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A taxonomic revision of the genus *Merizomena* Chaudoir, 1873 (Coleoptera: Carabidae: Lebiini)

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Taxonomical, geographical and nomenclatorial aspects of *Merizomena* Chaudoir, 1873 are discussed. The genus *Merizomena* is divided in to 2 subgenera *Merizomena* s.str. and *Dichromenta* subg. n. One new species is described: *M. kabaki* sp. n. (Tajikistan). *M. schoenmanni* (Kirschenhofer, 1994) is restored as a valid species. Five new synonyms are established: *M. silvatica* Mikhailov, 1977 syn. n. = *M. tricolor* (Gebler, 1845); *M. klapperichi* (Jedlička, 1956) syn. n. = *M. grandinella* (Semenov, 1889); *M. afgana* (Jedlička, 1956) syn. n. = *M. grandinella*; *M. buettikeri* (Mateu, 1986) syn. n. = *M. castanea* (Klug, 1832); *M. yemenita* (Mateu, 1986) syn. n. = *M. castanea*. A lectotype is designated for *M. castanea* (Klug, 1832). Distribution maps are added. An identification key is provided

Key words: new subgenus, new species, new status, new synonymy, taxonomy, first records, Carabidae, Lebiini, Afghanistan, Armenia, Egypt, Iran, Iraq, Israel, Jordan, Kazakhstan, Kyrgyzstan, Saudi Arabia, Tajikistan, Turkey, Turkmenistan, Uzbekistan, Yemen.

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INTRODUCTION

Despite many proposals among others (Jeannel, 1949, Basilewsky, 1984), the taxonomy of the subtribes of the Lebiini is highly controversial (Baehr & Will, 2019) and for a large part based on the shape and structure of the gonocoxites. An exception to this is the Calleidina (Chaudoir, 1873). Calleidina is a very diverse and divergent assemblage of genera and species of Carabidae and is distributed on all continents, with their highest diversity in intertropical areas (Casale, 1998). The molecular research of Ober and Maddison (2008) largely confirmed the proposals

of Casale (1998) about the phylogeny of the subtribe Calleidina. Chaudoir (1873) combined species from different Lebiini genera in *Merizomena* Chaudoir, (1873) such as *Cymindis basalis* (Chaudoir, 1852) and *Cymindis tricolor* (Gebler, 1845). Chaudoir assumed that *Singilis dimidiata* (Motschulsky, 1864) also belonged to this genus. *Singilis dimidiata* was only recently, after the paper of Anichtchenko (2011), added to *Merizomena*. Chaudoir did not include *Cymindis castanea* (Klug, 1832) into the genus in question. Maindron (1905) already noted that the species treated by Chaudoir as *C. castanea*, was only a colour variety of *Glycia rufolimbata* Maindron, 1905. According to Maindron, Chaudoir did not know *C. castanea*. Chaudoir's views were only partly followed by subsequent authors, many authors considered *Merizomena* as a subgenus of *Glycia* Chaudoir, 1842 (Jakobson, 1908; Winkler, 1924; Csiki, 1932; Kirschenhofer, 1994) or *Agatus* Motschulsky, 1845 (Kryzhanovskij, 1965).

Due to the lack of an unambiguous description of closely related species, a revision of the genus is needed. An additional problem was the loss of some holotypes, or double designation of holotypes of the same species.

Taxa now classified under *Merizomena*, can be divided into 2 subgenera, based on important diagnostic characters as body shape and basal border of elytra. For each subgenus and species, diagnostic characters and geographical distribution maps are provided. Differences between species are based on the combination of systematic external morphological differences with differences in the copulatory pieces in the endophallus. When studying the copulatory piece, it has been taken into account that it is not in a fixed position, it can be both twisted and shifted. Local populations and specimens can vary in colour (orange-brownish-yellowish), with many morphological features such as shape of pronotum, shape of labrum (straight to slightly incised), shape of basal border of pronotum (slightly oblique to strongly oblique), microsculpture and so on.

Up to now, the identification of these species is difficult because of the confusion around types and the absence of identification keys. Every effort was employed to check as many specimens recorded in the literature as possible; however, we could not find all of the relevant material. In some cases, old records are erroneous. To avoid these problems in future and to get a better insight in distribution of species here we have added an identification key.

MATERIAL AND METHODS

The study is based on the examination of several hundred *Merizomena* specimens housed in many collections. Specimens were examined with a Leica MZ 20.5 C stereomicroscope. Genitalia were extracted after soaking of the specimen for at least 24 h in a commercial protein enzyme solution. Male genitalia were immersed in a water/alcohol mixture in several stages and preserved in Euparal on microplastic cards added on the pin under the specimen.

Photographs of specimens were taken with a Canon 5Ds digital camera and Canon MP-E 65 mm macro lens or a Nikon 10× objective mounted on a bellow, and subsequently stacked using Helicon Focus 7. The projection of the median lobe shape, and especially the shape of copulatory pieces and apical lamella is strongly dependent of the position of the median lobe. The copulatory piece in the median lobe is not in a fixed position. We made a series of at least 4 photos of the median lobe by rotating it around its longitudinal axis. In some specimens, the proteins in the median lobe were highly denaturalized, causing a slight deformation of the copulatory pieces.

Measurements were mostly conducted from photographs. For measurements of the median lobe of the aedeagus (in the following referred to as "median lobe"), a 10x Nikon objective was used. The length of the median lobe was measured from basal bulb to the tip of the apical lamella at the widest distance. Measurement of length of median lobe were calibrated with a microscope

objective micrometer (0.01 mm). Microsculpture was studied at 120× magnification.

The label text of type specimens or of historical specimens is cited as originally given. In some cases, sites are now located in other countries or provinces. In type material a forward slash (/) indicates the end of each line. A double forward slash (//) separates labels.

Abbreviations are as follows: BL – body length, from the anterior margin of the clypeus to the elytral apex; BW – body width in widest point; HW – head width, maximum width of head across the eyes; E – eye length in dorsal view; T – tempora length in dorsal view; PL – pronotum length, from anterior to basal margin along its median line; PM – maximum width of pronotum; PS – minimum width of pronotum; PB – width of pronotum at base; EL – elytral length, from the apex of the scutellum to the apex of the longest elytron along the elytral suture; EW – elytra width at their broadest point; G1 – length of gonocoxite 1; G2 – length of gonocoxite 2. Metepisternum is measured along anterior margin and external side; N – number of examined specimens. All measurements are reported in millimeters. Average values for all morphometric characters are given in parentheses.

In the (re)description of the species the number of specimens measured and number of genital preparations is given in parentheses. Distribution maps were made using Klasse 2.0.75, a faunistic database published by NEV (Nederlandse Entomologische Vereniging).

Abbreviations of institutions and working collections:

CAA Working collection of Dr. Alexander Anichtchenko, Daugavpils, Latvia

CAK Working collection of Dr. Alexander Koval, St. Petersburg, Russia

CAP Working collection of Dr. Alexander Putshkov (†), Kiev, Ukraine

CBK Working collection of Drs. Igor Belousov and Ilya Kabak, St. Petersburg, Russia

CDW Working collection of David W. Wrase, Gusow–Platkow (part of Zoologische Staatssammlung München), Germany

CJM Working collection of Jan Muilwijk, Bilthoven, Netherlands

CJS Working collection of Dr. Joachim Schmidt, Admannshagen, Germany

CKO Working collection of Kamil Orszulik, Frýdek-Místek, Czech Republic

CPS Working collection of Peer Schnitter, Halle, Germany

CRF Working collection of Ron Felix, Berkel Enschot, Netherlands

CSA Working collection of Mahmoud Saleh Abdel-Dayem

CSO Working collection of Serguei Ovtchinnikov (†), Bishkek, Kyrghyzstan (part of ZIN, St. Petersburg)

CTA Working collection of Thorsten Assmann, Lüneburg, Germany

CVZ Working collection of Vladimir Zieris, Pardubice, Czech Republic

HMIM Hayk Mirzayans Insect Museum, Tehran, Iran, Dr. S. Serri

IBB Institute of Biology of the National Academy of Sciences, Bishkek, Kyrghyzstan, Dr. Dmitry Milko

IZK Institute of Zoology of the National Academy of Sciences, Almaty, Kazakhstan, Dr. Rustem Kadyrbekov

NHMUK Natural History Museum, London, Dr. Maxwell Barclay, Ms. Beulah Garner

MNB Museum für Naturkunde Berlin, Germany, Dr. Johanes Frisch

NHMB Naturhistorisches Museum Basel, Switzerland, Isabelle Zuercher, Matthias Borer

MNHN National Museum of Natural History, Paris, France, Dr. Thierry Deuve

MNP Narodný Museum v Praze, Dr. Jiří Hájek

MPU Moscow State Pedagogical University, Moscow, Russia, Dr. Kirill Makarov

MRAC Royal Museum for central Africa, Tervuren, Belgique, Drs. Stéphane Hanot

MRSN Turin Museum of Natural History, Torino, Italy, Fulvio Giachino

NHMW	Naturhistorisches Museum, Wien, Austria, Dr. Harald Schillhammer
NME	Naturkundemuseum Erfurt, Matthias Hartmann
RISNB	Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgique, Dr. Wouter de Koninck
RMNH	Natural History Museum 'Naturalis', Leiden, The Netherlands, Dr. Oscar Vorst
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Dr. Arnaud Faille
UAEIC	United Arab Emirates Invertebrate Collection, City, UAE
ZIN	Zoological Museum of the Russian Academy of Sciences, Russia, Dr. Boris Kataev
ZMMU	Zoological Museum of Moscow State University, Moscow, Russia, Dr. Alexey Gusakov
ZMUO	Zoological Museum of University of Odessa, Odessa, Urkaine, Dr. Viktor Lobkov
ZSM	Zoologische Staatssammlung, Munich, Dr. Michael Balke

TAXONOMY

Genus *Merizomena* Chaudoir, 1873

genus *Merizomena* Chaudoir, 1873: 100, type species *Cymindis basalis* Chaudoir, 1852 (designated by Bedel, 1907).
genus *Calleida* Maindron, 1905: 331.
genus *Merizomena*: Bedel, 1907: 266.
genus *Glycia* Chaudoir, 1842, subgenus *Merizomena*: Jakobson, 1908: 402.
genus *Glycia* Chaudoir, 1842, subgenus *Merizomena*: Winkler, 1924: 204 (Callidini).
genus *Glycia* Chaudoir, 1842, subgenus *Merizomena*: Csiki, 1932: 1437 (Subtribe Calleidina Chaudoir, 1873: Callidini).
genus *Agatus* Motschulsky, 1845, subgenus *Merizomena*: Kryzhanovskij, 1965: 103.
genus *Merizomena*: Emetz, 1973: 1413 (Subtribe Cymindidina Laporte, 1834: Cymindina).
genus *Merizomena*: Kryzhanovskij, 1983: 281, 284.
genus *Glycia* Chaudoir, 1842, subgenus *Merizomena*: Kirschenhofer, 1994: 1002.
genus *Merizomena*: Kryzhanovskij et al., 1995: 169 (Subtribe Cymindidina Laporte, 1834: Cymindina).
genus *Merizomena*: Lorenz, 1998: 465 (Subtribe Agrina Kirby, 1837).
genus *Merizomena*: Kabak, 2003: 409 (Subtribe Agrina Kirby, 1837).
genus *Merizomena*: Lorenz, 2005: 491 (Subtribe Agrina Kirby, 1837).
genus *Merizomena*: Mikhailov, 2013: 21 (Subtribe Cymindidina Laporte, 1834: Cymindina).
genus *Merizomena*: Azadbakhsh & Nozari, 2015: 98 (Subtribe Agrina Kirby, 1837).
genus *Merizomena*: Kabak, 2017: 581 (Subtribe Calleidina Chaudoir, 1873).

Redescription. Recognizable by the combination of the following characters: small to medium sized Lebiini (BL: 5–8.5 mm); elytra bicolored, base yellowish or red and distal part dark brown, black or violet. Dorsal and ventral side of body covered with punctures and hairs. Ventral sides of tarsomeres covered with bristles, dorsal side with scarce pubescence. Hind wings fully developed.

Head. Mostly with prominent eyes. Labrum flat, transverse; its anterior margin almost straight, with three pairs of setae. Clypeus flat, with one pair of antero-lateral setiferous pores. Frontoclypeal suture superficially, shortened laterally. Frons flat, with elongate wrinkles along the sides, smooth in the middle. Supraorbital furrow short, deepened. Mandibles short, with a clear scrobe. Two pairs of supraorbital setiferous pores located along upper margin of eye; anterior pore located close to front margin of eye in the supraorbital furrow and posterior one just behind the eye. Suborbital setae absent. Several additional setae located on sides of vertex, posterior of the eyes. Frons and vertex sparsely punctate and with short pubescence. Maxillary palpi with ultimate segment fusiform, penultimate palpomere shorter than both basal and ultimate palpomeres. Ultimate labial palpomere securiform, with or without pubescence. Mentum and submentum not fused. Mentum with acute lateral lobes and with rounded median tooth; with two setiferous pores at anterior margin laterally of median tooth. Submentum

with two setae. Ligular sclerite wide, anterior margin concave in middle, with a pair of apical setae. Antennae pubescent beginning with antennomere 4; antennomere 1–3 with apical setae and some additional hairs.

Thorax. Pronotum cordiform, base lobed, subrectilinear medially, oblique and slightly incised laterally toward hind angles; not marginated in middle; sparsely punctured and pubescent. Scutellum smooth. Prosternum, meso- and metasternum, pro-, mes- and metepisterna and epipleura with scattered punctures and pubescence.

Abdomen. Elytra truncate, widest at apical quarter; shoulders are subrectangular, though rounded, with some scattered short hairs. Sutural apical angle nearly at a right angle, with or without a small dent. Basal border complete or interrupted at level of the 3th or 4th stria. Parascutellar striole and parascutellar setiferous pore present. Interstriae with punctures and pubescence, the punctures arranged mostly in one–two irregular rows. Umbilicate series continuous, consisting of 13–18 pores, penultimate puncture not laterally displaced and one pore located at apex of striae 3. Epipleura of elytra not reaching external apical angle and not visible from above. Dorsal surface of elytra pubescent. Anal ventrite with 2–5 pairs of setae along apical margin.

Legs. Apical spines of tibiae shorter than half of tarsomere 1. Protibiae with an apical bundle of bristles. Tarsi with some hairs on dorsal side; tarsomere 4 without distinct anterolateral lobes. Male pro- and mesotarsi dilated and clothed beneath with whitish ventral adhesive hairs. Claws denticulate on inner side.

Median lobe. Flattened, straight for most of its length, its ventral margin bisinuate, apical orifice displaced to the left; apical lamella short, wide, rounded apically. Endophallus with 1 or 2 copulatory pieces. Left paramere short, broadly rounded at apex, right paramere with an incision on apical margin.

Female genitalia. Gonocoxite 1 glabrous, gonocoxite 2 with numerous short apical and preapical spinae and setae; with a hyaline apex. Spermatheca elongate, ductus like, with long basal ductus. The spermathecal gland is delicate and ends with a long thin duct in the spermatheca.

Comparative notes. The related genera *Glycia* Chaudoir, 1842, *Paraglycia* Bedel, 1904 and *Lipostratia* Chaudoir, 1872 differ from *Merizomena* by form of copulatory pieces of endophallus; absence of punctures and pubescence on pronotum, elytra and supplementary setae on vertex; absence of pubescence on dorsal side of tarsomeres and by more distinctly distinct anterolateral tarsomere 4.

Distribution. N.W. Africa to middle Asia.

Subgenus *Merizomena* s.str.
Type species: *Merizomena* (s.str.) *basalis* (Chaudoir, 1852)

Description. Small to medium sized Lebiini (BL: 5–7.5 mm); Body moderately convex. Head dark, pronotum red or brownish, elytra bicolored: basal part red, distal part black, sometimes with violet or bluish metallic lustre; ventral side of the head partly red, partly black, in all cases anterior parts of genae and gula black; thorax red; ventrites black; appendages in most specimens with dark femora and antennae at least partly darkened.

Head. Rather large, frons and vertex with punctures and pubescence, scattered setae on posterior side of vertex; tempora with long hairs. Maxillary palpi with basal segment thickened, with 1 apical seta and 1 (in *M. tricolor*) or 2 (in *M. basalis*) basal setae; penultimate maxillary palpomere short. Mentum punctate, with acute lateral lobes clearly longer than median tooth. Genae punctate, with laterally some black setae. Antennae moderately slender.

Thorax. Pronotum more or less cordate; covered with punctures and erect pubescence. Prosternum and proepisterna with fine punctures and pubescence; coarser on mesosternum, metepisterna, metasternum and epipleura. Prosternal process not bordered in posterior part; with a pair of long setae in *M. tricolor* and several pairs in *M. basalis*. Metacoxae punctate, with two setae along lateral side.

Abdomen. Elytra oblong-oval, slightly convex. Basal border interrupted at level of the 3th or 4th stria. Sutural apical angle nearly right, without a small dent. Elytral apical border with a few punctures with hairs in *M. tricolor* and smooth in *M. basalis*. Umbilicate series continuous, consisting of 13–15 pores. Interval 3 with one preapical pore. Ventrites punctate; especially laterally and on the anal ventrite yellow hairs. Anal ventrite with 2 pair of setae along apical margin.

Legs. Stout; tarsi on ventral side with dense short bristles and at dorsal side some hairs.

Median lobe. With one copulatory piece.

Female genitalia. Gonocoxite 1 without setae, gonocoxite 2 with setae in the apical quarter. Laterotergite IX narrow, semi-circular and highly chitinized.

Comparative notes. Species of this subgenus are characterized by the incomplete basal border of elytra, the shape of the copulatory piece and dark head and black ventrites.

***Merizomena (s.str.) basalis* (Chaudoir, 1852)**
(Figs. 1.1–1.5)

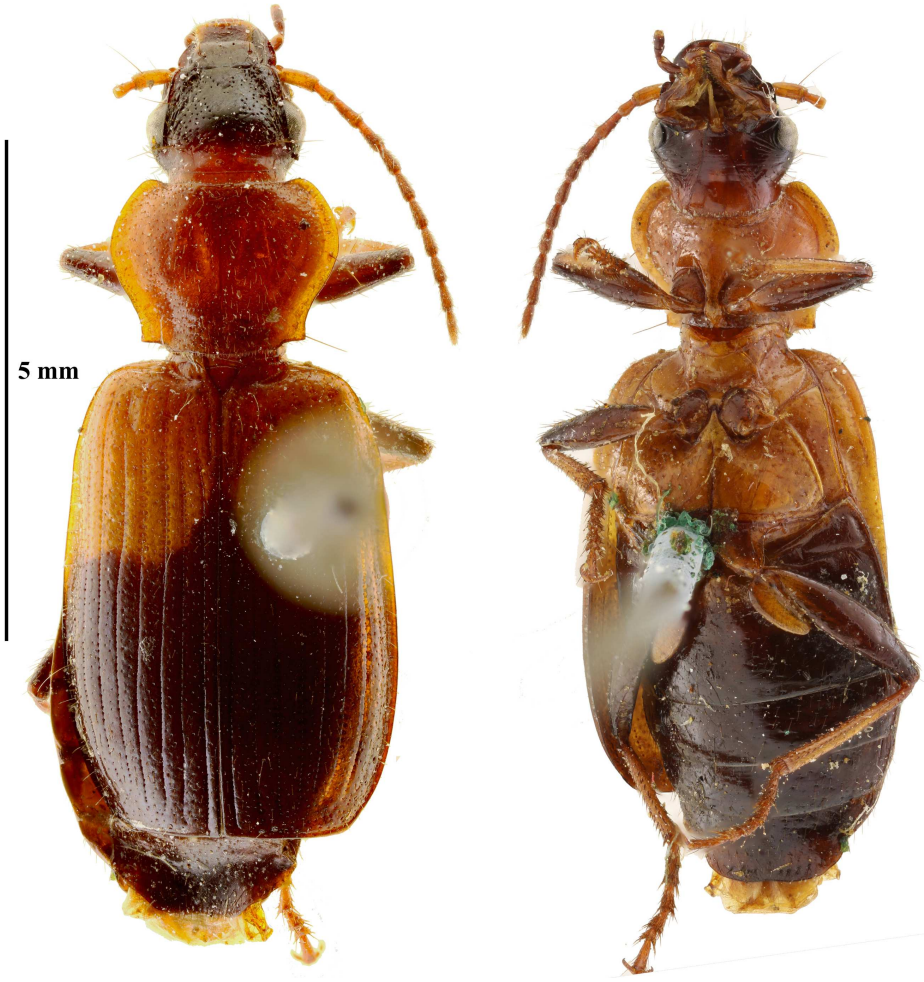


Fig. 1.1 *Merizomena basalis* habitus, holotype, dorsal and ventral view, scale 5 mm.

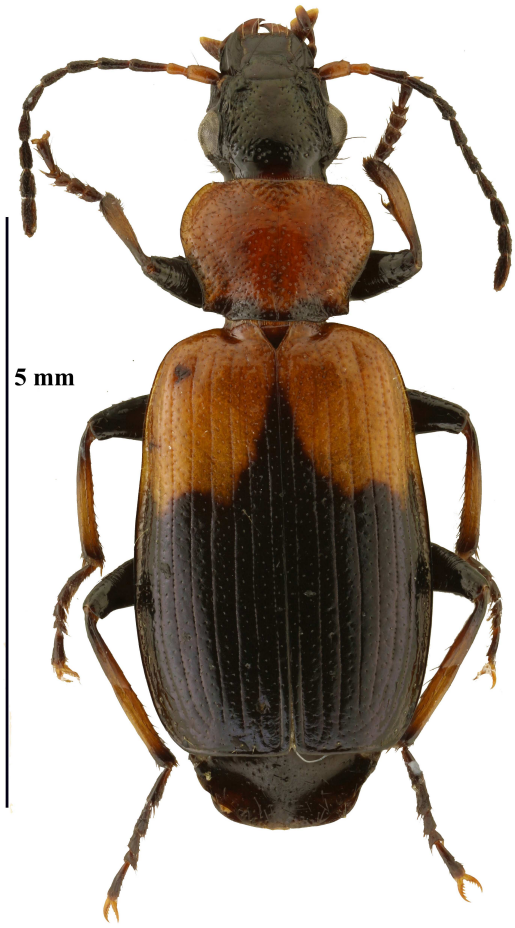


Fig. 1.2 *Merizomena basalis* habitus, Şaryanı, dorsal view, scale 5 mm.

References.

Cymindis basalis Chaudoir, 1852: 59 (type locality: "Diarbékir").

= *Singilis dimidiata* Motschulsky, 1864: 235 (nec *Glycia dimidiata* Ménétriés, 1848) (type locality: "Anatolie").V.M. Emetz established the synonymy in his unpublished PhD thesis.

Cymindis basalis: Gemminger & Harold, 1868: 119, erroneous reference "Sibiria".

Merizomena basalis: Chaudoir, 1873: 100, "Diarbékir".

Merizomena dimidiata (*Singilis dimidiata* Motschulsky, 1864): Chaudoir, 1873: 101, "Anatolia".

Cymindis (*Merizomena*) *basalis*: Marseul, 1880: 157, "Diarbékir".

Glycia (*Merizomena*) *basalis*: Jakobson, 1908: 403, "Asia Minor (Diarbekir)".

Glycia (*Merizomena*) *basalis*: Winkler, 1924: 204, "Asia Minor".

Glycia (*Merizomena*) *basalis*: Csiki, 1932: 1437, "Kleinasien".

Glycia (*Merizomena*) *basalis*: Kirschenhofer, 1994: 1002.

Merizomena basalis: Lorenz, 1998: 465.

Glycia (*Merizomena*) *basalis*: Casale & Vigna Taglianti, 1999: 398, Anatolia.

Singilis dimidiata (Motschulsky, 1864): Casale & Vigna Taglianti, 1999: 398, Anatolia

Merizomena basalis: Kabak, 2003: 409, "Asia: Turkey".

