [1919] listed *Micipsa philistina* from Assur (Iraq). He mentioned that this species is known for him only by the original description, and the head and the pronotum of the specimens from Assur are smooth or with very shallow wrinkles. Schuster [1937] mentioned *M. philistina* from Iraq (Khanakin). Iraq was listed for distribution of *M. philistina* in later publications [Kaszab, 1981; Lillig, Pavlíček, 2003, 2022] after records of Holdhaus and Schuster. In fact, *M. philistina* belongs to the nominotypical subgenus (having sexual dimorphism in the shape of the antennomere 11) and it is distributed in Palestine, as the species name suggests (type locality: Nablus) [Reiche, Saulcy, 1957] and Jordan [Kaszab, 1981]. Lillig and Pavlíček [2022] mentioned *M. cf. philistina* from Sinai, which also has strongly elongated male ultimate antennomere (photo of male antennomeres were separately provided to us by Martin Lillig). Females of *M. cf. philistina* from Sinai also have last antennomere more elongate than 10th (Figs 97, 101).

We examined specimens (on photographs) from Mosul, Assur and Khanakin (Iraq) deposited in NHMB (Figs 94–96, 98–100) and suggest that these beetles belong to *M. pubescens*, having short antennae and transverse (not bell-shaped) pronotum. Specimens from Khanakin and Assur differ from other ones in the slighter elytral pubescence. We don't know if this is interpopulation variability or subspecies level. Additional material is needed for examination and dissection.

The distribution of *Micipsa* from Iraq, Iran and Qatar is given on Fig. 102.

