Linzer biol. Beitr.	49/1	235-252	28.7.2017

Taxonomic and faunistic notes on some West Palaearctic and Middle Asian Xantholinini, with a revalidation and new synonymies (Coleoptera: Staphylinidae: Staphylininae)

Volker ASSING

A b s t r a c t : *Xantholinus motschulskyi* BORDONI, 1999, previously a synonym of *X. reitteri* COIFFAIT, 1966, is revalidated. The internal structures of the aedeagus of *X. motschulskyi*, *X. reitteri*, and *X. corallinus* REITTER, 1901 are illustrated. A lectotype is designated for *X. corallinus*. Seven synonymies are proposed: *Gyrohypnus punctulatus* (PAYKULL, 1789) = *Gyroyhypnus quadratus* STEPHENS, 1833, nov.syn.; *Stenistoderus cephalotes cephalotes* (KRAATZ, 1858) = *S. cephalotes armeniacus* (COIFFAIT, 1966), nov.syn.; *Xantholinus linearis* (OLIVIER, 1795) = *X. styriacus* GRIMMER, 1841, nov.syn.; *X. gridellii* COIFFAIT, 1956 = *X. tronqueti* BORDONI, 2016, nov.syn.; *X. khnzoriani* COIFFAIT, 1966 = *X. caucasicus* BORDONI, 1975, nov.syn., = *X. iablokoffi* COIFFAIT, 1975, nov.syn.; *X. motschulskyi* BORDONI, 1999 = *X. chalusianus* BORDONI, 2017, nov.syn. A neotype is designated for *Gyroyhypnus quadratus* STEPHENS, 1833. New records of 37 species of Xantholinini are reported. The revised distributions of *X. reitteri* and *X. motschulskyi* are mapped.

K e y w o r d s : Coleoptera, Staphylinidae, Staphylininae, Xantholinini, *Xantholinus*, West Palaearctic, Middle Asia, taxonomy, new synonymies, revalidation, neotype designation, new records, distribution map.

Introduction

By the end of 2014, the staphylinine tribe Xantholinini was represented in the West Palaearctic region and Middle Asia (including Afghanistan, but exclusive of Pakistan) by 214 species and four subspecies in 14 genera, two nomina dubia, one overlooked synonymy (*Xantholinus nicolasi* COIFFAIT, 1972 = *X. pantokratoris* BORDONI, 1975; see ASSING (2007)), and one adventive species not considered (SCHÜLKE & SMETANA 2015). Approximately half of them (108 species and two subspecies) belong to the genus *Xantholinus* DEJEAN, 1821. In the meantime, ten additional species have been described, six of *Xantholinus* from the Mediterranean and Iran (ASSING 2015a, b, BORDONI 2016a, 2017a), two of *Vulda* JACQUELIN DU VAL, 1853 from Turkey (ANLAŞ 2016, ASSING 2016), one of *Gyrohypnus* LEACH, 1819 from Afghanistan, and one of *Leptacinus* ERICHSON, 1839 from Afghanistan (BORDONI 2016b). Moreover, two synonymies were proposed (ASSING 2016, BORDONI 2017b).

A reliable identification of Xantholinini and particularly of *Xantholinus* species generally requires an examination of the aedeagus. Even a subgeneric assignment of a *Xantholinus* species exclusively relies on the male primary sexual characters. Nevertheless, the

description of one of the three *Xantholinus* species described by BORDONI (2016a) is based on a unique female and that of a second species on a unique male with a damaged aedeagus, both from Syria. While it is still possible to interpret the latter (see the section on *Xantholinus gridellii* COIFFAIT, 1956 in this paper), the identity of the former, *X. syriacus*, will have to remain doubtful until a male from the vicinity of the type locality is discovered. In the diagnosis of this species, the author justifies the description stating that "no other species of *Xantholinus* known to [him] has the appearance and depigmented coloration as this taxon". However, *X. wunderlei* (holotype examined), a species described by BORDONI (1994) from South Turkey, is just as depigmented as the holotype of *X. syriacus*.

Recently examined material of *Xantholinus reitteri* COIFFAIT, 1966 from Georgia and a comparison with previously identified material gave rise to the suspicion that the synonymy of *X. motschulskyi* BORDONI, 1999 proposed earlier (ASSING 2007) was erroneous. In order to clarify the identities of these names, the available material, including the type material of *X. motschulskyi*, was re-examined. Moreover, type material from the Iablokoff-Khnzorian collection, which is housed in the private home of Mark Kalashian, was revised. Finally, material of Xantholinini made available to me from various public and private collections and studied during the past few years is reported.

Material and methods

The material treated in this study is deposited in the following collections:

BMNH ..... The Natural History Museum, London (M. Barclay, R. Booth)
HNHM ..... Hungarian Natural History Museum, Budapest (Gy. Makranczy)
MNB ..... Museum für Naturkunde, Berlin (J. Frisch, B. Jaeger, M. Schülke, J. Willers)
cAnl..... private collection Sinan Anlaş, Izmir
cAss..... author´s private collection
cFel ..... private collection Benedikt Feldmann, Münster
cKal..... private collection Mark Kalashian, Yerevan
cKoc..... private collection Matúš Kocian, Prague
cSha..... private collection Alexey Shavrin, Daugavpils
cSko ..... private collection Vladimir Skoupý, Kamenné Žehrovice
cWun..... private collection Paul Wunderle, Mönchengladbach

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The images were created using a digital camera (Nikon Coolpix 995). In order to fully assess the internal aedeagal structures of *Xantholinus* species, the aedeagi were dissected after macerating them in KOH. The internal structures were removed from the capsule, embedded in water-soluble Lompe medium on a plastic slide, and then squeezed using another slide ("squeeze preparation").

Results

Comments are provided only for records of special interest. Records of widespread species that are within the known ranges are merely listed. For a synopsis of the distributions of these species see SCHÜLKE & SMETANA (2015).

Gauropterus fulgidus (FABRICIUS, 1787)

Material examined: Tunisia: 1 ex. [det. Feldmann], Jendouba, 10 km S Tabarka, 36°52'N, 8°43'E, 60 m, shore of reservoir, 2.III.2012, leg. Hetzel (cFel); 1 ex. [det. Feldmann], Jendouba, El Feja National Park, 36°28'N, 8°14'E, 590 m, 3.III.2012, leg. Starke (cFel). Lebanon: 1 ex. [det. Feldmann], ca 48 km NE Beirut, Chatine river near Arz Tannourine, ca 1500 m, river bank, 29.IV.2014, leg. Reuter (cFel). Israel: 1♂, 2♀♀, North District, Upper Galilee, northern shore of Sea of Galilee, tamarisk flood plain forest between Kfar Nakhum (Capernaum) and mouth of Jordan river, -200 m, 31.III.-1.IV.2008, leg. Wrase (MNB, cAss); 1 ex. [det. Feldmann], S En Gedi, Wadi Mishmar, ca 31°23'N, 35°19'E, 4.XII.2010, leg. Aßmann (cFel). Afganisthan: 1 ex. [det. Feldmann], Herat, Herat env., 31.X.-2.XI.2009, leg. Reuter (cFel).

Gauropterus bucharicus BERNHAUER, 1905

Material examined: Iran: Kerman: 1 ex., 40 km NNE Jiroft, 4 km SE Deh Bid, 29°01'N, 57°56'E, 2320 m, 27.V.2010, leg. Frisch (MNB); 1 ex., pass Mahan-Sirch, 30°12'N, 57°26'E, 2410 m, 21.V.2010, leg. Frisch & Serri (cAss).

Gauropterus sanguinipennis (KOLENATI, 1846)

Material examined: Turkey: 4 exs. [det. Feldmann], Hatay, 15 km WSW Antakya, Batıayaz, Musa Dağı, ca 500 m, 6.IV.2014, leg. Reuter (cFel). Lebanon: 2 exs. [det. Feldmann], ca 30 km NE Beirut, Adonis env., bank of Ibrahim river, 5.III.2014, leg. Reuter (cFel). Iran: Tehran: 10 exs., N Tehran, Elburz Mts., Darake, Palanchal, 35°51'N, 51°23'E, 2250 m, 31.V.2010, leg. Frisch (MNB, cAss). Kerman: 1 ex., Qohrud Mts., 15 km E Korin, 3500 m, 2.V.2008, leg. Anistschenko (cSha); 1 ex., Yasuj region, Zagros Mts., Si Sakht pass, 3800 m, 4.-5.VI.2008, leg. Anistschenko (cSha). Ilam: 13 exs., 10 km NW Eyvan, 5 km W Alamdar, 33°52'N, 46°11'E, 18.X.2011, leg. Frisch (MNB, cAss).

Gauropterus sanguinipes REITTER, 1889

Material examined: Iran: 1 ex., Kerman, Rayen-Darb Behesht, 6 km W Goruh, 29°22'N, 57°19'E, 2870 m, 28.V.2010, leg. Frisch (MNB).

Gauropterus semenovi KIRSHENBLAT, 1951

Material examined: Iran: 1 ex., Kerman, Bardsir-Baft, 10 km SE Qal'eh Askar, Mt. Lalehzar, 29°26'N, 56°45'E, 3360 m, 22.V.2010, leg. Frisch & Serri (MNB).

