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On the Staphylinidae of Turkey XI. Two new species, new synonymies, and additional records (Insecta: Coleoptera)

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Abstract: Two species of Staphylinidae from Turkey are described and illustrated: *Liogluta nigrobusta* nov.sp. (Artvin) of the Aleocharinae and *Vulda substricta* nov.sp. (Sinop) of the Xantholinini (Staphylininae). Two synonymies are proposed: *Xenochara* Mulsant & Rey, 1874 = *Rheochara* Mulsant & Rey, 1875, nov.syn.; *Xantholinus luteipennis* Coiffait, 1970 = *X. khachikovi* Anlaş, 2014, nov.syn. Additional records of 19 named and one unnamed species are reported, several of them considerably expanding the previously known ranges and seven of them representing first records from Turkey.

Key words: Coleoptera, Staphylinidae, *Aleochara*, *Liogluta*, *Vulda*, *Xantholinus*, Palaearctic region, Turkey, taxonomy, new species, new synonymies, new records.

Introduction

The present paper is the eleventh contribution to the Staphylinidae of Turkey providing descriptions and records of species belonging to miscellaneous subfamilies and genera (Assing 2013, 2014, and references therein).

Material recently collected in Turkey by Christoph Reuter (Hamburg) and made available to me by Benedikt Feldmann (Münster) included three undescribed species, two of which are described, as well as records of special zoogeographic significance. One of the undescribed species remains unnamed as it is represented only by a female.

Material and measurements

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

cAss.....author's private collection

cFelprivate collection Benedikt Feldmann, Münster

cSch.....private collection Michael Schülke, Berlin

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The images of the head, the forebodies, and the antennae were created using a photographing device con-

structed by Arved Lompe (Nienburg) and CombineZ software. For the remaining photographs a digital camera (Nikon Coolpix 995) was used.

Body length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles (in resting position) to the posterior margin of the elytra, head length along the middle from the anterior margin of the frons (Xantholinini) or the clypeus (Aleocharinae) to the posterior margin of the head, head width including eyes, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule (Aleocharinae). The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

On the subgenus *Rheochara* MULSANT & REY, 1875 of the genus *Aleochara* GRAVENHORST, 1802

Rheochara originally included only *Aleochara spadicea* (ERICHSON, 1837), the type species by monotypy (MULSANT & REY 1875). The subgenus currently includes 14 species (ASSING 2009a, 2011; SCHÜLKE & SMETANA 2015). Most West Palaearctic species were revised by ASSING (2009a, 2011).

According to the relevant literature, *Rheochara* is primarily distinguished from other species of *Aleochara* by a slender habitus, a weakly transverse pronotum, and long and slender legs and antennae (BERNHAEUER 1901; LOHSE 1974; MULSANT & REY 1875). There is, however, no principal difference, neither in external nor in the sexual characters, between the species currently assigned to *Rheochara* and those of the *A. cuniculorum* and the *A. breiti* groups of the subgenus *Xenochara* MULSANT & REY, 1874. The habitus and the length of the appendages are subject to considerable interspecific variation also among the species of *Rheochara*, ranging from species with a conspicuously slender body (e.g., *A. spadicea*; *A. arachipes* FÄGEL, 1900) to species with a less slender body (e.g., *A. rosei* ASSING, 2011, *A. spermophili* ASSING, 2011). As far as is currently known, *Rheochara* species live in nests and burrows of small mammals such as moles and gophers.

These observations suggest that the body shape of these species is simply a morphological adaptation to a subterranean habitat. In consequence, the species previously attributed to *Rheochara* are moved to *Xenochara* and the following synonymy is proposed: *Xenochara* MULSANT & REY, 1874 = *Rheochara* MULSANT & REY, 1875, nov.syn.

Descriptions and additional records

***Philorinum hopffgarteni* EPPELSHEIM, 1892**

Material examined: Turkey: 2 exs. [det. Zanetti], Mersin, 40 km N Gülnar, Köseçobanlı-Taşdüştü, 36°30'N, 33°08'E, pan trap in hollow oak tree, 24.V.2006, leg. Jansson & Avci (cFel).

