

**LEICESTERSHIRE
ENTOMOLOGICAL
SOCIETY**

11

September 1993

**PLENTY OF BUDDLEIA
BUT NO BUTTERFLIES!**

1993 was no different to other years as far as the *Buddleia* was concerned. It flowered profusely as ever and awaited the onslaught of nectar-thirsty butterflies as usual. But no butterflies!

Without doubt, this lack of insect life around the traditional mis-summer honey pot was noted by nearly everybody, regardless of interest in entomology. People at work would stop me and ask what had happened to the butterflies, items were appearing on radio and television and even local papers were carrying stories about this unimaginable shortage!

It's a fair question - where were the butterflies? My few observations this year seemed to indicate that whilst the plant was watching its diary, the butterflies were certainly not. And this has now even extended to the lack of butterflies on the autumn *Sedum* which is bright pink and that's about all!

Were the butterflies hit by adverse conditions over-winter? Spring emergences and hibernators seemed

to be at levels which may be expected. So was the problem in spring and early summer? Perhaps one of our members has made more detailed observations of butterflies this year and may be able to comment more authoritatively than I can.

If the general public has noticed with such concern the lack of butterflies this year then perhaps a quite sinister reason may be behind it all! Will 1994 show an upturn in numbers or are we heading for an even lower number of these beautiful creatures over the next few years?

Ray Morris

**Next copy date
January 15th 1994**

Thistleton Gullet 5th June 1993

[Following on from a request to receive reports of the Society's field meetings, Jon Daws has provided several. Other contributions are always welcome.]

Having parked at the meeting place on the roadside verge of the Thistleton to Sewestern road, I found a red admiral butterfly sunning itself on a pile of stones and a whitethroat singing on the edge of the quarry (Thistleton Gullet). I was joined by Adrian Russell and a new member who had joined at the LES stand at the Entomological Fair at the Granby Halls. The three of us set off across the field of flax to the quarry and the first invertebrates we noticed were teneral (immature) damselflies of the common blue (*Enallagma cyathigerum*) and azure (*Coenagrion puella*). These were either actively feeding or resting on grass blades near a small group of common spotted orchids.

Butterflies, moths and a spider

We first walked along the northern ledge with common blue, small heath, grizzled and dingy skipper butterflies being disturbed by our foray. There were over a hundred bee orchids here and, as we chased the day-flying moths, we were careful not to place our size tens on any of them. The moths included Mother Shipton, latticed heath, burnet companion and several micros that Adrian took away for identification. The beautifully yellow and black striped spider *Hypsosinga pygmaea* was also collected here from low vegetation. Having covered several hundred metres, we turned around and retraced our steps until we reached the way down into the quarry.

Newts and snakes

The bottom of the quarry has a stretch of water along its length fed by a spring at the far end. The water level rises and falls by several metres depending upon rainfall. On this Saturday morning, the water was just over a metre deep and had a grass snake swimming along its northern side before it disappeared into the vegetation. An immature smooth newt was found under stones and a great crested newt was also seen

swimming in the crystal clear water. Orange tip and peacock butterflies were added to the list as more of the previously mentioned day-flying moths fluttered around us.

At the end of the Gullet we found more bee orchids, yellow rattle and small heaths as we climbed the gentle slope up to the south side and walked back along the track to the cars.

Jon Daws

Letter

I have just received the latest LES Newsletter including the interesting comments on glow-worms.

The Natural History section of the Lit & Phil joined the Bat Group in a visit to Charnwood Lodge at the end of June 1991 and someone found a glow-worm "glowing" amongst the rubble in front of the stables. I reported this in Heritage (Loughborough Naturalists no. 122 April-June 1991) and then got severely told off by Mike Walpole for mentioning the location as several people then went to look for them at night - without permission!

Resulting from this editorial two LNC members wrote with old records. Elaine Broughton had seen them regularly around Benscliffe Cottage most recently being 1st July 1967. MB Faukes had seen them at Barroon-Soar cemetery in the early 1900s. More recently Steve Woodward found 34 glowing females at Roecliffe Manor (SK530124) on 15th June 1992. When reporting this in Heritage no. 126 I was careful not to reveal the exact location - once bitten twice shy! This does seem to indicate a thriving colony and warrant checking again this season.

Monica Gillham

Asfordby Hill - derelict land throws up moth delights!

