

ORBELLIA INFLATA SP. N.: A NEW HELEOMYZID SPECIES FROM SPAIN (DIPTERA, HELEOMYZIDAE)

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Abstract: A new heleomyzid species, *Orbellia inflata* sp. n., is described from Spain. It is characterised by its extremely dilated mid femora.

Key words: Diptera, Heleomyzidae, *Orbellia inflata*, new species, Spain.

***Orbellia inflata* sp. n.: especie nueva de heleomicido de España (Diptera, Heleomyzidae)**

Resumen: Se describe una especie nueva de heleomicido, *Orbellia inflata* sp. n., de España. Se caracteriza por sus fémures medios extremadamente dilatados.

Palabras clave: Diptera, Heleomyzidae, *Orbellia inflata*, especie nueva, España

Taxonomy/Taxonomía: *Orbellia inflata* sp.n.

Introduction

Orbellia Robineau-Desvoidy, 1830 is a Palaearctic genus of the family Heleomyzidae with 11 known species, 6 of which are known to occur in Europe and 2 in the Iberian Peninsula (Spain) (Carles-Tolrá & Báez, 2002). According to Papp (1998) this genus is characterized by the following features: proepisternal bristle always present, mid tibia with two ventroapical bristles, prosternum bare, wings very long, costal vein with long thick setae, 2+3-4 pairs of dorsocentrals and anepisternum with a strong anterior bristle.

During the Easter Week of 2004, a collecting trip to Extremadura Autonomous Community (Spain) was performed by the authors. Several Natural Parks and Reserves were visited and a set of Malaise traps were placed in these sites. One of the selected places was Garganta de los Infernos Natural Reserve (Valle del Jerte, Cáceres province), where 4 Malaise traps were placed trying to encompass the most important vegetation and climatic/altitudinal areas. These traps were run continuously over a year period and a lot of Diptera specimens were collected. Among all this material a specimen of genus *Orbellia* appeared, it belongs to a new species and is described below.

***Orbellia inflata* sp.n.**

Fig. 1-7.

DESCRIPTION: A dark brown species (Fig. 1)

Head (Fig. 1) dark brown, frons brownish anteriorly, face brown, gena brownish, haired, occiput and postgena dark brown. Palpi brown. Chaetotaxy: 2 orbitals, 2 verticals (anterior inwards, posterior outwards), 2 ocellars, 1 postvertical (crossed), 1 vibrissa. Antenna brown, arista pubescent.

Thorax (Fig. 1) dark brown, mesonotum with grey stripes along dorsocentral rows, pleurae dark brown, with grey tomentose. Scutellum dark brown. Chaetotaxy: 1 post-

pronotal, 2 notopleurals, 1 presutural, 1 supraalar, 2 postalar, 2+4 dorsocentrals (dorsocentrals increasing posteriorly, posterior dorsocentral very long, twice long than penultimate one), 3 acrostichal rows (posteriorly somewhat irregulars), acrostichal prescutellar longer, 2 scutellars (apicals very long, basals less than half long and somewhat internal), 1 proepisternal, anepisternum bare, with only 1-2 small anterior hairs (just behind the proepisternal), anepimeron bare, 1 katapisternal.

Legs (Figs 1-3) dark brown. Fore femur apically, fore tibia proximally, mid tibia proximally and hind tibia basally brownish. Mid and hind legs without bristles. Fore femur with a dorsal and ventral row of long hairs. Mid femur (Figs 2, 3) extremely dilated, inflated (width = 0.475 mm, proportion among mid femur:frons:length of scutellum = 10:11:7). Fore tibia with short hairs, only preapical dorsal longer. Mid tibia with a ventral crown of strong blackish apical spurs and 3 short, but strong, dorsal preapical bristles. Hind tibia with a long dorsal preapical hair. Apex of hind tibia ventrally and 2 first tarsomeres with a dense brush of short, yellowish hairs. Tarsi brown, somewhat darker apically; tarsomere 1 of fore and hind tarsi with a ventroapical projection; tarsomere 5 of fore leg somewhat dilated.

Wing (Fig. 4) brownish, veins brown, costal basal bristle long, anal vein long, reaching wing margin. Haltere yellowish.

Abdomen (Fig. 1) dark brown, with long hairs, those of posterior margins of tergites longer. Sternites dark brown, long haired.

Genitalia (Figs 5, 7) brown. Epandrium long haired; surstylus (Figs 5, 6) rhomboidal, cusped, with short hairs anteriorly. Aedeagus (Figs 5, 7) pointed apically. Cercus (Figs 5, 7) brownish, haired, with 5 long apical hairs.

Total body length: 3.8 mm, wing 4.5 mm.

TYPE MATERIAL (1 ♂): Holotype ♂: SPAIN: Cáceres, Tornavacas, Reserva Natural (= Natural Reserve) Garganta de los Infiernos, Garganta (= gorge) de San Martín, arroyo (= stream) la Quemá, 1250 m, 40° 15' 00.40" N, 5° 39' 37.85" O, 15-30.1.2005, Malaise trap in an oak forest right next to a stream, D. Ventura and M. Carles-Tolrá leg.

Holotype not dissected. Type material preserved in alcohol (70°) and deposited in the collection of the first author (MC-T).

DISCUSSION: *Orbellia inflata* sp.n. is very easily distinguished from the other *Orbellia* species by its extremely dilated mid femora, as well as by the genitalia. No other *Orbellia* species known has such a highly inflated mid femora as this new species (Czerny, 1924, 1927, 1930; Gorodkov, 1972, 1988).

