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The genus *Phloeocharis* MANNERHEIM in the southern and western Iberian Peninsula (Coleoptera: Staphylinidae, Phloeocharinae)

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A b s t r a c t : *Phloeocharis estrelae* sp. n. (Portugal: Serra da Estrela) and *P. bermejae* sp. n. (Spain: Sierra de Bermeja), the first species of the genus from the south of the Iberian Peninsula, are described, illustrated, and distinguished from their West Mediterranean congeners. Their distributions are mapped.

K e y w o r d s : Coleoptera, Staphylinidae, Phloeocharinae, *Phloeocharis*, West Palaearctic region, Europe, Spain, Portugal, taxonomy, new species.

Introduction

The Holarctic genus *Phloeocharis* currently includes 37 species, 36 of them from the Western Palaearctic and one from the Nearctic region (HERMAN 2001). The vast majority of species has been described from Western Europe and the Western Mediterranean. Except for the widespread European *P. subtilissima* MANNERHEIM, all the species have restricted distributions, many of them are characterized by adaptive reductions of eyes, hind wings, and pigmentation. Six endemic species have been recorded from Northwest Africa (one from Morocco, the remainder from Algeria and Tunisia). 15 *Phloeocharis* species are listed for northern Spain and the French and Spanish Pyrénées (*P. subtilissima* not considered); only one species has become known from northern Portugal (surroundings of Porto) (HERMAN 2001, SCHEERPELTZ 1951, COIFFAIT 1956). In view of these figures and distribution patterns, it did not come as a surprise when, during several recent field trips to the south of the Iberian Peninsula, it was discovered that the genus is also represented in southern Spain and central Portugal by at least two micropterous and apparently endemic representatives.

Material, measurements, and abbreviations

The material referred to in this study is deposited in the following collections:

MHNG..... Muséum d'histoire naturelle, Genève
NHMW..... Naturhistorisches Museum Wien

OÖLM..... Oberösterreichisches Landesmuseum Linz/Biologiezentrum Linz
cAss ..... author's private collection
cFel ..... private collection Benedikt Feldmann, Münster
cSch ..... private collection M. Schülke, Berlin
cWun..... private collection P. Wunderle, Mönchengladbach

The following abbreviations are used for the measurements, which are given in mm:

AL: length of antenna; HW: head width; PW: maximal width of pronotum; PL: length of pronotum along median line; EL: length of elytra from apex of scutellum to posterior margin; EW: combined width of elytra; AW: maximum width of abdomen; ML: length of aedeagus from apex of ventral process to base; TL: total length.

Phloeocharis estrelae sp. n. (Figs. 1-6; Map 1)

Holotype ♂: P - Serra da Estrela, 14, NW Manteigas, 1420m, under stones, 40°26'13N, 7°34'55WW, 20.III.2002, leg. Lompe / Holotypus ♂ *Phloeocharis estrelae* sp. n. det. V. Assing 2003 (cAss). Paratypes: 6♂♂, 6♀♀: same data as holotype; 5♂♂, 3♀♀, same data as holotype, but leg. Meybohm; 1♀: P- Serra da Estrela, No. 7, S Manteigas, 1073m, bushes, under stones, 40°21'20N, 7°33'39W, 18.III.2002, leg. Lompe (paratypes in MHNG, NHMW, OÖLM, cAss, Fel, cSch, cWun).

Description: Measurements (in mm) and ratios (range): AL: 0.39 - 0.44; HW: 0.27 - 0.30; PW: 0.33 - 0.37; PL: 0.26 - 0.28; EL: 0.20 - 0.22; EW: 0.35 - 0.39; AW: 0.34 - 0.39; ML: 0.32 - 0.33; TL: 1.3 - 1.8; PW/HW: 1.22 - 1.29; PW/PL: 1.29 - 1.36; EL/PL: 0.74 - 0.79; EW/PW: 1.00 - 1.06; AW/EW: 0.98 - 1.00.

Very small species (see measurements); facies as in Fig. 1. Pigmentation reduced, coloration of whole body uniformly testaceous.

Head with distinct microreticulation and almost matt; puncturation extremely fine and sparse, barely noticeable; eyes of reduced size, composed of approximately 10 ommatidia (Fig. 2). Antennae rather short (see measurements); antennomeres I and II oblong and of subequal length and width; III weakly oblong, distinctly narrower and shorter than I and II; IV small, shorter than III, and about as wide as long; V - IX of increasing width and increasingly transverse; IX more than twice as wide as long; X slightly wider than IX, about 1.5 times as long as IX and consequently less transverse; XI only slightly longer than wide.

Pronotum distinctly wider than head and transverse (see ratios PW/HW, PW/PL, and Fig. 2); maximum width about in the middle; lateral margins weakly convex in dorsal view; posterior angles obtuse, but well-marked; posterior margin straight; microsculpture and puncturation similar to those of head.

Elytra about as wide as, at suture distinctly shorter than pronotum (see ratios EW/PW, EL/PL, and Fig. 2); posterior margin convex; microsculpture shallower than that of head and pronotum, surface consequently with more shine; puncturation fine, but more distinct than that of head and pronotum, weakly granulose. Hind wings completely reduced. Legs relatively short and with rather short tarsi.

