

First record of *Sphegina montana* BECKER, 1921 (Diptera: Syrphidae) in Belgium

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Abstract

On 27 May 2018 a dark *Sphegina* with infuscated wings was collected near the Belle Croix at Jalhay on *Anthriscus sylvestris* Becker, 1921. Closer examination at home revealed this was a male *Sphegina montana*, a new species in Belgium. A brief discussion is provided on the habitat and the possible origin of this specimen in the absence of nearby populations.

Keywords: forest species, Blingbronzweefvlieg, Hautes Fagnes, saproxylic insects

Samenvatting

Op 27 mei 2018 werd een donkere bronzweefvlieg (*Sphegina*) met opvallend verdonkerde vleugels gezien nabij de Belle Croix in Jalhay op Fluitenkruid (*Anthriscus sylvestris*). Bij nader onderzoek thuis, onder andere van de kenmerkende genitaliën, bleek dat dit een man *Sphegina montana* Becker, 1921 (Blingbronzweefvlieg) was, een nieuwe soort voor België. Er wordt een korte bespreking gegeven over het leefgebied en de mogelijke oorsprong van deze vlieg, waarvan momenteel geen populaties in de buurt bekend zijn.

Résumé

Le 27 mai 2018, un *Sphegina* aux ailes très foncées a été repéré près de Belle Croix à Jalhay sur *Anthriscus sylvestris*. Un examen plus approfondi a révélé qu'il s'agissait d'un mâle de *Sphegina montana* Becker, 1921, une nouvelle espèce pour la Belgique. Une brève discussion est fournie sur l'habitat et l'origine potentielle de cet individu dont aucune population voisine n'est actuellement connue.

Introduction

Sphegina MEIGEN, 1822 is a genus of slender and rather unobtrusive syrphids that live in the undergrowth of damp forests near streams and along streams in montane grasslands (SPEIGHT, 2015). Of the 14 species recognized in Europe (SPEIGHT, 2015), 5 species occur in Belgium (VERLINDEN, 1994; VAN DE MEUTTER, 2011). The larvae are saprophagous and associated with living trees under bark or in sap-runs, but have also been found in woody debris in water (THOMPSON & TORP, 1986; SMIT, 2002). A peculiar aspect of their biology is that the adult flies generally avoid full sunshine, and prefer visiting flowers in semi-shade or dappled sunshine.

Observations

MATERIAL EXAMINED. 27.V.2018, 1♂, Jalhay, Belle Croix, on *Anthriscus sylvestris*, Latitude: 50.532765, Longitude: 6.046942, leg. & det. Frank Van de Meutter.



Fig. 1. *Sphegina montana* Becker, 1921, ♂, 27.V.2018 Jalhay, Belgium. (© Sander Bot).

During the morning of the 27th of May 2018, rapidly developing thunderstorms at the western side of the Hautes Fagnes (High Fens) near Jalhay caused cloudy but warm (25°C) weather conditions with high air humidity. In spite of a lack of sun and a light drizzle, the flowering *Anthriscus sylvestris* along the road to the Belle Croix abounded with large numbers of syrphids and particularly high numbers (many 100's) of *Sphegina* (mainly *S. clunipes* and *S. sibirica*). Among this plethora of flies, a dark-winged, rather large *Sphegina* stood out among the others. It was taken and studied at home and identified as *S. montana* (Fig. 1).

Identification

Identification of *S. montana* is straightforward and can be achieved using the available keys (e.g. VAN VEEN, 2004; BOT & VAN DE MEUTTER, 2019). The katepisternum is almost entirely shiny except a very narrow strip along its ventral margin, which excludes all European species except *S. sibirica*. The latter species is excluded because of the presence of a well-developed first sternum (at the underside of the abdomen), which is reduced in *S. sibirica*. Males have unique and easily recognizable genitalia (Fig. 2). Among the widespread and common *S. clunipes*, in the field it may attract the attention by its overall dark appearance, including darkened tarsae and a completely black face, although individuals with some yellow in the face are frequent. Observers familiar with the species may note the shiny katepisternum in the field when holding it upside down. In the here reported case, the specimen stood out from its congeners by its infuscate wings (Fig. 1). Apparently this is not a typical feature of this species, as another publication refers to its wings being hyaline (THOMPSON & TORP, 1986). The here reported specimen is also portrayed in BOT & VAN DE MEUTTER (2019).



Fig. 2. *Sphegina montana* Becker, 1921, ♂, genitalia. (© Sander Bot).

Discussion

In Europe, *Sphegina montana* occurs in all countries of the Alpine region (Austria, France, Germany, Italy, Liechtenstein, Switzerland), parts of the former Yugoslavia, Finland in the north and Romania and Poland in the east (SPEIGHT, 2018). Its range probably extends to the Russian far east, but there is considerable confusion with other species (namely *S. eoa* Stackelberg, 1953 and *S. violovitshi* Stackelberg, 1956) with which it is synonymized by some authors (BARKALOV & MUTIN, 2018; SPEIGHT, 2018). In Western Europe, *Sphegina montana* is restricted to lower mountain regions. In Germany the species is reported from the Harz (RÖDER, 1990) and the Schwarzwald (DOCZKAL *et al.*, 1993), in France it occurs in the Haute-Saône, Doubs and Jura departments, and in the Alpine region in the Haute Savoie and Isère (SPEIGHT *et al.*, 2018). According to TREIBER (2015) and SPEIGHT *et al.* (2018) it does not occur in the Vosges but it has been caught recently in the Vosges at Xonrupt (19.V.2009, pers. comm. Guy Van de Weyer). It is absent from the UK, the Netherlands and Denmark (TORP, 1994; BALL & MORRIS, 2000, 2014; REEMER *et al.*, 2009).

The presence of *S. montana* in the Ardennes fits within its general occurrence in Western Europe in low mountainous areas and it is possible that it has a small overlooked population here. Since the year 2000, over 15.000 records of syrphidae have been collected in the Belgian Ardennes and over 2000 (185 species) at the Belle Croix where *S. montana* is found (Belgian Syrphidae database, 14/I/2021). This makes it a well-studied area compared to many other low mountain areas, which is why the possibility of a long distance stray should also be considered. The Belle Croix area is an established hotspot for syrphids within the Hautes Fagnes area (highest plateau of the Ardennes in Belgium) owing to hilltopping behavior in the area. Possibly for the same reason, it is also a place where strays end up more often. The single record of *Epistrophe leiophthalma* (Schiner & Egger, 1853) in Belgium in June 1989, a stray for which the French Jura probably is the nearest origin, is from exactly the same place. Long-distance dispersal for a fragile syrphid that generally avoids open, windy and sunny areas may seem problematic, yet at least for the congeneric *S. sibirica* Stackelberg, 1953 there is strong evidence that it can happen. It was able to colonize Western Europe including crossing the North Sea to the UK over the past 40 years (VERLINDEN, 1991; BALL & MORRIS, 2000; BALL *et al.*, 2012), and also can be found occasionally at flowers in heavily urbanized areas or in gardens in Belgium (pers. obs. Van de Meutter F.), away from its known range and habitat.

According to SPEIGHT (2018), *S. montana* prefers *Fagus/Picea* forest, alluvial hardwood forest and riverine *Fraxinus* forest in the Alps. As with most *Sphegina*, it frequents the margins of streams and tracks, in semi-shade and flies among low-growing vegetation. A continued search of these habitats in the Ardennes will be undertaken in the coming years.

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