Merizomena basalis: Lorenz, 2005: 491.

Merizomena basalis: Kabak, 2017: 581, "Asia: Turkey", with an erroneous reference to *Lebia basalis* (43). The correct reference is *Cymindis basalis* (59).

Type material. 1♂, "*Singilis dimidiata* Motsch., labeled: "Amasia // *Singilis dimidiata* Motsch. Anatolia"; "Holotypus det. Emetz, 1972"; "*Merizomena basalis* Emetz det. 1972", ZMMU.

Additional type material. Cotype 1♀ *Cymindis basalis* Chaudoir 1852, in collection Chaudoir, HMNM, labeled: "Type (red) // Museum Paris / 1952/ Coll. R. Oberthuer // ex musaeo Chaudoir". We added a red label: "*Merizomena basalis*". Separated on another pin, the mentum, ligula and labial palp of this specimen are glued to a cardboard mount with label: "Glycia basalis Ch. // ex musaeo Chaudoir".

Additional material examined. **Turkey:** 1♂, Sanliurfa, Şaryanı, 19.v.2007, 36°58' N, 38°26' E, A.Cedzo leg., CDW; 1♀, Diyarbakir, Diyarbakir, 37°55'28" N, 40°12'38" E, Kindermann leg., MNHN; 1♀, Bitlis, Tatvan, 17.vi.2005, 38°29'00" N, 42°15'12" E, Hajdaj leg., CDW; 1♀, Erzincan, Pülümür, 18.v.2007, 39°31'12" N, 39°31'12" E, J.Fikera leg., CDW; 1♂, Sivas, Cobanli, 30.iv.1999, 40°01'22" N, 38°35'38" E, L.Klima leg., SMNS; 1♀, Yalova, Koru, .vi.1996, 40°39' N, 29°10' E, CDW; 1♀, Mersin, Kilikisch Taurus, Nordseite, 37°16'30l" N, 34°49'30l" E, v. Bodemeyer leg., ZIN; 1♂, Rize, Choruch River, 50 km NE Ispir, 21.vi.1998, 40°47'54" N,

40°33’18" E, B.Kataev leg., ZIN; 1 ♀, Ankara, Kizilcahamam, 16.vi.1971 +3, 40°28' N, 32°39' E, Bernhauer leg., SMNS col. Heinz.

Redescription. A medium-sized species compared to other species of the genus with BL 6.0–8.0 mm, BW 2.4–3.4 mm (N=4). Head black (in holotype, red behind eyes), pronotum red (base in some specimens black), base one-third of elytra red, apical part black. Habitus as in Figs. 1.1–1.3. Antennomeres, femora and coxae black except red tibiae (in 1 specimen tibiae black), antennomeres 1 and 2 red (holotype with monochromous brownish antennae), tarsi brownish. Basal palpomeres dark, ultimate palpomeres lighter coloured. Base of mandibles black with apex red. Ventral side black, except thorax and posterior part of head. Epipleura red basally, black apically. Palpomeres partly black, partly brownish.

Head. Narrower than pronotum (ratio HW/PM: 0.70–0.78); ratio tempora/eye: 0.3–0.5; tempora slightly convex. Eyes slightly prominent. A few long setae on lateral sides of vertex. Lateral sides of frons and vertex covered with scattered punctures and short erect dark hairs, punctures on vertex coarser. Microsculpture consisting of micropunctures. Maxillary palpi with basal segment short and thickened, kidney shaped. Antennae exceeding elytral base approximately by two apical antennomeres.

Thorax. Pronotum cordate (ratio PM/PL: 1.31–1.36), widest approximately at anterior third, narrowed posteriorly (ratio PM/PS: 1.25–1.38, PM/PB: 1.27–1.40). Lateral sides regularly rounded up to nearly basal 1/5, in basal fifth parallel to each other; basal angles rectangular. Marginal gutter wide throughout. Lateral sides with one seta in the basal angle, and one or two near widest point. Basal margin oblique laterally; marginated near hind angles. Anterior margin subrectilinear medially, not bordered, anterior angles rounded (in holotype, anterior angles slightly protruding forward). Surface especially on the sides covered with punctures and short erect dark hairs. Median line fine. Metepisterna about 2.5 times as long as wide, slightly narrowed to the apex. Proepisterna, prosternum and mesosternum, metepisterna and epipleura with sparse punctures and yellowish hairs. Microsculpture consisting of micropunctures and very superficially transverse meshes.

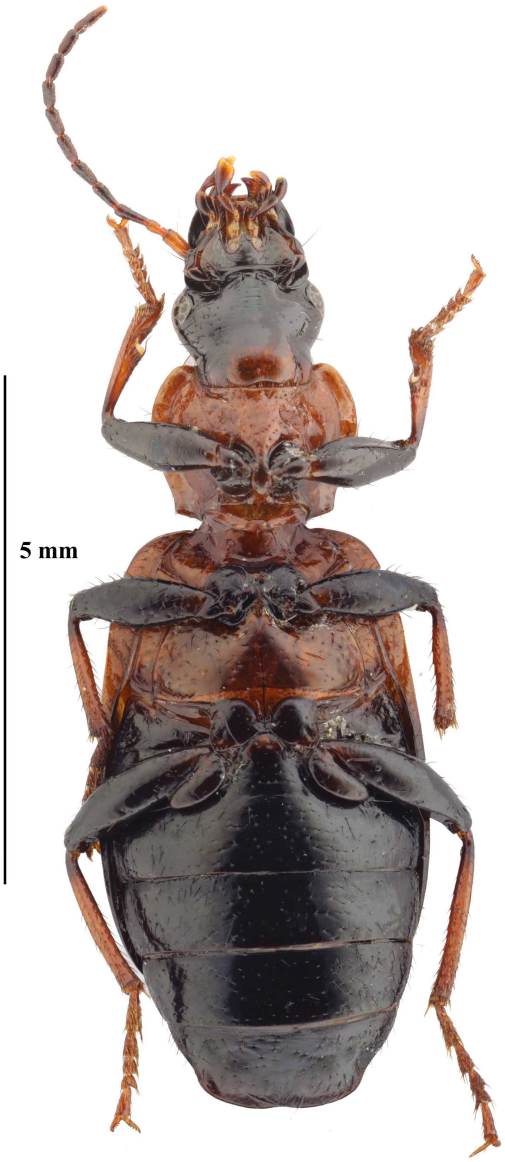


Fig. 1.3 *Merizomena basalis* habitus, Kizilcahamam, ventral view, scale 5 mm.

Abdomen. Elytra oblong elliptical, moderately convex (ratio EL/EW: 1.34–1.41, EL/PL: 2.74–2.99, EW/PM: 1.45–1.63), transversely truncate at apex; widest at apical quarter. Sutural apical

angle subrectangular. Marginal gutter small, obsolete near humeri. Striae punctured, slightly embedded, striae 1 reach the apex, the other striae stop nearly at apex. Striae 6 and 7 curve to sutural apex; interstriae subconvex with a row of irregular punctures with short erect yellowish hairs and a row of smaller punctures without hairs. Microsculpture with evident isodiametric meshes. Ventrites with scattered short hairs, in the middle almost glabrous, along lateral sides erect hairs, denser up to apex. Anal ventrite in the middle slightly incised, with 2 pairs of marginal setae.

Legs. Short and stout. Tibiae setose. Ventral side of mesotarsomeres 1–4 and ventral side of metatarsomeres 1–3 with dense setae; dorsal side with a few setae; claws with 4–6 teeth on inner margin.

Median lobe. Apical orifice in a right angle displaced to the left (Fig 1.4), length 1.38 mm (N=1), dorsal margin in left lateral view slightly arcuate. Copulatory piece in the middle part of the median lobe with a rhombic-shaped base and long-curved distal part.

Female genitalia. Ratio G1/G2: 2.5 (N=1); gonocoxite 2 with a long seta medially and shorter setae in the apical part. Laterotergite IX narrow, semicircular and highly chitinized (Fig 1.5). Spermatheca elongate, merged with basal ductus without bend; basal ductus nearly as long as spermatheca.

Comparative notes. Due to the colour and shape, this species cannot be confused with other species in Turkey.

Geographical distribution. Known so far only from Turkey (Map 1).

Habitat. Unknown.

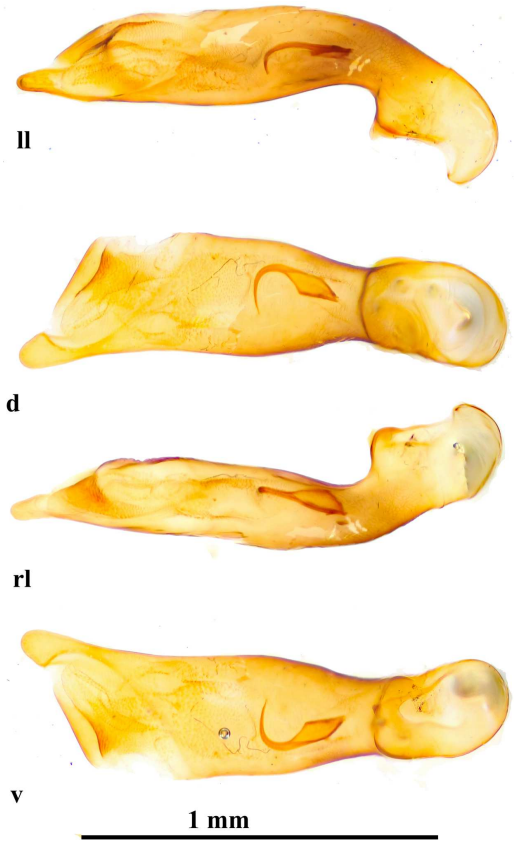
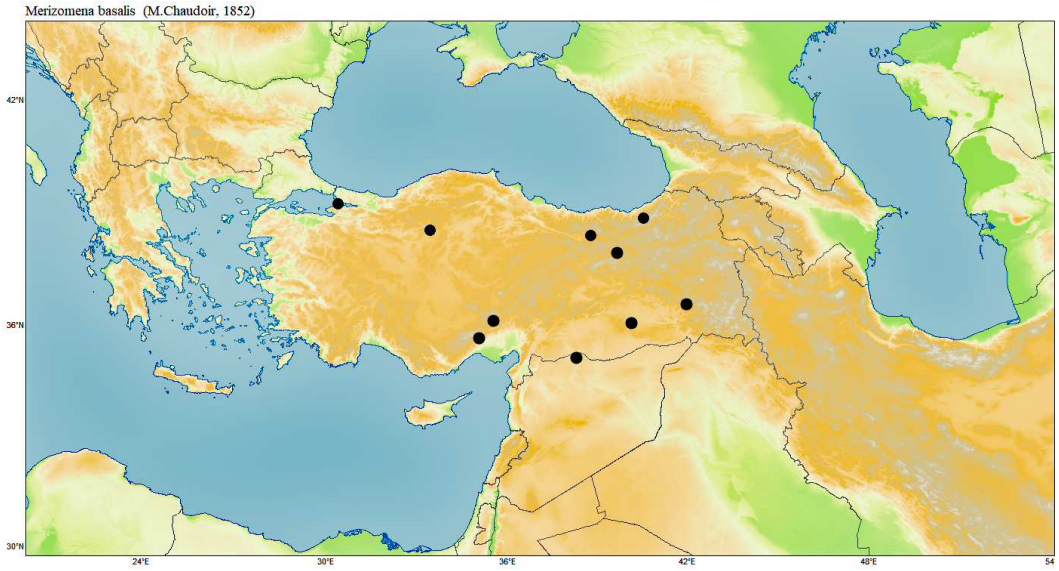


Fig. 1.4 *Merizomena basalis* median lobe, Şaryanı, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

Fig. 1.5 *Merizomena basalis* gonocoxite 1,2 and laterotergite 9, Pülümür, scale 0.5 mm.



MAP 1. *Merizomena* (s.str.) *basalis*.

***Merizomena (s.str.) tricolor* (Gebler, 1845)**
(Figs. 2.1–2.6)

References.
Cymindis (*Glycia* Chaud.?) *tricolor* Gebler, 1845: 99.
Agatus tricolor: Motschulsky, 1850: 39.
Agatus tricolor: Gebler, 1859: 433.
Agatus tricolor: Gebler, 1860: 4.
Glycia tricolor: Gemminger & Harold, 1868: 124.
= *Lebia dimidiata* Ballion, 1871: 325 (non *Glycia dimidiata* Ménétriés, 1848, non *Singilis dimidiata* Motschulsky, 1864), synonymy: Solsky, 1874: 33; Kabak, 2003: 24.
Merizomena tricolor: Chaudoir, 1873: 100, "les bords du lac Balkhasch".
Glycia tricolor: (= *dimidiata* Ballion, 1871): Solsky, 1873: 33.
Cymindis (*Merizomena*) *tricolor* (= *dimidiata* Ballion, 1871): Marseul, 1880.
Cymindis (*Merizomena*) *dimidiata* Ballion, 1870: Marseul, 1880: 159.
Glycia tricolor (= *dimidiata* Ballion, 1871): Heyden, 1880: 19.
Glycia (*Agatus*) *tricolor* (= *dimidiata* Ballion, 1871): Jakobson, 1908: 403.
Glycia (*Agatus*) *tricolor*: Winkler, 1924: 204.
Glycia (*Agatus*) *tricolor*: Csiki, 1932: 1437.
Glycia (*Agatus*) *tricolor*: Kryzhanovskij, 1964: 147.
Glycia tricolor: Arnoldi, 1968: 199, 395.
Merizomena tricolor: Emetz, 1973: 1413.
Merizomena tricolor: Mikhailov, 1977: 167.
Agatus tricolor: Kabak, 1985: 134.
Merizomena tricolor: Kadyrbekov, 1988: 46.
Merizomena tricolor: Soyunov, 1989: 26.
Merizomena tricolor: Konev, 1993: 177.
Merizomena tricolor: Kryzhanovskij et al., 1995: 169.
Merizomena silvatica: Kryzhanovskij et al., 1995: 169.
Merizomena tricolor: Ovtchinnikov, 1996: 108.
Merizomena tricolor: Lorenz, 1998: 465.
Merizomena silvatica: Lorenz, 1998: 465.
Merizomena tricolor: Kabak, Ovtchinnikov, 2002: 65, "Record for Cisfergania needs to be prooved".
Merizomena tricolor: Kalyuzhaya et al., 2002.
Merizomena tricolor: Kryzhanovskij, 2002: 174.
Merizomena silvatica: Kryzhanovskij, 2002: 174.
Merizomena tricolor: Kabak, 2003: 24, 409.
Merizomena silvatica: Kabak, 2003: 409.
Merizomena tricolor: Lorenz, 2005: 491.
Merizomena silvatica: Lorenz, 2005: 491.
Merizomena tricolor: Meldebekov, 2011.
Merizomena silvatica: Michailov, 2013: 21.

Merizomena tricolor: Michailov, 2013: 21 (erroneous record!).
Merizomena tricolor: Kabak, 2017: 582.
Merizomena silvatica: Kabak, 2017: 582.

= *Merizomena silvatica* Mikhailov, 1977 **syn. n.**

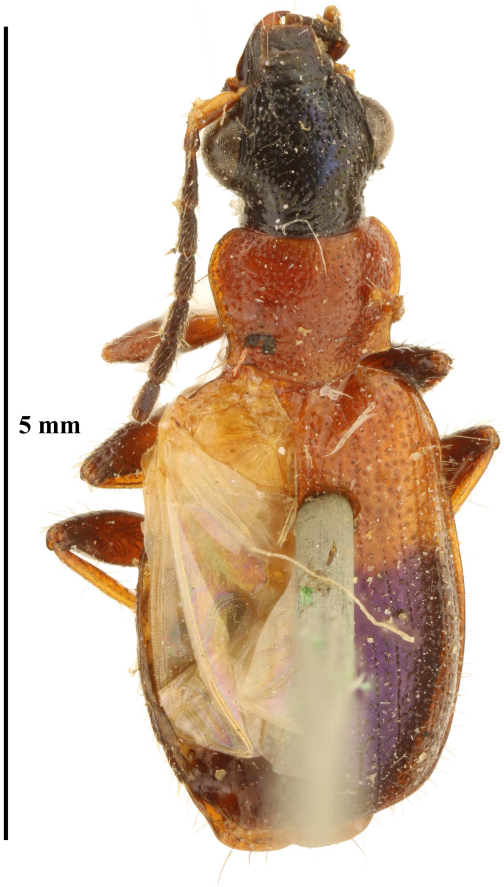


Fig. 2.1 *Merizomena tricolor* habitus, holotype, dorsal view, scale 5 mm.

Holotype: 1 ♂ with original labels "*tricolor* Gebl. / Sibir. or."; including a circle of golden paper. Later Emetz erroneously added the labels: "Not the type of *M. tricolor*!!! Emetz det. 1972 (In Russian) // Merizomena basalis Chaud. / Emetz det. 1972", ZIN.
Typelocality Kazakhstan, "Wüste Ack-Kum", 210 m, ca. 42°22'50" N, 68°12'07" E.

Additional type material. Lectotype: 1 ♂, "*Lebia dimidiata* Ball." (bottom label); "Ak-Kum"; "Lectotypus *Lebia dimidiata* Ballion // 28.10. 1997 // design. I. Kabak", ZMUO.
Merizomena silvatica Mikhailov, 1977: holotpe 1 ♂ with labels: "Darvaz Mt. R., N slope, forest in the Obi-Khingou valley bottom in front of the kishlak Sayot, 1700-1800 m");
Paratype: 1 ♂, labelled: "Vachia, 1889 / Grombczewskyi".
1 ♂, labelled: "Darvaz Mt. R., N slope / forest in the Obi-Khingou valley / bottom in front of the kishlak Sayot / 1700-1900 m // V. Michailov // 3.6.1974" (in Russian) // "Holotypus *Merizomena silvatica* // Michailov 1977" // "Zoological Institute Russian Academy of Sciences St. Petersburg", ZIN.
Additional material examined. Kazakhstan: 1 ♂, Almaty, Altyn Emal Ulken Kalken, 27.iv.2012, 43°50'52" N, 79°44'58" E, D.J.Mann & J.Cooler leg., CDW; 1ex, Qaraghandy, Balkhasch Lake, 46°41'32" N, 73°55'58" E, M.Mniszech leg.; 1 ♀, Qaraghandy, Balkhasch Lake, 12.vii.1969, 46°41'32" N, 73°55'58" E, V.Skopin leg., MNB; 1 ♂, Ak-Kum leg., ZMUO; 6 ♂, 4 ♀, Qaraghandy, 50–60 km NW of Betpak-Dala weather station, Gurjeva, 29.iv.1957, 46°18'36" N, 69°37'24" E, L. Arnoldi leg., ZIN; 3 ♀, Qaraghandy, 40 km W of Betpak-Dala weather station, 13.vi.1961, 46°00'46" N, 69°40'32" E, G.Medvedev leg., ZIN; 1 ♀, Zhambyl, Betpak-Dala weather station, ur. Kagashik, 14.vi.1961, 45°55'26" N, 70°17'28" E, G. Medvedev leg., ZIN; 2 ♂, Qaraghandy, 30 km W of Betpak-Dala weather station, 13.vi.1961, 46°00'06" N, 69°49'50" E, L.Arnoldi leg., ZIN; 1 ♀, Zhambyl, sor. Tshekmen-Kalgan, 60 km S of Betp[ak].-D[ala], 14.vi.1961, 45°28'38" N, 70°15'40" E, L.Arnoldi leg., ZIN; 1 ♂, Almaty, Vernyi distr., Siugaty Gorge, Tshilik Riv., 27.vi.1907, 43°21'24" N, 78°32'18" E, V.Nedzvetzkyi leg., ZIN; 1 ♂, Alexander Geb, .iv.1910, E. Fischer leg., ZIN; 1 ♂, Kapka Graben, 23.iv.1906, E.Fischer leg., ZIN; 1 ♂, Almaty, Ili Riv., Tamgaly-Tas, 1.v.1984, 44°04'28" N, 77°00'32" E, I.Kabak leg., ZIN; 1 ♀, Zhambyl, Tshu-Ili Mts., Kurdai Pass, 10.v.1986, 43°20'52" N, 74°59'02" E, G.V.Nikolaev leg., ZIN; 2 ex, Almaty, Kaptshagai, 20.v.1996,

43°52’26" N, 77°03’04" E, A.V.Gromov leg., CSO; 1 ♀, Zhambyl, Karatau Mt. R., S shore of Biylikul Lake, 18.v.1988 +1, 42°57’42" N, 70°44’14" E, T.N.Vereschagina leg., ZIN; 1 ♀, Qyzylorda, Daryalyk-Takyr, 84 km NW of Kyzyl-Orda, 17.v.1990, 45°06’10" N, 64°32’20" E, R.Kh.Kadyrbekov leg., IZK; 1 ex, Qyzylorda, Barsakelmes Nat. Res, 1993, 45°40’34" N, 59°55’20" E, Konev leg. **Uzbekistan:** 1 ♀, Navoi, Kyzylkum, Bukantau Mts, 13.v.1965, 42°32’50" N, 63°21’16" E, G. Medvedev leg., ZIN; 2 ♂, Navoi, Tamdytau, Aktau Mts, 8.v.1965, 41°41’12" N, 64°28’40" E, G. Medvedev leg., ZIN; 1 ♂, Navoi, Tamdytau, Aktau Mts, 10.v.1965, 41°41’12" N, 64°28’40" E, G. Medvedev leg., ZIN; 1 ♀, Da…inski [unreadable], 10.viii.1871, ZIN; 1 ♀, Karatsh. Utsh-Kayuk, 26.vi.1912, Zarydnyi leg., ZIN; 1 ♂, Margelan, iv.1891, ZIN; 1 ♀, Buxoro, Buchara, 39°46’04" N, 64°27’20" E, MNP. **Tadzjikistan:** 1 ♂, Vakhia, 1.vii.1889, Grombczewskyi leg., ZIN; 1 ♂, Badakhshoni Kuni, Sayyod, Darvaz Mt. R., N slope, forest in the, Obi-Khingou valley bottom in front of the kishlak Sayot, 3.vi.1974, 38°46’50" N, 70°38’32" E, Mikhailov leg., ZIN.

Redescription. A small-sized species compared to other species of the genus with BL 5.5–6.2 mm, BW 2.2–2.6 mm, (N=3). Habitus subconvex, appendages average, shiny (Figs. 2.1–2.3). Base of vertex, pronotum and elytral basal third reddish. Apical two–thirds of elytra violet with a very short extension anteriorly along the suture. Mandibles dark; maxillary palpi yellow, labial palpi with penultimate and ultimate segments brownish. Antennomeres yellowish, fuscated to the apex. Ventral side red, except black anterior part of head, ventrites and apex of epipleura.

Head. Rather large, narrower than pronotum (ratio HW/PM: 0.86–0.88; tempora/eye: 0.48–0.67). Eyes slightly convex, tempora subconvex.

