

Micropterna lateralis (Stephens, 1837) (Trichoptera, Limnephilidae) recorded in Iceland

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Two adult specimens, male and female, of *Micropterna lateralis* (Stephens, 1837) were found in a light trap at the Forestry Research Institute at Mógilsá in Kollafjörður, 20 km north of Reykjavík on 23–30 July 2008. Light traps have been operated at two sites in south and south-east Iceland since 1995 and at Mógilsá in south-west Iceland since 2005. Streams in all parts of Iceland were surveyed in 2004–2006 for Trichoptera species. Larvae of this species have not been found yet, and these are the only specimens obtained so far. This recent addition to the Trichoptera fauna is probably not associated with global warming, as this species is found much further north in Norway.

Key words: *Micropterna lateralis*, Trichoptera, Iceland

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Introduction

Prior to this new record only 11 species of Trichoptera had been recorded from Iceland (Gíslason 1981), belonging to the families Apataniidae, Limnephilidae and Phryganeidae. All 11 species are also found in Norway (Gíslason 1981a), 8 in mainland UK, and only 4 in the Faroe Islands, Shetland and the Orkneys and 1 in Svalbard (Henriksen 1929, Gíslason 1981a, 2005, Shire et al. 1964) with 3 in Greenland (Böcher 2001). One species (*Limnephilus sparsus* (Curtis, 1834)) is found only in running water, 6 are found only in stagnant water, and 4 species are found in both habitats (Gíslason 1981a). Two of them, *Apatania zonella* (Zetterstedt, 1840) and *Potamophylax cingulatus* (Stephens, 1837) are found in streams and the exposed shores of lakes, where wave movement is common and gives the effect of running water (Gíslason 1981a). The current Trichoptera fauna of Iceland has only one arctic species (*A. zonella*), whereas others

have temperate distributions in the Palaearctic or Holarctic regions (Gíslason 2005). The number of Trichoptera species on islands in the North Atlantic declines with distance from the European continent and Britain, and seems to be unrelated to their sizes (Gíslason 2005). The pattern of their occurrence indicates the stochastic nature of dispersal.

A general survey of Trichoptera adults and larvae was conducted in 1974–1978 (Gíslason 1981b), when *P. cingulatus* was recorded for the first time in Iceland and found only in the east and north-east of the country (Gíslason 1974). It was fairly common in running waters, but *A. zonella* was rare in these areas, where it had been common before (Fristrup 1942, Gíslason 1981b). In 2004–2006 the survey was repeated to map the present distribution of *P. cingulatus* and *A. zonella*. Rivers and streams in all areas of Iceland were sampled and species recorded, but no new Trichoptera species were discovered.

Material and methods

A project monitoring moths (Lepidoptera) using light traps was initiated on two sites in Iceland in 1995, run by the Icelandic Institute of Natural History. Light traps used were of the Swedish Ryrholm type located on the ground (Ólafsson & Björnsson 1997). Two light traps are still (2010) operated on these two original sites, Tumastadir in the south and Kvísker in the south-east of Iceland. They are emptied weekly from mid April until mid November and their content of moths and caddisflies identified and counted. These traps are in forested or wooded areas, and streams are in their vicinities.

Two additional sites in south Iceland were added to the project in 2005 (Raudafell) and 2006 (Skógar) and one site in the south-west (Mógilsá) in 2005, with a single trap operated on each site. The trap at Raudafell is located in open grassland right on the bank of a running stream, at Mógilsá at the edge of a mixed forest 130 m away from a rich pond and 230 m away from running water (64°12'59"N, 21°42'48").

When the contents of the trap at Mógilsá from 23–30 July 2008 were studied, two specimens of a caddisfly previously not recorded in Iceland were found. The specimens were identified with the aid of the key by Macan (1973) and the illustrations in McLachlan (1874–1880).

Results and discussion

Mógilsá light trap caught 440 individuals of 8 Trichoptera species from 16 April to 12 November 2008 (Table 1). Two specimens, male and female, belonging to *Micropterna lateralis* (Stephens, 1837) were caught during the period 23–30 July. *M. lateralis* is a species found in the Palaearctic region. In the neighbouring regions of Iceland, it is found in Fennoscandia, Denmark and the Britain, as well as alpine areas elsewhere in Europe. It is not found in the Faroe Islands nor in Greenland (Henriksen 1929, Macan 1973, Svensson & Tjeder 1975, Solem & Gullefors 1996, Böcher 2001). Although streams on most

Table 1. Trichoptera species collected by a light trap at Mógilsá during the period 16 April – 12 November 2008.

Species	No. of specimens
<i>Apatania zonella</i> (Zetterstedt, 1840)	6
<i>Grammotaulius nigropunctatus</i> (Retzius, 1783)	1
<i>Limnephilus affinis</i> Curtis, 1834	12
<i>Limnephilus decipiens</i> (Kolenati, 1848)	30
<i>Limnephilus griseus</i> (Linnaeus, 1758)	34
<i>Limnephilus sparsus</i> Curtis, 1834	174
<i>Micropterna lateralis</i> (Stephens, 1837)	2
<i>Potamophylax cingulatus</i> (Stephens, 1837)	181
Total	440

of the Faroe Islands are currently being surveyed the species has not been found there (Leivur Janus Hansen pers. com).

M. lateralis occurs mainly in rivers and is readily distinguished from other species of Limnephilidae. The wings have the rounded tips characteristic of *Potamophylax* and *Micropterna*, but the genitalia are distinctly different from those of *P. cingulatus* (Macan 1973). The larvae can be distinguished from those of *P. cingulatus* by several characters (Wallace et al. 1990).

Presumably *M. lateralis* is either a recent colonizer or else it is so rare that it has escaped our attention during Trichoptera surveys over the last 35 years. It seems unlikely that it had escaped entomologists' attention if it is flying around or living in streams, because both the adults and larvae are large and conspicuous. It is widespread in the UK (Wallace et al. 1990) where it has a flight period from June to July (Macan 1973).

It will be interesting to see if the species will spread in the near future, as was the case with *P. cingulatus*, which now is found in all lowland areas in Iceland (Gíslason pers. obs.), but 30 years ago was confined to the east and north-east of the country.

In recent decades new species of insects have colonized Iceland. In some cases these may be related to climate warming but the majority of the colonizers have arrived in the country as a result of human activities (Libungan et al. 2008, 2009), while the remaining ones have arrived by their own means (Icelandic Institute of Natural History databases). However, *M. lateralis* is distributed as far north as Tromsø in Norway and in alpine areas of central Europe (GBIF Data Portal 2010), which is a strong indication that *M. lateralis* was windborne from Norway or Britain and its occurrence is not related to climate warming.

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