

AGROMYZIDAE NEWSLETTER

LATEST NEWS FROM THE NATIONAL AGROMYZIDAE RECORDING SCHEME

A BRIEF UPDATE

RECORDS

A total of 124 records were received by the scheme during February. *Phytomyza ilicis*, again, was the most recorded species, forming 52% of this month's total.

The mines of *Phytomyza ranunculi*, a species which was mentioned in the previous newsletter, were also well recorded, with 22 records been submitted. Many thanks as always to everyone who sent in their sightings!

James Emerson recorded *Phytomyza leucanthemi* during February, a species which mines Ox-eye Daisy and is often found on the basal leaves of the host plant during the winter months.



Larval mine of *Phytomyza leucanthemi* © James Emerson

The NRS database holds only 34 records of this species so any additional sightings would really add to its current known distribution status – do be careful though as the micro-moth *Bucculatrix nigricomella* can cause similar looking mines on the same host plant – good luck!

WHAT'S ABOUT.....

MARCH

This month sees the early miners starting to appear, with Honeysuckle and Snowberry often being the most productive host plant to search.

Two species which can be found on these host plants at this time of year are *Aulagromyza cornigera* and *Aulagromyza hendeliana*.

Unfortunately, the larval mines produced by these species are often **very** similar and basing a determination on the mine alone is not recommended.

Thankfully, they are easily separated by examining the puparium. With *A. cornigera*, the puparium has unique cherry-red papillae on each segment, which can be clearly seen in the image below;



Aulagromyza cornigera puparium © Barry Warrington

In *A. hendeliana*, these papillae are absent, as shown;



Aulagromyza hendeliana puparium © Rob Edmunds

A RECORDERS MISSION

AGROMYZIDAE HELPING TO REACH A MILESTONE

Graham Watkeys writes;

"I have a mission. I want to add 1,000 new species to the list of those already recorded at my local SSSI reserve where I'm a wildlife trust volunteer warden.

Taf Fechan, nr Merthyr Tydfil in South Wales, is primarily an ancient woodland reserve but there are areas of limestone and acid grassland all bisected by a fast flowing river cutting a gorge through the limestone making it a lovely place to record all kinds of wildlife.

Now this aforesaid mission may not be an overly dramatic or world changing one but it keeps me out of trouble, helps with reserve management decisions and perhaps adds a little to the sum total of the knowledge of humanity.

Anyway, in pursuit of this aim the *Agromyzidae* have become a fecund and well mined (please excuse the pun) source of new records.

I've managed to add 36 species to date; even *Phytomyza icilis* was a newly recorded species and proudly took its place at number 144.

With the help of the *Agromyzids* (and Barry) my total species list now sits at 958.



Galiomyza violiphaga : a miner of Violets and a VC42 first for Taf Fechan © Graham Watkeys

This pursuit has generally spilt over into recording at the other sites I volunteer at where the *Agromyzids* almost invariably haven't been recorded before either.

It was still a surprise however to find out, thanks to Barry's inaugural end of year review of the recording scheme, that I had managed 64 individual records.

Given that most insects, let alone the *Agromyzidae*, as a group, are under-recorded and supported by my own experience of adding species to various lists, I decided to ask how many were first vice county records. I think both myself and Barry (but for perhaps different reasons) were surprised at the result. The spreadsheet duly arrived with a list of 28 species; six for VC41 and twenty two for VC42!



Phytomyza cytisi : a VC42 first found on Laburnum in my garden © Graham Watkeys

Whilst the total number of firsts was a surprise the split is perhaps more understandable. Firstly a little geographical orientation, Taf Fechan sits on the border of two vice counties VC41 (Glamorganshire) and VC42 (Breconshire). In fact the actual boundary runs through the exact middle of the reserve following the River Taf Fechan. The bulk of my VC42 *Agromyzid* records come from half of Taf Fechan (plus my garden and a couple of other locations) with my VC41 sites spread from the other half south down into the valleys.



Phytomyza solidaginis : a miner of Goldenrod and a VC42 first for Taf Fechan © Graham Watkeys

Fundamentally records come from where the recorders are (which has real implications for understanding true distributions of species) and there are simply a lot more recorders in the densely populated Valleys (and perhaps a longer historical precedent of recording?) than the more rural and less populated VC42.

Is there a moral to this tale?

Certainly that there are still areas, and whole vice counties, that have not been recorded to any great degree and just because it's a SSSI and a nature reserve doesn't mean it's comprehensively recorded.

Oh and perhaps being on border country has some advantages.



Phytomyza plantaginis : a miner of Ribwort Plantain and a VC41 first © Graham Watkeys

I'm still on the lookout for more *Agromyzid* records as I'm certain there are more to find, although maybe the seam is getting thinner and more difficult to work. Who knows perhaps one will be number 1000?"