BIOLOGY: unknown. The specimen was collected with Malaise trap in winter (January) and in a mountainous locality at moderate altitude (1250 m). According to Hågvar & Greve (2003) and Soszyńska-Maj & Woźnica (2016), Heleomyzidae is one of the families of Diptera with the best adaptation to low temperatures. Recent studies on necrophilous dipterans in winter have shown that there are several species of Heleomyzidae that lay eggs on carcasses, displaying winter activity (Carles-Tolrá, 2011; Carles-Tolrá & Prado e Castro, 2011; Carles-Tolrá *et al.*, 2011). Also, according to Soszyńska-Maj & Woźnica (2016), Heleomyzidae species with winter occurrence and necrophagous larvae, like *Orbellia* spp., prefer grassy and steppe areas. In contrast to this finding, our Malaise trap was placed in an oak forest right next to a stream.

DISTRIBUTION: hitherto only known from western Spain.

ETYMOLOGY: the specific name refers to the extremely dilated, inflated mid femora.

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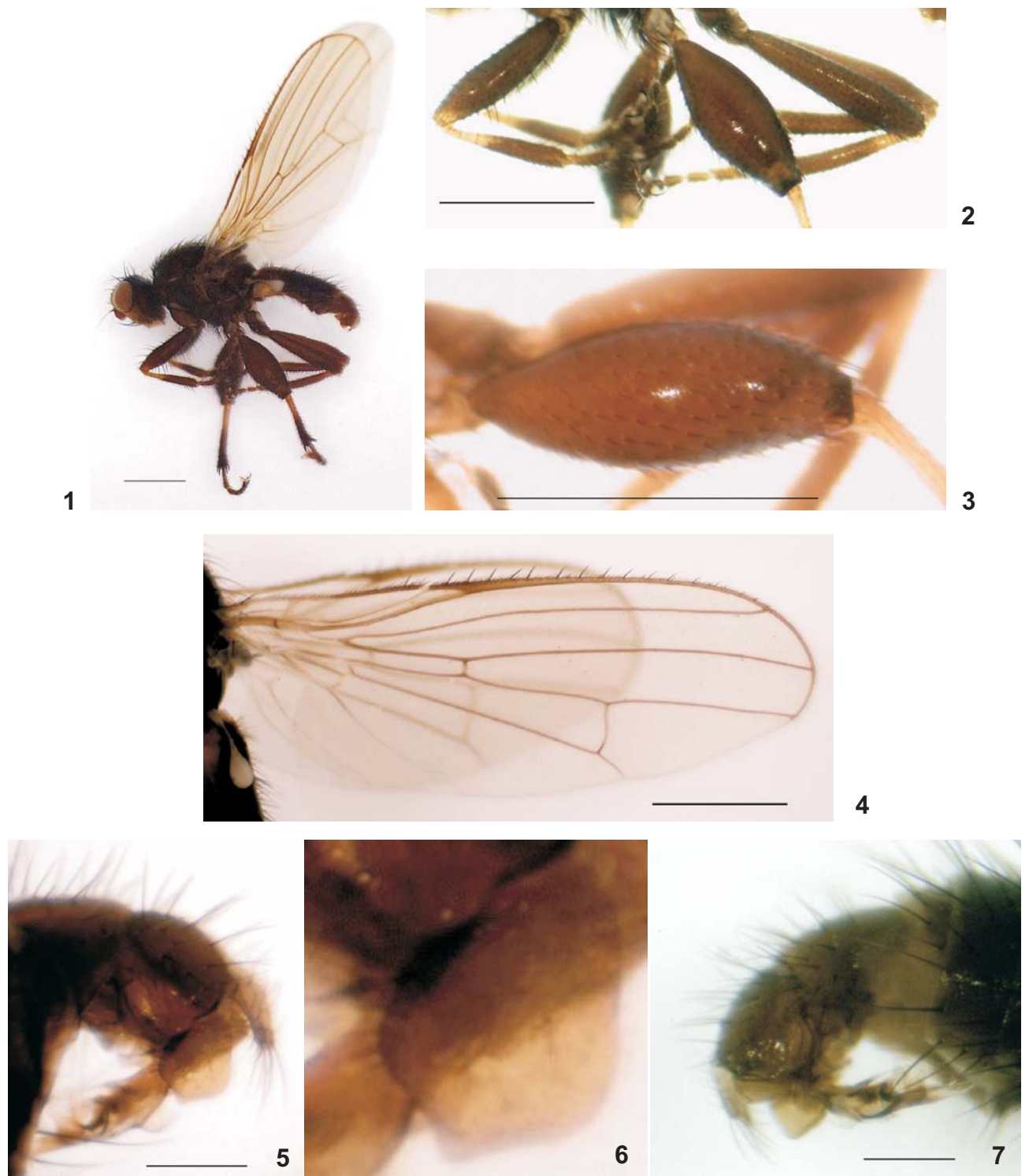


Fig. 1-7. *Orbellia inflata* sp.n. (Holotype male): 1) habitus, 2) legs, 3) mid femur, anterior view, 4) wing, 5) genitalia, left side, 6) left surstylus, detail, dorsolateral view, 7) genitalia, right side. Scale bars: 1-4 = 1 mm, 5, 7 = 0.2 mm.