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### A revision of the species of *Geostiba* THOMSON of the Eastern Mediterranean. VI. (Coleoptera: Staphylinidae, Aleocharinae)

#### V. Assing

A b s t r a c t : Based on a revision of types and additional material, three new species are described, illustrated, and distinguished from similar congeners: Geostiba (Tropogastrosipalia) hamata sp. n. (Turkey: Antakya), G. (T.) cingarae sp. n. (Turkey: Muğla), and G. (Sipalotricha) beydaghensis sp. n. (Turkey: Antalya). All the species previously attributed to the subgenus Geostiba, except for G. circellaris (GRAVENHORST) and *G. sororcula* ASSING, are attributed to the subgenus *Tropogastrosipalia* SCHEERPELTZ 1951, which is revalidated. The following established: Tropogastrosipalia SCHEERPELTZ 1951 synonymies are = Chondrogastrosipalia SCHEERPELTZ 1951; Geostiba oertzeni (EPPELSHEIM 1888) = G. oertzeni scyrosensis PACE 2002, syn. n., = G. oertzeni cnidia PACE 2002, syn. n., G. rizensis PACE 1983 = G. trapezusensis PACE 2002, syn. n., and G. rhodiensis PACE 1983 = G. besuchetiana PACE 1983, syn. n. The male sexual characters of G. attaleensis PACE and the female sexual characters of G. mostarensis PACE are described for the first time. Numerous new records of *Geostiba* species are presented from the Eastern Mediterranean. A key to the species of *Geostiba* THOMSON and *Paraleptusa* PEYERIMHOFF of Greece, Cyprus, Turkey, and the Middle East is presented. The distributions of G. rhodiensis, G. lucens (BENICK), and G. beydaghensis are mapped.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Geostiba, Paraleptusa*, *Tropimenelytron*, Palaearctic region, Turkey, Greece, Middle East, taxonomy, revision, new species, new synonyms, key to species.

#### 1. Introduction

The Geostiba species of the southern Balkans and Turkey have been revised in several steps (ASSING 1999, 2000a, 2000b, 2001a, 2001b). In the meantime, more material has been collected during recent field trips to the region. In addition, the collection of H. Franz is now deposited in the Naturhistorisches Museum Wien, so that it was possible to examine some previously inaccessible types. Moreover, four papers directly or indirectly treating the *Geostiba* species of the region have been published (GUSAROV 2002; PACE 2001, 2002; ZERCHE 2002), resulting in more or less significant taxonomic changes. The subgeneric name *Ditroposipalia* SCHEERPELTZ 1951 is now a synonym of *Sibiota* CASEY 1906 (GUSAROV 2002). The revalidation of *Lioglutosipalia* SCHEERPELTZ by PACE (2001) is unjustified, since it is based only on the (erroneous) assumption that the previous synonymy was established without due examination of types; a list of types and a discussion of the synonymy can be found in ASSING (1999: 879). ZERCHE (2002) reports

a total of 11 species from Bulgaria, two of them (G. circellaris, G. oertzeni) widespread and nine of them either locally endemic or confined to Bulgarian territory.

PACE (2001) collectively synonymized 11 species of *Geostiba* from Greece without providing any arguments whatsoever, without knowing the species involved, let alone studying the relevant types. The eleven species in question (*G. pangeoensis*, *G. siculifera*, *G. falakroensis*, *G. menikioensis*, *G. pauli*, *G. vermionensis*, *G. itiensis*, *G. menalonensis* ("melanonensis"), *G. parnonensis*, *G. zercheana*, *G. acifera*) are here formally revalidated.

PACE (2002) described a total of 24 species and subspecies from the Western Palaearctic. The descriptions of one third of these names are based exclusively on females, although in most species groups of *Geostiba* a reliable identification and interpretation is possible only when the male primary and secondary sexual characters are examined. It is mainly such inadequate descriptions, but also the lack of revisionary and synoptic work that have rendered the *Geostiba* fauna of various regions (especially Italy and the Western Mediterranean) virtually unworkable.

In view of the numerous taxonomic changes affecting the Eastern Mediterranean *Geostiba* fauna, an updated synoptic key to the species of this region - including Greece (continental and islands), Cyprus, Turkey, Lebanon, Israel - is provided at the end of the paper.

#### 2. Material

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

MCVR..... Museo Civico di Storia Naturale, Verona (L. Latella)

MHNG ...... Muséum d'Histoire Naturelle, Genève (G. Cuccodoro)

NHMW ...... Naturhistorisches Museum Wien (H. Schillhammer)

OÖLML ...... Oberösterreichisches Landesmuseum Linz

cAss ..... author's private collection

cNon..... private collection G. Nonveiller, Zemun

cPüt ..... private collection A. Pütz, Eisenhüttenstadt

cRos ...... private collection A. Rose, Oldenburg

#### 3. New species, redescriptions, and new records of *Geostiba* from the Balkans, Anatolia, and the Middle East

Below, new records are commented on only when the known range of distribution is extended or when they are remarkable in other respects.

The subgenus Geostiba is most likely to represent a polyphyletic taxon, a conclusion proposed earlier (ASSING 2001a) and confirmed by subsequent examination of additional species (ASSING 2003); for a discussion of characters and the phylogenetic affiliations see ASSING (2001a, 2003). Consequently, I here propose to revalidate *Tropogastrosipalia* SCHEERPELTZ 1951 (type species: *Sipalia meschniggiana* BERNHAUER 1936) as the subgeneric name to include all the species previously attributed to Geostiba s. str., except for G. circellaris (GRAVENHORST) and G. sororcula ASSING. Consequently,

Chondrogastrosipalia SCHEERPELTZ 1951, another previous synonym of Geostiba s. str. and described in the same paper as *Tropogastrosipalia*, is now a synonym of *Tropogastrosipalia* SCHEERPELTZ.

#### Geostiba (s. str.) sororcula ASSING

Material examined: Turkey: Adahan: 19, Çıldır Göl, 1800m, VI.1977, leg. Schubert (NHMW).

This record must be considered uncertain, since it is based only on a female.

#### Geostiba (Tropogastrosipalia) spizzana (BERNHAUER) Sipalia spizzana BERNHAUER 1931: 240f.

Material examined: Yugoslavia, Montenegro: 1♂, 1♀, Crna Gora, Ulcinj, Valdanos, 11.V.2000, leg. Karaman (cNon); 2♂♂, 1♀, Crna Gora, Rumija Planina, Ostros, 26.IV.1990, leg. Nonveiller (cNon, cAss).

The above specimens were collected near the type locality of G. *spizzana* and compared with the types of that species.

#### Geostiba (Tropogastrosipalia) armata (EPPELSHEIM)

Material examined: Greece: 13, Ipiros, Ioannina, S Vrosina, Zalongo, oak forest, 8.VI.2002, leg. Brachat (cAss).

#### Geostiba (Tropogastrosipalia) pangeoensis ASSING

Material examined: Greece: 18, Kavála, Pangéo, 1600-1700m, 10.VI.2002, leg. Brachat (cAss).

#### Geostiba (Tropogastrosipalia) brachati ASSING

M a t e r i a l e x a m i n e d : Turkey: 1 o, Antalya, W Kemer, S Hisar, 36°44'02N, 30°26'23E, 1120m, litter of *Quercus* and *Carpinus*, 2.IV.2002, leg. Assing (cAss); 1 o, Antalya, Saklikent, 36°50'25N, 30°19'54E, 1905m, grass roots near snow, 18.III.2002, leg. Rose (cRos).

#### Geostiba (Tropogastrosipalia) simulans PACE

M a t e r i a l e x a m i n e d : Turkey: Antakya: 13, 25 km S Senköy, 36°01'58N, 36°07'11E, 914m, under stones, 27.IV.2002, leg. Meybohm (cAss); 13, 25 km S Senköy, 36°01N, 36°07E, 900-930m, 26.-27.IV.2002, leg. Meybohm & Brachat (cAss); 19, 25 km S Senköy, 36°01'11N, 36°07'16E, 901m, sifted *Laurus* litter, 27.IV.2002, leg. Meybohm (cAss).

#### Geostiba (Tropogastrosipalia) attaleensis PACE (Figs. 1-4) Geostiba (s. str.) attaleensis PACE 1983b: 12ff.

Type material examined: <u>holotype</u> q; see ASSING (2000b).

Material examined: Turkey: Antalya: 13, 10km N Akseki, 37°07'37.4"N, 31°50'49.2"E, 1288 m, pasture, 21.III.2002, leg. Rose (cAss).

R e m a r k s: PACE (1983b) described G. attaleensis based on a single female, although the species of this subgenus can be interpreted only when males are available. Consequently, this description is inadequate for a reliable identification and the species would have to remain a doubtful entity at least until males from the type locality are collected. Now a male has become available which was collected not in the type locality itself, but at least in the vicinity. It may or may not be conspecific with the holotype of G. attaleensis, but it seems best to attribute it to that species at least until new evidence becomes available.

R e d e s c r i p t i o n : Of relatively dark coloration: castaneous, with the head and the

preapical abdominal segments infuscate and the elytra light brown. Head and pronotum with some shine, in spite of distinct microsculpture.

Pronotum with pronounced sexual dimorphism: in  $\mathcal{J}$  1.13 times as long as wide, posteriorly rounded, projecting over anterior part of elytra, and covering scutellum (Fig. 1).

