

Author Correction: *Micropterna lateralis* (Stephens, 1837) (Trichoptera, Limnephilidae) recorded in Iceland

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A new Icelandic record of a Trichoptera species was published in 2010. It was based on two specimens that were caught in a light trap at Mógilsá, 20 km north of Reykjavík. The identification was based on two identification keys available to the authors. Since then (till 2022), 545 specimens have been found at Mógilsá and 9 in two other places, Hvanneyri (8) and Hvalfjörður (1, based on a photograph). In a study on the origin of the Icelandic Trichoptera the BOLD database has been used. A specimen of *Micropterna lateralis* (Stephens 1837) sent to BOLD by one of the authors (EÓ) turned out to be *Micropterna sequax* McLachlan 1875. All specimens at the Icelandic Institute of Natural History have now been examined and compared with colour photographs of *M. lateralis* and *M. sequax* and they all were identified as *M. sequax*. The light trap catches have grown continuously since 2008 and the species has now been recorded 40 km from the original site.

Key words: Author Correction, *Micropterna sequax*, Limnephilidae, Trichoptera, Iceland.

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Introduction

Twelve species of Trichoptera have been recorded from Iceland (Ólafsson & Gíslason 2010, Gíslason & Pálsson 2021). The most recent record was a *Micropterna* species, identified as *M. lateralis* (Ólafsson & Gíslason 2010) based on two specimens caught in a light trap at Mógilsá in 2008. The light trap project has been operated as a moth monitoring survey in Iceland since 1995, and the Mógilsá light trap has been operated from 2005.

An ongoing study on the origin of the Icelandic Trichoptera species and their postglacial

migration route to Iceland (Gíslason *et al.* 2015, Gíslason & Pálsson 2020, Pálsson *et al.* 2016) has been carried out by analysing the COI mDNA of the specimens. The analyses indicate when the species arrived in Iceland and their relationship to populations in the neighbouring regions. A specimen of the *Micropterna* species in Iceland was sent to BOLD (ICEFI001-17.COI-5P). The analysis showed a relationship of 92% to *M. lateralis* and 98.7-99.9% relationship to *M. sequax* McLachlan 1875 populations in northern Europe (Figure 1) (Snaebjörn Pálsson pers. com.). On the basis of this information the previous identifications have been reviewed.