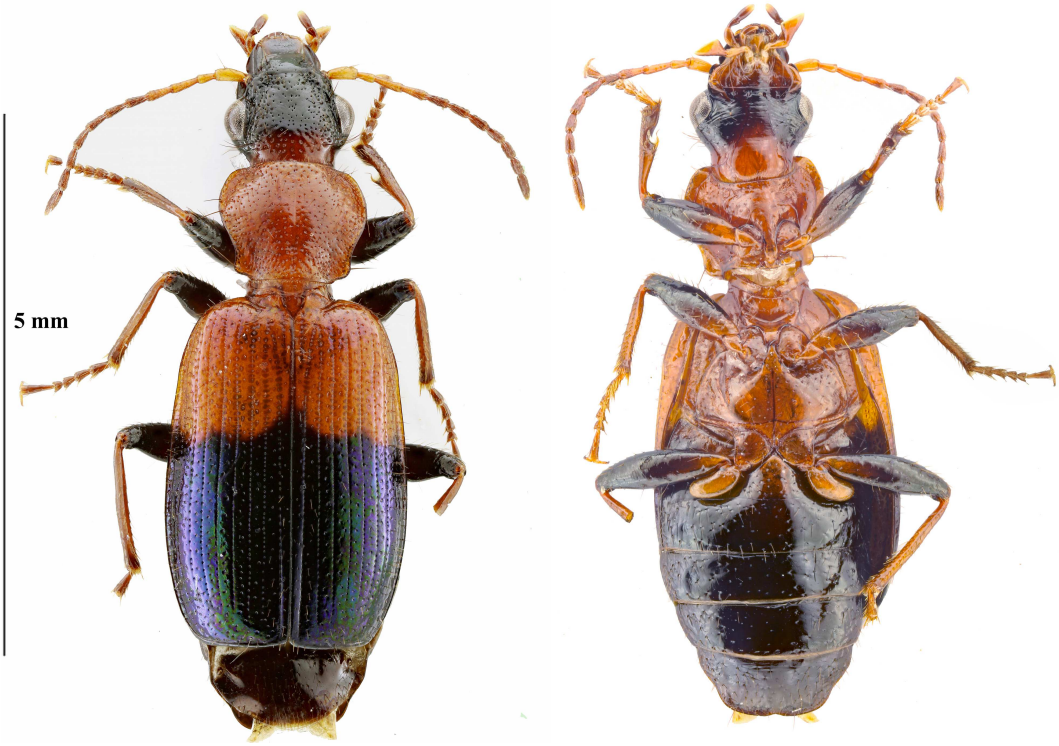


Fig. 2.2 *Merizomena tricolor* habitus, Altyn Emal Ulken Kalken, dorsal and ventral view, scale 5 mm.

Several long setae distal of eyes and on sides of vertex. Frons and vertex covered with coarse punctures and some erect hairs. Lateral sides of labrum with a row of hairs. Microsculpture consisting of micropunctures. Ultimate labial palpomeres strongly securiform in males, with a row of hairs along the sides. Maxillary palpi with basal segment thickened. Antennae exceeding elytral base approximately by two apical antennomeres.

Thorax. Pronotum cordate, moderately convex, (ratio PM/PL: 1.21–1.25), widest approximately at anterior third, narrowed posteriorly (ratio PM/PS: 1.28–1.33, PM/PB: 1.26–1.27). Lateral sides regularly rounded up to nearly 1/5 before base, in basal fifth parallel to each other. Basal angles variable, rounded in some, sharper in other specimens. Marginal gutter near base wide, narrowing forward, vaguely delimited from disc. Lateral sides with one seta in basal angle, and 1–3 setae near widest point. Median line evident. Surface covered with punctures with yellow hairs. Proepisterna, prosternum, mesosternum, metepisterna, and episterna covered with punctures and hairs. Metepisterna about 2.5 times as long as wide, clearly narrowed to the apex. Microsculpture very superficial.

Abdomen. Elytra oblong elliptical, moderately convex (ratio EL/EW: 1.34–1.40, EL/PL: 2.71–3.01, EW/PM: 1.63–1.77), regularly dilated to apex. Sutural apical angle blunt. Marginal gutter narrow, obsolete near humeri. Striae punctured, slightly embedded, striae 1 reaching the apex, the other striae become obscure near the apex; interstriae flat, with a regular row of punctures bearing erect yellow hairs, and scattered smaller punctures without hairs. Microsculpture consisting of superficially engraved isodiametric meshes. Ventrites with decumbent hairs, becoming denser on anal sternite, along lateral sides of ventrites erect hairs. Anal ventrite with 2 pairs of marginal setae, slightly incised in the middle.

Legs. Tibiae with long and thin bristles. Dorsal side of tarsi with a few hairs; mesotarsomeres 1–3 ventrally and metatarsomeres 1–2 with dense bristles; claws with 4 small denticles on inner margin.

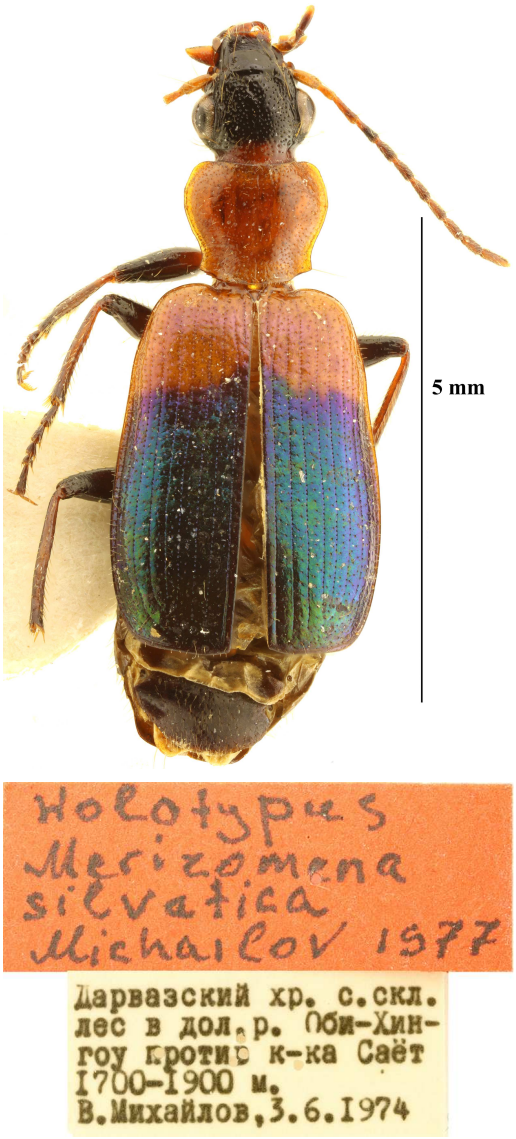


Fig. 2.3 *Merizomena silvatica* **syn. n.** habitus, holotype, dorsal view, scale 5 mm.

Median lobe. Apical orifice half displaced to the left, in dorsal and ventral view, widening to the apex (Figs. 2.4, 2.5), length 1.19–1.27 mm, N=2), in lateral view dorsal margin slightly arcuate. Endophallus medially with a long, slender, curved copulatory piece, basal part of the latter slightly wider than apical part.

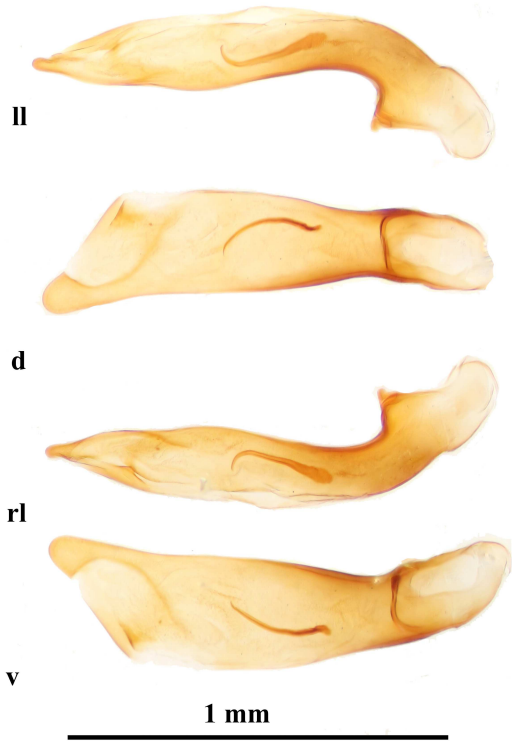


Fig. 2.4 *Merizomena tricolor* median lobe, Altyn Emal Ulken Kalken, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

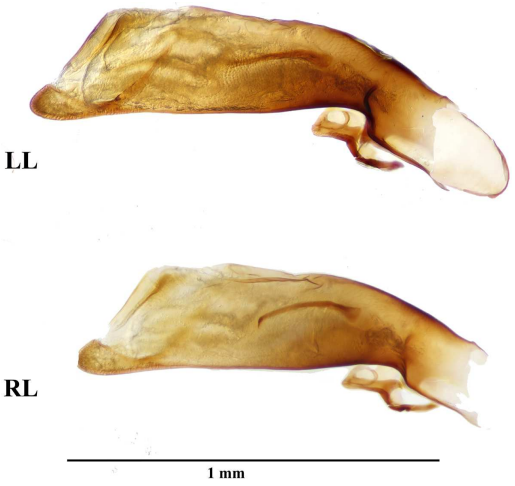


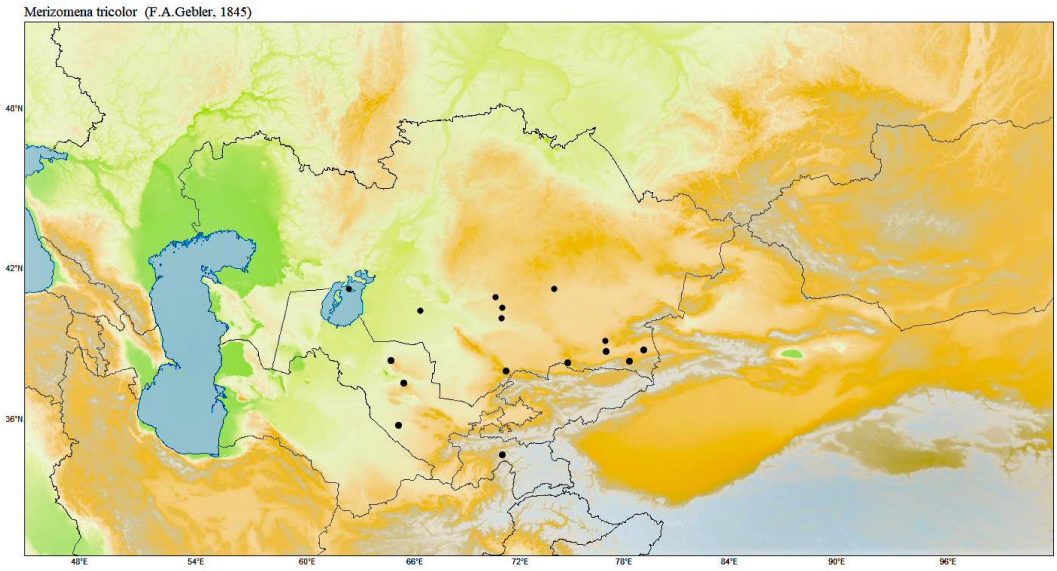
Fig. 2.5 *Merizomena silvatica* **syn. n.** median lobe holotype, v = ventral, d = dorsal view.

Female genitalia. Ratio G1/G2: 2.8 (N=1), gonocoxite 2 with short setae in apical part.

Comparative notes. *M. silvatica* **syn. n.** was in 1977 described by Mikhailov. Mikhailov noted already the strong similarity with *M. tricolor*. According to his description there were differences between these species particularly based on the shape of the labial palps. We could not confirm these differences. Furthermore, he noticed some small differences in colour with regard to the metallic-green shade of the darkened part of the elytra, the darkening of the femora and tarsi. Considering the variation in colour in the related species *M. basalis* and the lack of difference in shape of the median lobe and especially the copulatory piece, we hypothesize that *M. silvatica* **syn. n.** is synonymous with *M. tricolor*. *M. tricolor* differs from *M. basalis* by its smaller size, less transverse pronotum, violet lustre of the apical part of elytra and by the shape of copulatory piece. Due to the colour and shape, this species cannot be confused with other species in Middle Asia.

Note about type material. ZIN contains a male specimen with label "Holotype", including a circle of golden paper, labelled: "*tricolor* Gebl., Sibir. or." (Fig. 2.6). Emetz stated that this specimen did not fit the description of Gebler and added a label "Not the type of *M. tricolor*!!! Emetz det. 1972 // Merizomena basalis Chaud. / Emetz det. 1972" (In Russian). However, compared with the type of *M. basalis* it is clear that he misidentified this specimen. This specimen is the type of *M. tricolor*. We searched for another type of *M. tricolor* in Collection Chaudoir. Chaudoir (1873) had written: 'M. le comte de Mniszech, qui a acquis la collection Geblèr, m'a donné l'un des deux individus qui s'y trouvaient et qui avaient été pris par le Dr Schrenk sur les bords du lac Balkhasch'. We found 2 specimens coll. Chaudoir (MNHN). One specimen with label "Kirgis *tricolor* // coll. Mniszech" is *M. basalis*. The label "Kirgis" is confusing because, as far as we know, this species does not occur in Kyrgyzstan. The other specimen with printed labels "Coll. Oberthuer // ex musaeo Chaudoir" is *M. tricolor*. This is probably the specimen (cotype) Chaudoir obtained from Mniszech.

Fig. 2.6 *Merizomena tricolor* label holotype.



MAP 2. *Merizomena* (s.str.) *tricolor.*

Distribution. Kazakhstan, Uzbekistan, Turkmenistan (Map 2).

Habitat. Mostly in open dry biotopes and one specimen in a moist broad-leaved forest (Mikhailov, 1977).

Subgenus *Dichromenta* subg. n.
urn:lsid:zoobank.org:act:
Type species *Merizomena* (*Dichromenta*) *castanea* (Klug, 1832)

Description. Small to medium sized Lebiini (BL: 5.5–9 mm); body moderately flat. Head and pronotum monochromous yellowish to reddish, elytra

bicolored: base yellowish-red, distal part dark, without metallic lustre, ventral side yellowish, apex more or less brownish; appendages yellowish.

Head. Elongate, tempora with short setae. Frons and vertex with punctures and pubescence. Supraorbital furrow sharp. Maxillary palpi with basal segment widened apically, not thickened. Ultimate palpomere fusiform, slightly longer than penultimate one, with a few small hairs. Penultimate labial palpomere with two long setae on anterior margin. Apical segment of labial palpi securiform, with stout hairs. Gula convex. Mentum punctate at lateral sides, with two setae at anterior margin. Mentum tooth long, slightly shorter than lateral lobes, broadly rounded at apex. Genae finely punctate, with fine erect hairs. Antennae slender, exceeding elytral base approximately by two antennomeres.

Thorax. Pronotum cordate slightly transverse; covered with punctures and pubescence; lateral gutter wide. Anterior margin subrectilinear. Both anterior and posterior margin with a fringe of fine hairs. Anterior angles broadly rounded. Base without margin in middle, lateral margin with hairs. Without basal transverse impression. Lateral sides with one seta in basal angle, and one (two) approximately at widest point. Prosternal process finely marginated, with a few long setae. Metacoxae with two long setae. Prosternum, proepisterna, meso- and mesasternum and meso- and metepisterna with scattered punctures and hairs, denser on proepisterna and meso- and metepisterna. Metepisterna long. Elytral apical border with a few fine punctures.

Abdomen. Elytra relative long (approximately 3.5 times longer than the pronotum) and wide (two times wider than the pronotum), moderately convex. Basal border complete. Sutural apical angle nearly at right angle, with or without a small denticle. Striae slightly embedded; striae 7 and 8 curve to sutural apex. Umbilicate series continuous, consisting of 15–18 setiferous pores; one preapical pore located at apex of stria 3. Ventrites pubescent, denser on anal ventrite, anal ventrite with 5 pairs of setae along apical margin.

Legs. More slender than in the nominate subgenus, especially metatibiae and tarsi. Dorsal surface of tarsi provided with sparse long hairs.

Median lobe. Long, endophallus with 1 or 2 copulatory pieces.

Female genitalia. Gonocoxite 1 without setae, gonocoxite 2 cone shaped with setae in the apical quarter. Laterotergite IX curved; wider and less strongly chitinized as in species from the nominate subgenus. The spermatheca is divided in a pedicel ending in the bursa copulatrix and beginning at the point of the short branch of the spermatheca in which the duct of the spermathecal gland flows and a thicker distal part. The duct of spermathecal gland is very long and thin. The spermatheca is covered with dense villi in the middle part.

Comparative notes. Species of this subgenus differ from species of the nominate subgenus by the elytral base completely marginated, the more elongated and flat body, the slenderer appendages, and yellowish colour of head and ventral side.

Etymology. The name of the subgenus is derived from the bicolour dorsum.

***Merizomena (Dichromenta) arabica* (Mateu, 1986)**
(Figs. 3.1–3.6)

References.
Glycia (*Merizomena*) *arabica* Mateu, 1986: 204, figs. 8, 12.
Glycia (*Merizomena*) *arabica*: Kirschenhofer, 1994: 1002, “Saudiarabien”.
Merizomena arabica: Lorenz, 1998: 465.
Merizomena arabica: Kabak, 2003: 409, “Asia: Saudi Arabia”.
Merizomena arabica: Lorenz, 2005: 491.
Merizomena arabica: Felix, 2009: 130, “Hedjas”.
Merizomena arabica: Kabak, 2017: 581, “Asia: Saudi Arabia”.
Merizomena arabica: Nasir & Katbeh-Bader, 2017: 279, Libanon.

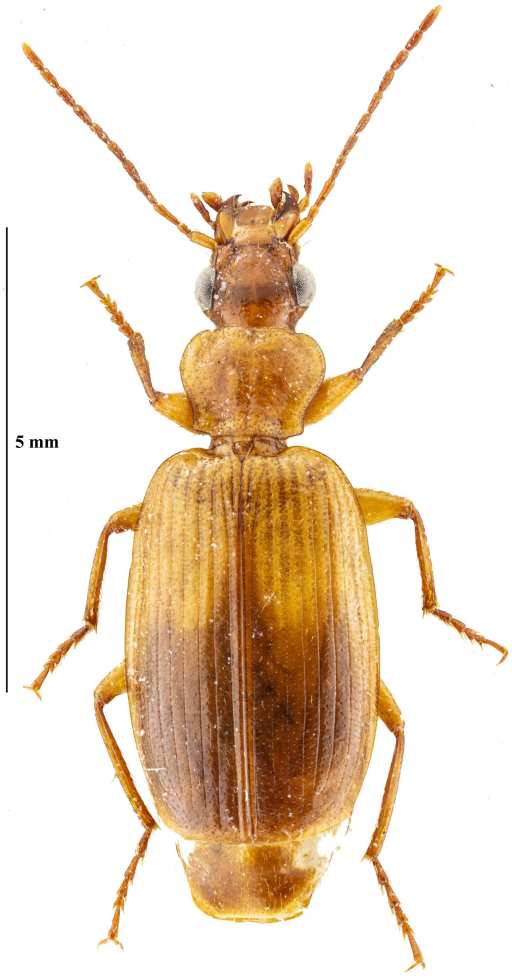


Fig. 3.1 *Merizomena arabica* habitus, holotype, dorsal view, scale 5 mm.

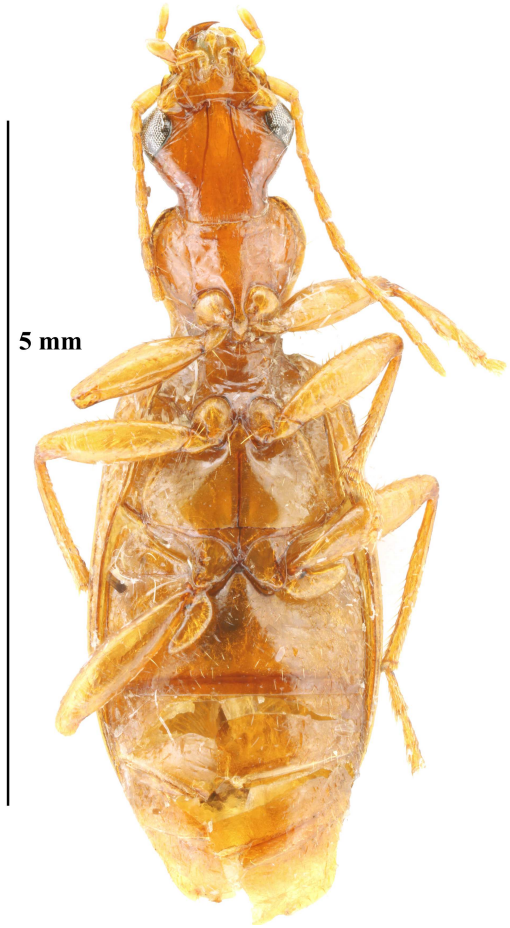


Fig. 3.2 *Merizomena arabica* habitus, Wadi Muqshin, ventral view, scale 5 mm.

Type material. Holotype ♂, labelled: "30 km N of Medina / 500 m, 27.1V.1975 // KAU-NHMB 1979 / Exp. N. Hedjaz // HOLOTYPE (red) // Glycia / (Merizomena) / arabica n.sp. / J. Mateu det., 1983", NHMB. Paratype ♂, with same data as holotype, MRSN.

Additional material examined. Israel: 1 ♂, HaDarom, Arava Hazeva, 2.vi.2001, 30°46'04" N, 35°16'42" E, V.Kravchenko leg., CTA; 1 ♂, HaDarom, En Yotvata, 20.iii.2001, 29°53'36" N, 35°03'50" E, V.Kravchenko leg., CTA; 1 ♀, HaDarom, Hazeva, 8.viii.1995, 30°46'04" N, 35°16'42" E, V.Chikatunov leg., CTA; 1 ♀, HaDarom, Nahal Neqarot, 19.iii.1999, 30°35'34" N, 34°56'46" E, L.Yarum & V.Kravchenko leg., CTA; 1 ♂, HaDarom, Shizzafon, 7.viii.1995, 30°02'48" N, 35°01'36" E, V.Chikatunov leg., CTA; 1 ♂, HaDarom, Wadi Fukra Palestine, .x.1950, 30°55'06" N, 35°14'18" E, Skaloni? leg., CTA. **Jordan:** 1 ♂, Ma'an, Souther Arava Valley, 15.iv.2005 +9, 30°27'54" N, 35°10'38" E, A.Shanas & V.Chikatunov leg., CTA. **Oman:** 1 ♂, Az Zahirah, Wadi Muqshin, 9.iv.2013, 19°27'24" N, 54°27'14" E, P.Kucera leg., CDW. **Saudi Arabia:** 1 ex, Ar Riyad, Wadi Shahib Luha, 27.v.1976, 24°26'30" N, 46°40'40" E, Buttiker leg., NHMB. **UAE:** 1 ex, Fujayrah, Wadi Safad, 15.iii.2007 +7, 25°15'04" N, 56°20'54" E, A.v.Harten leg., CRF.

Redescription. In body size slightly longer and elytra wider in comparison with the other species of this subgenus (BL 6.9–7.6 mm, BW 3.0–3.4 mm, N=6). Habitus as Figs. 3.1, 3.2. Body and extremities uniformly yellowish-red, except for brownish apical half of elytra. Both dorsal and ventral side punctate and pubescent. Head and pronotum moderately shiny, elytra duller.

Head. Rather large, narrower than pronotum (HW/PM: 0.81–0.86); eyes prominent, convex, much longer than tempora (T/E: 0.3–0.4), the latter slightly convex. Frontal foveae superficial on lateral sides. Vertex on each side with a seta diagonally behind the eyes. Sides of frons and vertex punctate, with spaced, small, erect, yellow hairs. Microsculpture consisting of isodiametric meshes and micropores on frons. Mentum sparsely punctated. Antennomere 3 as long as antennomere 1.

Thorax. Pronotum slightly cordate, transverse (PM/PL: 1.29–1.47), widest approximately at anterior third. From the widest point to the hind angles first regularly rounded and in distal part nearly parallel (PM/PS: 1.22–1.36, PM/PB: 1.20–1.32) towards straight hind angles. Base slightly oblique toward hind angles; not marginated in middle. Lateral gutter broad with one seta in basal angle, and one or two at widest point (one specimen with 5 setae on one side). Basal foveae superficial and vague, unified with lateral gutter. Disc convex; median line evident. Scattered punctures fine on disc, coarser and denser in lateral gutter, pubescence moderately sparse, suberect, yellow, as long as on head. Microsculpture consisting of irregular meshes. Metepisterna about 2–8 times as long as wide, slightly narrowed posteriorly.

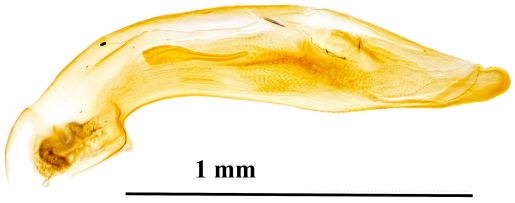


Fig. 3.3 *Merizomena arabica* median lobe, holotype, right lateral view, scale 1 mm.

