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A revision of *Geostiba* of the West Palaearctic region. XXI. Eight new species from Turkey and the Caucasus, a new synonymy, and additional records (Coleoptera: Staphylinidae: Aleocharinae)

V. ASSING

Abstract: Eight species of *Geostiba* THOMSON from Turkey and the West Caucasus are described and illustrated: *Geostiba (Tropogastrosipalia) perfodens* nov.sp. (Turkey: Isparta), *G. (T.) fodens* nov.sp. (Turkey: Isparta), *G. (T.) pungens* nov.sp. (Turkey: Isparta), *G. (T.) aequa* nov.sp. (Turkey: Niğde, Adana), *G. (T.) burdurica* nov.sp. (Turkey: Burdur), *G. (T.) akiana* nov.sp. (Turkey: Antalya), *G. (Sibiota) uniplicata* nov.sp. (W-Caucasus), and *G. (S.) convergens* nov.sp. (W-Caucasus). One subgeneric name is synonymised: *Sibiota* CASEY 1906 = *Typhlusida* CASEY 1906, nov.syn. Additional records from Turkey and the Caucasus region are reported for six species. Supplements to a recently published key to the *Geostiba* species of the East Mediterranean, including the Caucasus region and Iran, are provided. At present, 181 species in four subgenera are known from the region.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Athetini, *Geostiba*, Palaearctic region, Turkey, Caucasus, taxonomy, new species, new synonym, new records, key to species.

1. Introduction

According to recent revisions, the *Geostiba* fauna of the Eastern Mediterranean east of Italy, including the Caucasus region and Iran, previously comprised 173 species in five subgenera: *Geostiba* (two species), *Sibiota* CASEY (41 species), *Sipalotricha* SCHEERPELTZ (37 species), *Tropogastrosipalia* SCHEERPELTZ (91 species), and *Typhlusida* CASEY (2 species) (ASSING 2009, 2010, and references therein). An updated key to the species of the region defined above and a comprehensive catalogue are provided by ASSING (2009).

In the meantime, new material has become available from four recent field trips to Turkey and the West Caucasus in 2011, one of them conducted to central southern Turkey by Volker Brachat (Geretsried) and Heinrich Meybohm (Großhansdorf), one to south-western Turkey by Michael Schülke (Berlin), one to southwestern Turkey by Paul Wunderle (Mönchengladbach) and the author, and one to the West Caucasus by Alexey Solodovnikov, Sergej Tarasov (both Copenhagen) and the author.

An examination of this material included as many as eight new species, which raises the number of species known from the region outlined above to 181. The country with – by

far – the highest diversity is Turkey, from where 82 species (including the species described in the present paper) have been recorded; 77 of them are locally endemic and exclusively known from Turkish territory. The majority of the exclusive species (46 species) belongs to the subgenus *Tropogastrosipalia*.

2. Material and methods

The material referred to in this study is deposited in the following public institutions and private collections:

MNHUB..... Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch)
 OÖLL..... Oberösterreichisches Landesmuseum/Biologiezentrum Linz (F. Gusenleitner)
 ZMUC..... Natural History Museum Denmark/ University of Copenhagen Zoological
 Museum (A. Solodovnikov)
 cAss..... author's private collection
 cSch..... private collection Michael Schülke, Berlin
 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). For the photographs a digital camera (Nikon Coolpix 995) was used.

Head length was measured from the anterior margin of the clypeus to the posterior margin; elytral length was measured along the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the median lobe of the aedeagus from the apex of the ventral process to the base of the capsule.

3. Species descriptions and additional records

Geostiba (Geostiba) circellaris (GRAVENHORST 1806)

Material examined: Russia: 1 ex., W-Caucasus, Karachayevo-Cherkesskaya Respublika, 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 Respublika, 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).

This species has a trans-Palaearctic distribution and is common in many parts of Europe (ASSING 2005). The above specimens represent the first records from the Russian South European territory (SMETANA 2004).

Geostiba (Tropogastrosipalia) attaleensis PACE 1983

Material examined: Turkey: 23 exs., Antalya, 22 km N Akseki, Teke geçidi, 37°15'N, 31°46'E, 1300 m, sifted from oak and cypress litter, 14.II.2011, leg. Schülke (cSch, cAss); 8 exs., Antalya, 10 km N Akseki, 37°09'N, 31°48'E, 1250 m, sifted from oak and cypress litter, 17.II.2011, leg. Schülke (cSch, cAss).

The original description of *G. attaleensis* is based on a single female from "Topraktepe"

(PACE 1983), although males are required to identify and interpret species of the subgenus *Tropogastrosipalia*. The species was subsequently tentatively interpreted by ASSING (2001) based on a male from the environs of Akseki. The above specimens are conspecific with this male.

An examination of the males in the material listed above revealed that the posterior margin of the pronotum may occasionally be weakly concave in the middle. In order to account for this variability, couplet 77 in the species key in ASSING (2009) is modified accordingly (see the key supplement in the section on *G. pungens*).

***Geostiba (Tropogastrosipalia) perfodens* nov.sp.** (Figs 1-8)

Type material: Holotype ♂: "TR [2a] - Isparta, Sultan Dağları, SSW Akşehir, 38°15'15"N, 31°24'30"E, 1860 m, under stones, 22.IV.2011, V. Assing / Holotypus ♂ *Geostiba perfodens* sp. n. det. V. Assing 2011" (cAss). Paratypes: 54 ♂♂, 54 ♀♀: same data as holotype (cAss, MNHUB, OÖLL); 78 exs.: same data, but leg. P. Wunderle (cWun, MNHUB); 1 ex.: same data as holotype, but "[2] ... 17.IV.2011" (cAss); 5 exs.: same data, but leg. P. Wunderle (cWun).

Description: Body length 2.4-2.9 mm. Coloration: head dark-brown; pronotum and elytra pale-reddish to yellowish-brown; abdomen yellowish-brown, with segments V-VII more or less extensively dark-brown; legs yellowish; antennae yellowish-brown, with the basal antennomere(s) yellowish.

Head approximately as wide as long or weakly oblong; punctation extremely fine, barely noticeable; surface with shallow microreticulation. Eyes very weakly convex, approximately half as long as postocular region in dorsal view, or nearly so (Fig. 1).

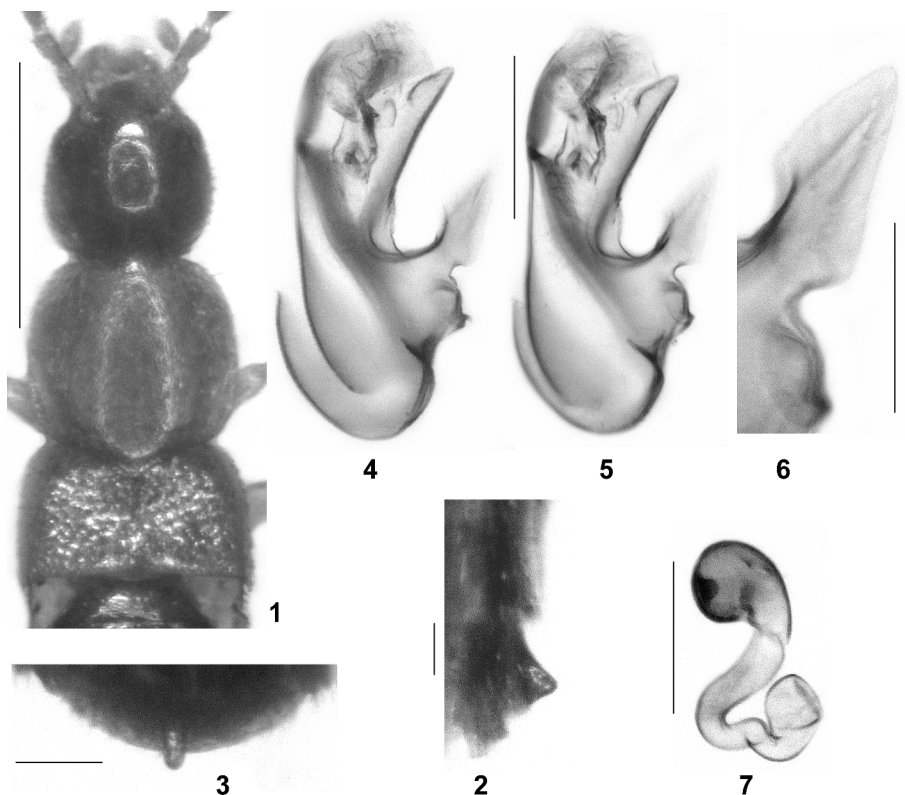
Pronotum without appreciable sexual dimorphism; approximately as wide as long or very weakly transverse, and approximately 1.20-1.25 times as wide as head (Fig. 1); posterior margin very weakly and obtusely pointed in the middle; punctation extremely fine, barely noticeable; microreticulation similar to that of head or slightly more pronounced.

