

## ***Temnostoma meridionale* Krivosheina & Mamayev, 1962, a new syrphid fly for Belgium (Diptera: Syrphidae)**

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### **Abstract**

On 7 June 2013 *Temnostoma meridionale* Krivosheina & Mamayev, 1962 was observed for the first time in Belgium near Ethe. This contribution gives a detailed account of the local circumstances of the record, and provides an overview of current knowledge on the habitat requirements and distribution in Belgium, Germany and the Grand-Duchy of Luxembourg. Finally, a table with Dutch names for all *Temnostoma* species occurring in Belgium is given.

**Keywords:** Faunistics, broad-leaved woodland, *Alnus*, *Quercus*, xylobiont.

### **Samenvatting**

Op 7 juni 2013 werd voor het eerst de maanwespvlieg (*Temnostoma meridionale* Krivosheina & Mamayev, 1962) waargenomen in België nabij Ethe. Dit artikel beschrijft de omstandigheden waarin deze soort werd aangetroffen en geeft een overzicht van de huidige kennis rond habitateisen en verspreiding in België, Duitsland en het Groot-Hertogdom Luxemburg. Tenslotte voorzien we alle Belgische *Temnostoma* soorten van een Nederlandse naam.

### **Résumé**

Le 7 Juin 2013, une femelle de *Temnostoma meridionale* Krivosheina & Mamayev, 1962 fut observée en Belgique à Ethe. Ici nous présentons les connaissances actuelles sur la répartition et l'écologie de l'espèce en Belgique, en Allemagne et au Grand-Duché du Luxembourg. Pour terminer, nous présentons les noms vernaculaires néerlandais pour les 4 espèces de *Temnostoma* de Belgique.

### **Introduction**

In the recently published update of the Belgian Syrphidae catalogue, a table is provided with species that are believed to occur in Belgium, or are expected to occur here in the near future, but that have not yet been recorded (VAN DE MEUTTER, 2011). This table is based on the presences and status of Syrphidae in the neighbouring countries. The past years, several species of this list indeed have been found. For one particular species, *Temnostoma meridionale*, some repeated observations close to the Belgian border, together with the fact that its preferred habitat - wet valleys in broad-leaved woodland - is well preserved in some areas, made it likely that the species is present in Belgium. A first attempt to find *T. meridionale* was immediately successful. We here give a full account of the observation and discuss the presence of *T. meridionale* in Belgium.

### **Details of the observation**

BELGIUM: **Luxemburg:** 7.VI.2013, Ethe, Vallée de Laclaireau, 1♀ (leg., det. & coll. Van de Meutter F.)

On 7 June 2013, a female *T. meridionale* was observed near *Le gros Cron* dans la Vallée de Laclaireau (Ethe, prov. Luxemburg). "La Vallée de Laclaireau" is a forested area renowned for the presence of



Fig. 1. Top view of the female *Temnostoma meridionale* (7.VI.2013, Ethe, Vallée de Laclaireau). Note the semicircular yellow spot at the hind end to the scutum.



Fig. 2. Side view of the female *Temnostoma meridionale* (7.VI.2013, Ethe, Vallée de Laclaireau).

multiple “crons”. These are places where calcareous minerals are deposited (“tufa”) around sources forming limestone accumulations, sometimes nicely sculptured terraces. The forest is dominated by oak (*Quercus robur*) in the upper layer. High oak trees are widely interspersed allowing sunlight to reach the flower-rich herb and bush layer. *T. meridionale* was observed in a sunlit clearing bordering a small stream with many flowering *Ranunculus repens*. In that same place, also two territorial *Temnostoma apiforme*, were present.

The identification of *T. meridionale* is relatively straightforward. It most closely resembles *Temnostoma vespiforme*. The differentiating features are all on the thorax: the triangular yellow spots on the postalar lobes do not reach the hind margin, the yellow line on the suture halfway the thorax is interrupted, and the yellow spot at the hind of the thorax is larger, forming a semicircle (Figs 1-2). As a whole, *T. meridionale* has a much more “speckled” appearance on the thorax than *T. vespiforme*, which may help to detect it in the field among *T. vespiforme*.