Fig. 3.4 *Merizomena arabica* median lobe, Wadi Fukra, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

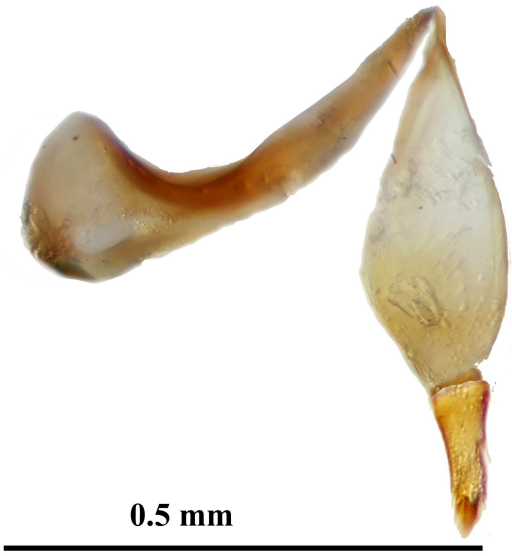


Fig. 3.5 *Merizomena arabica* gonocoxite 1,2 and laterotergite 9, Wadi Muqshin, scale 0.5 mm.

Abdomen. Elytra subrectangular, convex, broadest in posterior half (EL/EW: 1.41–1.64, EL/PL: 3.40–4.52, EW/PM: 1.66–1.78). Lateral margins subrectilinear for most of their length. Apices nearly straight, not incised; external apical angle

of each elytron broadly rounded, sutural angle blunt. Disc convex. Marginal gutter narrow, more narrowed to humeri and apexes. Striae embedded, deepened to base, finely punctate. Interstriae convex, interstriae 2 and 3 with three (two) rows and interstriae 4–8 with two rows of punctures. Near apex interstriae 2 slightly wider than interstriae 3. Pubescence on elytra scattered. Microsculpture evident, more distinct than on head and pronotum, consisting of isodiametric meshes. Anal ventrite with 4–5 pairs marginal setae, both in males and females.

Legs. Moderately robust, meso- and metatibiae slightly longer than corresponding tarsi. Claws with 5–7 teeth. Ventral side of meso- and metatarsomeres 1–4 with long bristles, with decreasing density from tarsomere 1 towards 5.

Length median lobe. 1.50–1.57 mm (N=2), in lateral view dorsal side slightly curved and ventral side straight (Figs. 3.3, 3.4). Base of copulatory piece oval, with long and curved tail, oval base about as long as thin apical part. Apical lamella short, wide and rounded. Length of right paramere is about two thirds of the left paramere.

Female genitalia. G1/G2 > 2 as in Fig. 3.5. The branch of the spermatheca is long and bent. The pedicel is much longer than the distal part (Fig. 3.6).

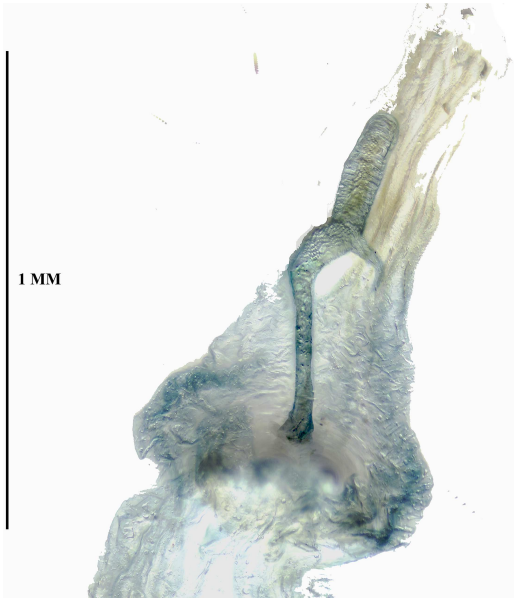
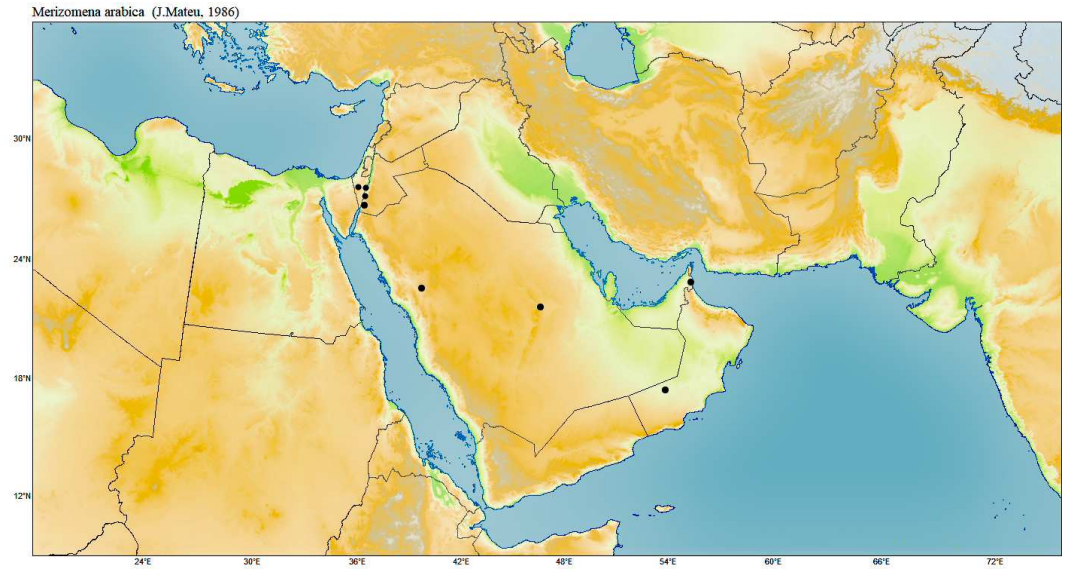


Fig. 3.6 *Merizomena arabica* spermatheca, Wadi Muqshin, scale 1 mm.



MAP 4. *Merizomena* (*Dichromenta*) *arabica.*

Comparative notes. *M. arabica* differs from *M. castanea* by the unpronounced colour difference between the basal and apical part of elytra; by the much more transverse pronotum and interstriae 2–8 with at least two rows of punctures and hairs. The shape of the copulatory piece somewhat resembles that of *M. castanea*, but is narrower with a longer, more pointed apical part.

Distribution. Saudi Arabia, Israel, Jordan, Oman, UAE (Map 4). *M. arabica* lives in sympatry with *M. castanea*. First record for Israel, Oman and UAE.

Habitat. Probably agricultural areas along riversides.

***Merizomena (Dichromenta) castanea* (Klug, 1832)**
(Figs. 4.1–4.8)

References.
Cymindis castanea Klug, 1832: pl. XXII, Fig. 2.
Cymindis castanea: Gemminger & Harold, 1868: 119, "Nubia".
Glycia castanea: Marseul, 1880: 159, "Ambukohl".
= *Glycia seminigra* Fairmaire, 1886: 439. Bedel (1907) established the synonymy.
Glycia castanea: Fairmaire, 1886: 439, "Nubie".
Glycia (*Merizomena*) *castanea*: Jakobson, 1908: 402, "?Asia Minor, Ambukol, Nubia, Erythrea".
Glycia (*Merizomena*) *castanea*: Winkler, 1924: 204, "Aegyptus".
Glycia (*Merizomena*) *castanea*: Csiki, 1932: 1437, "Nubien, Erythraea, Obock".
Glycia (*Merizomena*) *castanea*: Mateu, 1986: 204, figs. 5, 9, "Obock".
Glycia (*Merizomena*) *buettikeri*: Mateu, 1986: 204, figs. 6, 11, "Saudi Arabia".
Glycia (*Merizomena*) *yemenita*: Mateu, 1986: 204, figs. 7, 10, "Aden".
Glycia (*Merizomena*) *castanea*: Kirschenhofer, 1994: 1002.
Glycia (*Merizomena*) *buettikeri*: Kirschenhofer, 1994: 1002, "Saudiarabien".
Glycia (*Merizomena*) *yemenita*: Kirschenhofer, 1994: 1002, "Saudiarabien".
Merizomena castanea (= *seminigra* Fairmaire, 1886): Lorenz, 1998: 465.
Merizomena buettikeri: Lorenz, 1998: 465.
Merizomena yemenita: Lorenz, 1998: 465.
Merizomena castanea: Kabak, 2003: 409, "N Africa: Egypt. Asia: Iraq, Israel, Saudi Arabia, Yemen".
Merizomena buettikeri: Kabak, 2003: 409, "Asia: Saudi Arabia".
Merizomena yemenita: Kabak, 2003: 409, "Asia: Yemen".
Merizomena buettikeri: Lorenz, 2005: 491.
Merizomena yemenita: Lorenz, 2005: 491.
Merizomena castanea: Lorenz, 2005: 491.
Merizomena castanea: Felix, 2009: 130, "Obock, Eritrea and Somalia".
Merizomena buettikeri: Felix, 2009: 130, "Saudi Arabia".
Merizomena yemenita: Felix, 2009: 130, "Aden".
Merizomena castanea: Kabak, 2017: 582, "N Africa: Egypt. Asia: Iraq, Israel, Saudi Arabia, Yemen".
Merizomena buettikeri: Kabak, 2017: 581, "Asia: Saudi Arabia".
Merizomena yemenita: Kabak, 2017: 582, "Asia: Yemen".
= *Glycia* (*Merizomena*) *yemenita* Mateu, 1986 **syn. n.**
= *Glycia* (*Merizomena*) *buettikeri* Mateu, 1986 **syn. n.**
Note about type material. The holotype could not be found in MNB.
Type material. Neotype (here designated) "Glycia seminigra Fairmaire (1886), labelled: "Obock / (Oubert) // TYPE (red) // type // *Glycia seminigra* n.sp. / Fairmaire // *castanea* Kl. / *seminigra* Fairm. / Bedel determ // Museum Paris / coll. Allaud".
Type locality. *Cymindis castanea* Klug, 1832 "Ambukohl" (Soedan).
Additional type material examined. *Glycia* (*Merizomena*) *yemenita* Mateu, holotype 1 ♂, labelled: "Chaikottman / (Aden) / E. Simon // Glycia castanea Klug (handwritten) // HOLOTYPE (red) // Glycia (Merizomena) yemenensis n.sp. / J. Mateu det. 1983 // MUSEUM PARIS / COLL. L. BEDEL 1922", MNHN; *Glycia* (*Merizomena*) *buettikeri* (Mateu, 1983), holotype 1 ♂, labelled: "Saudi Arabien, W. Buettiker // W. Hizmah, 1450

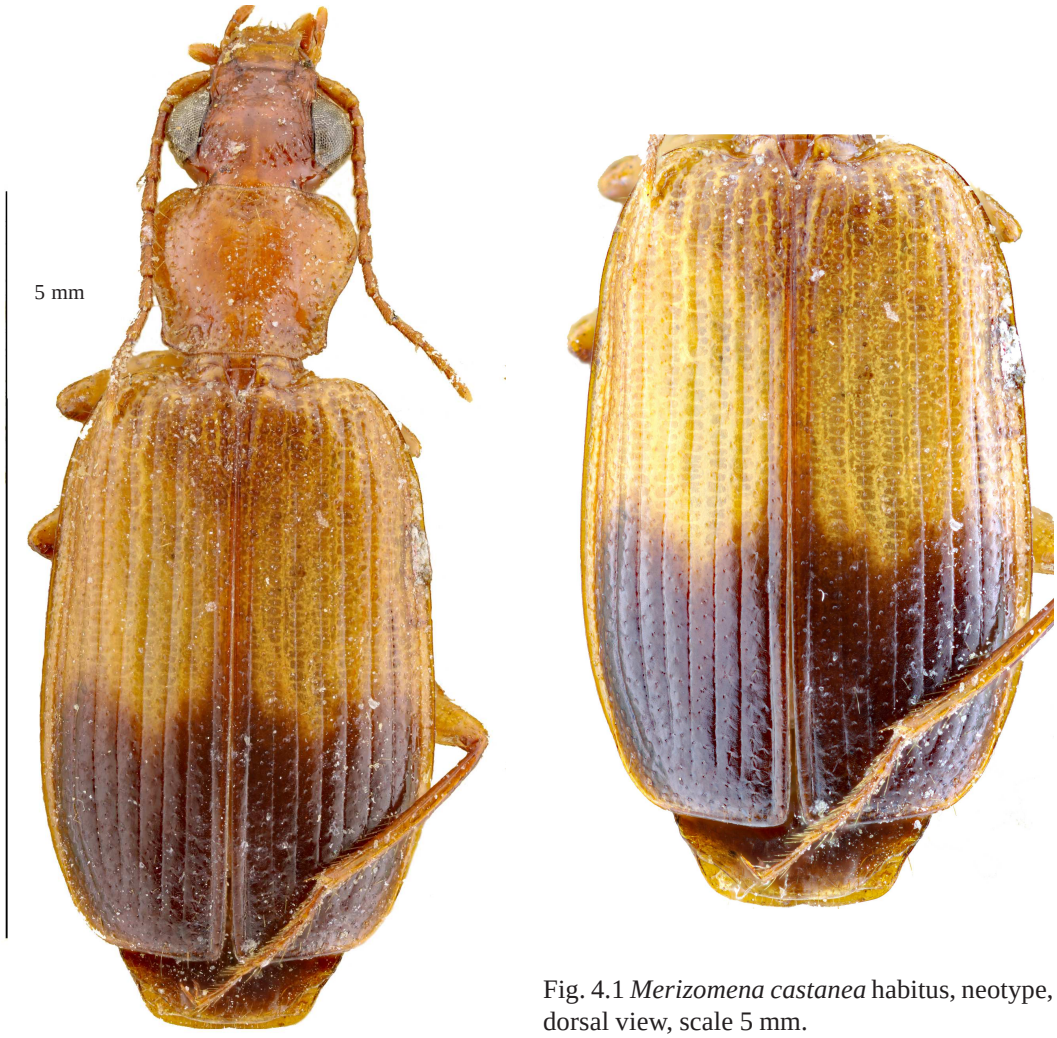


Fig. 4.1 *Merizomena castanea* habitus, neotype, dorsal view, scale 5 mm.

m / 29.9.1980 // HOLOTYPE (red) // Glycia / (Merizomena) / buttikeri n.sp. / J. Mateu det., 1983", NHMB; Paratypes *Glycia* (*Merizomena*) *yemenita* (Mateu, 1983), 5 ♂♂ and 2 ♀♀, labelled: "Aden Dr. Jousseaume // castanea // PARATYPE (red) // Museum Paris / coll M. Maindron / Coll G.Babault 1930", NMHN; "Aden Jemen / Arabien / vii 1897 / Dr. Jousseaume // castanea // PARATYPE (red)" MRSN; "Aden Jousseaume 1897 // PARATYPE (red) // Glycia (Merizomena) yemenita n.sp. / J. Mateu det. 1983 // Museum Paris / coll M. Maindron / Coll G.Babault 1930", MRSN; "Aden Jousseaume 1897 // castanea // PARATYPE (red) // Museum Paris / coll M. Maindron / Coll G.Babault 1930", MRSN; *Glycia* (*Merizomena*) *buettikeri* Mateu, paratype 1 ♂, labelled: "111 km before / Al-Ula, 860 m, 29.9.1980 // PARATYPE (red) // Glycia / (Merizomena) / butikeri n.sp. / J. Mateu det., 1983", MRSN; 1 ♂, labelled: "S. Iran 4.4.1972 / 22 km N Bandar Abbas // Exped. Mus. Vind // ParaTYPE (red) // Glycia (Merizomena) / schoenmanni n. sp. / det. Kirschenhofer, 1994", NHMW; 1 ♀, labelled: "S. Iran 31.3.1972 / 22 km N Bandar Abbas // Exped. Mus. Vind // ParaTYPE (red) // Glycia (Merizomena) / schoenmanni n. sp. / det. Kirschenhofer, 1994", NHMW.

Additional material examined. Djibouti: 1 ex, Obock leg., RISNB; 1 ♂, Obock, .1883, 11°58'20" N, 43°16'30" E, M.Maindron leg.,

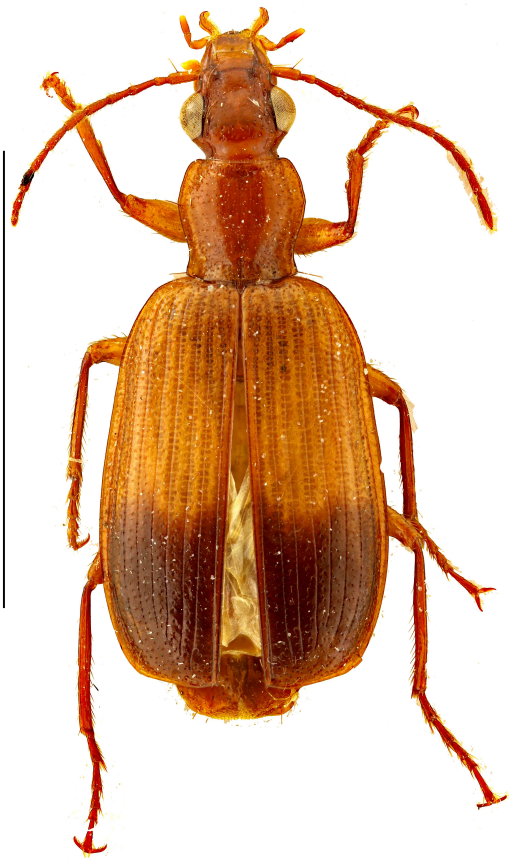


Fig. 4.2 *Merizomena yemenita* **syn. n.** habitus, holotype, dorsal view, scale 5 mm.

MRSN; 1 ♀, Obock, viii.2001, 11°57' N, 43°17' E, Bonhoeve leg., MNHN; 1 ♂, 1 ♀, Obock, 11°57' N, 43°17' E, MNHN; 1 ex, Obock, 11°57’52" N, 43°17’18" E, M. Laligant leg., MNHN; 1 ex, 1 ♂, 1 ♀, Obock, 11°57’52" N, 43°17’18" E, MRAC. **Egypt:** 2 ex, Al Bahr al Ahmar, Gabal Elba, 23.ii.1932, 24°49’50: N, 34°43’44" E, H. Priesner leg., NHMB; 1 ex, Al Bahr al Ahmar, Gabal Elba, W. Cansisrob, 24.i.1933, 24°49’50" N, 34°43’44" E, L.Trap leg., NHMB col., Frey; 1 ex, Janub Sina, Dahab Wadi Kid 40 km SW, 6.ii.2002, 28°08’08" N, 34°22’02" E, L.Lehmann leg., CDW; 1 ex, Janub Sina, Sinai Nuweiba 23 km S., Bir Zerein, 19.iv.1997, 28°45’34" N, 34°36’46" E, W.Ullrich leg., CDW; 1 ex, Janub Sina, Wadi Isla, 10.iv.1940 +2, 28°15’30" N, 33°52’54" E, Alfieri leg., NHMB col., Frey. **Iran:** 1 ♂, Hormozgan, Jask, 13.iii.1991, 25°40’10" N, 57°47’10" E, Mirzayans/Badii leg., HMIM; 1 ex, Sistan and Baluchestan, 44 km NE Zaboli, 30.iii.1973 +1, 27°26’30" N, 61°58’44" E, Exp. Nat. Mus. Praha leg., MPN; 1 ♀, Sistan and Baluchestan, Shadad, 11.ii.1998, 26°09’00" N, 60°33’02" E, Mof./Afd. leg., HMIM. **Israel:** 1 ex, HaDarom, En Gedi, 19.iv.2015, 31°27’04" N, 35°23’00" E, L.Friedman leg., CTA; 2 ♂, 1 ♀, HaDarom, En Gedi, 22.i.2003, 31°27’04" N, 35°23’00" E, V.Kravchenko & V.Chikatunov leg., CTA; 1 ex, HaDarom, En Gedi, 28.ii.2003, 31°27’04" N, 35°23’00" E, V.Kravchenko & V.Chikatunov leg., CTA; 3 ♂, HaDarom, En Gedi, 5.ii.2003, 31°27’04" N, 35°23’00" E, L.Friedman leg., CTA; 1 ex, HaDarom, Hai-Bar Yotvata, 26.ii.2016, 29°50’46" N, 35°01’44" E, J.Prazak leg., Prazak; 1 ♂, HaDarom, Nahal Amram, 24.ii.2016, 29°37’36" N, 34°58’54" E, J.Prazak leg., CDW; 1 ex, HaDarom, Sinai, Arandal, 20.v.1969, 30°30’44" N, 34°50’04" E, Tsabar leg., CTA; 1 ex, HaDarom, Sinai, Fiman, 28.ix.1977, 30°35’22" N, 34°50’06" E, A.Freidberg leg., CTA; 1 ex, HaDarom, Yahel, 5.viii.2003, 30°05’02" N, 35°07’42" E, V.Kravchenko leg., CTA. **Jordan:** 1 ♂, Ma’an, Akaba, 15.iv.1965, 29°31’54" N, 35°00’22" E, J.&S.Klapperich leg., MRSN; 1 ♀, 4 ex, Ma’an, Akaba, 16.xi.2004 +5, 29°31’54" N, 35°00’22" E, K.Orszulik leg., CDW; 3 ♂, 2 ♀, Ma’an, Akaba, 16.xi.2004 +5, 29°31’54" N, 35°00’22" E, K.Orszulik leg., CJM. **Oman:** 1 ♀, Ad Batinah, Al Hotta Resthouse, 23.ii.2011, 23°08’56" N, 57°24’58" E, P.Schnitter leg., CPS; 1 ♂, Ad Batinah, Al Jabal Achtar Mts, 22.x.1992, 23°11’08" N, 57°22’16" E, M.D.Gallagher leg., MRSN; 4 ex, 1 ♂, Ad Batinah, Al Jabal Achtar Mts, Al Hotta, 22.ii.2011, 23°11’08" N, 57°22’16" E, P.Schnitter leg., CJM; 1 ♂, 1 ♀, 1 ex, Ad Batinah, Al Jabal Achtar Mts, Al Hotta, 22.ii.2011, 23°11’08" N, 57°22’16" E, P.Schnitter leg., CPS; 2 ♂, 3 ♀, Ad Batinah, Al Jabal Achtar Mts, Al Hotta, 22.ii.2011, 23°11’08" N, 57°22’16" E, P.Schnitter leg., SMNS col. Heinz; 1 ♂, Ad Batinah, Wadi Bani, 15.iii.2019 +1, 23°18’06" N, 57°31’48"; 1 ♂, 1 ex, Ad Batinah, Wadi Bani, 19.xii.2009 +1, 23°18’06" N, 57°31’48" E, L.Lehmann et al leg., CAA; 1 ♀, Ad Dakhiliyah,

Fig. 4.3 *Merizomena buettikeri* **syn. n.** habitus, holotype, dorsal view, scale 5 mm.

Fig. 4.4 *Merizomena castanea* habitus, Al Jabal Achtar Mts, ventral view, scale 5 mm.

