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On some species of the *Quedius obliqueseriatus* group, with notes on *Q. nivicola* (Coleoptera: Staphylinidae: Staphylininae)

Volker ASSING

A b s t r a c t : New data on several micropterous and locally endemic species distributed in the Caucasus region and allied to *Quedius obliqueseriatus* EPPELSHEIM, 1889 are presented. *Quedius nigrosuturalis* nov.sp. (Northwest Georgia) is described and illustrated. *Quedius obliqueseriatus* and *Q. walteri* KORGE, 1971, both listed in *Microsaurus* DEJEAN, 1833 in the Palaearctic Catalogue, are assigned to the subgenus *Raphirus* STEPHENS, 1829. The distributions of *Q. boluensis* KORGE, 1971, *Q. smetanai* KORGE, 1971, and *Q. walteri* are mapped. Additional records are provided for *Quedius nivicola* KIESENWETTER, 1858, among them the first records from Turkey.

K e y w o r d s : Coleoptera, Staphylinidae, Staphylininae, Quediina, *Quedius*, Turkey, Georgia, Russia, Caucasus region, taxonomy, new species, new subgeneric assignment.

Introduction

At the end of 2014, the speciose genus *Quedius* STEPHENS, 1829 was represented in the Palaearctic region by 624 species (seven nomina dubia not considered) and 17 subspecies in five subgenera: *Distichalius* CASEY, 1915 (35 species and one subspecies), *Microsaurus* DEJEAN, 1833 (266 species and five subspecies), *Quedius* (18 species), *Raphirus* STEPHENS, 1829 (293 species and 11 subspecies), and *Velleius* LEACH, 1819 (eight species) (SCHÜLKE & SMETANA 2015). Four species are listed as incertae sedis. New species are continuously being described, especially from China.

SOLODOVNIKOV (2002, 2004, 2005) revised and (re-)described some taxa of the Caucasian region (including North Anatolia), with a special focus on species endemic to this area.

The western and northwestern Caucasus region (North Anatolia, Northwest of Greater Caucasus) hosts some relatively large-sized micropterous species with more or less restricted distributions, including *Q. boluensis* KORGE, 1971 (North Anatolia), *Q. smetanai* KORGE, 1971 (Northeast Anatolia), *Q. walteri* KORGE, 1971 (Northeast Anatolia), *Q. brachypterus* COIFFAIT, 1967 (distribution unknown), *Q. lgockii* ROUBAL, 1911 (Northwest Caucasus), *Q. obliqueseriatus* EPPELSHEIM, 1889 (Northwest Caucasus), *Q. nonseriatus* SOLODOVNIKOV, 2005 (Georgia: Svanetia), *Q. humosus* SOLODOVNIKOV, 2005 (Georgia: Abkhazia), and *Q. henrii* SOLODOVNIKOV, 2005 (Georgia: Mestia). Most of these species were treated by SOLODOVNIKOV (2004, 2005).

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Remarkably, some of them are assigned to the subgenus *Microsaurus*, while the majority is listed in *Raphirus* in the Palaearctic Catalogue (SCHÜLKE & SMETANA 2015).

Staphylinidae material recently collected in Georgia and made available to me by Heinrich Meybohm (Geretsried) contained an evidently undescribed micropterous species from Georgia. These specimens and a comparison with previously collected material from the Caucasus region eventually initiated the present study.

Material and methods

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

MNB ..... Museum für Naturkunde, Berlin (J. Frisch, M. Schülke, J. Willers)

cAss..... author´s private collection

cFel ..... private collection Benedikt Feldmann, Münster

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 photographing device constructed by Arved Lompe (Nienburg) and CombineZ software, as well as a digital camera (Nikon Coolpix 995). The map was created using MapCreator 2.0 (primap) software.

The measurements in the description are given in mm and abbreviated as follows: EL: length of elytra from apex of scutellum to elytral hind margin; FL: length of forebody from mandibles to the posterior margin of elytra; HL: head length from anterior margin of frons to posterior constriction; HW: maximal head width (across and including eyes); ML: length of median lobe of aedeagus; PL: length of pronotum along median line; PW: maximal width of pronotum; TaL: length of metatarsus (claws not included); TiL: length of metatibia (external aspect); TL: body length from apex of mandibles to posterior margin of tergite VIII.

The "parameral" side of the aedeagus (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Results

Quedius (*Raphirus*) *boluensis* KORGE, 1971 (Map 1)

Quedius (*Sauridus*) *boluensis* KORGE, 1971: 49 f.
Quedius (*Sauridus*) *deuvei* COIFFAIT, 1978a: 170 f.

Type material examined: Holotype ♂ [aedeagus missing]: "leg. H. Korge, Anatolia bor. / Abant-Geb. 1100-1500 m / ♂-Holotypus *Quedius* (*Sauridus*) *boluensis* Korge" (MNB). Paratype ♀: "Anatolia bor., W. Heinz leg. / Bolu dagl. bei Mengen 900 m, 21.7.1963 / ♀-Paratypus *Quedius* (*Sauridus*) *boluensis* Korge " (MNB).