Comment: The above specimen apparently represents the first record since the original description. The species is readily distinguished from its congeners particularly by the conspicuous coloration of the abdomen (segments V-VI and posterior margin of segment IV reddish and distinctly contrasting with the black remainder of the abdomen).

Gyrohypnus wagneri (SCHEERPELTZ, 1926)

Material examined: Tunisia: 1♂ [det. Feldmann], Jendouba, 8 km S Ain Draham, Beni M'Tir, 36°43'N, 8°12'E, oak forest, sifted, 610 m, 2.III.2012, leg. Hetzel (cFel).

Comment: The above male represents the first record from Tunisia (ASSING 2003, SCHÜLKE & SMETANA 2015).

Gyrohypnus punctulatus (PAYKULL, 1789)

Gyrohypnus quadratus STEPHENS, 1833: 260 f.; **nov.syn.**

Type material: Neotype ♂, present designation: "E. Ardsley, 19.v.37, WY / C.E. Tottenham collection. B.M.1974-587. / Neotypus ♂ *Gyrohypnus quadratus* Stephens, desig. V. Assing 2017 / *Gyrohypnus punctulatus* (Paykull), det. V. Assing 2017" (BMNH).

Comment: The original description of *Gyrohypnus quadratus* is based on an unspecified number of syntypes "taken in Suffolk by Mr. Kirby" (STEPHENS 1833). STEPHENS (1839) subsequently assigned the species to *Xantholinus*. The name is listed as a nomen dubium by HERMAN (2001) and as *Xantholinus* incertae sedis by SCHÜLKE & SMETANA (2015). It has not been in use since 1839 (HERMAN 2001).

According to Roger Booth (e-mail, 19 January, 2017), a thorough search for the type material in both the Kirby and Stephens collections at the BMNH revealed that there is no material named as *Gyrohypnus quadratus* in either of the two collections. Consequently, the type material must be regarded as lost.

It can be inferred from the original description that the name *Gyrohypnus quadratus* indeed refers to a species of Xantholinini. The details mentioned for the head ("oblong, as wide as the thorax, with confluent excavated lines"), the pronotum ("short, with about ten deep punctures on the disc, disposed in two lines", and the coloration (body, including the elytra, black with the "extreme apex [of the abdomen] reddish" suggest that *G. quadratus* belongs to *Gyrohypnus* LEACH, 1819; they clearly rule out *Xantholinus* (head with fine and sparse punctation; pronotum long and slender), *Gauropterus* THOMSON, 1860 (elytra red), and *Nudobius* THOMSON, 1860 (elytra reddish). Among the *Gyrohypnus* species distributed in Britain, the most likely candidate is *G. punctulatus* ("legs pitchy-black"; "Long. corp. 3 lin."). The possibility that *G. quadratus* refers to an overlooked species in Britain can be ruled out. Therefore, in order to dispose of an obsolete and doubtful name, a male of *G. punctulatus* from East Ardsley in West Yorkshire (according to Max Barclay situated at 53.7250°N, 1.5392°W) is designated as the neotype (see above) and *Gyrohypnus quadratus* STEPHENS, 1833 is placed in synonymy with *G. punctulatus* (PAYKULL, 1789).

Gyrohypnus ochripennis (EPPELSHEIM, 1892)

Material examined: Iran: Kerman: 8 exs., pass Mahan-Sirch, Banan mts., 30°12'N, 57°24'E, 2800 m, 20.V.2010, leg. Frisch & Serri (MNB, cAss); 2 exs., Bardsir-Baft, 10 km SE Qal'eh Askar, Mt. Lalehzar, 29°28'N, 56°43'E, 2950 m, 22.V.2010, leg. Frisch & Serri (MNB); 1 ex., Bardsir-Baft, 14 km SE Qal'eh Askar, Mt. Lalehzar, 29°26'N, 56°44'E, 3240 m, 22.V.2010, leg. Frisch & Serri (cAss); 1 ex., Baft-Jiroft, 7 km NE Hanza, 29°21'N; 57°12'E, 2950 m, 24.V.2010, leg. Frisch (cAss). Kyrgyzstan: 4 exs., Issyk-Kul, 25 km W Balykchy, 2 km S Kek Mojnok Vtoroe, 42°27'N, 75°51'E, 1670 m, 18.VI.2011, leg. Frisch (MNB, cAss). Kazakhstan: 5♀♀, Charyn NP, Ashen Grove, 43.67°N, 79.39°E, 630 m, leaf litter sifted, 16.-18.V.2014, leg. Kocian & Nakládal (cKoc).

Comment: According to SCHÜLKE & SMETANA (2015), this species was previously

unknown from Iran. It was recently also reported from Afghanistan, Tajikistan, and China (BORDONI 1916b).

Gyrohypnus vomer ASSING, 2003

Material examined: Kazakhstan: 7 exs., Almaty region, Talgar district, Ak-Bulak, 43.27°N, 77.37°E, 1750 m, horse and cow dung, 12.-15.V.2014, leg. Kocian & Nakládal (cKoc, cAss).

Comment: This species had been recorded only from the Russian Far East (ASSING 2003). The above record expands the known distribution westwards by several thousand kilometres.

Leptacinus nigerrimus COIFFAIT, 1971

Material examined: Iran: Esfahan: 5 exs., WNW Natanz, Abyaneh, Bidhand, 33°30'N, 51°46'E, 2350 m, 18.V.2009, leg. Frisch & Serri (MNB, cAss); 1 ex., S Natanz, N Tarq, Mt. Karkas, 33°25'N, 51°46'E, 2580 m, 20.V.2009, leg. Frisch & Serri (MNB). Semnan: 3 exs., road Shahrud-Mojen, 2 km SE Tash, 36°33'N, 54°40'E, 2190 m, 24.V.2006, leg. Frisch & Serri (MNB, cAss).

Comment: *Leptacinus nigerrimus* was previously known only from Turkey and from "Caucasus" without specified locality (SCHÜLKE & SMETANA 2015). The above material represents the first records from Iran.

Leptacinus mirus ASSING, 2011

Material examined: Iran: Tehran: 2♂♂, N Tehran, Elburz Mts., Darake, Palanchal, 35°51'N, 51°23'E, 2250 m, 31.V.2010, leg. Frisch (MNB, cAss). Esfahan: 1♂, Chadegan, Zayandeh road, 32°43'07"N, 50°44'19"E, 20.VI.2009, leg. Serri (MNB).

Comment: This recently described species was previously known only from Gilan and Mazandaran provinces, Iran (ASSING 2011).

Leptacinus armeniacus COIFFAIT, 1966

Leptacinus armeniacus COIFFAIT, 1966: 196 f.
Type material examined: Holotype ♀: "Erevan, Dzhrvezh, ASSR - 15-5-52 / Type / *Leptacinus armeniacus* Coiff., H. Coffait det. 1963" (cKal).

Comment: According to COIFFAIT (1966), the type material is composed of a male holotype deposited in the Khnzorian collection and a male paratype deposited in the Coiffait collection, both from the type locality in Armenia. An examination of the holotype, however, revealed that it is in fact a female. In external characters, this species is not distinctive. The holotype is characterized by rather small size (similar to *L. formicetorum* MÄRKEL, 1841), brownish coloration, and the absence of microsculpture in the anterior portion of the pronotum.

Megalinus flavocinctus (HOCHHUTH, 1849)

Material examined: Turkey: 1 ex. [det. Feldmann], Hatay, 15 km WSW Antakya, Batıayaz, Musa Dağı, ca 500 m, 6.IV.2014, leg. Reuter (cFel). Lebanon: 1 ex. [det. Feldmann], 27 km NE Beirut, Kfardebian env., ca 1100 m, mixed oak forest, pitfall trap, 30.X.2012, leg. Reuter (cFel); 1 ex. [det. Feldmann], same data, but 16.X.2013 (cFel); 1 ex. [det. Feldmann], ca 48 km NE

Beirut, Chatine river near Arz Tannourine, ca 1500 m, river bank, 9.VI.2013, leg. Reuter (cFel); 1 ex. [det. Feldmann], same data, but 29.IV.2014 (cFel); 1 ex. [det. Feldmann], same data, but 24.V.2014 (cFel); 1 ex. [det. Feldmann], Ehmej, ca. 34°08'N, 35°47'E, ca. 1300 m, 25.V.-9.VI.2013, leg. Reuter (cFel); 1 ex. [det. Feldmann], Rachaya, Tannoura, ca 33°29'N, 35°48'E, oak forest and shrubs, 900 m, IV.2015, leg. Reuter (cFel). Israel: 2 exs., North District, Upper Galilee, northern shore of Sea of Galilee, tamarisk flood plain forest between Kfar Nakhum (Capernaum) and mouth of Jordan river, -200 m, 31.III.-1.IV.2008, leg. Wrase (MNB, cAss); 1 ex. [det. Feldmann], Sea of Galilee, mouth of Jordan river near Capernaum, ca 32°54'N, 35°37'E, -220 m, tamarisk forest, 19.III.2011, leg. Hetzel (cFel); 1 ex. [det. Feldmann], Upper Galilee, Ziv'on Batha, 8.III.2008, leg. Buse (cFel); 1 ex. [det. Feldmann], 13 km S Haifa, Lower Nahal Oren, ca 32°43'N, 34°59'E, flight interception trap, 8.IV.2009, leg. Buse (cFel); 2 exs. [det. Feldmann], Haifa, Mt. Carmel, Ya'ar Ha'arbaim, 32°45'N, 35°01'E, 13.IV.2009, leg. Buse & Pavlicek (cFel).