Elytra in  $\delta$  with pronounced (i. e. distinctly elevated and relatively wide), but rather short (slightly more than half the length of suture) sutural carinae near apex of scutellum; with extensive shallow transverse impression in posterior half and with impressions along lateral margins, so that the latter appear rather bulging; near posterior angles with obtuse, short, and weakly defined elevations (Fig. 1); puncturation granulose and relatively dense.

Abdomen rather shining, microsculpture of tergites III - VI very shallow or indistinct, that of tergites VII and VIII more distinct.

 $\delta$ : anterior abdominal tergites unmodified; process of tergite VII in antero-dorsal view narrow and in lateral view relatively massive (Figs. 2-3); median lobe of aedeagus with small cristal process (Fig. 4).



Figs. 1-4: Geostiba attaleensis PACE: 1 – forebody; 2, 3 – process of  $\eth$  tergite VII in lateral and in antero-dorsal view; 4 – median lobe of aedeagus in lateral view. Scale bars: 1-3: 0.5 mm; 4: 0.1mm.

C o m p a r a t i v e n o t e s : Geostiba attaleensis as interpreted here is somewhat similar to G. taseliensis ASSING from the surroundings of Anamur, but readily distinguished by the darker coloration, the relatively more massive, more oblong, and posteri-

orly rounded  $\delta$  pronotum (in *G. taseliensis* obtusely pointed), the presence of distinct microsculpture on the pronotum, the modifications of the  $\delta$  elytra (more pronounced sutural folds near the scutellum, absence of sharp folds near posterior external angles, distinctly denser puncturation), the narrower (antero-dorsal view) and stouter (lateral view) process at the hind margin of the  $\delta$  tergite VII, and the even smaller and less dagger-shaped cristal process of the median lobe of the aedeagus.

D is tribution and bionomics: Geostiba attaleensis is probably endemic in the area to the north and northwest of Alanya, as can be inferred from the restricted distributions of the other species of the subgenus. The holotype was found at an altitude of only 200 m, which is quite remarkable considering that species of *Tropogastrosipalia* usually occur at higher elevations.

#### Geostiba (Tropogastrosipalia) hamata sp. n. (Figs. 5-9)

H o I o t y p e  $\sigma$ : TR - Antakya, 13, 803m, Iskenderun, Sogukoluk, sifted and under stones, 36°29'30N, 36°09'50E, 29.IV.2002, Meybohm / Holotypus  $\sigma$  *Geostiba hamata* sp. n. det. V. Assing 2002 (cAss). P a r a t y p e  $\sigma$ : same data as holotype (cAss).

D e s c r i p t i o n : 2.6 - 2.8 mm. Coloration: castaneous, with the head and the preapical abdominal segments infuscate. Head and pronotum shallow, but distinct micro-reticulation. Eyes relatively small, in dorsal view less than half the length of postgenae (Figs. 5-6).

Pronotum in  $\delta$  1.05 - 1.10 times as wide as long and with broadly and weakly convex posterior margin (Fig. 5), apparently without or, at most, with very indistinct sexual dimorphism.

Elytra in  $\delta$  with short strongly elevated sutural carinae of subtriangular shape (lateral view) (Fig. 6); without impressions or fold; puncturation rather sparse, fine, and not granulose (Fig. 5).

Abdomen rather shining, microsculpture of tergites III - VI very shallow or indistinct, that of tergites VII and VIII more distinct.

 $\delta$ : abdominal tergites III and IV weakly modified, the middle indistinctly elevated, but without distinct tubercles; process of tergite VII highly distinctive, in antero-dorsal view broadly triangular and in lateral view hook-shaped (Figs. 7-8); tergite and sternite VIII not distinctive; median lobe of aedeagus with small and apically acute cristal process (Fig. 9).

E t y m o l o g y : The name (Lat., adj.: hook-shaped) refers to the distinctive shape of the process of the  $\delta$  tergite VII.

C o m p a r a t i v e n o t e s : From all the other species of the subgenus, G. hamata is best distinguished by the hook-shaped process of the  $\delta$  tergite VII, by the absence of a sexual dimorphism of the pronotum, by the modifications of the  $\delta$  elytra, and by the small and acute cristal process of the median lobe of the aedeagus. Geostiba simulans PACE, which, too, occurs in the Nur Dağları, has a posteriorly weakly pointed  $\delta$  pronotum, much less pronounced sutural carinae of different shape on the  $\delta$  elytra, a more distinct elytral puncturation, a very long and acute process on the  $\delta$  tergite VII, and a differently shaped cristal process of the aedeagus.

Distribution and bionomics: As can be inferred from the restricted distributions of the other species of the subgenus, G. hamata probably has a restricted

distribution and is endemic to the Nur Dağları. The types were collected at an altitude of only 800 m, which is rather low considering the relatively high elevations at which most other species of the subgenus have been found.



Figs. 5-9: Geostiba hamata sp. n.: 5 – forebody and anterior part of abdomen in dorsal view; 6 – forebody in lateral view; 7, 8 – process of  $\delta$  tergite VII in antero-dorsal and in lateral view; 9 – median lobe of aedeagus in lateral view. Scale bars: 5-6: 0.5 mm; 7-9: 0.1 mm.

#### Geostiba (Tropogastrosipalia) cingarae sp. n. (Figs. 10-16)

H o l o t y p e  $\circ$ : TR - Muğla, 2230m, 13, 70km NE Fethiye, Seki, above Temel, n. snow, 36°43'44N, 29°34'26E, 11.VII.2002, V. Assing / Holotypus  $\circ$  *Geostiba cingarae* sp. n. det. V. Assing 2002 (cAss). P a r a t y p e s : 17 $\circ$   $\circ$ , 30 $\circ$   $\circ$ : same data as holotype (MHNG, NHMW, OÕLML, cAss, cWun);  $3\circ$   $\circ$ : TR - Muğla, 2225m, 7, 70km NE Fethiye, Seki, above Temel, n. snow, 36°44'07N, 29°36'43E, 8.VII.2002, V. Assing (cAss).

D e s c r i p t i o n : 2.4 - 3.1 mm. Coloration: head and abdomen blackish brown, pronotum brown to dark brown, elytra light brown to brown. Eyes relatively small, in lateral view less than half the length of postgenae (Fig. 12).

Pronotum without sexual dimorphism, weakly transverse, 1.02 - 1.08 times as wide as long and with broadly and weakly convex posterior margin (Figs. 10-11).

Elytra in  $\delta$  with pronounced, very long and distinctly elevated sutural carinae, extending over full length of suture, without distinct impressions or folds, and with moderately sparse, weakly granulose puncturation (Figs. 11-12); in  $\varphi$  with indistinct elevations along suture, with more distinct microsculpture than in  $\delta$ , puncturation finer and not granulose.

Abdomen rather shining, microsculpture of tergites III - VI very shallow, that of tergites VII and VIII more distinct.

 $\delta$ : anterior abdominal tergites unmodified; process of tergite VII without distinct process, only with weakly elevated oval elevation near middle of posterior margin; tergite and sternite VIII not distinctive; median lobe of aedeagus with relatively long, but thin cristal process (Figs. 13-14).

q: spermatheca not distinctive, similar to those of other species of the subgenus (Figs. 15-16).

E t y m o l o g y : The name is the genitive of the Latin noun cingara (gipsy) and refers to the fact that without the help of a Turkish gipsy woman I would not have discovered the snowfield where the species was collected.



**Figs. 10-16:** Geostiba cingarae sp. n.: 10 - facies; 11 - 3 forebody in dorsal view; 12 - 3 forebody in lateral view; 13, 14 - median lobe of aedeagus in lateral view; 15, 16 - spermatheca. Scale bars: 10-12: 0.5 mm; 13-16: 0.1 mm.

Comparative notes: Geostiba cingarae is readily distinguished from all

other Turkish congeners of the subgenus by the long sutural carinae on the  $\delta$  elytra, the presence of an oval tubercle (not a process) on the  $\delta$  tergite VII, and by the shape of the cristal process of the aedeagus.

Distribution and bionomics: Geostiba cingarae is apparently endemic to the Ak Dağlar (Muğla) where it was sifted in rather large numbers from roots and debris of shrubs below a snowpatch at an altitude of approximately 2200 m. One of the dissected females had a mature egg in the ovaries.

#### Geostiba (Sibiota) oertzeni (EPPELSHEIM)

Geostiba (Ditroposipalia) solitaria aksekiensis PACE 1996: 24ff. Geostiba (Ditroposipalia) oertzeni scyrosensis PACE 2002: 18, syn. n. Geostiba (Ditroposipalia) oertzeni cnidia PACE 2002: 18, syn. n.

Type material examined:

G. solitaria aksekiensis PACE: <u>holotype</u>  $\delta$ : Umg. Akseki, 1300-1500m / S-Anatolien, lg. H. Franz / HOLOTYPUS Geostiba solitaria aksekiensis m., det. R. Pace 1988 / Geostiba solitaria aksekiensis ssp. n., det. R. Pace 1988 / Geostiba oertzeni (Eppelsheim) det. V. Assing 2002 (NHMW); <u>paratypes</u>:  $1\delta$ ,  $4\varphi\varphi$ : same data as holotype (NHMW).

G. dertzeni scyrosensis: holotype q: Insel Skyros 36, P1187 Weirather / HOLOTYPUS Geostiba sirosensis m. [sic], det. R. Pace 1995 / Geostiba sirosensis sp. n. det. R. Pace 1995 / Geostiba oertzeni (Eppelsheim) det. V. Assing 2002 (cAss).