Comment: This species was previously known only from Croatia, Romania, and Greece (SCHÜLKE & SMETANA 2015). The above specimens represent the first record from Turkey.

***Aleochara (Ceranota) caucasica* EPPELSHEIM, 1889**

Material examined: Turkey: 1♂ [det. Feldmann], Artvin, ENE Artvin, Dalis Dağı, ca. 41°13'N, 41°55'E, 1800-2000 m, pitfall, 8.-18.VII.2014, leg. Reuter (cFel).

Comment: The previously known distribution of *A. caucasica* was confined to the Caucasus region (Russia, Georgia). The only previous Turkish record from Ordu (ASSING 2009b) refers to *A. claviculata* ASSING, 2009 (Assing 2009c). Thus, the above male represents the first record from Turkey.

***Aleochara (Ceranota) simplicicornis* ASSING, 2009**

Material examined: Turkey: 2♂♂, 4♀♀ [det. Feldmann], Artvin, ENE Artvin, Dalis Dağı, ca. 41°13'N, 41°55'E, 1600-1800 m, pitfall, 8.-18.VII.2014, leg. Reuter (cFel, cAss).

Comment: Previously, only the two type specimens from Ordu and Erzurum were known (ASSING 2009b). The above material represents the first record since the original description.

***Aleochara (Ceranota) bituberculata* BERNHAUER, 1900**

Material examined: Turkey: 1♂, 1♀ [det. Feldmann], Bitlis, Yelkeni, Van lake, ca. 38°28'N, 42°32'E, ca. 1800 m, pitfall, 21.IV-20.V.2014, leg. Reuter (cFel).

Comment: *Aleochara bituberculata* had been recorded from four localities in northwestern, northern, and southwestern Turkey (ASSING 2009c). The above specimens represent the first record from eastern Anatolia.

***Aleochara (Xenochara) rosei* ASSING, 2011**

Material examined: Turkey: 1♂, Bingöl/Muş, Buğlan Geçidi, 1640 m, pitfall, 21.IV.-11.V.2015, leg. Reuter (cFel); 1♀, Artvin/Ardahan, Yalnızçam, ca. 2400 m, 17.-19.VII.2014, leg. Reuter (cFel).

Comment: The original description is based on nine type specimens collected from a gopher nest in Antalya (ASSING 2011). The above records reveal that the species is widespread in Turkey.

***Aleochara (Xenochara) hamulata* ASSING, 2009**

Material examined: Turkey: 1♂, 1 ex. [det. Feldmann], Bitlis, Yelkeni, Van lake, ca. 38°28'N, 42°32'E, ca. 1800 m, pitfall, 21.IV-20.V.2014, leg. Reuter (cFel).

Comment: This species is rather widespread in the East Mediterranean from Croatia and Greece in the west to Iraq in the east. In Turkey, it was previously known only from the west and southwest (ASSING 2009a, 2013).

***Aleochara (Xenochara) lygaea* KRAATZ, 1862**

Material examined: Turkey: 6 exs. [det. Feldmann], Artvin, ENE Artvin, Dalis Dağı, ca. 41°13'N, 41°55'E, 1800-2000 m, pitfall, 8.-18.VII.2014, leg. C. Reuter (cFel).

Comment: This species has a trans-Palaearctic distribution. In Turkey, it has been recorded only from Artvin, Tunceli, and Bitlis (ASSING 2007b).

***Aleochara (Xenochara) stichai* LIKOVSKÝ, 1965**

Material examined: Turkey: 3♂♂ [det. Feldmann], Artvin, ENE Artvin, Dalis Dağı, ca. 41°13'N, 41°55'E, 1600-1800 m, pitfall, 8.-18.VII.2014, leg. C. Reuter (cFel).

Comment: In Turkey, this widespread West Palaearctic species was previously known only from Giresun (ASSING 2007c).

***Aleochara (Xenochara) sp.* (Fig. 16)**

Material examined: Turkey: 1♀, Bingöl, ca. 22 km WNW Bingöl, Kuruca Geçidi, 1800 m, pitfall, 20.IV.-11.V.2014, leg. Reuter (cFel).

