Linzer biol. Beitr.	40/2	1301-1325	19.12.2008
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## Nine new species and additional records of Staphylinidae from southern Spain, with new synonymies (Insecta: Coleoptera)

#### V. Assing

A b s t r a c t : *Proteinus lencinai* nov.sp. (Spain: Murcia), *Paraleptusa andujari* nov. sp. (Spain: Sierra de Segura), *Geostiba simaica* nov.sp. (Spain: Sierra de Segura), *G. filabresica* nov.sp. (Spain: Andalucía: Sierra de Filabres), *Oxypoda virgata* nov.sp. (Spain: Andalucía, Castilla-La Mancha), *O. flavissima* nov.sp. (Spain; Morocco; Portugal: Madeira), *O. telifera* nov.sp. (Spain: Andalucía), *O. imminuta* nov.sp. (Spain: Andalucía), and *O. incurvata* nov.sp. (Spain: Andalucía) are described and illustrated. The following synonymies are proposed: *Oxypoda islandica* KRAATZ 1857 = *O. testineri* SCHEERPELTZ 1958, nov.syn., = *O. castillana* FAGEL 1958, nov.syn., = *O. lativentris* FAGEL 1958, nov.syn., = *O. insidiosa* PACE 1988, nov.syn. Additional records of rarely found species of Staphylinidae are reported from Spain, among them two new country records. The distributions of nine species are mapped.

K e y w o r d s: Coleoptera, Staphylinidae, Spain, taxonomy, new species, new synonymies, distribution, new records.

## Introduction

The known species inventory of the Staphylinidae fauna of Spain, exclusive of the Canary Islands, currently comprises approximately 1500 species (ASSING 2007c; SMETANA 2004; SCHÜLKE unpubl.). It includes both numerous species with restricted distributions (particularly endogean species and epigeic species living at higher altitudes) and widespread species, most of which have an Atlanto-Mediterranean distribution. Species representing other distribution types (Ponto-Mediterranean, Adriato-Mediterranean, etc.) are mostly confined to the northern portion of Spain.

Continuous new discoveries of undescribed species even in the recent past clearly demonstrate that the staphylinid fauna of mainland Spain, particularly the endogean and the mountain fauna, requires further study. Also, taxonomic revisions have revealed that species described from, and believed to be confined to Spain are often more widespread and synonymous with species described and recorded from other parts of Europe (e. g., ASSING 2006b, 2008). It seems most likely that future revisions will yield similar results.

The present study is primarily based on material recently collected by Carmelo Andújar (Murcia), Manuel Baena (Córdoba), Heinrich Meybohm (Großhansdorf), and the author in southern Spain. Nine new species, eight of them in the subfamily Aleocharinae, are

described and records of rarely found species are reported. Also, it was discovered that the name of an *Oxypoda* species, which was previously believed to be confined to the Iberian peninsula, which had two junior synonyms based on type material from Spain, and which was recently also recorded from Tunisia, is actually synonymous with that of a widespread species originally described from Iceland.

#### Material and methods

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

DEI Deutsches Entomologisches Institut, Müncheberg (L. Zerche)		
OÖLLBiologiezentrum/Oberösterreichisches Landesmuseum Linz (F. Gusenleitner)		
cAssauthor's private collection		
cWunprivate collection Paul Wunderle, Mönchengladbach		

The morphological studies were carried out 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.

The maps were generated using the online generic mapping tool (GMT) of the Geomar website at www.aquarius.ifm-geomar.de/omc.

Head length was measured from the anterior margin of the clypeus to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra.

#### Results

## Lusitanopsis segurica Assing 2007

M a t e r i a l e x a m i n e d : <u>Spain</u>: 2 exs., Andalucía, Sierra de Segura, ca. 20 km SW Santiago de la Espada, 38°01'N, 02°41'W, 1550 m, moist grassland with rocks, under stones, 16.III.2008, leg. Andújar (cAss); 7 exs., same locality, 13.X.2008, leg. Andújar (cAss).

C o m m e n t : This recently described endogean species was previously known only from the type locality, some 20 km to the northeast of the above locality (ASSING 2007a).

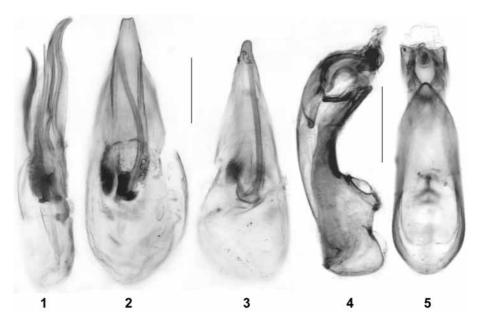
## **Proteinus lencinai nov.sp.** (Figs 1-2, Map 1)

T y p e m a t e r i a l : Holotype ♂: "E - Murcia, 1800 m, Moratalla, Revolcadores [38°04'N, 2°16'W], 22.III.1999, Lencina / Holotypus ♂ *Proteinus lencinai* sp.n. det. V. Assing 2008 (cAss).

D e s c r i p t i o n : Body length 2.6 mm. External characters, including the male secondary sexual characters, as in *P. crenulatus* PANDELLÉ 1867. Distinguished only by the morphology of the aedeagus:

 $\delta$ : aedeagus ventrally with a pair of pronounced carinae; apex weakly bent in lateral view and truncate in ventral view (Figs 1-2).

E t y m o l o g y: The species is dedicated to José Luis Lencina, a most remarkable, charismatic coleopterist from Jumilla (Murcia), who collected the holotype.

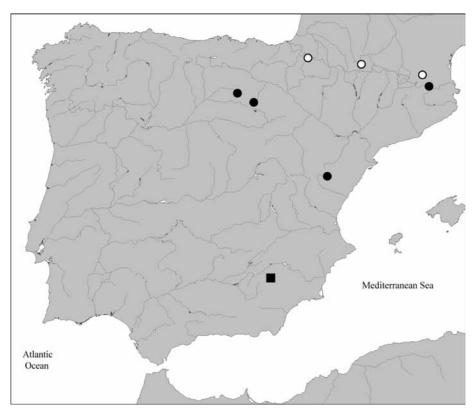


Figs 1-5: Proteinus lencinai nov.sp. (1-2), P. crenulatus PANDELLÉ (3), and Paraleptusa andujari nov.sp. (4-5): (1, 4) median lobe of aedeagus in lateral view; (2-3, 5) median lobe of aedeagus in ventral view. Scale bars: 0.1 mm.

C o m m e n t: The holotype is of brownish coloration. However, the similarly pale colour of other usually blackish Staphylinidae in the same sample suggests that the specimen has become decolourised post-mortem.

C o m p a r a t i v e n o t e s: Based on both the external and sexual characters (moderately microsculptured pronotum, rather slender antennae, enlarged male protarsomere I, modifications of the male meso- and metatibiae, shape of the male sternite VIII, general morphology of the aedeagus), the new species undoubtedly belongs to the P. crenulatus group, which was revised only recently and which currently includes five species, all of them rare (ASSING 2007b). Only two species of this group have become known from Spain: the widespread P. crenulatus PANDELLÉ 1867 (in Spain only recorded from the Pyrenees) and P. hamatus ASSING 2007, whose known distribution is confined to northern Spain and southwestern France (Map 1). The new species is distinguished from both of them only based on the shape of the aedeagus, particularly the shape of the apex (both in P. crenulatus and P. hamatus more acute and more strongly bent in lateral view and acute in ventral view; see Fig. 3), the presence of a pair of pronounced carinae on the ventral side of the aedeagus (much less pronounced in P. crenulatus and P. hamatus), and the internal structures (similar to those of P. crenulatus, but completely different from those of *P. hamatus*). For illustrations of the habitus, as well as of the male primary sexual characters of the species of the *P. crenulatus* group see ASSING (2007b).

D is tribution and bionomics: The type locality (Pico Revolcadores) is situated in the Sierra Seca in the west of Murcia province, close to the border with Castilla-La Mancha, southeastern Spain (Map 1). The holotype was collected in a pitfall trap with vinegar at an altitude of 1800 m.



