

AGROMYZIDAE NEWSLETTER

LATEST NEWS FROM THE NATIONAL AGROMYZIDAE RECORDING SCHEME

RECORDING THE HOLLY LEAF-MINER, *PHYTOMYZA ILICIS* CURTIS, 1846

In light of recent findings discussed by Papp & Černý (2019), the recording of *Phytomyza ilicis* leaf mines on Holly is significantly affected. In their publication, regarding Hungarian reared specimens of *P. ilicis*, they state;

“Much to our surprise, after genitalia preparation we found that Kertész’s males represent two species (from the same collection).We are afraid that all former records of *Ph. ilicis* from Europe will need to be either confirmed or revised.” - Papp, L. and Černý, M. 2019. *Agromyzidae (Diptera) of Hungary*. Volume 4. Phytomyzinae III. 708 pp. Pars Ltd, Nagykovácsi, Hungary.

There are eleven other species known to utilise Holly in the Nearctic region (Lonsdale & Scheffer, 2011), whilst in Europe, *P. jucunda* also mines Holly. At present, it is not known if the second species mentioned by Papp & Černý relates to one of the other known Holly miners or is an undescribed species.

The leaf mines of *P. ilicis* can often resemble those of the other Holly miners, as depicted below;



Phytomyza ilicis (reared & gen. det) leaf mines resembling those of *P. jucunda* and some Nearctic spp.

The anterior spiracles of the puparium, which usually penetrate the epidermis of the leaf, can be used to separate *P. ilicis* from *P. jucunda* and some of the Nearctic spp., however, these need to be examined under a microscope, something not every recorder possesses.

Owing to Papp & Černý's discovery and the atypical mines '*P. ilicis*' often produces, there is a distinct possibility that a second species may also be present in the U.K. Based on this, the National Agromyzidae Recording Scheme is requesting that all future records of *P. ilicis* are supported by images of the larval mine **and** anterior spiracles of the puparium.

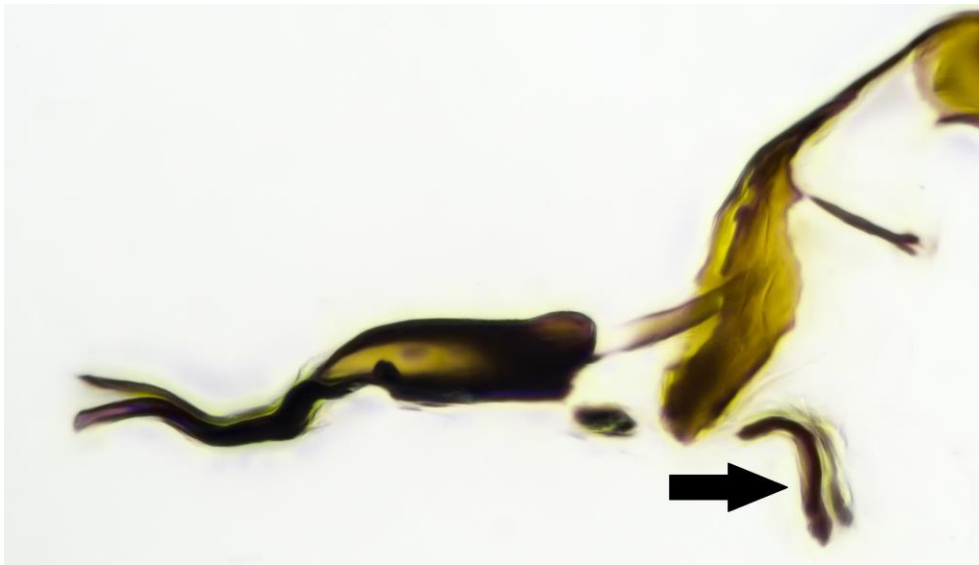
Although this is likely to put some recorders off submitting future records and may, unfortunately, cause some disgruntlement, hopefully recorders will appreciate the need for this requirement in light of the current knowledge available.

It is fully appreciated that not all recorders will be in a position to obtain images of the anterior spiracles, due to a lack of equipment and/or time. Therefore, recorders are still welcome to submit records of '*P. ilicis*' via iRecord as normal, however, these records will be verified as 'plausible', meaning they will not be incorporated into the National Agromyzidae Recording Scheme's database.

One could argue that until another Holly-mining species is recorded in the U.K., it should be safe to record Holly mines as *P. ilicis*, however, if recorders aren't more stringent with their observations, we may be forever recording *P. ilicis* in error.

It would be absolutely fantastic if recorders were to attempt rearing '*P. ilicis*' mines; although the anterior spiracles of the puparium provide an extremely valuable clue to the species involved, characteristics of the male genitalia are essential in accurately determining the species involved.

One of the key male genitalia features, which helps separate the Holly miners, is the shape of the lateral sclerites of the hypophallus. In *P. ilicis*, these are thin and 'L' shaped as shown below;



***Phytomyza ilicis* aedeagus in left lateral view [arrow indicates lateral sclerites of hypophallus].**

Rearing agromyzids won't appeal to all recorders but if you are keen to try, details can be found [here](#), or alternatively, please feel free to email agromyzidaers@gmail.com for tips and advice.

Finally, thank you in advance for your cooperation and understanding.

Best wishes,

Barry.

National Agromyzidae Recording Scheme Organiser

www.brc.ac.uk/scheme/national-agromyzidae-recording-scheme