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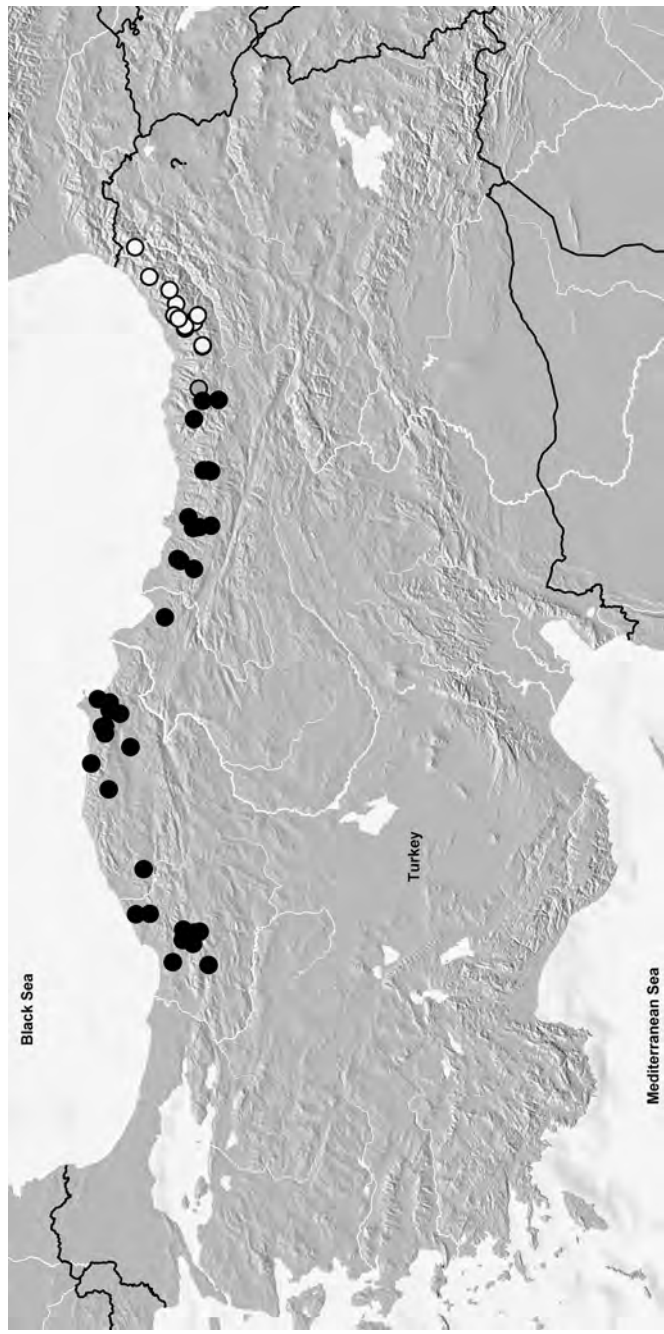

Map 1: Distributions of *Quedius boluensis* (black and grey circles) and *Q. smetanai* (white and grey circles; ?: doubtful record from Kars), based on examined and on literature records.

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Additional material examined: Turkey: Bolu: 1♂, 7 km S Bolu, 40°40'N, 31°38'E, 930 m, oak forest, sifted, 29.III.2010, leg. Assing (cAss); 1♂, Bolu - Yığılca, 40°51'N, 31°39'N, 1060 m, 29.IV.2012, leg. Brachat & Meybohm (cAss); 1♀, 11 km S Bolu, 40°40'N, 31°38'N, 1080 m, 30.IV.2012, leg. Brachat & Meybohm (cAss); 3♂♂, Abant mountains near Bolu, pitfall trap, 29.IV.-20.V.1976, leg Korge (MNB); 1♀, forest between Bolu and Yiğilca, 1100 m, 15.VII.-26.VIII.1972, leg. Heinz (MNB). Zonguldak: 2♀♀, ca. 15 km W Devrek, 41°14'N, 31°52'E, 700 m, beech forest with rhododendron undergrowth, litter sifted, 26.III.2010, leg. Assing (cAss). Kastamonu: 1♂, pass N Çambaşı, 1700 m, leg. Korge (MNB); 1♂, 1♀, W-Yaraligöz, S Çatalzeytin, 1300-1700 m, 25.VII.1970 (MNB). Sinop: 1♀, 25 km S Sinop, W Lala, 41°44'N, 35°01'E, 215 m, oak forest with undergrowth, sifted, 31.III.2009, leg. Assing (cAss); 1♂, 1♀, ca. 30 km S Ayancık, Çangal Dağı, 41°47'N, 34°40'E, 820 m, beech forest, sifted, 1.IV.2009, leg. Assing (cAss); 1♀, ca. 30 km S Ayancık, Çangal Dağı, 41°49'N, 34°39'E, 920 m, beech forest, sifted, 1.IV.2009, leg. Assing (cAss); 1♂, S Ayancık, Çangal Dağı, 1100 m, 26.VII.1970, leg. Heinz (MNB); 1♂, Dranaz Dağı near Sinop, 1250 m, 27.VII.1970, leg. Heinz (MNB). Samsun: 1♀, 20 km S Samsun, NE Asarcık, 41°07'N, 36°17'E, 840 m, *Quercus-Carpinus* forest with rhododendron, litter sifted, 20.VII.2008, leg. Assing (cAss). Ordu: 2♂♂, 1♀, ca. 30 km SW Ordu, 1 km NE Gölköy, 40°43'N, 37°37'E, 1050 m, beech forest with rhododendron and *Ilex* undergrowth, sifted, 13.VII.2008, leg. Assing & Schülke (cAss, MNB); 8♂♂, 10♀♀, road Ünye - Akkuş, 18 km NE Akkuş, 40°56'N, 37°07'E, 920 m, mixed deciduous forest with dominant *Fagus*, litter sifted, 15.VII.2008, leg. Assing & Schülke (cAss, MNB); 1♂, 1♀, Akkuş, 1400 m, leg. Heinz (MNB); 1♂, between Ulubey and Gölköy, 900-1100 m, 5.-15.VII.1977, leg. Korge (MNB); 1♂, Ulubey, 5.VII.1977, leg. Korge (MNB); 1♂, 15 km S Gölköy, Harçbeli Geçidi, 40°35'N, 37°38'E, 1610 m, beech forest with rhododendron, litter and mushrooms sifted, 22.VII.2008, leg. Assing (cAss). Giresun: 1♀, ca. 30 km S Giresun, 40°39'N, 38°27'E, 830 m, beech & hazelnut forest, sifted, 28.VII.2006, leg. Assing (cAss); 1♀, ca. 40 km S Giresun, N Kümbet, 40°34'N, 38°26'E, 1520 m, spruce forest with rhododendron, 29.VII.2006, leg. Assing (cAss); 1♂, ca. 30 km S Giresun, 40°36'N, 38°27'E, 1250 m, spruce forest with rhododendron, sifted, 29.VII.2006, leg. Schülke (cAss). Gümüşhane: 1♀, ca. 50 km SW Trabzon, NE Kürtün, 40°44'N, 39°13'E, 1430 m, spruce forest with rhododendron, near stream, sifted, 27.VII.2007, leg. Schülke (MNB). Trabzon: 1♂ [slightly teneral], ca. 50 km S Trabzon, 20 km S Maçka, Altındere Milli Park, 40°40'N, 39°40'E, 1560 m, spruce forest with rhododendron, sifted, 26.VII.2006, leg. Assing (cAss).