**Map 1**: Distribution of the species of the *Proteinus crenulatus* group in the Iberian Peninsula: *P. crenulatus* PANDELLÉ (open circles), *P. hamatus* ASSING (filled circles), and *P. lencinai* nov.sp. (square).

#### Omalium italicum Bernhauer 1902

M a t e r i a l e x a m i n e d : <u>Spain</u>: 1 ex., Andalucía, Sierra de los Filabres, S Serón, 37°16'N, 02°30'W, 1800 m, grassland with trees, under stones and grass roots sifted, 19.III.2008, leg. Assing (cAss).

C o m m e n t: The previously known distribution ranged from Italy to France, the British Isles and Central Europe (SMETANA 2004). The species is here reported from Spain for the first time.

## Platystethus burlei Brisout de Barneville 1862

M a t e r i a l e x a m i n e d : Spain: 23 exs., Andalucía, Sierra de Segura, ca. 10 km SW Santiago de la Espada, 38°03'N, 02°38'W, 1430 m, pasture and field margin, under stones and floated from soil near stream bank, 16.VIII.2008, leg. Andújar & Assing (cAss); 2 exs., Castilla-La Mancha, Sierra de Alcaraz, ca. 15 km NNE Riópar, 38°32'N, 02°25'W, 1380 m, stream bank under bushes, 7.IV.2003, leg. Assing (cAss); 3 exs., Castilla-La Mancha, Albacete, 15 km WSW Nerpio, 38°06'N, 02°29'W, 1450 m, calcareous pasture in stream valley, floated from soil, 30.III.2007, leg. Assing & Andújar (cAss); 1 ex., Murcia, Sierra de Espuña, Prado Mayor, 37°53'N, 01°34'W, 1140 m, N-slope, sifted and floated from soil, 29.III.2007, leg. Andújar & Assing (cAss)

C o m m e n t: This remarkable, rarely found species appears to have an endogean habitat. The vast majority of the specimens listed above were collected by floating soil.

## Cypha armata Assing 2005

M a t e r i a l e x a m i n e d : Spain: 1♂, Castilla-La Mancha, Madrigueras (AB), Rio Júcar, 1.VII.2005, leg. Lencina (cAss).

C o m m e n t: Previously, only the three type specimens from Tunisia (environs of Teboursouk) were known (ASSING 2005). The above first record from Spain suggests that the species is widespread in the Western Mediterranean.

## Paraleptusa andujari nov.sp. (Figs 3-4, 27)

T y p e m a t e r i a 1 : <u>Holotype & : "E - Castilla-La Mancha, Sierra de Segura, Calar de Sima, 1430 m, [4], 38°20'46"N, 02°29'11"W, 15.III.2008, C. Andújar / Holotypus & *Paraleptusa andujari* sp.n. det. V. Assing 2008 (cAss). <u>Paratype</u>  $\varphi$ : same data as holotype (cAss).</u>

A d d i t i o n a l m a t e r i a l e x a m i n e d , b u t n o t i n c l u d e d i n t y p e s e r i e s :  $2 \circ \circ$ , Castilla-La Mancha, Sierra de Segura, ca. 13 km W Yeste, La Moheda, 38°23'03"N, 02°26'44"W, 900 m, 16.III.2008, leg. Andújar (cAss);  $2 \circ \circ$ , Andalucía, Sierra de Segura, ca. 10 km SW Santiago de la Espada, 38°03'11"N, 02°37'55"W, 1430 m, floated from soil, 16.III.2008, leg. Andújar (cAss);  $1 \circ \circ$ , Andalucía, Sierra de Segura, ca. 20 km SW Santiago de la Espada, 38°01'24"N, 02°40'56"W, 1550 m, moist grassland with rocks, floated from soil, 16.III.2008, leg. Andújar (cAss).

Description: Body length 2.0-2.2 mm. External and secondary sexual characters as in *P. ripicola* ASSING; for a detailed description of this species see ASSING (2007c). Distinguished from *P. ripicola* only by the morphology of the aedeagus.

- $\delta$ : median lobe of aedeagus rather broad in ventral view; crista apicalis distinct; ventral process moderately long in lateral view (Figs 3-4).
- ♀: spermatheca of similar shape as that of geographically close congeners (Fig. 27).

E t y m o l o g y: The species is dedicated to my dear friend Carmelo Andújar, Murcia, in gratitude for the generous gift of endogean Staphylinidae collected by him while looking for endogean carabids and for his very pleasant company during a joint excursion in southern Spain in March 2008.

C o m m e n t: The specimens listed as additional material are indistinguishable from the two types. However, since they are all females, the possibility that they refer to other species cannot be ruled out.

C o m p a r a t i v e n o t e s: Three species of *Paraleptusa* PEYERIMHOFF 1901 have become known from southern Spain, all of them from the southwest: *P. anophthalma* (EPPELSHEIM 1884) from the Sierra de Espuña, *P. spectans* ASSING 2003 (Sierra de Segura), and *P. ripicola* ASSING 2007 (Sierra de Segura). For a distribution map see ASSING (2007c). The new species is reliably distinguished from all of them only based on the morphology of the aedeagus. In *P. ripicola*, the median lobe lacks a distinct crista apicalis and has a much longer and more slender ventral process (lateral view). In *P. spectans*, whose eyes are slightly larger and darker, the ventral process is more strongly arched and apically less acute in lateral view, more slender in ventral view, and the basal portion of the median lobe is larger. In *P. anophthalma*, the ventral process of the median lobe is apically of different shape (lateral aspect) and the spermatheca has a shorter and differently shaped duct. For illustrations of the habitus and the sexual characters of *P. anophthalma*, *P. ripicola*, and *P. spectans* see ASSING (2003a, 2007c).

D i s t r i b u t i o n a n d b i o n o m i c s: The type locality is situated in the Sierra de Segura, Castilla-La Mancha, very close to the border with Andalucía. The two type specimens were collected in a calcareous pasture at an altitude of 1430 m, by washing soil from below the grass-root layer beneath a *Crataegus* bush. In the same locality, numerous specimens of *Geostiba simaica* nov.sp. were found by sifting grass roots above the layer where the *Paraleptusa* sample was taken.

## Geostiba (Typhlusida) simaica nov.sp. (Figs 6-16)

T y p e m a t e r i a l :  $\underline{\text{Holotype }}$ : "E - Castilla-La Mancha, Sierra de Segura, Calar de Sima, 1430 m, [4], 38°20'46"N,  $\underline{\text{02}}$ °29'11"W, 15.III.2008, V. Assing / Holotypus & Geostiba simaica sp.n. det. V. Assing 2008 (cAss).  $\underline{\text{Paratypes}}$ : 15 d , 27 p ; same data as holotype (cAss, OÖLL).

Description: Body length 2.5-3.0 mm. Habitus as in Fig. 6. Coloration: head dark-brown; pronotum brown to dark-brown, usually slightly paler than head; elytra pale-brown to brown, of similar colour as pronotum or paler; abdomen with segments VI-VII blackish-brown to blackish; segments III-V brown to dark brown, usually more or less distinctly paler than VI-VII; apex of abdomen (segments VIII-X) reddish brown; legs yellowish; antennae brown to dark-brown, often with the basal three antennomeres slightly paler.

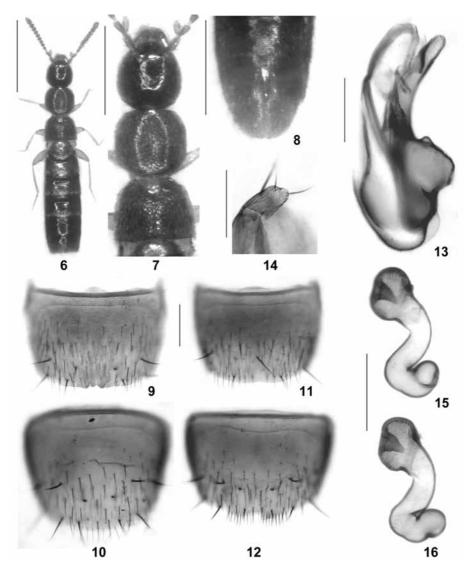
Head approximately as wide as long; eyes in dorsal view approximately 1/4 the length of postocular region or slightly longer, not projecting from lateral outline of head (Fig. 7); punctation sparse and very fine; interstices glossy, with very shallow, barely noticeable microreticulation.