Al Hamra 12 km NW, 15.iii.2019, 23°09’16" N, 57°11’12" E, R.Kmeco leg., CDW; 1 ♂, Ad Dakhiliyah, Nizwa, 9.i.1997, 22°55’00" N, 57°32’10" E, R.Cervenka leg., CDW; 2 ♂, Ash Sharqiyah, Al Fulayi, 28.ii.2011, 22°29’12" N, 59°21’28" E, P.Schnitter leg., CPS; 1 ♂, 1 ♀, Ash Sharqiyah, Maslaq Wadi, 28.ii.2011, 22°30’44" N, 59°25’16" E, P.Schnitter leg., CPS; 1 ♀, Ash Sharqiyah, Shiya, 16.iii.2015, 22°31’18" N, 59°43’18" E, L.Cemy leg., CKO; 1 ♀, Ash Sharqiyah, Wadi Tiwi, 1.iii.2011, 22°47’28" N, 59°13’42" E, P.Schnitter leg., CPS; 1 ex, Az Zahirah, Al Minthar, 13.iii.2019, 23°10’12" N, 57°09’10" E, K.Orszulik leg., CDW; 2 ♂, Az Zahirah, Al

Minthar, 13.iii.2019, 23°10’12" N, 57°09’10" E, K.Orszulik leg., CKO; 1 ex, Az Zahirah, Dhalqut, Wadi Sava, 9.iii.2019, 16°44’14" N, 53°13’28" E, K.Orszulik leg., CDW; 1 ♂, 1 ♀, 2 ex, Az Zahirah, Dhalqut, Wadi Sava, 9.iii.2019, 16°44’14" N, 53°13’28" E, K.Orszulik leg., CKO; 1 ♀, Az Zahirah, Jabab al Quamar, 19.ix.2011, 16°50’32" N, 53°41’34" E, R.Ambrus leg., CAA; 1 ♂, Az Zahirah, Mughsayl, 10.iii.2019, 16°52’44" N, 53°46’50" E, R.Kmeco leg., CDW; 1 ex, Az Zahirah, Mughsayl, 9.iii.2019, 16°53’10" N, 53°46’58" E, K.Orszulik leg., CKO; 1 ♀, Az Zahirah, Rakhvut, 9.iii.2019, 16°43’22" N, 53°13’34" E, K.Orszulik leg., CKO; 1 ♂, Az Zahirah, Salalah, 10.iii.2019, 16°53’16" N, 53°50’30" E, R.Kmeco leg., CDW; 1 ♂, Masqat, Bidbid Fanja, 5.iii.2019, 23°24’30" N, 58°07’24" E, R.Kmeco leg., CDW; 1 ex, Masqat, Fanja, 14.iii.2019, 23°29’18" N, 58°06’20" E, K.Orszulik leg., CKO. **Saudi Arabia:** 1 ♂, Al Bahah, Shada Al Ala Belw House, 14.xi.2015, 19°52’48" N, 41°18’44" E, H.al Dafer,H.Fadl & Mahmoud Saleh Abdel-Dayem leg., CJM; 4 ♂, 3 ♀, Al Bahah, Shada Al Ala Belw House, 14.xi.2015, 19°52’48" N, 41°18’44" E, M.Saleh Abdel-Dayem leg., CSA; 1 ♂, Al Madinah, Wadi Tima, 8.xi.1986 +1, 23°54’50" N, 39°38’42" E, Buttiker leg., NHMB; 1 ♂, Asir, Asir Abha Raydah, 26.iv.2014, 18°11’38" N, 42°23’40" E, H.al Dafer,H.Fadl & Mahmoud Saleh Abdel-Dayem leg., CRF; 1 ex, Makkah, Ashayrah, 25.iv.1936 +12, 21°43’40" N, 40°37’28" E, H.St.J B. Kirby leg., BMNH; 1 ex, Makkah, Djedda, 21.xi.1927, 21°29’08" N, 39°11’32" E, J.B.Philby leg., BMNH; 1 ex, Makkah, Hedjaz leg., MNHN; 2 ex, Makkah, Jeddah, 26.ii.1936, 21°20’28" N, 39°16’52" E, H.St.J B. Kirby leg., BMNH; 1 ex, Makkah, Jeddah, 28.ii.1936, 21°20’28" N, 39°16’52" E, H.St.J B. Kirby leg., NHMB col., Frey; 1 ex, Makkah, Mekka, 7.iii.1936, 21°23’20" N, 39°51’28" E, H.St.J B. Kirby leg., BMNH; 1 ♂, Tabuk, Bada, 1.ii.1953, 26°51’06" N, 36°55’18" E, J.B.Philby leg., BMNH; 1 ex, Tabuk, Ras Marjah, 8.xi.1986, 26°26’40" N, 36°21’02" E, Buttiker leg., NHMB; 1 ex, Tabuk, Ras Marjah, 8.xi.1986, 26°26’40" N, 36°21’02" E, W. Buettiker leg., MRSN. **UAE:** 1 ex, Verenigde Arabische Emiraten, Abu Dhabi, Al’Ajban, 15.v.2006 +7, 24°33’34" N, 55°20’12" E, A.v.Harten leg., CRF; 1 ex, Abu Dhabi, Sweihan, 16.xi.2005 +36, 24°27’28" N, 55°19’56" E, A.v.Harten leg., CJM; 1 ex, Dubay, Hatta, 22.i.2006 +7, 24°48’46" N, 56°07’38" E, A.v.Harten leg., CRF; 2 ♂, 1 ♀, Fujayrah, Bithnah, 31.xii.2005 +30, 25°11’00" N, 56°14’00" E, A.v.Harten leg., CJM; 6 ex, 1 ♂, Fujayrah, Bithnah, 31.xii.2005 +30, 25°11’00" N, 56°14’00" E, A.v.Harten leg., CRF; 1 ex, Fujayrah, Wadi Safad, 14.xii.2010, 25°15’04" N, 56°20’54" E, W.Schawaller leg., SMNS; 1 ♂, Fujayrah, Wadi Safad, 28.xi.2013, 25°15’04" N, 56°20’54" E, A.v.Harten leg., CAA; 1 ♂, Fujayrah, Wadi Safad, 28.xi.2013, 25°15’04" N, 56°20’54" E, A.v.Harten leg., CRF; 1 ♂, Fujayrah, Wadi Safad, 28.xi.2013, 25°15’04" N, 56°20’54" E, P.Kucera leg., CDW; 37 ex, 1 ♂, Fujayrah, Wadi Safad, 31.i.2006 +21, 25°15’04" N, 56°20’54" E, A.v.Harten leg., CRF; 1 ex, 1 ♀, Fujayrah, Wadi Safad, 31.i.2006 +21, 25°15’04" N, 56°20’54" E, A.v.Harten leg., SMNS col. Heinz; 1 ♂, Fujayrah, Wadi Wurayah, 12.iv.2005 +2, 25°26’28" N, 56°16’10" E, Pape leg., CJM; 1 ♀, 1 ex, Ras al Khaymah, Khor Kalba, 16.i.2006 +15, 24°59’42" N, 56°09’04" E, A.v.Harten leg., CDW; 1 ♂, 2 ♀, 1 ex, Ras al Khaymah, Khor Kalba, 16.i.2006 +15, 24°59’42" N, 56°09’04" E, A.v.Harten leg., CRF; 1 ex, Ras al Khaymah, Khor Kalba, 31.v.2006 +8, 24°59’42" N, 56°09’04" E, A.v.Harten leg., SMNS col. Heinz; 1 ♀, 40 ex, Ras al Khaymah, Khor Kalba, 7.iii.2006 +7, 24°59’42" N, 56°09’04" E, A.v.Harten leg., CRF; 1 ♂, Ras al Khaymah, Ras al Khaimah, 7.iii.2003, 25°40’04" N, 55°58’38" E, J.C.Ringenbach leg., CJM; 1 ♂, Ras al Khaymah, Wadi Bih Dam, 1.iii.2007 +8, 25°46’18" N, 56°02’38" E, A.v.Harten leg., CJM; 4 ex, Ras al Khaymah, Wadi Bih Dam, 1.iii.2007 +8, 25°46’18" N, 56°02’38" E, A.v.Harten leg., CRF; 2 ♂, 18 ex, Ras al Khaymah, Wadi Maidaq, 21.xii.2005 +11, 25°21’06" N, 56°05’18" E, A.v.Harten leg., CRF.

Redescription. A species with variation in morphological features, such as body size and pronotum shape; BL 6.0–8.6 mm, BW 2.5–3.6 mm (N=55). Habitus as in Figs. 4.1–4.4. Dorsal side yellowish (brownish-orange) including elytral lateral gutter; apical third of elytra brownish with

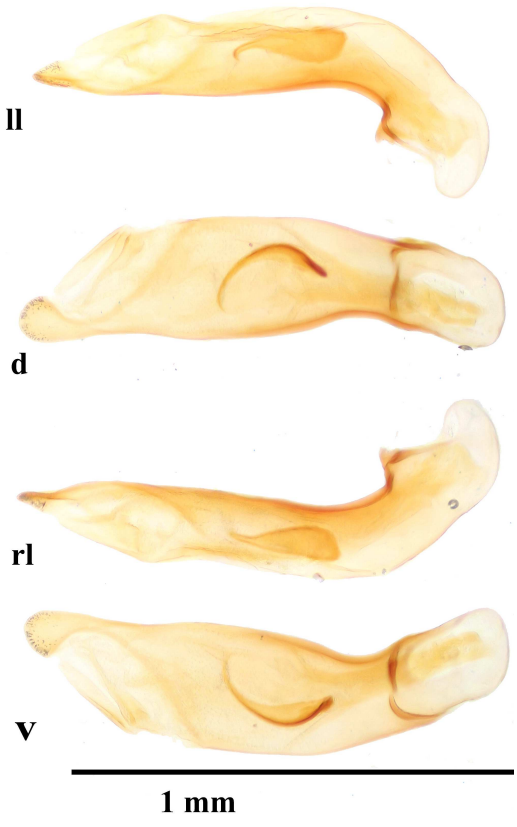


Fig. 4.5 *Merizomena castanea* median lobe, Al Bahah, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

Fig. 4.6 *Merizomena castanea* median lobe, Al Jabal Achtar Mts, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

or without extension anteriorly along the suture; all appendages yellowish. Ventral side yellowish-brown, apical ventrites brown. Head and pronotum shiny, elytra in males also slightly shiny, while in females they are more dull.

Head. Elongate, narrower than pronotum (HW/PM: 0.80–0.96). Eyes convex, much longer than tempora (T/E: 0.26–0.41). Frontal furrows not parallel, with some superficially transverse wrinkles on frons. Supraorbital furrow moderately sharp. Sides of frons and base of vertex covered with scattered punctures and hairs. Vertex on each side with one or two setae diagonally behind the eyes. Microsculpture consisting of very superficial isodiametric meshes and micropores on frons. Mentum punctated. Antennomere 3 slightly longer than antennomere 1.

Fig. 4.7 *Merizomena castanea* gonocoxite 1,2 and laterotergite 9, Akaba.

Thorax. Pronotum cordate transverse (PM/PL: 1.06–1.30), broadest approximately at anterior third. Lateral sides sinuated before straight to slightly blunt hind angles (PM/PS: 1.21–1.35, PM/PB: 1.18–1.35). Base oblique toward hind angles. Lateral gutter broad. Basal foveae unified with lateral gutter. Disc slightly convex, strongly sloped to lateral sides. Median line in basal part evident, not reaching anterior side. Surface covered with punctures and scattered fine yellow pubescence. Metepisterna about 2,7 times as long as wide, narrowed posteriorly. Microsculpture very superficial or not visible (120x).

Abdomen. Elytra subrectangular, moderately convex (EL/EW: 1.41–1.64, EL/PL: 3.27–4.02, EW/PM: 1.74–2.26); widest at apical quarter and regularly rounded at apex to the suture. Striae superficially embedded, faintly punctuated. Interstriae flat with one or (more to the base) two rows of confused fine punctures and thin, erect, yellow hairs. Apex of suture with or without a dent. Sutural angle slightly rounded. Microsculpture in males consisting of superficial isodiametric meshes, females with more impressed meshes. Ventrites with decumbent hairs, denser on ventrite 6 and anal ventrite. Anal ventrite with 3–5 pairs of marginal setae both in males and females.

Legs. Subrobust, meso- and metatibiae approximately as long as corresponding tarsi. Apex of mesotibiae with dense bristles. Ventral side of meso- and metatarsi with bristles, with decreasing density from tarsomere 1 towards 5. Claws with 6–8 teeth.

Median lobe. Dorsal side in lateral view regularly curved and widened to apex, ventral side more or less rectilinear, in horizontal view sinuate and elongate (Figs. 4.5, 4.6), with length 1.10–1.64 mm (N=25). Endophallus with a copulatory piece with the shape of a curled leaf with a broad basal part gradually narrowed into an apical point. Apical lamella short, wide and rounded. Length of right paramere is about two thirds of the left paramere.

Female genitalia. Gonocoxite 1 about 1.7 times longer than gonocoxite 2, and less than 2 times more long than wide (Fig. 4.7). The branch of the spermatheca is short. The pedicel is about as long as the distal part (Fig. 4.8).

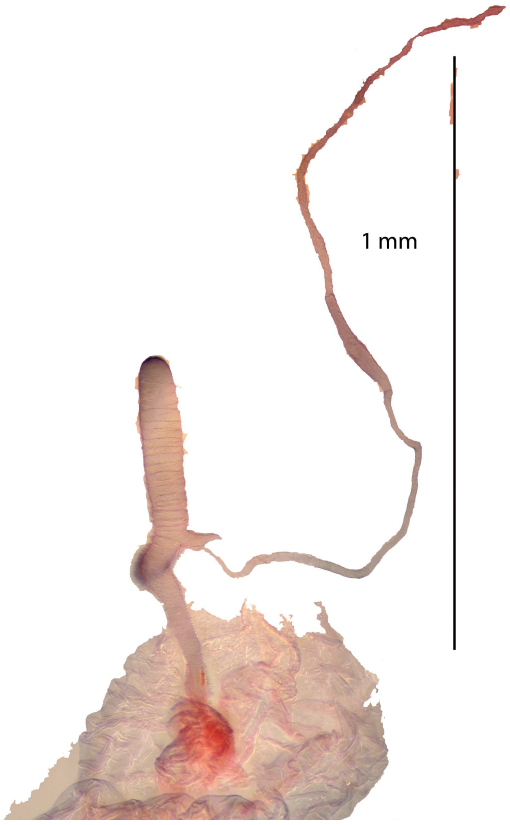


Fig. 4.8 *Merizomena castanea* spermatheca, Al Jabal Achtar Mts, scale 1 mm.

Comparative notes. Mateu (1983) based *M. yemenita* on a population from Aden present in the MNHN collection, which had been identified by Bedel as *M. castanea*, including a specimen of '*yemenita*', labelled: "*C. castanea* Klug // compared with type Museum Berlin J.V.1903 // Vidit Bedel 1907". Mateu compares these specimens with specimens of *M. castanea* from Djibouti, also present in MNHN. *M. buettikeri* was based on 2 specimens from the province of Medina in Saudi Arabia. At present, many populations spread across the Arabian Peninsula, Egypt and Israel are known. In his description, Mateu discusses differences in the shape of the median lobe and copulatory pieces, and some morphological

features such as the shape of the pronotum and body length.

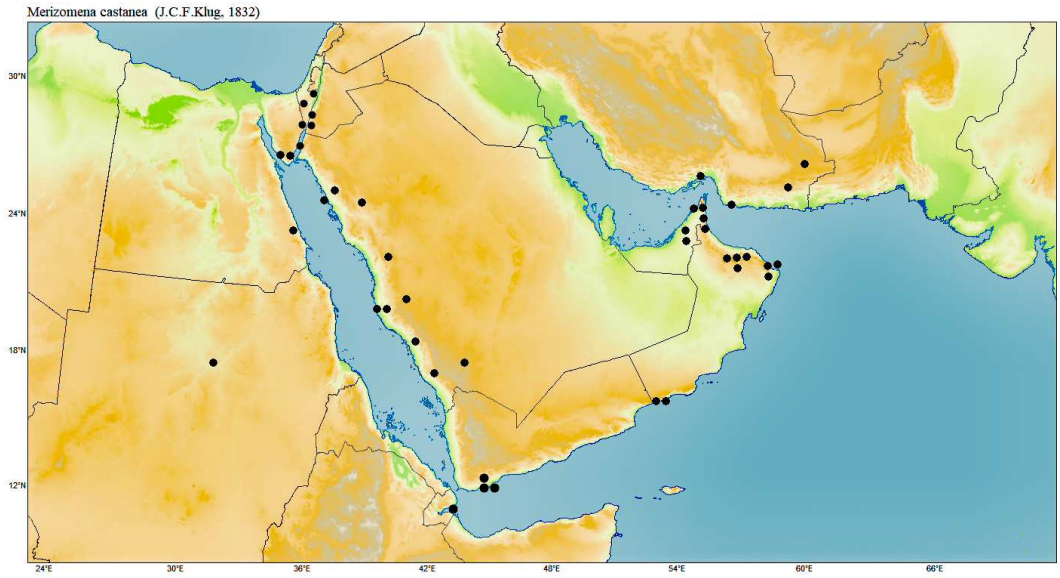
The copulatory piece has the shape of a curled leaf (according to Mateu "spoon"), with a broad basal part gradually narrowed into an apical point. The position of the median lobe determines the image of the copulatory piece. The image of the apical lamella is also determined by the position of the median lobe. Fig. 4.5 shows a small median lobe with length of 1.1 mm, Fig. 4.6 shows a median lobe with length 1.6 mm without difference in form of the copulatory piece.

The PM/PW ratio of the specimens from the above distribution area has a normal distribution, as does the body size. Other characteristics such as the degree of embedding of the elytral striae etc. also appear to vary continuously. Within populations, some specimens appeared to have a tooth at the sutural apex and others did not.

The only difference we could find is a smaller median lobe length in the population from Aden and a population from Al Bahah in Saudi Arabia compared with the specimens of Aden. Also, specimens from Egypt have the same median lobe length as specimens from Aden. In VAR, populations are present with in average longer median lobe length compared with the Aden population. Extensive comparison of the measured morphological parameters showed that populations differed slightly from each other, with a wide overlap with other populations. Since no systematic differences were found between features of the median lobe combined with morphological features, we conclude that all populations belong to 1 species.

Compared with *M. schoenmanni* and *M. grandinella*, *M. castanea* males can always be distinguished by the curled leaf copulatory piece in the median lobe. Further characteristics are: less transverse pronotum, disc slightly convex, strongly sloped to lateral sides, body size is smaller. Differences with *M. arabica* are discussed in the redescription of *M. arabica.*

Remarks: The labels of the type material are not in accordance with the description. The holotype of *M. buettikeri* housed in NHMB has the label described for the paratype. Some paratypes kept Mateu in his own collection and are now housed in MRSN.



MAP 3. *Merizomena* (*Dichromenta*) *castanea.*

Mateu measured body length from anterior border of labrum, because of this there are differences between our measures and measures given by Mateu (1986).

Distribution. Arabic Peninsula, Djibouti (Obock), Egypt, Israel, Iran, Sudan (Ambukohl), Yemen. (Map 3). *M. castanea* lives in sympatry with *M. arabica* in the Arabic Peninsula and Israel, and in Iran (province Hormozgan) with *M. schoenmanni*. First record of this species for Iran.

Habitat. Most specimens were collected by light in agricultural and cultivated areas.

***Merizomena (Dichromenta) dimidiata* (Ménétriés, 1848)**
(Figs. 5.1–5.3)

References.
Glycia dimidiata Ménétriés, 1848a: 19, Pl. I, fig. 2 [= Ménétriés, 1848b: 3]
Glycia dimidiata: Motschulsky, 1850: 36, "Des. Kirg. m. Kisil-Kum".
Glycia dimidiata: Gemminger & Harold, 1868: 124, "Sibiria".
Glycia dimidiata: Marseul, 1880: 160, "Sibérie, Kisil Koum".
Glycia dimidiata: Heyden, 1880: 19, "Kisil-Kum".
Glycia dimidiata: Fairmaire, 1886: 439, "Boukharie".
Glycia dimidiata: Semenov, 1889: 194.
Glycia (*Merizomena*) *dimidiata*: Jakobson, 1908: 402, "Syrdar.".
Glycia (*Merizomena*) *dimidiata*: Winkler, 1924: 204, "Syr-Darja".
Glycia (*Merizomena*) *dimidiata*: Csiki, 1932: 1437, "Syr Darja".
Agatus (*Merizomena*) *dimidiatus*: Kryzhanovskij, 1965: 103, "Uzbekistan".
Merizomena dimidiata: Emetz, 1973: 1413, "Turanian species".
Glycia (*Merizomena*) *dimidiata*: Kirschenhofer, 1994: 1002.
Merizomena dimidiata: Kryzhanovskij et al., 1995: 169, "Turan: Kyzylkum Desert".
Merizomena dimidiata: Lorenz, 1998: 465.
Merizomena dimidiata: Kabak, 2003: 409, "Asia: Kazakhstan, Uzbekistan".

Fig. 5.1 *Merizomena dimidiata* habitus, holotype, dorsal view.

Merizomena dimidiata: Lorenz, 2005: 491.
Merizomena dimidiata: Michailov, 2013: 21, "Tajikistan: Ghissar Mt. R. with Ghissar Valley" (erroneous record!).
Merizomena dimidiata: Kabak, 2017: 582, "Asia: Kazakhstan, Uzbekistan".

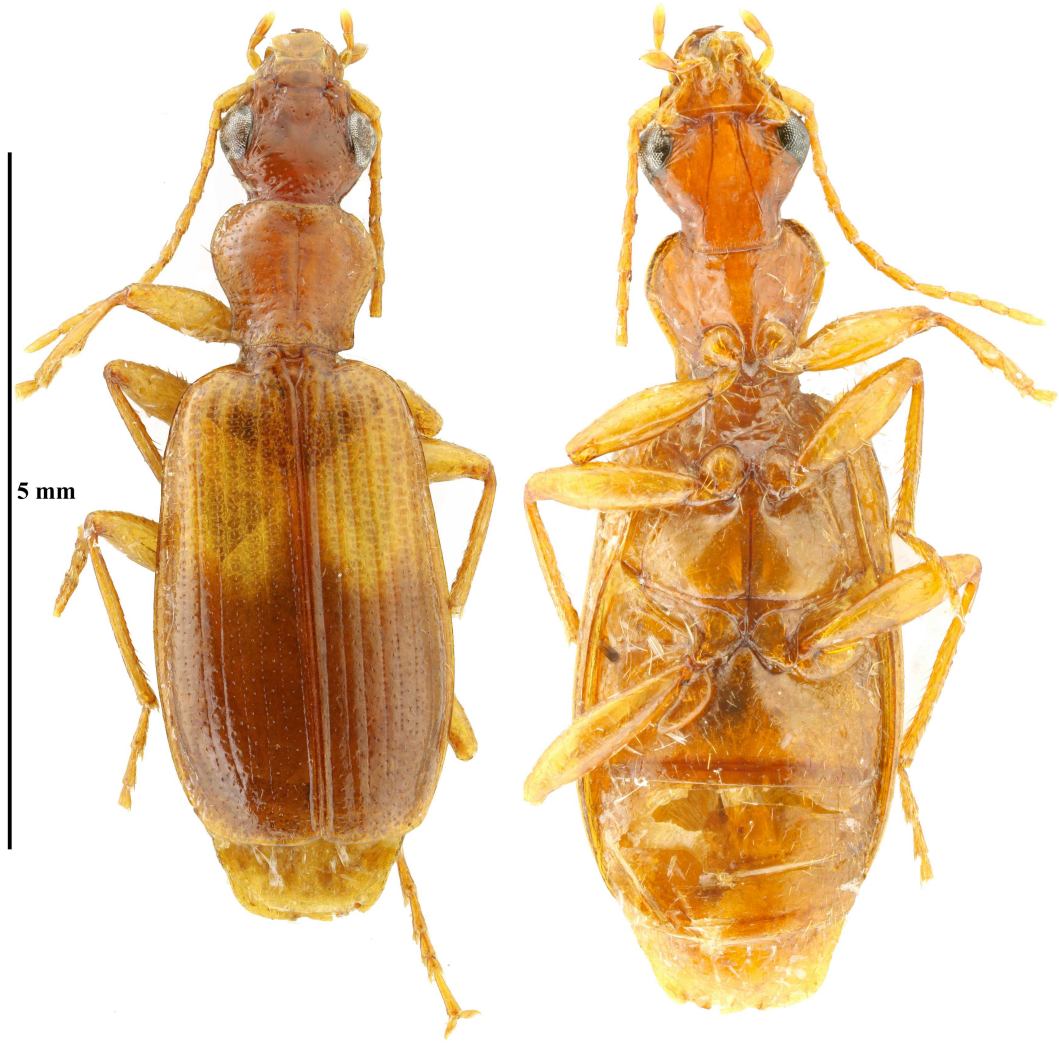


Fig. 5.2 *Merizomena dimidiata* habitus, Saraks, dorsal and ventral view, scale 5 mm.