As part of the ongoing support that the Leicestershire Entomological Society gives to the County Museum, recording of moths at the derelict land site of the old Holwell steel works at Asfordby Hill has been carried out on a number of occasions during 1993. In all five visits were made to the site during the year, each occasion being affected by the weather in some way. However, this site, which is superb for common spotted orchid and yellowwort, gave some excellent records.

Dusking and mvl

The site lends itself to dusking with open areas of grassland with some encroaching scrub. Many of the microlepidopteran records reported here were obtained in this way, particularly on the evening of 25th June. On all visits a mercury vapour light trap was run although the length of the run was never extensive because of adverse weather conditions.

A total of 108 species were recorded with some micros still awaiting identification.

County goodies

Three new county records were noted, not surprisingly all micro-moths. *Elachista triatoma* mines *Festuca* species whilst *Metzneria metzneriella* feeds on the seeds of knapweed. The third record was of particular interest in that it was the gall-causing species *Mompha nodicolella*. The obvious red swellings on the stems of rosebay willowherb were found on several plants both at the study site and near the spoil heaps at Holwell Works just down the road. The species has been found (JRM) in the Ashby Wolds area to the west of the county.

Two other micros were only second county records (as far as is known) - *Eupoecilia angustana* (feeds between spun flowers and seeds of low plants (flying at dusk) and *Cydia compositella* found commonly flying around the food plant (*Trifolium* species) on 25.vi.93. Asfordby Hill now also seems to be the third county site for *Teleiodes vulgella* which feeds spun up in the leaves of hawthorn and sloe.

A few of the macros also were of note. Purple bar and beautiful

hook tip are not common in the county being recorded from 18 and 16 tetrads respectively. The recording of dwarf cream wave on two of the visits established Asfordby Hill as only the second site for the moth in Leicestershire.

Other sightings

Plant galls are always of interest to the author and, whilst not concentrating too much on recording the various types bound to be found at the site, the following were noted.

Dasyneura kiefferiana - midge causing leaflets to roll in rosebay willowherb. *Aethes francillana* - micromoth causing flower head of wild carrot to close (huge numbers of affected plants were seen).

Diplolepis rosarum - wasp causing spiked pea gall on *Rosa* species. *Diplolepis rosae* wasp causing the familiar bedeguar gall on wild roses.

Although no coleopterists were present at any of the mothing sessions, the longhorn beetle *Agapanthia villosoviridescens* was found. There are only ten previously known records for this species in the county.

The excellent plant list for the site (compiled by Ralph Johnson of Melton) would seem to indicate many delights in store for those with an insect bent!

[Fieldwork for the lepidopteran survey was carried out by Jane, Glenn and Roy McPhail and Ray Morris. Ray Barnett at Bristol Museum kindly confirmed identification of many micro species.]

Jane McPhail

Glow-worm saga continues!

Over the last few issues of the LES Newsletter, the glow-worms of the county have been given some prominence. This has been mainly due to the recording activities of members of the Rutland Natural History Society who have kindly let us know of thier researches.

Their perseverance in recording this interesting little beetle (yes - there are interesting beetles!) lead to the heightened awareness of the plight of the species in Rutland.

"Greens see red over water work damage - top soil dumping scandalous - clain"

This was the headline which greeted readers of the Rutland Times of March 26th 1993.

"Conservationists have been outraged this week by the damage done to an important natural history site in Rutland following work by a regional water board and the county council.

Unique limestone verges near Empingham, home to several species of rare plant and only the secons location in Rutland where glow-worms are found, were dug up when water pipes were laid by the Severn Trent Water Authority.

At the weekend, insult was added to injury when hundreds of tons of topsoil from Bottesford were dumped on the roadside after the verges had been scrped level. The soil, unsuitable for limestone-loving plants, was put down at the request of the Leicestershire County Council who wanted to landscape the area (!!!). The action, which has been called "scandalous" by local naturalists, will almost certainly ensure that the native species of plants will be unable to grow."

Speaking on behalf of STW, Keith Middleton said " we do not as a matter of course liaise with local natural history societies to find out if an area is of special scientific interest."

They do not seem to talk to the Museum, English Nature etc etc - in this case the the whole mess was compounded in that the county council (of which the Leicestershire Museums Ecology Unit is part) also did not seem to consider the ecological effects of their actions despite having the necessary information at their finger tips - that is if they bothered to look!.