Elytra with moderately pronounced sexual dimorphism, approximately half as long as pronotum or even shorter (Fig. 1); microsculpture very shallow, less distinct than that of head and pronotum. Hind wings absent.

Abdomen slightly wider than elytra; punctation very fine and sparse; microreticulation distinct; posterior margin of tergite VII without palisade fringe; tergites III-IV and VII with sexual dimorphism; posterior margin of tergite VIII convex in both sexes.

♂ (with fully developed secondary sexual characters): elytra with very short and weakly elevated sutural carinae near apex of scutellum; elytral surface transversely and more or less extensively impressed, with granulose punctation (Fig. 1); tergite III with median tubercle at posterior margin; tergite IV with weaker median tubercle in the middle of tergal surface; tergite VII with relatively short and stout, suberect process near the middle of posterior margin (Fig. 2), apex of this process convex to almost truncate in anterodorsal view (Fig. 3); median lobe of aedeagus approximately 0.24 mm long and with conspicuously large cristal process (Figs 4-6).

♀: elytra with fine, non-granulose punctation and without impression; tergites III-IV and VII unmodified; posterior margin of sternite VIII broadly convex; spermatheca not distinctive (Fig. 7).



Figs 1-7: *Geostiba perfodens* nov.sp.: (1) male forebody; (2) male abdominal segments VI-VIII in lateral view; (3) male abdominal segment VII in antero-dorsal view; (4-5) median lobe of aedeagus in lateral view; (6) cristal process of aedeagus in lateral view; (7) spermatheca. Scale bars: 1: 0.5 mm; 2-5, 7: 0.1 mm; 6: 0.05 mm.

Intraspecific variation: As in other species of the subgenus *Tropogastrosipalia*, the male secondary sexual characters are subject to considerable variation. They are pronounced only in large males and may be nearly or completely absent in small males.

Etymology: The specific epithet is the present participle of the Latin verb *perforare* (to stab) and alludes to the dagger-like shape of the cristal process of the aedeagus.

Comparative notes: As can be inferred from the morphology of the primary sexual characters, the modifications of the male pronotum and elytra, the shape of the spermatheca, as well as from the general appearance, *G. perfodens* belongs to the subgenus *Tropogastrosipalia*. Using the key in ASSING (2009), the species would key out at couplet 91. In order to account for the new species, the key is modified as follows:

- 91 ♂: abdominal tergites III-IV or III-V each with median tubercle91a
- ♂: tergites III-V unmodified; for three species from Hatay, Gaziantep and Kahramanmaraş with very indistinct and ill-delimited elevations on tergites (III-)IV follow this alternative94
- 91a Pronotum without distinct sexual dimorphism. ♂: median lobe of aedeagus with conspicuously broad and dagger-shaped cristal process (Figs 4-6); sutural carinae very short and indistinct (Fig. 1). Isparta: Sultan Dağları..... *G. perfodens* nov.sp.
- Pronotum with distinct sexual dimorphism. ♂: median lobe of aedeagus with much more slender cristal process; sutural carinae more pronounced. Distribution different.....92

Distribution and natural history: *Geostiba perfodens* is currently known only from one locality in the Sultan Dağları. As can be inferred from the restricted distributions of other Turkish representatives of the subgenus *Tropogastrosipalia*, the species is probably endemic to this mountain range. The type specimens were collected in large numbers from under stones in a subalpine pasture (Fig. 8) at an altitude of 1860 m, together with numerous specimens of an undescribed species of *Sunius* STEPHENS.



Fig. 8: Type locality of *Geostiba perfodens* nov.sp. (photo: P. Wunderle).

***Geostiba (Tropogastrosipalia) fodens* nov.sp. (Figs 9-13)**

Type material: Holotype ♂: "TR [17a] - Isparta, 15 km SW Eğirdir, Davraz Tepe, 37°47'29"N, 30°45'24"E, 1680 m, under stones, 28.IV.2011, V. Assing / Holotypus ♂ *Geostiba fodens* sp. n. det. V. Assing 2011" (cAss). Paratypes: 7♂♂, 9♀♀: same data as holotype (cAss); 9 exs.: same data, but leg. Wunderle (cWun); 5♂♂, 13♀♀: same data as holotype, but "[17] ... 23.IV.2011" (cAss, OOLL); 3 exs.: same data, but leg. Wunderle (cWun); 6 exs.: "TR [18] -

Isparta, 15 km SW Eğirdir, Davraz Tepe, 37°47'03"N, 30°44'56"E, 1780 m, under stones, 23.IV.2011, P. Wunderle" (cWun); 1 ♀: "N37°47'00 E30°44'55, TR Isparta; Davraz Tepe, Skizentrum; 1700-2000 m, 17.IV.2008, leg. Meybohm & Brachat" (cAss).

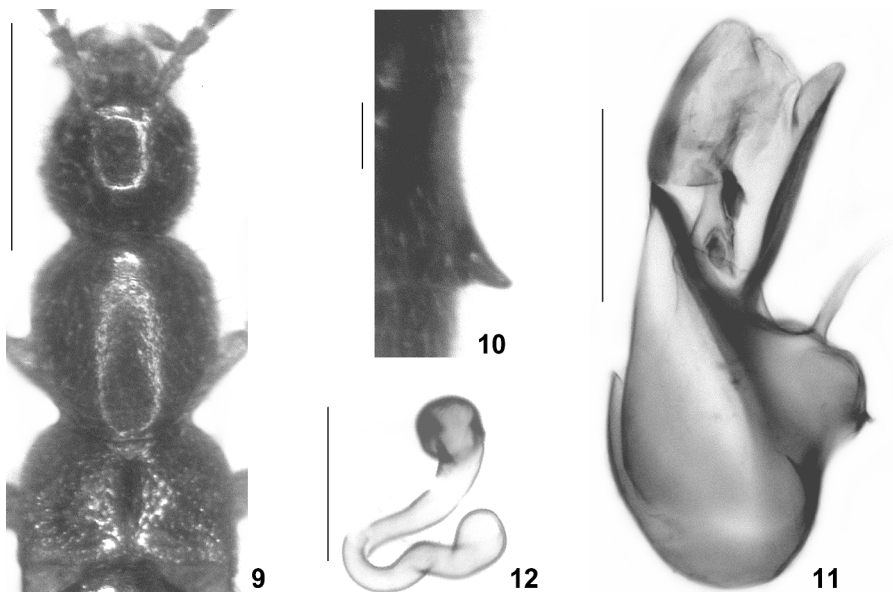
Description: Body length 2.5-3.2 mm. Coloration: head blackish-brown to black; pronotum brown to dark-brown; elytra yellowish-brown to reddish-brown; abdomen blackish-brown to blackish, with the anterior segments occasionally slightly paler; legs yellowish; antennae yellowish-brown, with the basal antennomere(s) yellowish.

Head approximately as wide as long; punctation extremely fine, barely noticeable; surface with shallow microreticulation. Eyes moderately convex, approximately half as long as postocular region in dorsal view (Fig. 9).

Pronotum with moderate sexual dimorphism; punctation extremely fine, barely noticeable; microreticulation usually slightly more pronounced than that of head.

Elytra with moderately pronounced sexual dimorphism, approximately half as long as pronotum (Fig. 9); microsculpture indistinct, interstices glossy. Hind wings absent.

Abdomen slightly broader than elytra; punctation very fine and sparse; microreticulation distinct; posterior margin of tergite VII without palisade fringe; tergites III-IV without sexual dimorphism; posterior margin of tergite VIII convex in both sexes.



Figs 9-12: *Geostiba fodens* nov.sp.: (9) male forebody (holotype); (10) male abdominal tergite VII in lateral view; (11) median lobe of aedeagus in lateral view; (12) spermatheca. Scale bars: 9: 0.5 mm; 10-12: 0.1 mm.

♂ (with fully developed secondary sexual characters): pronotum approximately 1.15 times as long as broad, moderately elongated posteriad, posterior margin strongly convex in the middle; elytra more or less extensively and rather shallowly impressed, with granulose punctation, and moderately pronounced, very narrow sutural carinae extending along anterior 3/5-2/3 of suture (Fig. 9); anterior tergites unmodified; process of tergite VII short and apically acute, in lateral view suberect and stout (Fig. 10), in antero-dorsal

view narrow; median lobe of aedeagus approximately 0.28 mm long, with very fine cristal process (Fig. 11).

♀: pronotum approximately as wide as long, posterior margin broadly and weakly convex; elytra without impression and with fine, non-granulose punctation; proximal portion of spermatheca twisted (Fig. 12).

Intraspecific variation: As in other species of the subgenus *Tropogastrosipalia*, the male secondary sexual characters may be nearly or completely absent in small males.

E t y m o l o g y : The specific epithet is the present participle of the Latin verb fodere (to pierce) and alludes to the spine-like shape of the cristal process of the aedeagus.

C o m p a r a t i v e n o t e s : Using the key in ASSING (2009), the species would key out at couplet 107. For a supplement to this key see the comparative notes in the section on *G. pungens*.