Type material. Holotype ♂, labelled: "Kisil-Kum // dimidiata Menet. // Holotypus" including a rectangul of golden paper, ZIN.
Type locality. ca. 43°20'58" N, 52°00'18" E.
Additional material examined. Iran: 1♂, North Khorasan, Sarakhs, 17.viii.1993, 36°32'54" N, 61°10'28" E, Ebra/Badii leg., HMIM. **Turkmenistan:** 1♂, Uzboi, Yaskha, 1.iv.1951, 39°42'32" N, 55°33'32" E, Kryzhanovsky leg., ZIN; 1♂, Mary, Chemen-i-Bid, 1.iv.1952, 35°28'00" N, 62°25'00" E, Snizek leg., CDW.

Redescription. A rather small, elongated species compared to the other species of this subgenus (BL 5.7–6.0 mm, BW 2.2–2.6 mm, N=4). Habitus as in Figs. 5.1, 5.2. Head, labrum and mandibles; pronotum; basal half of elytra and elytral lateral gutter and all appendages yellowish; apical half of elytra diffuse brownish, with an extension anteriorly along the suture; ventral side of body brownish, apical ventrites slightly darker. Both dorsal and ventral side punctate and pubescent. Head and pronotum shiny, elytra slightly duller.

Head. Slightly narrower than pronotum (HW/PM: 0.89–0.94); obliquely narrowing to neck. Eyes small. Tempora long, nearly as long as eye (T/E: 0.66–0.81). Frontal furrows vaguely impressed on anterior side of disc. Disc with a vague impression on each side, Posterior supraorbital puncture removed from eye. Vertex on each side with a seta diagonally behind the eyes. Sides of frons and vertex covered with rather small scattered punctures and yellow erect hairs. Microsculpture consisting of micropores on frons. Antennomere 3 slightly longer than antennomere 1.

Thorax. Pronotum cordate, flat, slightly transverse (PM/PL: 1.17–1.21), widest approximately at end of anterior third, regularly rounded up to a quarter of the base, slightly outwardly sinuated before the nearly blunt basal angles (PM/PS: 1.29–1.37, PM/PB: 1.32–1.39). Base oblique toward hind angles. Lateral gutter narrow and unclear separated from the flat disc. Basal foveae superficial and vague, unified with lateral gutter. Median line fine. Surface covered with small punctures and thin suberect yellow hairs, denser along the lateral sides than in middle. Microsculpture absent. Metepisterna about 3 times as long as wide, narrowed posteriorly.

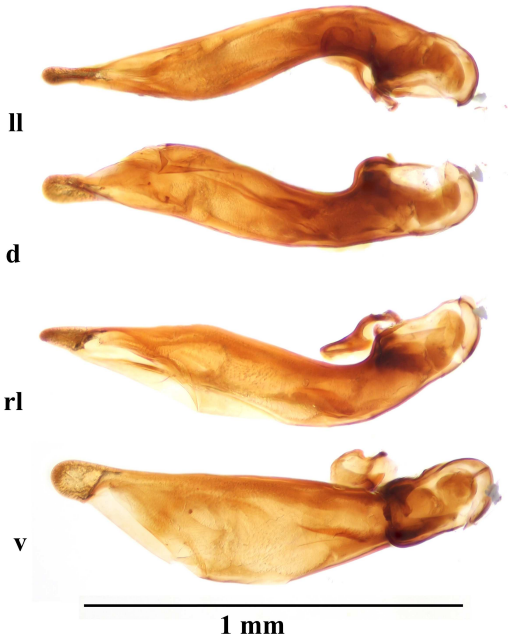
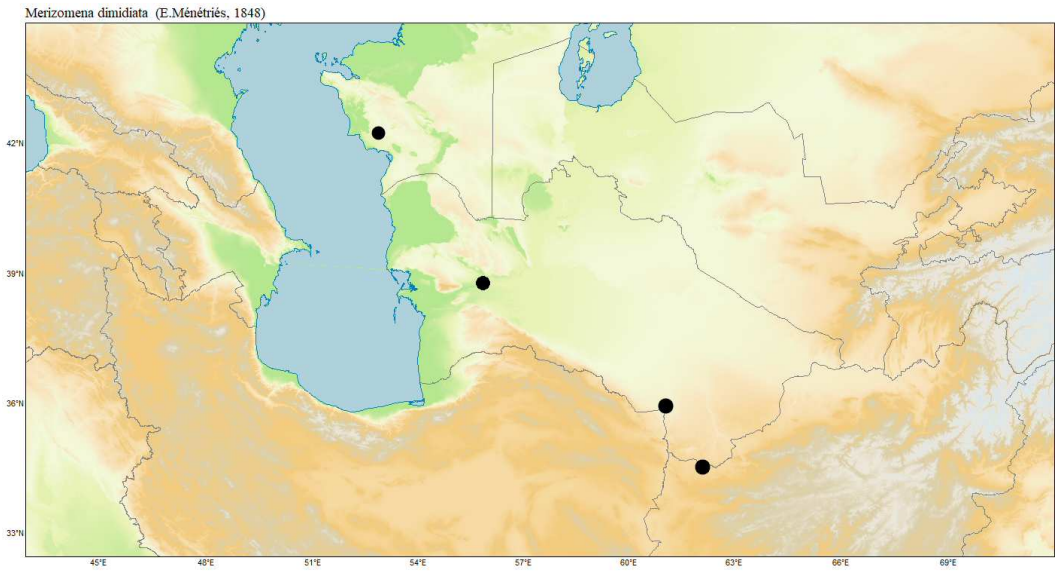


Fig. 5.3 *Merizomena dimidiata* median lobe, holotype, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.



MAP 5. *Merizomena* (*Dichromenta*) *dimidiata.*

Abdomen. Elytra subrectangular, elongated, flat (EL/EW: 1.58–1.73, EL/PL: 3.23–3.43, EW/PM: 1.77–1.90), almost transversely truncate at apex; widest at apical quarter. Sutural angle nearly straight, without dent. Striae slightly embedded, punctured. Interstriae slightly convex; with a row of fine punctures and hairs, near apex approximately with the same width. Apex of suture without a dent. Microsculpture almost invisible. Ventrites with long, decumbent hairs. Anal ventrite with three pairs of marginal setae.

Legs. Meso- and metatibiae approximately as long as corresponding tarsi, claws with 7–9 teeth. Ventral side of meso- and tarsi with long bristles.

Median lobe. As in Fig. 5.3 with length 1.17–1.24 mm (N=4); apical lamella rounded.

Internal sac medially with a thin copulatory piece. In form more or less comparable with *M. arabica*, but not as strongly bendt as the latter.

Female genitalia. Unknown.

Comparative notes. *M. dimidiata* differs from all other species of the subgenus *Dichromenta* by the combination of small body size, small eyes and flattened body.

Distribution. Iran, Kazakhstan (needs confirmation), Turkmenistan, Uzbekistan (Map 5). First record for Iran.

Fig. 6.1 *Merizomena tschitscherini* habitus, holotype, dorsal view.

***Merizomena (Dichromenta) tschitscherini* (Semenov, 1900)**
(Figs. 6.1–6.6)

References.
Glycia (*Merizomena*) *Tschitscherini* Semenov, 1900: 681.
Glycia (*Merizomena*) *tschitscherini*: Jakobson, 1908: 403, “Bukhara”.
Glycia (*Merizomena*) *Tschitscherini*: Winkler, 1924: 204, “Bukhara”.
Glycia (*Merizomena*) *Tschitscherini*: Csiki, 1932: 1437, “Bokhara”.
Agatus (*Merizomena*) *tschitscherini*: Kryzhanovskij, 1965: 103, “SE of Uzbekistan and Tadzhikistan”.
Merizomena tschitscherini: Emetz, 1973: 1413, “Afghano-Turkestanian species”.
Glycia (*Merizomena*) *tschitscherini*: Kirschenhofer, 1994: 1002.
Merizomena tschitscherini: Kryzhanovskij et al., 1995: 169, “Turan, Mountains of SE Middle Asia”.
Merizomena tschitscherini: Ovtchinnikov, 1996: 108, “Northern Kyrgyzstan, Cisfergania”.

Fig. 6.2 *Merizomena tschitscherini* habitus, Ost Buchara, Karatag, dorsal and ventral view, scale 5 mm.

Merizomena tschitscherini: Lorenz, 1998: 465.
Merizomena tschitscherini: Kabak, Ovtchinnikov, 2002: 65, "Record for Cisfergania needs to be prooved".
Merizomena tschitscherini: Kabak, 2003: 409, "Asia: Afghanistan, Kirghizia, Kazakhstan, Tajikistan, Uzbekistan".
Merizomena tschitscherini: Lorenz, 2005: 491.
Merizomena tschitscherini: Felix, 2009: 130, "Afghanistan".
Merizomena tschitscherini: Michailov, 2013: 21.
Merizomena tschitscherini: Kabak, 2017: 582, "Asia: Afghanistan, Kirghizia, Kazakhstan, Tajikistan, Uzbekistan".

Type material. Holotype ♀, labelled: "Gissar.: upper course of Ka / ratag, 1898 / E. Willberg (in Russian) // Glycia Tschitscherini m., ♀. typ. un., VII.900, A. Semenov det. // c Glasunov (in Russian) // Holotypus (red) // Zoological Institute Russian Academy of Sciences St. Petersburg", ZIN.
Type location. Tajikistan, "Buchara orientalis: prov. Hissar: curs. super. fluvii Karatag", 2200 m, N38°53'37" N, 68°20'11" E.
Additional material examined: Kyrgyzstan: 2♀, Chüy, Frunze, Bishkek, 29.iii.1979, 42°51'06" N, 74°35'32" E, S. Ovtchinnikov leg., CBK; 1 ♂, Chüy, Frunze, 24.iv.1980, 42°51'06" N, 74°35'32" E, S. Ovtchinnikov leg., CBK; **Uzbekistan:** 3♀, Jizzax, Nuratau Reservation, Chajat, 10.v.1996 +10, 40°32'52" N, 66°47'30" E, S. Badjak leg., IZU; **Tadzjikistan:** 1 ♀, Badakhshoni Kuhi, Argankun, Obi-Khingou Riv., 17.vii.1954, 38°52'00" N, 70°53'38" E, Lopatin leg., ZIN; 1

♀, Badakhshoni Kuhi, Darvaz Mt. range, valley of Obikhingou river, 12.vi.1968, 38°49’32" N, 70°45’38" E, V. Mikhailov leg., ZMMU?; 1 ♀, Badakhshoni Kuhi, Darvaz, Viskharv Valley, upper of Viskharv Vill., 19.vi.1971, 38°30’52" N, 71°02’36" E, Zhiltsova leg., ZIN; 1 ♂, Badakhshoni Kuhi, Kondara, 23.iv.1957, 38°48’36" N, 68°49’12" E, P. Kulinitsh leg., ZIN; 1 ♂, Badakhshoni Kuhi, Ost Buchara, Karatag, .1898, 38°34’38" N, 68°19’22" E, Hauser leg., NHMW; 1 ♂, 1 ♀, Khatlon, Khovaling, 15.x.1987, 38°20' N, 69°58' E, S. Ovtchinnikov leg., CBK; 67 ex, Khatlon, Kukhitek Mt. R., env. of Khovaling, 11.x.1987, 38°19’56" N, 69°59’14" E, S.Ovtchinnikov leg., ZIN; 1 ♀, Khatlon, Vakhsh Mt. R, 28.vi.1989, 38°25’24" N, 69°30’30" E, N.Vereschagina leg., ZIN; 1 ♀, Kondara gorge, 16.vii. 1939, V. Gussakovskyi leg., ZIN; 1 ♀, Kondara, Gissar. Mt. R., 1.vii.1955, Lopatin leg., ZIN.

Redescription. A large sized, elongated species compared to the other species of this subgenus (BL 7.3–8.3 mm, BW 2.9–3.4 mm, N=4). Habitus as in Figs. 6.1, 6.2. Head, pronotum, lateral elytral gutter and indistinct marginated oval spot on basal third of elytra yellowish/brownish, elytra dark brown; all appendages yellowish. Ventral side of head and thorax yellowish, ventrites brownish. Dorsal side moderately shiny.

Head. Slightly narrower than pronotum (HW/PM: 0.90–0.93), obliquely narrowing to neck. Eyes moderately convex. Tempora, about half the length of an eye (T/E: 0.41–0.67). Frontal furrows vaguely impressed on anterior side of disc. Posterior supraorbital punctures medio-lateral of eye. Vertex on each side with a seta diagonally behind the eyes. Frons and vertex covered with punctures, posterior margin of vertex with more coarse punctures, and long and fine pubescence. Microsculpture consisting of superficial meshes and micropores on frons. Antennae slender; antennomere 3 longer than antennomere 1.

Thorax. Pronotum cordate, slightly transverse (PM/PL: 1.03–1.21), widest at end of anterior third, regularly rounded up to a quarter of the base, outward sinuated before the nearly blunt basal angles (1.17–1.28, PM/PB: 1.18–1.24).

Fig. 6.3 *Merizomena tschitscherini* median lobe, Ost Buchara, Karatag, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

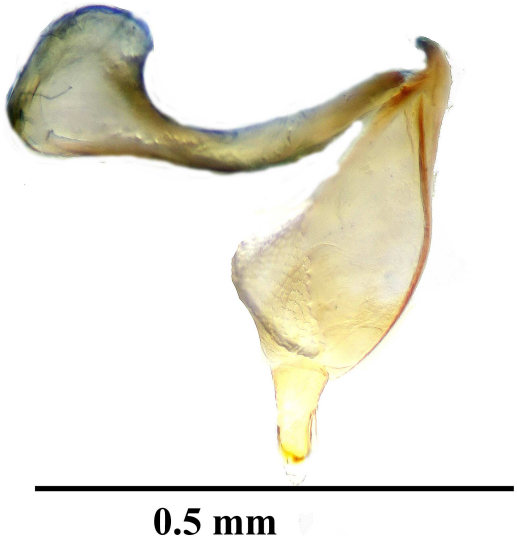


Fig. 6.4 *Merizomena tschitscherini* gonocoxite 1,2 and laterotergite 9, Darvaz Mt. range, scale 0.5 mm.

Lateral gutter wide, margins slightly reflexed. With a row of erect hairs along the anterior part of the lateral margins. Base laterally oblique towards the hind angles, with some thick hairs. Basal foveae slightly deep, unified with lateral gutter. Disc moderately convex. Median line fine. Surface covered with punctures and long decumbent yellow hairs. Microsculpture consisting of superficial meshes. Metepisterna about 2,8 times as long as wide, narrowed posteriorly.

Abdomen. Elytra subrectangular, elongated, moderately flat, lateral sides more or less parallel or slightly widened, widest at apical fifth (EL/EW: 1.51–1.61, EL/PL: 3.38–3.86, EW/PM: 1.92–2.16), truncate at apex. Sutural angle nearly straight, without dent. Striae embedded, punctured. Interstriae convex, with a row of coarse and a row of finer irregular punctures and long and erect hair; all interstriae near apex approximately the same width. Microsculpture evident, consisting of isodiametric meshes. Ventrites with long decumbent hairs. Anal ventrite with 5 pairs of marginal setae.

Legs. Slender, with meso- and metatibiae longer than corresponding tarsi, claws with 7–8 teeth. Apex of mesotibiae with long and fine accessory bristles. Ventral side of meso- and metatarsomeres 1–4 with dense, short bristles.

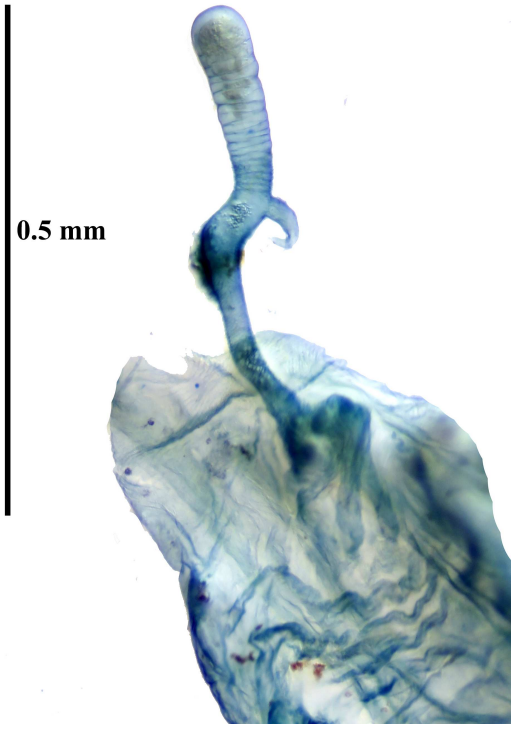
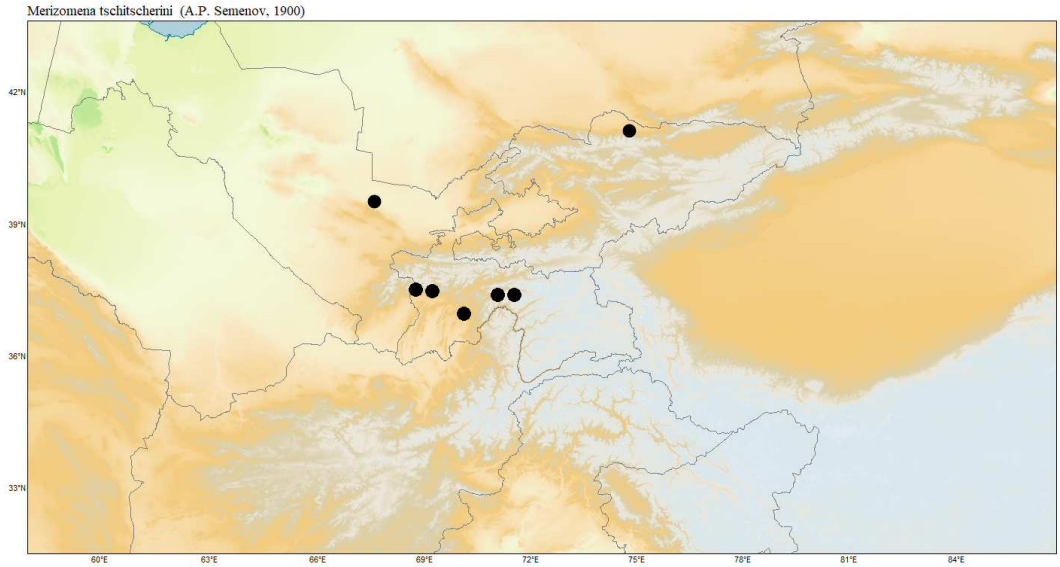


Fig. 6.5 *Merizomena tschitscherini* spermatheca, Darvaz Mt. range, scale 0.5 mm.

Fig. 6.6 *Merizomena tschitscherini* label Not-Type.



MAP 6. *Merizomena* (*Dichromenta*) *tschitscherini*.

Median lobe. Length1.48 mm (Fig. 6.3). Apical lamella wide and rounded. In ventral view strongly widened to apex. Copulatory piece slender, with long oval base and a strongly bent apical point**.**

Female genitalia. Gonocoxite 1 more than 3 times longer than gonocoxite 2, gonocoxite 2 rather wide (Fig. 6.4). Spermathecal branch and pedicel strongly bent (Fig. 6.5).

Comparative notes. Body more elongated, elytra uniformly dark, each elytron with an oval yellowish spot, hairs longer and finer than in all other species of this subgenus.

Comments. Kirschenhofer (1994) referred erroneously to a holotype of this species collected by Hauser in Ost Buchara (Fig. 6.6). A. Semenov indicated the holotype as "typ. un." – unique, with another location.

Distribution. Afghanistan (needs confirmation), Kazakhstan (needs confirmation), Kyrgyzstan, Tadzjikistan, Uzbekistan (Map 6).

***Merizomena (Dichromenta) grandinella* (Semenov, 1889)**
(Figs. 7.1–7.9)

References.
Glycia grandinella Semenov, 1889: 194.
Glyzia dimidiata: Reitter, 1889: 96 (nec Ménétriés, 1848), "Askhabad".
Glycia (*Merizomena*) *grandella* Semenov, 1900: 682 (unjustified emendation).
Glycia grandella (= *grandinella* Semenov, 1889, lapsus calami) Semenov, 1926: 44, "Persia, Turcomania".
Glycia (*Merizomena*) *grand*(*in*)*ella*: Jakobson, 1908: 403, "Transcasp.".
Glycia (*Merizomena*) *grandinella*: Winkler, 1924: 204, "Transcaspia".
Glycia (*Merizomena*) *grandella*: Csiki, 1932: 1437, "Transcaspien".
Glycia klapperichi Jedlička, 1956: 203.
Glycia afgana Jedlička, 1956: 203.
Glycia klapperichi: Jedlička, 1961: 5, "Belutschistan: lranshar, 800 m".
Agatus (*Merizomena*) *grandellus*: Kryzhanovskij, 1965: 103, "Turkmenia, Iran".
Glycia klapperichi (? syn. of Agatus grandellus): Kryzhanovskij, 1965: 103, "Afganistan".

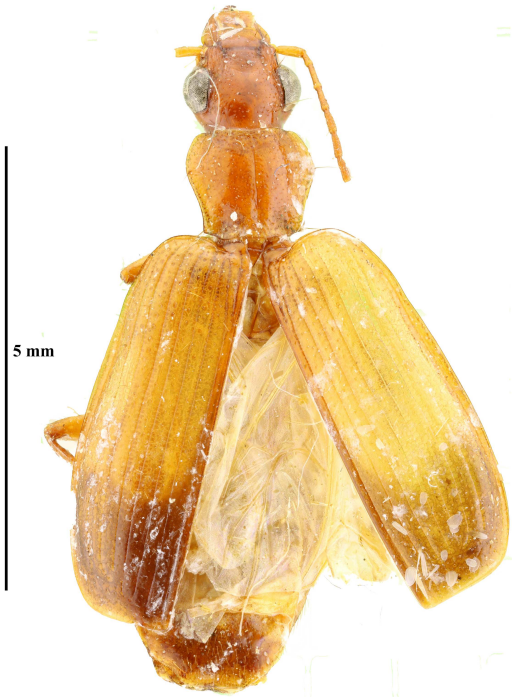


Fig. 7.1 *Merizomena grandinella* habitus, holotype, dorsal view, scale 5 mm.

Merizomena grandella: Emetz, 1973: 1413, "Irano-Azerbaidjan species".
Glycia (*Merizomena*) *klapperichi*: Mateu, 1986: 204, fig. 13, "Nuristan, Afganistan".
Glycia (*Merizomena*) *grandiella*: Kirschenhofer, 1994: 1002.
Glycia (*Merizomena*) *klapperichi*: Kirschenhofer, 1994: 1002.
Glycia (*Merizomena*) *afgana*: Kirschenhofer, 1994: 1002.
Glycia (*Merizomena*) *schoenmanni* Kirschenhofer, 1994: 1001, Abb. 49, 49a.
Merizomena grandella: Kryzhanovskij et al., 1995: 169, "Turan".
Merizomena grandella (= *grandinella* Semenov, 1889): Lorenz, 1998: 465.
Glycia klapperichi: Lorenz, 1998: 465.
Glycia afgana: Lorenz, 1998: 465.
Merizomena schoenmanni: Lorenz, 1998: 465.
Merizomena grandinella: Kabak, 2003: 409, "Asia: Turkmenia".
Merizomena schoenemanni: Kabak, 2003: 409, "Asia: Iran".
Glycia afgana: Kabak, 2003: 409, "Asia: Afghanistan".
Glycia klapperichi: Kabak, 2003: 409, "Asia: Afghanistan
Merizomena grandinella: Lorenz, 2005: 491.
Glycia klapperichi: Lorenz, 2005: 491.
Glycia afgana: Lorenz, 2005: 491.
Merizomena klapperichi: Felix, 2009: 130, "Afghanistan".
Merizomena afgana: Felix, 2009: 130, "Afghanistan".
Merizomena klapperichi (= *schoenmanni* Kirschenhofer, 1994): Felix, 2009: 130.
Merizomena grandinella: Azadbakhsh & Nozari, 2015: 98.
Merizomena klapperichi (= *schoenemanni* Kirschenhofer, 1994): Azadbakhsh & Nozari, 2015, 98.
Merizomena grandinella: Kabak, 2017: 582, "Asia: Iran, Turkmenia".
Merizomena klapperichi: Kabak, 2017: 582 (part.), "Asia: Afghanistan, Iran, Israel, Jordan, Pakistan".
Merizomena klapperichi (= *schoenemanni* Kirschenhofer, 1994): Kabak, 2017: 582, "Asia: Afghanistan, Iran, Israel, Jordan, Pakistan".
Glycia afgana: Kabak, 2017: 581, "Asia: Afghanistan".