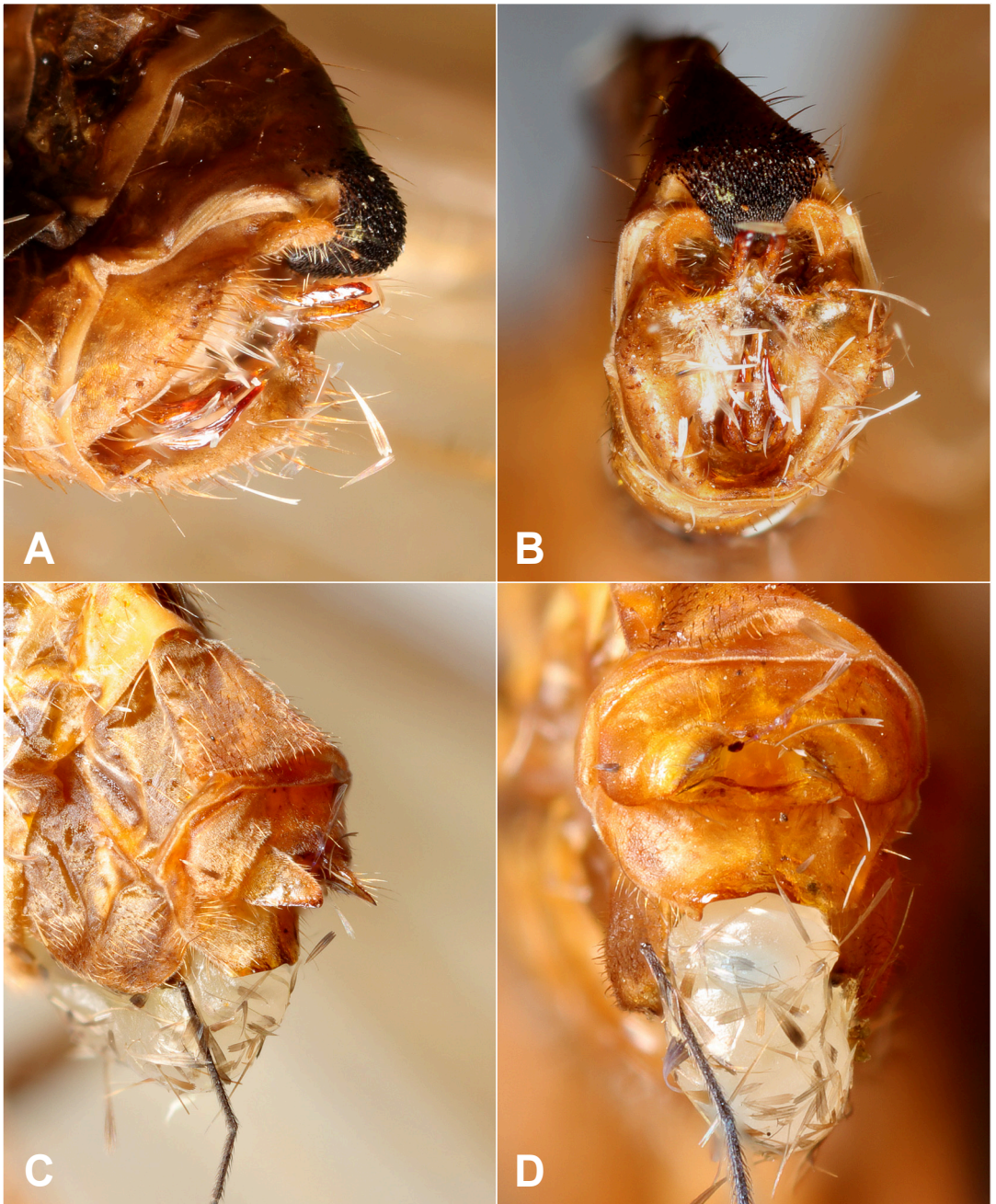


FIGURE 1. Photographs of the genitalia of *Micropterna sequax* McLachlan 1875 from Mógilsá. Dorsolateral view (A) and a posterior view (B) of a male and a dorsolateral view (C) and a posterior view (D) of a female.

Methods

A project monitoring moths (Lepidoptera) using light traps was initiated on two sites in South

Iceland in 1995, run by the Icelandic Institute of Natural History. Light traps used were of the Swedish Ryrholm type with Standard High Pressure Mercury lamp (Philips HPL-N 125W

e27) located on the ground (Ólafsson & Björnsson 1997). Traps have been added to the project and in 2005 at Mógilsá Southwest Iceland 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" W). Another trap was set up at Hvanneyri (64°33'43" N, 21°46'14" W), West Iceland, in 2010. All traps were emptied weekly from mid-April to mid-November, revealing insect numbers and flight periods.

When the contents of the trap at Mógilsá from 23–30 July 2008 were studied, two specimens, a male and a female, 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). When we discovered that the specimen from Iceland was *M. sequax*, but not *M. lateralis*, as previously recorded, all specimens of *Micropterna* species at the Icelandic Institute of Natural History were examined. Colour photographs that are available for the *M. lateralis* and *M. sequax* (Tobias & Tobias 2012) were used to revise the identification of all specimens.

Total of 545 specimens from Mógilsá and 8 from Hvanneyri. A single specimen from Kidafell in Kjós, Hvalfjörður (64°18'16"N, 21°41"W) was recorded by a photograph only.

