

## ***Heringia verrucula* (COLLIN, 1931) – a long expected addition to the Belgian Syrphidae fauna**

Frank VAN DE MEUTTER

Achterheide 16, 3980 Engsbergen (e-mail: Frank.VandeMeutter@gmail.com)

### **Abstract**

A new Syrphidae species for Belgium - *Heringia verrucula* - was discovered on 15 April 2010 at Arendonk (prov. Antwerp). This species was long anticipated, yet only after a specific search guided by information from the recent Dutch Syrphidae atlas (REEMER, *et al.* 2009), the species could be located within the Belgian territory. This paper further briefly discusses where this species may be found elsewhere in Belgium.

**Keywords:** *Neocnemodo*, Syrphidae, new Belgian species

### **Samenvatting**

Een nieuwe zweefvlieg voor België – *Heringia verrucula* – werd ontdekt op 15 april 2010 te Arendonk (prov. Antwerpen). Deze soort werd reeds lang verwacht, maar kon pas gevonden worden na gebruikmaking van informatie over het voorkomen van de soort verkregen uit de recente Nederlandse zweefvliegen atlas (REEMER, *et al.* 2009). Er wordt kort ingegaan op de habitat van de soort en de plaatsen waar deze soort nog kan verwacht worden in België.

### **Résumé**

Un nouveau syrphide pour la Belgique - *Heringia verrucula* - a été découvert à Arendonk (prov. Anvers). Cette espèce, attendue depuis longtemps, a pu être trouvée grâce à l'utilisation de l'atlas des syrphides des Pays-Bas (REEMER, *et al.* 2009). Dans cet article, il est discuté des habitats où l'espèce peut être cherchée ailleurs en Belgique.

### **Introduction**

In a recent updated overview of Belgian Syrphidae (VAN DE MEUTTER in prep.) more than 30 Syrphidae species from areas adjacent to Belgium are listed that are not known yet from Belgium. On this list figures one species that was mentioned already by VERLINDEN (1991) as likely to occur in Belgium, because it was observed frequently in the Netherlands: *Heringia verrucula* (COLLIN, 1931). VERLINDEN (1991) even went as far as listing this species on the Belgian checklist, because he believed "it soon would be discovered here". The next 30 years, his expectations were not fulfilled and chances of finding it even went worse. In the recent Dutch Syrphidae atlas (REEMER *et al.* 2009) it is shown that *H. verrucula* underwent a significant decline over the past decades. Being a species with a northerly distribution (Scandinavia, Netherlands, northern Germany, Britain, Russia to the

Pacific), this decline may fit well to a scenario of a northerly species retreating as a result of our warming climate. On the other hand, the atlas also showed that apart from the stronghold around the Veluwe area, *H. verrucula* had been seen relatively recently (1998) at Hilvarenbeek, only some kilometres from the Belgian border. The species had been seen here once before in 1962 (REEMER *et al.* 2009), suggesting a small local population may still persist. This population represents the southernmost population known of *H. verrucula* in mainland Western Europe (SPEIGHT 2010).

### **Detailed account of the observation**

Record details: (1) Arendonk, Kruisberg-De Luthoven, 2 males, 15.IV.2010, leg., coll. & det. F. Van de Meutter

After a long and cold winter, spring 2010 continued with low temperatures and little

sunshine. The weather only started to change around half of April and temperatures finally went above 15°C with ample sun. On 15 April 2010 I decided to try my luck of finding *H. verrucula* in Belgium. Road works prevented me from driving to the Belgian side of the border nearest to the last Dutch record, and I ended up at the nearest reachable forest patch (Kruisberg, De Lusthoven) near Arendonk, some 15 km south of Hilvarenbeek, and walked into it. The forest here is dominated by large *Picea* and *Pinus* trees, with nearly no flowers in the undergrowth at this time of year. Despite this lack of flowers, large numbers of *Parasyrphus punctulatus* (VERRALL, 1873), and some *P. malinellus* (COLLIN, 1952) and *Melangyna lasiophtalma* (ZETTERSTEDT, 1843) were seen on and along the moist dirt roads drinking. After walking in the forest some time I arrived at an open area with a small flowering willow *Salix cinerea* that attracted good numbers of Syrphidae. I attended this bush for the next two and a half hours (13h30-16h) and using a hand net observed several uncommon species, among which 3 males *Cheilosia psilophtalma* BECKER, 1894 (few records known so far in Belgium), 3 males *Dasysyrphus pauxillus* (WILLISTON, 1887) (again one of the few Belgian records), a male and a female *Platycheirus discimanus* LOEW, 1871 (together with some other records this year, the first records since 1972) and several males *Orthonevra geniculata* (MEIGEN, 1830). Around 14 h, a small black *Heringia* male appeared on the willow catkins. The fragile, slender body (see Fig. 1) and small size made this individual look different from other Belgian *Heringia* species I was familiar with. After catching it, a closer look at the abdominal sternites revealed the deterministic process on st4 (Fig. 2, see also VERLINDEN 1991). At around 16 h a second male of *H. verrucula* was collected on catkins of the same willow bush.