Stenistoderus versicolor (SOLSKY, 1871)

Material examined: Kazakhstan: 2♂♂, 3♀♀, Charyn NP, Ashen Grove, 43.67°N, 79.39°E, 630 m, leaf litter sifted, 16.-18.V.2014, leg. Kocian (cKoc, cAss).

Stenistoderus cephalotes cephalotes (KRAATZ, 1858)

Leptolinus cephalotes armeniacus COIFFAIT, 1966: 197; **nov.syn.**
Type material examined: Holotype ♀: "Erevan, Dzhrvezh, ASSR - 2-4-52 / Type / *Leptolinus cephalotes* ssp. *armeniacus* Coiff., H. Coiffait det. 1963 / *Leptolinus cephalotes* Kr., V.I. Gusarov det. 2000 / *Stenistoderus cephalotes* (Kraatz), det. V. Assing 2017" (cKal). Paratype ♂: "Erevan, Sovetashen, ASSR, 4-4-52 / Préparation microscopique / Paratype / *Stenistoderus cephalotes* (Kraatz), det. V. Assing 2017" (cKal).

Material examined: Armenia: 1♂, Yerevan, Dzhrvezh, 25.V.1952 (cKal). Iran: 1♀, Ilam, Sarableh-Kuhdasht, NW Sarneh, 33°41'N, 47°04'E, 890 m, 17.X.2011, leg. Frisch (MNB).

Comment: The original description of *Stenistoderus cephalotes armeniacus* is based on a male holotype and three paratypes, one male and two females, from Armenia (COIFFAIT 1966). An examination of the holotype revealed that it is in fact a female. The aedeagus of the male paratype is missing, that of the additional male from Armenia examined, however, is identical to that of *Stenistoderus cephalotes* males from other regions. Moreover, the presence of a distinct subspecies in Armenia would be zoogeographically implausible. Consequently, *S. cephalotes armeniacus* is placed in synonymy with the nominate subspecies.

Stenistoderus turcicus (COIFFAIT, 1956)

Material examined: Israel: 1♂, S Hadera, Breikhat Ya'ar, 35°25'N, 34°54'E, 10 m, ponds and wet meadows, [date not specified], leg. Aßmann (cFel); 2♂♂, Golan Heights, Bental Reservoir near Merom Golan, 33°08'N, 35°47'E, 940 m, 25.VIII.2008, leg. Aßmann (cFel, cAss).

Stenistoderus syriacus (COIFFAIT, 1956)

Material examined: Jordan: 1♂, Karak gov., Wadi al Hasa, 30°57'N, 35°46'E, 470 m, 1.III.2014, leg. Hetzel (cFel).

Comment: *Stenistoderus syriacus* had been recorded from Israel and Syria. The above male represents the first record from Jordan.

Xantholinus (*Calolinus*) *corallinus* REITTER, 1901 (Fig. 5)

Xantholinus corallinus REITTER, 1901: 68.

Type material examined: Lectotype ♂ [dissected prior to present study]: "Buchara, Karatak / coll. Reitter / Holotypus *Xantholinus corallinus* Reitter 1901 [curator label] / *X. corallinus* m. 1900 type / *Xantholinus* (*Typhlolinus* Reitt. sensu meo) *corallinus* Reit. sensu meo, det. A. Bordoni 1972 / Lectotypus *Xantholinus corallinus* Reitter, rev. V. Assing 2009" (HNHM).

Additional material examined: Turkmenistan: 1♂, Turkestan, Auli-Ata, C. Aris (HNHM).

Comment: The original description is based on an unspecified number of syntypes from "Buchara: Karatak" (REITTER 1901). BORDONI (1999) designated the above syntype from the Reitter collection at the HNHM as the lectotype. It was not labelled as such, although BORDONI (1999) states that he attached a lectotype label to it. The aedeagus of the lectotype is illustrated in Fig. 5.

Xantholinus (*Calolinus*) *rufipennis* ERICHSON, 1839

Material examined: Greece: 1 ex., Rhodos, Theologos, 36°23'N, 28°02'E, beach, 5.IV.2007, leg. Bahr et al. (MNB). Turkey: 6 exs., Balıkesir, Kalabak, 5.XI.2009 (cAnl, cAss); 1♂ [det. Feldmann], Antalya, Kemer, Comyuva, 20.XI.2010, leg. Röwekamp (cFel); 1♂ [det. Feldmann], Alanya, Incekum, 26.XI.2009, leg. Röwekamp (cFel). Lebanon: 1♂ [det. Feldmann], Ehmej, ca 34°08'N, 35°47'E, ca 1300 m, 25.V.-9.VI.2013, leg. Reuter (cFel); 1♂ [det. Feldmann], 27 km NE Beirut, Kfardebian env., ca 1100 m, mixed oak forest, pitfall trap, 12.XII.2012, leg. Reuter (cFel). Israel: 2♂♂, 2♀♀, Central District, Nitsanim, dunes between Ashdod and Ashkelon, 29.III.2008, leg. Wrase (MNB, cAss); 1♀, South District, Ha Bsor, Nakhal Bsor, ca. 12 km SW Ofakim, 22.III.2008, leg. Wrase (MNB); 1♀, Golan Heights, Bental reservoir, W Merom Golan, 1000 m, pasture near shore, 25.III.2008, leg. Wrase (MNB); 1♂ [det. Feldmann], 13 km S Haifa, Lower Nahal Oren, c. 32°43'N, 34°59'E, flight interception trap, 8.V.2009, leg. Buse (cFel). Syria: 1♀, W Crac des Chevaliers, 8.XII.2006, leg. Skoupý (cSko); 2♀♀, E Safita, Mashtalhelu, 30.IV.2008, leg. Skoupý (cSko); 1♂, Slenfeh, 18.IV.2010, leg. Skoupý (cAss).

Xantholinus (*Calolinus*) *nicolasi* COIFFAIT, 1972

Material examined: Greece: Pelopónnisos: 1♀, Korinthos, Akrokorinth env., fallow, 4.II.2012, leg. Esser (MNB); 1♀, Lapas, Limni Strofilia, margin of lagune, 31.I.2012, leg. Esser (MNB); 1♀, 30 km S Egio, Clokos mts., Petsaki, 20.V.2004, leg. Skoupý (cSko); 1♂ [teneral], 30 km S Egio, Clokos mts., Valta, 20.V.2004, leg. Skoupý (cSko).

Xantholinus (*Heterolius*) *fortepunctatus* MOTSCHULSKY, 1860

Material examined: Armenia: 1♂, Yerevan, 26.V.1988, leg. Skoupý (cSko).

Xantholinus (*Heterolius*) *khnzoriani* COIFFAIT, 1966

Xantholinus (*Heterolinus*) *khnzoriani* COIFFAIT, 1966: 199.
Xantholinus (*Heterolinus*) *caucasicus* BORDONI, 1975: 73 f.; **nov.syn.**
Xantholinus (*Heterolinus*) *iablokoffi* COIFFAIT, 1975: 31 f.; **nov.syn.**
Type material examined: Holotype ♂: "Aparan [Amaran?], Husagjur, ASSR - 30-5-49 / Type / *Xantholinus* (*Phalacrolinus*) *khnzoriani*, H. Coiffait det. 1963 / *Xantholinus khnzoriani* Coiff., V.I. Gusarov det. 2000" (cKal). Paratypes: 1♂: same data as holotype (cKal); 1♀: same data as holotype, but "29-5-49" (cKal).