Abdomen approximately as wide as combined width of elytra (see ratio AW/EW and Fig. 1); individual segments less transverse than in *P. subtilissima*; with distinct microreticulation and subdued shine; puncturation extremely fine and relatively sparse; posterior margin of tergite VII without palisade fringe.

♂: sternites VII and VIII unmodified; aedeagus as in Figs. 3 - 6.

Etymology: The name (noun, genitive) is derived from the Serra da Estrela, where the type locality is situated.

Comparative notes: From the widespread *P. subtilissima*, which, too, is present in Portugal, and from the geographically closest endemic congener, *P. nevesi* SCHEERPELTZ from northern Portugal, the new species is readily distinguished by much smaller body size and the reduced eyes, wings, and pigmentation. *P. recidiva* PEYERIMHOFF from the Moroccan Haut Atlas, which is similarly small, is very weakly microsculptured and consequently more shining, and has much longer elytra (longer than pronotum).

Distribution and bionomics: The reduced eyes, wings, and pigmentation, as well as the altitude of the type locality suggest that *P. estrelae* is endemic to the Serra da Estrela in northern central Portugal (Map 1). It was collected in open habitats with sparse shrub vegetation and bushes under stones at elevations of 1073 and 1420 m.

***Phloeocharis bermejae* sp. n. (Figs. 7 - 12; Map 1)**

Holotype ♂: E. Andalusien (MA), Sierra de Bermeja, Umg. Ronda, 1000m, 26.III.1994, Assing, 21 / Holotypus ♂ *Phloeocharis bermejae* sp. n. det. V. Assing 2003 (cAss). Paratypes: 8♂♂, 5♀♀: same data as holotype; 4♂♂, 14♀♀, same data as holotype, but leg. Wunderle (MHNG, NHMW, OÖLM, cAss, Fel, cSch, cWun).

Description: Measurements (in mm) and ratios (range): AL: 0.53 - 0.60; HW: 0.32 - 0.35; PW: 0.42 - 0.48; PL: 0.32 - 0.35; EL: 0.27 - 0.32; EW: 0.42 - 0.49; AW: 0.42 - 0.48; ML: 0.54 - 0.57; TL: 1.9 - 2.4; PW/HW: 1.33 - 1.43; PW/PL: 1.33 - 1.41; EL/PL: 0.86 - 0.91; EW/PW: 0.97 - 1.03; AW/EW: 0.97 - 1.02.

Species of moderate size (see measurements); facies as in Fig. 7. Pigmentation reduced, coloration of whole body ferrugineous.

Head with distinct microreticulation and almost matt; puncturation extremely fine and sparse, barely noticeable; eyes rather large (only slightly smaller than in *P. subtilissima*) and distinctly projecting from lateral outline of head. Antennae of similar relative length as in *P. subtilissima* (see measurements); antennomeres I and II oblong and of subequal length and width; III at least about 1.5 times as long as wide, distinctly narrower and shorter than I and II; IV - VI small, shorter than III, about as wide as long or weakly oblong, gradually increasing in width; VII weakly transverse; VIII - IX distinctly transverse, about 1.5 - 2.0 times as wide as long; X longer and slightly wider than IX, less transverse than IX; XI weakly oblong.

Pronotum distinctly wider than head and rather strongly transverse (see ratios PW/HW, PW/PL, and Fig. 8); maximum width about in the middle; lateral margins distinctly convex in dorsal view; posterior angles obtuse, but well-marked; posterior margin straight; microsculpture and puncturation similar to those of head.

Elytra about as wide as, at suture somewhat shorter than pronotum (see ratios EW/PW, EL/PL, and Fig. 8); posterior margin convex; microsculpture shallower than that of head and pronotum, surface consequently with more shine; puncturation fine, but more distinct than that of head and pronotum, finely granulose. Hind wings reduced. Legs of similar relative length as in *P. subtilissima*, but with stouter metafemora and with slightly longer metatibiae.

Abdomen approximately as wide as combined width of elytra (see ratio AW/EW and Fig. 7); individual segments as transverse as in *P. subtilissima*; with shallow

microsculpture and some shine; puncturation extremely fine, barely noticeable; posterior margin of tergite VII without palisade fringe.

♂: sternites VII and VIII unmodified; aedeagus as in Figs. 9 - 12.

Etymology: The name (noun, genitive) is derived from the Sierra de Bermeja, where the type locality is situated.

Comparative notes: *Phloeocharis bermejae* is readily separated from *P. subtilissima* by the uniformly ferrugineous coloration, by the much shorter elytra, and by the reduced hind wings alone. The geographically closest endemic congeners, *P. recidiva* from Morocco and *P. estrelae* from Portugal are easily distinguished by the smaller size, the longer elytra, and the more shallow microsculpture (*P. recidiva*), or by the smaller size, lighter coloration, much smaller eyes, relatively narrower (in relation to head) and less transverse pronotum, shorter elytra, less transverse abdominal segments, and distinctly smaller aedeagus (*P. estrelae*).

