british leafminers

Newsletter 35

March 2018

A guide to the Birch feeding Eriocraniidae:

The Eriocraniidae species feeding on Birch can be separated if carefully examined using a hand lens.

It is important to note that none may be identified from vacated mines.

The first feature to note is the frass, which look like long strands of spaghetti in fresh mines.

This is a characteristic feature and absence of this means a different leaf miner is involved eg a sawfly.

Secondly the start of the mine is important — whether it starts in the interior or at the edge of the leaf.

Accumulations of frass will also show you where the mine has started.

An early mine of *Eriocrania semipurpurella*, which starts at the edge of a leaf.

Photo © Rob Edmunds

This is a developing mine of *Eriocrania salopiella*, which starts in the interior of a leaf.

Photo © Rob Edmunds

(a) Mines starting at the leaf edge:

These mines occur earlier in the year compared to the mines which start in the interior of the leaf. They form in April-May.

(i) *Eriocrania sangii*: The larvae occur singly in these mines and are dark grey in colour and hence easily seen:

Photo © Rob Edmunds

(ii) Eriocrania cicatricella:

Several larvae may occupy the mine and the mine may apparently have no larvae in occupation as they are virtually invisible when

the leaf is held up to the light.

Photo © Tony Prichard

Sometimes mines of other *Eriocrania* species may coalesce, if there are several mines in a leaf, so care needs to be taken over the identification as there may appear to be a single mine with multiple occupants. The distinguishing feature of *E.cicatricella* mines is that the larvae are almost invisible in the mine.

(iii) Eriocrania semipurpurella:

Photo © Rob Edmunds

This is our largest and commonest *Eriocrania* species. It is readily identified in early instars by the characteristic dark head and prothorax (as shown). This feature is lost as the larva matures.

(*iv) Heringocrania unimaculella:*

Photo © Rob Edmunds

The larva of this species has a very dark head in the final instar (as shown). If the larva is examined it will be seen to have projections on the second abdominal segment.

(b) Mines starting in the interior of the leaf:

These mines occur later in the year compared to the previous mines.

(i) Eriocrania salopiella:

These mines occur first in May or June.

Photo © Rob Edmunds

The larva has a pale head and projections on the first abdominal segment.

(ii) Eriocrania sparrmannella:

This is the last Birch *Eriocrania* leaf miner to occur (from June to August) and care must be taken to distinguish between this species and *E.salopiella.*

The initial mine is somewhat angular and the larva has distinctive cloudy spots on the prothorax:

Photos © Rob Edmunds

Rearing Eriocraniidae:

Ben Smart found this method was his most successful:

http://leafmines.co.uk/html/newsletter21.htm

Further information:

More information, with keys and photos of the mines and larvae, may be found here:

http://leafmines.co.uk/html/eriocraniidae.htm

Antispila treitschkiella (Fischer von Röslerstamm, 1843) - a new and spreading leafminer in the UK

Photo © Robert Homan

Van Nieurkerken et al.(2018) showed that *Antisplia treitschkiella* had been incorrectly synonymised with *Antispila petryi* in the past.

They found that *A.petryi* was a leaf miner of *Cornus sanguina*, whereas *A.treitschkiella* mined *Cornus mas.* Both species being monophagous.

Both form similar size small cut-outs in the leaf.

A.treitschkiella is widespread in Central and Southern Europe and was first found in the UK, in London, in 2016. It seems to be well established in this city and examples were also found as far North as Cambridge.

It will be interesting to see how far it spreads in the UK each year.

It is bivoltine and leaves of *Cornus mas* may have several mines, as this photo (x.2017, Parliament Hill, London) shows:

Photo © Robert Homan

Further information:

http://leafmines.co.uk/html/Lepidoptera/A.treitschkiella.htm

Reference:

Nieukerken EJ van, Lees DC, Doorenweerd C, Koster JC, Bryner R, Schreurs A, Timmermans MJTN & Sattler K, (2018a), Two European Cornus L. feeding leafmining moths, Antispila petryi Martini, 1899, sp. rev. and A. treitschkiella (Fischer von Röslerstamm, 1843) (Lepidoptera, Heliozelidae): an unjustified synonymy and overlooked range expansion , Nota lepidopterologica 41(1): 39–86.

Recording Guidelines:

The **Agromyzidae Recording Scheme** has set out useful guidelines for recording under the following categories:

Grade 1 Easily identifiable by inexperienced recorders
Grade 2 Care should be taken due to possibility of other causers
Grade 3 Difficult to determine, all aspects of the mine should be examined. Rearing advised
Grade 4 As above – can be determined by examination of larva or puparium
Grade 5 Rearing of adult material essential

The leafmine site has now been updated to show these Grades for each Agromyzid species illustrated .

Reference:

Agromyzidae Recording Scheme Newsletter, No 7, January 2018. (AgromyzidaeRs@gmail.com)

Micro-moth Verification Guidelines were published to aid verification of records, using the following guidance for leafmines:

Category A: Accept record without the need to see the actual leaf or a good photo.

Category L: Either the leaf or a good photograph required.

Category R: Moth needs to be reared and, in some cases, possibly dissected.

The leafmine site is being updated to reflect these categories.

Reference:

http://mothscount.org/text/73/guidance_notes.html