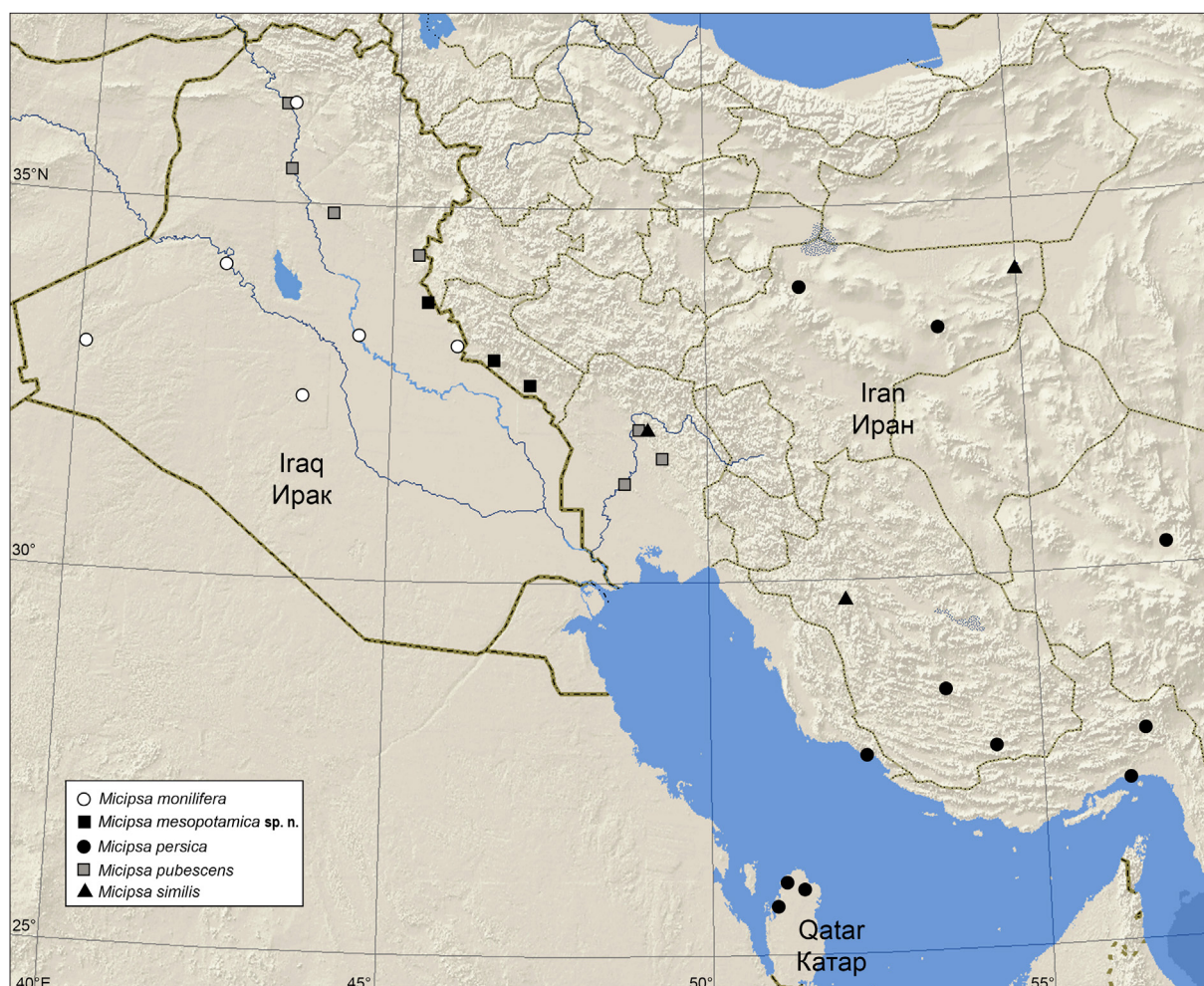


Fig. 102. Distribution of *Micipsa* in Iraq, Iran and Qatar.

Рис. 102. Распространение *Micipsa* в Ираке, Иране и Катаре.

Discussion

Differences between the subgenera *Micipsa* and *Cirsa* are indistinct. The subgenus *Cirsa* is dubious, because the main differential character mentioned by Lucas [1857] was a small compact body in the type species *M. (Cirsa) striaticollis* (Lucas, 1857). The other two species of *Cirsa* (*M. instriata* Pic, 1922 and *M. chobauti* Peyerimhoff, 1926) have the same size or larger body (length from 8 to 10 mm) and the same characters as in *Micipsa* s. str. [Pic, 1922; Peyerimhoff, 1926]. The genus *Cirsa* was synonymized with *Micipsa* by Kraatz [1865], who mentioned that the first genus does not differ from members of *Micipsa* from other regions of North Africa. Pic [1922] and Peyerimhoff [1926] ignored this synonymy and interpreted *Cirsa* (as *Cirta*) as a valid subgenus without arguments. Thus, they formally resurrected *Cirsa* from synonyms and this subgenus is still interpreted as valid [Iwan et al., 2020; Bouchard et al., 2021]. Body size cannot serve as a basis for subgeneric rank, especially since other *Micipsa* also vary in size (from 7 mm and longer). Here we support Kraatz's opinion and return this synonymy: *Micipsa* Lucas, 1855 = *Cirsa* Lucas, 1857 = *Cirta* Lacordaire,

1859 = *Cirta* Gemminger, 1870, **syn. resurr.** *Micipsa* and *Girardius* exhibit more distinct differences in the sexual dimorphism of the last male antennomere. Soldati [2009] also mentioned the following distinguishing character for the genus *Girardius*: metatarsomere 1 is equal or subequal in length than metatarsomeres 2 and 3. Indeed, *Micipsa* s. str. has a more elongated first metatarsomere than *Girardius*, but the differences are also small. The ratio of the length of the metatarsomere 1 to the length of metatarsomeres 2 and 3 together in *M. monilifera* – 1.3 (nominotypical subgenus), and in members of *Girardius*: *M. mesopotamica* **sp. n.** – 1.1, *M. persica* – 1.08–1.2, *M. pubescens* – 1.08–1.2, *M. similis* – 1.1–1.2. The boundary is indistinct between “subequal” lengths of metatarsomere 1 and 2 + 3 (from 1.08 to 1.2 times longer) and “longer” first metatarsomere than 2 + 3 ones (1.3 times as long and more). In our opinion, following the revision of the Iraqi and Iranian species, this feature can no longer be used to justify the generic separation of *Micipsa* and *Girardius*. Genera of Tentyriini usually have distinct generic characters (unlike, for example, some genera in the subfamily Tenebrioninae and Stenochiinae, where it is sometimes difficult to distinguish genera by females), despite sexual dimorphism.