Additional material examined: Russia: 4 exs., Karachayevo-Cherkesskaya, 13 km SW Teberda, 43°20'N, 41°40'E, 1450 m, moist spruce forest with scattered beech, litter, moss, and dead wood sifted, 22.VII.2011, leg. Assing (cAss); 1 ex., Karachayevo-Cherkesskaya, 20 km SW Teberda, Dombai, 43°18'N, 41°39'E, 2160 m, subalpine birch forest, litter sifted, 23.VII.2011, leg. Assing (cAss); 2 exs., Karachayevo-Cherkesskaya, 4 km NNE Teberda, Teberda river, 43°29'N, 41°45'E, 1250 m, river bank, flood debris sifted, 24.VII.2011, leg. Assing (cAss); 4 exs., Karachayevo-Cherkesskaya, 20 km SW Teberda, above Dombai, 43°17'N, 41°38'E, 1950 m,

mixed forest (fir, spruce, beech), leaf litter sifted, 25.VII.2011, leg. Assing (cAss); 2 exs., Karachayevo-Cherkesskaya, 9 km SW Teberda, Teberdinski range, Baduk river valley, 43°23'N, 41°40'E, 2000 m, spruce forest, bark of spruce and maple sifted, 27.VII.2011, leg. Assing (cAss); 1♂, Karachayevo-Cherkesskaya, Bol'shaya Laba river valley, 1500 m, 31.VIII.1992, leg. Savitsky (cAss); 1♂, Krasnodar region, Tshugush mountain range, 2300-2400 m, 28.VIII.1998, leg. Koval (cAss); 1♀, Krasnodar region, Caucasian preserve, Mt. Yatirgvarta, 2200 m, 26.VII.1992, leg. Solodovnikov (cAss); 1♂, Mussatceri Khrebet, 3000 m, VI.1976, leg. Gottwald (cAss). Georgia: 1♀, Central Caucasus, Schatili-Mutso, 42°40'N, 45°11'E, 1390 m, 15.VII.2015, leg. Brachat & Meybohm (cAss); 1♂, Central Caucasus, Schatili-Mutso, 42°37'N, 45°12'E, 1510 m, 15.VII.2015, leg. Brachat & Meybohm (cAss); 2♂♂, 1♀, Central Caucasus, Schatili-Gudani, 42°32'N, 45°01'E, 1960 m, 16.VII.2015, leg. Brachat & Meybohm (cAss); 1♀, Central Caucasus, Gudani, 42°32'N, 44°58'E, 1620 m, 18.VII.2015, leg. Brachat & Meybohm (cAss); 1♀, Central Caucasus, Stepanzminda, 42°40'N, 44°37'E, 2120 m, 20.VII.2015, leg. Brachat & Meybohm (cAss); 1♂, 2♀♀, Central Caucasus, Sno valley, 42°36'N, 44°39'E, 1800 m, 21.VII.2015, leg. Brachat & Meybohm (cAss); 1♀, Central Caucasus, Sno valley, 42°35'07"N, 44°45'09"E, 2210 m, 21.VII.2015, leg. Brachat & Meybohm (cAss); 1♂, Zemo Svaneti, W Koruldashi, 42°56'N, 43°07'E, 2350 m, 30.VII.2016, leg. Meybohm (cAss); 1♂, Zemo Svaneti, 3 km S Koruldashi, 42°53'N, 43°09'E, 1790 m, 1.VIII.2016, leg. Meybohm (cAss); 2♂♂, Svaneti, Mazeri env., Dolra river valley, 43.07°N, 42.60°E, 1600 m, litter beneath *Azalea* sifted, 6.VII.2015, leg. Kocian (cKoc); 1♀, Svaneti, Mestia env., Ughviri pass, 43.03°N, 42.03°E, 1940 m, litter beneath *Azalea* sifted, 9.VII.2015, leg. Kocian (cKoc); 1♂, 1♀, Svaneti, 2 km E Lakhamula, Madlina river valley, 43.05°N, 42.46°E, 1100 m, sifted, 8.VII.2015, leg. Kocian (cKoc, cAss); 1♂, Lesser Caucasus, Trialetskiy Khrebet, Bakuriani, 1800-2200 m, 15.-20.VI.1987, leg. Wrase & Schülke (cAss). Armenia: 1♂, 2♀♀, N Yerevan, NW Hrazdan, 40°38'06"N, 44°27'37"E, 2110 m, stream valley, moist margin of pista, 28.VI.2016, leg. Assing (cAss).

Comment: The original description of *X. khnzoriani* is based on a male holotype and nine paratypes from "Aparan", Armenia (COIFFAIT 1966); the species had been recorded only from Armenia (HERMAN 2001, SCHÜLKE & SMETANA 2015). The type locality of *X. caucasicus* is situated near Teberda in the Northwest Caucasus; paratypes were collected also near Dombai and in Artvin, Northeast Anatolia (BORDONI 1975). In the original description of *X. iablokoffi*, which is based on a male holotype and a male paratype from "Dombai, Koubans" (i.e., not far from the type locality of *X. caucasicus*), COIFFAIT (1975) states that this species resembles *X. khnzoriani*, except that the punctation of the head was finer and that of the elytra was denser and coarser. The holotype was looked for, but not found, in the Khnzorian collection, where it should be deposited according to the original description.

An examination of the type material of *X. khnzoriani* and of additional material from numerous localities in the Caucasus and adjacent mountain ranges (Russia, Georgia, Armenia), including the immediate vicinity of the type localities of both *X. caucasicus* and *X. iablokoffi*, revealed that the aedeagal characters are identical. The external characters, including the punctation of the head and of the elytra, are subject to some variation, as is usually the case with widespread *Xantholinus* species. Consequently, there is little doubt that all three names refer to the same species, and *X. caucasicus* and *X. iablokoffi* are placed in synonymy with the senior name *X. khnzoriani*.

Xantholinus (*Idiolinus*) *crassicornis* HOCHHUTH, 1851

Material examined: Turkey: 1♂, Ardahan, Ikizdere, Dereköy, 5.VII.1996, leg. Skoupý (cSko); 1♂, Ardahan, Çam geçidi, 2400 m, 27.V.2000, leg. Skoupý (cAss). Georgia: 1♂, Algeti National Park, W Manglisi, 41°42'N, 44°21'E, 1120 m, 11.VII.2015, leg. Brachat & Meybohm (cAss); 1♂, 1♀, Algeti National Park, W Manglisi, 41°42'N, 44°19'E, 1110 m, 11.VII.2015, leg. Brachat & Meybohm (cAss); 3♂♂, 1♀, Algeti National Park, W Manglisi, 41°42'N, 44°18'E, 1210 m, 11.VII.2015, leg. Brachat & Meybohm (cAss); 2♂♂, 1♀, Samzche-Dschawach., Timotesubani, 41°49'N, 43°31'E, 1140 m, 13.V.2016, leg. Brachat & Meybohm (cAss); 1♂,

Samzche-Dschawach., Bakuriani, 41°44'N, 43°43'E, 1767 m, 13.V.2016, leg. Brachat & Meybohm (cAss); 1♂, Imereti, NW Rikoti pass, 42°03'N, 43°29'E, 950 m, 14.V.2016, leg. Brachat & Meybohm (cAss); 6♂♂, Samazche-Dschawach., N Abastumani, 41°46'N, 42°50'E, 1370 m, 15.V.2016, leg. Brachat & Meybohm (cAss); 1♂, 1♀, Samazche-Dschawach., W Abastumani, 41°45'N, 42°49'E, 1345 m, 15.V.2016, leg. Brachat & Meybohm (cAss); 1♂, Samazche-Dschawach., S Abastumani, 41°43'N, 42°51'E, 1215 m, 15.V.2016, leg. Brachat & Meybohm (cAss); 3♂♂, 1♀, Imereti, 6 km W Nakerala, 42°23'N, 42°57'E, 1450 m, 17.V.2016, leg. Brachat & Meybohm (cAss); 5♂♂, Ratcha, 4 km N Nakerala, 42°24'N, 43°02'E, 1150 m, 18.V.2016, leg. Brachat & Meybohm (cAss); 1♀, Ratcha, Nakerala pass, 42°23'N, 43°02'E, 1260 m, 18.V.2016, leg. Brachat & Meybohm (cAss); 2♀♀, Ratcha, Nakerala pass, 42°22'N, 43°02'E, 1320 m, 22.V.2016, leg. Brachat & Meybohm (cAss); 3♂♂, 1♀, Ratcha, 4 km NW Nikortsminda, 42°29'N, 43°06'E, 1395 m, 23.V.2016, leg. Brachat & Meybohm (cAss); 1♀, Zemo Svaneti, 4 km N Mazeri, 43°06'N, 42°36'E, 1690 m, 28.VII.2016, leg. Meybohm (cAss).

Xantholinus (*Idiolinus*) *translucidus* SCRIBA, 1870

Material examined: Spain: 1♂, Andalucía, Tarifa env., III.1994, leg. Poot (cWun).