G. oertzeni cnidia: paratypes: 13, 19: Umg. Marmaris, W-Anatolien, leg. H. Franz / PARATYPUS Geostiba solitaria knidia m., det. R. Pace 1995 / Geostiba solitaria knidia sp. n., det. R. Pace 1995 / Geostiba oertzeni (Eppelsheim) det. V. Assing 2002 (cAss).

Additional material examined:

Greece: Rhódos: 13, 19, Profitis Ilias, leg. H. Franz (NHMW).

Turkey: Antalya: 1 φ, 60 km SSW Antalya, Çiralı, 36°24'34N, 30°28'05E, 40m, sifted from grass roots, 4.IV.2002, leg. Assing (cAss); 1 δ, TR - Antalya, W Kemer, S Hisar, 36°44'02N, 30°26'23E, 1120m, Quercus, Carpinus, 2.IV.2002, leg. Assing (cAss); 3 δ δ, 2 φ φ, Akseki, 1300-1500m, leg. Franz (NHMW). Muğla: 4 δ δ, 9 φ φ [partly teneral], ca. 20 km NNE Fethiye, 36°47'28N, 29°11'29E, 970m, oakwood in northern exposition, 27.III.2002, leg. Assing (cAss); 11 δ δ, 18 φ φ, 15 km ENE Ortaca, 36°52'01N, 28°52'25E, 470m, litter of Pinus, Quercus, Q. ilex, and deciduous shrubs, 27.III.2002, leg. Assing (cAss); 6 δ δ, 2 φ φ, SE Fethiye, Baba Dağ, above Ovacik, 36°31'59N, 29°11'26E, 1450m, litter and humus beneath deciduous trees, 30.III.2002, leg. Assing (cAss); 27 δ δ, 23 φ φ (partly teneral), Baba Dağ, above Ovacik, 36°32'16N, 29°10'20E, 1705m, sifted leaf litter and grass roots, 4.VII.2002, leg. Assing (cAss); 1 δ, 1 φ, Baba Dağ, 36°33'07N, 29°11'41E, 1385m, roots of grass and herbs, 4.VII.2002, leg. Assing (cAss); 1 δ, Gölgeli Dağları, 20km NE Köyceğiz, below Ağla, 37°01'20N, 28°44'27E, 600m, litter of Platanus and other deciduous trees, 6.X.2002, leg. Assing (cAss); 3 δ δ, 2 φ φ, 20km NNE Fethiye, 36°47'27N, 28°11'29E, 1000m, oak forest in northern exposition, 8.X.2002, leg. Assing (cAss).

R e m a r k s : As the collection of H. Franz is now in the NHMW, it was possible to examine the previously inaccessible types of G. solitaria aksekiensis PACE. The synonymy established earlier (ASSING 1999) is here confirmed.

An examination of the types of the three names indicated above and recently described by PACE (2002) revealed that they are all conspecific with *G. oertzeni*; no convincing evidence was found that any of them should represent a distinct species. *Geostiba oertzeni* is one of the most widespread species of the genus. The species is wingdimorphic, but macropterous specimens are very rare. Under these circumstances, gene flow may be expected to be reduced and populations from different areas within the vast range of distribution may differ to some extent, especially in external characters. Hence,

it seems sensible to attribute all these populations to one variable species rather than consider them subspecies and name each of the numerous populations individually. For further discussion see ASSING (1999).

The holotype of G. oertzeni scyrosensis is a macropterous female of G. oertzeni; the spermatheca is of the same morphology as that of G. oertzeni from other areas. Macropterous specimens of G. oertzeni had been reported from the island Skyros before (ASSING 1999).

Geostiba oertzeni is common and widespread also in southwestern Anatolia (see map in ASSING 2001a), from where G. cnidia was described. The paratypes of G. cnidia were already listed as G. oertzeni in ASSING (2001b).

Distribution and bionomics: The distribution of this widespread species is mapped in ASSING (2001a).

## Geostiba (Sibiota) mostarensis PACE 2002 (Fig. 17)

Geostiba (Ditroposipalia) mostarensis PACE 2002: 15.

Type material examined: <u>holotype</u>  $\delta$ : 13.8.77, Jugoslavia, Umg. Mostar, Bjelasnica / HOLOTYPUS Geostiba mostarensis m, det. R. Pace 93 / Geostiba mostarensis sp. n. det. R. Pace 1993 (MHNG).

Additional material examined: 13,299, same data as holotype (cAss).

R e m a r k s: PACE (2002) compares G. mostarensis with G. weiratheri; there is no reference to G. oertzeni. Externally, however, G. mostarensis is practically indistinguishable from G. oertzeni, and the aedeagus, too, is highly similar, suggesting a close relationship of these two species. From both G. oertzeni and - the also very similar - G. kasyi (SCHEERPELTZ) from Macedonia, G. mostarensis is readily distinguished by the completely different shape of the spermatheca (Fig. 17). For illustrations of the spermathecae of the related species see ASSING (1999, 2000a).

#### Geostiba (Sibiota) lycaonica PACE 2002

Geostiba (Ditroposipalia) lycaonica PACE 2002: 18ff.

Type material examined: <u>holotype</u> d: Anatolien lg. H. Franz / Aladag b. Konya / HOLOTYPUS Geostiba lycaonica m, det. R. Pace 1995 / Geostiba lycaonica sp. n. det. R. Pace 1995 (MHNG).

R e m a.r k s: Geostiba lycaonica is highly similar and also very closely related to G. uhligi PACE from northwestern Anatolia, as can be inferred especially from the male primary and secondary sexual characters: the elytral suture forming a carina, the long and distinctly converging carinae on the  $\delta$  tergite VII, and the presence of a long flagellum in the internal sac. Geostiba lycaonica is distinguished from G. uhligi by the less distinctly elevated elytral suture, by the wider, in cross-section rounded (G. uhligi: sharp and fold-like), more shining, and posteriorly more widely separated carinae on the male tergite VII, and by the longer flagellum of the aedeagus. The type locality (Aladağ) is situated some 40 km WNW of Konya.

#### Geostiba (Sibiota) helvetiorum PACE

M a terial examined: Turkey: Adana: 19, road from Osmaniye to Zorkun, 37°02N, 36°17E, 1300m, 25.IV.2002, leg. Meybohm & Brachat (cAss). Antakya: 19, Iskenderun, Sogukoluk, 36°29'30N, 36°09'50E, 803m, 29.IV.2002, leg. Meybohm (cAss).

#### Geostiba (Sibiota) rizensis PACE 1983

Geostiba (Ditroposipalia) trapezusensis PACE 2002: 21, syn. n.

Type material examined:

G. trapezusensis: holotype 5: Anatolien, Trabzon, 20km s. Ikizdere, 22.05.89, Riedel leg. / HOLOTYPUS Geostiba trapezusensis, det. R. Pace 96 / Geostiba trapezusensis sp. n., det. R. Pace 1996 / Geostiba rizensis Pace det. V. Assing 2000 (MCVR).

R e m a r k s : The holotype was already examined and found to be conspecific with G. *rizensis* by ASSING (2001b).



Figs. 17-20: Geostiba mostarensis PACE (17) and G. libanensis PACE (18-20): 17, 20 – spermatheca; 18 – posterior margin of  $\mathcal{J}$  tergite VIII; 19 – median lobe of aedeagus in lateral view. Scale bars: 17, 19, 20: 0.05 mm; 18: 0.1 mm.

#### Geostiba (Sipalotricha) lucens (BENICK) (Map 1)

M a t e r i a l e x a m i n e d : **Turkey: Muğla:** 1 φ, SE Fethiye, Baba Dağ, above Ovacik, 36°32'16N, 29°10'20E, 1705m, sifted leaf litter and grass roots, 4.VII.2002, leg. Assing (cAss); 9 Å Å, 20 φ φ [macropterous], Boncuk Dağı, ca. 30km NE Fethiye, 36°50'56N, 29°14'04E, 1750m, sifted from grass roots and shrub litter, 2.&&X.2002, leg. Assing (cAss); 1 Å [macropterous], Gölgeli Dağları, 20km NE Köyceğiz, above Ağla, 37°02'54N, 28°49'24E, 1690m, roots and litter of grasses and thistles, 6.X.2002, leg. Assing (cAss). **Antalya:** 4 Å Å, 1 φ φ [3 Å Å macropterous, 1 Å, 1 φ brachypterous]: NE Belpinar pass, 36°22'24N, 29°29'59E, 870m, sifted from grass roots, 26.III.2002, leg. Assing (cAss); 1 Å [macropterous], N Kalkan, Dumanlı Dağı, 36°24'01N, 29°25'53E, 1230m, sifted from grass, 5.X.2002, leg. Assing (cAss). **Mersin:** 1 Å, 1 φ, N Pozanti, Tekir, 37°18N, 34°51E, 1400m, cedar wood, 4.V.2002, leg. Meybohm (cAss). **Antakya:** 2 Å Å φ φ [partly teneral], E Yeşilkent, 36°57'30N, 36°15'42E, 390m, 30.IV.2002, leg. Meybohm (cAss).

R e m a r k s : The specimens from Antakya are distinctly lighter and have a more pronounced microsculpture on the forebody than the material from other regions. However,

an examination of the genitalia yielded no evidence that they should represent a distinct species.