### Discussion

The discovery of *T. meridionale* in Belgium did not come as a surprise. The species was observed recently in Rheinland-Pfalz (MALEC & MANSFELD, 2007) and Saarland in Germany (A. SSYMACK, pers. comm.), and in the Grand-Duchy of Luxembourg (CARRIÈRES, 2001). In 2012, *T. meridionale* was again observed in the G.D. of Luxembourg (June 2012, Kautenbach, W. VAN STEENIS, pers. comm.), at 15 km of the Belgian Gaume area. Although the Gaume area is relatively well studied for syrphids for over 100 years (Belgian Syrphidae Database), no one had searched specifically for this species in all that time.

With regard to the habitat, SPEIGHT (2013) mentions thermophilous *Quercus* and *Fagus* woodland. This is however contradicted by observations of German populations that are all in very wet forest habitats, almost impenetrable *Alnus-Betula* carr, steep riverine woods, etc. (A. SSYMACK, pers. comm.). Similarly, BARTSCH (2009) describes the habitat as ‘forest bogs and humid deciduous forest with old beech or oak trees’. “La Vallée de Laclaireau” has both wet *Alnus* and *Quercus* forest and thermophilous *Quercus robur* forest in the immediate vicinity of the place where *T. meridionale* was caught.

Finding *Temnostoma* species requires exploring open, sunlit areas with flowers in broad-leaved woodland. *Temnostoma apiforme* and possibly also *T. meridionale* have to be looked for in the wettest places, such as near small streams. The fact that *T. meridionale* was discovered at the very first deliberate search in such habitat here, could indicate that it is not hard to find when searched for in the right habitat. Similar habitats can be found in the Gaume area and *T. meridionale* may turn up here as well, if searches are performed at the right time and place. In Germany, also new populations were found recently, often at difficult-to-access places that were never visited before (A. SSYMACK, pers. comm.).

There is no agreement on whether *T. meridionale* is recently expanding its range in Europe: the increasing number of observations may result from increased searching and the fact that this species was lacking from identification keys in the past. In Germany, the species is found at an increasing number of places but this is not interpreted as a change in the range size of *T. meridionale* (pers. comm. A. SSYMACK). It occurs highly localized, but it can be abundant in these places. The currently known range of *T. meridionale* in Europe extends from Finland and the Baltic states to the southwest of the Pyrenees. The westerly range limit runs through Denmark, Germany and the G.D. Luxembourg. This includes the south-easterly tip of Belgium as well, as is now revealed.

Since over a decade, Syrphidae occurring in the Netherlands are given Dutch names that are used in Belgium as well (see REEMER *et al.*, 2009), and that have helped to reach a wider community of Syrphidae fanatics. The name “wespvlieg” is given to all members of the *Temnostoma* genus. Both *T. apiforme* and *T. meridionale* do not have a Dutch name yet. We here propose the name “Maanwespvlieg” for *T. meridionale*, because of the semicircular (moonlike) spot at the end of the thorax. For *T. apiforme* we propose the name “Bleke wespvlieg”. This name refers to the yellow banding on the abdomen being more whitish than in other indigenous *Temnostoma*. The other two indigenous *Temnostoma* have Dutch names already. In Table 1 we list all Dutch names for Belgian *Temnostoma* species.

Table 1: Overview of the existing and newly proposed Dutch names given to Belgian *Temnostoma* species.

Species name	Dutch name
<i>Temnostoma apiforme</i> (Fabricius, 1794)	Bleke wespvlieg
<i>Temnostoma bombylans</i> (Fabricius, 1805)	Donkere wespvlieg
<i>Temnostoma meridionale</i> Krivosheina & Mamayev, 1962	Maanwespvlieg
<i>Temnostoma vespiforme</i> (Linnaeus, 1758)	Echte wespvlieg

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