We do not believe that the degree of sexual dimorphism in one structure (length of antennomere 11) is sufficient for generic rank in the tribe Tentyriini, because females of these genera are almost indistinguishable, but *Girardius* is undoubtedly a good taxon and can be saved as a subgenus. Its range occupies the eastern part of the generic range from the Mesopotamia region to Central Iran with an exclave in the Qatar Peninsula.

Members of *Micipsa*, unlike other flightless genera of Tentyriini, have unusual male genitalia not differing even among different subgenera, which was noted by Carl [1991] on the example of two species: *M. monilifera* and "*M. similis*". The aedeagus strongly differs from those in other genera of Tentyriini by the presence of a large sac-like structure in the penis on the side facing the parameres (Figs 16, 23, 25, 68, 73, 87, 91). This structure looks like an endophallus, but is not one, having only a deep funnel-shaped pocket in the middle, and does not turn inside out (Fig. 73). Otherwise, the aedeagus is typical for Tentyriini, having fused parameres (only in *Mesostena* Eschscholtz, 1831 they are separated [Bekchanov et al., 2025]) with a basal part of approximately the same length. The shape of blades of spiculum gastrale has an important diagnostic significance as shown on Figs 17, 26, 69, 74, 88, 92. The most interesting is the structure of female genital tubes in *Micipsa* (Fig. 75). Doyen [1993] believed that apical annulate part of the bursa copulatrix forms a more or less definitive spermatheca. In all variants of spermatheca, described by Doyen [1993], Chigray and Abakumov [2019], Bekchanov et al. [2023] for various species of Tentyriini, it was membranous (annulate or not). Spermatheca in *Micipsa* is completely formed, strongly sclerotized, curved, short and distinctly separated from the annulate apical part of the vagina. The narrow basal duct of the accessory gland falls into this sclerotized spermatheca.

In external structures, *Micipsa* also demonstrates specialization. Thus, the strongly convex (up to semispherical) elytra form a large subelytral cavity inside to prevent moisture transpiration. The strongly elongated ultimate antennomere in males of the nominotypical subgenus increases the sensory surface, probably for better detection of females. The elongation of metatarsomeres in *Micipsa* s. str. is also apomorphy. The elytral pubescence is interpreted here as apomorphic character. Body pubescence in general is not characteristic of wingless Tentyriini and is found only in highly specialized genera, for example, *Ammogiton* Peyerimhoff, 1920 [Schawaller, 1990; Soldati, 2009]. Thus, the high degree and double type of pubescence in *Micipsa* is an apomorphy. In the examined members of the genus *Micipsa*, elytral pubescence is most extensively developed in *M. pubescens* and *M. monilifera*.

The strigose pronotum is also a characteristic feature of many *Micipsa*. It appears independently in different species from different subgenera but even in one series the beetles can vary strongly, especially in the subgenus *Girardius*. An apomorphic character is probably the reduction in eye size in some *Micipsa* s. str. In this case, the area of the facet surface is preserved due to the strong convexity of the eye, but increasing the visual area.

In general, the nominotypical subgenus demonstrates more specialization than *Girardius*.

Acknowledgements

The authors thank curators of museums and colleagues for loan material and photographs of *Micipsa* spp.: Roberto Poggi (MSNG), Christoph Germann (NHMB), Dmitry Telnov (NHMUK), Ivan Chigray (ZIN), Vladimir Savitsky (ZMMU) and Laurent Soldati (French National Institute for Agriculture, Food, and Environment, France), Martin Lillig (PCML). The authors also thank Laurent Soldati (France) and Martin Lillig (Germany) for valuable comments and corrections in the early drafts of the manuscript.

The research was supported by the basic research project of the Precaspian Institute of Biological Resources of the Daghestan Federal Research Centre of the Russian Academy of Sciences, No. 122032200288-0 for M.V. Nabozhenko.

