

LEICESTERSHIRE ENTOMOLOGICAL SOCIETY

6

February 1991

NEW MOTH INITIATIVE BY NCC

In order to keep abreast of what is happening in the world of lepidoptera since the publication of the Nature Conservancy Council's Invertebrate Site Registers, NCC is now establishing a national reporting network to monitor the occurrence of Red Data Book (RDB) macro-moths in Britain.

Over two hundred species of macros are included in the RDB publication ranging from the almost extinct to those which will be under threat unless we keep a close eye on habitat destruction etc.

The RDB scheme uses a system based upon the frequency of occurrence of a species in the UK's 10km squares. The

table below details the way in which the system determines the rarity of species.

The list of species included in the RDB is quite long but inevitably the true status of some in Britain still remains to be elucidated.

contd p8

Extinct (no longer a viable species in Britain) - 12 species
RDB1 - endangered, in less than 5 squares - 21 species
RDB2 - vulnerable moving to RDB1 status - 12 species
RDB3 - rare scattered populations under threat - 52 species
RDB4 - out of danger, were in above categories - 0 species
RDB5 - endemic, known only from Britain - 1 species
RDB6 - considered rare but status unknown - 1 species
Notable a - recorded from 16-30 squares - 68 species
Notable b - recorded from 31-100 squares - 108 species

Notes from an estranged Midlander

Having moved house from the Midlands to Bristol in June 1990 I have been getting to know the similarities and differences between the two areas with respect to the insect fauna.

Some specials!

Bristol is rightly famous for its Downs and the Avon Gorge, both of which are within a mile of the Museum where I am now working. These localities were once the only known sites for two moths: the Silky Wave (*Idaea dilutaria* Hb.) discovered at Durdham Down in 1851 and the Scarce Hook-tip (*Drepana harpagula* Esp.) first recorded in the Leigh Woods which carpet the southern edge of the Avon Gorge.

Today there is no sign of the Scarce Hook-tip although it still occurs at its more recently discovered site at Tintern. The Silky Wave is still present but as the majority of the Downs are mown for recreational purposes it hangs on only in the more inaccessible gulleys. However, it too has been discovered at another locality, the Great Orme in North Wales.

Chafers and more moths

So much for the Bristol specialities, what about general impressions? The Rose Chafer (*Cetonia aurata* L.) has long been one of my favourite beetles. It breeds within 100 yards of the Museum and can be seen in the summer on flowers or clambering along busy pavements.

Being near the coast (or at least the Severn estuary!) also results in specialist maritime species being at

hand. One example is the Feathered Ranunculus moth (*Eumichtis lichenea* L.) which turns up in the middle of the city. The commonest visitor to my light this autumn was the micro-moth *Epiphyas postvittana* Walk. This species was introduced accidentally into Cornwall, from Australia in 1936 but has only recently started to spread over the rest of the British Isles. Hence Jane McPhail's capture of it in Leicestershire in 1989. (Hands up all those who said "green-house effect").

Another species which is thought to have been introduced, perhaps from the far east, is the micro-moth *Psychoides filicivora* Mayr. I have found this species in Leigh Woods during 1990 and its distribution map in MGBGI volume 2 reveals it to be restricted to coastal counties at present. Its larvae specialise in eating the sporangia of ferns.

A mixed bag!

Moving out of the city, the calcareous grasslands are home to many of the *Pyrausta* species of micro-moths and the attractive bug *Rhopalus subrufus* Gmel. is common. The Avon Levels reach up to the south-west of Bristol and share some species with the famous Somerset Levels further south. Particularly interesting are the Odonata (e.g. *Brachytron pratense* Mull.) and the aquatic beetles.

contd p3

Estranged Midlander contd.

The areas of salt marsh and dunes also hold interest for specialists such as the tiny beetle *Heterocerus maritimus* Guerin-Meneville which tunnels into wet mud and the tiger beetle *Cicindela maritima* L. which hunts over sand.

For butterfly enthusiasts fritillaries, such as the silver-washed and small pearl-bordered, can be found in the woodland and there is even a colony of Glanville fritillary, introduced some years ago and still surviving.

But where are the entomologists?