Macropterous specimens were found in several localities in Muğla and Antalya; previously, macropterous specimens were known only from Rhódos (types of the junior synonym *Atheta glaberima* BENICK) (ASSING 2001a). The distribution in Anatolia and Rhódos is illustrated in Map 1. For an illustration of records outside Anatolia see ASSING (2001a).



Map 1: Distribution of *Geostiba lucens* (BENICK) (filled circles) and *G. beydaghensis* sp. n. (square) in southwestern Anatolia and Rhódos.

#### Geostiba (Sipalotricha) rhodiensis PACE 1983 (Map 2)

Geostiba (Lioglutosipalia) rhodiensis PACE 1983a: 138f. Geostiba (Lioglutosipalia) besuchetiana PACE 1983b: 35ff.; syn. n. Geostiba (Lioglutosipalia) taurica PACE 1996: 38; syn. n. Geostiba (Lioglutosipalia) lyciorum PACE 2002: 9, syn. n.

Type material examined:

G. rhodiensis: holotype ♂: Profitis Ilias, Insel Rhodos, leg. H. Franz / HOLOTYPUS Geostiba rhodiensis m., det. R. Pace 1981 / Geostiba rhodiensis n. sp., det. R. Pace 1981 (NHMW).

G. besuchetiana: see ASSING (2001a).

*G. taurica* [(see also ASSING 2001a)]: <u>holotype</u>  $\delta$  [teneral]: Umg. Alanya, Hotel Alara / S-Anatolia lg. H. Franz / HOLOTYPUS Geostiba taurica m., det. R. Pace 1988 / Geostiba taurica sp. n., det. R. Pace 1988 / Geostiba rhodiensis Pace det. V. Assing 2002 (NHMW); paratype  $\varphi$ : same data as holotype (NHMW)..

G. lyciorum: holotype 9: 10.3.79, Türkei, Lykischer Taurus, Korkuteli-Elmali / HOLOTYPUS Geostiba lyciorum m., det. R. Pace 93 / Geostiba lyciorum sp. n., det. R. Pace 1993 / Geostiba rhodiensis Pace det. V. Assing 2002 (MHNG).

A d d i t i o n a 1 m a t e r i a 1 e x a m i n e d : **Turkey: Antalya:** 733, 299 [partly teneral]: E Kumluca, 36°21'50N, 30°22'27E, 385m, litter of *Laurus* and *Platanus*, 25.III.2002, leg. Assing (cAss); 1233, 1599 [partly teneral], same data, but 3.IV.2002 (cAss); 2233, 2099 [partly teneral], 60 km SSW Antalya, Çiralı 36°25'54N, 30°25'59E, 220m, litter of deciduous trees and shrubs, 25.III.2002, leg. Assing (cAss); 6333, 5199 [partly teneral], W Kemer, road to Ovacik, 36°36'18N, 30°28'38E, 325m, litter of *Quercus* 

and other deciduous trees, 2.IV.2002, leg. Assing (cAss); 1  $\circ$ , Akseki env., S Dikmen, 800m, 14.III.2000, leg. Rose (cRos); 1  $\circ$ , 4 km NW Akseki, N-slope, 1250m, 16.III.2000, leg. Rose (cRos); 20  $\circ$   $\circ$ , 19  $\circ$   $\circ$ , N Kalkan, Dumanlı Dağı, 36°24'01N, 29°25'53E, 1230m, sifted from grass roots in cedar forest, 5.X.2002, leg. Assing (cAss). **Muğla:** 32  $\circ$   $\circ$ , 28  $\circ$   $\circ$  [1 dissected  $\circ$  with mature egg in ovaries], SE Fethiye, Baba Dağ, above Ovacik, 36°32'47N, 29°10'52E, 1170m, coniferous forest with *Quercus ilex*, 30.III.2002, leg. Assing (cAss); 22  $\circ$   $\circ$ , 22  $\circ$   $\circ$ , SE Fethiye, Baba Dağ, above Ovacik, 36°33'23N, 29°09'49E, 680m, *Pinus* forest, 30.III.2002, leg. Assing (cAss). **Mersin:** 2 $\circ$   $\circ$ , 2 $\circ$   $\circ$ , Ciftehan - Çamliyayla, 37°09'32N, 34°46'30E, 711m, pine forest, 5.V.2002, leg. Meybohm & Brachat (cAss).

R e m a r k s : An examination of the previously inaccessible holotype of *G. rhodiensis* revealed that the specimen is conspecific with the species previously referred to as *G. besuchetiana* PACE. Evidence suggesting that *G. rhodiensis* and *G. besuchetiana* should represent distinct species was found neither in external morphology nor in the primary and secondary sexual characters (shape and chaetotaxy of tergite and sternite VIII, median lobe of aedeagus, apical lobe of paramere). The publication dates given in the issues containing the respective descriptions are 31 January 1983 (*G. rhodiensis*) and March 1983 (*G. besuchetiana*), so that *G. rhodiensis* must be regarded as the senior name.

*Geostiba taurica* had already been synonymized with *G. besuchetiana* by ASSING (2001a), based on an examination of several paratypes, and is now a junior synonym of *G. rhodiensis*, too.

According to PACE (2002), *G. lyciorum* is distinguished from all other Anatolian *Geostiba* species by the larger eyes. Remarkably, he compares it with *G. cyprensis* PACE from Cyprus; there is no reference whatsoever to *G. rhodiensis* (or any of its synonyms), a species with equally large eyes, which is common and widespread in southwestern Anatolia. As was expected, an examination of the holotype of *G. lyciorum* indeed revealed that it is a specimen of *G. rhodiensis* with slightly malformed (teratological) antennae. Consequently, *G. lyciorum* is a junior synonym of *G. rhodiensis*.

Distribution and bionomics: The species is widespread and common in the southwest of Anatolia and Rhódos (Map 2). Teneral specimens were observed in March and April; the ovaries of a dissected female collected at the end of March contained a mature egg.



Map 2: Distribution of Geostiba rhodiensis PACE.

#### Geostiba (Sipalotricha) macronorum PACE 2002 Geostiba (Lioglutosipalia) macronorum PACE 2002: 9ff.

Type material examined: <u>Paratypes</u>: 13, 299: Turcia bor. or. Prov. Trabzon, Pontus, ca. 18km SW Macka gegenüber Güzelce, 1400-1500m, 16.VII.1997, leg. L. Lehmann: / PARATYPUS Geostiba pontica mihi [sic!], det. R. Pace 1998 / Paratypus Geostiba macronorum Pace rev. V. Assing 2002 (cPüt, cAss).

R e m a r k s: The types are all labelled G. *pontica*, because that is the name Pace originally intended to assign to this species. Upon notification of the primary homonymy with G. *pontica* PACE 1996 he altered the name, but not the labels. Note that according to the original description, the paratypes are all females.

Geostiba macronorum is highly similar to G. euxina, which, too, was described from Trabzon, with at least one of the paratypes even collected in the same area (Maçka). Geostiba macronorum is distinguished from G. euxina as follows: eyes slightly larger, maximal diameter approximately equal to the length of antennomere III (in G. euxina somewhat shorter than antennomere III), antennomere III relatively longer, only slightly shorter than antennomere II (in G. euxina distinctly shorter than antennomere II), and spermathecal capsule distally enlarged (in G. euxina somewhat coniform). I have not found any differences in the morphology of the aedeagus.

D i s t r i b u t i o n : The species has become known only from the type locality.

#### Geostiba (Sipalotricha) libanensis PACE 1983 (Figs. 18-20)

Geostiba (Lioglutosipalia) libanensis PACE 1983b: 37.

Type material examined: <u>Holotype</u> δ: LIBAN, 21.III.75, Cèdres Barouk, Besuchet 1800m / HOLOTYPUS Geostiba libanensis m., det. R. Pace1981 / Geostiba libanensis n. sp. det. R. Pace. 1981 (MHNG). <u>Paratypes:</u> 11 exs.: same data as holotype (MHNG, cAss).

Additional material examined: 19, same data as holotype (MHNG).

R e m a r k s : PACE (1983b) attributes the species to the group G. plicatella (FAUVEL), a species whose distribution is confined to the Western Mediterranean. However, based on the morphology of tergite VIII and of the primary sexual characters, i. e. the posterior emargination of tergite VIII (Fig. 18), the shape and chaetotaxy of the apical lobe of the paramere, and the shape of the median lobe of the aedeagus (Fig. 19), G. libanensis is phylogenetically affiliated to G. rhodiensis, G. cyprensis, and allied species, which are distributed in continental Greece, Crete, Rhódos, and Turkey. From both G. rhodiensis and G. cyprensis, it is distinguished by the slightly smaller eyes, the shorter antennae with distinctly more transverse (more than twice as wide as long) preapical antennomeres, by the shorter ventral process of the aedeagus (Fig. 19), as well as by the longer and more slender spermathecal duct (Fig. 20). In addition, it is separated from G. rhodiensis by (on average) lighter coloration, especially by the only weakly infuscate abdomen.

D is tribution: Geostiba libanensis has become known only from the type locality.