Distribution and bionomics: *Phloecharis bermejae* is probably endemic to the Sierra de Bermeja, as can be inferred from the reduced wings and pigmentation. The types were sifted from litter and soil in a pine forest near Pto. de Peñas Blancas at an altitude of 1000 m.

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Zusammenfassung

Phloeocharis estrelae sp. n. (Portugal: Serra da Estrela) und *P. bermejae* sp. n. (Spain: Sierra de Bermeja), die erste Art der Gattung aus dem Süden der iberischen Halbinsel, werden beschrieben und von anderen Arten des westlichen Mittelmeergebiets unterschieden; wesentliche Differentialmerkmale werden abgebildet. Die Verbreitung der beschriebenen Arten wird anhand einer Karte illustriert.

References

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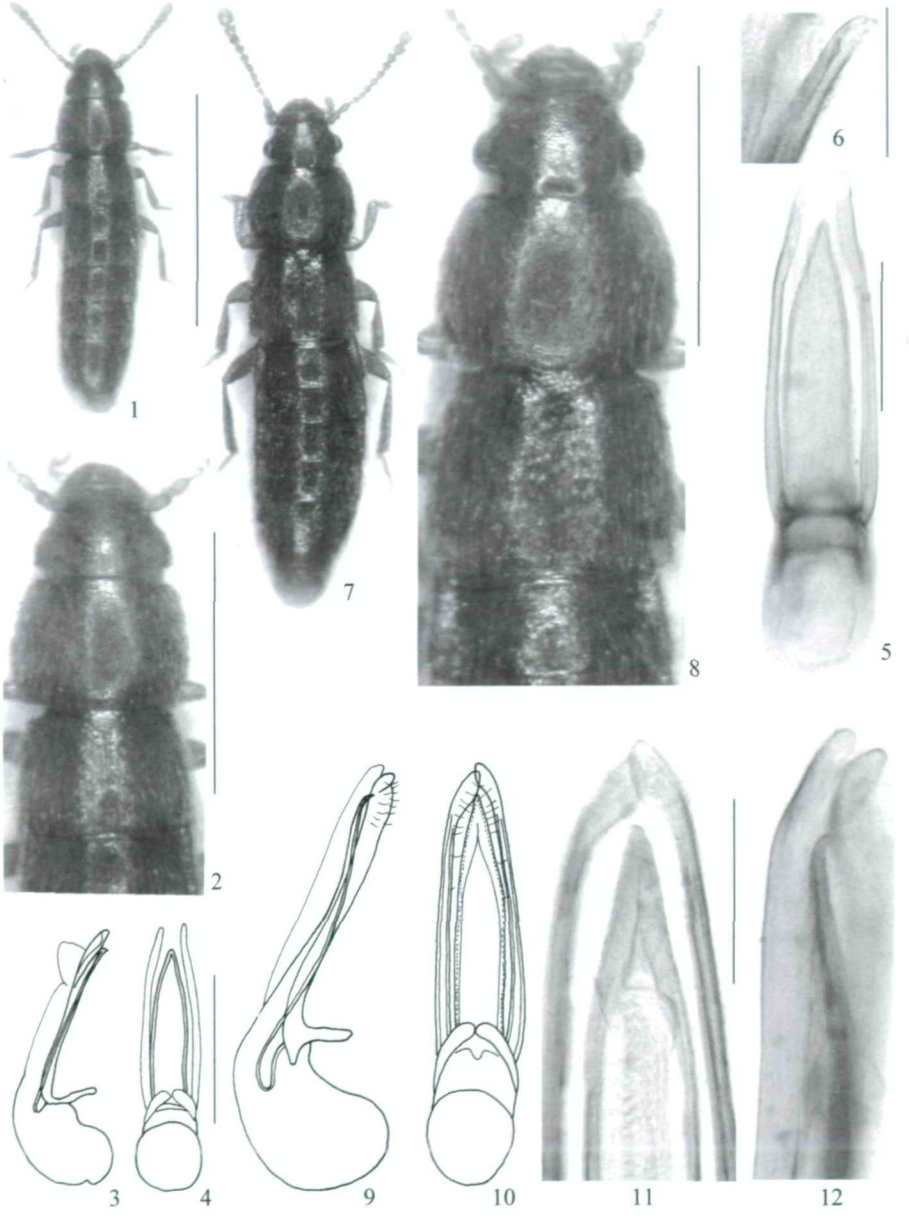

Figs. 1-12: *Phloeocharis estrelae* sp. n. (**1 - 6**) and *P. bermejae* sp. n. (**7 - 12**): **1, 7** – ♂ holotype; **2, 8** – forebody; **3-5, 9-10** – aedeagus in lateral and in ventral view; **6, 11-12** – apical part of aedeagus in lateral and in ventral view. Scale bars: 1, 7: 1.0 mm; 2, 8: 0.5 mm; 3-4, 9-10: 0.2 mm; 5, 11-12: 0.1 mm; 6: 0.05 mm.

Map 1: Distributions of *Phloeocharis estrelae* sp. n. (filled circles) and *P. bermejae* sp. n. (open circle).