Fig. 13: Type locality of *Geostiba fodens* nov.sp. (photo: P. Wunderle).

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : *Geostiba fodens* was discovered in the Davraz Tepe, a mountain range to the southwest of Eğirdir, where the species is probably endemic. The specimens were collected from under stones on a sparsely vegetated slope (Fig. 13) at an altitude of nearly 1700 m, and by breaking porose calcareous stones below a snowfield at an altitude of 1780 m.

***Geostiba (Tropogastrosipalia) pungens* nov.sp. (Figs 14-20)**

T y p e m a t e r i a l : Holotype ♂: "TR [26b] - Isparta, 10 km SE Sütçüler, 1520 m, 37°24'55"N, 31°02'21"E, calcareous slope, stones, 26.IV.2011, V. Assing / Holotypus ♂ *Geostiba pungens* sp. n. det. V. Assing 2011" (cAss). Paratypes: 3♂♂, 8♀♀: same data as holotype (cAss); 13 exs.: same data, but leg. Wunderle (cWun); 3♂♂: same data as holotype, but "[26a] ... sifted" (cAss).

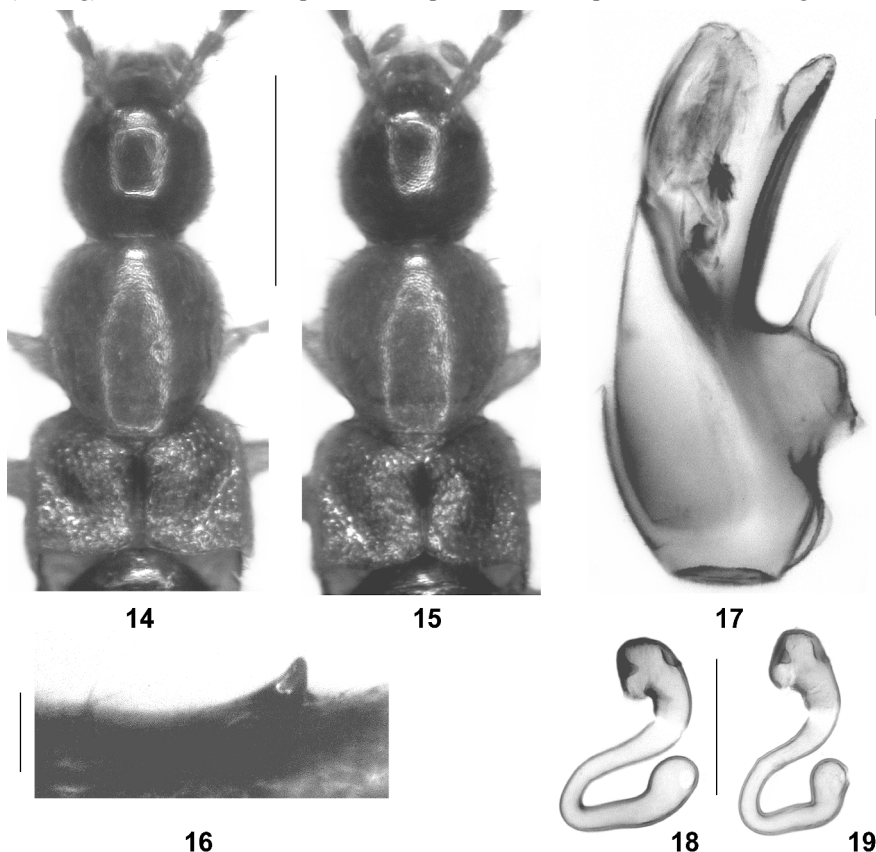
D e s c r i p t i o n : External characters (Figs 14-15) as in *G. fodens*, except as follows: Coloration paler: head dark-brown; pronotum pale-reddish; elytra dark-yellowish; abdomen with segments III-IV reddish and V-VII more or less extensively blackish; antennae dark-brown, with the basal antennomere(s) reddish.

♂ (with fully developed secondary sexual characters): pronotum slightly broader, approximately 1.1 times as wide as long, posterior margin more broadly convex and in the middle indistinctly concave; elytra with deeper, more clear-cut, and more distinctly diagonal impressions (Figs 14-15), otherwise as in *G. fodens*; shape of spine (Fig. 16) on abdominal tergite VII as in *G. fodens*; median lobe of aedeagus approximately 0.24 mm long and with very fine cristal process (Fig. 17).

♀: proximal portion of spermatheca not twisted (Figs 18-19).

Intraspecific variation: The extent of intraspecific variation of the male secondary sexual characters is similar to that of *G. fodens*.

Etymology: The specific epithet is the present participle of the Latin verb *pungere* (to sting) and alludes to the spine-like shape of the cristal process of the aedeagus.



Figs 14-19: *Geostiba pungens* nov.sp. (14: holotype): (14-15) male forebody; (16) male abdominal tergite VII in lateral view; (17) median lobe of aedeagus in lateral view; (18-19) spermatheca. Scale bars: 14-15: 0.5 mm; 16-19: 0.1 mm.

Comparative notes: *Geostiba pungens* is evidently closely allied to *G. fodens*, as is suggested by the similarly modified male pronotum, male elytra, and male abdominal segment VII, as well as by the similar shape of the median lobe of the aedeagus. However, the observed differences in coloration, shape of the male pronotum, the modifications of the male elytra, and the shape of the spermatheca appear to be constant. Also, the type localities of both species are separated by a deep and broad valley, and the Turkish representatives of *Tropogastrosipalia* generally have very restricted distributions. Therefore, the observed differences are attributed to interspecific variation.

In order to account for both *G. fodens* and *G. pungens*, the key in ASSING (2009) is modified as follows:

- 77 ♂: posterior margin of pronotum broadly truncate or (broadly or narrowly) concave in the middle (large ♂♂). (Note that in small ♂♂ of *G. kastamonuensis*, a species with a distinctive cristal process of the median lobe of the aedeagus, the pronotal hind margin is smoothly convex.)78
- ♂: posterior margin of pronotum weakly to distinctly pointed or smoothly convex, not truncate or concave. For one species from central southern Anatolia with enormous sutural carinae and without appreciable sexual dimorphism of the pronotum (*G. lunata*), a second species from Isparta (*G. pungens*) with a very fine cristal process of the aedeagus (Fig. 16), in which the pronotal hind margin is of intermediate and variable condition (Figs 14-15), and a third species (*G. attaleensis*) from the environs of Akseki in eastern Antalya, which may be variable in this respect, follow this alternative91
- 107 ♂: pronotum with posterior margin convex (sometimes very indistinctly concave in the middle). Northern and southwestern Anatolia 107a
- ♂: pronotum with posterior margin (in *G. nemrutica* indistinctly) pointed in the middle. Southern Anatolia (E-Antalya and eastwards)108
- 107a ♂: median lobe of aedeagus with broad dagger-shaped cristal process (figure 21 in ASSING 2009). N-Anatolia: Kastamonu: Hasan Dağı *G. hasanica* ASSING
- ♂: median lobe of aedeagus with very fine and short cristal process. SW-Anatolia: Isparta107b
- 107b Pronotum dark-brown to blackish-brown; abdomen completely blackish or with indistinctly paler abdominal segments III-IV. ♂: pronotum more slender and more narrowly elongated posteriorly, middle of posterior margin strongly convex, not concave in the middle (Fig. 9); median lobe of aedeagus as in Fig. 11. ♀: spermatheca with proximal portion of capsule twisted (Fig. 12). Davraz Tepe *G. fodens* nov.sp.
- Pronotum pale-reddish to reddish-brown; anterior abdominal segments reddish. ♂: pronotum broader and with more broadly convex posterior margin, middle of posterior margin sometimes indistinctly concave (Figs 14-15); median lobe of aedeagus as in Figs 17. ♀: spermatheca with proximal portion of capsule not twisted (Figs 18-19). Kuyucak Dağı *G. pungens* nov.sp.

Distribution and natural history: The type locality is situated to the southeast of Sütçüler in the Kuyucak Dağı. The specimens were sifted from grass roots and collected from under stones on a calcareous, grassy slope (Fig. 20) at an altitude of 1520 m, together with an undescribed species of *Sunius*.



Fig. 20: Type locality of *Geostiba pungens* nov.sp. (photo: P. Wunderle).

