

## The genus *Leiomyza* Macquart, 1835 in Norway (Diptera, Asteiidae)

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One male and two females of *Leiomyza curvinervis* (Zetterstedt, 1838) have been recorded from two localities in Finnmark, and a single male of *Leiomyza dudai* Sabrosky, 1956 from one locality in Ringsaker, Hedmark. These records represent the first findings of this genus in Norway. The identification and biology of the family Asteiidae and the genus *Leiomyza* are briefly commented on.

Key words: Diptera, Asteiidae, *Leiomyza*, *Leiomyza curvinervis*, *Leiomyza dudai*, faunistics.

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### Introduction

The Asteiidae are a group of small to minute acalyprate Diptera found in all biogeographical regions except Antarctica. More than 100 species have been described in two subfamilies; however the family's diversity is underestimated and poorly studied. About 20 species in four genera occur in Europe (Oosterbroek 2006).

What little is known of the biology of asteiids suggests that they are diverse generalist saprophages or phytophages. Larvae of several species have been found in or reared from such diverse habitats as tree bark, floral inflorescences, phloem, rotting or dry organic matter and fungal fruit bodies (Papp 1998, Oosterbroek 2006). *Leiomyza* Macquart, 1835 are generally thought to be fungivorous in their larval stage (e.g. Papp 1984, Chandler 1978); however Sidorenko & Shedko (2010) recorded *Leiomyza scathophagina* (Fallén, 1823) as a facultative myiasis parasite of Amur sturgeon *Acipenser schrenckii*.

Asteiids are most easily recognized on their characteristic wing venation, with crossvein BM-Cu and cell *cup* absent, a continuous costa,

subcosta incomplete and M1 concave (e.g. Figure 1). In the genera *Asteia* Meigen, 1830, *Astiosoma* Duda, 1927 and *Phlebosotera* Duda, 1927, vein R2+3 terminates very close to the base of the wing; *Leiomyza* is atypical in having it closer to the wing apex (Merz 1996). Nine species of *Leiomyza* have been described and five of them are known from Europe (Gibbs & Papp 2006).

The Norwegian fauna of Asteiidae has apparently not been studied at all; as no species are listed by Papp (1984) or Carles-Tolra (2012). The family was first published from Norway by Gammelmo & Søli (2011), who recorded *Asteia amoena* Meigen, 1830 from three localities in Akershus and Aust-Agder. Further *Asteia* species are present in the Natural History Museum, Oslo; however this material has not yet been published (G. Søli, pers.comm.) The present paper gives the first account of the genus *Leiomyza* from Norway.

### Material and methods

Most of the specimens were collected in Malaise traps as part of the project "Insects inhabiting



FIGURE 1. *Leiomiza curvinervis* (Zetterstedt, 1838) female from Alta, Gargia.

freshwater and humid habitats in Finnmark, northern Norway”, funded by the Norwegian Taxonomy Initiative (Artsdatabanken). For details of this project, see Ekrem *et al.* (2012). The present paper is the fifth contribution dealing with Diptera from this material. Other *Leiomiza* material was found in partially sorted Malaise trap material in the magazines in Bergen Museum. All the recorded specimens are deposited in the Natural History Collections, the University Museum of Bergen, registration numbers A49642-A49643.

Identification is according to Merz (1996), Gibbs & Papp (2006) and Beuk (2012).

#### New records

##### *Leiomiza curvinervis* (Zetterstedt, 1838)

**Material.** FI, Alta: Gargiaelven near Gargia Fjellstue (69.80525°N, 23.48937°E), 1♂1♀, 23.VII–7.VIII.2010, leg. Finnmarksprosjektet

(Malaise-trap), FØ, Sør-Varanger: Sametijohka at Sameti (69.40106°N, 29.71923°E), 1♀, 24.VI–20.VII.2010, 1♀, 20–30.VII.2010, leg. Finnmarksprosjektet (Malaise-trap).

**Remarks.** The knobs of the halteres of most *Leiomiza* are brown; however in *L. curvinervis* and *L. scathophagina* they are yellow. These two species can be separated on several characters according to Merz (1996) and Beuk (2012): *Leiomiza curvinervis* (Zetterstedt, 1838) is characterised by its yellowish to red-brown face, the distance between the dorsocentral setae and the scutellum being shorter than the length of the dorsocentral setae and the cerci with setae reaching tip of surstyli. *Leiomiza scathophagina* (Fallén, 1823), on the other hand has face black to dark brown, distance between dorsocentral setae and scutellum longer than length of dorsocentral setae and cerci with setae not reaching tip of surstylus.

*Leiomiza curvinervis* was described from

Umeå, Northern Sweden, and has been recorded from Austria, the Czech Republic, Poland, Slovakia, Spain, Sweden, Switzerland and the USA (Papp 1984, Gibbs & Papp 2006).

***Leiomyza dudai*** Sabrosky, 1956

**Material.** HES, Ringsaker: Furnes, Sandvold Hamnehage (60.840°N, 11.021°E), 1♂, VI.1992, leg. G. Bakkerud (Malaise trap).

**Remarks.** *Leiomyza dudai* is the only European *Leiomyza* species with both a brown-knobbed haltere and the dorsocentral setae further from the scutellum than the length of the dorsocentral seta itself. Merz (1996) further cites the incurved inner process of the surstylus in the male as a very good diagnostic character (see e.g. Gibbs & Papp 2006, Figures 6, 18).

According to Gibbs & Papp (2006) *L. dudai* is known from Austria, the British Isles, the Czech Republic, Finland, France, Germany, Hungary, Italy, Poland, Russia (including the Asian part), Slovakia, Spain, Sweden and Switzerland.

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