With all this to discover you might think that local entomologists would be very happy. The problem, though, is finding any members of that happy breed! The Entomology Section of the Bristol Naturalists' Society has recently been suspended due to lack of interest, another victim of the failure to attract youngsters when competing against county Trusts and wildlife on the "box".

The Museum has a Biological Records Centre for the area but recently has been concentrating on producing a Flora. In the post-1974 counties, Gloucestershire has an Invertebrate Group and Somerset has both a Butterfly Group and a Moth Group. Avon has no such groups. It is hoped that this situation will be rectified either through the Bristol Naturalists' Society or by forming a new group such as your own. The experiences of the LES could be very useful in helping other entomologists to get more organised.

(P.S. Please remember that if you visit Avon and/or vice-counties 6 & 34 (North Somerset and West Gloucester) I want your records!

Ray Barnett

[Ray can be reached at:
Natural History Section,
City Museum & Art Gallery,
Queens Road, Bristol BS8 1RL]

Another clouded yellow!

1990 was not as good a year as 1983 for the clouded yellow butterfly in Leicestershire. Following on from the report of a single at Burbage (LES Newsletter 5) another record has emerged, this time from Rutland. A single clouded yellow was seen at butterfly hot-spot Ketton Grange behind the industrial units by AW Brown of the Rutland Natural History Society on 12.viii.90. I am grateful to Jean Harvey of the Rutland NHS for letting the LES know of this record.

Any other sightings of this migrant for 1990?

**Copy is urgently
needed for this
Newsletter and
for the Occasional
Publications
Series!**

Holly blues - 1990 a bumper year

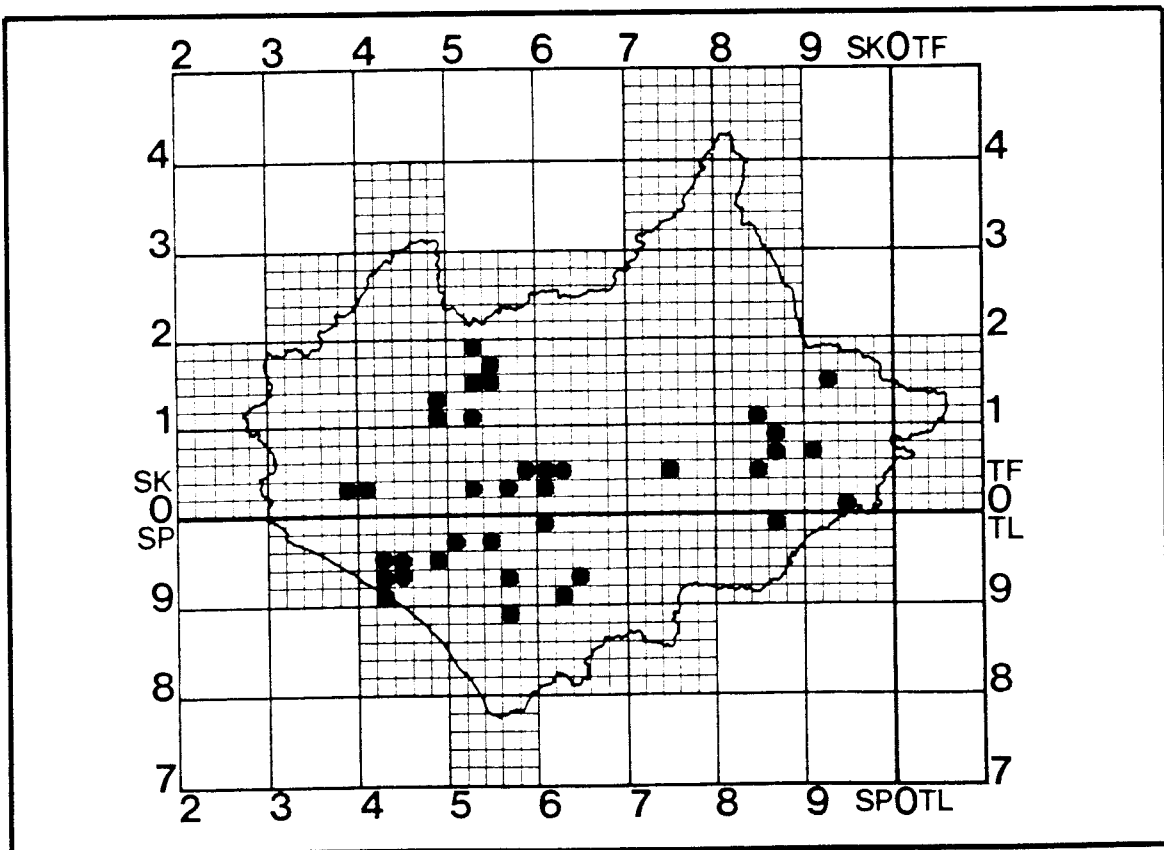
Celastrina argiolus L. (the holly blue) is found throughout much of England but in Leicestershire it does not usually occur in any numbers. For instance the Biological Records Centre at Leicester Museum holds fourteen records for the 1970s and 27 records for the 1980s.

