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NOTES AND OBSERVATIONS

Some records of *Profenusa thomsoni* (Konow) (Hymenoptera: Tenthredinidae) in SE. England

While investigating parasitism of leaf-mining sawflies during the autumn of 1979 I found tenanted mines of *Profenusa thomsoni* on *Betula* sparingly at Hell Coppice (Bucks) on 12.ix (8 mines), Chobham Common (Surrey) on 20.ix (1 mine), Snelmore Common (Berks) on 28.ix (2 mines), and Owlsmore (Berks) on 5.x (2 mines). Benson (1952, *Handbk Ident. Br. Insects* **6** 2(b) and Supplement in 1958, **6** 2(c)) gives only four British records, from Warwicks, Staffs, Herts, and probably near Oxford.

The mines are readily distinguished from those of the other four British sawflies which mine on *Betula*: *P. thomsoni* does not start mining at the edge of the leaf (unlike *Messa nana* (Klug), *Scolio-neura betuleti* (Klug) and *Heterarthrus nemoratus* (Fallén)) and makes a mine which is much larger, more rounded, and less brown in colour than that of *Fenusia pusilla* (Lepelletier). The larva closely resembles that of *Profenusa pygmaea* (Klug) (a widespread and usually common miner on *Quercus*) but is quite unlike any other miner on *Betula* in Britain.

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SCYTHRIS INSPERSELLA (HUEBNER, [1817]) NEW TO THE BRITISH FAUNA (LEPIDOPTERA: SCYTHRIDIDAE)

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During a brief inspection of sand dunes on the Norfolk coast, *Scythris inspersella* (Hübner), a small moth previously unknown in the British Isles, was discovered. The locality, the Nature Conservancy reserve at Holkhams Meads on the north coast of Norfolk, was visited on July 31st and August 12th 1980 by myself and other members of the Microlepidoptera Section of the BMNH (Mr R. M. Pearson, Mrs L. M. Pitkin and Dr G. S. Robinson). On the second occasion the sand dunes to the west of the access road to the reserve were thoroughly explored for a distance of about one kilometre, and evidence of *inspersella* was found everywhere.

I acknowledge gratefully the help with plant identifications I have received from my colleagues Mr A. O. Chater and Mr J. Lewis, Department of Botany (BMNH). Mr E. Jäckh, Hörmanshofen, West Germany, kindly supplied genitalia photographs of continental *inspersella* for comparison. The photographs for Figs 1 and 2 were taken by the Photographic Unit of the BMNH, those for Figs 5-7 by Mrs E. Sattler.

Scythris inspersella (Hübner, [1817])

(Figs 1-4, 7)

Tinea inspersella Hübner, [1817], *Samm. eur. Schmett.* **8**: pl. 66, fig. 443. Type(s), EUROPE [Germany: Bavaria, Augsburg], probably lost.

♂, ♀. Wingspan 12.0-15.0 mm. Forewing black with scattered white scales, particularly in apical region. Sometimes white scales concentrated to form irregular dots at middle and distal third of fold; rarely wing completely black.

Genitalia ♂ (Figs 2-4). Eighth tergite crescent-shaped, anterior margin extended to pair of strong apophyses. Eighth sternite much reduced, weakly sclerotized. Uncus reduced to pair of setose lobes. Tegumen strongly asymmetrical; left hand margin with short, blunt process near base of uncus, right hand margin with long, slender, apically curved process. Valvae asymmetrical, with pair of strongly sclerotized prongs, ventrally fused at distal third. Apex of long, narrow, sclerotized juxta fused with base of aedeagus. Aedeagus a long, slender tube with slightly swollen basal half and curved apical third.

Remarks

Hübner did not state the type-locality in the *Sammlung*; however, in a later work (Hübner, 1822: 72) he marked *inspersella* with an asterisk, thus indicating that it had been observed in the vicinity of his home town Augsburg.

The extent of white on the forewing of *inspersella* varies but there are usually at least some white scales present in the apical region; specimens without any trace of white appear to be rare. Amongst the specimens from Norfolk there is a male with albinistic distal halves of the slightly crippled left pair of wings.

