Lockdown Special - Species to look for in Winter:

Dip: Agromyzidae:

Agromyzid larvae can still be found actively feeding during the winter and careful searching may also reveal those pupariating inside stems.

Cerodontha iridis (Hendel, 1927)

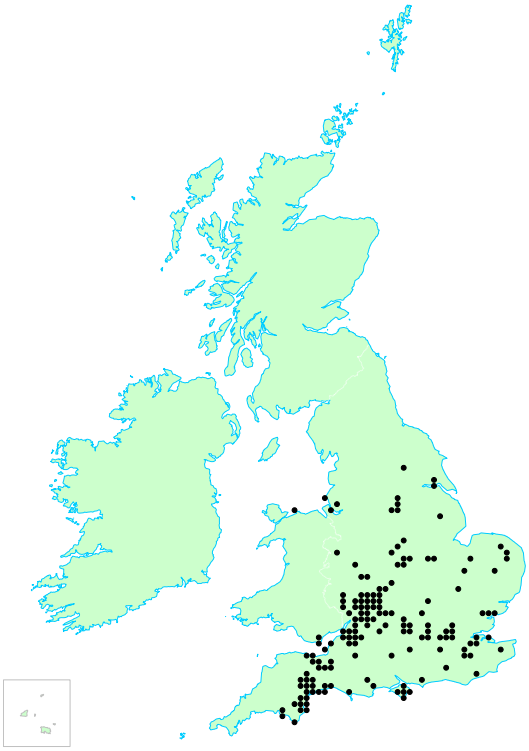
This leaf miner of iris species forms large conspicuous blotch mines which have a mottled appearance. It looks rather as if someone has tried to whitewash a leaf with a dirty paint brush!

A good miner to look for in supermarket car parks, parks and gardens.

Photo ©Rob Edmunds

Its current distribution is shown:

Cerodontha iridis



Map © National Agromyzidae Recording Scheme

Phytomyza hellebori Kaltenbach, 1872:

This miner is found in *Helleborus* species, mostly in Stinking Hellbore (*Helleborus foetidus*), and is a good species to look for in your gardens and also in parks.

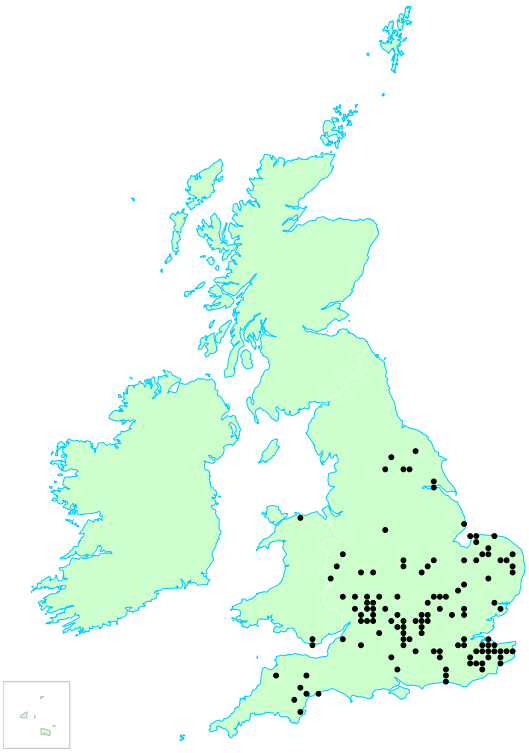
The mines develop throughout the winter and are initially black and linear. As they develop they may form a blotch and then whiten as they age.

The mines are very visible and several may develop in a leaf.

It was first discovered in the UK in 2000 and is spreading into the West and North from the southern counties.

Photo ©Rob Edmunds

Phytomyza hellebori



Map © National Agromyzidae Recording Scheme

Stem borers:

If you would like a challenge, looking for stem borers can be very rewarding. It can also very frustrating as you do not know which stems will contain puparia, as there is usually no visible external signs of occupancy.

Ragwort stems may hold a variety of puparia such as *Melanagromyza aeneoventris* (Fallén, 1823)*, Melanagromyza dettmeri* Hering, 1933*, Melanagromyza eupatorii* Spencer, 1957 *and Melanagromyza oligophaga* Spencer, 1990.

This Ragwort stem has been mined by *Melanagromyza eupatorii* and has the puparium in situ:

Carefully collect some stems and split from the bottom upwards. Take care that any puparia found do not 'ping' out of the stems as you open them up!

Puparia, if present, are tiny cigar-shaped objects with very distinctive hooked posterior spiracles.