***Geostiba (Tropogastrosipalia) aequa* nov.sp.** (Figs 21-25)

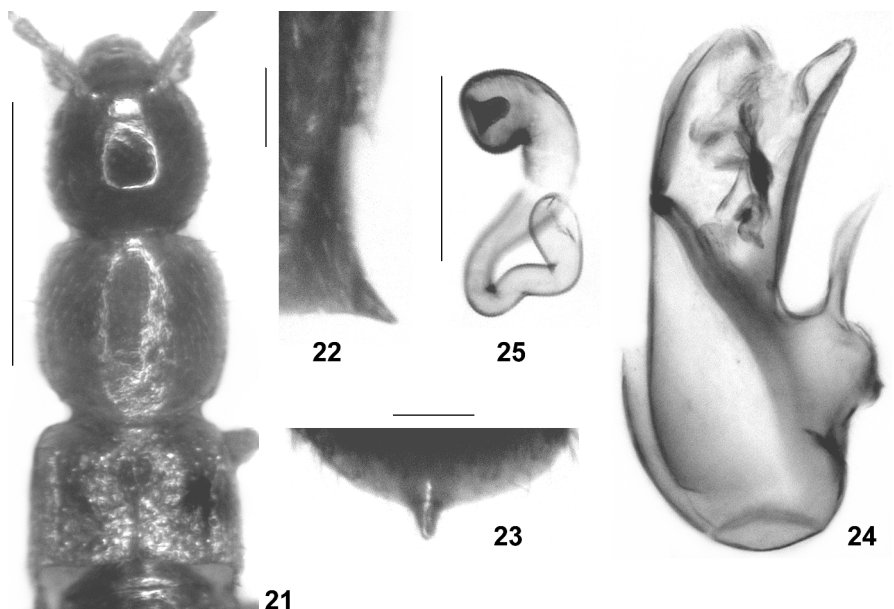
Type material: Holotype ♂: "N37°27'20 E034°38'33, Türkei, Nigde, Madenköy, 1615-1870 m, 17.4.2011, Brachat & Meybohm (11/12) / Holotypus ♂ *Geostiba aequa* sp.n. det. V. Assing 2011" (cAss). **Paratypes:** 3 ♀: same data as holotype (cAss); 1 ♂: "TR - Adana (6), ö. Pozanti → Armutoluğu, 1310 m; 16.IV.2011, N37°26'8; E34°55'03, leg. Meybohm & Brachat" (cAss).

Description: Small species, 2.0-2.6 mm. Coloration: head dark-brown to blackish; pronotum and elytra yellowish-red, distinctly contrasting with the head; abdomen yellowish-red to reddish with segments V-VII more or less extensively infusate; legs yellowish; antennae reddish to pale-brown, with the basal antennomeres reddish-yellow. Head weakly oblong; punctuation sparse and extremely fine, barely noticeable; interstices only with traces of microsculpture and glossy; eyes weakly convex and small, less than half as long as postocular portion in dorsal view (Fig. 21).

Pronotum approximately as wide as long and about 1.2 times as wide as head, without sexual dimorphism (Fig. 21); posterior margin broadly convex; punctuation very fine and barely noticeable; microsculpture more pronounced than that of head.

Elytra (Fig. 21) with distinct sexual dimorphism, approximately half as long as pronotum, or slightly longer.

Abdomen slightly broader than elytra; anterior tergites without sexual dimorphism; punctuation very fine and sparse; interstices with distinct, but shallow microsculpture; posterior margin of tergite VII with or without indistinct rudiment of a palisade fringe.



Figs 21-25: *Geostiba aequa* nov.sp. (21-24: holotype): (21) male forebody; (22) male abdominal tergite VII in lateral view; (23) posterior portion of male abdominal tergite VII in antero-dorsal view; (24) median lobe of aedeagus in lateral view; (25) spermatheca. Scale bars: 21: 0.5 mm; 22-25: 0.1 mm.

♂ (with fully developed secondary sexual characters): elytra with a pair of clusters of 3-5 granula (no carina) near apex of scutellum, lateral margins fold-like and elevated, punctuation distinctly granulose (Fig. 21); abdominal tergite VII with relatively short, suberect, not very stout (lateral view), and apically narrowed (antero-dorsal view) median spine at posterior margin (Figs 22-23); median lobe of aedeagus approximately 0.26 mm long, cristal process rather slender (Fig. 24).

♀: elytra unmodified and with fine punctuation; proximal portion of spermatheca twisted (Fig. 25).

E t y m o l o g y : The specific epithet (Latin, adjective: equal, similar) refers to the absence of a sexual dimorphism of the pronotum, one of the characters separating this species from most geographically close consubgenera.

C o m p a r a t i v e n o t e s : Using the key in ASSING (2009), *G. aequa* would key out at couplets 96-98. In order to accommodate the new species, the key is modified as follows:

- 96 Pronotum without or with weakly pronounced sexual dimorphism (up to 1.15 times as long as wide, posterior margin broadly convex) in large males, posterior margin more or less distinctly convex (Fig. 21; figures 2, 30, 37 in ASSING 2009). Western (three species) and southern Anatolia (one species).....97
- Pronotum with more pronounced sexual dimorphism, either distinctly elongated posteriorly (and covering scutellum) or posterior margin pointed in the middle. Southern Anatolia (Antalya, Mersin).....99

- 97 Small (2.0-2.6 mm) and distinctly bicoloured species from central southern Anatolia (Niğde, Adana). ♂: process of tergite VII shaped as in Figs 22-23; aedeagus with slender cristal process (Fig. 24). ♀: spermatheca as in Fig. 25 *G. aequa* nov.sp.
- Species from western Anatolia. Character combination different 97a
- 97a ♂: process of tergite VII short, stout, and apically obtuse (figures 41-42 in ASSING 2006); aedeagus with larger cristal process (figure 43 in ASSING 2006). Muğla: Oyuklu Dağ (Map 3 in ASSING 2006) *G. renneri* ASSING
- ♂: process of tergite VII long, slender, and apically acute (figures 5, 32 in ASSING 2006). median lobe of aedeagus with smaller and more slender cristal process (figures 8-9, 33 in ASSING 2006). Distribution different 98

Distribution and natural history: The type locality is situated near Maden in the south of Niğde in the northern slopes of the Taurus. Remarkably, one additional male was found some 30 km to the east of this locality, on the other side of a deep valley, in the west of Adana province. Since no morphological differences between the males from both localities could be found, they are attributed to the same species. The specimens from the environs of Maden were sifted from the roots of grass and herbs beneath a bush at an altitude of 1615 m, the male was collected in a mixed cedar and cypress forest at an altitude of 1310 m (MEYBOHM, pers. comm.).

***Geostiba (Tropogastrosipalia) burdurica* nov.sp.** (Figs 26-32)

Type material: Holotype ♂: "TR [8], Burdur, W Çeltikçi Geç., 21 km SE Burdur, 37°33'37"N, 30°23'49"E, 1419 m, Zypr., Eichen, 16.II.2011, M. Schülke / Holotypus ♂ *Geostiba burdurica* sp. n. det. V. Assing 2011" (cAss). Paratypes: 6♂♂, 5♀♀: same data as holotype (cSch, cAss).

Description: Body length 2.2-3.1 mm. Coloration: head dark-brown to blackish; pronotum and elytra reddish, distinctly contrasting with the head; abdomen reddish-brown, with segments VI-VII or V-VII more or less extensively infuscate; legs yellowish; antennae reddish to brown, with the basal antennomeres pale-reddish.

Head approximately as wide as long; punctation sparse and extremely fine, barely noticeable; interstices with shallow microsculpture; eyes weakly convex and approximately half as long as postocular portion in dorsal view (Fig. 26).

Pronotum with weakly pronounced sexual dimorphism; punctation very fine and barely noticeable; microsculpture more pronounced than that of head.

Elytra with moderately pronounced sexual dimorphism, approximately half as long as pronotum.

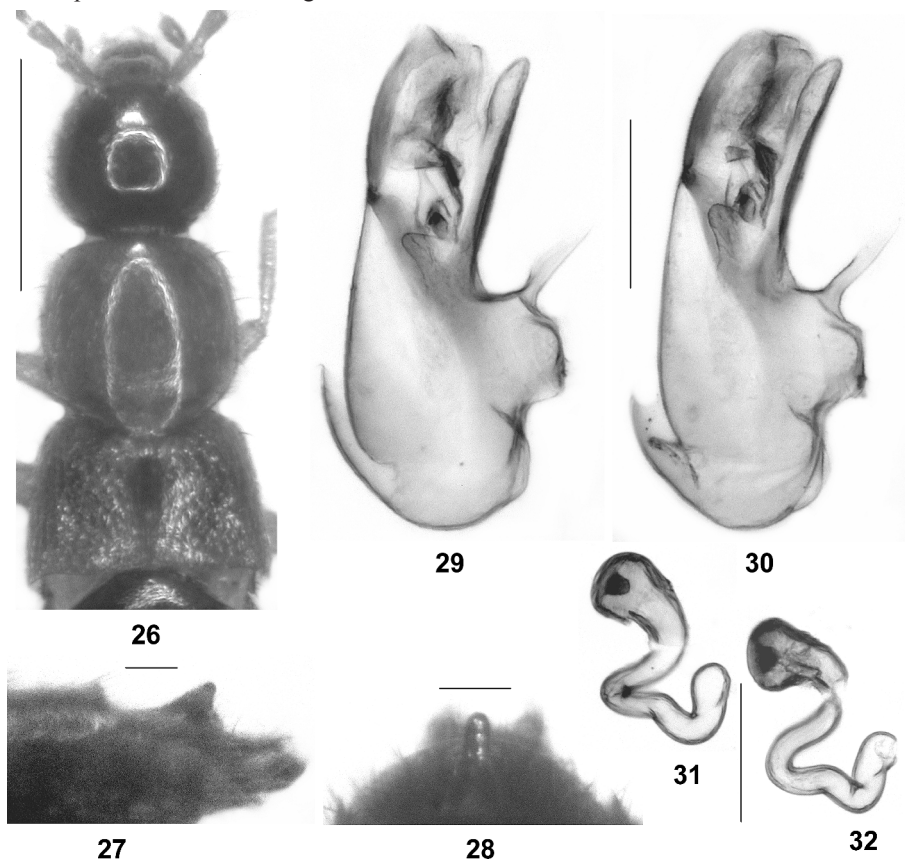
Abdomen slightly broader than elytra; tergites III-IV and VII with sexual dimorphism; punctation fine to moderately fine, moderately dense on anterior tergites and very sparse on posterior tergites; interstices with distinct, but shallow microsculpture; posterior margin of tergite VII usually with, rarely without very narrow rudiment of a palisade fringe.