Comment: The original description of *Q. boluensis* is based on a male holotype from "Abant-Gebirbe bei Bolu" and two female paratypes from "Bolu-Gebirge bei Mengen" (KORGE 1971), that of *Q. deuvei* on a male holotype and a female paratype from "Drannaz Dag" (COIFFAIT 1978a). The latter was synonymized with the former by SOLODOVNIKOV (2004). SOLODOVNIKOV (2004, 2005) provided additional records from Bolu, Zonguldak, Kastamonu, Sinop, Ordu, Gümüşhane, and Trabzon provinces. He also reported one female from Borçka in Artvin province, but this record is zoogeographically implausible and most likely refers to *Q. smetanai* or *Q. walteri.*

The confirmed distribution of *Q. boluensis* is confined to the Pontic Mountains from Bolu in the west to Trabzon in the east (Map 1) and parapatrically borders on that of *Q. smetanai*. In one locality in Trabzon (Altındere Milli Park), one male of *Q. boluensis* was collected together with two males and one female of *Q. smetanai* (see grey circle in Map 1). For characters distinguishing *Q. boluensis* and *Q. smetanai* see the comment in the section on *Q. smetanai*.

Size, coloration, and other external characters of *Q. boluensis* are subject to remarkable intraspecific variation. The pronotum may be uniformly reddish, reddish with a diffuse and oblong darker spot on either side of the midline, or blackish-brown with reddish margins. The colour of the abdomen ranges from reddish to blackish-brown with narrowly reddish posterior margins. The palisade fringe at the posterior margin of tergite VII may be complete (though very narrow), reduced to indistinct rudiments, or completely absent.

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Considering that, like the type material (see also KORGE 1971), all the examined specimens are micropterous and have a blackish head, it appears noteworthy that SOLODOVNIKOV (2004) states on p. 229 that "in *Q. boluensis* head and pronotum [are] never black" and that SOLODOVNIKOV (2005: 7) seems to suggest that the specimens examined by him earlier are not micropterous: "Unlike other examined material on *Q. boluensis*..., these two specimens... have shortened wings".

Quedius (*Raphirus*) *smetanai* KORGE, 1971 (Map 1)

Quedius (*Sauridus*) *smetanai* KORGE, 1971: 47 ff.

Quedius (*Sauridus*) *horsti* COIFFAIT, 1978b: 222.

