



Enteucha acetosae (Stainton, 1854) (Lep: Nepticulidae)



Photo © Rob Edmunds

The distinctive mines of Britain's smallest moth may be found on the Sorrels - *Rumex acetosae* (Sheep's Sorrel) and *Rumex acetosella* (Common Sorrel). Mining activity by the larvae cause the leaf to redden, as seen above.

A full account of the life history is given by Sich:

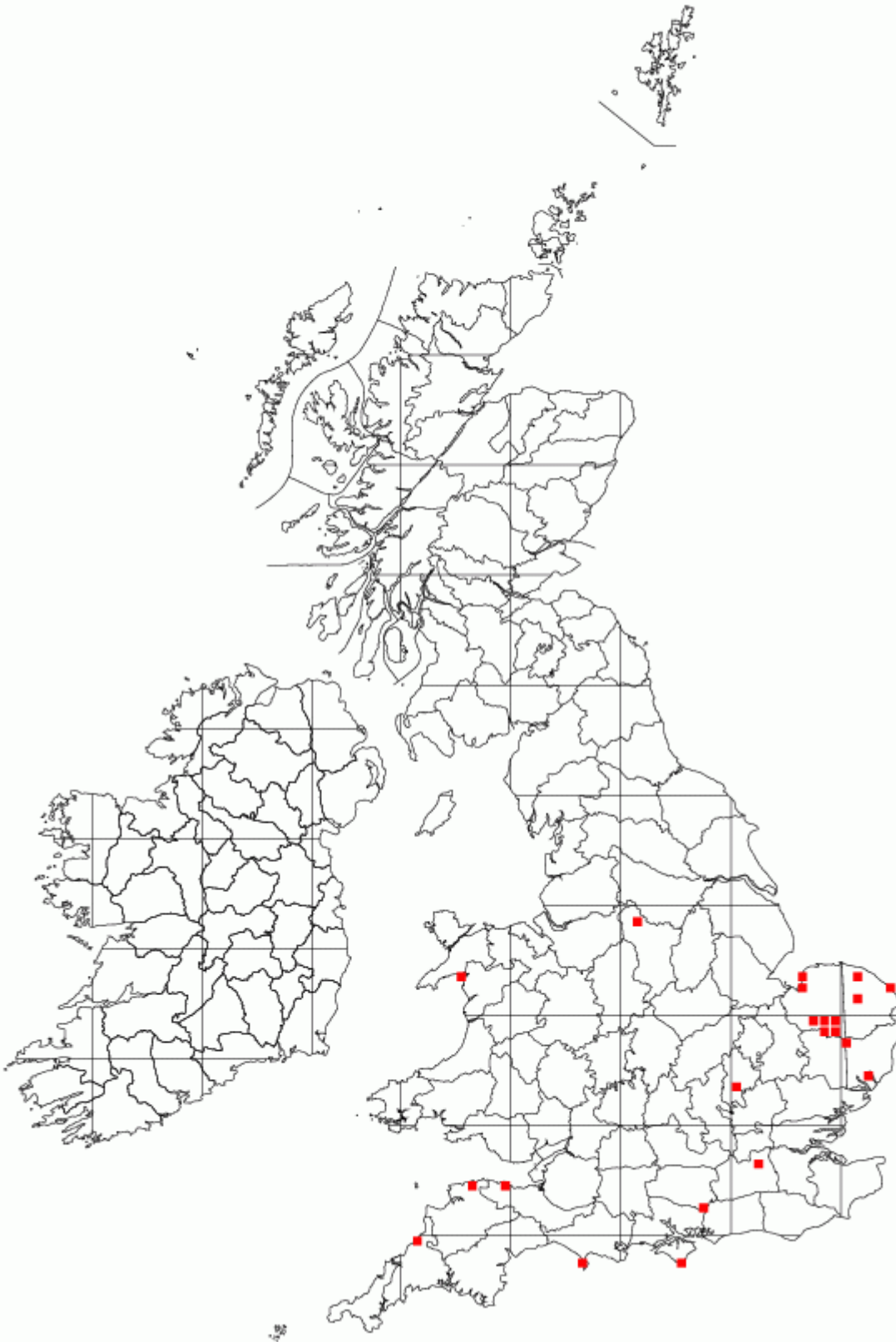
Sich(1908), Notes on the life-history of *Nepticula acetosae*, Entomologist's Record and Journal of Variation 20:248-252