Comment: The above female most likely represents an undescribed species. It is very similar to *A. rosei*, but distinguished by larger body size, slightly less slender antennae, a more transverse pronotum, and a spermatheca of different shape (Fig. 16).

***Liogluta nigrobusta* nov.sp.** (Figs 1-11)

Type material: Holotype ♂: "TR, Artvin, ENE Artvin, Dalis Dağ, 1800-2000 m, ca. 41°13'N, 41°55'E, 8.-18.VII.2014, pitfall, leg. C. Reuter / Holotypus ♂ *Liogluta nigrobusta* sp. n. det. V. Assing 2016" (cAss). Paratypes: 5♀♀ (3 severely damaged): same data as holotype (cFel, cAss).

Etymology: The specific epithet is an adjective composed of the Latin adjective *niger* (black) and *robustus* (robust). It alludes to the robust habitus and dark coloration of the species.

Description: Body length 4.5-4.7 mm; length of forebody 2.0-2.2 mm. Habitus as in Fig. 1. Coloration: body black; legs with the femora dark-brown, the tibiae reddish to dark-reddish, and the tarsi pale-reddish; antennae blackish; maxillary palpi dark-brown with the apical palpomere yellowish.

Head (Figs 2-3) distinctly transverse and dilated posteriorly, broadest behind eyes; punctuation fine and moderately dense; interstices with pronounced microreticulation. Eyes weakly convex and weakly protruding from lateral contours of head, slightly shorter than postocular region in dorsal view. Antenna 1.6 mm long and shaped as in Fig. 4.

Pronotum (Figs 2, 5) 1.15-1.20 times as broad as long and approximately 1.3 times as broad as head, somewhat depressed in postero-median portion; pubescence of midline directed posteriad; punctuation rather dense and fine; interstices with pronounced microreticulation.

Elytra (Figs 2, 6) rather short, 0.77-0.80 times as long as pronotum; punctuation more distinct than that of head and pronotum; interstices with pronounced microreticulation, but with more shine than those of head and pronotum. Hind wings fully developed.

Abdomen distinctly broader than elytra, broadest at segment VI; punctuation fine, rather dense on anterior tergites, gradually becoming sparser towards posterior tergites, rather sparse on tergite VII; interstices with distinct microreticulation; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII very weakly convex, nearly truncate in median portion; sternite VIII longer than tergite VIII and with convex posterior margin; median lobe of aedeagus 0.85 mm long and shaped as in Figs 7-8.

♀: posterior margin of tergite VIII broadly convex (Fig. 9); posterior margin of sternite VIII broadly convex and with moderately stout marginal setae (Fig. 10); spermatheca (Fig. 11) small in relation to body size, with long and distinctly conical apical cuticular invagination.

Comparative notes: This species is distinguished from all its congeners by the primary sexual characters. From all the *Liogluta* species known from Turkey and the Caucasus region, it is easily distinguished by external characters alone, particularly the combination of dark coloration, relatively large size, pronounced microsculpture and nearly matt forebody, a posteriorly dilated head with relatively small eyes, relatively short elytra, and a broad abdomen.

Distribution: The type locality is situated near Artvin, Artvin province, in northeastern Anatolia, at an altitude of 1800-2000 m.

***Haploglossa gentilis* (MÄRKEL, 1844)**

Material examined: Turkey: 1 ex. [det. Feldmann], Isparta, Eğirdir, Yukangökdere, Kasnak forest, 37°43'N, 30°50'E, window trap, hollow oak tree, 19.VII.2007, leg. Jansson & Avci (cFel).

Comment: According to SCHÜLKE & SMETANA (2015), *H. gentilis* is widespread in Europe, but had not been recorded from Turkey.