T y p e m a t e r i a l e x a m i n e d : Holotype ♂: "Anatolia bor., leg. H. Korge / Tal v. Ardeşen: Ilica, 28.VII.1967 / ♂-Holotypus *Quedius frater* Korge / *Quedius frater* Korge never published but publishes as *Q. smetanai* Korge / Holotype *Quedius smetanai* Korge, A. Solodovnikov rev. 2004" (MNB). Paratypes: 1♂: "Anatolia or., leg. H. Korge / Ilica, Tal v. Ardeşen, 28.VII.1967 / *Quedius frater* Korge, Paratypus" (MNB); 1♂, 1♀: "Anatolia bor., W. Heinz leg. / Paß s. Ikizdere, 1400 m, 27.VIII.1966 / *Quedius frater* Korge, Paratypus" (MNB); 2♂♂, 1♀ [1♂, 1♀ teneral]: Anatolia bor., Korge & Heinz leg. / Tal v. Ardesen (Ayder), 1000-16000 m [sic], 2.VIII.1965 / *Quedius frater* Korge, Paratypus" (MNB); 1♂: "Anatolia bor., W. Heinz leg. / Tal v. Ardesen, Ilica, 1600-2000 m, 25.VIII.1966 / *Quedius frater* Korge, Paratypus" (MNB); 1♀: "Çamlik bei Rize 1750 m / 23.V.1964 - As. m., leg. H. Korge / *Quedius frater* Korge, Paratypus" (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 : Turkey: T r a b z o n : 1♂, 1♀, ca. 50 km S Of, S Uzungöl, 40°36'N, 40°17'E, 2050 m, moss and roots of grass and herbs near rocks, sifted, 4.VIII.2006, leg. Assing (cAss); 1♀, ca. 50 km S Of, S Uzungöl, 40°36'N, 40°17'E, 2050 m, gravel, ferns sifted, 4.VIII.2006, leg. Assing (cAss); 2♂♂, 1♀, ca. 50 km S Trabzon, 20 km S Maçka, Altındere Milli Park, 40°40'N, 39°40'E, 1560 m, spruce forest with rhododendron, sifted, 26.VII.2006, leg. Assing & Schülke (cAss, MNB), 1♀, ca. 50 km S Of, S Uzungöl, 40°36'N, 40°18'E, 1870 m, spruce forest, 4.VIII.2006, leg. Assing (cAss). R i z e : 1♀, ca. 50 km S Ardeşen, Çat, 40°52'N, 40°56'E, 1240 m, *Alnus* forest, sifted, 3.VIII.2006, leg. Assing (cAss); 3♂♂, 2♀♀, 32 km SSE Ardeşen, SE Ayder, 40°56'N, 41°09'E, 1730 m, mixed forest (*Alnus*, *Picea*) with undergrowth (*Rhododendron*, *Rubus*), sifted, 10.VII.2008, leg. Assing & Schülke (cAss, MNB); 1♂, 1♀, 50 km SSE Rize, W Sivrikaya, 40°41'N, 40°39'E, 2050 m, primary *Abies* forest, litter and dead wood, 1.VIII.2006, leg. Assing & Schülke (cAss, MNB); 1♂, 1♀, 40 km SSE Rize, 4 km E Ikizdere, 40°47'N, 40°36'E, 750 m, mixed forest with chestnut, alder, beech, rhododendron, sifted, 1.VIII.2006, leg. Assing & Schülke (cAss, MNB); 1♀, 32 km SSE Ardeşen, SE Ayder, 40°56'N, 41°09'E, 1730 m, mixed forest (*Alnus*, *Picea*) with undergrowth (*Rhododendron*, *Rubus*), sifted, 10.VII.2008, leg. Assing (cAss); 3♀♀, 30 km SE Rize, 40°54'N, 40°46'E, 900 m, stream bank, rhododendron litter, 2.VIII.2006, leg. Schülke (MNB); 1♂, ca. 30 km SW Hopa, Çağlayan Dere river valley, ca. 41°09'N, 41°22'E, 1800-1900 m, 26.VI.1998, leg. Solodovnikov (cAss); 2♂♂, 3♀♀, valley of Ardeşen, Ayder, 1400-1800 m, 1.VIII.1970, leg. Korge & Heinz (MNB); 1♂, 2♀♀, valley of Ardeşen, Ayder, leg. Heinz (MNB); 2♂♂, pass S Ikizdere, 1400 m, 19.VIII.1978, leg. Heinz (MNB); 2♀♀, Ayder, 1500 m, 22.-24.VII.1992, leg. Heinz (MNB); 2♂♂, pass S Ikizdere, 1400 m, 27.VIII.1966, leg. Heinz (MNB); 1♀, Ovit pass S Ikizdere, 1400 m, 19.-21.VII.1987, leg. Heinz (MNB); 1♀, 20 km SW Kaptanpaşa, Ligovi, 1400 m, 24.-25.VII.1992, leg. Heinz (MNB). A r t v i n : 1♂, Karçkal Yaylaşı, Otingöl, 1800-2300 m, 19.VIII.1972, leg. Heinz (MNB). K a r s : 1♀, N Kars, 2000 m, 29.VII.1965, leg. Korge & Heinz (MNB).

C o m m e n t : The original description of *Q. smetanai* is based on material from "Ilica (bzw. Ayder) im Tal südlich Ardeşen 1000-1600 m", "Ikizdere südlich Rize, 1400 m", and "Çamlik südlich Rize, 1700 m", and one female of slightly different coloration from "Hochebene nördlich von Kars, 2000 m" (KORGE 1971). The type material is labelled as *Quedius frater*, a name that Korge evidently subsequently discarded and replaced with *Q. smetanai*, without changing the labels. The specimen from Kars was not labelled as a

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type by Korge. The record is rather far away from the confirmed distribution of *Q. smetanai* (see question mark in Map 1) and requires verification.

As can be inferred from the records known at present, the distribution of *Q. smetanai* is adjacent to, and much more restricted than, that of *Q. boluensis* (Map 1). In Altındere Milli Park to the south of Trabzon, both species were found together (see grey circle in Map 1).

Quedius smetanai is easily distinguished from *Q. boluensis* not only based on the different morphology of the aedeagus, particularly the somewhat spoon-shaped paramere (see figure 12 in KORGE 1971), but also by external characters such as the punctation pattern of the head (puncture near postero-dorsal margin of eye accompanied by additional non-setiferous in *Q. boluensis*, without such punctures in *Q. smetanai*) and the coloration. In *Q. boluensis*, the pronotum always has the margins broadly reddish, whereas in *Q. smetanai* it is practically completely black. Moreover, the elytra are uniformly reddish in *Q. boluensis*, while in *Q. smetanai* they have a dark spot on either side of suture or they are more extensively blackish.

Like *Q. boluensis*, *Q. smetanai* is subject to pronounced intraspecific variation. In most of the specimens examined, the elytra are reddish with an oblong infuscate spot on either side of the suture. Some specimens from Rize, however, have the elytra nearly completely black, with only the humeral angles and the postero-lateral angles narrowly paler.