<http://www.biodiversitylibrary.org/item/36492#page/298/mode/1up>

Sich(1909), Notes on the life-history of *Nepticula acetosae* (concluded), Entomologist's Record and Journal of Variation 21:103-106

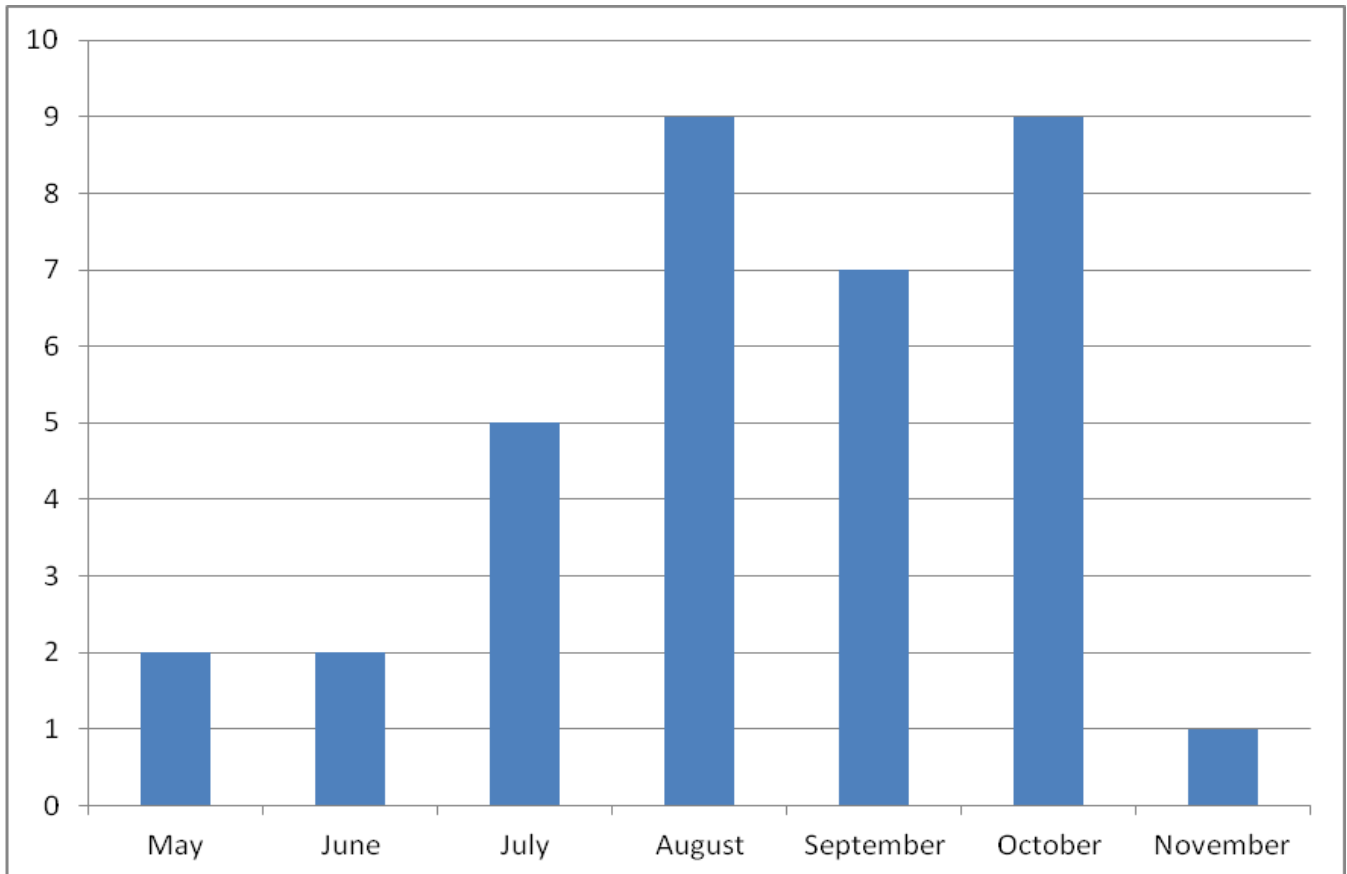
<http://www.biodiversitylibrary.org/item/36043#page/132/mode/1up>

The Leaf-miner Moth Recording Scheme distribution shows some preference for coastal and sub coastal localities



It is a rare miner in the UK, (Nationally Scarce A), but can be locally abundant.