***Thamiraea cinnamomea* (GRAVENHORST, 1802)**

Material examined: Turkey: 9 exs. [det. Feldmann], Sinop, Erfelek env., ~250 m, pitfall, 10.-28.VII.2014, leg. Reuter (cFel); 2 exs. [det. Feldmann], Artvin, Borçka, Maçahel Geçidi, 1400-1600 m, 19. – 20.VII.2014, leg. Reuter (cFel); 1 ex. [det. Feldmann], Tunceli, ca. 40 km NW Tunceli, road to Ovacık, 1300 m, pitfall, 19.-22.V.2014, leg. Reuter (cFel).

Comment: This species had been recorded from numerous localities in Europe, but was previously unknown from Turkey (SCHÜLKE & SMETANA 2015).

***Thamiraea hospita* (MÄRKEL, 1844)**

Material examined: Turkey: 1 ex. [det. Feldmann], Sinop, Erfelek env., ~250 m, pitfall, 10.-28.VII.2014, leg. Reuter (cFel); 2 exs. [det. Feldmann], Bitlis, Yelkenli, Van lake, 38°28'N, 42°32'E, 1800 m, pitfall, 21.IV.-20.V.2014, leg. Reuter (cFel).

Comment: Like the preceding species, the widespread *T. hospita* had been unknown from Turkey (SCHÜLKE & SMETANA 2015).

***Platystethus strigosulus* FAUVEL, 1875**

Material examined: Turkey: 4 exs. [det. Schülke], Ardahan, Göle, 15.VI.2007, leg. Reuter (cFel, cSch); 4 exs. [det. Feldmann], Bitlis, Yelkenli, Van lake, 38°28'N, 42°32'E, 1800 m, pitfall, 21.IV.-20.V.2014, leg. Reuter (cFel, cAss).

Comment: The previously known distribution was confined to Israel and Syria (SCHÜLKE & SMETANA 2015). The above specimens represent the first records from Turkey.

***Stenus nitidiventris* FAGEL, 1968**

Material examined: Turkey: 1♂ [identified by V. Puthz based on a photo], Sinop, Erfelek env., ~250 m, pitfall trap, 10.-28.VII.2014, leg. Reuter (cFel).

Comment: *Stenus nitidiventris* was originally described from Artvin (FAGEL 1967) and subsequently reported from numerous localities in Georgia (PUTHZ 1983). The above male considerably expands the known distribution towards the west.

***Gabrius tokatensis* SMETANA, 1977**

Material examined: Turkey: 1♂ [det. Feldmann], Bingöl, ca. 22 km WNW Bingöl, Kuruca Geçidi, 1800 m, pitfall trap, 20.IV.-11.V.2014, leg. Reuter (cFel).

Comment: The previously known distribution of *G. tokatensis* was confined to Tokat, Amasya, Adana, Kahramanmaraş, and Adıyaman provinces (ASSING (2004, 2006).

***Quedius infuscatus* ERICHSON, 1840**

Material examined: Turkey: 1♂ [det. Feldmann], Burdur, Gölhisar, 7 km SW Altinyayla, 36°58'N, 29°28'E, pan trap in hollow oak tree, 22.V.2009, leg. Jansson & Avcı (cFel); 1♂ [det. Feldmann], Mersin, 40 km N Gülnar, Köseçobanlı-Taşdüştü, 36°30'N, 33°08'E, pan trap in hollow oak tree, 26.VII.2006, leg. Jansson & Avcı (cFel).

Comment: The previously known distribution of *Q. infuscatus* extended from Spain in the west to Lithuania, Slovakia, and Romania in the east (SCHÜLKE & SMETANA 2015). The above material considerably expands the range of this species towards the southeast and represents the first records from Turkey.

