

ARTIGO / ARTÍCULO / ARTICLE

Description of the male of *Archicera avarorum* Szilády, 1934, and two new genera and species for Spain (Diptera: Rhagionidae)

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Abstract: The male of the very rare *Archicera avarorum* Szilády, 1934 (Diptera: Rhagionidae) is described and the species is recorded from Spain for the first time. Furthermore, another rhagionid, *Ptiolina obscura* (Fallén, 1814), is also recorded from Spain for the first time and new figures of its male genitalia are given.

Key words: Diptera, Rhagionidae, *Archicera avarorum*, male description, *Ptiolina obscura*, faunistics, Spain.

Resumen: Descripción del macho de *Archicera avarorum* Szilády, 1934, y dos géneros y especies nuevos para España (Diptera: Rhagionidae). Se describe el macho del rarísimo *Archicera avarorum* Szilády, 1934 (Diptera: Rhagionidae) y la especie se cita de España por primera vez. Además, también se cita por primera vez de España otro ragiónido, *Ptiolina obscura* (Fallén, 1814), y se dan figuras nuevas de su genitalia masculina.

Palabras clave: Diptera, Rhagionidae, *Archicera avarorum*, descripción del macho, *Ptiolina obscura*, faunística, España.

Recibido: 9 de enero de 2021

Publicado on-line: 17 de enero de 2021

Aceptado: 13 de enero de 2021

Introduction

The rhagionids (Snipeflies) are often colourful, conspicuous species, but not very abundant in collections, excepting a few species. Adults are mainly related to humid zones and/or water courses on foliage and tree trunks. It is a family of lower Brachycera generally easily distinguished by their long wings, legs and abdomen, and an onion-like third antennal segment with a long and thin arista. Genera like *Rhagio* Fabricius, 1775 and *Chrysopilus* Macquart, 1826, both with numerous species, have big or medium sized flies, although generally of hard identification. Nevertheless, other genera include much smaller species and have other morphological features (Majer, 1988, 1997; Oosterbroek, 2006; Marshall, 2012).

Few weeks ago, the author started the search of rhagionids not belonging to *Rhagio* or *Chrysopilus* in his particular collection, giving as a result the finding of only two different genera: the extremely interesting and rare *Archicera* Szilády, 1934 and *Ptiolina* Zetterstedt, 1842. Both genera belong to the subfamily Spaniinae and are recorded from Spain for the first time.

Results and comments

Genus *Archicera* Szilády, 1934

This genus was described as a subgenus of *Ptiolina*, including and describing Szilády (1934) in the same paper the sole species *Archicera avarorum* n. sp. The descriptions were based on only two females

collected in Austria and Croatia. No time data was given by Szilády, but it is supposed that they were collected before the First World War (1914). Unfortunately, both specimens were destroyed in the fire of the Hungarian Natural History Museum (Budapest) in November, 1956. In 2017, a sole specimen (female) of *A. avarorum* was collected by Malaise trap in Romania, using Papp (2018) this very interesting female specimen to designate a neotype. Grootaert *et al.* (2020) collected 13 more specimens of *A. avarorum* in 2015 and 2017 in Belgium, all of them females too. For more details of the interesting history of this genus and species see Papp (2018) and Grootaert *et al.* (2020).

Archicera, as previously said, was originally described as a subgenus of *Ptiolina*, but Szilády treated the species simply as *Archicera*. It was even considered as a synonym of *Spania* Meigen, 1830 by Nagatomi (1982), Majer (1988) and Kerr (2010). The taxonomic status of *Archicera* is not completely clear but following Papp (2018), as Grootaert *et al.* (2020) did before, here it is considered as a genus until getting resolved its status.

Among the material studied, 3 specimens of *A. avarorum* were found but interestingly 2 of them are males and this sex is described in this paper for the first time.

Description of the male (Fig. 1):

Head: brown, with light hairs. Frons brown, bare, reduced to a small triangle. Parafacials flat, brown, bare. Clypeus convex, brown, bare. Eyes holoptic (Figs. 2-4). Ocellar triangle prominent, haired, ocelli situated laterally. Lower third of the facets smaller, dark; upper two thirds of facets longer, whitish. Antenna (Figs. 2-4) brown: scape bare, pedicel with short hairs; scape:pedicel = 3:4. Flagellomere darker basally, with short hairs, characteristic (Figs. 2-4): base rectangular, darker, with a slight, but distinct, anterodorsal projection; stylus apicoventral, short and thick, lighter, with short hairs, cylindrical, pointed apically, not segmented or with a slight incipient segmentation (in a same specimen). Palpus (Fig. 4) finger-like, slightly dilated apically, with dark hairs, dorsal ones shorter. This species shows a sexual dimorphism on the palpi, as those of the female are flat, slightly S-shaped (Fig. 8 and Grootaert *et al.*, 2020: Fig. 5D). Proboscis brownish, haired, ventral hairs longer. Gena and postgena brown, haired. Postocular hairs dark.