Results and discussion

All specimens examined turned out to be *Micropterna sequax* MacLachlan 1975 after thorough identification, based on male and female genitalia (Figure 2). The earlier identification of two specimens, based on drawings was incorrect. Therefore, it is necessary to correct the information in the Ólafsson & Gíslason (2010) publication.

The catch of *M. sequax* in the light traps at Mógilsá has been followed since the first record in 2008. There has been a continuous increase in the catch (Figure 3) and the population has established itself very well. The species has also, in addition to Kidafell in Kjós in Hvalfjörður, dispersed to Hvanneyri, 40 km north of Mógilsá and it is possible that the population will, with time, spread to other parts of Iceland, as *Potamophylax*

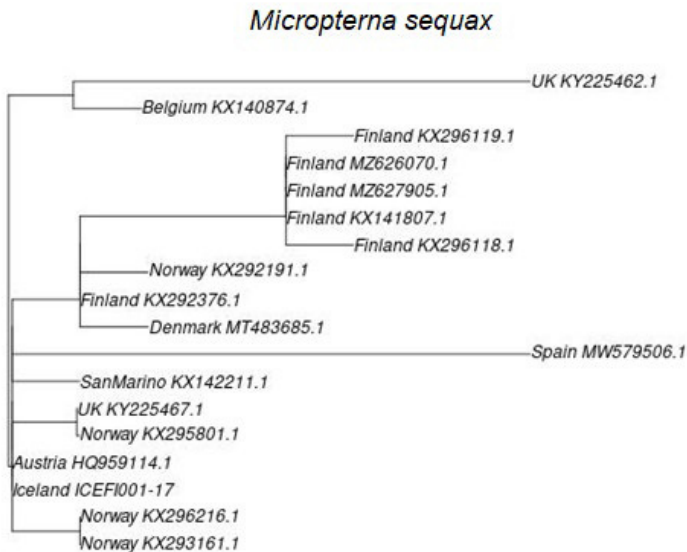


FIGURE 2. Bayesian phylogeny based on the COI mtDNA haplotypes (barcode region) for *Micropterna sequax* McLachlan 1875.

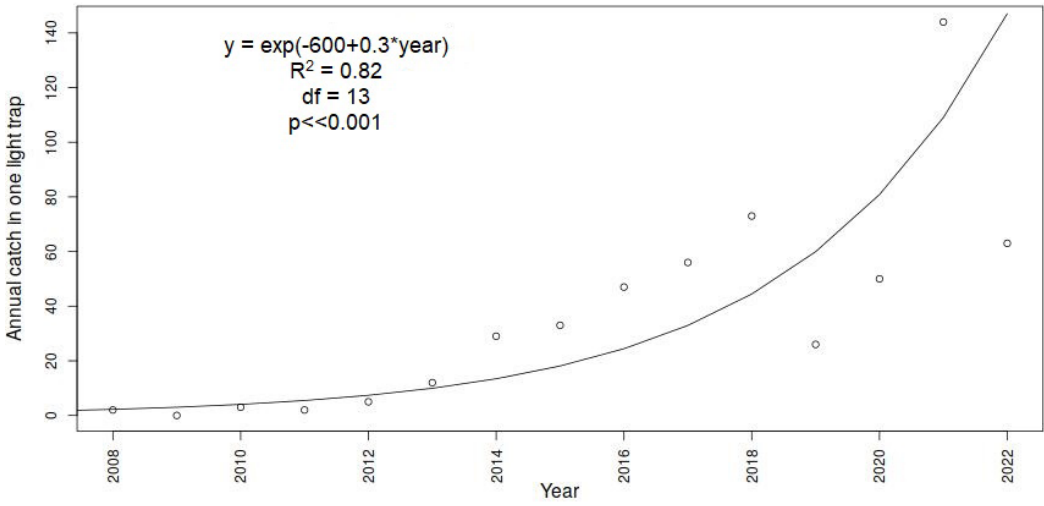


FIGURE 3. Specimens of *Micropterna sequax* McLachlan 1875 caught in a light trap at Mógilsá near Reykjavik 2008-2022.

