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## Nine new species of Phoridae (Insecta: Diptera) from Spain

CARLOS GARCÍA-ROMERA<sup>1</sup> & JOSE ANTONIO BARRIENTOS

*Departamento de Biología Animal, de Biología Vegetal y de Ecología (Unidad de Zoología); Facultad de Ciencias; Universidad Autónoma de Barcelona; E-08193 Bellaterra, Barcelona; Spain*

<sup>1</sup>Corresponding author. E-mail: [cgarci24@xtec.cat](mailto:cgarci24@xtec.cat)

### Abstract

One new species of *Triphleba* Rondani and eight new species of *Megaselia* Rondani are described from Montseny Natural Park (mainland Spain). The new species are *Megaselia arbuciensis* García-Romera **sp. nov.**, *Megaselia barrientosi* García-Romera **sp. nov.**, *Megaselia callunae* García-Romera **sp. nov.**, *Megaselia carminis* García-Romera **sp. nov.**, *Megaselia ivanisi* García-Romera **sp. nov.**, *Megaselia longianalis* García-Romera **sp. nov.**, *Megaselia montseniensis* García-Romera **sp. nov.**, *Megaselia sarae* García-Romera **sp. nov.**, *Triphleba beatricis* García-Romera **sp. nov.**

**Key words:** Diptera, Phoridae, *Triphleba*, *Megaselia*, new species, Montseny, Spain

### Introduction

The scuttle flies (Diptera: Phoridae) of Spain are still poorly known when compared to other European countries such as United Kingdom or Germany, where more than 300 species have been reported. The most recent catalogue of the Diptera of Spain, which includes both mainland Spain and the Canary and Balearic Isles, lists 214 species (García Romera & Baez, 2002). Subsequent additions have cited 22 new records and new species (Disney & Prescher, 2003; Disney & Blasco-Zumeta, 2004; Carles-Tolrà, 2006a,b,c, 2011a,b; Disney, 2006a,b,c, 2009, 2011a, 2012; Disney & Pagola-Carte, 2009; Disney & Franquinho Aguiar, 2010; Disney *et al.*, 2010; Carles-Tolrà & García Romera, 2011).

The genus *Triphleba* Rondani includes about 90 species around the world, except the Afrotropical Region (Disney, 1994). 56 species are known in Europe (Disney, 1991; Weber & Prescher, 2013; Carles-Tolrà & García Romera, 2011) and 12 species were listed in the most recent catalogue of Spain (García Romera & Baez, 2002). Subsequent studies have recorded 3 species (Carles-Tolrà, 2006c, 2011b) and have described a new species for this genus (Carles-Tolrà & García Romera, 2011).

The giant genus *Megaselia* Rondani includes around 1500 species, about the half of the known Phoridae. More than 400 species are recorded from Europe (Disney, 1999, 2008) and 155 species have been reported in Spain (García Romera & Baez, 2002) (128 mainland Spain and 55 Canary and Balearic Islands); subsequent additions, including new species and new records, have increased the number in 10 species (Disney 2009, 2011a, 2012; Disney & Pagola-Carte, 2009; Disney *et al.*, 2010).

In this paper, nine new species are described, belonging to the genera *Triphleba* Rondani and *Megaselia* Rondani.

### Material and methods

The material were collected by José Antonio Barrientos in Montseny Natural Park (Catalonia, North East Spain), an UNESCO biosphere reserve, between March 1990 and March 1991 using window, water and pitfall traps. Traps were placed in three plots located in a beech (*Fagus sylvatica* L.) forest. Two plots were located in Montseny (Barcelona), at 1130 m a.s.l. (UTM 31TDG530274) and at 1170 m a.s.l. (UTM 31TDG532273), respectively, while

apart from the antero-dorsal, and a short anterior apical one (0.050–0.095 mm long) placed 0.32–0.40 mm from the first bristle. Hind legs with two antero-dorsal bristles on tibia, upper one (0.15–0.18 mm long), near end of basal third, and a preapical one shorter (0.065–0.085 mm long), 0.42–0.52 mm far apart from each other.

Wing. Length 2.52–2.88 mm. Membrane tinged grey-brown and veins brown. Subcosta (Sc) reaching  $R_1$ . Vein  $R_s$  forked ( $R_{2+3}$  present). One axillary bristle. Costal index 0.53–0.62; Costal ratios 2.3–2.7:1.4–1.6:1. One hair present at base of vein  $R_s$ , 0.07 mm long. Vein  $A_2$  incomplete, without apical third. Second and third costal sections, gradually broadens to the end. Costal cilia (of section 3) 0.09–0.10 mm long, shorter than axilar bristle (0.15–0.19 mm). Knob of haltere yellow.

**Recognition.** In the keys to *Triphleba* species of the British Isles (Disney, 1983) it runs to couplet 10, to *Triphleba luteifemorata* (Wood), with a similar hypopygium to the new species but the shape of epandrial processes (left and right) and the cercus size differs in both species. In the keys of Palaearctic species of *Triphleba* (Schmitz *et al.*, 1938–81) it runs to couplet 49, on page 142, to *T. luteifemorata* too.

**Material examined. Holotype** ♂ Spain, Girona: Arbucias, Montseny Natural Park, beech forest, UTM 31TDG540279, 1250 m a.s.l., 27/12/1990–20/01/1991. Window trap. J.A. Barrientos leg (UAB).

**Paratypes** 3 ♂, one same date, locality and habitat as holotype and two others Barcelona: Montseny, Montseny Natural Park, beech forest, UTM 31TDG530274, 1130 m a.s.l., 05–17/11/1990. Window trap. J.A. Barrientos leg (UAB and CCG-R).

**Note.** Another species of *Megaselia* was going to describe in this paper when R.H.L. Disney comunicated us which this species is currently described in a paper based on specimens from Italy (Disney, Weber & Prescher, in press). The data of captured specimens in our survey is cited below.

**Material examined:** Spain, Barcelona: Montseny, Montseny Natural Park. 2 ♂ *Juniperus* scrubland, UTM 31TDG530256, 1620 m a.s.l., 27/06–07/07/1990, one window trap and one water trap; 1 ♂ *Calluna* scrubland, UTM 31TDG542245, 1520 m a.s.l., 27/06/1990, water trap; 2 ♂ beech forest, UTM 31TDG530274, 1130 m a.s.l., one water trap (17/06/1990) and one window trap (01–14/07/1990); 4 ♂ beech forest, UTM 31TDG532273, 1170 m a.s.l., window trap, one 02–16/06/1990 and three 16/06–01/07/1990. J.A. Barrientos leg (UAB).

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