Many thanks indeed to Graham for taking the time to write this very interesting article. The NRS wishes you all the best in your quest to reach 1,000 species!

Keep up the great work and hopefully, that milestone species will be in the form of a leaf mine!

GETTING STARTED ON AGROMYZIDS

STARTING OUT IDENTIFYING MINERS?

Richard Shillaker has kindly taken the time to help others who are thinking of or have just started recording *Agromyzids* by putting together a table of the more easily identifiable species, along with their host plant and phenology.

He says "My recent casual interest in leaf-mining insects has been spurred on by Barry Warrington's prompt responses to my photo ID queries.

I was also fascinated to learn of the food chains involving Blue Tits and parasitic wasps stemming from the mining activity of the commonly observed Holly Leaf Gall Fly, see *Glackin M et al. School Science Review, March 2006, 87(320) 91-97.*

Further encouragement has come from the realisation that an inexperienced observer can apparently easily identify quite a few species of *Agromyzid* flies from the appearance of their larval leaf-mines (see UK *Agromyzid* species list in January's newsletter).

Using this list, together with information in the British Leafminers website, I have produced a table indicating the host plant species (or groups of species) on which easily identifiable *Agromyzid* leaf-mines can be found.

Notes and photographs to help identify these leaf-mines are included on the British Leafminers website, with notes on some species also featuring in the *Agromyzidae* newsletter.

The table is provided below in case it is helpful to anyone else getting started on identifying *Agromyzid* flies".

Larval food plant ^b	<i>Agromyzid</i> species ^a	Time of year when mines are present ^b (further information ^c)
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Trees

Alder, Grey Alder, Italian Alder	<i>Agromyza alnivora</i>	Summer & early Autumn
Ash	<i>Aulagromyza heringii</i>	Autumn (see also AN October 2017)
Holly	<i>Phytomyza ilicis</i>	Summer – Spring

Bushes and Climbers

Butterfly Bush	<i>Amauromyza verbasci</i>	Summer & early Autumn
Dogwood	<i>Phytomyza agromyzina</i>	Summer (also present in October see AN Oct 2017)
Elder	<i>Liriomyza amoena</i>	Summer & early Autumn
Honeysuckle, Fly Honeysuckle (mostly), Etruscan Honeysuckle, Himalayan Honeysuckle, Snowberry	<i>Aulagromyza luteoscutellata</i>	June-July & August (see also AN October 2017)

Other Flowering Plants

Astrantia	<i>Phytomyza astrantiae</i>	April-June, August (see also AN October 2017)
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Balsam species particularly Touch-me –not Balsam and Small Balsam	<i>Phytoliriomyza melampyga</i>	July-August
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Buttercup spp, especially Meadow and Creeping Buttercup	<i>Phytomyza ranunculi</i>	Throughout year
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Columbine, Greater Meadow Rue	<i>Phytomyza aquilegiae</i>	Summer & Autumn (see also AN Nov 2017)
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Phytomyza minuscula

Cow Parsley, Chevril, Pignut and other Umbelliferae	<i>Phytomyza chaerophylli</i>	Early Spring to late Summer & into Dec (see also AN June 2017)
Globe Thistle (<i>Echinops spp</i>)	<i>Phytomyza bipunctata</i>	June-July

Golden-Rod, Canadian Golden-Rod	<i>Nemorimyza posticata</i>	Summer & Autumn
Ground Ivy	<i>Phytomyza glechomae</i>	Late Spring & late Summer
Hellebore species, mostly Stinking Hellebore, also Christmas Rose	<i>Phytomyza hellebori</i>	Summer - Spring (see also AN July 2017)
Mullein, Common Figwort	<i>Amauromyza verbasci</i>	Summer & early Autumn
Primrose, Cowslip, Birdseye Primrose	<i>Chromatomyia primulae</i>	January, June-November
Sow-thistles (<i>Sonchus spp</i>)	<i>Liriomyza sonchi</i>	Late Spring & Summer (see also AN Aug 2017)
Water Mint, Horse Mint, Round Leaved Mint	<i>Phytomyza tetrasticha</i>	Early Summer & late Summer

Ferns

Wall-rue, Hart's-tongue, Common Polypody	<i>Chromatomyia scolopendri</i>	Early Summer, Autumn
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a) Agromyzid flies with recording grade 1 larval leaf-mines, ie easily identifiable leaf-mines by inexperienced recorders, see Agromyzidae Newsletter (AN) January 2018

b) Information from British Leafminers website <http://www.leafmines.co.uk>, which also contains notes and pictures for identifying leaf-mines

c) Further information is available in previous Agromyzidae Newsletters

CONTACT

IF YOU HAVE ANY QUESTIONS OR WOULD LIKE TO KNOW MORE ABOUT THE SCHEME, PLEASE DO GET IN TOUCH WITH US;



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