Xantholinus (*Helicophallus*) *kirschenblati* BORDONI, 1975

Material examined: Armenia: 1♂, N Yerevan, NW Hrazdan, 40°38'N, 44°30'E, 2010 m, mixed deciduous forest, litter and grass roots sifted, 27.VI.2016, leg. Assing (cAss); 1♂, 40 km NW Sisian, W-side of Vorotan Pass, 39°43'N, 45°41'E 1960 m, dry oak forest, litter and roots sifted, 30.VI.2016, leg. Assing (cAss); 1♂, 20 km SSE Goris, Shurnukh, 39°22'N, 46°25'E, 1720 m, *Quercus* and *Carpinus* forest, litter and dead wood sifted, 5.VII.2016, leg. Assing (cAss); 1♂, SW Kapan, 10 km N Meghri, 38°59'N, 46°11'E, 1350 m, slope with oak, other trees, and bushes, litter sifted, 6.VII.2016, leg. Assing (cAss); 1♂, 1♀, 25 km S Kapan, N Gomarants Pass, 39°02'N, 46°22'E, 2190 m, oak forest, litter and dead wood sifted, 7.VII.2016, leg. Assing (cAss); 2♂♂, 1♀, WSW Kapan, S Meghri Pass, 39°05'N, 46°11'E, 2170 m, oak forest margin, litter (partly moist litter under bushes) sifted, 8.VII.2016, leg. Assing (cAss); 1♂, WSW Kapan, S Meghri Pass, 39°06'N, 46°10'E, 2090 m, stream valley, litter near stream sifted, 8.VII.2016, leg. Assing (cAss); 2♂♂, Lori province, Teghut mine, 41.091°N, 44.812°E, 990 m, artificial pond, soil traps, 1-24.V.2014, leg. Kalashian (cKal); 1♂, 1♀, Lori province, Teghut mine, Dukanadzor gorge, 41.091°N, 44.851°E, 890 m, soil traps, 1-24.V.2014, leg. Kalashian (cKal); 1♂, 1♀, Lori province, Teghut mine, railing dump, 41.074°N, 44.840°E, 1100 m, soil traps, 1-24.V.2014, leg. Kalashian (cKal); 2♂♂, Lori province, Teghut mine, Kharatanots gorge, 41.097°N, 44.822°E, 920 m, soil traps, 1-24.V.2014, leg. Kalashian (cAss); 1♀, Jermuk env., 39.81°N, 45.64°E, 2060 m, deciduous forest, sifted, 19.V.2015, leg. Kocian (cKoc); 1♂, Goris, 39.52°N, 46.32°E, 1700 m, deciduous forest, sifted, 25.V.2015, leg. Kocian (cAss).

Comment: The identification of the above material is based on a photo of the aedeagus of a paratype.

Xantholinus (*Helicophallus*) *araxis* REITTER, 1898

Material examined: Armenia: 1♂, 2♀♀, SW Kapan, 10 km N Meghri, 38°59'N, 46°11'E, 1350 m, slope with oak, other trees, and bushes, litter sifted, 6.VII.2016, leg. Assing (cAss); 1♂, Yerevan, Dzhrvezh, 7.III.1948 (cKal).

Comment: The identification of the above material is based on a photo of the aedeagus of a type specimen.

Xantholinus (*Helicophallus*) *libanicus* COIFFAIT, 1956

Material examined: Lebanon: 1♂ [det. Feldmann], 27 km NE Beirut, Kfardebian env., ca 1100 m, mixed oak forest, pitfall trap, 16.X.2013, leg. Reuter (cFel). Israel: 1♂, 5♀♀, Khermon Mts., Khermon ridge, Har Khavushit, 1800 m, small *Quercus libani* forest, leaf litter sifted, 10.III.2008, leg. Wrase (MNB, cAss); 1♂, North district, Upper Galilee, Meron Mts.,

Nakhar (Wadi) Moran, 1 km W Meron field school, 900 m, leaf litter sifted, 11.III.2008, leg. Wrase (cAss). 1♂ [det. Feldmann], Haifa, Mt. Carmel, Ya'ar Ha'arbaim, 32°45'N, 35°01'E, 26.VI.2009, leg. Buse & Pavlicek (cFel); 1♂ [det. Feldmann], Mt. Hermon, 1800 m, 10.III.2008, leg. Buse (cFel). Jordan: 1♂ [det. Feldmann], N Ajloun, Barqash Forest, 6.-13.VI.2013, leg. Reuter (cFel).

Comment: In external morphology (body size, eye size) and coloration of the elytra (ranging from blackish brown to bright reddish), the species is remarkably variable. The above record from Jordan represents a new country record (SCHÜLKE & SMETANA 2015).

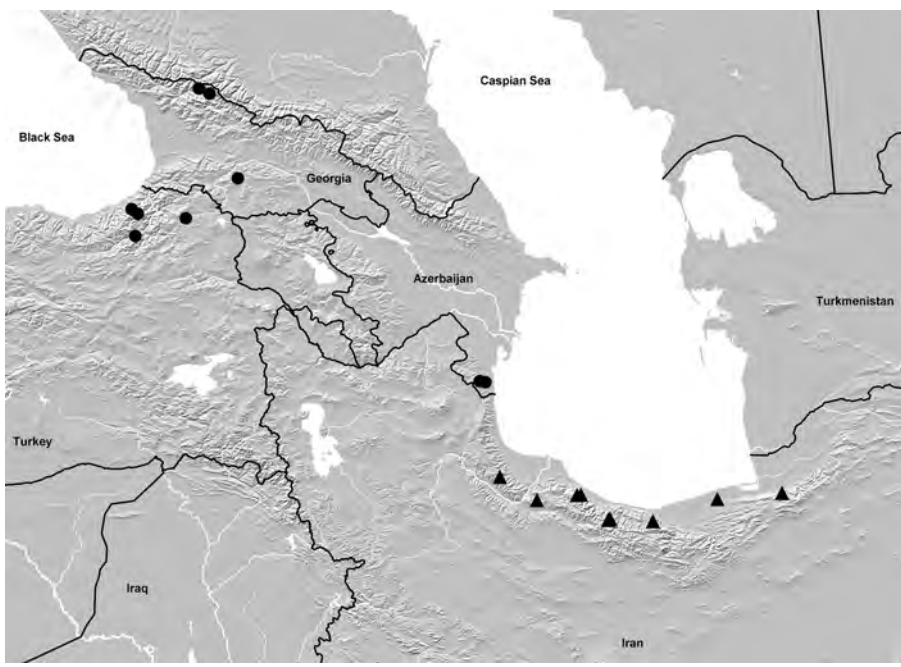
Xantholinus (*Typhlolinus*) *graecus* KRAATZ, 1858

Material examined: Greece: Pelopónnisos: 1♂, W Patras, Araxos, 19.IV.2004, leg. Skoupý (cSko); 1♀, N Epitalia, flood plain of Alfio river, 3.II.2012, leg. Esser (MNB). Cyprus: 1♂, 1♀, Akamas, Neo Chorio env., Ag. Minas, 35°02'N, 32°20'E, 420 m, leaf litter sifted, 2.IV.2014, leg. Kocian (cKoc, cAss). Turkey: 4 exs. [det. Feldmann], Antalya, Belek, at light, 20.XI.2013, leg. Röwekamp (cFel).

Xantholinus (*Typhlolinus*) *varnensis* COIFFAIT, 1972

Material examined: Greece: 6 exs., Chalkidiki, Sithonia, Sarti, 10 m, 40°05'N, 23°59'E, IX.2007, leg. Frisch (MNB, cAss); 1 ex., Rhodos, Theologos, 36°23'N, 28°02'E, beach, 5.IV.2007, leg. Bahr et al. (MNB).

Xantholinus (*Typhlolinus*) *minos* ASSING, 2008



Map 1: Distributions of *Xantholinus reitteri* (circles) and *X. motschulskyi*, based on revised records.

M a t e r i a l e x a m i n e d : Greece: Crete: 1♀, Mourtzana, 35.36°N, 24.74°E, 120 m, river bank, 29.IV.2015, leg. Kocian (cKoc).

Xantholinus (*Typhlolinus*) *gridellii* COIFFAIT, 1956

Xantholinus tronqueti BORDONI, 2016a: 27; **nov.syn.**

M a t e r i a l e x a m i n e d : Syria: 4 exs., Crac des Chevaliers, 18.IV.2008, leg. Skoupý (cSko, cAss); 3 exs., W Crac des Chevaliers, 8.XII.2006, leg. Skoupý (cSko, cAss).

C o m m e n t : *Xantholinus gridellii* was revised and illustrated by ASSING (2007). This species is widespread and rather common in the Middle East, from Cyprus and South Turkey across Lebanon and Syria to Israel. In the original description of *X. tronqueti*, which is based on a unique male with a damaged aedeagus from "Syria: Lac Zanzar", BORDONI (2016a) does not compare this taxon with any other species, not even those recorded from Syria. As can be inferred from the photograph of the aedeagus, particularly its internal structures (BORDONI 2016a: figure 4), the holotype of *X. tronqueti* undoubtedly belongs *X. gridellii*. Hence the synonymy proposed above.

Xantholinus (*Typhlolinus*) *reitteri* COIFFAIT, 1966 (Figs 1-2, 6-9, Map 1)

M a t e r i a l e x a m i n e d : Turkey: 1♀, Artvin, Yusufeli - Kiliçkaya, 1800 m, 30.V.2000, leg. Skoupý (cSko); 1♀, Ardahan, Yalnizçam env., 27.V.2000, leg. Skoupý (cSko). Georgia: 1♂, Zemo Svaneti, Mestia Ughviri Pass, 43°02'N, 42°50'E, 1900 m, 27.VII.2016, leg. Meybohm (cAss); 1♂, Svaneti, Mazeri, 43°06'N, 42°36'E, 1700 m, leg. Kocian (cAss).

C o m m e n t : *Xantholinus reitteri* was revised, illustrated, and recorded from various localities, including Iran, by ASSING (2007). A re-examination of most of this material, as well as a study of the specimens listed above, revealed that the material from Iran belongs to *X. motschulskyi* BORDONI, 1999 and that this name is not a synonym of *X. reitteri*, as proposed earlier (ASSING 2007). For additional comments see the following section.