Thorax (Fig. 1): dark brown. Scutum with long light hairs, anterior part bare; laterally with dark, long hairs; dorsally with a pair of diffuse longitudinal stripes. Scutellum dark brown, with long, dark hairs. Postpronotum brown, small, bare. Pleurae brown, bare; laterotergite bare; mediotergite brown, bare.

Legs: brown, haired. Tibial spurs = 0:2:0 (as the female). Hairs dark, someones lighter. Dorsal preapical seta on tibiae absent. Hind trochanter with an inner, small, apical projection. Pulvilli and empodium shorter than claws. Claws distinctly curved.

Wing (Figs. 5, 6): slightly darkened; pterostigma slightly darker. Veins brownish, M basally lighter. M1 and M2 separate (Fig. 5), only originating from the same point in the left wing of one specimen (Fig. 6). Alula (Fig. 5) broadly rounded, fringe with long hairs. Halter brownish (Fig. 5).

Abdomen (Figs. 1, 7): brown. Tergites with long dark hairs; sternites with short dark hairs. Tergites 2-6 anterodorsally each with 2 pairs of short transverse grooves; tergites 3-4 also with 1 pair of such grooves, but posterolateral.

Genitalia (Figs. 7, 9-11): brown, haired. Surstyli (Figs. 9-11) S-shaped.

Total length: 3.1-3.3 mm.

Material examined:

- **Navarra:** Artikutza, 13-26.06.1995, 1 male; 27.05-9.06.1996, 1 male, 1 female (all Malaise trap and L. Martínez de Murguía leg.). These three specimens were collected in a mixed forest of pine trees (*Pinus* spp.), sessile oaks (*Quercus petraea*) and beech trees (*Fagus sylvatica*). For more information on this site see Carles-Tolrá (2019) and Castro & Matelo (2019). The material is preserved in alcohol (70°) in the particular collection of the author.

Comments: as Papp (2018) and Grootaert *et al.* (2020) did, the systematic position of *A. avarorum* or possible synonymy of *Archicera* with the genus *Spania* is not discussed here, but their surstyli are "identical" to those of *Spania nigra* (see Kerr, 2010: Fig. 104). It is evident that both species are, at least, very closely related.

The head (Fig. 8) of the female is included to aid to the recognition of this very interesting and rare species.

Flight period (of the hitherto known specimens): May-June.

Distribution: only known so far from Austria, Belgium, Croatia and Romania. New genus and species for Spain.

Genus *Ptiolina* Zetterstedt, 1842

This genus includes more than 20 worldwide species, 7 of them known from Europe (Kerr, 2010; Grootaert *et al.*, 2020). Using the papers by Lindner (1925), Szilády (1934), Rozkošný & Spitzer (1965), Stubbs & Drake (2001) and Grootaert *et al.* (2020), 13 males and 34 females were identified as *Ptiolina obscura* (Fallén, 1814), and are preserved in alcohol (70°) in the particular collection of the author.

Material examined:

- **Barcelona:** Santa Susanna, Can Jordà, 16-31.05.1997, 1 male (Malaise trap and D. Ventura leg.); Vilassar de Dalt, Can Jonc, 16-31.05.1997, 5 females; 1-15.06.1997, 1 female; 16-31.05.1999, 1 female. All Malaise trap and D. Ventura leg.
- **Guipúzcoa:** Oiartzun, Oieleku (Aiako Harria P.N.), June 2007, 1 male, 1 female (beech forest, Kaila trap on *Fomes fomentarius*, 500 m, S. Pagola Carte leg.) (more information of this site in Carles-Tolrá, 2008, 2009).
- **Lugo:** Folgoso do Courel, Paderne, 15.06.2014, 1 male (brook on deciduous forest, 800 m, J.L. Camaño leg., ABIGA 23794) (more information of this site in Carles-Tolrá *et al.*, 2010).
- **Navarra:** Artikutza, 13-26.06.1995, 1 male, 1 female (beech forest); 13-26.06.1995, 2 females (mixed forest); 27.06.-10.07.1995, 1 male, 7 females (beech forest); 27.06.-10.07.1995, 2 males, 9 females (mixed forest); 11-24.07.1995, 1 female (beech forest); 11-24.07.1995, 1 female (mixed forest); 25.07.-7.08.1995, 1 male (mixed forest); 27.05.-9.06.1996, 6 males, 2 females (beech forest); 10-23.06.1996, 2 females (beech forest); 10-23.06.1996, 1 male, 2 females (mixed forest). All specimens were collected by Malaise trap in a beech forest (*Fagus sylvatica*) and in a mixed forest of pine trees (*Pinus* spp), sessile oaks (*Quercus petraea*) and beech trees (*Fagus sylvatica*); all, L. Martínez de Murguía leg. More information of this site in Carles-Tolrá (2019) and Castro & Matelo (2019).

Distribution: widespread in Europe, although it is a very rare species. New genus and species for Spain.

Comments: Grootaert *et al.* (2020) included figures of the dorsal and ventral views of the male genitalia, but more figures from other angles are here presented (Figs. 12-15) to help to the identification of this species.