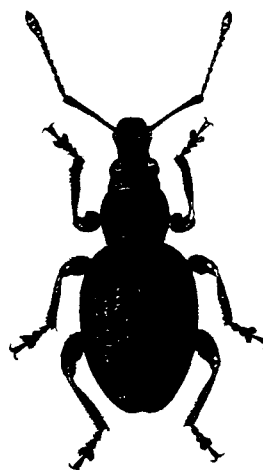
Sometimes I wonder why so many volunteers bother to do something about our environment when bureacracy (or is it sheer stupidity?) can ride rough shod over everything!

Ray Morris

Vine weevils at Shearsby

An interesting experience during 1993 was the finding of two weevils in our utility room. These, from the description in my beetle book, were vine weevils (*Otiorhynchus sulcatus*) which can be a horticultural pest. They can develop in the soil-less compost in which most plants from garden centres are now grown. As I had a *Streptocarpus* plant in the room, recently bought from a garden centre, I assume that they must have emerged from amongst the roots of that plant.

Harold Godsmark



Notes on the cockchafer

Belonging to the family Scarabeidae, with 77 British species, the larva of the cockchafer (*Melolontha melolontha*) lives underground for up to four years. Here it devours roots, dung or rotting wood. Its body is white/transparent, stout and permanently bent in half. The jaws on the orange head are well developed.

Being a favourite food of rooks, the larvae are known as "rookworms" whereas the adult "maybug" takes its name from the usual month of its emergence.

Not much fun camping!

There are reports that up to 80 bushels of adults were collected from a farm in Britain. In the 1960s it was often impossible to leave our tent on the South Downs, after dusk, due to eruptions of these large insects. I remember many a damsel in distress having to be rescued and have the insects plucked or cut from her hair.

Nearer to home, moth trapping in the Old Brake Spinney and at Ulverscroft Reserve regularly comes to a standstill in May when the lamp is under threat of being broken from the onslaught of the adults' heavy bodies.

Recently, while digging rich "black cheese" manure round the fruit bushes in a Kirby Muxloe garden, a *melolontha* larva was discovered in a solid lump of the manure. It made strong body movements but did not manage to travel any distance because of its bent shape.

I was hoping to rear the larva which seemed to be at an interim stage of its development, the beetle body being seen through the larval skin. Unfortunately, possibly due to the sudden disturbance, it died two days after its disinterment.

Jane McPhail

Moths c/o Rutland Natural History Society

Members of the Rutland NHS are amongst the most active of recorders of our county's natural history. I am grateful to them for drawing my attention to records of some of the more unusual macro moths from the eastern side of the county during 1992.

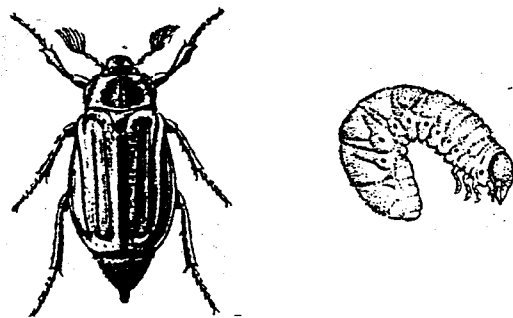
That perennially exciting site, Ketton Quarry, on 19.vii.92 gave an example of the small purple barred (*Phytometra viridaria*), an uncommon moth in Leicestershire.

Clipsham Quarry was productive on 25.vi.92 when four county rarities were noted - maple prominent (*Ptilodontella adustata*), silvery arches (*Polia hepatica*), blackneck (*Lygephila pastinum*) and beautiful hooktip (*Laspeyria flexula*).

Unusual crane fly at Melton

A strikingly glossy black and red crane fly, *Ctenophora bimaculata*, emerged from willow fire wood at Meltom Mowbray. The crane fly is said to mimic an ichneumon wasp.

Only known to date from about six localities in the county.



The brown-tail moth in Leicestershire

Local members may recall the article that appeared in the Leicester Mercury earlier this year entitled "Warning on poison bugs" (26th May 1993). This news item reported that a colony of the brown-tail moth (*Euproctis chrysorrhoea*) had been discovered at Thorpe Road Cemetery, Melton Mowbray. Referring to "poisonous caterpillars", the article went on to "warn people to be an their guard"!

This clearly caused considerable concern to many local residents and the Environmental Health Department of the City Council, where I work, received a large number of calls alleging similar larval infestations. My entomological interests are well known and there reports were, therefore, passed my way. Leicestershire is outside the normal range of this species and any such records would have been of interest. I thus seized on the opportunity to escape from my office and do some recording.

Terror and devastation!