♂ (with fully developed secondary sexual characters): pronotum weakly oblong, approximately 1.05 times as long as broad, posterior margin strongly convex in the middle; elytra slightly less than half as long as pronotum, very shallowly impressed at most, with moderately granulose punctation, and with moderately pronounced sutural carinae extending along anterior 2/3 of suture (Fig. 26); abdominal tergites II and III with median tubercles, both of them situated close to the anterior tergal impressions; process of tergite VII broadly triangular in lateral view (Fig. 27), parallel, convex (cross-section), and apically rounded in antero-dorsal view (Fig. 28); median lobe of aedeagus approximately

0.28 mm long, cristal process narrow and obliquely projecting away from ventral process in lateral view (Figs 29-30).

♀: pronotum weakly transverse; elytra unmodified and slightly more than half as long as pronotum; spermatheca as in Figs 31-32.

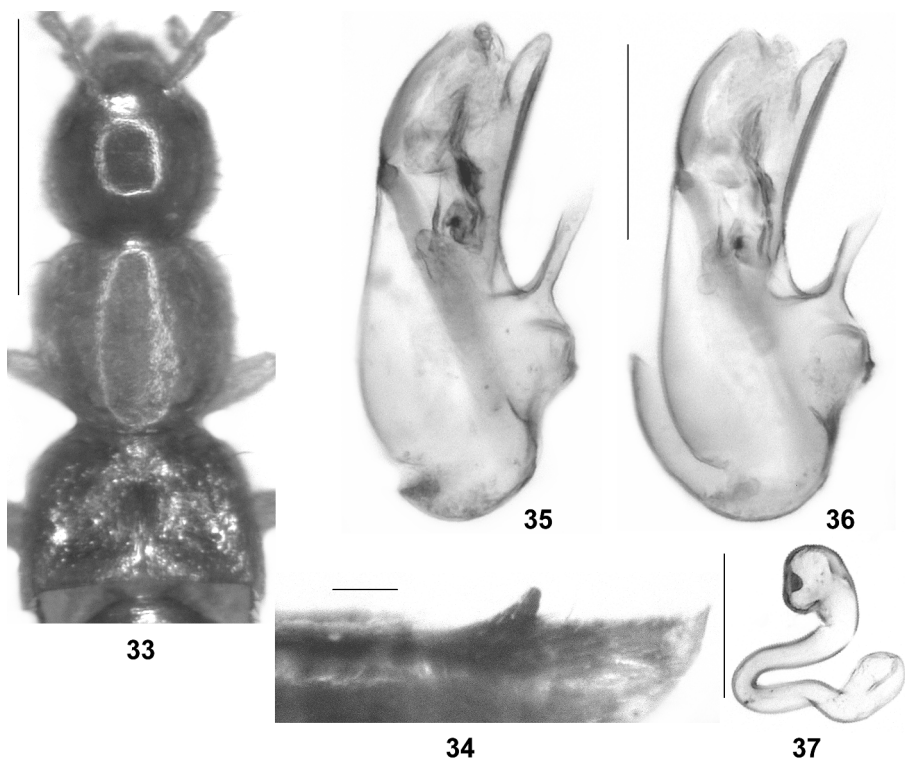
E t y m o l o g y : The specific epithet is a latinized adjective derived from the name of the province where the type locality is situated. It refers to the fact that the species is the first representative of the subgenus to become known from Burdur.



Figs 26-32: *Geostiba burdurica* nov.sp. (26, 29: holotype): (26) male forebody; (27) male abdominal apex in lateral view; (28) posterior portion of male abdominal tergite VII in antero-dorsal view; (29-30) median lobe of aedeagus in lateral view; (31-32) spermatheca. Scale bars: 26: 0.5 mm; 27-32: 0.1 mm.

Comparative notes : Using the key in ASSING (2009), *G. burdurica* would key out at couplets 91-93. For a supplement to this key, which accounts for the new species, see the following section on *G. akiana*.

Distribution and natural history : The type locality is situated in the Katrancık Dağı to the southeast of Burdur in Burdur province. The specimens were collected in a cypress forest with oak undergrowth at an altitude of approximately 1420 m, by sifting litter and grass roots near snow (SCHÜLKE, pers. comm).



Figs 33-37: *Geostiba akiana* nov.sp. (33-35: holotype): (33) male forebody; (34) male abdominal apex in lateral view; (34-35) median lobe of aedeagus in lateral view; (36) spermatheca. Scale bars: 33: 0.5 mm; 34-37: 0.1 mm.

***Geostiba (Tropogastrosipalia) akiana* nov.sp.** (Figs 33-37)

Type material: Holotype ♂: "TR [10], Antalya, Akdağlar, 11 km S Kızılcadağ, 36°55'54"N, 29°59'24"E, 1633 m, Polster, 16.II.2011, M. Schülke / Holotypus ♂ *Geostiba akiana* sp. n. det. V. Assing 2011" (cAss). Paratypes: 3 ♂ ♂, 5 ♀ ♀: same data as holotype (cSch, cAss).

Description: Body length 2.4-2.7 mm. Coloration: head reddish to dark-brown; pronotum and elytra pale-reddish, often not distinctly contrasting with the head; abdomen reddish, with segments VI-VIII or V-VII more or less extensively infuscate; legs yellowish; antennae pale-brown, with the basal two antennomeres yellow to reddish-yellow. Head approximately as wide as long; punctation sparse and extremely fine, barely noticeable; interstices with very shallow microsculpture, glossy; eyes weakly convex and approximately half as long as postocular portion in dorsal view (Fig. 33).

Pronotum with barely noticeable sexual dimorphism; punctation extremely fine; microsculpture shallow, but somewhat more pronounced than that of head.

Elytra with rather weakly pronounced sexual dimorphism, approximately half as long as pronotum.

Abdomen slightly broader than elytra; tergites III-IV, and VII with sexual dimorphism; punctation fine and sparse; interstices with distinct, but shallow microsculpture; posterior margin of tergite VII with very narrow rudiment of a palisade fringe.

♂ (with fully developed secondary sexual characters): pronotum approximately as long as broad, posterior margin broadly convex; elytra shallowly and more or less extensively impressed, with weakly granulose punctation, and with short and weakly elevated sutural carinae usually extending along anterior half of suture (Fig. 33), rarely extending beyond middle; abdominal tergites II and III with smooth median tubercles, both of them situated close to the anterior tergal impressions; process of tergite VII stout and rather short in lateral view (Fig. 34), parallel and apically rounded in antero-dorsal view; median lobe of aedeagus approximately 0.26 mm long, cristal process narrow and weakly projecting away from ventral process in lateral view (Figs 35-36).

♀: pronotum weakly transverse, posterior margin slightly more weakly convex than in ♂; elytra unmodified; spermatheca as in Fig. 37.

E t y m o l o g y : The specific epithet is a latinized adjective derived from the name of the mountain range where the type locality is situated.