#### Geostiba (Sipalotricha) beydaghensis sp. n. (Figs. 21-32, Map 1)

Holotype  $\delta$ : TR - Antalya, 1120m, W Kemer, S Hisar, No. 24, *Quercus, Carpinus*, 36°44'02N, 30°26'23E, 2.IV.2002, V. Assing / Holotypus  $\delta$  *Geostiba beydaghensis* sp. n. det. V. Assing 2002 (cAss). P a r a t y p e s : 28 $\delta$   $\delta$ , 28 $\phi$   $\phi$ : same data as holotype (MHNG, NHMW, OÖLML, cAss); 13 $\delta$   $\delta$ , 19 $\phi$   $\phi$ : same data, but leg. P. Wunderle (cWun); 4 $\phi$   $\phi$ : N36°43' E030°26', Türkei Umg. Antalya, südl. Hisar; 1120m, Meybohm, 23.4.2001 (cAss).

D e s c r i p t i o n : 2.3 - 2.91 mm. Coloration uniformly testaceous to ferrugineous; preapical abdominal segments at most only indistinctly infuscate.

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Head as wide as long or weakly transverse (length measured from anterior margin of clypeus); distinctly dilated behind eyes; integument shining, with very shallow microsculpture. Eyes small, in dorsal view less than one third the length of postgenae (Fig. 22).

Pronotum 1.10 - 1.15 times as wide as long. Microsculpture very shallow; integument shining (Figs. 21-22).

Elytra very short, at suture approximately 0.6 times as long as pronotum; puncturation moderately sparse, in  $\sigma$  granulose, in  $\rho$  fine and not granulose (Figs. 21-22).

Abdomen widest at segment VI, approximately 1.1 times as wide as elytra; with shallow microsculpture and with fine and sparse puncturation.

 $\delta$ : setiferous punctures near posterior margin of tergite VII and on tergite VIII granulose; posterior margin of tergite VIII in the middle distinctly concave, this concavity delimited by carinae (Fig. 23); posterior margin of sternite VIII broadly convex (Fig. 24); median lobe of aedeagus and apical lobe of paramere as in Figs. 27-30.

9: setiferous punctures on tergites VII and VIII not granulose; posterior margin of tergite VIII only indistinctly concave in the middle, this concavity not delimited by carinae (Fig. 25); posterior margin of sternite VIII weakly concave in the middle (Fig. 26); spermatheca as in Figs. 31-32.

E t y m o l o g y : The name is derived from the Bey Dağları, 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 : From G. *rhodiensis*, the only other species of Sipalotricha present in southwestern Anatolia, G. beydaghensis is distinguished by the much smaller eyes, the much lighter and more uniform coloration, the shorter elytra, the relatively wider abdomen, the deeper and more distinctly delimited central concavity of the posterior margin of the  $\delta$  tergite VIII, the more strongly bent ventral process of the aedeagus (lateral view), and by the completely different shape of the spermatheca.

D is tribution and bionomics: The adaptive reductions of pigmentation, eye size, and wings suggest that G. beydaghensis is endemic to the Bey Dağları. The types were sifted in large numbers from relatively deep litter of Carpinus sp. and Quercus sp. together with G. oertzeni.

#### Geostiba confusa ASSING

Material examined Turkey: Adana: 13, N Osmaniye, Karatepe, 37°17'03N, 36°14'04E, 200m, Laurisilva, 1.V.2002, leg. Meybohm (cAss).

#### Geostiba scheerpeltziana (FAGEL)

M a t e r i a l e x a m i n e d : 1 J, Lebanon, Les Cèdres, near Becharré, 1950-2000m, 2.IV.1975, leg. Besuchet (cAss).

R e m a r k s: Geostiba scheerpeltziana was reported from the same locality (two specimens with the same data) by PACE (1983b).

#### Tropimenelytron tuberiventris (EPPELSHEIM)

Material examined: 633, 19, Borçka, 1.-3. VI. 1960, leg. Schubert (NHMW, cAss).

R e m a r k s : This is the second record from Turkey; in Anatolia, the species was previously known only from Karkal Dağı (Artvin) (ASSING 2001a).



**Figs. 21-32:** Geostiba beydaghensis sp. n.: 21 – facies; 22 – forebody; 23 –  $\eth$  tergite VIII; 24 – posterior margin of  $\eth$  sternite VIII; 25 – posterior margin of  $\circlearrowright$  tergite VIII; 26 – posterior margin of  $\circlearrowright$  sternite VIII; 27, 28 – median lobe of aedeagus in lateral view; 29 – median lobe of aedeagus in ventral view; 30 – apical lobe of paramere; 31, 32 – spermatheca. Scale bars: 21-22: 0.5 mm; 23-26: 0.2 mm; 27-32: 0.1 mm.

## 4. Key to the species of *Geostiba* and *Paraleptusa* of Greece, Cyprus, Turkey, and the Middle East

The following key includes the species known from Greece, including Crete, Rhodes, and other islands, from Cyprus, Turkey, and the Middle East. In most cases, a reliable identification must be based on the male primary and secondary sexual characters, the latter of which characterize the currently accepted subgenera. Since many - but not all! - *Geostiba* species have more or less restricted distributions, geographic information is incorporated in the key in order to facilitate identification.

The references to maps and to illustrations of distinguishing characters in the literature are abbreviated as follows: A99 = ASSING (1999), A00b = ASSING (2000b), A01a = ASSING (2001a), A01b = ASSING (2001b), P83a = PACE (1983a), P83b = PACE (1983b), P84 = PACE (1984), P96 = PACE (1996), P02 = PACE (2002).

1.	Mesotarsus four-jointed. Eyes small, but with ommatidia and pigmentation. δ: elytra and abdominal tergites III - VIII unmodified. Species from Greece. Genus <i>Paraleptusa</i> PEYERIMHOFF
-	Mesotarsus five-jointed or, if with partly or completely fused fourth and fifth tarsomere, eyes reduced to minute rudiments (without ommatidia and pigmentation). $\delta$ : elytra and abdominal tergites III - VIII often modified. Genus <i>Geostiba</i> THOMSON
2.	Body entirely testaceous. Aedeagus and spermatheca as figured in A00a. Evritania, Oros Timfristós
-	Body darker, preapical abdominal segments infuscate. Kefallinia
3.	Eyes reduced to minute rudiments, without ommatidia and pigmentation. Colour of body entirely testaceous. Mesotarsus five-jointed or with partly or completely fused fourth and fifth tarsomere
-	Eyes sometimes small, but always with ommatidia and pigmentation. Mesotarsus in most species 5-jointed
4.	Species from central southern Anatolia
-	Species from the Middle East (Lebanon, Israel)
5.	Larger species (ca. 2.4 mm). Elytra with weakly granulose puncturation. $\delta$ : elytra and abdominal tergites III and VII unmodified; tergum VIII posteriorly concave; aedeagus with ventral process of median lobe in lateral view distinctly curved, apical lobe of paramere with long apical setae (Figs. P83b). $\varphi$ : unknown. Southern Nur Dağları (Antakya)
-	Smaller species, $1.8 - 2.2$ mm. Elytra with distinctly granulose puncturation in both sexes. $\delta$ : elytra with pair of circular tubercles near apex of scutellum and (mostly) with carina in the middle of lateral margin (Fig. A01a: 105); tergite III with more or less extensive median elevation; tergite VII at posterior margin with or without long and acute, weakly erect median process (Fig. A01a: 104); tergite VIII posteriorly distinctly convex (Fig. A01a: 102); aedeagus with ventral process of median lobe in lateral view almost straight (Fig. A01a: 98-99); apical lobe of paramere with short apical setae (Fig. A01a: 100). $\varphi$ : spermatheca as in Fig. A01a: 101. Eastern Adana
	G. confusa Assing
6.	Species from Lebanon. $\delta$ : elytra and apical abdominal tergites unmodified
-	Species from Israel (Mt. Hermon). $\delta$ : elytra with pronounced (i. e. strongly elevated and extending over full length of suture) sutural carinae; tergites VII and VIII each

with pair of carinae near posterior margin. Aedeagus and spermatheca as figured in P84. Subgenus *Tetratropogeostiba* PACE ......G. loebliana PACE