Pronotum slender, 1.05-1.10 times as wide as long, and 1.10-1.15 times as wide as head; with weakly pronounced sexual dimorphism; microreticulation as shallow as that of head (Fig. 7).

Elytra slightly wider than, and at suture approximately 0.65 times as long as pronotum (Fig. 7); sexual dimorphism pronounced; microsculpture similar to that of pronotum. Hind wings reduced.

Abdomen approximately 1.1 times as wide as elytra; punctation sparse and very fine, barely noticeable; microsculpture shallow, but more distinct than that of forebody; posterior margin of tergite VII without palisade fringe; tergites VII-VIII sexually dimorphic.

♂: pronotum along the middle extensively depressed or shallowly impressed, punctation dense and distinct (Fig. 7); elytra amost matt, at suture distinctly elevated and coarsely, densely, and granulosely punctate; postero-lateral areas of elytra more or less distinctly impressed and with less coarse and less dense punctation (Fig. 7); abdominal tergite VII at posterior margin with oblong median tubercle (Fig. 8); tergite VIII with a pair of denticles in the middle of posterior margin (Figs 8-9); posterior margin of sternite VIII almost regularly convex (Fig. 10); median lobe of aedeagus as in Fig. 13; apical lobe of paramere short and stout (Fig. 14).



**Figs 6-16**: *Geostiba simaica* nov.sp.: **(6)** male habitus; **(7)** male forebody; **(8)** male abdominal segments VI-VIII; **(9)** male tergite VIII; **(10)** male sternite VIII; **(11)** female tergite VIII; **(12)** female sternite VIII; **(13)** median lobe of aedeagus in lateral view; **(14)** apical lobe of paramere; **(15-16)** spermatheca. Scale bars: 6: 1.0 mm; 7: 0.5 mm; 8-16: 0.1 mm.

 $\varsigma$ : pronotum without median impression and with finer average punctation; elytra more or less glossy, not distinctly elevated at suture, with or without very shallow posterolateral impressions, and with sparse, fine, and non-granulose punctation; posterior margin of tergite VIII weakly convex, in the middle indistinctly concave (Fig. 11); posterior margin of sternite VIII weakly convex, in the middle concave and with stout long marginal setae (Fig. 12); spermatheca as in Figs 15-16.

E t y m o l o g y: The name is derived from the Calar de Sima, the mountain range where the type locality is situated.

Intraspecial punctation, elytral punctation, elytral elevations and impressions, tubercle on tergite VII, shape of posterior margin of tergite VIII) are subject to considerable variation. They are usually more pronounced in large males and more or less reduced in smaller males.

C o m p a r a t i v e n o t e s: The geographically closest congeners of the subgenus Typhlusida CASEY 1906 are G. vidua PACE 1983 from the Sierra de Alcaraz and G. segurae ASSING 2003 from the Sierra de Segura. The new species is distinguished from the former by different coloration (G. vidua: forebody uniformly pale reddish to reddishbrown, abdominal segments VI-VII brown to dark brown, antennae reddish to reddishbrown), less pronounced microsculpture of the head and pronotum, more distinct punctation of the pronotum, more pronounced modifications of the male elytra, a more pronounced tubercle on the male tergite VII, the distinctly denticulate posterior margin of the male tergite VIII, as well as by the shape of the aedeagus and the spermatheca (much shorter duct of different shape). It is separated from the variably coloured G. segurae particularly by the more pronounced modifications of the male elytra (in large males), the narrower tubercle on the male tergite VII, the distinctly dentate posterior margin of the male tergite VII, the reduced crista apicalis of the median lobe of the aedeagus, and by the shape of the spermatheca (less dilated capsule, duct shorter and stouter). For illustrations and descriptions of the external and sexual characters of G. segurae and G. vidua see Assing (2003a).

D is tribution and bionomics: The type locality is identical to that of *Paraleptusa andujari* (see above). The type specimens were collected by sifting grassroots beneath a *Crataegus* bush.

#### Geostiba (Sipalotricha) cazorlensis FAGEL 1961

M a t e r i a l e x a m i n e d : <u>Spain</u>: 1♂, 1♀, Andalucía, Jaén, Sierra de Cazorla, Linarejos, 1.X.2006, leg. Baena (cAss).

C o m m e n t: To my knowledge, the above specimens represent the first record of since the original description. The species is endemic to the Sierra de Cazorla.

#### Geostiba (Sipalotricha) filabresica nov.sp. (Figs 17-26)

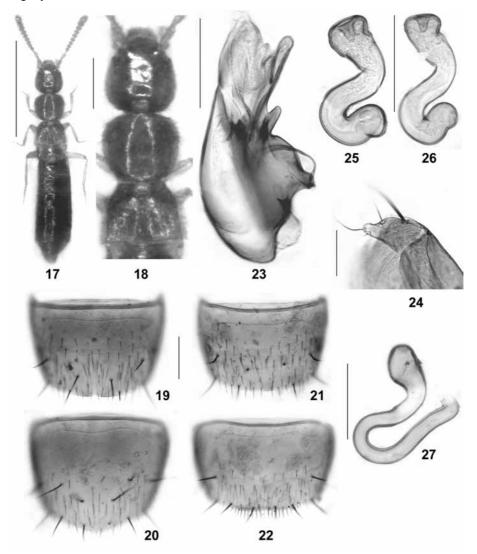
T y p e m a t e r i a 1 : <u>Holotype 3</u>: "E - Andalucía [15], Sierra de los Filabres, S Serón, 1800 m, grassland, 37°15'44"N,  $\overline{02°30'30"W}$ , 19.III.2008, V. Assing / Holotypus & *Geostiba filabresica* sp.n. det. V. Assing 2008 (cAss). <u>Paratypes</u>:  $3 \delta \delta$ ,  $4 \circ \varphi$ : same data as holotype (cAss, OÖLL).

D e s c r i p t i o n: Body length 2.0-2.6 mm. Habitus as in Fig. 17. Coloration: fore-body uniformly yellowish to pale yellowish-brown; abdomen with segments VI-VII dark brown, anterior segments and abdominal apex paler; legs and antennae yellowish.

Head (Fig. 18) weakly oblong, approximately 1.05 times as long as wide; eyes extremely small, composed of approximately 5 ommatidia, not projecting from lateral outline of head; punctation sparse and extremely fine, noticeable only at high magnifications; interstices glossy, microreticulation almost obsolete. Antennae distinctly incrassate apically; antennomeres VII-IX more than twice as wide as long.

Pronotum (Fig. 18) approximately 1.1 times as wide as long and 1.1 times as wide as

head; punctation as fine and sparse as that of head; microsculpture very shallow, but slightly more distinct than that of head.



Figs 17-27: Geostiba filabresica nov.sp. (17-26) and Paraleptusa andujari nov.sp. (27): (17) habitus; (18) forebody; (19) male tergite VIII; (20) male sternite VIII; (21) female tergite VIII; (22) female sternite VIII; (23) median lobe of aedeagus in lateral view; (24) apical lobe of paramere; (25-27) spermatheca. Scale bars: 17: 1.0 mm; 18: 0.2 mm; 19-23, 25-27: 0.1 mm; 24: 0.05 mm.

Elytra at posterior margin approximately 1.1 times as wide and at suture 0.6 times as long as pronotum (Fig. 18); punctation fine, but somewhat more distinct than that of head and pronotum; microsculpture barely noticeable. Hind wings reduced.

Abdomen 1.10-1.15 times as wide as elytra, widest at segments VI-VII (Fig. 17); punc-

tation conspicuously sparse and very fine, barely noticeable; microsculpture very shallow on tergites III-VI, somewhat more distinct on tergites VII-VIII; posterior margin of tergite VII without palisade fringe.

