

Some remarkable findings within the subtribe Helophilina (Diptera, Syrphidae) from the island of Menorca, Spain

Algunos hallazgos notables dentro de la subtribu Helophilina (Diptera, Syrphidae) de la isla de Menorca, España

Menorca is the further-most Balearic island from the Iberian Peninsula coast. The authors of the present paper visited Menorca for surveying its hoverflies from 12-17 May 2022. Adult hoverflies were collected with hand net in different localities and habitats of the island. After a preliminary examination of the collected hoverflies, two species of the subtribe Helophilina Newman, 1835 (Eristalinae, Eristalini) were identified, *Mesembrius peregrinus* (Loew, 1846) (Fig. 1) and *Parhelophilus*



Fig 1. Male of *Mesembrius peregrinus* feeding on a flower of *Rubus ulmifolius* in the wetland of Son Bou, Menorca, Spain on May 2022. The photo [A. Ricarte] was made with the Macro option of the camera (v. 12.0.06.25) of a Samsung Galaxy mobile phone.

Fig. 1. Macho de *Mesembrius peregrinus* alimentándose en una flor de *Rubus ulmifolius* en el humedal de Son Bou, Menorca, España en mayo de 2022. La fotografía [A. Ricarte] fue tomada con la opción macro de la cámara (v. 12.0.06.25) de un teléfono móvil Samsung Galaxy.

versicolor (Fabricius, 1794), which resembles the first. We report here the examined material for these two species and discuss briefly the relevance of the findings to the knowledge of the hoverflies of Spain and the Iberian-Balearic region (mainland Portugal + mainland Spain + Balearic Islands).

Once identified, each specimen was assigned a bar code label (CEUA00#), databased and deposited at the CEUA-CIBIO collection, University of Alicante, Spain. The examined material for *M. peregrinus* originates from Alaior, San Jaime Mediterráneo, prat de Son Bou, 39.9/4.072, 2 m, 14.05.2022. The codes, sexes and collectors for the *M. peregrinus* specimens are as follow: CEUA00112450 to 00112455, 3♂♂/3♀♀, Z. Nedeljković leg.; CEUA00112456 to 00112457, 2♂♂, A. Ricarte leg.; CEUA00112458 to 00112463, 2♂♂/4♀♀, P. Aguado-Aranda leg. Most specimens of *P. versicolor* were collected at the same locality and date as *M. peregrinus*, and their codes, sexes and collectors are as follow: CEUA00112469 to 00112472, 4♀♀, Z. Nedeljković leg.; CEUA00112474 to 00112477, 3♂♂/1♀, P. Aguado-Aranda leg.; CEUA00112464 to 00112468, 2♂♂/3♀♀, A. Ricarte leg. – CEUA00112473. One male of *P. versicolor* (CEUA00112473) originates from Alaior, Solí-Nou, Son Bou, sendero forestal [forest track], 39.9/4.070, 20 m, 14.05.2022, A. Ricarte/Z. Nedeljković leg. The individuals of both species were found flying together and visiting flowers of the same plants (e.g. *Rubus ulmifolius* and *Daucus* sp.).

Mesembrius Rondani, 1857, which can be separated from all other Palaeartic Eristalini by having globuliferous hairs on the baso-ventral part of the hind basitarsomere (THOMPSON & ROTHE-RAY, 1998), is represented in Europe by only one species, *M. peregrinus* (SPEIGHT, 2020). The resembling genus *Parhelophilus* Girschner, 1897

can be distinguished from *Mesembrius* by its bare katepimeron, hind basitarsomere with hairs of the usual shape, and dichoptic males (THOMPSON & ROTHERAY, 1998). The species of *Parhelophilus* here reported was identified with THOMPSON (1997) and VAN STEENIS *et al.* (2022), and compared with vouchers of *Parhelophilus consimilis* Malm, 1863 and *P. versicolor* deposited at the CEUA-CIBIO collection. The records of *M. peregrinus* (Fig. 1) are the first of this genus both for Spain and the Iberian-Balearic Region, while those of *P. versicolor* are the first for this genus on the island of Menorca. After the addition of these two species, the number of hoverfly species reported from Menorca increases to 46 (RICARTE & MARCOS-GARCÍA, 2017).

Mesembrius peregrinus has not been reported from the Iberian Peninsula yet. However, it is present in various central and southern European countries, including some of the Mediterranean Basin and even the island of Sicily (PECK, 1988; SPEIGHT, 2020). Despite of some hoverfly sampling conducted on the major Balearic island of Mallorca, *M. peregrinus* has not been uncovered there (e.g. KASSEBEER, 2002; RIDDIFORD & EBEJER, 2006). It is likely that *M. peregrinus* is present in Mallorca and mainland Spain, because both in Mallorca and mainland Spain there are also wetlands of similar characteristics as those in Menorca. However, due to biogeographic reasons or human-induced habitat modifications, it can be just possible that this species is absent from those Iberian-Balearic regions. The unknown larvae of this species are supposed to be saprophagous in aquatic habitats, as those of related genera (SPEIGHT, 2020), and this is why the specimens from Menorca were found at or near wetlands.

Regarding *P. versicolor*, the findings from Menorca reinforce the idea of *P. consimilis* being absent from the Balearic Islands, as suggested by

SPEIGHT (2020), who apparently re-identified, as *P. versicolor*, the material of *P. consimilis* from Mallorca reported by RIDDIFORD & EBEJER (2006). Errors in the identification of *P. versicolor* may just be possible due to the darkened area that some specimens have near the apex of the fore tibia, while *P. consimilis* is known to have the apical third of the fore tibia black, at least anteriorly (VAN STEENIS *et al.*, 2022). Consequently, *P. consimilis* is deleted both from the Spanish and the Balearic checklists of hoverflies and the species of *Parhelophilus* of Spain come to three: *Parhelophilus crococroronatus* Reemer, 2000, *P. frutetorum* (Fabricius, 1775) and *P. versicolor* (RICARTE & MARCOS-GARCÍA, 2017; VAN STEENIS *et al.*, 2022).

In conclusion, we would like to highlight the importance of further surveying the diversity of hoverflies of Menorca in order to better understand their evolution on the island, as well as their role in many ecosystem services (e.g. pollination).

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