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7.	δ: tergite VII at posterior margin with median tubercle or with distinct spine-like process
-	$\delta$ : tergite VII at posterior margin unmodified, or pair of more or less pronounced carinae, or with weak median granulum, or with sparse granula in posterior half
8.	$\delta$ : elytra with very dense granulose puncturation, almost mat, and anteriorly each with subcircular tubercle; tergite VII with apically rounded median tubercle (not spine-like process) at hind margin (Fig. A01a: 9); tergite VIII with median pair of short carinae at posterior margin (Fig. A01a: 10); median lobe of aedeagus without cristal process. Subgenus <i>Geostiba</i> s. str
•	$\delta$ : elytra with less dense, though granulose puncturation, more shining, and anteriorly without subcircular elevation (but often with carinae near scutellum); tergite VII in large $\delta \delta$ of most species with distinct process of variable shape, rarely with oval elevation; tergite VIII unmodified. Median lobe of aedeagus with cristal process. Subgenus <i>Tropogastrosipalia</i> SCHEERPELTZ
9.	On average larger species. Coloration of body usually lighter, pronotum and elytra yellowish to reddish brown. $\delta$ : aedeagus larger, median lobe with base of ventral process in lateral view bulging, and ventral process in ventral view broader (Figs. A01a: 1-2). $\varphi$ : spermatheca with longer and proximally wider duct (Fig. A01a: 4). Widespread wing-dimorphic species. In Turkey only once recorded from Bolu
-	On average smaller species, 2.6 - 3.2 mm. Coloration of body darker, pronotum dark brown to blackish brown, elytra brown. $\delta$ : aedeagus smaller, median lobe with base of ventral process in lateral view straight, and ventral process in ventral view more slender (Figs. A01a: 5-6). $\varphi$ : spermatheca with shorter and more slender duct (Fig. A01a: 8). Northeastern Anatolia, surroundings of Erzincan
10.	Species from Greece 11
-	Species from Turkey
11.	Species occurring in the Pelopónnisos12
-	Species absent from the Pelopónnisos
12.	$\hat{\sigma}$ : anterior abdominal tergites III, III - IV, or III - V modified, i. e. with median tubercle, keel, or impression either in anterior transverse impression or in posterior half. (These modifications are occasionally indistinct especially in smaller $\hat{\sigma}\hat{\sigma}$ .)
-	$\delta$ : anterior abdominal tergites unmodified
13.	Pronotum with pronounced sexual dimorphism, i. e. in $\delta$ posteriorly distinctly tapering, elongated and (in normal position) covering most or all of scutellum
-	Pronotum with weak sexual dimorphism, in $\delta$ not distinctly elongated posteriorly; scutellum visible
14.	$\delta$ : elytra with aggregation of granula or small tubercle near apex of scutellum, lateral margins in or near the middle elevated, almost folded; tergite III with transverse or crescent-shaped median impression near hind margin
-	$\delta$ : elytra with deep subcircular impressions, without granula or tubercle near apex of scutellum, lateral margins unmodified; tergites III and IV with round or oblong median tubercle in anterior impression, that of tergite IV often indistinct; aedeagus as in Figs. A99: 130-131. Parnon Oros (SE-Pelopónnisos)G. parnoniensis ASSING
15.	Larger species. $\delta$ : pronotum 0.45 mm wide and 0.54 mm long, more strongly elongated posteriorly (ca. 1.18 x as long as wide); aedeagus with cristal process as in Fig. A99: 153. Taygetos (SW-Pelopónnisos)G. taygetana (BERNHAUER)
-	Smaller species. 5: pronotum in larger specimens 0.40 - 0.42 mm wide and 0.44 - 0.47 mm long, less strongly elongated posteriorly (1.10 - 1.15 x as long as wide); aedeagus with cristal process as in Figs. A99: 137-140. Erimanthos (NW-Pelopónnisos)
16.	$\delta$ : elytra with longitudinal tubercle near apex of scutellum, deeply and extensively impressed; tergites III and IV with smooth central elevation in anterior impression, that of tergite IV often very indistinct; aedeagus as in Figs. A99: 121-124. Killini (N-Pelopónnisos)G. killiniensis ASSING

-	$\delta$ : elytra without tubercle near apex of scutellum; primary and secondary sexual characters different. Species absent from the Killini range
17.	<i>δ</i> : tergites III - IV with median keel, tergite V with weak median elevation in anterior impression; process of tergite VII more slender (Figs. A99: 119-120); aedeagus as in Figs. A99: 113-115. Menalon Oros
-	$\delta$ : tergites III - V with subcircular or oval median elevation in anterior impression, those of tergites IV and V often indistinct; process of tergite VII in antero-dorsal view broader (Fig. A99: 112); aedeagus as in Figs. A99: 104-107. Aroania, Panahaiko (N- Pelopónnisos)
18.	<ul> <li>δ: elytra with long sutural carina; process of tergite VII and aedeagus as in Figs. A99: 98-99, 102-103. Taygetos (S-Pelopónnisos)</li></ul>
-	d: elytra with weak to moderately long sutural carina; process of tergite VII and aedeagus as in Figs. A99: 146-148, 151-152. Erimanthos (NW-Pelopónnisos)G. acifera ASSING
10	Species from Evvoia 20
-	Species from mainland Greece
20.	Large species, width of pronotum >0.4 mm. $\delta$ : elytra with extensive and deep impressions; process of tergite VII and aedeagus as in Figs. A99: 71-74. Likhás peninsula (NW-Evvoia)
-	Small species, width of pronotum <0.4 mm. $\delta$ : elytra weakly impressed; process of tergite VII often more or less reduced; cristal process of aedeagus very thin (Figs. A99: 77-78). Dirfys Oros (central Evvoia)
21.	$\delta$ : anterior abdominal tergites III - IV modified, i. e. with median elevation either in or just behind anterior transverse impression. (These modifications are occasionally indistinct especially in smaller $\delta \delta$ .)
-	$\sigma$ : anterior abdominal tergites unmodified. (Extremely weak, barely noticeable median elevations may be present in <i>G. siculifera</i> from the Pangéo.)
22.	Shape of pronotum with moderate sexual dimorphism, hind margin more convex. $\delta$ : elytra without sutural carina, dorsal surface with weak impression; tergites III and IV with subcircular tubercle behind anterior impression; process of tergite VII shorter (Figs. A99 16-17); cristal process of aedeagus of characteristic shape.(Fig.A99: 13). Pilion Oros (Thessalia)
-	Shape of pronotum with weak sexual dimorphism. $\delta$ : elytra with sutural carina and distinct impression; tergites III and IV with oval or circular median elevation in anterior impression; tergite VII (in large $\delta \delta$ ) with longer process. Distribution different
23.	$\delta$ : elytra with - in larger $\delta \delta$ - longer, but less strongly projecting sutural carina; tergites III and IV with oblong median elevation in anterior impression; process of tergite VII and aedeagus as in Figs. A99: 1-4, 8-9. Makedhonía, Thessalía, Ipiros
-	$\delta$ : elytra with shorter, but more strongly projecting sutural carina; tergites III and IV with subcircular median elevation in anterior impression; process of tergite VII and aedeagus as in Figs. A99: 28-29, 32-33. Pangéo (NE-Greece); one doubtful record also from the Athos peninsula
24.	Head and pronotum with extremely weak microsculpture and very shiny. $\delta$ : elytra without carina, tubercle or elevation at suture, but with fold-like elevations near exterior hind angles; process of tergite VII long and acute (Figs. A99: 87-88); aedeagus as in Figs. A99: 82-83. Vermion (Makedhonía)
-	Head and pronotum with less shine. $\delta$ : elytra with carina, tubercle or elevation at suture, exterior hind angles unmodified. Primary sexual characters and distribution different
25.	Pronotum with pronounced sexual dimorphism, in $\delta$ distinctly tapering and elongated posteriorly, in normal position covering most or all of scutellum (larger $\delta \delta$ !)
-	Pronotum with weak sexual dimorphism, in $\delta$ not distinctly tapering and elongated posteriorly, scutellum visible

26.	$\delta$ : posterior margin of pronotum concave in the middle (large $\delta \delta$ )
-	o posterior margin of pronotum not concave
27.	d: posterior concavity of pronotum shallower and narrower; pronotum more strongly tapering posteriorly; process of tergite VII more narrow-based (antero-dorsal view); aedeagus as in Figs. A99: 63-64. Pilion Oros (Thessalía)
-	δ: posterior concavity of pronotum deeper and broader; pronotum less strongly tapering posteriorly (Fig. A01b: 12); process of tergite VII more wide-based in antero- dorsal view (Fig. A01b: 6); aedeagus as in Figs. A01b: 1-2. Thessalia: Oros Othris
28.	Species known from eastern Evritania and western Fthiotis. $\delta$ : posterior margin of pronotum obtusely angled in the middle (Fig. A00a: 6); process of tergite VII more slender; aedeagus as in Figs. A00a: 1-2
-	Species from northeastern Greece. $\delta$ : posterior margin of pronotum not angled, but rounded in the middle; process of tergite VII broader
29.	$\delta$ : elytra with short tubercle at some distance behind apex of scutellum; process of tergite VII apically rounded in antero-dorsal view (Fig. A99: 41); aedeagus with cristal process of distinctive shape (Figs. A99: 35, 37). Pangéo
-	$\delta$ : elytra with long sutural carinae; process of tergite VII apically acute in antero- dorsal view (large $\delta \delta$ !) (Fig. A99: 51); aedeagus with cristal process of different shape (Figs. A99: 44, 46). Falakró
30.	$\delta$ : elytra with broad and smooth elevation near apex of scutellum; process of tergite VII in large $\delta \delta$ shorter (Figs. A99: 59-60); aedeagus with short and slender cristal process (Figs. A99: 53-56). Menikio, Vrontóus (NE-Greece) <i>G. menikioensis</i> ASSING
-	$\delta$ : elytra with distinct sutural carinae; process of tergite VII longer; aedeagus with longer cristal process of different shape
31.	$\delta$ : process of tergite VII very long, not distinctly erect, almost horizontally projecting caudad (Figs. A00a: 11-12); elytra without distinct impressions, sutural carinae long and broad, not closer to apex of scutellum than to posterior elytral margin; aedeagus as in Figs. A00a: 7-8. Northern Greece (Flórina, Kozani)G. torisuturalis ASSING
-	$\delta$ : process of tergite VII distinctly erect; elytra with or without impressions, sutural carinae shorter and narrower, closer to apex of scutellum than to posterior elytral margin. Distribution different
32.	$\delta$ : elytra with distinct impressions; process of tergite VII slender and apically rounded (Figs. A99: 25-26); aedeagus with cristal process much broader in lateral view (Figs. A99: 20, 22). Ipiros: Xerovuni OrosG. xerovuniana (SCHEERPELTZ)
-	$\delta$ : elytra at most with very weak impressions; process of tergite VII with broader base and apically acute (Figs. A99: 96-97). Fthiótis, Fokis (Map A01b: 1) <i>G. itiensis</i> ASSING
33.	$\delta$ : posterior margin of pronotum broadly truncate or (broadly or narrowly) concave in the middle (large $\delta \delta$ ). (Note that in small $\delta \delta$ of <i>G. kastamonuensis</i> , a species with a distinctive cristal process of the median lobe of the aedeagus, the pronotal hind margin is smoothly convex.)
	$\delta$ : 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, in which the pronotal hind margin is of intermediate and variable condition ( <i>G. lunata</i> ), follow this alternative
34.	$\delta$ : abdominal tergites III and IV each with smooth subcircular tubercle near anterior impression. Species from southern or eastern Anatolia
-	$\delta$ : abdominal tergites III and IV unmodified. Species from northern Turkey (Thrace, northern Anatolia) or from Konya
35.	Pronotum with distinct microreticulation; abdomen with very fine and sparse puncturation. $\delta$ : posterior margin of pronotum broadly concave; elytra with wider sutural carinae (Fig. A00b: 10); elytra with weakly granulose and sparser puncturation; aedeagus larger and with more slender cristal process (Figs. A00b: 11-12). Southern Anatolia (Antalya)