= *Merizomena afgana* (Jedlička, 1956) **syn. n.**
= *Merizomena schoenmanni* (Jedlička, 1956) **syn. n.**

Type material. Holotype ♀, labelled: "Kopet-Dagh / 29-30.IV.1878 / A. Semenov (in Russian) // Glycia grandinella / m. ♀. typ. un. A.S., II.89 // Holotypus // Zoological Institute Russian Academy of Sciences St. Petersburg", supplied with a circle of golden paper, ZIN.
Type location. E Turkmenistan, "Prov. Transcaspica: Tschuli in montibus, Kopet-dagh", ca. 25º59'33.5" N, 99º52'12.5" E.
Additional type material. 1 ♂, labelled: "J.Klapperich / Bashgultal 1100 m / Nuristan 11.5.53 / Afghanistan // COTYPE (red) // Glycia klapperichi sp.n. / det. Ing. Jedlièka // Mus. Nat. Pragae / lnv. 24021", MNP; 1 ♂, labelled: "J. Klapperich / Kutiau 1550 m / Nuristan 22.5.53 / Afghanistan // Glycia klapperichi sp.n. / det. Ing. Jedlička // COTYPE (red)", MNHN; 1 ♀, labelled: "J.Klap-

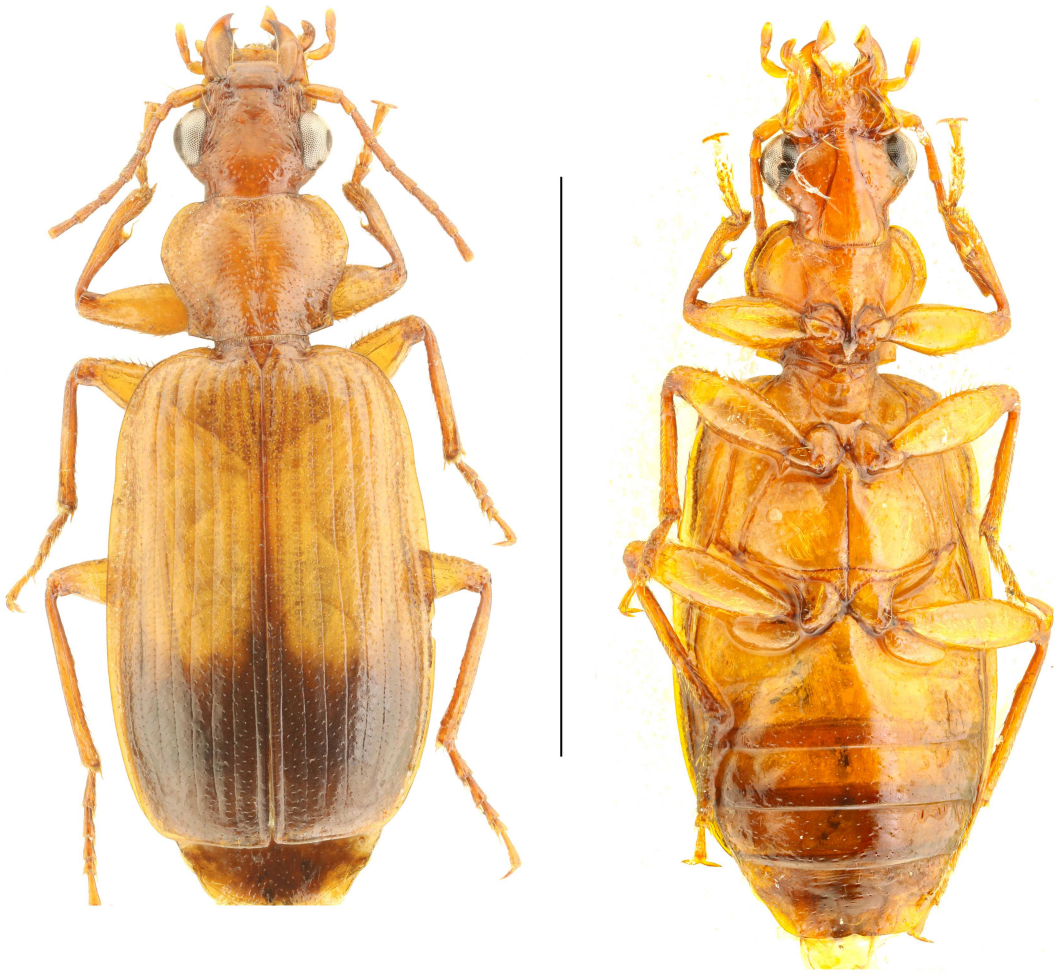


Fig. 7.2 *Merizomena grandinella* habitus, Khorramabad, dorsal and ventral view, scale 5 mm.

perich / Kutiau 1550 m / Nuristan 14.5.53 / Afghanistan // Glycia klapperichi sp.n. / det. Ing. Jedlička // COTYPE (red)", MNP; 1 ♀, labelled: "J.Klapperich / Bashgultal 1150 m / Nuristan 9.5.53 / Afghanistan // COTYPE (red) // Glycia klapperichi sp.n. / det. Ing. Jedlička", MNP; 1 ♂, labelled: "J. Klapperich / Bashgultal 1100 m / Nuristan 6.4.53 / Afghanistan // COTYPE (red) // Glycia klapperichi sp.n. / det. Ing. Jedlička", MNP; 1 ♀, labelled: "J.Klapperich / Kutiau 1550 m / Nuristan 14.5.53 / Afghanistan // Glycia klapperichi sp.n. / det. Ing. Jedlička // COTYPE (red), MRSN; 1 ♀, labelled: "J. Klapperich / Asmar 900 m / Nuristan 3.4.53 / Afghanistan // Glycia klapperichi sp.n. / det. Ing. Jedlička // COTYPE (red), MNP; Holotype 1 ♀, labelled: "J.Klapperich / Bashgultal 1200 m / Nuristan 11.5.53 / Afghanistan // TYPUS (red) // Glycia afgana sp.n. / det. Ing. Jedlička // Mus. Nat. Pragae / lnv. 24034", MNP.

Additional material examined. Afghanistan: 1 ♀, Kabul, Khurd-Kabul SO Kabul, 3.vii.1965, 34°22'00" N, 69°21'52" E, Kasy & Vartian leg., NHMW; 1 ex, Kabul, Paghman, 19.v.1965 +12, 34°35'46" N, 68°57'20" E, Kasy & Vartian leg., SMNS; 1 ex, Nurestan, Asmar, 3.iv.1953, 35°02'02" N, 71°21'18" E, J.Klapperich leg., MNHN. **Armenia:** 1 ♀, Ararat, 6 km N Surenavan, 14.vii.2004 +1, 39°50'30" N, 44°46'44" E, Kalashian leg., CAK. **Iraq:** 1 ♂, Baghdad, Bag-

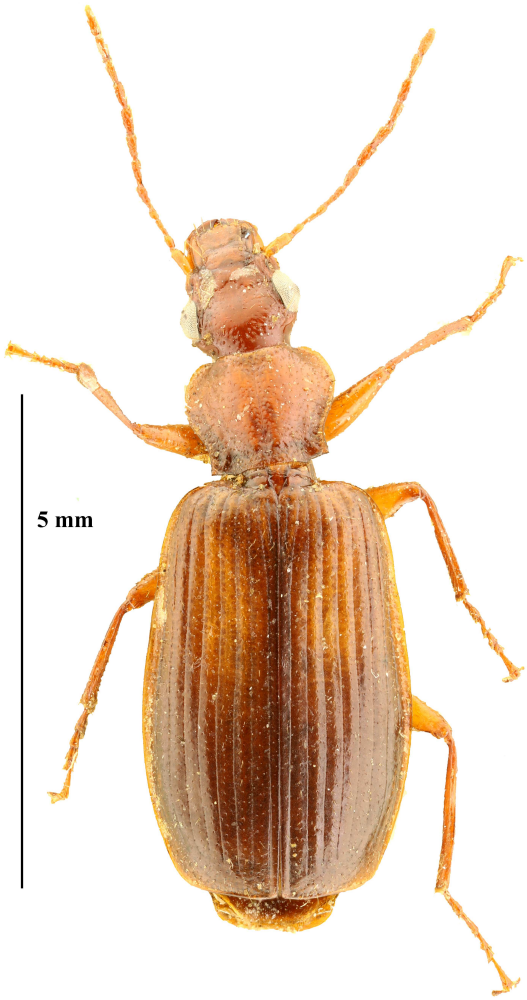


Fig. 7.3 *Merizomena klapperichi* **syn. n.** habitus, holotype, dorsal view, scale 5 mm.

dad, 33°22’48" N, 44°33’14" E, P.Čechovský leg. **Iran:** 1 ♀, Golestan, Astrabad, 36°50’44" N, 54°26’20" E, ZIN; 1 ♂, 1 ♀, Hormozgan, 12 km W Tirour, 8.v.2019 +1, 27°22’38" N, 56°50’16" E, L.Dembicky leg., NME; 1 ♂, 1 ♀, Hormozgan, Sarhanalan Mts, 6.iii.2014 +1, 27°38’18" N, 56°45’42" E, D.Frenzel leg., CDW; 1 ♂, Kerman, 33km W Sabzevaran, 6.v.1973 +1, 28°44’34" N, 57°29’14" E, Exp. Nat. Mus. Praha leg., MPN; 1 ♂, Kerman, Bampur, 1.iv.1901, N. Zarudnyi leg., ZIN; 1 ♂, Kerman, Bampur, 23.iv.1901, N.Zarudnyi leg., ZIN; 1 ♂, 1 ♀, Kerman, Bampur, 25.iv.1901, N.Zarudnyi leg., ZIN; 1 ♀, Kerman, Ge, 29.iii.1901, N.Zarudnyi leg., ZIN; 1 ♀, Kerman, Jiroft, 17.iv.1971, 28°40’16" N, 57°43’08" E, Saf/Zair leg., HMIM; 1 ♀, Kerman, Mekran, 8.iii.1901, N. Zarudnyi leg., ZIN; 7 ♂, 12 ♀, Kerman, Sargad, 29.iv.1901, N. Zarudnyi leg., ZIN; 1 ♂, Kerman, Sargad, 29.iv.1901 N.Zarudnyi leg., NMPC; 7 ♂, Kerman, Sargad, 1.v.1901, N.Zarudnyi leg., ZIN; 3 ♂, 1 ♀, Kerman, Sargad, 30.iv.1901, N.Zarudnyi leg., ZIN; 1 ex, Kerman, Sirjan, 23.iv.1986, 29°26’36" N, 55°35’24" E, Mirz./Borum. leg., HMIM; 1 ♂, 1 ♀, 1 ex, Lorestan, Khorramabad, S of Mahmudvand, 30.iv.2007, 33°27’52" N, 48°20’20" E, A.Anichtchenko leg., CAA; 1 ex, North Khorasan, Gonobad area, 10 km SW Khezri, 22.v.2009, 33°56’14" N,

58°42’54" E, K.Kolesnichenko leg., CAA; 1 ♂, 1 ex, North Khorasan, Q’aen area Khunik pass, 25.v.2009, 33°33’32" N, 59°08’08" E, A.Klimenko leg., CAA; 1 ex. 1 ♂, Persia, 5.iv.1904, N.Zarudnyi leg., ZIN; 1 ♂, Semnan, Shahrud area, Tajar vic, Shah Kuh, 10.vi.2009, 36°26’48" N, 54°31’14" E, K.Kolesnichenko leg., CAA; 1 ♂, Semnan, Shahrud, .1892, 36°27’16" N, 54°58’56" E, Bates leg., MNHN; 1 ♂, Sistan and Baluchestan, Gulandar, Neiband, 17.vi.1896, N.Zarudnyi leg., ZIN; 5 ex, Sistan and Baluchestan, 37 km ZW Zahedan, 22.iv.1973 +1, 29°18’32" N, 60°42’00" E, Exp. Nat. Mus. Praha leg., MPN; 1 ♂, 1 ♀, 1 ex, Sistan and Baluchestan, 37 km ZW Zahedan, 22.iv.1973 +1, 29°18’32" N, 60°42’00" E, HMIM; 1 ♀, Sistan and Baluchestan, Bazman, 12.iv.1973 +2, 27°51’04" N, 60°08’14" E, Sat./Brou leg., HMIM; 1 ♂, 1 ♀, 1 ex, Sistan and Baluchestan, Mohammadabad, 3.v.1973 +2, 28°27’12" N, 58°56’08" E, Exp. Nat. Mus. Praha leg., MPN. **Pakistan:** 1 ♂, 20 km S Quetta, 14.v.1965, 30°00’26" N, 67°00’18" E, Kasy & Vartian leg., NMHW. **Turkmenistan:** 1 ♀, Ahal, Ashgabat, 37°56’26" N, 58°23’32" E, ZIN; 1 ♀, Ahal, Firjuza, 21.vi.1984, 37°55’48" N, 58°04’58" E, O.Odvarka leg., CDW; 1 ex, Ahal, Firjuza, 30.iv.1991 +6, 37°54’54" N, 58°05’22" E, Csorba et al leg., CDW; 1 ex, Badkhyz, 20.v.1952, Nikulin leg., MPU; 1 ♀, Balkan, Uzboy Valley, near Topyatan, 25.iv.1951, 39°49’02" N, 55°38’36" E, Steinberg leg., ZIN; 1 ♂, Mary, Ghindukush Mts., 20 km N of Kushka, Chemenibit, 30.iii.1992 +7, 35°27’20" N, 62°23’32" E, P.Čechovský leg., CDW; 1 ♀, Trans-Caspi G., E.König leg., ZIN.

Redescription. A very variable, small to medium sized species (BL 6.3–7.1 mm, BW 2.6–3.3 mm, N=11). Habitus as in Figs. 7.1–7.4. Head, pronotum, lateral elytral gutter and basal two third of elytra brownish, apex of elytra dark brown, with or without an extension anteriorly along the suture; antennae yellowish more or less fuscated to the apex, labrum, mandibles, palpomeres and legs yellowish. Ventral side head and thorax yellowish, ventrites slightly darker. Head and pronotum shiny.

Fig. 7.4 *Merizomena afgana* **syn. n.** habitus, holotype, dorsal view, scale 5 mm.

Head. Slightly narrower than pronotum (HW/PM: 0.80–0.92). Eyes moderately convex. Tempora, about half the length of an eye (T/E: 0.36–0.54). Frontal furrows superficial, not parallel. Frons with a small superficial median impression. Vertex on each side with one–three setae diagonally behind the eyes. Frons and vertex covered with punctures and erect yellow hairs, punctures along frons finer and scarcer. Microsculpture consisting of (superficial) meshes and micropores on frons. Antennae slender, more darkened to the apex; antennomere 3 longer than antennomere 1.

Thorax. Pronotum cordate, slightly transverse (PM/PL: 1.15–1.36), widest at anterior third, lateral sides regularly narrowed posteriorly, in basal fifth parallel or slightly outwards sinuated to the straight hind angles (PM/PS: 1.23–1.34, PM/PB: 1.22–1.33). Base lobed, subrectilinear medially laterally oblique towards the hind angles. Disc convex, gradually fading to the lateral gutter. Basal foveae superficial and vague, unified with lateral gutter. Median line evident. Surface covered with punctures and erect yellow hairs. Microsculpture consisting of (superficial) irregularl meshes. Metepisterna scarcely punctate, about 2.7 times as long as wide, narrowed posteriorly.

Abdomen. Elytra subrectangular, convex, lateral sides more or less parallel or regularly widened, widest at apical fifth, (EL/EW: 1.43–1.64, EL/PL: 3.33–3.85, EW/PM: 1.75–2.10), transversely truncate at apex. Sutural angle blunt, without dent. Striae superficially embedded, punctured. Interstriae flat, with one row of punctures and sparse, short, yellow hairs. Microsculpture consisting of isodiametric meshes. Ventrites with rather dense suberect yellow hairs. Anal ventrite with four–five pairs of marginal setae, incised at middle.

Legs. Moderately robust, with meso- and metatibiae longer than corresponding tarsi. Mesotibia slightly curved. Mesotibia with a bundle of accessory apical hairs. Ventral side of meso- and meta tarsi with bristles. Claws with 5–6 teeth.

Median lobe. Dorsal side in horizontal view curved with maximum width just after the middle, ventral side slightly sinuated (Figs. 7.5, 7.6). Length 1.1–1.7 mm (N=9). Copulatory piece with

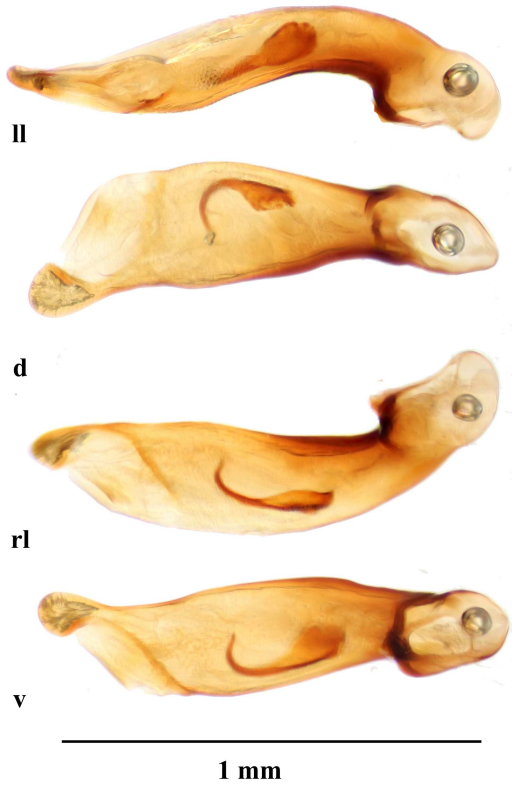


Fig. 7.5 *Merizomena grandinella* median lobe, Khorramabad, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

Fig. 7.6 *Merizomena klapperichi* **syn. n.** median lobe, holotype, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

a rhombic base and a strongly bended apical point. Length of right paramere about two thirds of left paramere.

Female genitalia. G1/G2 > 2.5 (Fig. 7.7). The spermathecal pedicel is shorter than the distal part, the branch is not bended (Fig. 7.8).

Comparative notes. *M. grandinella* varies widely in morphology (e.g., colour of elytra, shape of pronotum, presence of a denticle at apical sutural angle of elytra), both within and between populations. Both in Lorestan (Iran) and in Nuristan (Afghanistan) specimens are slightly larger and with more sharply dented hind angles than specimens from the Eastern provinces in Iran. Some specimens from Nuristan have more dark elytra, the yellowish basal part is reduced to oval spots along the suture. Jedlička, 1956 described *Glycia afgana* and *Glycia klapperichi* from the province Nuristan (Afghanistan). The specific difference between *G. afgana* and *G. klapperichi* was based on difference in length, however the length of the holotype of *G. afgana* falls within the variation of length of *G. klapperichi*. Because the copulatory piece in the endophallus of *M. klapperichi* is comparable with *M. grandinella* and the morphological variation of *M. grandinella* we don't conserve the specific status of these taxa. Compared with *M. schoenmanni* and *M. castanea*, *M. grandinella* males can always be distinguished by the comma-shaped copulatory piece in the

Fig. 7.7 *Merizomena grandinella* gonocoxite 1,2 and laterotergite 9, Tirour.

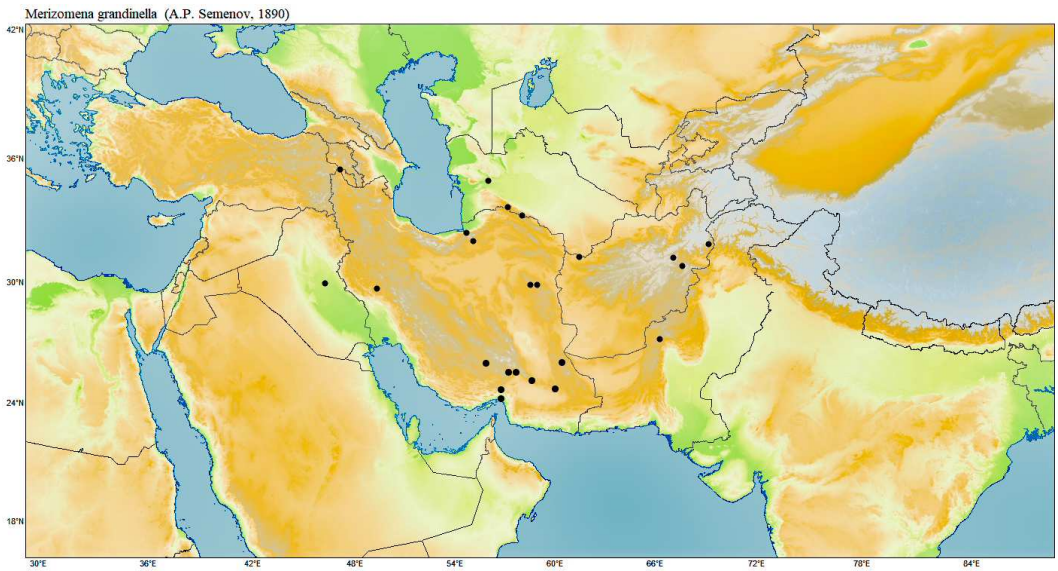
Fig. 7.8 *Merizomena grandinella* spermatheca, Tirour.

median lobe. Further characteristics are: body size is smaller, pronotum more transverse, disc gradually sloping towards the lateral gutter, and eyes slightly less protruding.

Comments. The original description of *M.* (*D.*) *grandinella* indicated: "♀. typ. un.". A specimen from NMPC with label Type (Fig. 7.9) does not belong to type series.

Distribution. Afghanistan, Armenia, Iran, Iraq, Israel (needs confirmation), Jordan (needs confirmation), Pakistan, Turkmenistan (Map 7).

Fig. 7.9 *Merizomena grandinella* label Not-Type.



MAP 7. *Merizomena* (*Dichromenta*) *grandinella.*

***Merizomena (Dichromenta) schoenmanni* (Kirschenhofer, 1994)**
Status changed: bona species.
(Figs. 8.1–8.6)

References.
Glycia (*Merizomena*) *schoenmanni* Kirschenhofer, 1994: 1001, Abb. 49, 49a.
Merizomena schoenmanni: Lorenz, 1998: 465.
Merizomena schoenemanni: Kabak, 2003: 409, "Asia: Iran".
Merizomena klapperichi (= *schoenmanni* Kirschenhofer, 1994): Felix, 2009: 130.
Merizomena klapperichi (= *schoenemanni* Kirschenhofer, 1994): Azadbakhsh & Nozari, 2015, 98.
Merizomena klapperichi (= *schoenemanni* Kirschenhofer, 1994): Kabak, 2017: 582, "Asia: Afghanistan, Iran, Israel, Jordan, Pakistan".