Over the next few days, I visited a number of gardens in the city and witnessed a variety of scenes of terror and devastation. Children were forbidden from entering gardens. Caterpillars and vegetation had been drenched with boiling water! Not surprisingly, brown-tail larvae were not found; in every case the caterpillars in question turned out to be those of the common and conspicuous lackey moth (*Malacosoma neustria*). In most instances they were feeding on apple trees. Whilst trying, as best I could, to educate the members of the public concerned to wonders of moths and their larvae, I feel my efforts met with only limited success.

Jon Daws kindly investigated the original alleged sighting from Melton Mowbray and also found that it was the lackey which was responsible. However, it was encouraging to see a more informative article appear in the Leicester Mercury subsequently.

So, no brown-tail moths in Leicestershire this year after all! It is interesting to speculate what the response would have been if these reports had proven correct. Would we value colonies of what would be a local moth or would a major extermination exercise be

undertaken? The Leicestershire Act gives local authorities in the county special legal powers to ensure the destruction of brown-tail larvae. I just hope that a measured, commonsense approach would prevail and to that end, a well-informed public will be the key.

Adrian Russell

Global warming - perhaps craneflies have advance warning?

"Scientists expect that the effects of global warming will be detected first among the plants and animals on hilltops. If the present cold and wet conditions become warmer and drier then there will be changes in the numbers and distributions of species".

Work being carried out by the National Environment Research Council (NERC) at their field station on the Moor House National Nature Reserve in Upper Teesdale in the Pennines in Yorkshire aims to monitor such effects.

A most unlikely candidate which may already be a useful indicator of climatic change is a species of cranefly found in such locations. The insect has two generations each year on the lower slopes of the Pennines but only one higher up. If the climate does become warmer then the boundary between the two will move up the hill. Species such as this can be used successfully (and cheaply!) to test the predictions and assess the impacts of global warming.

[Abstracted from NERC News July 1993]

Spider parasite

Recently, while out surveying the grounds of Gumley Hall for their invertebrate interest, John Mousley caught an immature spider of the genus *Tetragnatha* in his sweep net. Attached to the side of its abdomen was a grub. John thought this might be a fly maggot, so took the spider back to the Museum and kept it alive in a tube on the shelf above his desk. Well you would, wouldn't you?

One morning, about a fortnight later, he came into the office to find that the spider had been completely eaten, only its skin remaining. Above these remains a pupa hung on a silk thread attached to the top of the tube.

After a further two weeks a parasitic wasp emerged, flew around for a couple of days, then died. John was not impressed since he was hoping for an interesting species of Diptera and what he had got was a species of Hymenoptera!

Scotland to the rescue!

Meanwhile, I was on a spider identification course in Scotland where one of the other students gave me the name and address of a person who was working on spider parasites. So, on my return, I posted the tube containing the remains of both spider and parasitic wasp off to the National Museum of Scotland in Edinburgh, along with relevant details.

Almost by return of post, Mark Shaw wrote to tell me that I had sent him a female *Acrodactyla quadrisculpta*. This species is apparently a common parasitic wasp that is host specific on species of *Tetragnatha* spiders. He also said that he would be more than happy to receive any further specimens in future. I hope to find a few more unfortunate spiders in the near future to breed through.

Jon Daws

[*Tetragnatha* spiders are elongated with long legs and chelicerae, the abdomen having a metallic appearance. Their inclined webs have few radii and spirals.]

More birds than moths!

Responding to a request to give Birstall Birders a night of moth trapping in early August, four intrepid trappers - "have moth trap will travel" - set up shop at the Birstall Gravel Pits. Clear skies and falling temperatures forewarned disaster! After five early arrivals, all common carpets, had been duly examined and exclaimed over (!), the long lull with nothing but greylag geese flying by became somewhat embarrassing.

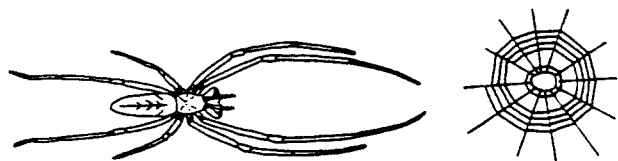
Seven six-striped rustics dribbled in over the next hour and the list was then "swelled" further by the addition of a canary-shouldered thorn and a very battered single-dotted wave.

Not a murmur of complaint was heard from the vast crowd of birders who had arranged themselves, unbidden, into height order, so that everyone could get a really good look at the empty sheet! It was noted, however, that a few members in the back ranks slipped away thankfully into the night.