Quedius (*Raphirus*) *walteri* KORGE, 1971 (Map 2)

Quedius (*Microsaurus*) *walteri* KORGE, 1971: 44 ff.

Type material examined: Holotype ♀: "Anatolia bor., W. Heinz leg. / Tal v. Ardesen: Ilica 1600-2000 m, 25.VIII.1966" (MNB). Paratype ♀: "Anatolia bor., Iliça (Ayder), Tal v. Ardeşen / Anatolia bor., W. & U. Heinz leg." (MNB).

Additional material examined: Turkey: Artvin: 1♂ [det. Feldmann], ENE Artvin, Dalis Dağı, 41°13'N, 41°55'E, 1800-2000 m, pitfall, 8.-18.VII.2014, leg. Reuter (cFel); 1♀, Karçkal Yaylaşı, Otingo, 1200-1600 m, 18.VII.1987, leg. Heinz (MNB).

Comment: The original description is based on two females from "Ilica im Tal von Ardeşen (Kaçkar-Dağlari), 1600-2000 m" (KORGE 1971). SMETANA (1995) and SOLODOVNIKOV (2005) provided additional records from Rize and Artvin provinces, plus one vague record without specified locality ("Armen. Geb." = Armenisches Gebirge), which was – probably erroneously – interpreted as an Armenian locality by SOLODOVNIKOV (2005) and subsequently SCHÜLKE & SMETANA (2015). The currently known records suggest that the restricted distribution of *Q. walteri* somewhat overlaps with that of *Q. smetanai* (Map 2).

KORGE (1971) tentatively placed *Q. walteri* in the subgenus *Microsaurus*, at the same time expressing his doubts regarding the subgeneric assignment. SMETANA (1995) subsequently moved the species to *Raphirus*, based on plausible morphological arguments. Strangely, he listed it in *Microsaurus* again in the first edition of the Palaearctic Catalogue (SMETANA 2004), most likely a lapsus. SOLODOVNIKOV (2005) adopted this concept solely on the grounds that this was "the latest published assignment". However, the distribution pattern and the presence of several other morphologically similar species in the Caucasus region suggest that *Q. walteri* belongs to the same group as *Q. boluensis*, *Q. smetanai*, *Q. obliqueseriatus*, and allied species (all

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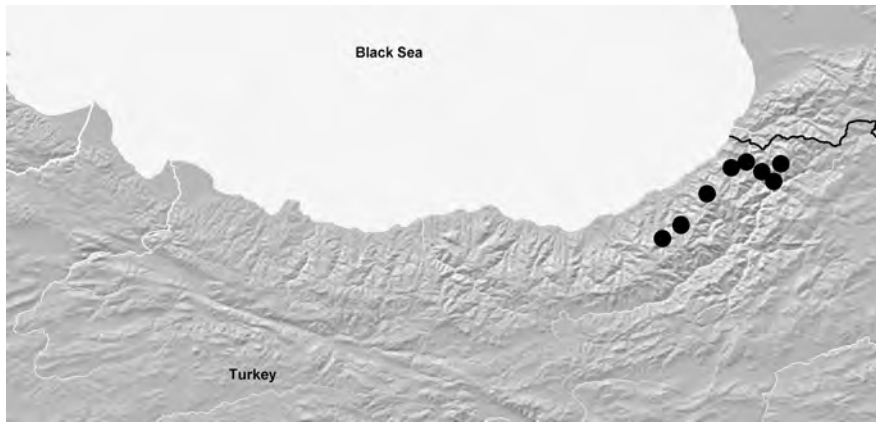
of which are currently assigned to *Raphirus*); I have been unable to find any significant characters indicating otherwise. Consequently, *Q. walteri* is transferred to *Raphirus* again.

The photo of the habitus provided by SOLODOVNIKOV (2005) suggests that the body of *Q. walteri* is of nearly uniformly blackish coloration, whereas in fact the head is dark-brown to blackish brown, the pronotum is dark-brown with reddish margins, the elytra are uniformly reddish, and the abdomen is reddish-brown to dark-brown with the posterior margins of the tergites reddish.



Map 2: Distribution of *Quedius walteri* in northeastern Turkey, based on examined and on literature records.

Quedius (*Raphirus*) *henrii* SOLODOVNIKOV, 2005

Material examined: Georgia: 1♀, Zemo Svaneti, W Koruldashi, 42°56'N, 43°07'E, 2350 m, 30.VII.2016, leg. Meybohm (cAss); 1♂, Zemo Svaneti, 7 km NE Ushguli, 42°57'N, 43°04'E, 2280 m, 31.VII.2016, leg. Meybohm (cAss).

Comment: This species was described based on a unique male holotype from "Mestia,..., Svanetia" (SOLODOVNIKOV 2005). The above specimens represent the first records since the original description.

Quedius (*Raphirus*) *lgockii* ROUBAL, 1911

Material examined: Russia: 1♂, 1♀, 43 km NE Sochi, Mt. Fisht, S-slope, 43°56'N, 39°54'E, 1940-2000 m, below snowfield, under stones, 13.VII.2011, leg. Assing (cAss).

Comment: SOLODOVNIKOV (2004) revised the type material of this species and provided additional records. It is endemic to the Krasnodar region (Russia) and western Abkhazia (Georgia) in the Northwest Caucasus.