The puparia range from a white to yellow colour and it is this colour and type of spiracles which help determine the species.

Melanagromyza eupatorii (with short posterior spiracles):

Melanagromyza aeneoventris (with longer, hooked posterior spiracles):

Please note that the 'horns' on the posterior spiracles of *aeneoventris* although usually visible, can be atrophied and barely detectable occasionally.

Photos ©Rob Edmunds

Further details:

Can you add further records of these leaf miners and stem borers?

If you find any of these then please photograph and iRecord.

National Agromyzidae Recording Scheme:

agromyzidaers@gmail.com

Lep: Gracillaridae

15.060 *Phyllonorycter ulicicolella* (Stainton, 1851)

The mines of this species can be found in Gorse (U*lex* spp) stems and needles between September and May.

They appear as paler green areas, normally a few centimetres long and wrapping around half of the stem, often with some purple bruising.
The subtle and variable nature of the mine means it's probably best to only record it after opening it up to check for frass (yellowy-orange when fresh, fading to a darker red-brown as shown below, with the yellow frass of a fresh mine) or the rather elongated larva.

I've done this using a very fine needle, scoring along the middle of the mine to 'unzip' it.

I have mainly found mines on Western Gorse, on a variety of types of plant.

The highest densities have been on scraggly, older plants (I found nearly 20 mines on the small plant pictured here).

Photos ©Will Langdon

In contrast to my experience, Jack Oughton down in Devon has found plenty of mines on younger, thicker stems. You can see his pictures here (https://www.facebook.com/groups/dorsetmoths/permalink/3510279032422236).

It does occur at some quite isolated sites, with small quantities of the foodplant, so it may well be over-looked and worth looking for wherever the gorse occurs.

There are more photos and some discussion of how to find these mines here (https://willsbutterflies.blogspot.com/2020/12/finding-phyllonorycter-ulicicolella-and.html).

Lep: Nepticulidae

4.088 *Ectoedemia heringella* (Mariani, 1939)

This is a good miner to look for in churchyards and parks, in fact anywhere where the foodplant Evergreen Oak (*Quercus ilex*) grows.

It forms large numbers of contorted mines in the leaves and is present from late October onwards.

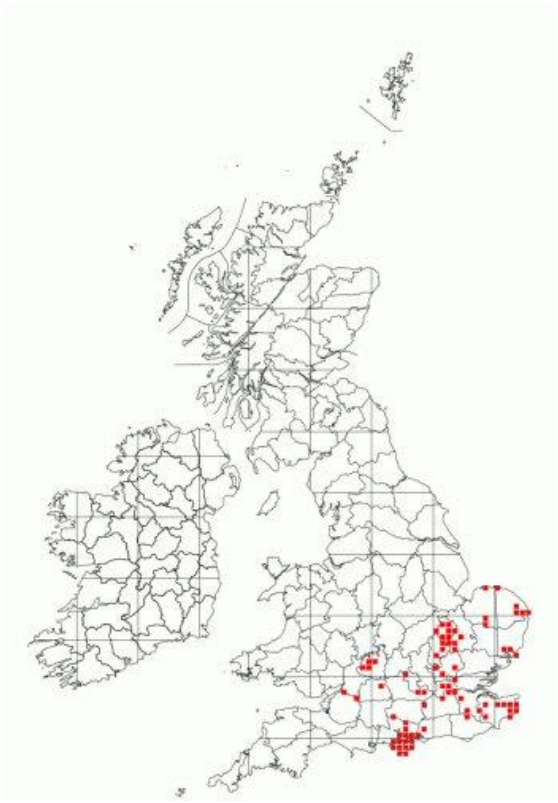
The larvae develop throughout the winter and the mines enlarge and fill with black frass.

Initially the leaves seem to have brown speckles (due to the presence of the early tiny mines).

In late winter (February onwards) the mines are easily visible as they enlarge and blacken.

The adults emerge in June to August and sometimes may be seen in great numbers swarming around their foodplant.

This miner was first seen in central London in 2003 and has since spread rapidly in Southern England. It has expanded its range since this map was developed.