Type material. Holotype 1 ♂, labelled: "S. Iran 2.5.1974 / ca.100 km NE / Minab (26) // Exped. Mus. Vind / leg. Pretzmann // holoTYPE (red) // Glycia (Merizomena) / schoenmanni n. sp. / det. Kirschenhofer, 1994", NHMW. Paratypes 1 ♀, 1 ♂, labelled: "S. Iran 2.5.1974 / Manujan, 110 km E / Bandar-Abbas (26) // Exped. Mus. Vind / leg. Pretzmann // ParaTYPE (red) // Glycia (Merizomena) / schoenmanni n. sp. / det. Kirschenhofer, 1994", NHMW.
Additional material examined. Iran: 1 ♂, 1 ex, Fars, 3 km SSW Dast-e Arzan, 30.iv.2002, 29°38'46" N, 51°59'10" E, Kadlec leg., CDW; 1 ♂, 1 ex, Fars, 3 km SSW Dast-e Arzan, 30.iv.2002, 29°38'46" N, 51°59'10" E, P.Kabatek leg., CDW; 1 ex, Fars, 3 km SSW Dast-e Arzan, 30.iv.2002, 29°38'46" N, 51°59'10" E, Rutjan leg., CJM; 1 ♂, 1ex, Fars, Dast-e Arzan, 4.vi.2018 +2, 29°38'46" N, 51°59'10" E, E.Rutjan leg., CJM; 1 ex, Fars, Fariab, 5.iii.1972, 30°28'20" N, 51°19'42" E, Mirz/Broum leg., HMIM; 1 ♂, Fars, Gandaman, 15.vii.1982, 29°54'54" N, 52°42'12" E, Broumend./Pazaki leg., HMIM; 1 ♂, Fars, Khollar 2 km W, 22.iv.2000 +1, 29°59' N, 52°12' E, J.Hajek & M.Mikat leg., MNP; 1 ♂, 1 ♀, 1 ex, Fars, Sivand, 15.vii.2004, 30°01'12" N, 52°54'22" E, M.Rejzek leg., CDW; 1 ♀, Fars, Sivand, 15.vii.2004, 30°01'12" N, 52°54'22" E, S.Kadlec leg., MNP; 1 ex, Fars, Tang-e Kish, 1.v.1951, 28°17'56" N, 52°36'58" E, Mirz leg., HMIM; 1 ex, Hormozgan, Kuh-e Genu, 21.v.2001, 27°20'42" N, 56°05'18" E, T.Osten leg., SMNS; 1 ♂, Hormozgan, Siahu Sikhora, 10.xi.2001, Ebra./Mof. leg., HMIM; 1 ♂, Ilam, Andimesk, 10.iv.1977 +1, 32°49'58" N, 47°50'56" E, Exp. Nat. Mus. Praha leg., MPN; 1 ♂, Kerman, 16 km NNE Balvard, 31.v.2017, 29°32'40" N, 56°07'42" E, L.Dembicky leg., NME; 1 ex, Kerman, Deh Bakri, 7.iv.2000, 29°03'12" N, 57°55'02" E, J.Hajek leg., MPN; 1 ♂, Kerman, Minab 100 km NE, 2.v.1974, 27°46'58" N, 57°46'58" E, Pretzmann leg., NHMW; 1 ♂, Kerman, Sargad, 1.v.1901, N. Zarudnyi leg., ZIN; 1 ♀, Kerman, Sargad, 29.iv.1901, N. Zarudnyi leg., ZIN; 1 ex, Kohgiluyeh and Buyer Ahmad, 7 km N, Sisakht, 11.vii.2003 +5, 30°51'08" N, 51°31'18" E, I.Jenis leg., CDW; 1 ♂, Lorestan, Shahabad, 2.vii.1997, 33°49'40" N, 48°14'34" E, Bar/Mot leg., CJM; 1 ♂, Lorestan, Shahabad, 2.vii.1997, 33°49'40" N, 48°14'34" E, Bar/Mot leg., HMIM; 1 ♂, Sistan and Baluchestan, 100 km Z.Zahedan, 3.v.2006, 28°32'42" N, 61°05'56" E, A.Klimenko leg., CJM; 1 ex, Sistan and Baluchestan, Sekand, 31.iii.1973 +1, 26°37'58" N, 61°15'30" E, Exp. Nat. Mus. Praha leg., MPN; 1 ex, Sistan and Baluchestan, Serbaz, .iv., 26°38'00" N, 61°16'02" E, ZMMU. **Turkmenistan:** 1 ♀, Ahal, Badkhyz Reserv, Akar-Tshashma, 27.v.1965, 35°47'14" N, 61°27'42" E, CBK. **Turkey:** 1 ♀, Siirt, Mesindagi Gecidi 25 km, 23.vi.2010, 37°42'40" N, 42°15'30" E, W.Grosser leg., CDW.

Redescription. A medium sized species (BL 6.5–8.3 mm, BW 2.8–3.4 mm, N=13). Habitus as in Figs. 8.1, 8.2. Head and disc of pronotum brown (in some specimens more red-brown), lateral gutter yellowish, basal two thirds of elytra and lateral elytral gutter brown, apex of elytra dark brown, with an extension anteriorly along the suture; antennae yellowish more or less fuscated to the apex, labrum, mandibles, palpomeres yellowish; legs with the same colour as the head. Ventral side of head and thorax yellowish, ventrites darker. Dorsal side dull caused by strong microstructure.

Fig. 8.1 *Merizomena schoenmanni* habitus, holotype, dorsal view, scale 5 mm.

Head. Narrower than pronotum ((HW/PM: 0.81–0.94). Eyes protruding. Tempora less than half the length of an eye (T/E: 0.27–0.45). Frontal furrows on lateral sides slightly deepened, not parallel. Vertex on each side with one seta diagonally behind the eyes. Surface with both coarse and fine punctures on frons and vertex, and rather long, erect yellow hairs. Microsculpture consisting of isodiametric meshes and micropores on frons. Antennomere 3 longer than antennomere 1.

Thorax. Cordate, transverse pronotum (PM/PL: 1.12–1.36), widest at anterior third, lateral sides with a very blunt angle narrowed posteriorly, in basal fifth parallel or slightly sinuated outwardly to the straight hind angles (PM/PS: 1.23–1.33, PM/PB: 1.17–1.32). Base lobed, subrectilinear medially, laterally oblique towards the hind angles provided with long hairs. Lateral gutter wide. Disc convex, sloped to lateral sides, with some lateral wrinkles. Median line deep. Basal foveae slightly deepened, unified with lateral gutter. Surface covered with punctures, and dense erect, yellow hairs. Microsculpture, also on disc, consisting of superficial isodiametric/transverse meshes. Metepisterna punctate, about 2.8 times as long as wide, narrowed posteriorly.

Abdomen. Subrectangular, rather wide elytra, lateral sides regularly widened, widest at apical quarter (EL/EW: 1.51–1.58, EL/PL: 2.86–3.01, EW/PM: 1.63–1.77), oblique truncate at apex. Disc convex. Sutural angle slightly blunt, without dent. Striae superficial, superficially punctured. Interstriae flat; with two or three rows of irregular punctures and dense, yellow, erect hairs. Elytral interval 7–9 with transverse wrinkles. Microsculpture more impressed than on pronotum and head, consisting of isodiametric meshes. Ventrites with rather dense suberect yellow hairs. Anal ventrite with three pairs of marginal setae, in the middle incised.

Legs. Robust, with meso- and metatibiae longer than corresponding tarsi. Mesotibia slightly curved, apically with a bundle of hairs. Ventral side of meso- and meta tarsomeres 1–4 with dense short bristles. Claws with 5–6 teeth.

Median lobe. Dorsal side in horizontal view curved, with maximum width just after the middle, ventral side slightly sinuated (Figs. 8.3, 8.4). Length 1.5–1.8 mm (N=11). Base of copulatory piece more or less triangular with a long apical point which is not strongly bended, comparable with *M. arabica*. Right paramere long, nearly as long as left paramere.

Female genitalia. G1/G2 > 2.5 (Fig. 8.5). The pedicel is rather long, the branch is not short and bent (Fig. 8.6).

Comparative notes. Specimens of *M. schoenmanni* from Fars are duller and have stronger microsculpture and wrinkles than specimens from Kerman and Hormozgan. Specimens from Andimesk (province Ilam) have strongly bent meta-

Fig. 8.2 *Merizomena schoenmanni* habitus, Manuan, dorsal and ventral view, scale 5 mm.

tibia. *M. schoenmanni* is intermediate between *M. castanea* and *M. grandinella*. Both with regard to the external morphology and in the copulatory piece. The copulatory piece in *M. castanea* has the shape of a curled leaf with a broad basal part gradually narrowed into an apical point. *M. grandinella* has a copulatory piece with a rhombic base and a very long, strongly bended apical point. In *M. schoenmanni* the base of the copulatory piece is more or less triangular with a long apical point which is slightly bent (more comparable with *M. arabica*). In *M. castanea* the pronotum is less transverse and the disc more strongly sloped to lateral sides, elytral interstriae more flat and less coarsely punctate, with 1 or 2 rows of punctures compared with *M. schoenmanni.*

M. grandinella is on average smaller, pronotum more transverse and less sloped to the lateral sides, elytral sides less parallel, eyes less protruding.

Note about type material: Kirschenhofer and Muilwijk (submitted) solved some ambiguities about the type series of *M. schoenmanni*. The specimen from Minab with label “Holotype” is added to the type series. The specimens from Manuan are “Paratype”.

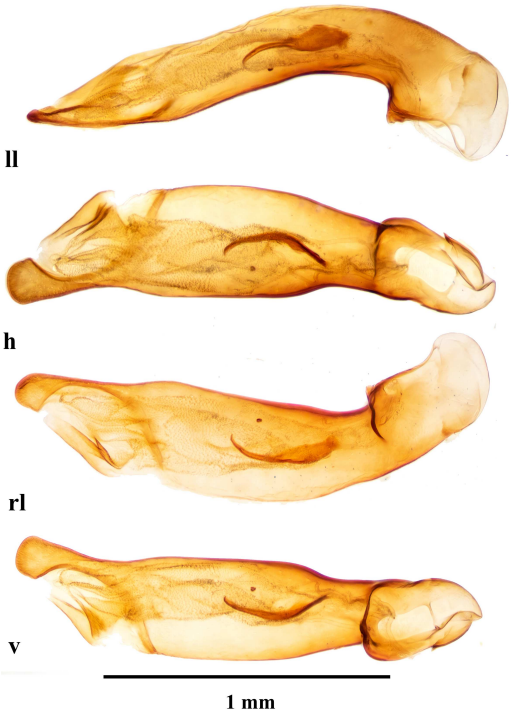


Fig. 8.3 *Merizomena schoenmanni* median lobe, Manuan, rl = right lateral, v = ventral, ll = left lateral, d = dorsal view, scale 1 mm.

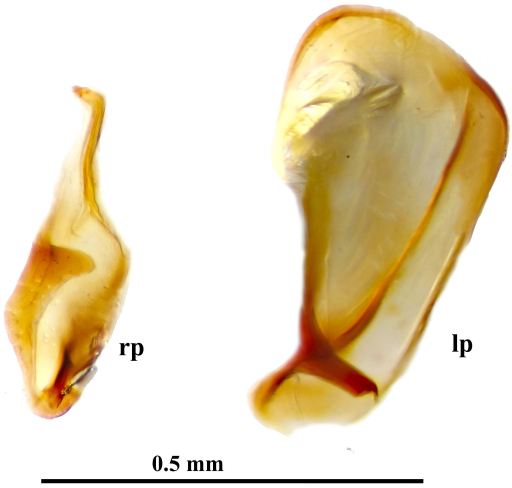


Fig. 8.4 *Merizomena schoenmanni* parameres, Manuan, rp = right paramere, lp = left paramere, scale 0.5 mm.

Fig. 8.5 *Merizomena schoenmanni* gonocoxite 1,2 and laterotergite 9, Sivand, scale 0.5 mm.

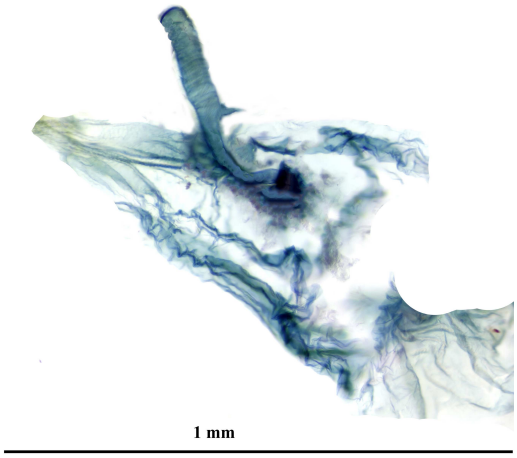
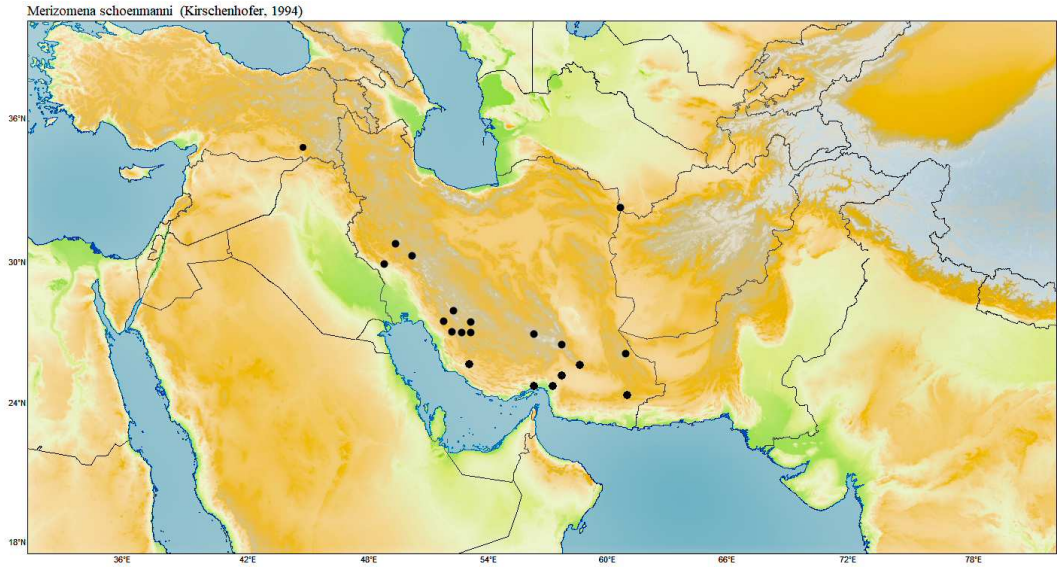


Fig. 8.6 *Merizomena schoenmanni* spermatheca, Sivand, scale 1 mm.



MAP 8. *Merizomena* (*Dichromenta*) *schoenmanni*.

Distribution. Iran, Turkey, Turkmenistan? (Map 8). First record for Turkey.

***Merizomena* (*Dichromenta*) *kabaki* sp. n.**
urn:lsid:zoobank.org:act:
(Figs. 9.1–9.3)

Type material. Holotype, ♂ labelled: "Chodshent // Reg. Mus. Hist. Nat. / Belg. I. G. 10294 // G. Fagel det. / Glycia / bicolor / Solsky // Merizomena (Dichromenta) kabaki **sp. n.** / Muilwijk, Felix & Anichtchenko, 2022 // Holotype (red) // Coll. R. I. Sc. N. B.", RISNB.

Description. A small sized species, (BL 6.5 mm, BW 2.5 mm). Habitus as in Fig. 9.1. Head brownish, pronotum brownish with yellowish lateral gutter, basal half of elytra and lateral elytral gutter yellowish, apex of elytra brown, with an extension anteriorly along the suture; small appendages yellowish. Ventral side of head and thorax yellowish, ventrites slightly darker. Dorsal side shiny.

Head. Narrower than pronotum (HW/PM: 0.90). Eyes convex. Tempora, half the length of an eye (T/E: 0.5). Frontal furrows surpressed. Frons with a small and shallow median impression. Vertex on each side with one seta diagonally behind the eyes. Frons and vertex covered with punctures, coarser on posterior side of vertex and very sparce hairs; base of frons with some punctures. Microsculpture consisting of micropunctures on frons. Antennomere 3 as long as antennomere 1.

Thorax. Pronotum cordate (PM/PL: 1.18), widest at approximately the end of anterior third, lateral sides regularly narrowed posteriorly, in basal sixth straight to the nearly straight hind angles (PM/PS: 1.26, PM/PB: 1.27). Base lobed, oblique towards the hind angles. Lateral gutter narrow and unclear separated from the flat disc. Basal foveae slightly deepened, unified with lateral gutter. Median line impressed. Surface covered with punctures, denser along the lateral sides. Microsculpture consisting of very superficial irregular meshes. Metepisterna about 3.5 times as long as wide, narrowed posteriorly.

Abdomen. Elytra subrectangular, slightly elongated, moderately flat, (EL/EW: 1.63); widest at apical quarter. Regularly rounded to the suture. Sutural angle subrectangular, without dent. Disc moderately flat. Striae embedded, punctured. Interstriae slightly convex; with one row of punctures, only in the outer striae with a few fine

Fig. 9.1 *Merizomena kabaki* habitus, holotype, dorsal view, scale 5 mm.

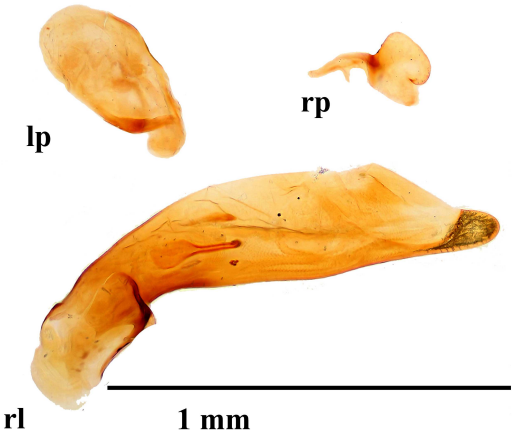


Fig. 9.2 *Merizomena kabaki* aedeagus, holotype, rl = right lateral view, rp = right-, lp = left paramere, scale 1 mm.jpg, scale 1 mm.

setae. Microsculpture absent. Ventrites with yellow, decumbent hairs, denser on lateral sides and on anal ventrite. Anal ventrite with three pairs of marginal setae, incised at middle.

Legs. Moderately slender, with meso- and metatibiae longer than corresponding tarsi. Ventral side of meso- and metatarsi 1–4 with dense short bristles. Claws with 5 teeth.

Median lobe. Dorsal side in horizontal view curved with a more or less rectilinear part in the middle, ventral side slightly bisinuate (Fig. 9.2). Length 1.15 mm. Endophallus with two copulatory pieces, one copulatory piece comma shaped and the other thin, short and straight. Right paramere with a wide basal part.

Female genitalia. Unknown.

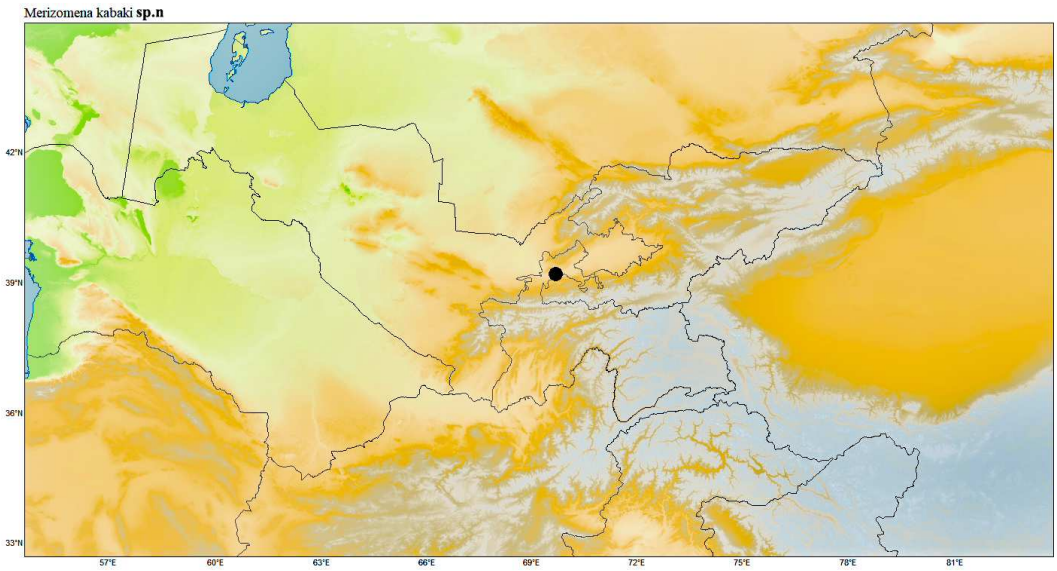
Comparative notes. *M. kabaki* sp. n. differs from all other known species of this subgenus by the combination of small body size, more oblong elytra, inner elytral interstriae without hairs and two copulatory pieces in the median lobe.

Etymology. This new species is named after our friend and colleague, the entomologist Ilya I. Kabak (St. Petersburg), who made an essential contribution to this manuscript.

Comments. This species was erroneously identified as *Glycia bicolor* Solsky. It is unknown why the label "Holotype" was added. (Fig. 9.3).

Distribution. Only known from the type location in Tadzhikistan (Map 9).

Fig. 9.3 *Merizomena kabaki* label holotype.



MAP 9. *Merizomena* (*Dichromenta*) *kabaki* **sp.n.**

Key to the species *Merizomena* Chaudoir
For a certain identification the median lobe of a male is necessary

1 Base of elytra marginated to stria 3 or 4. Body more convex, head and pronotum with evident colour contrast …… …… *Merizomena* s.str. (**2)**
– Base of elytra marginated to scutellair striae. Body more elongated, head and pronotum without evident colour contrast …… *Dichromenta* **subg. n.** (**3**)

2 Pronotum cordiform. Elytral apex blackish. Species from Turkey. … *M.* (s.str.) *basalis* (Chaudoir, 1852)
– Pronotum less cordiform with straight or blunt angles. Elytral apex violet. Species from Central Asia … *M.* (s.str.) *tricolor* (Gebler, 1845)

3 Eyes reduced, tempora long (T/E: 0.66–0.81), body size small: 5.7–6.0 mm. Habitus as in Fig. 5.2 … *M.* (*Dichromenta*) *dimidiata* (Ménétriés, 1848)
– Eyes more convex, tempora short (T/E: < 0.5), body size mostly bigger: 5.5–8.6 mm … (**4**)

4 Elytra elongated. Hairs of legs and dorsal side long and fine. Habitus as in Fig. 6.2 … *M.* (*Dichromenta*) *tschitscherini* (Semenov, 1900)
– Elytra more elliptical. Hairs of legs and dorsal side short …… (**5**)

5 Only outer elytral striae with punctures bearing fine setae … *M.* (*Dichromenta*) *kabaki* **sp. n.**
– All elytral striae with punctures and hairs … … (**6**)

6 Contrast between red-brownish base with brown apex of elytra indistinct; pronotum transverse; interstriae 2–8 with at least two rows of setiferous punctures; median lobe as in Fig. 4.4. …… *M.* (*Dichromenta*) *arabica* (Mateu, 1986)
– Contrast between yellowish (red-brown) base and dark brown apex of elytra evident (**7**)

7 Copulatory piece in endophallus with a rhombic base and a strongly bent apical point (90°) as in Fig. 7.5 … *M.* (*Dichromenta*) *grandinella* (Semenov, 1889)
– Apical point of copulatory piece not bent under a hook of 90° (Figs. 3.6–8.3) ….. (**8**)

8 Elytral microsculpture superficial; pronotal disc slightly convex, strongly sloped to lateral sides, median lobe as in Fig. 3.6. … *M.* (*Dichromenta*) *castanea* (Klug, 1832)
– Elytral microsculpture evident; pronotal disc convex, gradually sloped to lateral sides, median lobe as in Fig. 8.3. … *M.* (*Dichromenta*) *schoenmanni* (Kirschenhofer, 1994)

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