Quedius (*Raphirus*) *humosus* SOLODOVNIKOV, 2005

Material examined: Georgia: 1♂, Abkhazia, upper course of Mtshishta river, 200 m, forest (*Carpinus*, *Corylus*), 8.VIII.2001, leg. Koval (cAss); 1♂, 1♀, Abkhazia, Novyi Afon env., Psyrtska river valley, forest (*Fagus*, *Corylus*), 28.VIII.2001, leg. Koval (cAss).

Comment: *Quedius humosus* was described based on a male holotype and two

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female paratypes from two localities in Abkhazia (SOLODOVNIKOV 2005). The above specimens represent the first records since the original description.

Quedius (*Raphirus*) *obliqueseriatus* EPPELSHEIM, 1889

Material examined: Russia: Krasnodar: 2♂♂, 35 km NNE Sochi, Babuk-Aul, 43°53'N, 39°49'E, 560 m, *Fagus orientalis* and *Castanea sativa* forest, litter and bark sifted, 11.VII.2011, leg. Assing (cAss); 1♂, 4 km NNW Krasnaya Polyana, Atchishkho Mt., 43°43'N, 40°10'E, 1150 m, beech forest, leaf litter sifted, 19.VII.2011, leg. Assing; 1♂, 3♀♀, 4 km NNW Krasnaya Polyana, Atchishkho Mt., 43°42'N, 40°10#E, 1130 m, beech forest with rhododendron, leaf litter sifted, 19.VII.2011, leg. Assing (cAss).

Comment: *Quedius obliqueseriatus* was originally attributed to the subgenus *Sauridus* MULSANT & REY, 1876, today a junior synonym of *Raphirus* STEPHENS, 1829 (EPPELSHEIM 1889). The species was revised by SOLODOVNIKOV (2004), who did not explicitly assign it to a subgenus. However, according SOLODOVNIKOV (2004, 2005), it is closely allied to *Q. boluensis* and some species described in the second paper (*Q. nonseriatus*, *Q. henrii*, *Q. humosus*), which he attributed to *Raphirus*. Nevertheless, *Q. obliqueseriatus* is listed in the subgenus *Microsaurus* in SCHÜLKE & SMETANA (2015). Since *Q. obliqueseriatus* is clearly closely related to the other species treated in the previous sections, it should be placed in *Raphirus*. The species is endemic to the Krasnodar region in the Northwest Caucasus (SOLODOVNIKOV 2004).

Quedius (*Raphirus*) *nigrosuturalis* nov.sp. (Figs 1-9)

Type material: Holotype ♂: "N42°23'48 E43°01'59 (14), GEORGIA: Ratscha, Nakerala 4 km N, 1150 m, Brachat & Meybohm, 18.V.2016 / Holotypus ♂ *Quedius nigrosuturalis* sp. n. det. V. Assing 2016" (cAss). Paratypes: 1♂, 1♀: same data as holotype (cAss); 1♀: "N42°22'20 E43°02'30 (21), GEORGIA: Ratscha, Nakerala Pass, 1320 m, Brachat & Meybohm, 22.V.2016" (cAss).

Etymology: The specific epithet (adjective) alludes to the blackish elytral suture.

Description: Measurements (in mm) and ratios (range): TL: 9.0-10.0; FL: 4.5-5.1; HL: 1.09-1.32; HW: 1.35-1.62; PL: 1.55-1.79; PW: 1.76-2.02; EL: 0.70-0.81; HTiL: 1.44-1.67; HTaL: 1.07-1.18; ML: 1.55-1.58; HW/HL: 1.22-1.25; PW/HW: 1.24-1.31; PL/PW: 0.88-0.90; EL/PL: 0.43-0.47; HTiL/HTaL: 1.29-1.48. Female of noticeably larger size than male.

Coloration: head blackish; pronotum bicoloured, dark-brown with the anterior and posterior margins narrowly, and the lateral portions broadly reddish; elytra dark-reddish with the sutural and scutellar regions blackish-brown to blackish; abdomen blackish-brown to blackish, with the posterior margins of tergites III-VII narrowly, and the posterior margin of tergite VIII broadly reddish; legs reddish; antennae brown, with the basal 3-4 antennomeres reddish; maxillary palpi pale-reddish.