References

- Baudi di Selve F. 1874. Catalogo dei tenebrioniti della fauna europea e circummediterranea del Museo Civico di Genova. *Annali del Museo Civico di Storia Naturale di Genova*. 6: 89–115.
- Baudi di Selve F. 1875. Europaeae et circummediterraneae faunae Tenebrionidum specierum, quae Comes Dejean in suo Catalogo, editio 3a consignavit, ex ejusdem collectione in R. Taurinensi Musaeo asservata, cum auctorum hodie denominated collatio. *Deutsche Entomologische Zeitschrift*. 19: 17–119.
- Bekchanov N.Kh., Nabozhenko M.V., Bekchanov Kh.U., Kamolova M.Z., Bekchanov M.Kh., Kholmatov B.R. 2025. Note on the identity and distribution of *Mesostena puncticolis* Solier, 1835 (Coleoptera, Tenebrionidae) in Central Asia. *Journal of Insect Biodiversity and Systematics*. 11(4): 965–972. DOI: 10.61186/jibs.11.4.965
- Bekchanov N.Kh., Nabozhenko M.V., Bekchanova M.Kh. 2023. Review of the subgenus *Turcmenicola* Bogatchev, 1952, the genus *Colposcelis* Dejean, 1834 (Coleoptera: Tenebrionidae: Tentyriini). *Zootaxa*. 5375(4): 550–564. DOI: 10.11646/zootaxa.5375.4.6
- Blair K.G. 1925. A list of the heteromorous Coleoptera collected mainly during the war, by various members of H.M. Forces in Mesopotamia. *The Journal of the Bombay Natural History Society*. 30(1–2): 428–440.
- Bouchard P., Bousquet Y., Aalbu R.L., Alonso-Zarazaga M.A., Merkl O., Davies A.E. 2021. Review of genus-group names in the family Tenebrionidae (Insecta, Coleoptera). *ZooKeys*. 1050: 1–633. DOI: 10.3897/zookeys.1050.64217
- Carl M. 1991. Beschreibung von *Micipsa monilifera* sp. nov. aus Mesopotamien. *Entomofauna*. 12: 141–146.
- Chigray S.N., Abakumov E.V. 2019. Taxonomic revision of the genus *Calypopsis* Solier, 1835 (Coleoptera, Tenebrionidae: Pimeliinae: Tentyriini) from Iran. *Entomological Review*. 99(2): 209–244. DOI: 10.1134/S001387381902009X
- Doyen J.T. 1993. Cladistic relationships among Pimeliinae Tenebrionidae (Coleoptera). *Journal of the New York Entomological Society*. 101(4): 443–514.
- Gebien H. 1910. Tenebrionidae i, ii. Pars 15, 22. In: *Coleopterorum Catalogus*. Vol. 18. Berlin: W. Junk. 354 p.
- Gebien H. 1937. Katalog der Tenebrioniden (Col. Heteromera) Teil I. *Pubblicazioni del Museo Entomologico 'Pietro Rossi'*. 2: 505–883.
- Grimm R. 2015. Tenebrionidae (Insecta: Coleoptera) from Iran. *Vernate*. 34: 299–318.
- Haag-Rutenberg G.J. 1875. Beiträge zur Familie der Tenebrioniden. (5. Stück). *Coleopterologische Hefte*. 14: 67–92.
- Holdhaus K. 1919. Koleopteren aus Mesopotamien. *Annalen des Naturhistorischen Museums in Wien*. 33: 39–58, 1 taf.
- Iwan D., Löbl I., Bouchard P., Bousquet Y., Kamiński M.J., Merkl O., Ando K., Schawaller W. 2020. Family Tenebrionidae Latreille, 1802. In: *Catalogue of Palaearctic Coleoptera*. Vol. 5. Revised and updated second edition. Tenebrionoidea. Leiden: Brill: 104–475. DOI: 10.1163/9789004434998
- Kaszab Z. 1981. Insects of Saudi Arabia. Coleoptera: Fam. Tenebrionidae (Part 2) Zusammenfassung der bis jetzt bekannt gewordenen Tenebrioniden (First part). *Fauna of Saudi Arabia*. 3: 276–401.
- Koch C. 1937. Wissenschaftliche Ergebnisse über die während der Expedition Seiner Durchlaucht des Fürsten Alessandro C. della Torre