The summer of 1990 showed a dramatic increase in the numbers of holly blues throughout Britain and our county was no different. To date over seventy records have been uncovered from a total of thirty seven tetrads. Records have been uncovered from many parts of the county except from the north east (see Figure 1). Most of the records come from gardens and the distinct bivoltine breeding behaviour of the butterfly was clearly demonstrated (see figure 2).

Many observers reported the species feeding at herb flowers and, later in the season, particularly at ivy. Barrowden in Rutland is reported to have held at least ten in the village centre on 3.viii.90 although the majority of reports were of ones and twos. Burbage Common held at least twenty two on 7.v.90 with fourteen being found amongst the scrub area and eight along a boundary hedge.

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Figure 1. Distribution of holly blue records in Leicestershire in 1990



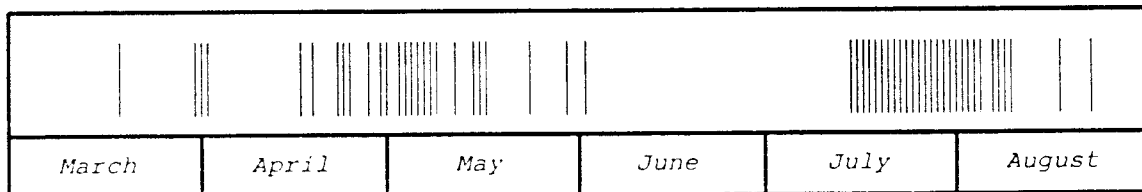
Holly blues contd.

Clearly the 1990 summer has benefitted the holly blue but will it extend into 1991? In the meantime, records for the species are still wanted in order that a definitive report of the 1990 population expansion can be fully documented. All records to Ray Morris please.

The LES is grateful to the following for their records:

Rutland Natural History Society; Hinckley & District Natural History Society; Loughborough Naturalists (via Heritage); Harold Godsmark; John Gladman; Mark Baker; Jane McPhail; Reg Price; Leicester Museum; Eva Penn-Smith

Figure 2. Dates of holly blue records in Leicestershire during 1990.



In Warwickshire...

Across the border in Warwickshire, LES member Brian Mitchell reports:

"It has been the best year for holly blues in North Warwickshire in living memory. Even in good years in the south of the county, it is usually scarce up here but this year there were over a hundred records from numerous sites including first time records at Alvecote Pools (Tamworth) and Whitacre Heath reserve (Kingsbury). At the former site the second brood became quite frequent and a maximum of eight were counted in late July".

Next copy date:

1st July 1991

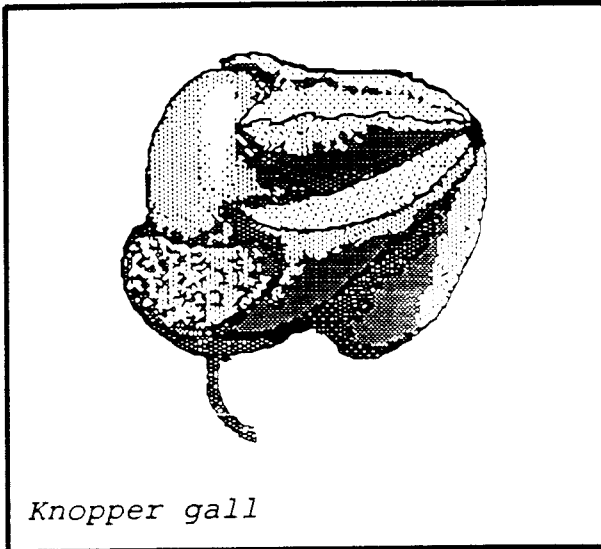
Calling all "mothers"