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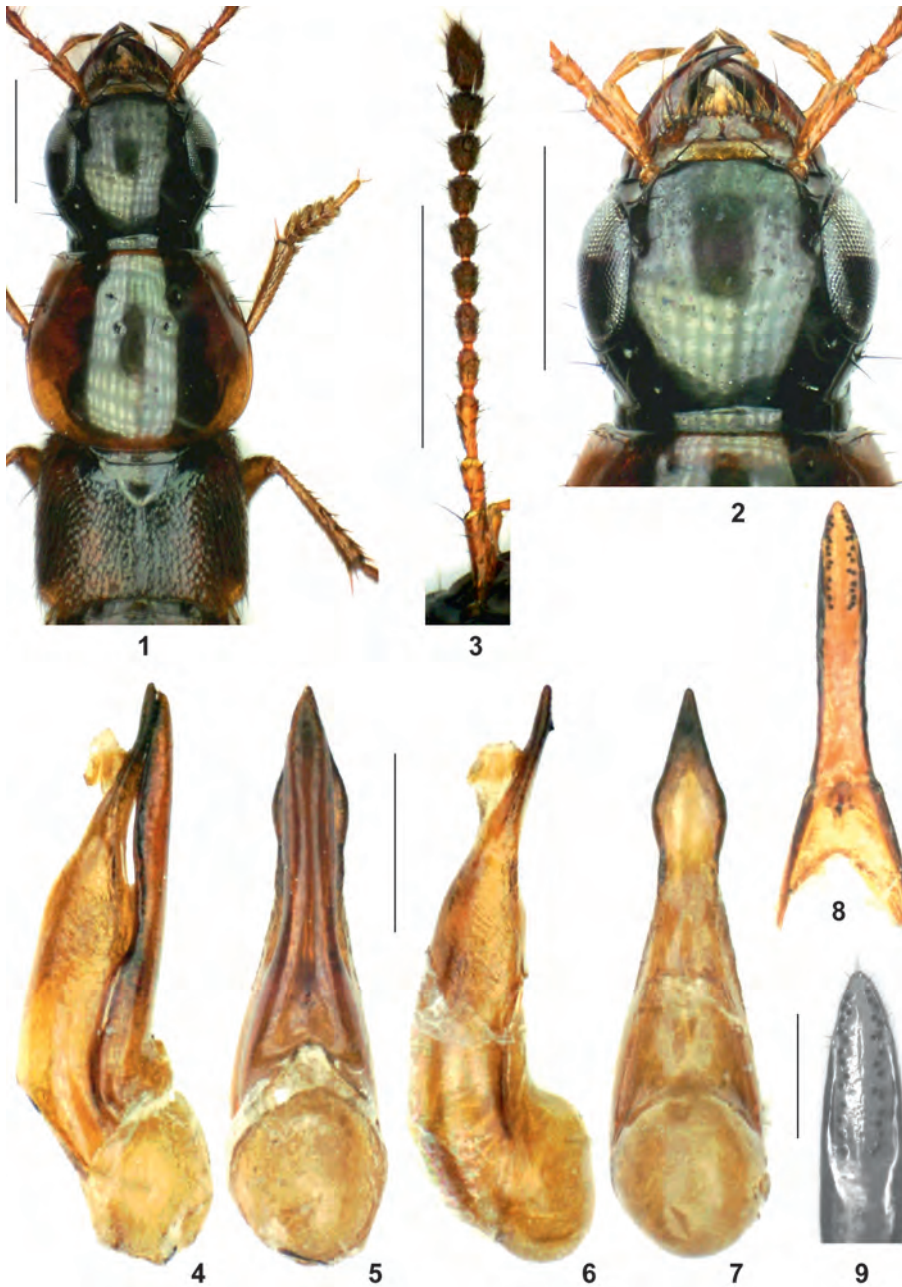

Figs 1-9: *Quedius nigrosuturalis* nov.sp.: (**1**) male forebody; (**2**) head; (**3**) antenna; (**4-5**) aedeagus in lateral and in ventral view; (**6-7**) median lobe of aedeagus in lateral and in ventral view; (**8**) paramere; (**9**) apical portion of paramere. Scale bars: 1-3: 1.0 mm; 4-8: 0.5 mm; 9: 0.2 mm.

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Head (Figs 1-2) distinctly transverse (see ration HW/HL); punctation pattern (setiferous punctures only) of dorsal surface: one puncture at anterior angle of frons, one between antennal insertion and antero-dorsal margin of eye, one near middle of dorsal margin of eye, one near postero-dorsal margin of eye, and one puncture near posterior constriction of head on either side; dorsal surface with transverse microsculpture and interspersed micropunctation; infraorbital ridge pronounced, nearly reaching posterior constriction of head. Eyes approximately 2.5 times as long as postocular region in dorsal view. Antenna as in Fig. 3.

Pronotum (Fig. 1) distinctly transverse and much broader than head (see ratios PL/PW and PWE/HW); dorsal series composed of three punctures; setae inserting in dorsal punctures and in punctures at lateral and anterior margins black and moderately long, those inserting in sublateral punctures black and very long; microsculpture composed of diagonally transverse striae on disc and of oblong meshes near antero-lateral angles.

Elytra (Fig. 1) less than half as long as, and distinctly narrower than pronotum; punctation dense and distinct. Hind wings completely reduced.

Abdomen with dense and rather coarse punctation; interstices with fine transverse microsculpture visible only at high magnification (100 x); posterior margin of tergite VII without palisade fringe.

♂: protarsomeres I-IV strongly dilated (Fig. 1); posterior excision of sternite VIII of broadly triangular shape; aedeagus (Figs 4-9): median lobe with pronounced subapical tooth, apical portion of ventral process straight in lateral view and spear-shaped in ventral view; paramere apically not quite reaching apex of median lobe, with two slightly irregular lateral series of peg-setae.

♀: protarsomeres I-IV moderately dilated, distinctly less so than in male; posterior margin of sternite VIII convex; tergite X apically sharply convex.

Comparative notes: *Quedius nigrosuturalis* is distinguished from other micropterous *Raphirus* species distributed in the Caucasus region by the shape of the aedeagus and additionally as follows (compared with actual specimens, except for *Q. brachypterus* and *Q. nonseriatus*):

from *Q. brachypterus*, *Q. lgockii*, and *Q. henrii* (body blackish) by completely different coloration alone;

from *Q. obliqueseriatus* and *Q. nonseriatus* by the punctation pattern of the head (*Q. obliqueseriatus* and *Q. nonseriatus* with an additional pair of punctures posteriorly), a more distinctly bicoloured pronotum, and by bicoloured elytra (uniformly reddish in *Q. obliqueseriatus* and *Q. nonseriatus*);

from *Q. walteri* by the punctation pattern of the head (*Q. walteri* with an additional pair of punctures posteriorly), a convex posterior margin of the pronotum (*Q. walteri*: posterior margin of pronotum very weakly convex, nearly truncate), denser punctation of the elytra, and by bicoloured elytra (uniformly reddish in *Q. walteri*);

from *Q. humosus*, with which it shares the punctation pattern of the head, by a more distinctly bicoloured pronotum and bicoloured elytra;

from *Q. boluensis* by the punctation pattern of the head (*Q. boluensis*: puncture near postero-dorsal margin of eye more distant from eye and accompanied by 1-4 additional non-setiferous punctures), by a more distinctly bicoloured pronotum, and by bicoloured elytra;

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from *Q. smetanai*, with which it shares bicoloured elytra, by the coloration of the pronotum (*Q. smetanai*: pronotum completely black), the coloration of the elytra (*Q. smetanai*: elytra reddish with an oblong infuscate spot on either side of, but not including suture, or nearly completely dark), and by slightly shorter elytra.