The revised range of *Xantholinus reitteri* includes northeastern Turkey, Georgia, and Azerbaijan (Map 1), suggesting a Caucasian distribution. Consequently, the record from Kahramanmaraş (central southern Anatolia) by ANLAŞ (2014) requires confirmation.

Previous records from Iran (ASSING 2007) are erroneous and refer to *X. motschulskyi* (see below).

The internal structures of the aedeagus of males from Turkey and Georgia are illustrated in Figs 1-2 and 6-9.

Xantholinus (*Typhlolinus*) *motschulskyi* BORDONI, 1999, revalidated (Figs 3-4, 10-13, Map 1)

Xantholinus chalusianus BORDONI, 2017: 109 ff.; **nov.syn.**

T y p e m a t e r i a l e x a m i n e d : Lectotype ♂: "Gilan (Iran), Heinz leg. / Masuleh 1.VIII.67, südl. Talysch, 1000-1800 m / Lectotypus ♂ *Xantholinus motschulskyi* Bordoni, desig. V. Assing 2006" (cAss). Paralectotypes: 7♂♂, 2♀♀: same data as lectotype, but with additional label "*Xantholinus fortepunctatus* Motsch., Coll. H. Korge / Paralectotypus *Xantholinus motschulskyi* Bordoni, rev. V. Assing 2017 / *Xantholinus motschulskyi* Bordoni, det. V. Assing 2017" (MNB); 1♂: "Gilan (Iran), Heinz leg. / Dare-dasht, e. Rudbar, 1000 m, 4.VIII.1968 / *Xantholinus fortepunctatus* Motsch., Coll. H. Korge / Paralectotypus *Xantholinus motschulskyi* Bordoni, rev. V. Assing 2017 / *Xantholinus motschulskyi* Bordoni, det. V. Assing 2017" (MNB).

A d d i t i o n a l m a t e r i a l e x a m i n e d : Iran: 1♂, Mazandaran, Dasht e Naz Wildlife Refuge, 36.7°N, 53.2°E, 10 m, oak trap, X.2015, leg. Barimani (cAss); 1♂, Mazandaran, Elburz Mts., Ramsar Co., Eshkatechal, 36°51'N, 50°33'E, 1050 m, sifted, 6.VI.2008, leg. Pütz (cAss); 1♂, Mazandaran, Nahar Khoran, 450-1000 m, 14.VIII.1967, leg. Heinz (MNB); 1♂, 1♀, Mazandaran, S Alamdeh, Kolehsar, 1000-1400 m, 15.VII.1975, leg. Heinz (MNB); 2♂♂, Gilan, S Ramsar, Javaherdeh, 1700-2000 m, 16.VII.1975, leg. Heinz (MNB).

C o m m e n t : A lectotype was designated by ASSING (2007), who synonymized *X. motschulskyi* with *X. reitteri*. Two of the specimens listed as paralectotypes by ASSING (2007) do not have type status, as one of them was collected after 1973 and the other in Mazandaran. A re-examination of the internal structures of the aedeagus (Figs 3-4, 10-13) of previously studied material revealed that *X. motschulskyi* represents a distinct species and that the previously proposed synonymy is erroneous. Though generally similar (distal cluster of long semi-transparent spines (see Figs 8-9, 12-13) and a diagonal median series of short nail-shaped spines, the aedeagus of *X. motschulskyi* differs from that of *X. reitteri* in that it has two pronounced lateral series of numerous long and strongly sclerotized spines in the proximal portion (much less numerous, shorter, and less strongly sclerotized in *X. reitteri*) and a larger proximal "brush-like" cluster of semi-transparent spines (Figs 3-4, 10-11). While these differences are not easily seen in an intact aedeagus, they are clearly visible when the internal structures are dissected and squeezed.

The availability of the name *X. motschulskyi* has been under doubt. BORDONI (1999) proposed "*Xantholinus* (*Helicophallus*) [sic] *motschulskyi*" to replace Coiffait´s and Korge´s misinterpretation of *X. fortepunctatus* MOTSCHULSKY, 1860, but failed to mention or illustrate any characters or designate a holotype. HERMAN (2001) states that *X. motschulskyi* can only be regarded as an available name if "we apply the characters published by Coiffait, 1972 and Korge, 1973 to the new name". However, since BORDONI (1999) provides bibliographical references to COIFFAIT (1972) and KORGE (1973), he meets the requirements of Article 13.1.2 of the Code (ICZN 1999) and the name can be considered available.

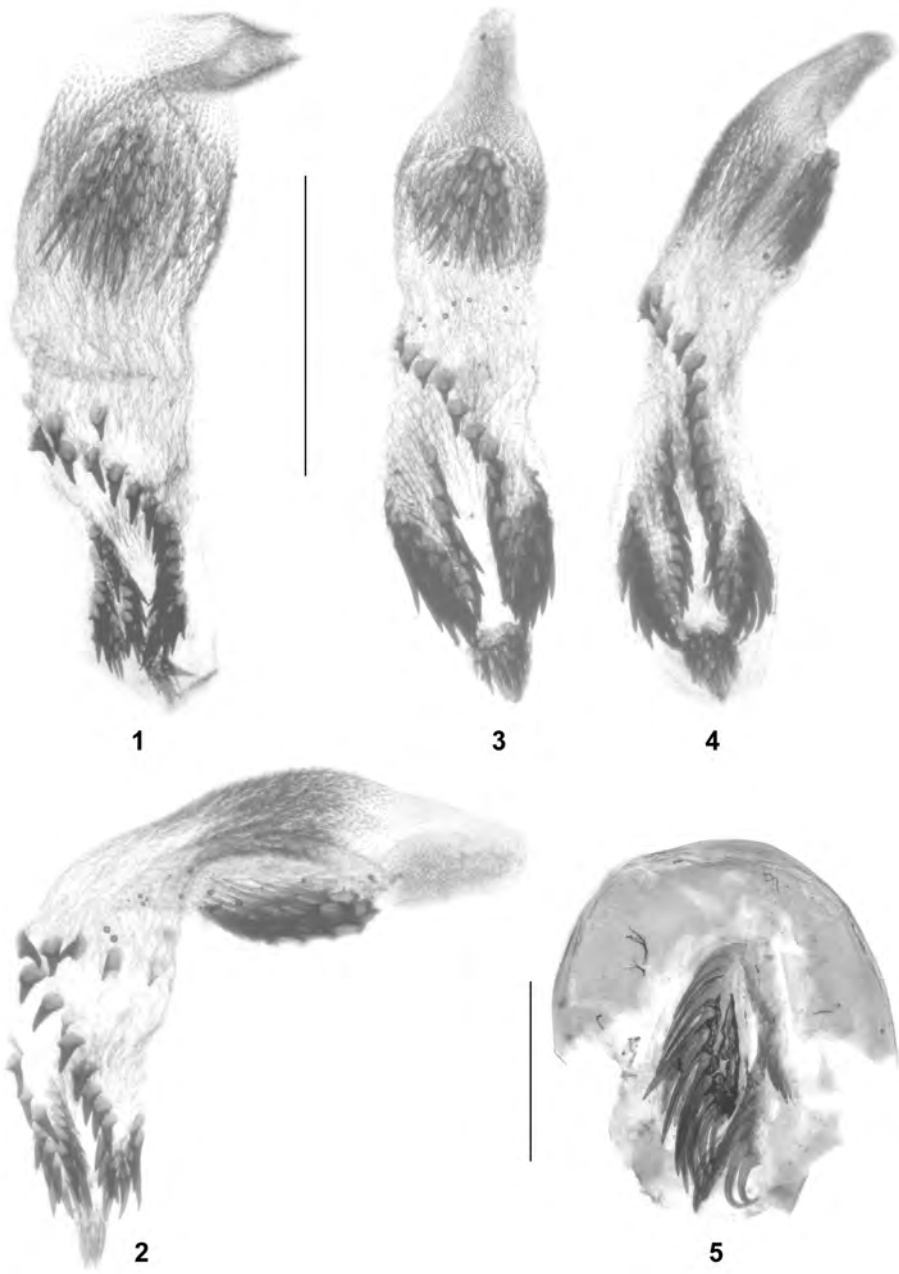
In the recent description of *Xantholinus chalusianus*, which is based on a unique holotype from "Iran, Chalus", a locality situated in Mazandaran province, BORDONI (2017a) compares the species with *X. martensi* BORDONI, 1983 (Iran) of the subgenus *Idiolinus* CASEY, 1906 and with *X. penicillatus* ASSING, 2007 (Southwest Turkey) of the subgenus *Calolinus* COIFFAIT, 1956, but not with *X. motschulskyi*, which too has been recorded from Mazandaran province. As can be inferred from the photograph of the aedeagus (BORDONI 2017a: figure 2), the holotype of *X. chalusianus* is undoubtedly conspecific with the type material of *X. motschulskyi*. Hence the synonymy proposed above.

