

***Limnephilus subcentralis* Brauer, 1857 confirmed for the Belgian fauna (Trichoptera: Limnephilidae)**

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Abstract

On 20.IX.2014, one female of *Limnephilus subcentralis* Brauer, 1857 was captured with a light trap in the nature reserve 'De Hoefaert' in Lanaken (province Limburg). With this observation, the occurrence of this species in Belgium can finally be confirmed.

Keywords: Limnephilidae, *Limnephilus subcentralis*, De Hoefaert.

Samenvatting

Op 20.IX.2014 werd één vrouwtje *Limnephilus subcentralis* Brauer, 1857 met een lichtval gevangen in het natuureservaat 'De Hoefaert' in Lanaken (provincie Limburg). Met deze waarneming kan het voorkomen van deze soort in België eindelijk worden bevestigd.

Résumé

Le 20.IX.2014, une femelle de *Limnephilus subcentralis* Brauer, 1857 a été capturée au piège lumineux dans la réserve naturelle 'De Hoefaert' à Lanaken (province du Limbourg). Cette observation confirme la présence de cette espèce en Belgique.

Introduction

Limnephilidae are the most diverse caddisfly (Trichoptera) family in Belgium and *Limnephilus* is the largest genus. Most species are quite big and can be recognised by their wing pattern. They occur mainly in stagnant water and their larvae are therefore rarely sampled during water quality monitoring, which is almost restricted to running waters. In addition, most species are nocturnal and adults are usually only observed when they come to light. Despite their size, the number of observations only started to grow due to the increasing popularity of moth observation by light trapping during the last decade, combined with the success of the online recording and photo posting on www.waarnemingen.be. Recently, *Limnephilus binotatus* Curtis, 1834 could already be added to the Belgian fauna (LOCK *et al.*, 2010) and now *Limnephilus subcentralis* Brauer, 1857 can finally be confirmed for the Belgian fauna.

L. subcentralis was already mentioned from the Campine area by Bamps (DE SELYS-LONGCHAMPS, 1888). Later, MARLIER (1949) reported the species from Munster-Bilzen and Stokrooie. However, STROOT (1985) indicated that none of this material could be found despite the fact that most material collected by DE SELYS-LONGCHAMPS and MARLIER is present in the collection of the Royal Belgian Institute of Natural Sciences. I also could not find any conserved material from *L. subcentralis* and therefore, the species was not included in the Belgian checklist (LOCK & GOETHALS, 2012). With the confirmation of *L. subcentralis*, the number of *Limnephilus* species in Belgium has risen to 22.



Fig. 1. *Limnephilus subcentralis* Brauer, 1857 (Photograph: Koen Lock).



Fig. 2. *Limnephilus lunatus* Curtis, 1834 (Photograph: Koen Lock).

Material and methods

On 20.IX.2014, moths were sampled with a light trap in the nature reserve 'De Hoefaert' (province Limburg, UTM: 31UFS8141, 75m asl). 'De Hoefaert' is managed by Orchis vzw, covers about 32 acres and is situated next to the national park 'Hoge Kempen'. It mainly consists of forests and meadows and also contains several ponds. During sampling, not only moths, but also a few caddisflies were observed, which were identified by the first author using MALICKY (1983). The collected female specimen of *L. subcentralis* has been deposited to the collection of the Royal Belgian Institute of Natural Sciences.

Results

One female of *Limnephilus subcentralis* Brauer, 1857 (Fig. 1) was sampled with a light trap in the nature reserve 'De Hoefaert'. The species closely resembles some other species of the genus *Limnephilus*, especially the common *Limnephilus lunatus* Curtis, 1834. *L. subcentralis* has fore wings of 11-14 mm with apically a hyaline crescent, however, unlike *L. lunatus* (Fig. 2), the crescent is not bordered by a dark line. The hyaline patches are also arranged slightly different: the middle transversal row is widest in the middle and is clearly thinner near the hind margin, which is situated on top in rest. In addition, the middle transversal row almost reaches the basal transversal row. In *L. lunatus* the middle transversal row, which is often completely fused with the distal row, is widest near the hind margin and is clearly separated from the basal transversal row.

According to WALLACE *et al.* (2003), larvae of *L. subcentralis* can be found in pools and ponds with emergent vegetation, while TOBIAS & TOBIAS (1981) mention peaty stagnant waters with a lot of plants. Adults can be found from May till November (TOBIAS & TOBIAS, 1981), however, the species seems to have a summer diapause.

Other species encountered at the same site that night were: *Hydropsyche angustipennis* (Curtis, 1824) (Hydropsychidae), *Glyphotaelius pellucidus* (Retzius, 1783), *Limnephilus flavicornis* (Fabricius, 1787), *Limnephilus griseus* (Linnaeus, 1758), *L. lunatus*, *Limnephilus marmoratus* Curtis, 1834 and *Limnephilus sparsus* Curtis, 1834 (Limnephilidae).

Discussion

Limnephilus subcentralis was expected to occur in Belgium, because it was already observed in the Netherlands close to the Belgian border (HIGLER, 2008) and in Northern France in the department Meurthe-et-Moselle (COPPA, 2016). The records from Munster-Bilzen and Stokrooie (MARLIER, 1949) are not far from the location where *L. subcentralis* was found during the present study: about 10 and 30 km, respectively. Therefore, it seems that the species has been present in the province Limburg all along, but could only be confirmed during the present study.

Another species of the genus *Limnephilus* that can be expected in Belgium is *Limnephilus italicus* McLachlan, 1884, which has already been observed in the Grand Duchy of Luxembourg (SCHRANKEL *et al.*, 2008) and the German federal state Rheinland-Pfalz, which borders Belgium (ROBERT, 2001).

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