Prime your generators, oil your tripods, check your bulbs and shake your sheets! Reports of moths on the wing are already coming in. On 20.i.91 *Diurnea fagella* emerged in the house from its white pupal web spun in a folded rhododendron leaf. On 3.ii.91 *Mompha subbis-trigella* woke from its hibernation and performed some exciting flybys past the bathroom light. At Shearsby recently, winter moths, *Operophtera brumata*, landed on Harold Godsmark's window and an early moth, *Thera primaria*, landed on a window in Barwell. The moths were probably trying to get in from the snow! Roll on spring and let's get trapping. Please remember to let me have your micro records! Thanks to all those who who responded promptly.

Jane McPhail

Knopper study starts

Dr GN Stone of Imperial College need help with a project concerning oak galls. Three galls, in particular, are being studied. The first two, marble and cola galls caused by *Andricus kollari* and *A. lignicola* respectively, remain on the oak through the winter. They are very conspicuous now the trees are bare of leaves. The third is the knopper gall caused by the wasp *A. quercuscalicis*.



Knopper gall

The second generation of gall insects develops in the small galls that form on the catkins. This is the sexual generation. The males and females emerge in May and June and are much smaller than the agamic females and were once thought to be a different species. After mating, females lay their eggs on young acorns of English oak and the cycle begins again with the formation of the knopper gall

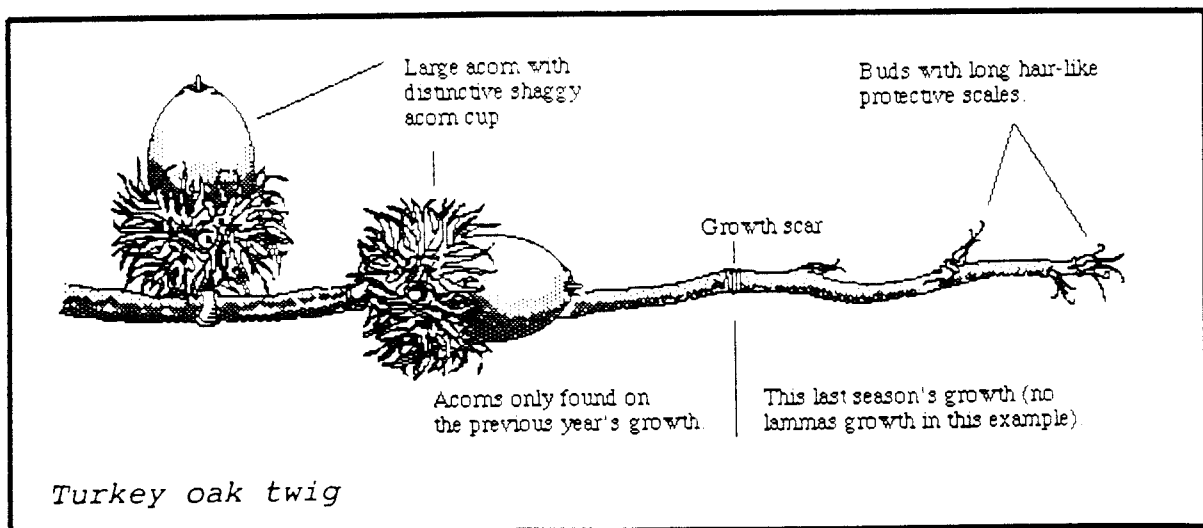
The knopper project

This cynipid causer was first recorded in eastern and southern England in the early 1980s and is known to be spreading northwards. The agamic females emerge from the fallen knopper galls beneath English oaks, *Quercus robur*, from mid-January to early March and lay their eggs on the male catkins of Turkey oak, *Quercus cerris*.

The spread of *Andricus quercuscalicis* is being studied - how far has it spread already and where is it extending its range?

Have any parasites of the wasp and inquilines associated with knopper galls yet caught up with the causer as it pushes its way northwards?

contd p7



Turkey oak twig

Knoppers contd

At the moment the number of knopper galls found in southern England on English oak are generally much higher than those on the same species of tree on mainland Europe suggesting that *Andricus quercuscalicis* is still outpacing its parasites.