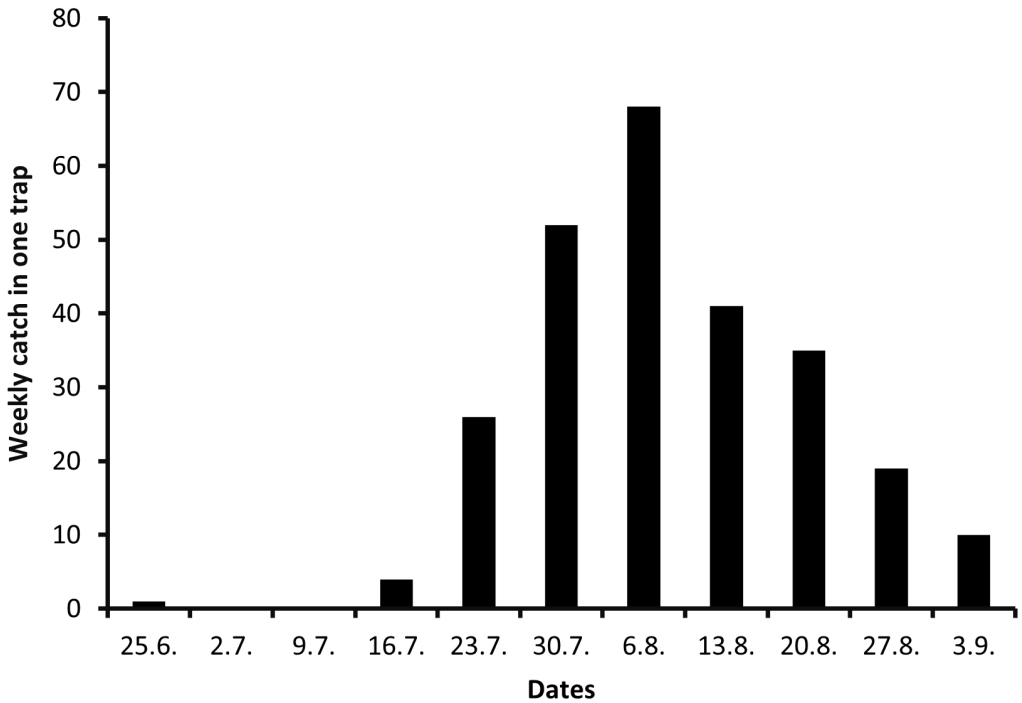


FIGURE 4. Flight period of *Micropterna sequax* McLachlan 1875 at Mógilsá in SW-Iceland.

cingulatus did from mid-twentieth century to present time (Gíslason *et al.* 2015, Gíslason *et al.* 2023).

The flight period of *M. sequax* is from mid-June to early September (Figure 4). The flight period of the same species is similar in South Sweden (Svensson 1972). In Kosovo the flight period was recorded from mid-June to mid-October (Ibrahimi *et al.* 2013). In South Sweden oviposition is from late July to September (Svensson 1972). With climate change, the flight period may have changed in South Sweden from early 1970s.

M. sequax is widespread in Europe from the Balkan peninsula in the south, central Europe, the British Isles and Scandinavia to North Norway in the north. It has also been found in Turkey and in Caucasus mountains (GBIF 2022). The record of *M. sequax* is an example of stochastic postglacial colonization of Trichoptera in Iceland (Gíslason & Pálsson 2020). It is still ongoing and if a species has found a suitable habitat, its population increased and dispersed (Gíslason *et al.* 2023). There are plenty of small running waters, including ditches and ponds in the areas where *M. sequax* has been recorded and these same habitats are found all over Iceland. It can therefore be expected that during the next decades the species will have dispersed over most of the island.

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