Map produced using MapMate

This is the appearance of the mines in late November, showing the brown speckled appearance:

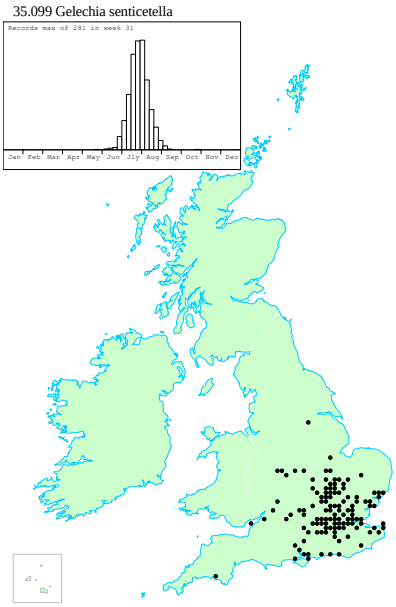
Holding the leaf so that the light shines through reveals the numerous developing mines:

By late winter the mines are fully developed and in severe infestations may appear as below:

Photos ©Rob Edmunds

Lep: Gelechiidae:

35.099 *Gelechia senticetella* (Staudinger, 1859)



Map produced using MapMate

Over the winter months, the larva of this species can be found on a variety of ornamental garden shrubs such as *Chamaecyparis*, particularly *Chamaecyparis lawsoniana* (Lawson Cypress), *Cupressus* spp. (cypress), *Juniperus* spp. (Juniper) or a *Thuja* sp. (red-cedar).

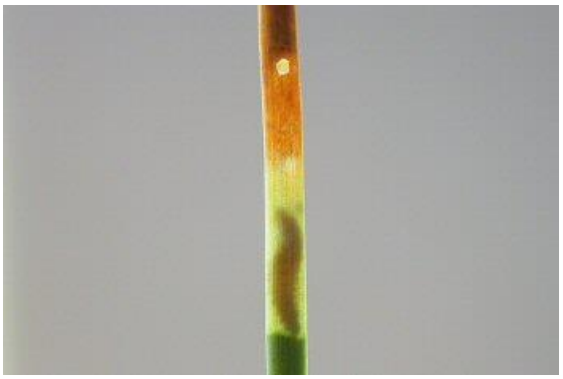
The leaf-mining stage starts in October with the small larva mining the tips of leaves. As the larva develops it moves to feeding externally in tight silken spinnings among the leaflets, or in developing buds, which turn brown. These can be found until Spring-time.

First discovered in Grays, Essex in 1988, the moth has spread considerably since then, both naturally and probably with the assistance of the horticultural trade. It was noted as far west as South Devon in 2008, Staffordshire in 2011 and made it into South West Yorkshire in 2018. There appear to be many 'record gaps' on the provisional distribution map and as the above plants are often found in gardens, this is a perfect time to look out for this distinctive larva.

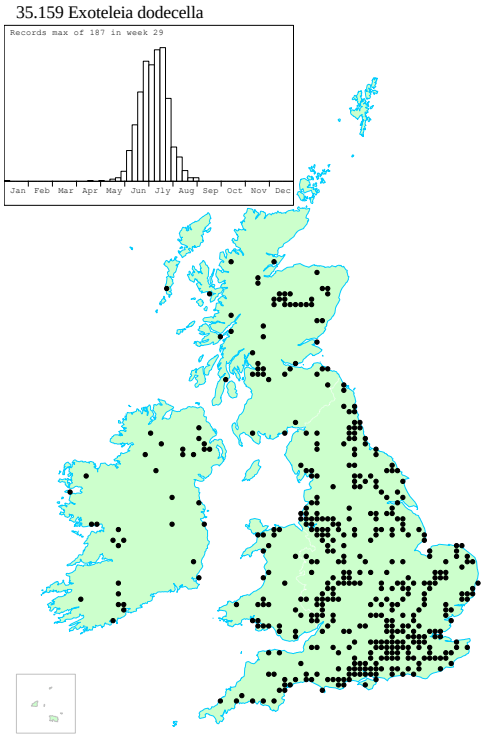
Other species do mine these plants over the winter months and are equally worth looking for.

Dichomeris marginella mines *Juniperus* spp. needles, overwintering in the mine, and in the spring produces an extensive silk web amongst the needles. The larva of *D. marginella* has a dark brown head and a pinkish white body with dark red lines.

Three *Argyresthia* species also mine cypress and juniper varieties over the winter; two of these can be abundant. The larva of *A. trifasciata* has a black head, prothoracic plate and anal plate and a greenish brown body. A photo of *A. cupressella* can be seen on the Leaf Mine website at http://www.leafmines.co.uk/html/Lepidoptera/A.cupressella.htm .
The third, *A. dilectella*, is more associated with wild Juniper but can also be found on garden varieties (perhaps less frequently so in recent years). The larva of these *Argyresthia* species (as shown) complete their feeding in the leaf mine or in a new shoot and only exit to pupate.