- ♂: tergite VIII with weakly convex posterior margin (Fig. 19); posterior margin of sternite VIII weakly angled in the middle (Fig. 20); median lobe of aedeagus highly distinctive, with conspicuous projection at base of ventral process, and with pronounced crista apicalis and crista proximalis (Fig. 23); apical lobe of paramere as in Fig. 24.
- $\varphi$ : posterior margin of tergite VIII very weakly convex (Fig. 21); sternite VIII strongly transverse, its posterior margin weakly convex and in the middle indistinctly concave; spermatheca with short and stout duct (Figs 25-26).

E t y m o l o g y: The name (adjective) is derived from the Sierra de los Filabres, where the species is probably endemic.

Comparative notes: The new species is characterised by its small size, bicoloured body, extremely weak microsculpture, small size, and by the primary and secondary sexual characters, particularly by the conspicuous morphology of the aedeagus. The geographically closest consubgener with restricted distribution, of similarly small size, with similarly small eyes, and without palisade fringe at the posterior margin of tergite VII is Geostiba jaenica ASSING 2006 from the Sierra Almadén and the Sierra de la Pandera (Jaén). Geostiba filabresica is distinguished from this species by the different coloration (G. jaenica: whole body uniformly reddish, abdomen not distinctly infuscate), the much weaker microsculpture, the different shapes of the male sternite VIII (G. jaenica: strongly convex) and the female sternite VIII (G. jaenica: posterior margin distinctly emarginate in the middle), as well as by the different primary sexual characters. For illustrations of the external and sexual characters of *G. jaenica* see ASSING (2006a). In the somewhat larger G. cazorlensis (FAGEL 1961) from the Sierra de Cazorla, the abdomen is not distinctly infuscate, the eyes are less strongly reduced, the punctation of the elytra and abdomen is more distinct, the elytral punctation is sexually dimorphic, the microsculpture of the forebody is more pronounced, the male tergite and sternite VIII have a strongly convex posterior margin, and the male and female primary sexual characters are of different morphology. Geostiba besucheti (FAGEL 1961), an endemic of the Sierra Nevada, is of much darker coloration, has slightly larger eyes, a much more pronounced microsculpture and a more distinct punctation of the forebody, a sexually dimorphic punctation of the elytra, a narrow palisade fringe at the posterior margin of tergite VIII, and different primary and secondary sexual characters.

D is tribution and bionomics: The type locality is situated in the Sierra de los Filabres, where the species is probably endemic, as can be inferred from the adaptive reductions of eye size, pigmentation, wings, and palisade fringe at the posterior margin of tergite VII. The type specimens were collected in a pasture at an altitude of 1800 m, by turning stones (two specimens) and by sifting grass roots (six specimens) in the shade of a bush. For a photograph of the type locality, which is identical to the type locality of a species of *Sunius* STEPHENS 1829 and one of *Lomechusa* GRAVENHORST 1806 see figure 19 in ASSING (in press).

## Chitosa nigrita (ROSENHAUSER 1856)

M a t e r i a l e x a m i n e d : <u>Spain</u>: 3 exs., Andalucía, Córdoba, Sierra de Cabra, El Navazuelo, 4.IV.2007, leg. Baena (cAss).

C o m m e n t: The distribution of this rare myrmecophile is confined to Spain and Morocco.

#### Zoosetha incisa Assing 1998

M a t e r i a l e x a m i n e d : <u>Spain</u>: 1 ♂, Castilla-La Mancha, Sierra de Segura, Sierra de Cujón, 38°28′N, 02°21′W, 1460 m, grass and moss near rocks sifted, 15.III.2008, leg. Assing (cAss).

C o m m e n t: This rare species was only recently reported from Spain (Murcia) for the first time (ASSING 2007c).

#### Zoosetha inconspicua (ERICHSON 1839)

M a t e r i a l e x a m i n e d : <u>Spain</u>: 1♂, Castilla-La Mancha, Sierra de Segura, ca. 15 km W Yeste, Calar de Sima, 38°21'N, 02°29'W, 1430 m, calcareous pasture with *Crataegus*, soil washed, 15.III.2008, leg. Andújar (cAss).

C o m m e n t: In Spain, there was previously only one confirmed record of this wide-spread, but very rare species from Burgos (ASSING 1998).

## Oxypoda (Deropoda) andalusica ASSING 2003

M a t e r i a l e x a m i n e d : <u>Spain</u>: 4 exs., Andalucía, Sierra de los Filabres, S Serón, 37°16'N, 02°31'W, 1800 m, stony pasture with trees and bushes, under stones, 19.III.2008, leg. Assing (cAss).

C o m m e n t : This recently described species was previously known only from few localities in the Sierra de Segura and the Sierra de las Nieves, Andalucía (ASSING 2003b).

## Oxypoda islandica KRAATZ 1857 (Figs 49-53, Map 2)

Oxypoda islandica KRAATZ 1857: 285. Oxypoda edinensis SHARP 1871: 188. Oxypoda steineri SCHEERPELTZ 1958 ff.: 198; nov.syn. Oxypoda castillana FAGEL 1958: 244 f.; nov.syn.

Oxyoda lativentris FAGEL 1958: 245 f.; nov.syn.

Oxyoda insidiosa PACE 1988: 68; nov.syn.

T y p e m a t e r i a l e x a m i n e d : Lectotype 3, present designation: "Island, Staudinger / islandica mihi, Island, Stauding. / coll. Kraatz / Syntypus / Lectotypus / coll. DEI Müncheberg / Lectotypus 3 Oxypoda islandica Kraatz, desig. V. Assing 2008 / Oxypoda islandica Kraatz, det. V. Assing 2008" (DEI). Paralectotypes: 3 exs. [mounted on same pin]: "Typus / Island / Syntypus / O. islandica Kr., Kr. [sic] / coll. Stierlin / coll. DEI Müncheberg" (DEI).

A d d i t i o n a l m a t e r i a l e x a m i n e d : <u>Tunisia</u>: see ASSING (2005). <u>Spain [see also ASSING (2003b)]</u>: C a s t i l l a y L e ó n : 2 exs., Sierra de Ancares, ENE Puerto de Ancares, peak of Miravalles, 42°53'N, 6°47'W, 1960 m, N-slope, grass, moss, etc., sifted, 15.VII.2004, leg. Assing (cAss); 5 exs., Sierra de la Demanda, Sierra de Urbión, Sierra de Freguela, Peña Negra, 42°03'N, 02°46'W, 1750-1950 m, pine forest, 15.X.2003, leg. Assing (cAss); 2 exs., Sierra de la Demanda, E Neila, Cabeza Herrera, 42°05'N, 02°58'W, 1580 m, E-slope, mixed oak, beech, and pine forest, 16.X.2003, leg. Assing (cAss); 1 ex., Sierra de la Demanda, ca. 40 km ESE Burgos, S Valmala, Trigaza peak, 42°15'N, 03°15'W, 1950 m, N-slope, *Pinus* litter, *Vaccinium*,

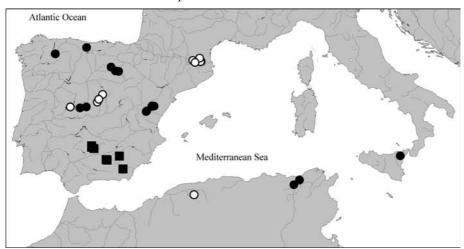
Juniperus, Calluna, 17.X.2003, leg. Assing (cAss); 1 ex., Sierra de Gredos, ca. 60 km SW Avila, ca. 5 km S Hoyos del Espino, 40°18′N, 05°13′W, 1470 m, stony grassland in stream valley, under stones, 24.III.2007, leg. Assing (cAss); 1 ex., Sierra de Gredos, ca. 60 km SSW Avila, ca. 10 km SSW Burgohondo, 40°21′N, 04°49′W, 1250 m, stream valley, floated, 25.III.2007, leg. Assing (cAss). Italy: S i c i l i a: 11 exs., 12 km NE Randazzo, Bosco Malabotta, 37°57′N, 15°03′E, 1300 m, oak forest margin, grass, moss, and litter sifted, 24.XII.2007, leg. Assing & Wunderle (cAss, cWun).