***Quedius truncicola* FAIRMAIRE & LABOULBENE, 1856**

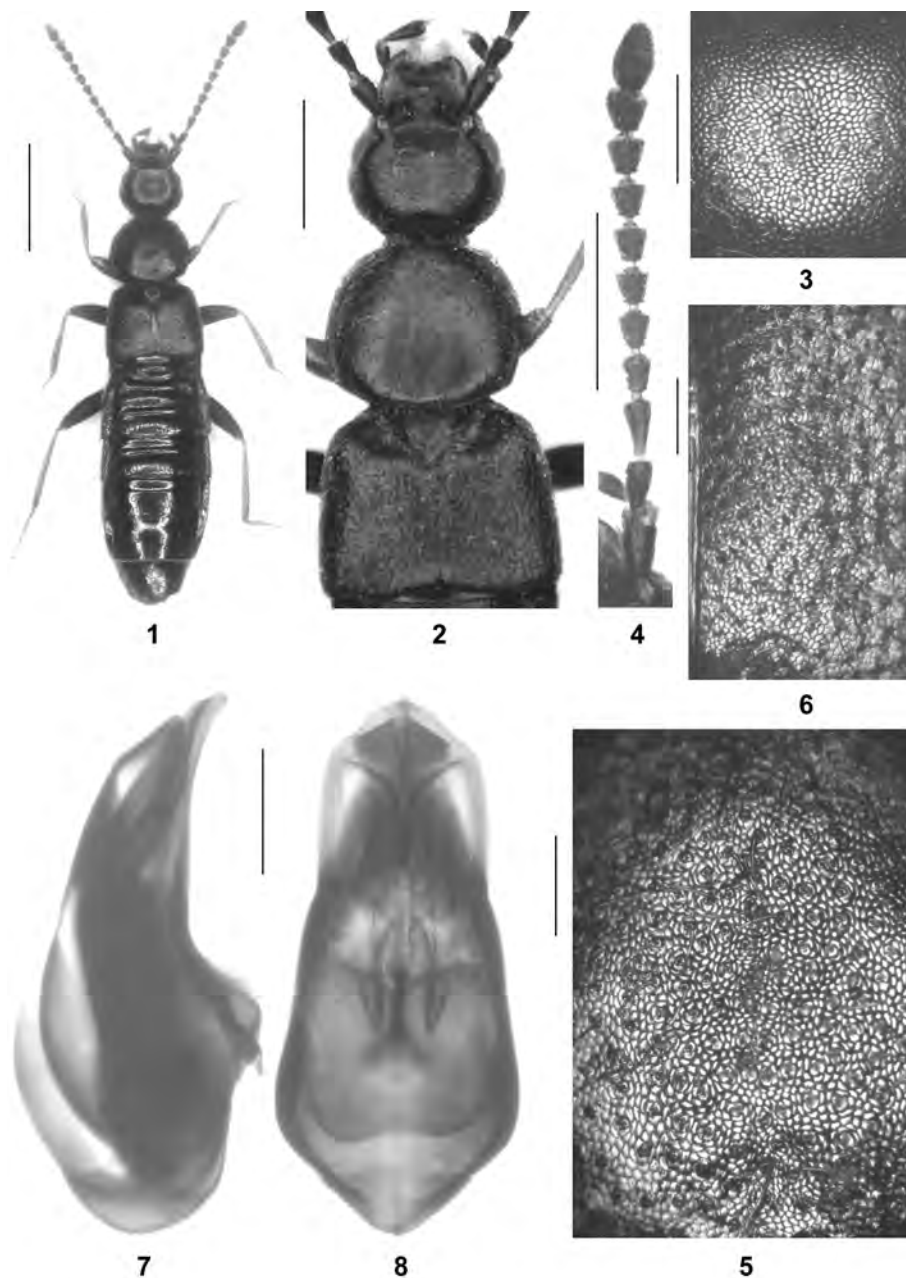
Material examined: Turkey: 1♂ [det. Feldmann], Burdur, Gölhisar, 7 km SW Altinyayla, 36°58'N, 29°28'E, pan trap in hollow oak tree, 22.V.2009, leg. Jansson & Avcı (cFel); 1♀ [det. Feldmann], Isparta, Eğirdir, Yukangökdere, Kasnak forest, 37°43'N, 30°50'E, window trap, hollow oak tree, 17.V.2007, leg. Jansson & Avcı (cFel).

Comment: This widespread species has been recorded from large parts of Europe, but was previously unknown from Turkey (SCHÜLKE & SMETANA 2015).