The known distribution of *X. motschulskyi* is confined to the Elburz range (North Iran: Gilan and Mazandaran provinces) (Map 1). All the previous records of *X. reitteri* from Iran (ASSING 2007) refer to this species.

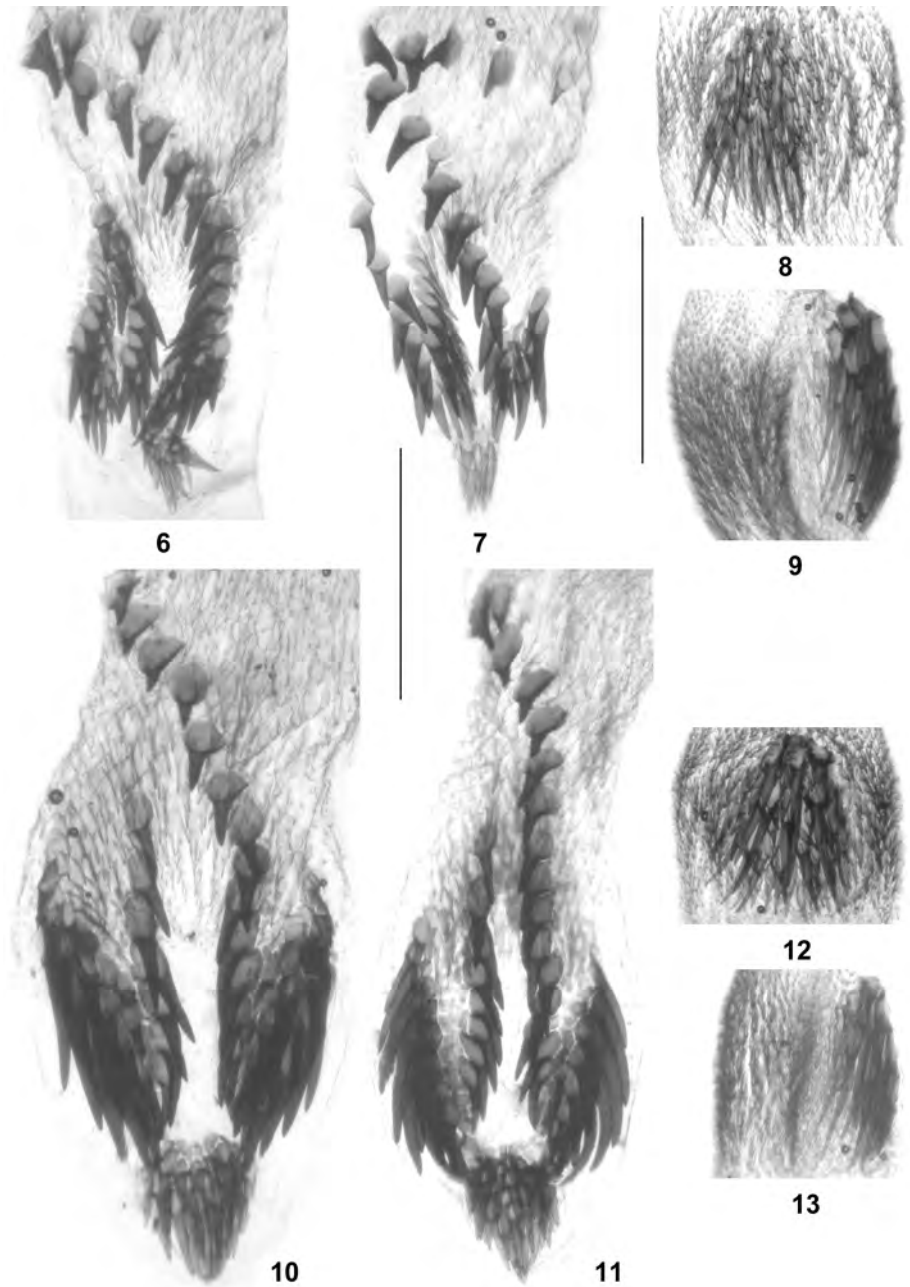
Xantholinus (*Xantholinus*) *linearis* (OLIVIER, 1795)

Xantholinus styriacus GRIMMER, 1841: 33; **nov.syn.**

C o m m e n t : *Xantholinus styriacus* has been listed as a nomen dubium in all recent catalogues (HERMAN 2001, SCHÜLKE & SMETANA 2015, SMETANA 2004). The original



Figs 1-5: Internal structures of aedeagus of *Xantholinus reitteri* (**1-2**; 1: Turkey, 2: Georgia), *X. motschulskyi* from Mazandaran (**3-4**) in squeeze preparation, and of *X. corallinus*, lectotype (**5**). Scale bars: 1-4: 1.0 mm; 5: 0.5 mm.



Figs 6-13: *Xantholinus reitteri* (**6-9**; 6, 8: Turkey, 7, 9: Georgia) and *X. motschulskyi* from Mazandaran (**10-13**): (**6-7, 10-11**) proximal internal structures of aedeagus in squeeze preparation; (**8-9, 12-13**) distal cluster of spines in squeeze preparation. Scale bars: 0.5 mm.

description is based on an unspecified number of syntypes from "Steiermark" (GRIMMER 1841). The depository of the Grimmer collection is unknown and it can be regarded as lost (SCHÜLKE 2004). Aside from the body size ("3 Linien Länge"), the only characters mentioned in the description are the colour ("Kopf, Brustschild und Leib schwarz; Fühlhörner, Flügeldecken, Füsse braun") and the presence of punctures and setae on the body. The possibility that there is an undiscovered dark-coloured *Xantholinus* species in what was Steiermark in Grimmer´s days can be ruled out with certainty. If the type material indeed belonged to *Xantholinus*, the description best fits to the common *X. linearis*. Hence, in order to dispose of a doubtful name, *X. styriacus* is placed in synonymy with *X. linearis*.

Xantholinus (*Xantholinus*) *audrasi* COIFFAIT, 1956

M a t e r i a l e x a m i n e d : Greece: 1♀, Thraki, 10 km N Feres, 24.IV.2012, leg. Skoupý (cSko). Turkey: 1♂ [det. Feldmann], Artvin, ENE Artvin, Daliş Dağı, ca 41°13'N, 41°55'E, 1600-1800 m, pitfall trap, 8.-18.VII.2014, leg. Reuter (cFel); 1♀, Artvin, Yusufeli - Kiliçkaya, 2100 m, 30.V.2000, leg. Skoupý (cSko). Armenia: 6♀♀, Vorotan pass env., 39.69°N, 45.69°E, 2160 m, grass and leaf litter sifted, 27.V.2015, leg. Kocian (cKoc). Georgia: 1♀, Kakheti, Bakurtsikhe env., 41.68°N, 45.85°E, 480 m, deciduous forest, sifted, 13.VII.2015, leg. Kocian (cKoc); 1♀, Svaneti, above Nodashi, Manshura river valley, 43.06°N, 42.43°E, 1000 m, mixed forest, sifted, 8.VII.2015, leg. Kocian (cKoc). Iran: A r d a b i l : 5 exs., E Abi Beyglu, Saha Dam, 38°14'N, 48°40'E, 1470 m, X.2011, leg. Frisch (MNB); 4 exs., 20 km N Khalkhal, 37°41'N, 48°23'E, 1480 m, 13.X.2011, leg. Frisch (MNB, cAss).

Xantholinus (*Xantholinus*) *dvoraki* COIFFAIT, 1956

M a t e r i a l e x a m i n e d : Kazakhstan: 1♂, 2♀♀, Ile-Alatau NP, Talgar env., Ak-Bulak resort, 43.27°N, 77.37°E, 1690 m, leaf litter sifted, 12.-15.V.2014, leg. Kocian (cKoc); 1♂, Almaty region, Talgar district, Ak-Bulak, 43°16'N, 77°23'E, 11.-15.V.2014, leg. Nakládal (cAss).

Xantholinus (*Xantholinus*) *morandi* COIFFAIT, 1958

M a t e r i a l e x a m i n e d : Portugal: 1♂, Algarve, 15 km N S. Bras, 4.VI.1992, leg. Wunderle (cWun).

Xantholinus (*Xantholinus*) *coiffaiti* FRANZ, 1966

M a t e r i a l e x a m i n e d : Austria: 1♂, Burgenland, Neusiedl, Kalvarienberg, dump, 17.IX.1992, leg. Siede (cWun).

Xantholinus (*Xantholinus*) *creticus* ASSING, 2006

M a t e r i a l e x a m i n e d : Greece: Crete: 3♀♀, Rethimnion, Koxare, 500 m, laurel litter, 16.X.1991, leg. Wunderle (cWun); 1♀, W-Crete, Topolia, 350 m, pine litter, 12.X.1991, leg. Wunderle (cWun).

Vulda kazachstanica (JANÁK, 1979)

M a t e r i a l e x a m i n e d : Kazakhstan: 7 exs., Almaty region, Talgar district, Ak-Bulak, 43.27°N, 77.37°E, 1750 m, 12.-15.V.2014, leg. Kocian & Nakládal (cKoc, cAss).

C o m m e n t : This species has been recorded only from the Almaty region in Kazakhstan.

