

Chromatomyia linnaeae (Diptera, Agromyzidae) new to Finland

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Chromatomyia linnaeae (Griffiths), previously known from Canada, is reported from northern Finland, where the larvae mine leaves of *Linnaea borealis*.

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Griffiths (1974) revised the boreal Agromyzidae living on Caprifoliaceae and described a new species, *Chromatomyia linnaeae*, living solely on the leaves of *Linnaea borealis*, reporting several finds in Alberta, Canada. At approximately the same time Spencer (1976) described a minute, incomplete mine found (3.7.1972) at Beisfjord, Nsø in Norway and assumed that this might represent *C. linnaeae*, but because the case could not be verified he did not even accept the find for the provincial tables.

In autumn 1991 I found a few mines in the leaves of *Linnaea borealis* in northern Finland (ObN: Rovaniemi mlk., 736:49, Kaihuavaara). Breeding did not succeed, however. The next autumn I collected more of these mines from the same site, and the following spring managed to obtain over 30 adults. These were verified as *Chromatomyia linnaeae* by reference to Griffiths (1974), who presents valuable morphological characters for identifying the species.

So far I have collected the mines in August and September and it seems that the larvae finish their mining late in autumn and pupate before the winter. Pupation takes place inside the mine (Fig. 1), which starts as a gallery with a darkish band in the middle. Later on the larva usually mines the whole leaf, which then turns light greyish/greenish. The frass is deposited in sparse black

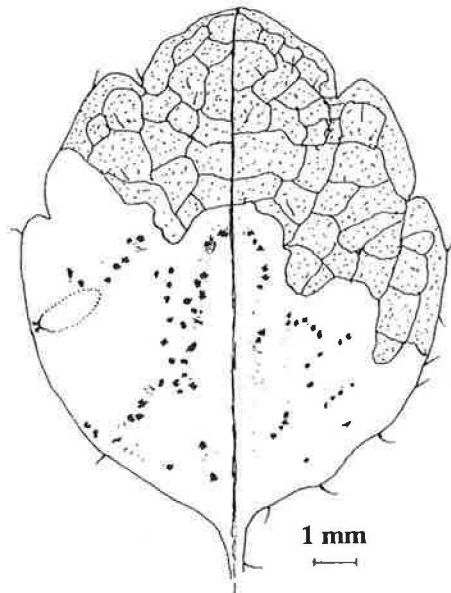


Fig. 1. Leaf of *Linnaea borealis* with a mine of *Chromatomyia linnaeae* Griffiths. The location of the puparium is indicated by a dotted line.

grains. The anterior spiracles of the puparium project dorsally through the epidermis, although Griffiths (1974) states that they project ventrally. After hibernation the original gallery is hardly

visible, but the mines themselves are easy to see. The mined leaf assumes a light brownish appearance like a dead leaf. Breeding turned out to be easy.

The present finds are from the northern part of Finland (Fig. 2), but so far the species has not been searched for in the southern provinces, although *L. borealis* is found throughout the country (see Hämet-Ahti et al. 1984). It is quite probable that the fly will be found there, too, in the course of time. *C. linnaeae* seems to be quite abundant in those areas where the mines have been searched for. At this moment the species has been found in the following biogeographical provinces: *ObS*, *ObN*, *Ok*, *Ks* and *Li*. The list of current finds in Finland is as follows:

- Ok*: Kajaani, 7125:536, mine. 5.1993, R. Leinonen leg.
Ok: Sotkamo, 708:59 and 708:60, mines 10.09.1993, J. Itämies & J. Viramo leg.
ObS: Hailuoto, 721:40, mine 06.10.1993, J. Viramo leg.
ObS: Oulu, 721:42, mine, 29.9.1993, J. Itämies leg.
ObS: Kiiminki, 7216:446, mines, 29.9.1993, J. Viramo leg.
ObS: Kiiminki, 7227:445, mines 28.09.1993, J. Viramo leg.
ObS: Kiiminki, 7223:434, mine, 29.9.1993, J. Viramo leg.
ObS: Kiiminki, 7226:450, Reposelkä, mine, 29.9.1993, J. Viramo leg.
ObS: Haukipudas, 7223:433, mine 29.9.1993, J. Viramo leg.
ObN: Rovaniemi mlk. 736:49, Kaihuavaara larvae and pupae 1991 and 1992, J. Itämies leg.
Ks: Kuusamo, 735:61, mines 20.09.1993, J. Viramo leg.
Ks: Kuusamo, 736:60, mines 26.09.1993, J. Viramo leg.
Ks: Taivalkoski, 729:57, Niemelä, mines 26.09.1993, J. Viramo leg.
Li: Ivalo, 762:53, mines 26.08.1993, J. Itämies leg.

I have found the mines in humid, shady forests, whereas *L. borealis* specimens growing in open, dry terrain seem less likely to be mined by *C. linnaeae* and although some mined leaves have been found in a pine sapling stand in Kuusamo, this is also a rather humid site.

Chromatomyia linnaeae seems to be the only species mining on *Linnaea borealis*, because the *Phytomyza periclymeni* DeMeijere mentioned by Hering (1957) is said by Griffiths (1974) to be based on a misunderstanding. *C. linnaeae* will be placed on the Finnish list (see Hackman 1980) in connection with the genus *Phytomyza*. The specimens are deposited in the collections of the Zoological Museums of Oulu and Helsinki.

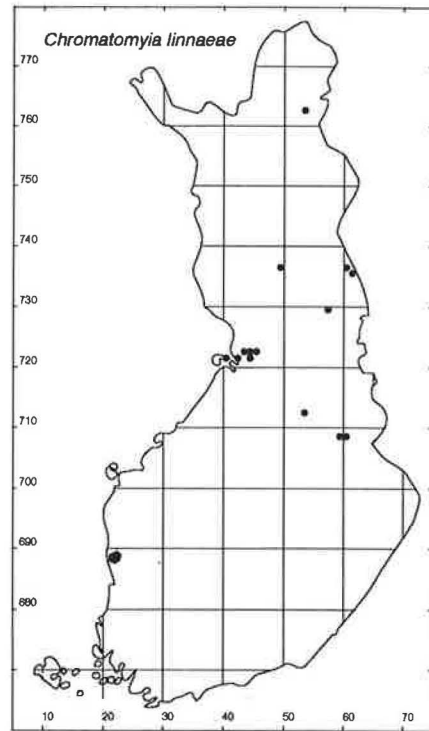


Fig. 2. Records of *Chromatomyia linnaeae* in Finland.

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