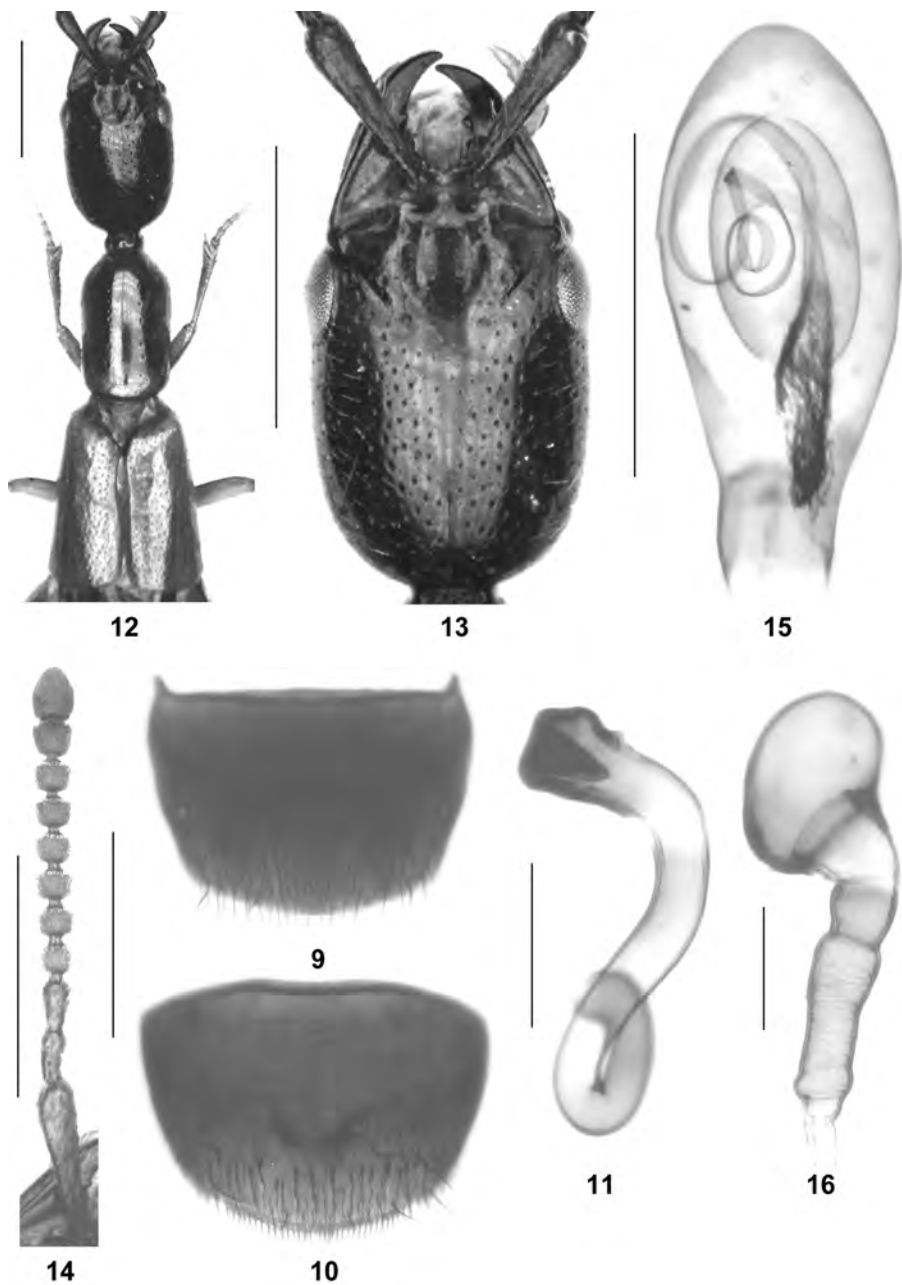
***Tasgius depressus* (HOCHHUTH, 1849)**

Material examined: Turkey: 11 exs. [det. Feldmann], Artvin, ENE Artvin, Dalis Dağı, ca. 41°13'N, 41°55'E, 1600-1800 m, pitfall, 8.-18.VII.2014, leg. C. Reuter (cFel, cAss); 2 exs. [det. Feldmann], same data, but 1800-2000 m (cFel).