### Discussion

A pertinent matter when preparing to search for *H. verrucula*, is where to look for it. Little is known on its biology – probably its larvae will feed on adelgids or aphids as is observed for other *Heringia*-species (SPEIGHT 2010), but this does little help to narrow our search focus. By comparing the locations of current West-European populations, we however may derive some properties of its typical habitat. Dutch



Fig. 1: *Heringia verrucula* male, 15.IV.2010, Arendonk. Note the very slender build.



Fig. 2: *Heringia verrucula* male, 15.IV.2010, Arendonk. Lateral view on the underside. The arrow indicates the typical process on sternite 4.

populations are all near (old?) mixed forest on poor sandy soil (REEMER *et al.* 2009). Details on the British populations are somewhat less specific: “open rides in deciduous or mixed woodland” (Hoverfly Recording Scheme <http://www.hoverfly.org.uk/>, SPEIGHT 2010). The now discovered Arendonk population closely fits these habitat descriptions – old, mixed forest on moist, sandy soil. The majority of Dutch (and now Belgian) observations are done on flowering willows (Dutch name = wilgenplatbek). On the one hand, this may point to a true relationship with willows, or with the habitat where such willows are found. On the other hand, this may reflect an observation bias: without a flowering willow that attracts this species, the species may remain unnoticed. Since *H. verrucula* starts flying from half of April onwards when only late-flowering willow species (e.g. *Salix cinerea*, *S. repens*) are available; observations are restricted to moist forests on poor, sandy soil, where these willow species are typically found.

As long as the precise ecology of this species is not known, it will remain difficult to explain or predict the occurrence of *H. verrucula*.

*Heringia verrucula* undoubtedly is an easily overlooked species. Adults may be largely arboreal, are tiny and inconspicuous and fly early in the year. As with all other *Heringia* species, females are difficult if not impossible to identify. It is thus possible that other populations still persist unnoticed in Belgium. Similar forests as the one in Arendonk can be found in the area from Hoogstraten to Postel along the Dutch border. This area has been very little investigated for Syrphidae (cf. Belgian Syrphidae database), yet appears very promising. It would come as no surprise if further research here would reveal the presence of more populations of *H. verrucula*. Such search efforts should try to find flowering bushes (*Salix* sp., probably mainly the late flowering species *S. cinerea* & *S. repens*) near well developed forest to maximize the chances of finding this rare syrphid.

#### Epilog

Just before publication of this article, an additional record became known of *Heringia verrucula* that predates the here reported record.

Two *H. verrucula* (1 male + 1 female) were retrieved from Malaise trap material: Tessenlo, Averbode Bos & Heide, 11.IV.2009-24.IV.2009, det., leg. & coll. F. Van de Meutter. The Malaise trap was located at the edge of a small open patch in old deciduous forest on sandy soil, in agreement with the other records.

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## *Cheilosia aerea* Dufour, 1948 new for the Belgian fauna (Diptera Syrphidae)

Frank VAN DE MEUTTER<sup>1</sup> & Jonas MORTELMANS<sup>2</sup>

<sup>1</sup> Achterheide 16, 3980 Engsbergen, Belgium. (e-mail: frank.vandemeutter@gmail.com)

<sup>2</sup> Salvialaan 31, 8400 Oostende, Belgium. (e-mail: jonasmortelmans@gmail.com)

#### Abstract

The species *Cheilosia aerea* Dufour, 1948 is reported for the first time from Belgium.

**Keywords:** *Syrphidae*/ new Belgian species/ *Cheilosia aerea*

#### Résumé

Le syrphé *Cheilosia aerea* Dufour, 1948 est mentionné pour la première fois en Belgique.

#### Samenvatting

De zweefvlieg *Cheilosia aerea* Dufour, 1948 wordt voor het eerst vermeld voor België.