The Leaf-miner Moth Recording Scheme has mines recorded from May to November, with peaks in August and October.



In terms of habitat it seems to be distributed where the local environment is warm e.g. in Derbyshire it is found on a steep south facing slope in a limestone valley.

Here in Norfolk it is found on chalky embankments and the hot sandy soils of the Brecks.

Mines are very visible at this time of the year and worth searching for.

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Kent moths - Leafmines and Microlepidoptera on YouTube

Kent moths have started an innovative approach to leaf mining by recording individual species on YouTube. The project is in its infancy and will also include feeding signs of microlepidoptera.

Certainly worth following!

<https://www.bing.com/videos/search?q=kentmoths%20you%20tube&gs=HS&form=QBVR&sp=1&pq=kentmoths%20you%20tube&sc=1-18&cvid=9002DCC9FC0240C9BBCC8CFFF8E80D39>

The *Stigmella salicis* complex



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The polymorphic mines of *Stigmella salicis* are well known on *Salix* (Willow) species in the UK.

Nieurkerken et al (2012) bar-coded the mitochondrial DNA of this group and discovered that it was a complex of several cryptic species and consisted of at least seven clusters in Europe, of which two occurred in the UK:

Cluster 1: *Stigmella cf salicis* ss is the species found most commonly throughout the UK and the egg is laid on the underside of the leaf. It mostly occurs on the hairy *Salix* species such as *S.cinerea*, *aurita* and *caprea*. The larva has a pale brown head.

Cluster 6: *Stigmella salicis* *Salix caprea* is found from the south of England and Wales and occurs on *S.caprea* or *cinerea* and their hybrids. In this cluster the eggs are laid on the upper side of the leaf and the larva has a darker brown head and a chain of ventral ganglia in the body.

The authors indicate that more research needs to be done on this complex.

It is something one needs to take into account when recording mines from this complex, in particular the egg position - upper or lower surface of the leaf.

Reference:

Nieukerken, Mutanen and Doorenweerd (2012), DNA barcoding resolves species complexes in *Stigmella salicis* and *S.aurella* species groups and shows additional cryptic speciation in *S.salicis* (Lepidoptera: Nepticulidae). - Entomologisk Tidskrift 132(4): 235-255.

A note on the pupation of *Amauromyza verbasci* (Bouche,1847)

During the past few weeks, I have been searching for the mines of *Amauromyza verbasci*, which is known to use Butterfly-bush (*Buddleja*), Figwort (*Scrophularia*) and Mullein (*Verbascum*) as hosts in the UK.



Having collected many mines, a total of 34 puparia were obtained (22 from Mullein, 12 Figwort). The known literature states that pupation occurs externally, via a semi-circular slit in the upper epidermis. It came as a surprise that out of the 34 puparia, 10 of these were formed within the mine. Interestingly, these internally pupating larva, were all on Mullein. Some leaves were occupied with multiple larvae, some vacated the mine to pupate whilst others pupated internally.

Pupation occurred at the end of the mine; the puparia being loose with no spiracula penetrating the epidermis, which is a feature of some *Agromyzidae*. The pupa may be seen in this mine (bottom left)