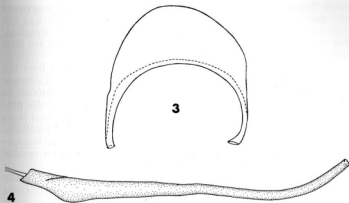
The male genitalia of many *Scythris* species are complicated by asymmetries and other deviations from the lepidopteran norm; their dissection may thus pose problems. In the *inspersella* male the ventral fusion of the valvae prevents the spreading of the genitalia in the standard position. It was therefore necessary to sever on one side the connection between the tegumen and the vinculum in order to 'unroll' the genitalia and mount them in a way that gave an optimal view of the taxonomically important characters. The juxta was separated from the base of the aedeagus but left connected to the rest of the genitalia.

Early stages and ecology

Host-plants: *Epilobium angustifolium* (L.) (Onagraceae); according to Lhomme ([1949]: 804) also on *E. hirsutum* L., *E. montanum* L., *E. rosmarinifolium* Haencke and *E. spicatum* Lamk., the last two of which do not occur in Britain.

The egg was not observed but in all probability it is deposited singly or in small batches on the host-plant where it presumably overwinters. The brown larva with black head and prothoracic plate was described in detail by Schläger (in Zeller, 1855: 253-255) and again by Becker, who also illustrated in colour the larva, cocoon, pupa and larval damage (Becker, 1861: 53, pl. 2, figs 1-1d). It occurs in June-July, usually gregariously, amongst spun shoots and inflorescences of the host-plant, the larval spinings being filled with frass. Mitterberger (1911: 249-250) found the larvae singly around Steyr (Upper Austria) but in groups of two or three elsewhere. Due to the larval activity the tips of the infested plants become dry and brown and are sometimes curved (Fig. 6). The brown pupa is found in July-August in a white cocoon within the larval habitation; at times several cocoons are spun together, in a similar way to that of some Yponomeutidae. The moths occur in July-August; they are diurnal and visit various flowers for feeding, particularly in the sunshine.

The prominent feature of the locality in Norfolk (Fig. 5) is two parallel ridges of stationary sand dunes, the higher of which (inland) is densely covered with pine trees (*Pinus nigra* Arnold), whereas the lower one (seaward) is predominantly covered with



Figs 3, 4. *Scythris inspersella* (Hübner, ♂ genitalia (BMNH slide no. 21 692), Norfolk, Holkham Meads. 3, eighth tergite. 4, aedeagus.

Ammophila arenaria (L.) Link., the Marram Grass. *Epilobium angustifolium* is common along the explored length of the latter dune, occurring as single plants or in more or less dense stands. Its growth is somewhat stunted, plants rarely exceeding a height of about half a metre. In most places there was evidence of larval feeding, sometimes heavy, and typical damage as illustrated by Becker (1861: pl. 2, fig. 1d) was seen. Many empty and several dead pupae were found in their cocoons inside the frass-covered larval habitation, up to about a dozen on one plant. In several instances the *Epilobium* plant had extended a fresh shoot to bypass the damage and form a new tip. Many adults were seen resting on *Epilobium* or other vegetation, and two pairs were found in copulation (Fig. 7). On July 31st moths were found in the flowers of *Sonchus arvensis* L., *Leontodon taraxacoides* (Vill.) Mérat (Compositae) and *Epilobium angustifolium* (L.) (Onagraceae) where they were feeding in the sunshine in the early hours of the afternoon. On August 12th the weather was cool, windy and the sky was overcast. In spite of these seemingly adverse conditions a small number of moths were feeding on the flowers of *Eupatorium cannabinum* L. and *Sonchus arvensis* L. (Compositae) as well as *Epilobium angustifolium*. A single moth was also seen on *Inula conyza* DC (Compositae) but not observed feeding. No moths were observed in the flowers of *Carduus* and *Cirsium* species (Compositae), *Centaureum* species (Gentianaceae) or *Calystegia soldanella* (L.) R. Br. (Convolvulaceae) although at least some of these should be suitable hosts. There were sometimes several moths feeding on the

same flower; we counted a maximum of six. On *Sonchus arvensis* the moths bored themselves deep into the flowers and it was not easy to remove them without damage to the scales. When disturbed, the moths do not fly away but jump from the flower and are then difficult to find.