What is the distribution of Turkey oaks in Britain? The further north you go the rarer this tree becomes. What is the greatest distance between a Turkey oak and an English oak successfully travelled by the wasp?

How you can help

Send dated records with six figure map reference for

each location of marble galls, cola galls and knopper galls as well as Turkey oaks (with or without galls). Send oak galls collected from different sites around the county/country so that the project team can rear the inquilines and parasites.

Send to:

Dr GN Stone,
Centre for Population Biology,
Imperial College at Silwood
Park, Ascot, Berks SL5 7BS
(0344 - 294565).

Jane McPhail

[These notes are taken from an article in "Cecidologist", by courtesy of the British Plant Gall Society].

National meetings

Hymenoptera: 24-29th April, North Devon - contact John Mousley on Leicester 473262 for details.

Diptera: two field meetings in Scotland - 6-13th July Skye, 13-21st July Moir of Ord, East Ross - contact Alan Stubbs (0733-340345) for more information.

Beetles wanted!

Peter Mellow of London is making a study of carabids and would welcome material from the Midlands. He is willing to exchange (including European or other places) but is not interested in selling. If you can help in any way contact Peter at: Bacteriology, Royal Post-graduate Medical School, Ducane Road, London W12 0NN.

More earlies!

Already on the wing are the early, march, chestnut, spring usher, pale brindled beauty and dotted border all attracted to light at Kirby Muxloe on 5.iii.91.

Have you dusted off your lamp yet - don't take too long the season is already upon us!

1930
1663
2258
1932
1920
1934

The LES is grateful to the Leicestershire Museums Service for its continued support and help with production of its publications.

Rare moth network contd.

Background

Up to 1982 a national scheme for recording macro-moths was operated by the late John Heath at Monks Wood. The principal aim was to produce maps showing the national distribution of species in Britain based upon 10km square recording. Those maps have formed the basis of the prestigious MBGBI series of books. The retirement of John Heath resulted in the demise of the national recording scheme but its activities sparked off a country-wide interest in recording moths.

ISR and RDB

A fragmented approach to recording because of lack of national coordination or difficulty in knowing who to send records to makes it difficult to use any data for conservation purposes. After all, a species may be considered rare in one area but may be common in another! Since 1980 the Invertebrate Site Register (ISR) has been operated by NCC collecting information from entomologists about a range of sites which they consider to be of some invertebrate interest. In many cases such sites have not been reserves or sites of special scientific interest.

The ISR sets out to provide the national and regional overview of the status of our invertebrates that is now necessary for use in the conservation of sites. However, to remain manageable the ISR concentrates upon species which are considered to be nationally scarce in that they are known from

fewer than 100 10km squares. The Red Data Book on Insects (RDB) identifies the species which are endangered, vulnerable or scarce and their basic requirements for their successful conservation. However, in the case of the micro-moths only a small representative selection is included (11 species in all!).

New recording scheme

Entomologists are continually making new discoveries and the status of particular invertebrates on sites can change in a matter of 2-3 years especially if site management has been unfavourable. The ISR must be kept up to date if it is to remain useful. The proposed National Review of the rarer macro-moths will set out to collect new information on an annual basis and forward the data to ISR.

The Review will also serve to identify gaps in our knowledge and hopefully it will result in a focussing of attention on these areas of deficiency. There are plans to ensure feedback of information to the counties through occasional bulletins.

Where it all starts

The National Review will begin by concentrating on macro-moths in greatest need of special conservation measures. The published (and unpublished) reports so far have been very useful but are only as good as the original data from which they were compiled. Some species with a northerly distribution, are difficult to identify or

contd p9

Rare moth network contd

do not often come to light (thus requiring different collection techniques) e.g. scarce silver Y, pugs, the clearwings, are known to be more widespread than BRC records suggest. Some of these species appear on rarity lists because of biases in recording effort or recorder interest or experience.