For illustrations of the aedeagi of the compared species see KORGE (1971), SMETANA (1995), and SOLODOVNIKOV (2004, 2005).

Distribution and natural history: The species is currently known from two localities near the Nakerala pass in Ratcha province, Northwest Georgia. The specimens were collected in a beech forest and in a secondary forest with box trees, hazelnut, and rhododendron at altitudes of 1150 and 1320 m (MEYBOHM pers. comm.).

Quedius (*Raphirus*) *nivicola* KIESENWETTER, 1858

Material examined: Greece: 5♂♂, Atikí, Oros Kithairón, 1210 m, VI.2004-VI.2005, leg. Giachino & Vailati (cAss); 5♂♂, same data, but V.2003-VI.2004 (cAss); 1♂, 1♀, same data, but VI.2002-V.2003 (cAss); 1♂, 2♀♀, Pelopónnisos, Lakonía, Oros Taygetos, Prof. Elías, 1940 m, VI.1999-VI.2000, leg. Giachino & Vailati (cAss). Turkey: Samsun: 1♂, 33 km SW Samsun, 7 km SE Kavak, 41°03'N, 36°07'E, 470 m, 20.VII.2008, leg. Assing (cAss). Ordu: 1♂, ca. 25 km SSE Gölköy, 40°29'N, 37°43'E, 980 m, dry north slope, litter sifted 14.VII.2008, leg. Assing (cAss). Sivas: 2♂♂, 19 km W Suşehri, Karabay Geçidi, 40°10'N, 37°52'E, 1800 m, 17.VII.2008, leg. Assing (cAss). Aydın: 1♂, Dilek Dağı, 37°41'N, 27°09'E, 15 m, 27.IV.2006, leg. Brachat & Meybohm (cAss); 1♀, Dilek Dağı, Kanyon, 37°41'N, 27°10'E, 70-200 m, 29.IV.2006, leg. Brachat & Meybohm (cAss). Isparta: 1♂, 12 km N Sütçüler, 37°36'N, 30°59'E, 1100 m, oak forest, litter and grass, mostly between stones, sifted, 26.IV.2011, leg. Assing (Ass). Afyon: 1♀, Emir Dağları, 20 km S Emirdağ, 38°54'N, 31°08'E, 1230 m, N-slope with oak, sifted, 18.IV.2011, leg. Assing (cAss); 1♂, 1♀, Sultan Dağları, 15 km SE Çay, 38°32N, 31°11'E, 1430 m, oak forest, litter and bark sifted, 18.IV.2011, leg. Assing (cAss). Konya: 2♂♂, 1♀, Sultan Dağları, NW Dereçine, 38°29'N, 31°15'E, 1320 m, oak forest, litter sifted, 21.IV.2011, leg. Assing (cAss); 1♀, Sultan Dağları, SW Sultandağı, 38°30'N, 31°12'E, 1730 m, 19.IV.2008, leg. Brachat & Meybohm (cAss). Kahramanmaraş: 1♀, Başkonuş Yaylaşı, 37°34'NB, 36°34'E, 1250 m, 24.IV.2007, leg. Brachat & Meybohm (cAss).

Comment: SCHÜLKE & SMETANA (2015) list this species for Greece, Lebanon, Israel, and Iran. Recently it was reported from the Greek island Samos, close to the Turkish coast (ASSING 2015). *Quedius nivicola* was previously unknown from Turkey, from where it is here reported for the first time.

The above specimens from Greece were collected in greater numbers (14 and three specimens, respectively) in two localities with subterranean pitfall traps. The material from Turkey, by contrast, is mostly represented by singletons, on rarer occasions also by two or (in one case) three specimens per locality and was found exclusively by sifting. These observations suggest that *Q. nivicola* is not a typical inhabitant of the leaf litter like most of its congeners, but lives in a subterranean habitat of unknown identity.

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Zusammenfassung

Zuvor unveröffentlichte (Fund-)Daten zu einigen brachypteren und in der Kaukasusregion lokalendemischen, mit *Quedius obliqueseriatus* EPPELSHEIM, 1889 verwandten Arten werden zusammengestellt. *Quedius nigrosuturalis* nov.sp. (nordwestliches Georgien) wird beschrieben und abgebildet. *Quedius obliqueseriatus* und *Q. walteri* KORGE, 1971 werden in die Untergattung *Raphirus* STEPHENS, 1829 gestellt. The Verbreitung von *Q. boluensis* KORGE, 1971, *Q. smetanai* KORGE, 1971 und *Q. walteri* wird anhand von Karten illustriert. Weitere Nachweise werden für *Quedius nivicola* KIESENWETTER, 1858 gemeldet, darunter die ersten Nachweise aus der Türkei.

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

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