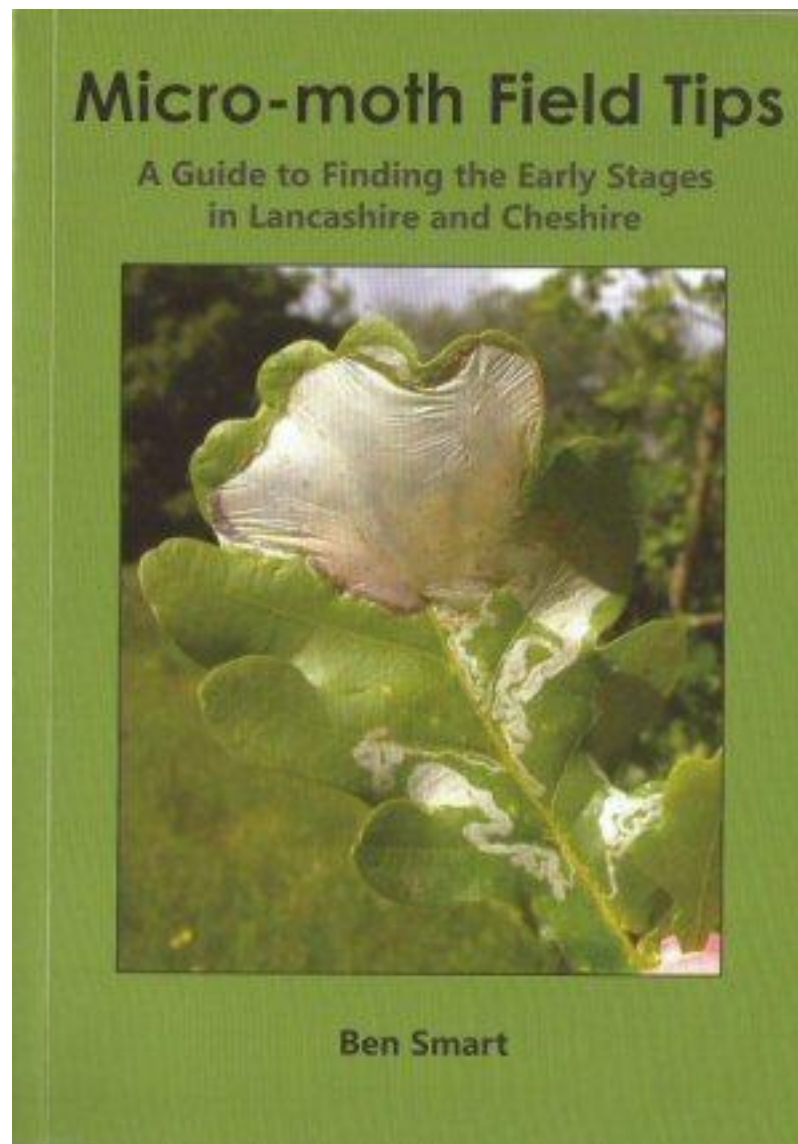
The pupation site of many *Agromyzidae* is often contrary to the stated literature and therefore should not be used as a reliable feature when determining a larval mine. Last year, mines on Ash were collected which had larva pupating internally. Adults were successfully reared, confirming that the mines were those of *Aulagromyza heringii*.

However, at the time of collecting the mines, *Aulagromyza heringii* was ruled out by one European expert due to this feature.

It would be great if anyone who spots the mines of *Amauromyza verbasci* were to check if the mines were empty or had puparia present and submit their record to the scheme, either using iRecord and by emailing agromyzidaeRS@gmail.com

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National Agromyzidae Recording Scheme Organiser

Micro-moth Field Tips by Ben Smart



This is a really useful field guide to finding and identifying the early stages of microlepidoptera including the leafminers. It aims to encourage people to get into the field and look for and identify the feeding signs of microlepidoptera.

It is set out with field tips for each month. Each one of which contains 10-18 species accounts with accompanying text and Ben's excellent photographs to aid location of the feeding signs, using his expertise built up over 15 years. The guide is applicable to the whole country, not just Lancashire and Cheshire.

Leafminers do feature prominently in this guide and my copy is already well used and compact enough to take into the field.

It would have been useful to have a list of host plants and their associated microlepidoptera in an appendix as one could find larval workings but be unsure of the causative organism if it occurred outside the month illustrated in the guide.

A highly recommended guide and excellent value at £16.

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Autumn leaf mine challenge

How many of these, perhaps under recorded miners, find can you find this autumn?

Phyllonorycter esperella (Goeze, 1783) forms prominent white blotches on the upper surface of the leaves of Hornbeam.



As the mine develops it contracts and the leaf is folded inwards.



Phyllonorycter coryli (Nicelli, 1851) forms similar- looking mines on Hazel

Ectoedemia quinquella (Bedell, 1848)

These mines can be found through to November and are particularly easy to spot in green islands on fallen leaves with the mines looking like tiny scribbles on the leaf surface



The larvae have ventral spots (as shown on the right hand larva), which disappear as the larva develops



Good luck finding these two species!