C o m p a r a t i v e n o t e s : Using the key in ASSING (2009), *G. akiana* would key out at couplets 91-93. In order to account for both *G. burdurica* and *G. akiana*, the key is modified as follows:

- 91 ♂: abdominal tergites III-IV or III-V each with median tubercle.....91a
 - ♂: abdominal tergites III-V unmodified; for three species from Hatay, Gaziantep and Kahramanmaraş with very indistinct and ill-delimited elevations on tergite(s) (III-)IV follow this alternative94
 91a Species from southwestern Anatolia (W-Antalya, Burdur)91b
 - Species from northeastern and central southern Anatolia (Rize, Mersin).....92
 91b On average slightly larger species, 2.2-3.1. Head dark-brown to blackish, always much darker than the reddish pronotum and elytra. ♂: pronotum weakly oblong, posterior margin strongly convex in the middle (Fig. 26); elytra very shallowly impressed at most, with more pronounced sutural carinae extending along anterior 2/3 of suture (Fig. 26); process of tergite VII more massive (Figs 27-28); median lobe of aedeagus larger, approximately 0.28 mm long, cristal process obliquely projecting away from ventral process (Figs 29-30). ♀: spermatheca shaped as in Figs 31-32. Burdur: Katrancık Dağı (to the southeast of Burdur).....*G. burdurica* nov.sp.
 - Smaller species, body length 2.4-2.7 mm. Head reddish to dark-brown, often of similar coloration as the pale-reddish pronotum and elytra. ♂: pronotum with barely noticeable sexual dimorphism, as broad as long, posterior margin broadly convex (Fig. 33); elytra shallowly and more or less extensively impressed, with less pronounced and shorter sutural carinae (Fig. 33); process of tergite VII less massive (Fig. 34); median lobe of aedeagus smaller, approximately 0.26 mm long, cristal process weakly projecting away from ventral process in lateral view (Figs 35-36). ♀: spermatheca of different shape (Fig. 37). Western Antalya: northern outliers of the Ak Dağlar*G. akiana* nov.sp.

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in the northern outliers of the Ak Dağlar, western Antalya. The specimens were collected in a montane steppe at an altitude of approximately 1630 m, by sifting the litter from cushion plants, partly near snow (SCHÜLKE, pers. comm).

On the subgenera *Sibiota* CASEY 1906 and *Typhlusida* CASEY 1906

Sibiota CASEY 1906: 350; type species: *Sibiota impressula* CASEY 1906.

Ditroposipalia SCHEERPELTZ 1951: 172; type species *Sipalia bidens* BAUDI DI SELVE 1870; synonymy by GUSAROV (2002).

Callosipalia COIFFAIT 1968: 104; type species: *Sipalia cassagnai* COIFFAIT 1968; synonymy by ASSING (1999).

Tetrapogeostiba PACE 1984: 215; type species: *Geostiba loebliana* PACE 1984; synonymy by ASSING (2004).

Typhlusida CASEY 1906: 263; type species: *Homalota flava* KRAATZ 1856; **nov.syn.**

Tylosipalia SCHEERPELTZ 1951: 174; type species: *Homalota flava* KRAATZ 1856; placed in synonymy with *Typhlusida* by LOHSE (1989).

C o m m e n t : The subgenus *Typhlusida* previously included only two European species, the type species *Geostiba flava* (KRAATZ 1856) from the eastern Alps and *G. rhilensis* (RAMBOUSEK 1924) from Bulgaria. Based on the modifications of the male abdominal tergite VII, *Geostiba uniplicata* (see the following section) would have to be attributed to this subgenus, too. *Typhlusida* is defined by the presence of a median oblong elevation on the male tergite VII.

The current subgeneric concept of *Geostiba*, which was proposed by SCHEERPELTZ (1951) primarily based on the male secondary sexual characters, has been proved artificial on various occasions (e.g., ASSING 2005). As can be inferred from both morphological and zoogeographic evidence, it seems most unlikely that *G. flava*, *G. rhilensis*, and *G. uniplicata* should form a monophylum. First, the distribution of this subgenus would be remarkably discontinuous (eastern Alps, western Bulgaria, West Caucasus). Second, the external characters, particularly the modifications of the male elytra, and the morphology of the primary sexual characters is highly similar to that of *Sibiota* species. Moreover, the similarly derived morphology of the spermatheca of *G. plicata*, the similar morphology of the aedeagus, and the geographically close distributions suggest that *G. uniplicata* is closely allied to *G. krzysztofi* of the subgenus *Sibiota*. Consequently, there is little doubt that the single oblong elevation on the male tergite VII is merely the result of a secondary fusion of the two carinae that are found in most *Sibiota* species and an autapomorphy of *G. uniplicata*, *G. flava*, and *G. rhilensis*. It follows that these species should be attributed to the same subgenus as those previously included in *Sibiota*.

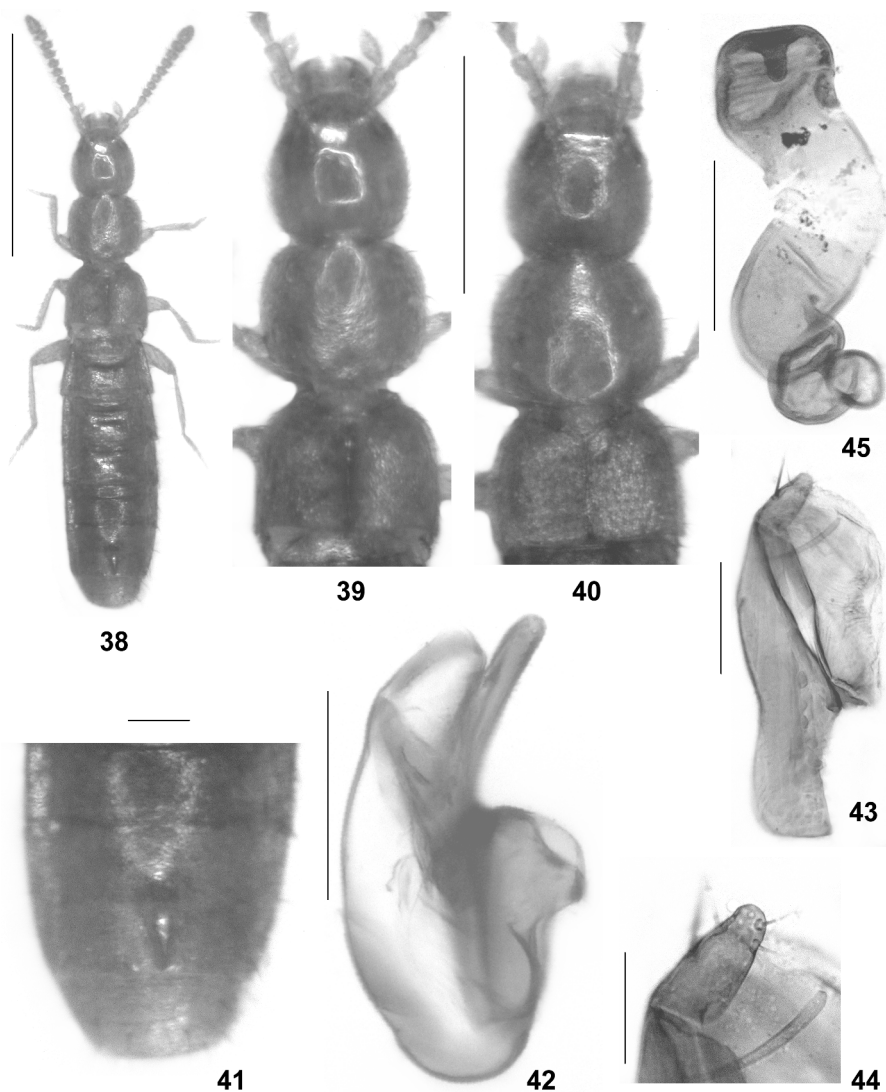
Both *Sibiota* and *Typhlusida* were described in the same work with the same publication date (CASEY 1906). Since the former includes nearly 80 species in the Palearctic region alone (SMETANA 2004, ASSING 2009), plus 14 species in the Nearctic (GUSAROV 2002), as opposed to merely two in the latter, *Sibiota* is designated as the senior name and *Typhlusida* placed in its synonymy. It appears likely that, once the species of the West Mediterranean are revised, more subgenera will eventually have to be synonymized, among them *Sipalotricha* SCHEERPELTZ 1931, which is constituted mainly by one evidently plesiomorphic character, the absence of modifications of the male abdominal apex.

***Geostiba (Sibiota) uniplicata* nov.sp. (Figs 38-46)**

Type material: Holotype ♂: "RU [8], W-Caucasus, 15 km ENE Krasnaya Polyana, 2040 m, 43°43'06"N, 40°22'55"E, 16.VII.2011, V. Assing / Holotypus ♂ *Geostiba uniplicata* sp.n. det. V. Assing 2011" (cAss). **Paratypes:** 1 ♂, 1 ♀: same data as holotype (cAss).

Description: Body length 2.2-2.4 mm. Habitus as in Fig. 38. Coloration: whole body dark-yellowish.

Head approximately as broad as long (Figs 39-40); punctuation extremely fine, barely noticeable; interstices with very shallow microsculpture and glossy. Eyes not projecting from lateral contours of head, small, 1/5-1/4 as long as postocular region in dorsal view,



Figs 38-45: *Geostiba uniplicata* nov.sp. (38-39, 41-44: holotype): (38) male habitus; (39) male forebody; (40) female forebody; (41) male abdominal tergites V-VIII in dorsal view; (42) median lobe of aedeagus in lateral view; (43) paramere; (44) apical lobe of paramere; (45) spermatheca. Scale bars: 38: 1.0 mm; 39-40: 0.5 mm; 41-43: 0.1 mm; 44-45: 0.05 mm.

composed of approximately five ommatidia, and with pigmentation. Antenna distinctly and gradually incrassate apically, antennomere X approximately twice as wide as long. Pronotum 1.10-1.15 times as wide as long and 1.15-1.20 times as wide as head (Figs 39-40), without sexual dimorphism; punctation extremely fine, barely noticeable; interstices with distinct microreticulation.