35.159 *Exoteleia dodecella* (Linnaeus, 1758)



Map produced using MapMate

This is one of several Lepidopterous larvae that mine pine needles. *E. dodecella* occupies the apical half of a needle, making one or two holes from which it ejects frass.

The larva hibernates in the needle, later boring into buds and shoots making small whitish webs amongst the needles.

It is a widespread moth and has been noted on isolated trees as well as larger stands of Pines. Its main foodplant is *Pinus sylvestris* (Scots Pine) and occasionally on *Larix decidua* (Larch) or *Pinus contorta* (Lodgepole Pine).

Other species mining needles over the winter period are: *Cedestis subfasciella* – see http://www.leafmines.co.uk/html/Lepidoptera/C.subfasciella.htm ; *Ocn*erostoma *friesei* - see http://www.leafmines.co.uk/html/Lepidoptera/O.friesei.htm ; *Batrachedra pinicolella*, which does so from a silken gallery spun on the surface of a twig; and *Clavigesta purdeyi* where the larva is reddish brown (head and plate colour unknown) and overwinters within a mined needle.

If you are still looking for mines on pine needles into March or later then there are a few additional species that will need consideration.

Thanks very much to Ben Smart and Ian Thirlwell for their permission to use their photos, Ben for all the photographs of *Exoteleia dodecella* and *Argyresthia dilectella* and Ian for those of *Gelechia senticetella*.

For further details of the Gelechiid species mentioned: Gelechiid Recording Scheme: https://www.gelechiid.co.uk/

.

Lep: Tischeriidae

10.003 *Coptotriche marginea* (Haworth, 1828)

This is a miner of Bramble species, especially *Rubus fruticosus*. It is bivoltine, forming mines in the summer (in June to July) and also from September to March.

The mines are said to resemble seahorses being whitish when fresh with a curled and 'lumpy' intial gallery. As they age the mines become brown and there may be several mines in a leaf (as below):

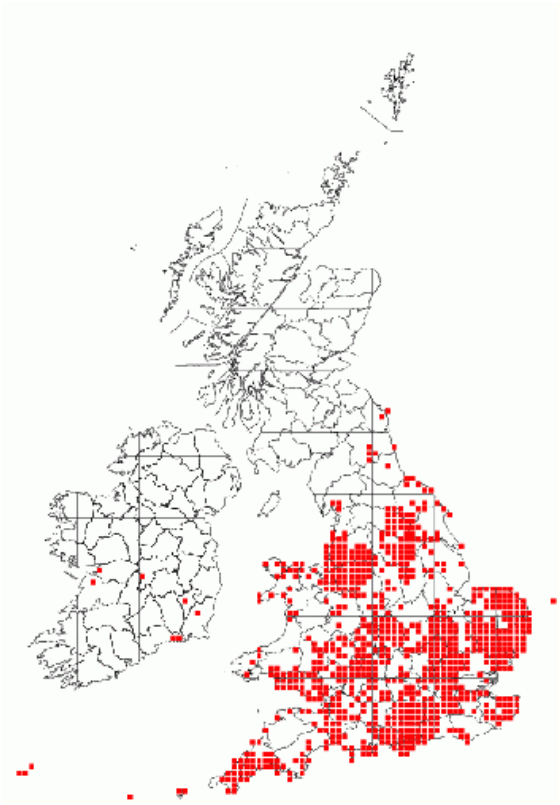
If you hold the leaf up to the light a larva (if in occupancy) will be easily visible.

Photos ©Rob Edmunds

These mines are common throughout England and Wales, with decreasing numbers in the North.

They are found in a variety of habitats, wherever Bramble grows.

©Rob Edmunds



Map produced using MapMate

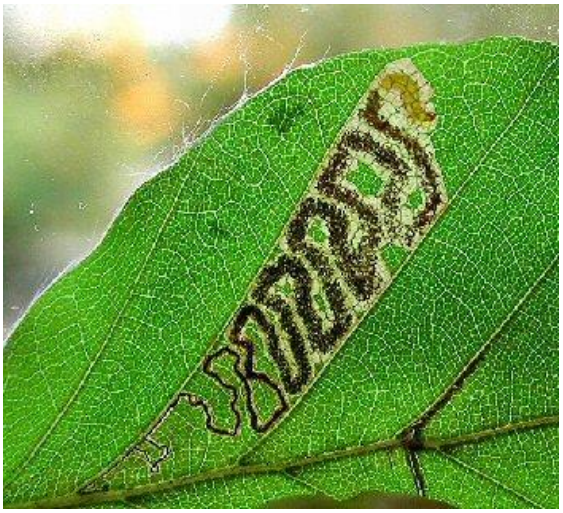


Photo ©Rob Edmunds

A distinguishing feature of this mine is that the egg is laid on the leaf underside, usually in the angle between the midrib and a vein. The mine also tends to develop between veins.