- ♂: pronotum with posterior margin broadly concave or truncate; aedeagus with cristal process much smaller or of different shape
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- 42. δ: posterior margin of pronotum weakly convex to indistinctly concave (Fig. A01a: 44); process of tergite VII short and wide-based (Fig. A01a: 43); median lobe of acdeagus smaller, at base of ventral process not strongly excavate in lateral view; cristal process of median lobe stouter (Figs. A01a: 40-41). Eastern Anatolia (Bitlis)....... G. bitlisensis ASSING

-	$\delta$ : posterior margin of pronotum pointed (Fig. A01a: 39); process of tergite VII long and slender (Fig. A01a: 38); median lobe of acdeagus larger, at base of ventral process strongly excavate in lateral view; cristal process very slender (Figs. A01a: 33-34). Central southern Anatolia (Mersin)
43.	δ: tergite VII posteriorly only with oval tubercle, without distinct process; cristal process of median lobe of aedeagus long and thin (Figs. 13-14). Muğla: Ak Dağlar
-	$\delta$ : tergite VII (in large $\delta \delta$ ) posteriorly with process; cristal process of aedeagus of different shape. Distribution different
44.	$\delta$ : elytra with fold-like elevation or tubercle near posterior angles, or with bulging lateral margins. Species from southern Anatolia (Antalya, Mersin)
-	$\delta$ : elytra without fold-like elevation or tubercle, lateral margins not bulging. Species from NW-Turkey or from central southern Anatolia
45.	Forebody very shiny; microsculpture almost obsolete. $\delta$ : pronotum posteriorly distinctly pointed, but only weakly projecting (Fig. A00b: 5); elytra with shallower impressions and with sutural carinae near apex of scutellum (Fig. A00b: 5); process of tergite VII in antero-dorsal view wide-based and of triangular shape; aedeagus: Figs. A00b: 6-7. W-Mersin, north of Anamur
-	Forebody with distinct microsculpture. $\delta$ : pronotum (in large $\delta \delta$ ) distinctly oblong and posteriorly projecting over scutellum; elytra, including suture, deeply impressed
46.	$\delta$ : middle of posterior margin of pronotum not bent ventrad; elytra with sutural carina and with broadly bulging lateral margins (Fig. 1); process of tergite VII as in Figs. 2-3; cristal process of median lobe of aedeagus short and thin (Fig. 4). E-Antalya, surroundings of Akseki
-	$\delta$ : middle of posterior margin of pronotum bent ventrad (Fig. A01a: 26); elytra without sutural carinae near apex of scutellum, lateral margins with long sinuate folds (Fig. A01a: 26); aedeagus with longer cristal process (Figs. A01a: 20-21). Mersin, Akçeli Dağları
47.	$\delta$ : elytra with enormous, in lateral view crescent-shaped sutural carinae extending from apex of scutellum to posterior elytral margin (or nearly so) (Fig. A01a: 50); process of tergite VII almost vertically erect, very long and apically acute (Fig. A01a: 49); aedeagus as in Figs. A01a: 45-46. Central southern Anatolia
-	$\delta$ : elytra near apex of scutellum only with tubercles or with short sutural carinae
48.	Larger species; pronotum without appreciable sexual dimorphism. $\delta$ : process of tergite VII short and very weakly erect; aedeagus with cristal process of median lobe extremely short. Facies and aedeagus: Figs. P83b. Northwestern Turkey (Istanbul)
-	Smaller species; pronotum without or with very weak sexual dimorphism. $\delta$ : process of tergite VII either hook-shaped or very long and slender; aedeagus with cristal process of median lobe of different shape. Central southern Anatolia (Antakya)
49.	Pronotum without sexual dimorphism. $\delta$ : posterior margin of pronotum broadly and weakly convex (Fig. 5); elytra with short sutural carinae near scutellum (Figs. 5-6); process of tergite VII relatively short, in lateral view hook-shaped and in anterodorsal view broadly triangular (Figs. 7-8); median lobe of aedeagus as in Figs. 9
-	Pronotum with weak sexual dimorphism. $\delta$ : pronotum obtusely pointed posteriorly; elytra with pair of small weakly elevated tubercles (not carinae) near apex of scutellum separated by distance approximately equal to their diameter; process of tergite VII very long, slender, and apically acute (shaped like a sharp spine). Facies and aedeagus: Figs. P83b
50.	$\delta$ : tergite VII near hind margin with pair of longitudinal carinae or impressions; elytra with a carina on either side of suture or with suture forming a narrow carina. Subgenus <b>Sibiota</b> CASEY

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 δ: tergite VII unmodified, or with sparse granula in posterior half, or with median subcircular granulum; elytra unmodified, or on either side of suture weakly elevated and with dense, coarsely granulose puncturation. Subgenus Sipalotricha SCHEERPELTZ .......60

51.	Eyes larger, composed of distinctly more than 20 ommatidia. $\delta$ : elytra with short and rather weakly elevated sutural carinae near apex of scutellum; carinae on tergite VII short and subparallel; aedeagus: Figs. A99: 158-161. $\varphi$ : spermatheca of distinctive morphology, S-shaped, duct relatively short, wide, and untwisted (Figs. A99: 163-165). Widespread species: Albania, Bulgaria, Macedonia, Greece (including Crete, Rhodos, and smaller islands), and Turkey (Map A01a: 1)G. oertzeni (EPPELSHEIM)
-	Eyes of reduced size, composed of less than 20 ommatidia. $\delta$ : elytra otherwise modified, carinae usually longer and more pronounced; carinae of tergite VII in most species longer and/or converging posteriad; aedeagus of different morphology. $\varphi$ : duct of spermatheca more slender, relatively longer, and twisted
52.	Spcies from Turkey
-	Species from Greece
53.	$\delta$ : elytra with suture, forming a narrow carina; carinae on tergite VII relatively long and converging posteriad; median lobe of aedeagus with very long flagellum
-	$\delta$ : elytra with long carinae or oblong elevations on either side of suture; median lobe of aedeagus with short flagellum
54.	$\delta$ : elytral suture more strongly elevated; carinae on tergite VII fold-like (i. e. acute in cross-section) and (in large $\delta \delta$ ) meeting posteriorly; median lobe of aedeagus with shorter flagellum (Figs.: P83a). $\varphi$ : spermatheca: Figs. P83a. Northwestern Anatolia
-	$\delta$ : elytral suture weakly elevated; carinae on tergite VII wider, in cross-section convex, and not meeting posteriorly; median lobe of aedeagus with longer flagellum (Figs.: P02). Konya: Aladağ
55.	$\delta$ : elytra near apex of scutellum and along anterior 2/3 of suture each with more or less strongly elevated carina of variable breadth parallel to suture; tergite VII with pair of subparallel carinae, in large $\delta$ extending over posterior 2/5 of tergite and separated by a distance approximately equal to their width or greater; tergite VIII posteriorly more or less convex, weakly to distinctly emarginate in the middle, and with pair of flat, sometimes indistinct tubercles (Figs. A01a: 68-70); aedeagus as in Figs. A01a: 61- 62. $\varphi$ : spermatheca of highly variable shape (Figs. A01a: 64-67). Central southern Anatolia: Nur Dağları
-	$\delta$ : elytra with sutural carinae extending over whole length of suture; carinae on tergite VII either separated by a distance greater than their width or converging posteriad; tergite VIII without pair of tubercles; aedeagus of different morphology. Species from northern or western Anatolia
56.	Colour of body entirely testaceous. $\delta$ : elytra with narrow, distinctly elevated, anteriorly only weakly widened sutural carina; each elytron with extensive, but rather shallow impression; tergite VII with very narrow, distinctly elevated, relatively long, straight, and posteriorly weakly converging pair of carinae at hind margin, separated (even posteriorly) by a distance greater than their width; posterior margin of tergite VIII convex, in the middle with distinct emargination; aedeagus: Figs. P83b. Western Anatolia (surroundings of Izmir)
-	Colour of body testaceous to ferrugineous; preapical abdominal segments often infuscate. $\delta$ : primary and secondary sexual characters different; posterior margin of tergite VIII without central emargination. Species from northeastern Anatolia
57.	$\delta$ : elytral impressions shallower, sutural carinae anteriorly narrower, less strongly elevated, and without coarse puncturation or sculpture; tergite VII with usually pronounced, though relatively short pair of carinae, these carinae separated by a distance distinctly less than their width and posteriorly merging (Fig. A01a: 56); median lobe of aedeagus apically more acute (ventral view) and less slender (Figs. A01a: 51-52). $\varphi$ : spermatheca as in Figs. A01A: 54-55. Northeastern Anatolia: Artvin <i>G. fabaeformis</i> ASSING