Comment: *Tasgius depressus* is endemic to the Caucasus region (northeastern Anatolia, Russia, Georgia, Azerbaijan (SCHÜLKE & SMETANA 2015).



Figs 1-8: *Liogluta nigrobusta* nov.sp.: (1) habitus; (2) forebody; (3) median dorsal portion of head; (4) antenna; (5) median portion of pronotum; (6) sutural portion of right elytron; (7-8) median lobe of aedeagus in lateral and in ventral view. Scale bars: 1: 1.0 mm; 2, 4: 0.5 mm; 7-8: 0.2 mm; 3, 5-6: 0.1 mm.



Figs 9-16: *Liogluta nigrobusta* nov.sp. (9-11), *Vulda substricta* nov.sp. (12-15), and *Aleochara* sp. (16): (9) female tergite VIII; (10) female sternite VIII; (11, 16) spermatheca; (12) forebody; (13) head; (14) antenna; (15) aedeagus. Scale bars: 12-14: 1.0 mm; 9-10, 15: 0.5 mm; 11, 16: 0.1 mm.

***Vulda substricta* nov.sp.** (Figs 12-15)

Type material: Holotype ♂: "TR, Sinop, Erfelek env., 10.-28.VII.2014, ~250 m, pitfall, leg. C. Reuter / Holotypus ♂ *Vulda substricta* sp. n. det. V. Assing 2016" (cAss).

Etyymology: The specific epithet (Latin, adjective: slender, narrow) alludes to the slender habitus, which at once distinguishes this species from the geographically close *V. cangalica* ASSING, 2007.

Description: Body length 8.2 mm; length of forebody 5.1 mm. Coloration: head black; pronotum brown; elytra dark-yellowish; abdomen brown; legs pale-brown; antennae dark-reddish.

Head (Figs 12-13) very slender, 1.38 times as long as broad, 1.0 mm broad, broadest across eyes, weakly tapering posteriorly; punctation rather fine and moderately dense, sparse in antero-median portion, with interspersed micropunctures; interstices without microsculpture. Eyes moderately convex, slightly more than one-third as long as post-ocular region. Antenna 2.3 mm long and shaped as in Fig. 14.

Pronotum (Fig. 12) slender, nearly 1.7 times as long as broad and approximately 0.8 times as broad as long, broadest anteriorly; dorsal series composed of 9-11 rather fine punctures; lateral portion with sparse and fine punctation; interstices without microsculpture, but with very fine micropunctuation.

Elytra (Fig. 12) 0.9 times as long as pronotum; punctation rather fine and dense. Hind wings fully developed.

Abdomen distinctly narrower than elytra, with shallow, but distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: aedeagus (Fig. 15) 0.83 mm long and 0.35 mm broad; internal tube distally weakly sclerotized, long, slender, and coiled; proximal portion of internal tube broader and more sclerotized, but without spines.

Comparative notes: In external characters (coloration; head shape; slender pronotum), *V. substricta* somewhat resembles the macropterous morph of *V. ottomana* (CAMERON, 1912), whose known distribution is confined to northwestern Turkey from Istanbul to Bolu. Both species, however, are readily distinguished by the size of the aedeagus (*V. ottomana*: 0.65 mm long and < 0.2 mm broad) and the different internal structures of the aedeagus, which are much shorter in *V. ottomana*. Regarding the shape of the internal structure of the aedeagus, *V. substricta* is similar to the geographically close *V. cangalica* ASSING, 2007 (known distribution confined to Çangal Dağı, Sinop), from which it differs by smaller body size, a more slender and posteriorly tapering head (*V. cangalica*: head 1.2 mm long and weakly dilated posteriorly), larger and more convex eyes, less numerous punctures in the dorsal series of the pronotum, much longer elytra, fully developed hind wings (completely reduced in *V. cangalica*), the presence of a palisade fringe at the posterior margin of tergite VII, and particularly by the much smaller aedeagus with an internal structure of different shape (*V. cangalica*: aedeagus 1.4 mm long and 0.68 mm broad; internal structure much broader, larger, and darker). *Vulda substricta* is distinguished from *V. brignolii* BORDONI, 1973 (Amasya) by the absence of large internal spines in the aedeagus and from *V. vignai* BORDONI, 1973 (Bolu), a species unfortunately described based on a unique female, by much smaller body size alone (*V. vignai*: body length 13 mm; length of forebody 6.8 mm).

