

## LEAF MINING ORGANISMS NOT PREVIOUSLY RECORDED ON THE ISLE OF WIGHT

Dr. D.T. Biggs

Since the publication of my last list of newly found leaf miners (Biggs, 2006) five new species for the Island have been found, three flies and two moths.

### DIPTERA

#### Agromyzidae

*Agromyza albitarsis* Meigen, 1830

At Hurst Stake, SZ5090, there are some planted Aspens (*Populus tremula*.) On 25th July 2005 I found several vacated mines of this fly. They were very noticeable. Each mine is a full-depth blotch visible on the upper leaf surface, and involving c.40% of the area of the leaf. They were a grey-brown colour, a somewhat irregular oval, and particularly obvious because they showed numerous darker brown arcs throughout. Such arcs are usually the features of a dipteran larva's feeding activities. However I was surprised to find, on microscopical examination, that these arcs were made of frass, there being both primary lines, and secondary lines at right angles to these. The frass grains were a dark reddish-brown and rather thread-like. Each mine had an upper surface exit hole. Although *Populus tremula* is favoured, this fly does rarely mine other *Populus* species and occasionally it will mine willows, *Salix spp.* The larvae mine in June and August. This species is found in northern and central Europe as well as in Great Britain. It has also been found in Canada. With respect to England it is reported to be widespread but local.

*Cerodontha pygmaea* Meigen, 1830

Bill Shepard found the mine of this fly on a soft-grass (*Holcus sp.*) at Lock's Copse, Porchfield SZ4491 on 10th August 2005. This mine was a full-depth blotch 3.5cm long involving the whole width of the leaf blade and whitish and translucent. Luckily a puparium was present which allowed me to identify the causer. On microscopy the mine was seen to consist of four parallel linear mines, each with its own track of frass, which later merged into an irregular elongated blotch. The pupa was a brilliant shining violet-black and was attached to the leaf by a silken thread from its rear end. Neither the anterior nor the posterior spiracles broke the surface of the leaf. The posterior ones lay together on a concave pillar. This is the commonest *Cerodontha* mine in grasses and the fly attacks many grass species. The larvae mine in May to September in two generations. Found throughout the northern hemisphere, in the British Isles it is reported as being widespread and common.

*Liriomyza sp.* Hering No. 3805

Whilst searching for fungi in Grange Chine SZ4281 for the annual Fungus Foray on 15th October 2005 I came across a young adder basking in the sun and, next to it, a leaf mine on Ribwort Plantain (*Plantago lanceolata*.) This was of a strange pattern, a very long, extremely narrow, convoluted and shallow corridor, leading eventually to an elongated blotch centred over a side vein. Both the raised corridor and the blotch were buff in colour, contrasting markedly with the dark green of the leaf. The corridor was translucent and the blotch opaque. Microscopy revealed the corridor to be empty of frass and the blotch to contain large black frass grains. Hering (1957) gave numbers to all his described leaf mines even when the causer could not be identified. My mine corresponded exactly with that assigned the number 3805 by Hering. He gives a very strange disjunct distribution viz. Naples, Sweden and Great Britain.

## LEAF MINING ORGANISMS NOT PREVIOUSLY RECORDED ON THE IOW

### LEPIDOPTERA

#### Coleophoridae

*Coleophora limosipennella* Duponchel, 1843

A walk in Parkhurst Forest on 7th June 2005 resulted in my finding several leaves of an English Elm (*Ulmus minor*) at SZ4690 bearing unusually large and strangely yellow fleck mines. A fleck mine is a full-depth mine, usually small and usually white and transparent, empty of frass and with a tiny opening. Fleck mines are characteristic of the larvae of the case-bearing micro-moths of the family Coleophoridae. Further examination of the leaf revealed a dark brown larval case, 10mm in length, lying almost parallel to the leaf surface, and with a serrated dorsal keel made from leaf fragments from the leaf edge. Dr. J. R. Langmaid confirmed my identification. There are no certain previous records of this moth on the Isle of Wight. It was not found in south Hampshire until 1984. There is one record of the species in a manuscript by Dr. K.G. Blair reporting a specimen of the moth taken in Parkhurst Forest by Mr. S. Wakely before the Second World War. However, before 1970 two other species of the moth were considered to be conspecific with *C. limosipennella* and Wakely's specimen is not available for examination. The 2005 record from Parkhurst Forest is therefore the first confirmed record of the species. It is reported to be locally common in S.E. England, frequenting the margins of woods. The larvae feed in June and July. In Europe it is found as far north as southern Scandinavia, and also in Asia Minor.

#### Lyonetiidae

*Leucoptera lotella* Stainton, 1859

On the edge of a ride on the Osborne Estate at SZ5295 on 13th August 2005 I noticed a small white round blotch mine on the upper surface of a leaf of what I assumed at the time to be Common Bird's-foot-Trefoil, *Lotus corniculatus*. At home, further examination revealed the mine to have a spiral of reddish-brown frass attached to the upper epidermis of the mine. There was no initial corridor and the mine contained a larva. I began to wonder whether the host plant was Hairy Birds-foot-Trefoil, *Lotus subbiflorus*. In Goater and Norris (2001) the host plant is stated to be Greater Birds-foot-Trefoil, *L. pedunculatus*, and the moth to be only local in Hampshire, and not found on the Isle of Wight.

I sent the specimen to Dr. John Langmaid who confirmed the identity of the miner and considered the plant to be *Lotus subbiflorus*. The moth is reported to be more or less widespread in southeast England. On the continent it is only recorded from Germany.

With respect to the host plant, Colin Pope examined some material and thought that *L. subbiflorus* was a possibility but he requested more specimens. Returning a few days later to the site I found that it had been strimmed so I will have to return next year.

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