Acknowledgements

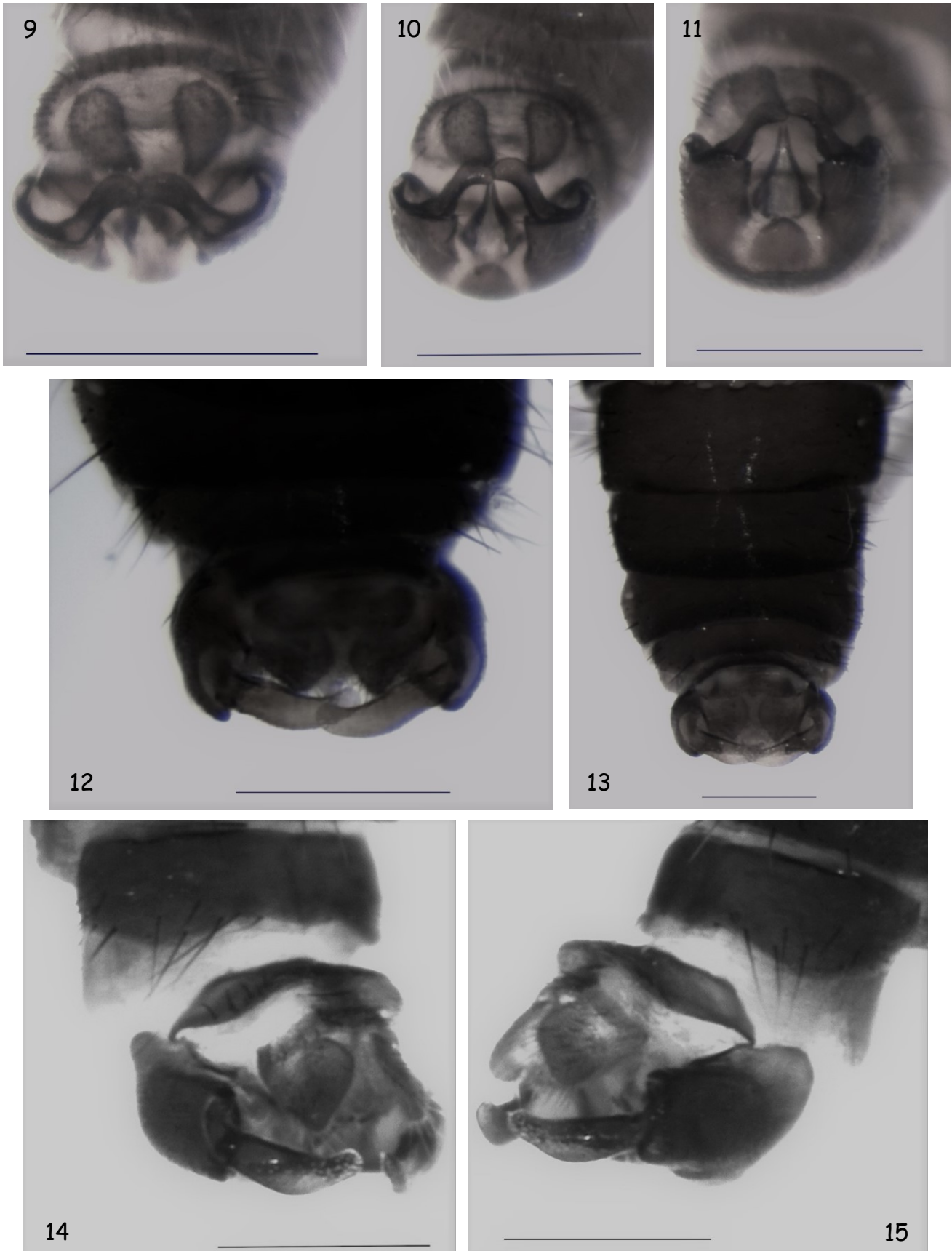
Many thanks to all those colleagues who sent to me this very interesting material for study. My special thanks to Peter H. Kerr (California Department of Food and Agriculture, Plant Pest Diagnostics Branch, Sacramento, California, USA) for sending his paper.

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Figs. 1-7.- Male of *Archicera avarorum* Szilády. 1.- Habitus. 2.- Eyes. 3.- Left antenna laterally. 4.- Palpi. 5-6.- Wings. 7.- Abdomen and genitalia laterally. **Fig. 8.-** Head of female of *Archicera avarorum* Szilády. Scale bars: 1 = 1 mm, 2-8 = 0.3 mm.



Figs. 9-11.- Male genitalia of *Archicera avarorum* Szilády. **9.**- Posteriorly. **10.**- Posteroventrally. **11.**- Ventrally. **Figs. 12-15.**- Male genitalia of *Ptiolina obscura* (Fallén). **12.**- Dorsoposteriorly. **13.**- Posteriorly. **14.**- Left surstylus, broadest view. **15.**- Right surstylus, broadest view. Scale bars: 0.3 mm.