C o m m e n t: The original description of *O. islandica* is based on several syntypes ["häufig unter todten Vögeln"] from Iceland; a locality is not specified (KRAATZ 1857). Of the four syntypes located in the collections of the DEI a male is designated as the lectotype. It is conspecific with *O. steineri* SCHEERPELTZ; hence the synonymies proposed above. Based on an examination of type material, *O. castillana* FAGEL and *O. lativentris* FAGEL had been synonymised with *O. steineri* by TRONQUET (1999, 2001).

The original description of *O. insidiosa* is based on two male type specimens from "Teniet-el-Haad" in Algeria (PACE 1988). The types were not examined, but the illustration of the aedeagus provided with the original description leaves no doubt whatsoever that they are conspecific with *O. islandica*.

Oxypoda islandica has been attributed to the subgenus Sphenoma MANNERHEIM 1830, whereas O. steineri has been regarded as a species of the subgenus Podoxya MULSANT & REY 1875, and O. insidiosa was originally assigned to Demosoma THOMSON 1859, now a synonym of Bessopora THOMSON 1859. Since the current taxonomic and phylogenetic concept of these subgenera is highly doubtful and requires revision, the subgeneric affiliations of O. islandica are unclear.

The aedeagus of the specimens from Tunisia and Sicily is slightly smaller, has a slightly more curved dorsal internal structure, and a less projecting crista proximalis, but is otherwise highly similar to that of material from Spain (Figs 49-52). Also, the spermatheca is of similar size and shape (Fig. 53). Therefore, the observed differences are attributed to intra-rather than interspecific variation.



**Map 2**: Distributions of *Oxypoda islandica* KRAATZ (filled circles: examined records; open circles: reliable literature records) and *O. virgata* nov.sp. (squares) in the Western Mediterranean.

D is tribution. It has been recorded, partly as *O. steineri*, from Tunisia, Algeria, southern Italy, Spain, and France, to Iceland, the British Isles, Scandivia, northwestern Russia (material examined; ASSING 2003b, 2005; GAMARRA 1987; SMETANA 2004; TRONQUET 1999, 2001). The species had already been reported under the correct name from Spain by GAMARRA (1987), a record apparently overlooked by SMETANA (2004). The previous record (as *O. steineri*) from the Sierra de Pozo (ASSING 2003b) is based on two misidentified females and refers to the following species. The distribution in the Western Mediterranean is illustrated in Map 2.

#### Oxypoda virgata nov.sp. (Figs 28-39, Map 2)

T y p e m a t e r i a l : Holotype  $\circ$ : "E - Andalucía [15], Sierra de los Filabres, S Serón, 1800 m, grassland,  $37^{\circ}15^{\circ}44^{\circ}N$ ,  $02^{\circ}30^{\circ}30^{\circ}W$ , 19.III.2008, V. Assing / Holotypus  $\circ$  Oxypoda virgata sp.n. det. V. Assing 2008" (cAss). Paratypes:  $7\circ\circ\circ$ ,  $3\circ\circ$  : same data as holotype (cAss);  $17\circ\circ\circ$ ,  $9\circ\circ$ : "E - No. 7; Andalucía, E Jaén, SE Mancha Real, Sierra Almadén, 1850 m,  $37^{\circ}44^{\circ}N$ ;  $03^{\circ}31^{\circ}W$ , 26.XII.2003, V. Assing" (cAss, OÖLL);  $2\circ\circ\circ$ ,  $5\circ\circ\circ$ : "E - No. 8; Andalucía, E Jaén, Sierra Almadén, 1450-1850 m,  $37^{\circ}45^{\circ}N$ ;  $03^{\circ}33^{\circ}W$ , 26.XII.2003, V. Assing" (cAss);  $1\circ\circ$ , "E - No. 15; Andalucía, ca. 60 km N Montoro, N Azuel, ca. 600 m,  $38^{\circ}19^{\circ}N$ ;  $04^{\circ}19^{\circ}W$ , 28.XII.2003, V. Assing" (cAss);  $1\circ\circ$ : "E - No. 14; Castilla-La Mancha, Sierra del Rey, 90 km N Montoro, 850 m,  $38^{\circ}32^{\circ}N$ ;  $04^{\circ}22^{\circ}W$ , 28.XII.2003, V. Assing" (cAss);  $2\circ\circ\circ$ : "E- No. 7, Andalucía, SW Sierra de Segura, Sierra de Pozo, 1555 m,  $37^{\circ}56^{\circ}13^{\circ}N$ ,  $02^{\circ}43^{\circ}09^{\circ}W$ , 9.IV.2003, V. Assing" (cAss).

Description: Body length 2.5-3.0 mm. Habitus as in Fig. 28. Coloration: head dark-brown to blackish-brown; pronotum and elytra slightly paler than head, brown to dark-brown; abdomen blackish-brown to black, with the posterior margins of the segments and the apex, often also larger parts of segments III-V paler brown; legs pale brown; antennae dark-brown, usually with the basal antennomeres slightly paler.

Head (Fig. 29) approximately as wide as long or weakly oblong; punctation fine and weakly defined; interstices with distinct microsculpture; eyes moderately small, approximately 0.6-0.7 times as long as postocular region in dorsal view. Maxillary palpi with penultimate palpomere slightly more than twice as long as broad. Antennae gradually incrassate apically; antennomere IV weakly transverse; X approximately 1.5 times as wide as long; XI approximately as long as the combined length of IX and X (Fig. 30).

Pronotum (Fig. 29) approximately 1.25 times as wide as long and 1.25-1.30 times as wide as head, widest slightly behind middle; posterior angles weakly marked; punctation dense, fine, and rather ill-defined; interstices with distinct microsculpture.

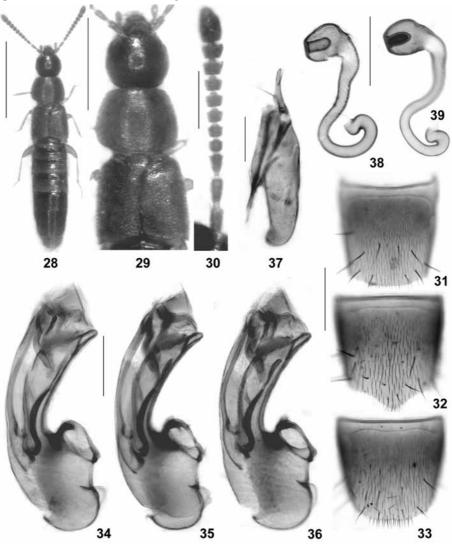
Elytra approximately 0.90-0.95 times as long and 1.1 times as wide as pronotum (Fig. 29); punctation and microsculpture similar to those of pronotum. Hind wings of reduced length, approximately twice as long as elytra. Metatarsomere I about as long as the combined length of II-IV or nearly so.

Abdomen with lateral margins of segments III-VI subparallel, segments VII-IX tapering posteriad; punctation dense and fine on all tergites, almost as dense on tergite VII and VIII as on anterior tergites; microsculpture very shallow; posterior margin of tergite VII with palisade fringe; tergite VIII without evident sexual dimorphism (Fig. 31).

- $\delta$ : posterior margin of sternite VIII distinctly pointed in the middle (Fig. 32); median lobe of aedeagus with pronounced crista apicalis and crista proximalis, and with distinctive internal structures (Figs 34-36); paramere with moderately long apical lobe (Fig. 37).
- $\circ$ : posterior margin of sternite VIII moderately convex, in the middle weakly concave and with stout marginal setae (Fig. 33); spermatheca as in Figs 38-39.