Elytra with pronounced sexual dimorphism, 0.65-0.70 times as long as pronotum (Figs 39-40); interstices with pronounced microreticulation and almost matt. Hind wings absent.

Abdomen wider than elytra; punctation very fine and sparse, barely noticeable; interstices with shallow microreticulation; tergite VII with sexual dimorphism; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII broadly convex in both sexes.

♂: elytra with suture forming a sharp carina extending from apex of scutellum to posterior margin, disc shallowly and extensively impressed; abdominal tergite VII with distinctly elevated, posteriorly acute, dorsally flattened and smooth, oblong median tubercle in posterior half (Fig. 41); sternite VIII broadly convex; median lobe of aedeagus approximately 0.23 mm long, internal sac without spines (Fig. 42); paramere with moderately slender apical lobe with one long and several shorter setae (Figs 43-44).

♀: elytra without impressions and carina, with pronounced microreticulation; posterior margin of sternite VIII weakly convex, without distinct concavity in the middle; spermatheca stout, proximal portion of capsule of helicoid shape (Fig. 45).

E t y m o l o g y : The specific epithet (Latin, adjective: with one fold) alludes to the presence of only one tubercle on the male abdominal tergite VII.

C o m p a r a t i v e n o t e s : *Geostiba uniplicata* is distinguished from the geographically close *G. krzysztofi*, with which it shares a similar morphology of the spermatheca, by numerous characters, particularly its slightly smaller size and paler coloration, the more pronounced microsculpture of the pronotum and the elytra, the narrower, sharper, and more elevated sutural carina on the male elytra, the completely different modifications of the male tergite VII, the shape of the male tergite VIII (*G. krzysztofi*: posterior margin concave in the middle), and the different morphology of the primary sexual characters. For illustrations of *G. krzysztofi* see ASSING (2005). In the key in ASSING (2009), *G. uniplicata* would key out at couplets 133-134 together with *G. flava* and *G. rhilensis*. In order to account for the new species, the key is modified as follows:

- | | |
|------|--|
| 133 | Coloration of body usually more or less yellowish to yellowish-red. ♂: tergite VII with distinct smooth, broad, oblong median elevation. Subgenus <i>Sibiota</i> (partim).... 134 |
| - | ♂ tergite VII unmodified or with small subcircular median tubercle near posterior margin 135 |
| 134 | ♂: elytra on either side of suture with broader, long oblique elevation; abdominal tergite VII in posterior half with less well-defined smaller elevation or tubercle; median lobe of aedeagus and apical lobe of paramere as illustrated by PACE (1983: figures 45, 46, 48). ♀: spermatheca with long and slender duct (PACE 1983: figure 47). Bulgaria (ASSING 2005: map 11) <i>G. rhilensis</i> (RAMBOUSEK) |
| - | ♂: elytra with suture forming a narrow carina; abdominal tergite VII with larger, more strongly elevated, and more well-defined oblong tubercle. ♀: spermatheca with shorter duct. Distribution different 134a |
| 134a | Elytra with pronounced microreticulation and almost matt. ♂: elytral carina sharper and more strongly elevated (Fig. 39); abdominal tergite VII in posterior half with shorter tubercle; median lobe of aedeagus and apical lobe of paramere as in Figs 42-44. ♀: spermatheca conspicuously stout (Fig. 45). West Caucasus: Psheashkha range <i>G. uniplicata</i> nov.sp. |

- Elytra with shallow microreticulation and somewhat glossy. ♂: elytral carina less sharp and less strongly elevated; abdominal tergite VII with larger, more strongly elevated, and more well-defined oblong tubercle; aedeagus as illustrated by ASSING (2000: figures 1-3). ♀: spermatheca with shorter duct (ASSING 2000: figures 4-5). Southeastern Austria, Slovenia..... *G. flava* (KRAATZ)

Distribution and natural history: The type locality is situated in the Psheashkha range to the east northeast of Krasnaya Polyana in the West Caucasus. The specimens were sifted from moist leaf litter of a subalpine birch and maple forest at an altitude of 2040 m (Fig. 46).

***Geostiba (Sibiota) sultanica* ASSING 2008**

Material examined: Turkey: 1 ♀, Afyon, Sultan Dağları, 15 km SE Çay, 38°32'N, 31°11'E, 1430 m, oak forest, litter and bark sifted, 18.IV.2011, leg. Assing (cAss); 1 ♂, Konya, Sultan Dağları, NW Dereçine, 38°29'N, 31°15'E, 1320 m, oak forest, litter sifted, 21.IV.2011, leg. Wunderle (cWun).

Geostiba sultanica is endemic to the Sultan Dağları (ASSING 2008).



Fig. 46: Type locality of *Geostiba uniplicata* nov.sp.

***Geostiba (Sibiota) krzysztofi* (ROUBAL 1913)**

Material examined: Russia: 1 ex., W-Caucasus, Karachayevo-Cherkesskaya Respublika, 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); 9 exs., 9 km SW Teberda, Teberdinski range, Baduk river valley, 43°23'N, 41°40'E, 2000 m, subalpine forest (maple, birch, with rhododendron) near lakeshore, litter sifted, 26.VII.2011, leg. Assing & Solodovnikov (cAss); 4 exs., 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); 3 exs., 9 km SW Teberda, Teberdinski range, Baduk river valley, 43°23'N, 41°40'E, 2000 m, subalpine forest (birch, maple), leaf litter between large rocks sifted, 27.VII.2011, leg. Assing (cAss); 1 ex., same data, but spruce-fir-beech forest with rhododendron, leaf litter sifted, leg. Solodovnikov (ZMUC).

This species has become known only from the environs of Teberda in Karachayevo-Cherkessia, northwestern Caucasus (ASSING 2005).

***Geostiba (Sibiota) convergens* nov.sp.** (Figs 47-56)

Type material: Holotype ♂: "RU [4], W-Caucasus, 40 km NNE Sochi, S Mt. Fisht, 1650 m, forest litter, 43°55'14"N, 39°51'26"E, 12.VII.2011, V. Assing / Holotypus ♂ *Geostiba convergens* sp.n. det. V. Assing 2011" (cAss). **Paratypes:** 2 ♀♀: same data as holotype (cAss).

Description: Body length 2.4-2.7 mm. Habitus as in Fig. 47. Coloration: body reddish, with the abdomen occasionally slightly darker and the appendages yellowish to dark-yellowish.

Head weakly oblong (Figs 48-49); punctation extremely fine, barely noticeable; interstices with very shallow microreticulation. Eyes very small, but with pigmentation and composed of about 5-10 ommatidia, approximately 0.20-0.25 times as long as postocular region in dorsal view. Antenna distinctly and gradually incrassate apically, antennomere X almost twice as wide as long.

Pronotum approximately 1.1 times as wide as long and 1.2 times as wide as head (Fig. 23), with weakly pronounced sexual dimorphism; interstices with distinct microreticulation.

Elytra with pronounced sexual dimorphism, 0.60-0.65 times as long as pronotum (Figs 48-49). Hind wings absent.