This is a very common miner, distributed throughout the UK.

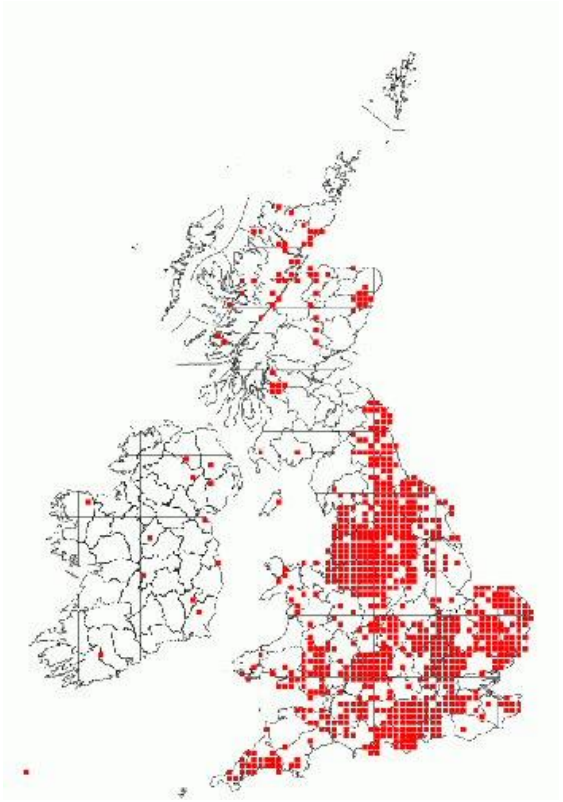
Mines in a Beech (*Fagus sylvatica*) hedge:

One reason that Beech hedges are popular with gardeners in parks and gardens is that they tend to retain their leaves over winter, providing a wind screen and also some colour during this season.

This also is advantageous in that such a hedge may harbour leaf mines, which are common and readily visible at this time of year.

4.034 *Stigmella tityrella* (Stainton, 1854)

By winter the larvae will have exited the leaf to pupate but the very distinctive zig zag galleries may still be seen, mostly between the veins.



Map produced using MapMate

15.063 *Phyllonorycter maestingella* (Müller, 1764)

Another very common miner in Beech hedges, with easily visible mines in winter.

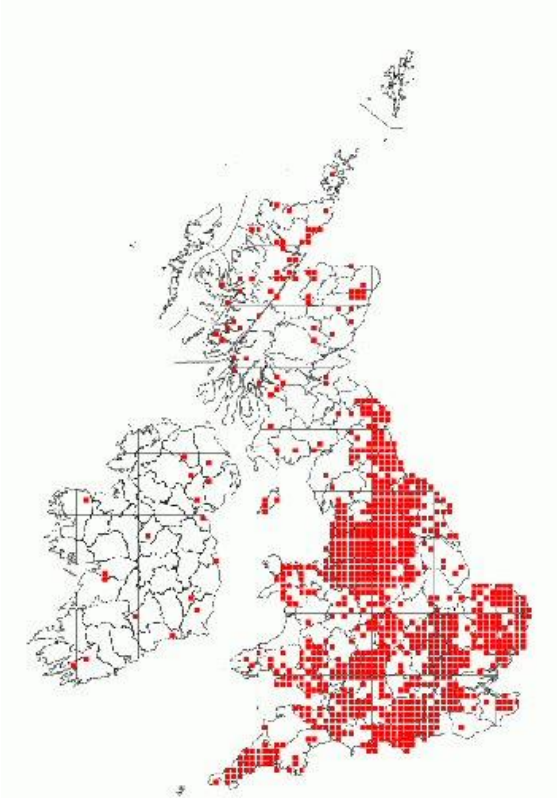
It forms long mines between the veins of a leaf, constricting the leaf and thus causing it to hump up.

Photos ©Graham Calow

In winter the mines are conspicuous as the leaf surface becomes a lighter brown colour due to the feeding inside the leaf by the larva.

It may also form a mine on the leaf edge and cause this to fold downwards.

It is distributed throughout the UK.



Map produced using MapMate