Acknowledgements

I am grateful to the colleagues listed in the material section for the loan of material from the collections under their care. Michael Schülke´s (Berlin) suggestions on the availability of the name *X. motschulskyi* are appreciated. Roger Booth and Max Barclay (both BMNH) selected material of *Gyrohypnus punctulatus* from the collections of the Natural History Museum, London, for the designation of a suitable neotype of *G. quadratus*. Sinan Anlaş (Izmir) provided photos of the aedeagi of type specimens of *Xantholinus kirschenblati* and *X. araxis*. Mark Kalashian (Yerevan) granted permission to study the Iablokoff-Khnzorian collection, which is currently housed in his private home. Michael Schülke and Alexey Solodovnikov (Copenhagen) helped with the transliteration of labels of material from the Khnzorian collection. Benedikt Feldmann (Münster) contributed additional records and proof-read an early version of the manuscript.

Zusammenfassung

Xantholinus motschulskyi BORDONI, 1999, zuvor Synonym von *X. reitteri* COIFFAIT, 1966, wird revalidiert. Die Innenstrukturen des Aedoeagus von *X. reitteri*, *X. motschulskyi* und *X. corallinus* REITTER, 1901 werden abgebildet. Für *X. corallinus* wird ein Lektotypus designiert. Sieben Namen werden synonymisiert: *Gyrohypnus punctulatus* (PAYKULL, 1789) = *Gyroyhypnus quadratus* STEPHENS, 1833, nov.syn.; *Stenistoderus cephalotes cephalotes* (KRAATZ, 1858) = *S. cephalotes armeniacus* (COIFFAIT, 1966), nov.syn.; *Xantholinus linearis* (OLIVIER, 1795) = *X. styriacus* GRIMMER, 1841, nov.syn.; *X. gridellii* COIFFAIT, 1956 = *X. tronqueti* BORDONI, 2016, nov.syn.; *X. khnzoriani* COIFFAIT, 1966 = *X. caucasicus* BORDONI, 1975, nov.syn., = *X. iablokoffi* COIFFAIT, 1975, nov.syn.; *X. motschulskyi* BORDONI, 1999 = *X. chalusianus* BORDONI, 2017, nov.syn. Für *Gyroyhypnus quadratus* STEPHENS, 1833 wird ein Neotypus designiert. Weitere Nachweise von 37 Arten der Tribus Xantholinini werden gemeldet. Die derzeit bekannte Verbreitung von *X. reitteri* und *X. motschulskyi* wird anhand einer Karte illustriert.

References

ANLAŞ S. (2014): On the genus *Xantholinus* DEJEAN of Turkey: three new species, new and additional records, with distributional checklist (Coleoptera: Staphylinidae: Staphylininae: Xantholinini). — Journal of Insect Biodiversity **2** (11): 1-28.

ANLAŞ S. (2016): A new species of the genus *Vulda* JACQUELIN DU VAL from Turkey (Coleoptera: Staphylinidae: Xantholinini). — Zoology in the Middle East, DOI: 10.1080/09397140.2016.1257401: 1-8.

ASSING V. (2003): On the taxonomy of *Gyrohypnus* LEACH: new synonymies, new species, and a key to the Western Palaearctic and Middle Asian representatives of the genus (Insecta: Coleoptera: Staphylinidae). — Entomologische Blätter **99** (1): 55-81.

ASSING V. (2007): On the Xantholinini of Turkey and adjacent regions (Coleoptera: Staphylinidae: Staphylininae). — Zootaxa **1474**: 1-54.

ASSING V. (2011): On the Staphylinidae (Coleoptera) of Iran. II. New species and additional records, with special reference to the Paederinae, Xantholinini, and Aleocharinae. — Stuttgarter Beiträge zur Naturkunde Serie A, Neue Serie **4**: 137-183.

ASSING V. (2015a): On the Staphylinidae (Coleoptera) of Crete II. Seven new species, a new synonymy, and additional records. — Stuttgarter Beiträge zur Naturkunde A, Neue Serie **8**: 95-112.

ASSING V. (2015b): On the Staphylinidae of the Greek island Chios (Insecta: Coleoptera). — Linzer Biologische Beiträge **47** (1): 43-55.

ASSING V. (2016): On the Staphylinidae of Turkey XI. Two new species, new synonymies, and additional records (Insecta: Coleoptera). — Linzer Biologische Beiträge **48** (1): 269-280.

BORDONI A. (1975): Studi sulla sistematica e la geonemia degli *Xantholinus*. VIII. Le specie Eurocentroasiatiche e Caucasiche in particolare. Revisione di tipi e descrizione di nuove entità. — Memorie della Società Entomologica Italiana **53** [1974]: 56-96.

BORDONI A. (1994): Nuove specie di Staphylinidae della regione mediterranea (Coleoptera). — Redia **77** (1): 23-32.

BORDONI A. (1999): Note sulla sinonimia di alcune specie e sottogeneri del genere *Xantholinus* DEJAN [sic], 1821 e designazione di lectotipi (Coleoptera: Staphylinidae). — Opuscula Zoologica Fluminensia **171**: 1-8.

BORDONI A. (2016a): New data on Palaearctic Xantholinini. 9°. Three new Mediterranean species of *Xantholinus* (Coleoptera: Staphylinidae). — Fragmenta Entomologica **48** (1): 25-28.

BORDONI A. (2016b): New data on the Palaearctic Xantholinini. 11. New species and new records from Afghanistan (Coleoptera, Staphylinidae, Staphylininae). — Doriana, Annali del Museo Civico di Storia Naturale "G. Doria" **8** (400): 1-8.

BORDONI A. (2017a): New data on the Palaearctic Xantholinini. 12. New species, new designations and new records (Coleoptera, Staphylinidae). — Onychium **13**: 107-115.

BORDONI A. (2017b): New data on the Palaearctic Xantholinini. 13. Systematic position of *Xantholinus laevissimus* REITTER, 1998 (Coleoptera, Staphylinidae). — Onychium **13**: 117-119.

COIFFAIT H. (1966): Novye Xantholinini iz Sovetskogo Soyuza (Coleoptera, Staphylinidae). — Zoologichesky Zhurnal **45** (2): 195-202.

COIFFAIT H. (1972): Coléoptères Staphylinidae de la région paléarctique occidentale. I. Généralités, sous-familles: Xantholininae et Leptotyphlinae. — Supplément à la Nouvelle Revue d'Entomologie **2** (2): 1-651.

COIFFAIT H. (1975): Staphylinides nouveaux d'U.R.S.S. récoltés par S. M. Khnzorian-Iablokoff. — Nouvelle Revue d'Entomologie **5** (1): 31-37.

GRIMMER K.H.B. (1841): Steiermark´s Coleoptern mit Einhundert sechs neu beschriebenen Species. — Grätz: 1-49.

HERMAN L.H. (2001): Catalog of the Staphylinidae (Insecta: Coleoptera). 1758 to the end of the second millennium. Volumes I-VII. — Bulletin of the American Museum of Natural History **265**: 4218 pp.

ICZN (1999): International Code of Zoological Nomenclature. Fourth Edition. — London: xxix + 306 pp.

KORGE H. (1973): Studien über westpalaearktische Arten der Gattung *Xantholinus* SERVILLE [sic] (Coleoptera: Staphylinidae). — Mitteilungen der Deutschen Entomologischen Gesellschaft e.V. **31** [1972]: 4-11.

REITTER E. (1901): Weitere Beiträge zur Coleopteren-Fauna des russischen Reiches. — Deutsche Entomologische Zeitschrift **1901**: 65-84.

SCHÜLKE M. (2004): Zur Taxonomie der Tachyporinae (Coleoptera: Staphylinidae). Typenrevision, Typendesignation, Neukombinationen, Untergattungszuordnungen, Nomina nova und neue Synonymien. — Linzer Biologische Beiträge **36** (2): 919-1000.

SCHÜLKE M. & A. SMETANA (2015): Staphylinidae, pp. 304-1134. — In: LÖBL I. & D. LÖBL (eds), Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Staphylinoidea. Revised and updated edition. Leiden: Brill: xxvi + 1702 pp.

SMETANA A. (2004): Subfamily Staphylininae LATREILLE, 1802. — In: LÖBL I. & A. SMETANA (eds), Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea. Stenstrup: Apollo Books: 624-698.

STEPHENS J.F. (1833): Pp. 241-306. — In: Illustrations of British entomology; or, a synopsis of indigeneous insects: containing their generic and specific distinctions; with an account of their metamorphoses, times of appearance, localities, food, and economy, as far as practicable. Mandibulata. Vol. V. — London: Baldwin and Cradock: 448 pp.

STEPHENS J.F. (1839): A manual of British Coleoptera, or beetles; containing a brief description of all the species of beetles hitherto ascertained to inhabit Great Britain and Ireland; together with a notice of their chief localities, times and places of appearances, etc. — London: Longman, Orme, Brown, Green, and Logmans: xii + 443 pp.

Author´s address: Dr. Volker ASSING
Gabelsbergerstr. 2
D-30163 Hannover, Germany
E-mail: vassing.hann@t-online.de