- e Tasso in Lybien aufgefundenen Tenebrioniden. *Pubblicazioni del Museo Entomologico 'Pietro Rossi' Duino*. 2: 285–500.
- Kraatz G. 1865. Revision der Tenebrioniden der alten Welt aus Lacordaire's Gruppen der Erodiides, Tentyriides, Akisides, Pimeliides, und der europäischen Zophosis-Arten. Berlin: Nicolaische Verlagsbuchhandlung. 393 p.
- Kühnelt W. 1957. Ergebnisse der Österreichischen Iran-Expedition 1949/50. Die Tenebrioniden Irans. *Sitzungsberichte der Österreichischen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse*. 166(2): 65–102.
- Lillig M., Pavlíček T. 2003. The darkling beetles of the Sinai Peninsula (Coleoptera: Tenebrionidae excl. Lagriinae et Alleculinae). *Zoology in the Middle East*. 30(Supplementum 1): 1–87. DOI: 10.1080/09397140.2003.10638008
- Lillig M., Pavlíček T. 2022. The darkling beetles of the Sinai Peninsula. Boca Raton: CRC Press. 168 p. DOI: 10.1201/9781003255901
- Löbl I., Merkl O., Ando K., Bouchard P., Lillig M., Masumoto K., Schawaller W. 2008. Tenebrionidae. In: Catalogue of Palearctic Coleoptera. Vol. 5. Tenebrionoidea. Stenstrup: Apollo Books: 105–352.
- Lucas P.H. 1857. [New taxa]. *Bulletin de la Société Entomologique de France*. 1857: lv–lvii.
- Marseul S.A. de. 1879. Ouvrages périodiques. *L'Abeille, Journal d'Entomologie*. 17: 1–119.
- Peyerimhoff P. de. 1926. Nouveaux coléoptères du Nord-Africain. Cinquante-septième note. Faune de la Zousfana et du Guir. *Bulletin de la Société Entomologique de France*. 1926: 193–196.
- Pic M. 1922. Notes diverses, descriptions et diagnoses (Suite). *L'Echange, Revue Linnéenne*. 38: 29–30.
- Reiche L.J., Saulcy F. 1857. Espèces nouvelles ou peu connues de coléoptères, recueillis par M. F. de Saulcy, membre de l'Institut, dans son Voyage en Orient, et d'crites. *Annales de la Société Entomologique de France* (3). 5: 169–276, 1 pl.
- Reitter E. 1900. Bestimmungs-Tabelle der Tenebrioniden-Abtheilungen: Tentyrini und Adelostomini aus Europa und den angrenzenden Ländern. Paskau: Edmund Reitter. [1] + 82–197.
- Schawaller W. 1990. Revision of the Western Palearctic Tenebrionidae (Coleoptera). Part 2. The genus *Ammogiton* in Arabia with description of a new species. In: Fauna of Saudi Arabia. Vol. 11. Basel: Pro Entomologia, c/o Natural History Museum: 40–48.
- Schuster A. 1935. Die Tenebrioniden-Ausbeute Dr. Gabriels in Persien. *Koleopterologische Rundschau*. 21: 20–29.
- Schuster A. 1937. Eine Tenebrioniden-Ausbeute von Mesopotamien, Palästina, Syrien und Aegypten. *Koleopterologische Rundschau*. 23: 44–52.
- Silva T.S.R., Neundorff A.C.A., Feitosa R.M. 2026. Materiality and context of specimen labels: exposing frictions between local and global priorities in the preservation of 'nonprototypical' records. *Biological Journal of the Linnean Society*. 147(1): blaf115. DOI: 10.1093/biolinnean/blaf115
- Soldati L. 2009. The darkling beetles (Coleoptera: Tenebrionidae) of Qatar. Warszawa: Natura optima dux Foundation. 101 p. + 17 plates.

Received / Поступила: 15.01.2026

Accepted / Принята: 17.02.2026

Published online / Опубликована онлайн: 9.07.2026