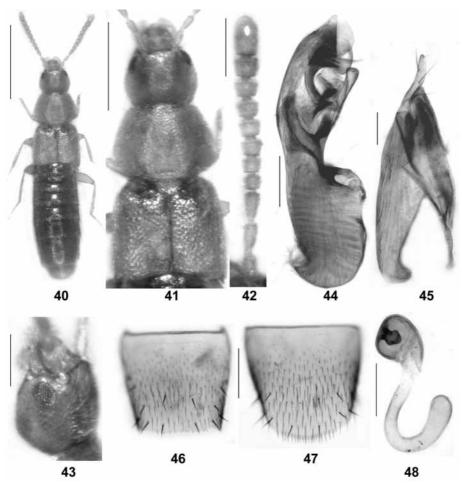
E t y m o l o g y: The name (Latin, adjective: with a rod) refers to the conspicuous dark rod-like structure near the ventral process of the aedeagus (lateral view).

C o m p a r a t i v e n o t e s: The new species is on average slightly smaller and more slender, but otherwise externally indistinguishable from *O. islandica*. Both species are reliably separated only based on the different morphology of the median lobe of the aedeagus and of the spermatheca. For illustrations of the distinctive aedeagus and the spermatheca of *O. islandica* see Figs 49-53.



Figs 28-39: Oxypoda virgata nov.sp.: (28) habitus; (29) forebody; (30) antenna; (31) male tergite VIII; (32) male sternite VIII; (33) female sternite VIII; (34-36) median lobe of aedeagus in lateral view; (37) paramere; (38-39) spermatheca. Scale bars: 28: 1.0 mm; 29: 0.5 mm; 30-33: 0.2 mm; 34-39: 0.1 mm.

D i s t r i b u t i o n a n d b i o n o m i c s: The type specimens were discovered in several localities in Andalucía and one locality in the south of Castilla-La Mancha (Map 2). They were collected by sifting grass roots and leaf litter in various types of oak forest (*Quercus ilex*, etc.) and in pastures with shrubs at altitudes of 600-1850 m. In the Sierra Almadén they were found together with numerous specimens of *Oxypoda magdalenae* FAGEL 1958 and *O. annularis* (MANNERHEIM 1830). One of the females collected in March had a mature egg in the ovaries. For a photograph of the type locality, which is identical to that of a species of *Sunius* STEPHENS 1829 and some other species of Staphylinidae, see figure 19 in ASSING (in press).



**Figs 40-48**: Oxypoda flavissima nov.sp.: **(40)** habitus; **(41)** forebody; **(42)** antenna; **(43)** head in lateral view; **(44)** median lobe of aedeagus in lateral view; **(45)** paramere; **(46)** female tergite VIII; **(47)** female sternite VIII; **(48)** spermatheca. Scale bars: 40: 1.0 mm; 41: 0.5 mm; 42-43, 46-47: 0.2 mm; 44-45, 48: 0.1 mm.

## Oxypoda flavissima nov.sp. (Figs 40-48, Map 3)

T y p e m a t e r i a l : <u>Holotype ♂</u>: "E - Jaén, Alcaudete, Sierra del Ahillo, 29.XII.2006, leg. M. Baena / Holotypus ♂ *Oxypoda flavissima* sp.n. det. V. Assing 2008" (cAss). <u>Paratypes</u>: 1 ♀: "36 Marruecos 60598, Lartamna, afl. Oued Larbaa [ca. 34°14′N, 03°59′W; without further data]" (cAss); 1 ♀: "P. Madeira, 700 m, Roseiro [recte: Rosario], 28, 5.IV.1993, Assing" (cAss); 1♀: "Madeira, Achada do Teixeira, 1350 m, 06.04.93, Wunderle" (cWun).

D e s c r i p t i o n: Body length 2.9-3.4 mm. Habitus as in Fig. 40. Coloration distinctive: whole body, except eyes, uniformly yellowish; middle of abdominal tergite VI occasionally weakly infuscate.

Head (Figs 41, 43) approximately 1.1 times as wide as long; punctation rather dense and very fine, barely distinguishable from the pronounced microreticulation; pubescence short, whitish, and decumbent; eyes moderately small, approximately 0.6-0.7 times as long as postocular region in dorsal view. Maxillary palpi with penultimate palpomere 3-3.5 times as long as broad. Antennae gradually incrassate apically; antennomere IV weakly transverse; X approximately 1.5 times as wide as long; XI approximately as long as the combined length of IX and X (Fig. 42).

Pronotum (Fig. 41) approximately 1.25 times as wide as long and 1.35 times as wide as head, widest slightly behind middle; posterior angles weakly marked; punctation dense, shallow, fine, and partly somewhat ill-defined, but slightly more distinct than that of head; interstices on average narrower than diameter of punctures and with distinct microreticulation; pubescence whitish, short, and decumbent.

Elytra approximately 0.9 times as long and 1.15 times as wide as pronotum (Fig. 41); punctation dense, weakly granulose, and somewhat more distinct than that of pronotum; interstices on average narrower than diameter of punctures and with shallow microsculpture; pubescence similar to that of pronotum. Hind wings apparently fully developed. Metatarsomere I somewhat longer than the combined length of II-III, but shorter than the combined length of II-IV.



Map 3: Distribution of Oxypoda flavissima nov.sp.

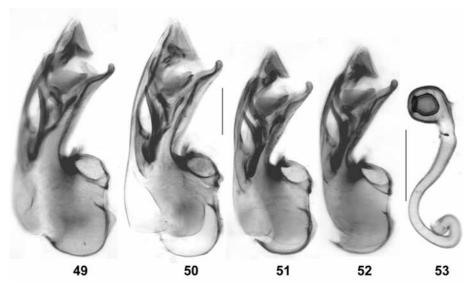
Abdomen with lateral margins of segments III-VI subparallel, segments VII-IX tapering posteriad; punctation moderately dense and extremely fine, barely distinguishable from the distinct microreticulation; posterior margin of tergite VII with palisade fringe; tergite VIII without evident sexual dimorphism (Fig. 46).

- 3: posterior margin of sternite VIII strongly convex, but not distinctly pointed in the middle; median lobe of aedeagus with distinctive internal structures (Fig. 44); paramere with rather short apical lobe (Fig. 45).
- $\varphi$ : posterior margin of sternite VIII moderately convex, in the middle not concave, and with moderately stout marginal setae (Fig. 47); spermatheca as in Fig. 48.

E t y m o l o g y: The name (Latin, superlative of the adjective flava: yellow) refers to the conspicuously yellowish coloration of the body.

C o m p a r a t i v e n o t e s: Its external characters would place *O. flavissima* either in the subgenus *Sphenoma* or in *Bessopora*. It is readily distinguished from all the Western Palaearctic species currently attributed to either of these subgenera by the conspicuous coloration and by the shape of the aedeagus.

D is tribution and bionomics: The four type specimens were found in one locality in Spain, two localities in Madeira, and one locality in Morocco, suggesting that it is widespread in the Western Mediterranean and the Atlantic islands, and that the habitat is cryptic. The Madeiran specimens were collected in April by sifting the litter in an old stand of *Erica arborea* at an altitude of 1350 m and by floating moist grass and moss in a dark stream valley at an altitude of 700 m, respectively.

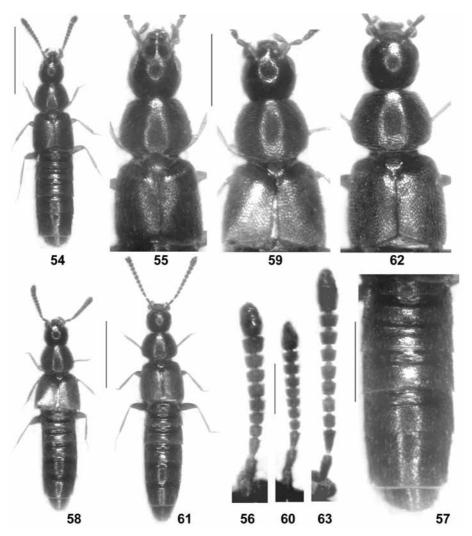


**Figs 49-53**: Oxypoda islandica KRAATZ: (49-52) median lobe of aedeagus of males from Aragón (Spain) (49), Cantabria (Spain) (50), Tunisia (51), and Sicilia (52); (53) spermatheca (Aragón, Spain). Scale bars: 0.1 mm.