D i s t r i b u t i o n : The type locality is situated in Sinop province, northern Anatolia, at an altitude of approximately 250 m.

***Xantholinus bitlisicus* ASSING, 2007**

M a t e r i a l e x a m i n e d : Turkey: 1♂, Bitlis, Yelkenli, Van lake, 38°28'N, 42°32'E, 1800 m, pitfall, 21.IV.-20.V.2014, leg. Reuter (cFel).

C o m m e n t : The original description is based on 16 type specimens from Tatvan, Bitlis province. ANLAŞ (2014) subsequently recorded from the environs of Tatvan again, but judging from the photograph of the aedeagus provided in that paper, it seems doubtful if the specimens were identified correctly. The internal structures resemble those of *X. luteipennis* more than those of *X. bitlisicus*.

***Xantholinus luteipennis* COIFFAIT, 1970**

Xantholinus luteipennis COIFFAIT, 1970: 293.

Xantholinus khachikovi ANLAŞ, 2014: 20 ff.; **nov.syn.**

M a t e r i a l e x a m i n e d : Turkey: 1♂, Bitlis, Yelkenli, Van lake, 38°28'N, 42°32'E, 1800 m, pitfall, 21.IV.-20.V.2014, leg. Reuter (cFel).

C o m m e n t : The holotype of *X. luteipennis*, which was collected to the east of Kayseri, was revised by ASSING (2007a), who recorded the species also from Gaziantep and Adıyaman provinces. According to the original description of *X. khachikovi*, which is based on two males and one female from two localities in Muş province, this species is distinguished from *X. luteipennis* by the paler coloration of the head and pronotum, as well as by "less dense and less numerous sclerotised spines in the aedeagus" (ANLAŞ 2014). The coloration may be subject to enormous intraspecific variation in *Helicophallus* species and is consequently of little taxonomic significance. More importantly, the somewhat unclear photographs of the aedeagus (ANLAŞ 2014: figures 46-49) do not reveal any significant differences between the internal structures of the aedeagus of the type material of *X. khachikovi* and those of the holotype of *X. luteipennis*; the number, shapes, and degree of sclerotization of the spines are practically identical, so that there is little doubt that the holotypes of *X. khachikovi* and *X. luteipennis* are conspecific. Hence the synonymy proposed above.

As can be inferred from the new records (Bitlis, Muş), *X. luteipennis* is remarkably widespread in southeastern Anatolia, its currently known distribution ranging from Kayseri in the west to Bitlis in the east.

Acknowledgements

I am indebted to Benedikt Feldmann (Münster) for making the material available, which this study is based on, for communicating several additional records, for the generous gift of the holotypes of *Liogluta nigrobusta* and *Vulda substricta*, and for proof-reading the manuscript. Jürgen Vogel (Görlitz) reviewed the description of *Liogluta nigrobusta* and confirmed that the species was undescribed. Three species of Steninae, Omaliinae, and Oxytelinae were identified by Volker Puthz (Schlitz), Adriano Zanetti (Verona), and Michael Schülke (Berlin), respectively.

Zusammenfassung

Zwei Staphylinidenarten aus der Türkei werden beschrieben und abgebildet: *Liogluta nigrobusta* nov.sp. (Artvin) (Aleocharinae) sowie *Vulda substricta* nov.sp. (Sinop) (Staphylininae: Xantholinini). Zwei Namen werden synonymisiert: *Xenochara* Mulsant & Rey, 1874 = *Rheochara* Mulsant & Rey, 1875, nov.syn.; *Xantholinus luteipennis* Coiffait, 1973 = *X. khachikovi* Anlaş, 2014, nov.syn. Weitere Nachweise von 20 Arten, davon eine unbenannt, werden gemeldet, darunter sieben Erstnachweise für die Türkei.

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