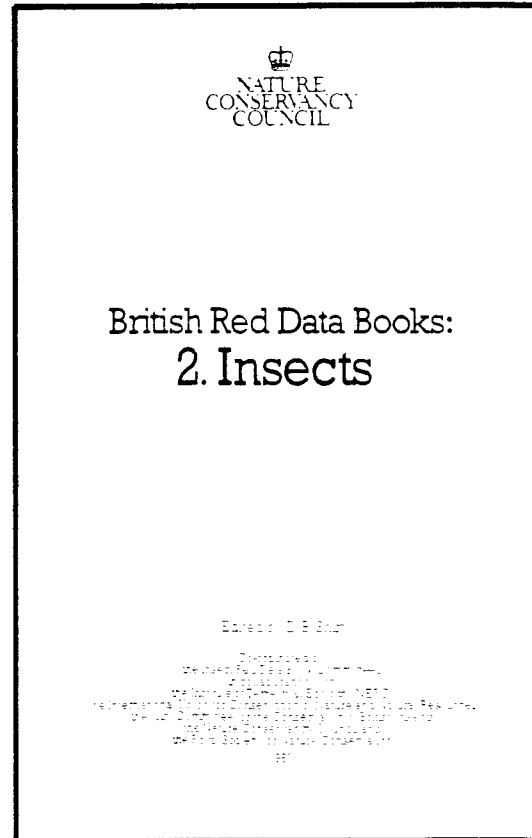
All records held at BRC are now at least 10 years old and some species have dramatically changed their status since the late 1970s. For example, the white spotted pinion is a Notable species which does not seem to have been recorded since 1987. Records for other species are much older e.g. no-one appears to have seen the reed leopard at its site in Dorset since the early 1960s - is it extinct or is it that local records have not yet surfaced?

Revision of RDB

The first task is to construct a national distribution map of records since 1980 for each species in the RDB based on the 10km square recording scheme. These maps will decide which species remain in the RDB listing. Any species recorded from more than 100 squares will be removed while those noted from less than 15 squares will be considered as being of RDB status. There may well be other species which are not in the RDB but may need to be included - this revision will justify such action.

Moth recorders can help get this update scheme work by ensuring that records are forwarded to the appropriate

recorder as soon as possible after the close of the season. In Leicestershire records should be sent either to Derek Lott or Ray Morris. Enclosed with this Newsletter is a complete list of the species currently covered by the Red Data Book on Insects.



Free copy service for records

Protect your valuable records of lepidoptera by taking advantage of our free copy service. The only condition is that you let both the LES and the Museum Service have a copy.

We are only interested in your detailed records and observations not your yearly summaries. Your information is irreplaceable!

Contact Ray Morris to arrange copying

Galls caused by moths

Whilst researching the archives for her forthcoming review of the status of the microlepidoptera in Leicestershire, the first part of which should be published in mid 1991, Jane McPhail accumulated information on lepidoptera which cause galls. Many of these tend to be recorded as the adults with little, if any, reference to their gall-causing habits. Jane has compiled the following tables as an indication of which moths are known to cause galls and which have been recorded in Leicestershire to date. Galls are a fascinating subject and this area of cecidology which overlaps with the study of microlepidoptera is another example of how an apparently narrow interest can be usefully expanded.

contd p11

Gall-causing lepidoptera recorded in Leicestershire

B&F	Causer	Gall details	Leics status
1167	<i>Gypsonoma acariana</i> Dup.	Swelling in <i>Populus</i> spp near tip of young stem. Gall develops and splits when moth emerges in August.	Few county records
1210	<i>Rhyacionia buoliana</i> D&S	"Post-horn" distortion of <i>Pinus</i> spp leaving permanent bend in tree.	Few county records
1288	<i>Alucita hexadactyla</i> L.	Galls flower of honeysuckle. Corolla swells and the flower remains closed.	Few county records in 1970s; many more in 1980s.

Keep an eye open for...

News has reached us of a micro-moth which is relatively new to Britain. This one mines the leaves of the garden firethorn (*Pyracantha*) Details of what the mine looks like and also what the adult looks like are awaited and will be printed in the next Newsletter.

Don't forget!