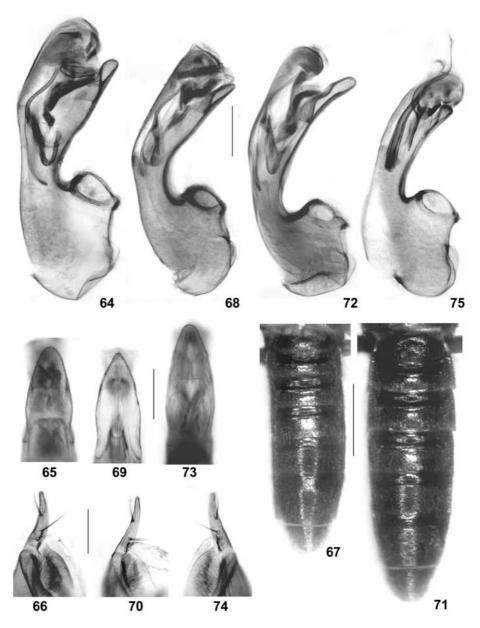
## *Oxypoda telifera* **nov.sp.** (Figs 54-57, 64-66, Map 4)

T y p e m a t e r i a l : <u>Holotype ♂</u>: "E - Andalusien, Umg. Cortez de la Frontera, Meybohm 19.2.2000 / N36°37' W5°26', Penon del Berrueco, 700 m, Korkeichenw. / Holotypus ♂ *Oxypoda telifera* sp.n. det. V. Assing 2008" (cAss). <u>Paratype ♂</u>: same data as holotype (cAss).

D e s c r i p t i o n: Body length 2.8-3.2 mm. Habitus as in Fig. 54. Coloration: head blackish-brown; pronotum and elytra brown to reddish-brown; abdomen blackish-brown, with the apex yellowish-brown; legs yellowish; antennae dark-brown, with antennomeres I-III yellowish-brown.



**Figs 54-63**: *Oxypoda telifera* nov.sp. (**54-57**), *O. imminuta* nov.sp. (**58-60**), and *O. incurvata* nov.sp. (**61-63**): (**54, 58, 61**) habitus; (**55, 59, 62**) forebody; (**56, 60, 63**) antenna; (**57**) abdomen. Scale bars: 54, 58, 61: 1.0 mm; 55, 57, 59, 62: 0.5 mm; 56, 60, 63: 0.2 mm.



Figs 64-75: Oxypoda telifera nov.sp. (64-66), O. imminuta nov.sp. (67-70), O. incurvata nov.sp. (71-74), and O. haemorrhoa (MANNERHEIM) (75): (64, 68, 72, 75) median lobe of aedeagus in lateral view; (65, 69, 73) apical portion of median lobe of aedeagus in ventral view; (66, 70, 74) apical lobe of paramere; (67, 71) abdomen. Scale bars: 67, 71: 0.5 mm; 64-66, 68-70, 72-75: 0.1 mm.

Head (Fig. 55) approximately as wide as long or weakly oblong; punctation moderately sparse and extremely fine, barely noticeable in the distinct microreticulation; eyes large, but weakly convex, approximately as long as postocular region in dorsal view, or slightly longer. Maxillary palpi slender, with the penultimate palpomere approximately 3.5 times as long as broad. Antennae gradually incrassate apically; antennomere III shorter than II; IV weakly transverse; X somewhat longer than IX and approximately 1.5 times as wide as long; XI approximately as long as the combined length of IX and X (Fig. 56).

Pronotum (Fig. 55) approximately 1.25 times as wide as long and 1.35 times as wide as head, widest slightly behind middle; posterior angles weakly marked; punctation and microsculpture similar to those of head.

Elytra approximately 1.05 times as long and 1.2 times as wide as pronotum (Fig. 55); punctation dense and fine, slightly more distinct than that of pronotum; interstices with shallow, but distinct microsculpture and with subdued luster. Hind wings fully developed. Legs of moderately length; metatarsus approximately 0.85 times as long as metatibia, the latter approximately 0.38 mm long; metatarsomere I somewhat longer than the combined length of II-III, but shorter than the combined length of II-IV.

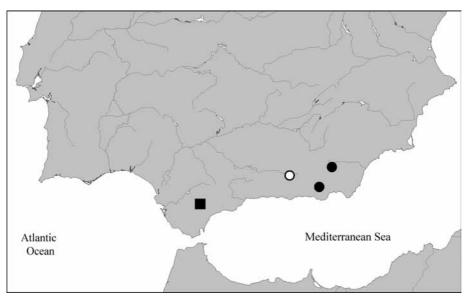
Abdomen with lateral margins of segments III-VI subparallel, segments VII-VIII weakly tapering; punctation fine, but distinct, rather dense on anterior tergites and sparse on posterior tergites; microsculpture shallow, but distinct; posterior margin of tergite VII with palisade fringe; tergite VIII with strongly convex posterior margin (Fig. 57).

 $\delta$ : posterior margin of sternite VIII strongly convex, but not distinctly pointed in the middle; median lobe of aedeagus of distinctive morphology, ventral process rather long and almost straight in lateral view and apically rounded in ventral view; internal sac with moderately long and basally curved flagellum, and with apical sclerotised structures of characteristic shape (Figs 64-65); apical lobe of paramere as in Fig. 66.  $\varphi$ : unknown.

E t y m o l o g y: The name (Latin) is composed of the nouns telum (weapon, gun) and fera (carrier) and refers to the shape of the apical internal structures of the aedeagus.

C o m p a r a t i v e n o t e s: Oxypoda telifera is distinguished from the highly similar O. haemorrhoa (MANNERHEIM 1830), which is currently attributed to the subgenus Bessopora THOMSON 1859, which is widespread and common in the Palaearctic region, and which is also present in Spain (material from northern and southern Spain examined), particularly by larger average size, longer and more massive antennae with less transverse antennomeres IV-X, larger eyes (in O. haemorrhoa usually shorter than postocular region in dorsal view), longer elytra (in O. haemorrhoa usually slightly to distinctly shorter than pronotum), and by the completely different shape and internal structures of the aedeagus (see Fig. 75 for an illustration of the aedeagus of a male of O. haemorrhoa from northern Spain).

D i s t r i b u t i o n a n d b i o n o m i c s : The new species is known only from one locality in the environs of Cortez de la Frontera, Andalucía (Map 4), where the two type specimens were sifted from leaf litter in a cork tree forest at an altitude of 700 m.



**Map 4**: Distributions of *Oxypoda telifera* nov.sp. (square), *O. imminuta* nov.sp. (filled and open circles), and *O. incurvata* nov.sp. (open circle) in southern Spain.

#### *Oxypoda imminuta* nov.sp. (Figs 58-60, 67-70, Map 4)

T y p e m a t e r i a l : Holotype 3: "E - Andalusien, Sierra Nevada, Meybohm 24.2.2000 / N37°7' W3°27', westl. Str. zur Veleta, Bachtal, 1600 m / Holotypus 3 Oxypoda imminuta sp.n. det. V. Assing 2008" (cAss). Paratypes: 13 [slightly teneral]: "E - Andalucía [15], Sierra de los Filabres, S Serón, 1800 m, grassland, 37°15'44"N, 02°30'30"W, 19.III.2008, V. Assing" (cAss); 13: "E - Andalucía [11], W Almeria, Sierra de Gádor, 1720 m, 36°55'20"N, 02°47'53"W, 17.III.2008, C. Andújar & V. Assing" (cAss).

D e s c r i p t i o n: Body length 2.8-3.2 mm. Habitus as in Fig. 58. Coloration: head blackish-brown; pronotum and elytra reddish-brown to dark-brown; abdomen blackish-brown, with the apex yellowish-brown; legs yellowish; antennae dark-brown, with antennomeres I-II paler brown.

Head (Fig. 59) approximately as wide as long or weakly oblong; punctation moderately sparse and fine; interstices with shallow microreticulation; eyes large, but weakly convex, approximately as long as postocular region in dorsal view. Maxillary palpi moderately slender, with the penultimate palpomere approximately 3 times as long as broad. Antennae distinctly incrassate apically; antennomere III shorter than II; IV moderately transverse; VIII-X approximately twice as wide as long; X only slightly longer than IX; XI approximately as long as the combined length of IX and X (Fig. 60).