There is no reason to believe that *inspersella* prefers here the stunted *Epilobium* to the normal tall plants. In East Germany (Jena) Schläger found the larvae in a dense stand of *Epilobium* in a clearing that had resulted from timber cutting during the previous year. The discovery of *inspersella* on the Norfolk coast is no indication that the species is confined in Britain to coastal localities, and it seems likely that it will also be found inland. The conspicuous larval damage and the diurnal feeding of the moths on various flowers should make the discovery in other places easy.

Various species of *Epilobium* are the host-plants of many British *Mompha* species, and a single male of *M. raschkiella* (Zeller) was collected with the *Scythris*.

Distribution

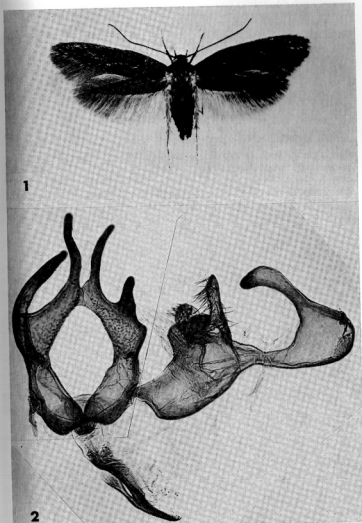
Great Britain (Norfolk), Netherlands, Belgium, N. France, Denmark, Norway, Sweden, Finland, NW. U.S.S.R. (Karelia), Germany, Poland, Czechoslovakia, Switzerland, Austria. Apparently not recorded from Portugal, Spain, S. France, Italy, Hungary and the Balkans. Rebel (1901: 183) recorded *inspersella* from Yugoslavia (Dalmatia) but omitted it from all his subsequent papers on Dalmatia and other areas of the Balkans. Although repeated by several authors, Rebel's record must be considered as doubtful.

S. inspersella was previously recorded erroneously from Britain by Stainton (1852: 14, 40, as *Oecophora*); the species actually involved was *Scythris variella* (Stephens).

After I had completed the manuscript of this paper, moths reared by Mr J. L. Fenn in Norfolk were also recognized as *Scythris inspersella*. Details of his discovery are recorded by him in a separate note in this issue of the *Gazette* (see p. 17).

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Figs 1, 2. *Scythris inspersella* (Hübner), ♂, Norfolk, Holkham Meads. 1, adult moth. 2, genitalia, without aedeagus (BMNH slide no. 21 692).

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NOTES AND OBSERVATIONS

Scythris inspersella (Hübner) (Lepidoptera: Scythrididae) in Britain

On the 30th June 1980, whilst collecting at Stoke Ferry near Downham Market in west Norfolk, I picked two spinnings on rose-bay willowherb (*Epilobium angustifolium*). At the time I was hurrying back to my car in heavy rain, so I did not search for more. I placed the spinnings in a plastic box and after a day or so the larvae left their foodplant to spin up in corners of their container. The moths emerged on the 25th July. I did not recognise the species, but in due course it was identified for me by Lt.-Col. A. M. Emmet and Dr J. D. Bradley. Another specimen that I had captured at Hockwold on 14th August 1977 also remained unrecognised until now. Although I was the first to find this species in Britain, my moths were not determined until after Dr K. Sattler had added it to the British list from captured adults, likewise taken in Norfolk. For a detailed discussion of *Scythris inspersella* and its occurrence in Britain see the paper by Dr Sattler in this issue of the *Gazette* (p. 13).

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Abnormal abundance of *Crataerina pallida* (Latreille) (Diptera: Hippoboscidae) inside an Edinburgh house

While in lodgings in Mayfield Road, Edinburgh, I collected 39 adults (about half of which were female) of *Crataerina pallida* from my bed-sitting room in the period 5-23.vi.1980, a single male on 6.vii.1980 and found another dead on 16.vii.1980. Although swifts (the usual host of *pallida*) were abundant in the general area none seemed to be nesting close to my room, and the fresh but emaciated condition of all the *pallida* seen suggested that they had recently emerged from last year's nests which had not been rehoused this year. Nine specimens were collected from the insides of my trouser legs and a further two invaded my bedding, but I was evidently a disappointment for I was not bitten.

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