Your articles are urgently needed!
Next copy date is

1st July 1991

Gall-causing lepidoptera not yet recorded in Leicestershire

B&F	Causer	Gall details	Comments
138	<i>Lampronia fuscatella</i> Tengst.	A round gall in the twig of <i>Betula</i> spp. usually at a node.	Pupation in gall. Imago April-May with frass-covered cap over the exit hole.
486	<i>Augasma aeratella</i> Zeller.	Reddened pod-like gall up to 15mm long on stem of <i>Polygonum aviculare</i> .	Overwintering of the larva and pupation occur in the gall. Rare.
728	<i>Peltodora cytisella</i> Curt.	Slight swelling on the stem or side shoot of bracken often aborting it.	None of the Ethmiidae are found in Leicestershire.
889	<i>Mompha divisella</i> Herr-Schaff.	A swelling in the stem of <i>Epilobium montanum</i> , <i>E. palustre</i> or <i>E. lanceolatum</i> .	Pupation occurs in the gall.
891	<i>Mompha nodicolella</i> Fuchs.	A swelling in the stem of <i>Epilobium angustifolium</i> usually near flower.	
1256	<i>Cydia servillana</i> Duponchel.	The larva lives inside twigs of <i>Salix caprea</i> and <i>S. cinerea</i> . It feeds on the pith and woody tissue and stimulates a gall to form.	Galls easily found in December and January. Galls collected then will produce adults in about 6 weeks if kept in a warm room. Local.
1258	<i>Cydia milleniana</i> Adamczewski.	A resinous swelling between the nodes of a <i>Larix</i> spp twig.	When tenanted the galls are soft and spongy; when vacated they become hard and woody. Rare.
1280	<i>Dichrorampha consortana</i> Stephens.	Larva in stem of <i>Chrysanthemum leucanthemum</i> causing slight swelling and shoot abortion.	Feeds May-June, imago flies around food plant in afternoon July-August. Local, rather uncommon.
1485	<i>Homoesoma carlinella</i> Hein.	A fuscoid swelling on the stem of <i>Tanacetum vulgare</i> .	Sometimes shortening of the internodes occurs near the shoot apex.
1517	<i>Adaina microdactyla</i> Hubner.	Roughly cylindrical gall near to nodes of <i>Eupatorium cannabinum</i> .	

SUMMER PROGRAMME 1991

Check with leader that event is still on. Day events meet at the Museum at 09.45 or 10.30 in the field. A venue for lunch will be decided on the day. Items marked * are moth traps meeting at the location at dusk.

- April 6th PICKWORTH GREAT WOOD (meet small gravel car park SK986156). Leader - John Mousley
Leicester 473262
- May 5th TIXOVER QUARRY (meet minor road SK974026 north of A47). Leader - Derek Lott, Leicester 473031.
- June 1st* ULVERSCROFT (meet Whitcroft Lane SK488126).
Leaders - Anona & Graham Finch, Leicester
473005 or Coalville 61681
- June 2nd SOAR BROOK, RAMSDALE FARM (meet old Fosse Way SP499923). Leader - Stephen Grover, Leicester
473005.
- June 8th CLOWES WOOD, WARWICKSHIRE (meet car park at Wood Lane SP102744). Leader - Mike Pugh but details from John Mousley.
- June 22nd* PICKWORTH GREAT WOOD (same venue as April 6th)
Leader - Adrian Russell, Leicester 549922
extension 6411.
- June 29th* AYLESTONE MEADOWS (meet Evesham Road SK575024 east of Narborough Road). Leader - Jane McPhail
Leicester 473005 or Leicester 386188.
- July 7th BURLEIGH/HOLYWELL WOODS (meet at new car park at SK508181 off A512). Leader - Sally Thompson
Loughborough 263151 extension 2221.
- July 20th* NARBOROUGH BOG (meet at reserve entrance).
Leader - Harry Ball, Leicester 394110.
- August 3rd* Moth trapping with Jack Ward and Peter Gamble.
Contact Jack (Leicester 874172) or Peter
(Quorn 414283) for details.
- August 4th BRREDON CLOUD WOOD/HILL (afternoon only).
Contact John Kramer (Leicester 716499).
- September 1st GRANTHAM CANAL (meet minor road SK766342 north of Plungar). Leader - John Mousley/Jeremy
Woodhead.
- October 6th GRACE DIEU WOOD (meet housing estate road SK430176 next to old railway). Leader -
John Mousley.

PLUS: regular moth trapping at OWSTON WOOD lead by Adrian Russell - ring Adrian for dates.