Pronotum (Fig. 59) 1.20-1.25 times as wide as long and approximately 1.35 times as wide as head, widest slightly behind middle; posterior angles weakly marked; punctation variable, more or less dense and more or less distinct; microsculpture variable, as shallow as that of head.

Elytra approximately 1.05 times as long and 1.2 times as wide as pronotum (Fig. 59); punctation dense and fine; interstices with shallow microsculpture. Hind wings fully

developed. Legs short; metatarsus approximately 0.75 times as long as metatibia, the latter only 0.33-0.35 mm long; metatarsomere I somewhat longer than the combined length of II-III, but shorter than the combined length of II-IV.

Abdomen with lateral margins of segments III-VI subparallel, segments VII-VIII weakly tapering; punctation moderately fine and distinct, slightly less dense on posterior than on anterior tergites; microsculpture very shallow, visible only at higher magnification; posterior margin of tergite VII with palisade fringe; tergite VIII with strongly convex posterior margin (Fig. 67).

3: posterior margin of sternite VIII strongly convex, but not distinctly pointed in the middle; median lobe of aedeagus of distinctive morphology, ventral process rather long and almost straight (lateral view), apically acute (lateral and ventral view), and at base with lateral carinae (Figs 68-69); internal sac with moderately long and almost straight flagellum, and with short apical sclerotised structures; apical lobe of paramere as in Fig. 70.

o: unknown.

E t y m o l o g y: The name (Latin, adjective: shortened) alludes to the short apical internal structures of the aedeagus.

Comparative notes: Like O. telifera, O. imminuta is highly similar to O. haemorrhoa, but distinguished by larger eyes, longer elytra, shorter legs with a relatively shorter metatarsus and a shorter metatarsomere I, more pronounced punctation and shallower microsculpture of the abdomen, and by the completely different shape and internal structures of the aedeagus (see Fig. 75 for an illustration of the aedeagus of O. haemorrhoa). It is separated from similar O. telifera by the distinctly shorter antennae with more transverse antennomeres IV-X, the shallower microsculpture on the whole body, the shorter metatibia and metatarsus, and by the different shape (ventral process apically acute and basally with pronounced lateral carinae; smaller size; crista apicalis less pronounced) and internal structures (apical sclerotised structures much smaller; flagellum almost straight) of the aedeagus.

Distribution and bionomics: The new species was collected in the Sierra Nevada, as well as in the adjacent Sierra de los Filabres and Sierra de Gádor (Andalucía) (Map 4) at altitudes of 1600-1800 m. The paratype from the Sierra de los Filabres was sifted from grass roots in a pasture with shrubs, together with the type specimens of Geostiba filabresica (see above). The paratype from the Sierra de Gádor was floated from soil in grassland with shrubs and scattered trees.

#### *Oxypoda incurvata* nov.sp. (Figs 61-63, 71-74, Map 4)

Type material: Holotype 3: "E - Andalusien, Sierra Nevada, Meybohm 24.2.2000 / N37°7' W3°27', westl. Str. zur Veleta Bachtal 1600 m./ Ustl. 7' W3°27', westl. Str. zur Veleta, Bachtal, 1600 m / Holotypus & Oxypoda incurvata sp.n. det. V. Assing 2008" (cAss).

Description: Body length 3.4 mm. Habitus as in Fig. 61. Coloration: head blackish-brown; pronotum dark-brown; elytra brown; abdomen blackish-brown, with the apex (posterior 1/3 of segment VIII and segments IX-X) yellowish-brown; legs brownish; antennae completely dark-brown.

Head (Fig. 62) of subcircular shape and slightly wider than long; punctation moderately sparse and extremely fine, barely noticeable; interstices with distinct microreticulation; eyes large, but weakly convex, slightly longer than postocular region in dorsal view. Maxillary palpi slender, with the penultimate palpomere approximately 3.5 times as long as broad. Antennae long and slender, weakly incrassate apically; antennomere III almost as long as II; IV and V approximately as long as wide; VI-VIII weakly transverse; IX-X approximately 1.5 times as wide as long; XI conspicuously oblong, approximately as long as the combined length of VIII-X (Fig. 63).

Pronotum (Fig. 62) approximately 1.35 times as wide as long and almost 1.45 times as wide as head, widest slightly behind middle; posterior angles weakly marked; punctation very fine, but slightly more distinct than that of head; interstices with distinct microreticulation and subdued luster.

Elytra approximately 1.05 times as long and 1.2 times as wide as pronotum (Fig. 62); punctation dense and fine, much more distinct than that of head and pronotum; interstices with shallow microreticulation and subdued luster. Hind wings fully developed. Legs moderately long; metatarsus approximately 0.8 times as long as metatibia, the latter 0.4 mm long; metatarsomere I approximately as long as the combined length of II-IV.

Abdomen with lateral margins of segments III-VI subparallel, segments VII-VIII weakly tapering; punctation very fine and dense, slightly less dense on posterior than on anterior tergites; microsculpture distinct everywhere; posterior margin of tergite VII with palisade fringe; tergite VIII with convex posterior margin (Fig. 71).

 $\delta$ : posterior margin of sternite VIII strongly convex, but not distinctly pointed in the middle; median lobe of aedeagus of distinctive morphology, ventral process long in relation to basal capsule, weakly curved and slender (lateral view); crista apicalis relatively small; internal sac with moderately long and almost straight flagellum, and with strongly bent apical sclerotised structures (Figs 72-73); apical lobe of paramere as in Fig. 74.

E t y m o l o g y: The name (Latin, adjective: curved) alludes to the shape of the apical internal structures of the aedeagus.

C o m p a r a t i v e n o t e s: This species is distinguished from the similar O. telifera, O. imminuta, and O. haemorrhoa particularly by the shape and internal structures of the median lobe of the aedeagus and additionally by the much longer and more slender antennae with a much more oblong antennomere XI, by the more transverse pronotum, and by the longer metatarsomere I.

Distribution and bionomics: Oxypoda incurvata is known only from the type locality in the Sierra Nevada (Andalucía), which is identical to that of O. imminuta (Map 4). The holotype was collected in a stream valley at an altitude of 1600 m.

#### Acknowledgements

I am most grateful to Manuel Baena, Carmelo Andújar (Murcia), José Luis Lencina (Jumilla), and Heinrich Meybohm (Großhansdorf) for the generous gift of their staphylinid by-catches. Benedikt Feldmann (Münster) proof-read the manuscript.

## Zusammenfassung

Proteinus lencinai nov.sp. (Spanien: Murcia), Paraleptusa andujari nov.sp. (Spanien: Sierra de Segura), Geostiba simaica nov.sp. (Spanien: Sierra de Segura), G. filabresica nov.sp. (Spanien: Andalucía: Sierra de Filabres), Oxypoda virgata nov.sp. (Spanien: Andalucía, Castilla-La Mancha), O. flavissima nov.sp. (Spanien; Marokko; Portugal: Madeira), O. telifera nov.sp. (Spanien: Andalucía), O. imminuta nov.sp. (Spanien: Andalucía) und O. incurvata nov.sp. (Spanien: Andalucía) werden beschrieben und abgebildet. Folgende Synonymisierungen werden vorgenommen: Oxypoda islandica KRAATZ 1857 = O. steineri SCHEERPELTZ 1958, nov.syn., = O. castillana FAGEL 1958, nov.syn., = O. lativentris FAGEL 1958, nov.syn., = O. insidiosa PACE 1988, nov.syn. Nachweise seltener Staphylinidenarten, darunter zwei Erstnachweise, werden aus Spanien gemeldet. Die derzeit bekannte Verbreitung von neun Arten wird anhand von Karten illustriert.

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Zeitschrift/Journal: Linzer biologische Beiträge

Jahr/Year: 2008

Band/Volume: 0040\_2

Autor(en)/Author(s): Assing Volker

Artikel/Article: Nine new species and additional records of Staphylinidae from

southern Spain, with new synonymies (Insecta: Coleoptera) 1301-1325