- 58. d: elytra with pronounced longitudinal elevation along suture, extending almost from apex of scutellum to hind margin, laterad of this elevation with deep and large impression extending from just behind the shoulder to the hind margin; tergite VII with pair of impressions; chaetotaxy of tergite VIII as in Fig. A99: 192; median lobe of aedeagus as in Figs. A99: 188-189; apical lobe of paramere broader and with three long setae (Fig. A99: 190). Timfristós (Fthiótis)......G. cassagnaui (COIFFAIT)

62. δ: tergite VII with small median granulum near hind margin, which is rarely indistinct or obsolete (Fig. A99: 200); aedeagus as in A99: Figs. 196-197. φ: spermatheca as in Fig. A99: 199. Distribution: Taygetos (SW-Pelopónnisos).....G. ulcerifera ASSING

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64.	Colour usually darker, eyes larger. $\delta$ : hind margin of tergite VIII convex (Fig. A99: 210); median lobe of aedeagus as in Figs. A99: 203-204; apical lobe of paramere relatively slender (Fig. A99: 205). $\varphi$ : spermatheca as in Figs. A99: 206-209. Widespread species: Albania, central Greece, Pelopónnisos, Zákinthos, Levkás, Kefallinía, Thessalía, Evvoia, Kárpathos (Map A01b: 2)
-	Colour usually lighter, eyes smaller. $\delta$ : hind margin of tergite VIII at least shallowly concave in the middle; aedeagus of different morphology. $\varphi$ : spermatheca different. Species with more restricted areas of distribution
65.	Species from mainland Greece and the Pelopónnisos
-	Species from Crete and Cyprus
66.	δ : posterior margin of tergite VIII strongly emarginate in the middle (Fig. A99: 242); median lobe of aedeagus with slender ventral process (ventral view) (Fig. A99: 239); lateral aspect as in Fig. A99: 238. $φ$ : spermatheca as in Fig. A99: 240. Ipiros: Tsumerka
-	$\sigma$ : hind margin of tergite VIII weakly emarginate in the middle; median lobe of aedeagus with broader ventral process (ventral view) and in lateral view of different shape. Distribution different
67.	δ : ventral process of median lobe of aedeagus broader in ventral view and more strongly bent in lateral view (Figs. A00a: 34-35). $ q $ : spermatheca with very short duct, highly distinctive (Fig. A00a: 240). Northern Greece: Voras Oros
-	$\delta$ : ventral process of median lobe more slender in ventral view and less distinctly curved in lateral view. $\varphi$ : spermatheca with longer duct, of completely different morphology. Southern mainland Greece and Pelopónnisos
68.	Elytra with distinct sexual dimorphism, in $\delta$ with dense and coarsely granulose punctation. Aedeagus and spermatheca as in Figs. A99: 229-233. Fthiotis: Iti Oros
-	Elytra without sexual dimorphism. Aedeagus and spermatheca as in Figs. A99: 222- 225. NW-Pelopónnisos: Erimanthos Oros
69.	Species endemic to Cyprus. $\delta$ : aedeagus and spermatheca as in Figs. A99: 269-272
-	Species endemic to Crete
70.	$\delta$ posterior margin of tergite VIII more or less strongly concave in the middle; aedeagus smaller and with distinct long spines in internal sac. Distribution: central or eastern Crete
-	$\delta$ : posterior margin of tergite VIII distinctly emarginate in the middle; aedeagus larger, without or with very indistinct spines in internal sac. Distribution: central or western Crete
71.	$\delta$ : posterior margin of tergite VIII strongly concave in the middle (Fig. A01b: 33-34); aedeagus with two long and distinctly sclerotized spines in internal sac (Figs. A01b: 27-28; spermatheca: Figs. A01b: 30-32. Eastern Crete: Thryptis range
-	$\delta$ : posterior margin of tergite VIII less strongly concave in the middle; internal sac of aedeagus with more numerous and shorter spines. Absent from the Thryptis range, more western distribution
72.	δ: posterior margin of tergite VIII weakly concave in the middle (Fig. A99: 251); median lobe of aedeagus with more slender ventral process (Fig. A99: 247); apical lobe of paramere short and broad (Fig. A99: 248). φ: spermatheca as in Figs. A99: 249-250. Central Crete: Idhi Oros (= Ida)
-	$\delta$ : posterior margin of tergite VIII on average more distinctly incised (Figs. A00a: 47- 48); median lobe of aedeagus as in Figs. A00a: 42-43; apical lobe of paramere more slender (Fig. A00a: 44). $\varphi$ : spermatheca as in Figs. A00a: 45-46. Eastern Crete: Dikti Oros

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73.	$\delta$ : tergite VIII more strongly emarginate in the middle (Fig. A99: 259); median lobe of aedeagus with relatively longer and more slender ventral process (Figs. A99: 254-255). Q: capsule of spermatheca relatively smaller and less distinctly delimited from duct (Figs. A99: 257-258). Central Crete: Idhi Oros (= Ida)G. exsecta ASSING
-	$\delta$ : tergite VIII less strongly emarginate in the middle (Fig. A99: 266); median lobe of aedeagus with relatively shorter and broader ventral process (Figs. A99: 262-263). $\varphi$ : capsule of spermatheca larger and more distinctly delimited from duct (Fig. A99: 265). Western Crete: Lefka Ori
74.	Smaller species, 1.8 - 2.3 mm. Elytra with sexual dimorphism. $\delta$ : elytra on either side of suture slightly elevated and/or with dense and coarse punctures; tergite VII either with scattered granula in posterior half or with microreticulation distinctly contrasting with the more transverse microsculpture of the anterior tergites
-	Larger species, 2.0 - 2.9 mm. Elytra without or with weaker sexual dimorphism, in $\sigma$ on either side of suture not distinctly elevated or more coarsely and more densely punctured than elsewhere
75.	Eyes small, about as large as antennomere IV in cross-section. $\delta$ : elytra on either side of suture slightly elevated and with coarsely granulose punctures; tergite VII in posterior half with some distinct granula, its microsculpture similar to that of anterior tergites; aedeagus smaller and with spines in internal sac (Figs. A01a: 77-78). $\varphi$ : unknown. Western central Anatolia: Emir Dağları (Afyon) <i>G. emirdaghensis</i> ASSING
-	Eyes distinctly larger than antennomere IV in cross-section. $\delta$ : elytra on either side of suture not distinctly elevated, but with rather dense and coarsely granulose punctures, which (in large $\delta$ ) are denser and coarser near apex of scutellum than elsewhere; tergite VII without granula, but with isodiametric microreticulation distinctly contrasting with the more transverse microsculpture of tergite VI; aedeagus larger and more slender (Figs. A01a: 82-83). Q: spermatheca as in Figs. A01a: 85-86. Southern Anatolia: Taşeli Yaylasi range, north of Anamur (western Mersin)
76.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE
76. -	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE Species from Anatolia
76. - 77.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. -	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. 3: aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. - 78.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. - 78.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $d$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. - 78. - 79.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. δ: aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. - 78. - 79.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia
76. - 77. - 78. - 79. - 80.	Species from Lebanon. Antennae relatively short; preapical antennomeres more than twice as wide as long. $\delta$ : aedeagus and spermatheca: Figs. 19-20G. libanensis PACE         Species from Anatolia

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#### Zusammenfassung

Typen und weiteres Material ostmediterraner Geostiba-Arten werden revidiert. Drei Arten werden beschrieben und von verwandten Arten unterschieden: Geostiba (Tropogastrosipalia) hamata sp. n. (Türkei: Antakya), G. (T.) cingarae sp. n. (Türkei: Muğla) und G. (Sipalotricha) beydaghensis sp. n. (Türkei: Antalya). Wesentliche Differentialmerkmale werden abgebildet. Alle bisher der Untergattung Geostiba zugeordneten Arten, mit Ausnahme von G. circellaris (GRAVENHORST) und G. sororcula ASSING, werden in das Subgenus Tropogastrosipalia SCHEERPELTZ 1951 transferiert, das hiermit revalidisiert wird. Folgende Synonymisierungen werden vorgenommen: Tropogastrosipalia SCHEERPELTZ 1951 = Chondrogastrosipalia SCHEERPELTZ 1951, syn. n.; Geostiba oertzeni (EPPELSHEIM 1888) = G. oertzeni scyrosensis PACE 2002, syn. n., = G. oertzeni cnidia PACE 2002, syn. n., G. rizensis PACE 1983 = G. trapezusensis PACE 2002, syn. n. und G. rhodiensis PACE 1983 = G. besuchetiana PACE 1983, syn. n. Die männlichen Sexualmerkmale von G. attaleensis PACE und das Weibchen von G. mostarensis PACE werden erstmals beschrieben. Zahlreiche neue Geostiba-Nachweise aus dem ostmediterranen Raum werden gemeldet. Für die ostmediterranen Arten der Gattungen Geostiba THOMSON und Paraleptusa PEYERIMHOFF wird eine Bestimmungstabelle erstellt. Die bekannten Verbreitungsgebiete von G. rhodiensis, G. lucens (BENICK) und G. beydaghensis werden anhand von Karten illustriert.

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