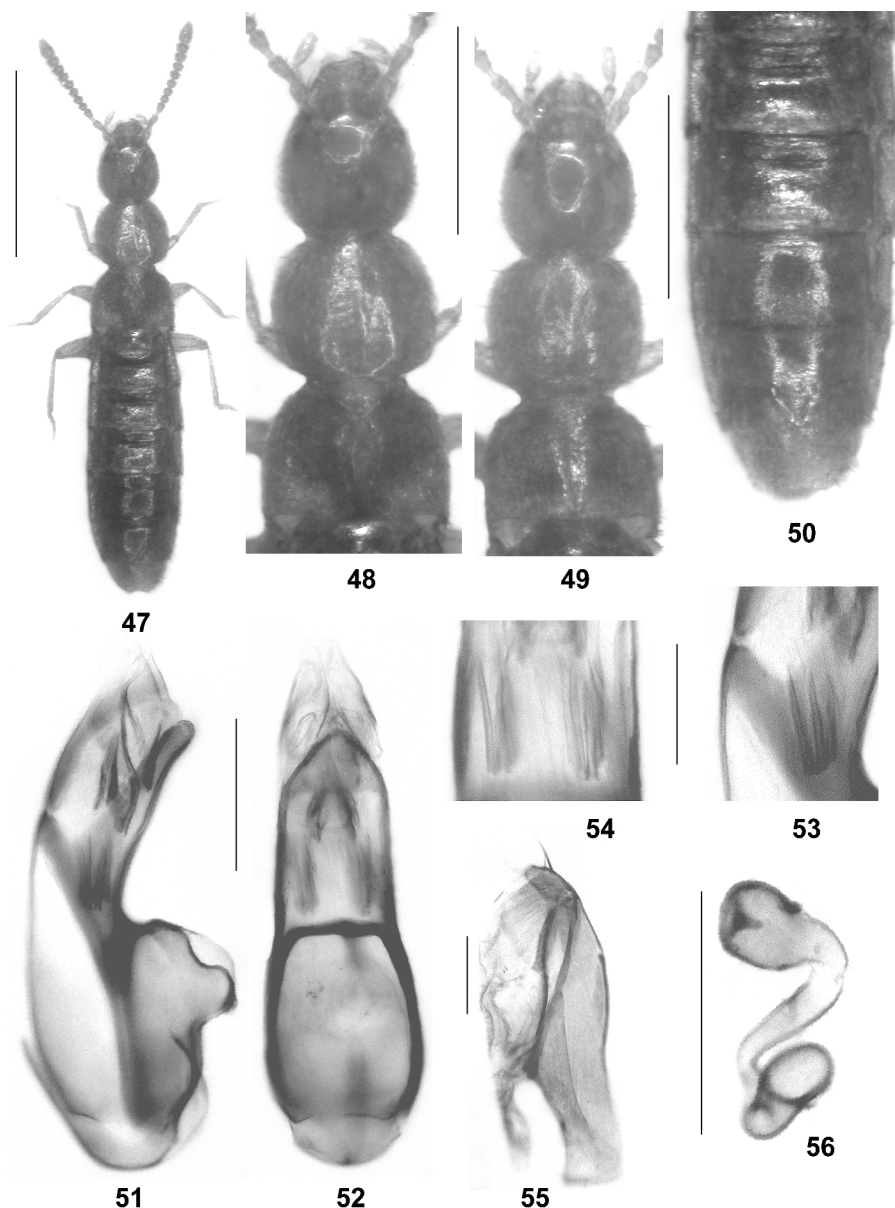
Abdomen wider than elytra; punctation very fine and sparse, barely noticeable; interstices with distinct microreticulation and only subdued shine; tergite VII with sexual dimorphism; posterior margin of tergite VII without palisade fringe.

♂: pronotum with moderately coarse, but rather sparse punctation, on either side of midline with shallow oblong impressions; elytra on either side of suture with pronounced, curved, and posteriorly convergent elevations, disc extensively, but shallowly impressed, punctation fine and non-granulose; abdominal tergite VII with posteriorly convergent carinae forming a "V" in posterior half (Fig. 50); posterior margin of tergite VIII distinctly concave in the middle; posterior margin of sternite VIII broadly convex; median lobe of aedeagus approximately 0.3 mm long, with pronounced crista apicalis and crista proximalis (Figs 51-52), and with pair of clusters of approximately five long semi-transparent spines in internal sac (Figs 53-54); paramere with relatively stout apical lobe (Fig. 55).

♀: pronotum with barely noticeable impressions on either side of midline and with fine punctation; elytra with very shallow impressions, but without elevations on either side of suture (Fig. 49); posterior margins of tergite VIII and sternite VIII convex; spermatheca shaped as in Fig. 56.

Etymology: The specific epithet (Latin, present participle) alludes to the posterior convergent elevations on the male elytra and the posteriorly convergent carinae on the male tergite VII.

Comparative notes: In the key in ASSING (2009), the species would key out at couplet 120. In order to account for the new species, the key is modified as follows:



Figs 47-56: *Geostiba convergens* nov.sp. (47-55: holotype): (47) male habitus; (48) male forebody; (49) female forebody; (50) male abdomen in dorsal view; (51-52) median lobe of aedeagus in lateral and in ventral view; (53) median portion of median lobe in lateral view; (54) median portion of median lobe in ventral view; (55) paramere; (56) spermatheca. Scale bars: 47: 1.0 mm; 48-50: 0.5 mm; 51-52, 55-56: 0.1 mm; 53-54: 0.05 mm.

- 120 Species from the Caucasus minor in Georgia. ♂: sexual characters unknown. ♀: spermatheca as in PACE (1996: figure 165)..... *G. zerchei* PACE
- Species from the main Caucasus range, Russia..... 120a
- 120a ♂: pronotum without impressions on either side of midline; elytra with the sutural elevations narrower and contiguous throughout their length (ASSING 2005: figure 194); carinae in posterior half of tergite VII posteriorly not contiguous, separated by a distance of approximately the width of one carina (ASSING 2005: figure 196); tergite VIII posteriorly broadly and more deeply concave (ASSING 2005: figure 197); median lobe of aedeagus and apical lobe of paramere as in ASSING (2005: figures 198-199). ♀: spermatheca with short helicoid duct (ASSING 2005: figure 201). Karachayevo-Cherkesskaya Respublika: environs of Teberda *G. krzysztofi* (ROUBAL)
- ♂: pronotum with shallow oblong impressions on either side of midline; elytra with massive elevations on either side of suture, these elevations curved, distinctly separated anteriorly and converging posteriorly (Fig. 48); carinae in posterior half of tergite VII strongly converging and contiguous posteriorly, forming a "V" (Fig. 50); posterior margin of tergite VIII less broadly and less deeply concave in the middle; median lobe of aedeagus with less pronounced crista proximalis and differently shaped crista apicalis (Figs 51-52). ♀: spermatheca of completely different shape (Fig. 56). Southern slopes of Mt. Fisht region..... *G. convergens* nov.sp.

Distribution and natural history: The type locality is situated to the south of Mt. Fisht in the border region between Adygea Respublika and Krasnodarskiy Kray, West Caucasus. The specimens were sifted from leaf litter and dead wood in a moist beech forest with scattered fir undergrowth at an altitude of 1650 m.

***Geostiba (Sipalotricha) lucens* (BENICK 1970)**

Material examined: Turkey: 2 exs., Adana, 5 km E Kamışlı, 37°32'N, 34°59'E, 1450 m, 26.IV.2011, leg. Brachat & Meybohm (cAss); 1 ex., Adana, 4 km E Kamışlı, 37°33'N, 34°59'E, 1385 m, 26.IV.2011, leg. Brachat & Meybohm (cAss).

Geostiba lucens is one of the most widespread species of the genus in the Eastern Mediterranean, its distribution ranging from Turkey across the Balkans to southeastern Central Europe; for a recent distribution map see ASSING (2006).

***Geostiba (Sipalotricha) rhodiensis* PACE 1983**

Material examined: Turkey: 1♂, Burdur, 17 km SE Burdur, N Çeltikçi geçidi, 37°36'N, 30°24'E, 1260 m, oak litter and moss sifted, 16.II.2011, leg. Schülke (cSch); 3 exs., Antalya, 33 km NW Alanya, 36°46'N, 31°45'E, 250 m, stream valley, litter sifted, 18.II.2011, leg. Schülke (cSch, cAss); 2 exs., Adana, SW Hasandede geçidi, 37°30'N, 35°23'E, 1230 m, 19.IV.2011, leg. Brachat & Meybohm (cAss); 42 exs., Adana, Fekke, 21 km to Mansurlu, 37°51'N, 35°46'E, 965 m, 22.IV.2011, leg. Brachat & Meybohm (cAss).

Geostiba rhodiensis is widespread and common in southern Anatolia and Rhodos. Its distribution is mapped by ASSING (2006). The male from Burdur represents the first record from this province.

Acknowledgements

I am indebted to Volker Brachat (Geretsried) and Heinrich Meybohm (Großhansdorf) for the generous gift of their staphylinid by-catches from Turkey, to Michael Schülke (Berlin) for making his

material from Turkey available to me and for the gift of the holotypes of *G. burdurica* and *G. akiana*, as well as to Alexey Solodovnikov (ZMUC) for organizing a field trip to the West Caucasus with admirable perfection. Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Acht Arten der Gattung *Geostiba* THOMSON aus der Türkei und dem Westkaukasus werden beschrieben und abgebildet: *Geostiba (Tropogastrosipalia) perfodens* nov.sp. (Türkei: Isparta), *G. (T.) fodens* nov.sp. (Türkei: Isparta), *G. (T.) pungens* nov.sp. (Türkei: Isparta), *G. (T.) aequa* nov.sp. (Turkey: Niğde, Adana), *G. (T.) burdurica* nov.sp. (Turkey: Burdur), *G. (T.) akiana* nov.sp. (Türkei: Antalya), *G. (Sibiota) uniplicata* nov.sp. (Westkaukasus), and *G. (S.) convergens* nov.sp. (Westkaukasus). Ein Untergattungsname wird synonymisiert: *Sibiota* CASEY 1906 = *Typhlusida* CASEY 1906, nov.syn. Für sechs Arten werden weitere Nachweise aus der Türkei und dem Kaukasus gemeldet. Eine kürzlich publizierte Bestimmungstabelle der *Geostiba*-Arten des östlichen Mittelmeerraums, der Kaukasusregion und Irans wird ergänzt. Einschließlich der neu beschriebenen Arten sind derzeit 181 Arten in vier Untergattungen aus diesem Gebiet bekannt.

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