In time, a few more moths did arrive at the scene. These were pounced upon, potted and pondered over, their names changing, in Chinese whisper fashion, as they were passed round the group. By eleven o'clock it was pointless to continue and packing up began.

Many thanks to Birstall Birders for keeping so cheerful throughout the proceedings. Also for the £10 donation to LES. It worked out at £1 per species!!!

Jane McPhail



North Luffenham Quarry

[The invertebrate importance of many sites is determined by geology and the resultant vegetation. In a large number of instances, sites within Leicestershire have been found to be botanically rich but little invertebrate research has been carried out. The following article by Jon Daws describes a general natural history walk around North Luffenham Quarry, a site of special scientific interest located in Rutland. The quarry, located on the Lincolnshire limestone, is now long disused and has developed a rich flora characteristic of limestone grassland.]

Part 1 - the morning

The time was just before 10.15 as I arrived at North Luffenham Quarry to lead the LES walk. At the allotted time only two other members (the Harveys) had arrived, so we made our way through the British Telecom grounds and onto the SSSI. Around the entrance there was a large patch of marjoram with black and greater knapweed and a few field scabious, while scrambling over the shrubs was hedge bedstraw. The first 150m or so of the track was edged on both sides with scrub, dominated by elder but with the odd purging buckthorn amongst it. The path itself, although slightly overgrown in places with nettles, had large patches of eyebright, red bartsia, wild basil and selfheal. Dotted amongst these were wild parsnip, viper's bugloss, common centuary and wild mignonette.

Feeding on this large range of wild flowers were peacocks, brimstones, gatekeepers, three species of whites and a small copper. Several moths were also disturbed by our passage including a shaded broad bar, common carpets and silver Y's. When the path suddenly widened and the vegetation became less vigorous, we found yellowwort, purging flax and basil thyme in the open areas. Around the sides grew musk mallow, perforate St John's wort and bird's foot trefoil, the latter with common blues in attendance.

Devils and pigs

Another 100m, and a wade through the final nettle patch, found us at a small cliff face beneath which lay an area of exposed limestone. Here we found ploughman's spikenard, blue fleabane and

carline thistle. We also added our tenth species of butterfly to the day's list when a small skipper alighted on some ragwort. We also turned over some large pieces of limestone to reveal several devil's coach horses and the limestone-loving woodlouse *Porcellio spinicornis*. In addition, a common rustic moth and a reasonably good bivalve fossil were found. Overhead several brown hawker dragonflies zipped around the scrubby margins of the quarry feeding on slower fellow-winged invertebrates.

As a green woodpecker yaffled nearby we turned and retraced our steps back along the path, noticing more specimens of previously recorded flowers and adding the crimson and gold moth, *Pyrausta purpuralis*, to the list. The only new flower we added to the list was agrimony which we found growing on the edge of a large open area we had neglected to investigate on our outward journey. We reached the cars to find a large specimen of weld growing on the verge. I said goodbye to the Harveys and made for the village of North Luffenham where I had earlier noticed several pubs advertising meals

Part 2 - the afternoon

On returning to the quarry just after 2 p.m., I found the first arrivals of the Leics Lit & Phil Natural History Section picknicking in the shade of several trees. They showed me specimens of the snail *Candioula intersecta*, which seemed to be quite common, and a small patch of storksbill in an adjacent field.

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North Luffenham contd

At 3 p.m. the walk began with another snail, *Monacha cantiana*, being shown around. Meanwhile, Jan Dawson, having seen the morning's plant list, was quick to point out a few omissions such as upright hedge parsley and the leaves of hairy violet. A small tortoiseshell also put in a brief appearance.

Glowworms and waxcaps

The 25-strong party was soon spread out along the path through the quarry with small groups clustered around the best of the flowers. I was shown where 29 female glowworms had been seen alight earlier this year by a member of the Rutland NHS. At the same place a single flower of bladder campion was found and a group of toadstools I had noticed earlier had a name put to them: yellow waxcaps *Hygrocybe langei*. On the edge of the quarry a few arable weeds were growing on a piece of disturbed ground including scarley pimpernel, field bindweed and a single field pansy.

We reached the small cliff face near the top of the quarry, then took a small steep overgrown track to go beyond the point at which the LES group had turned back in the morning. As we emerged from the overgrown track a stemless thistle in full bloom caught our eye but it was several minutes before anyone spotted the green spikes of southern marsh orchids amongst the quaking grass. A total of 27 spikes were counted. Several yards further on, old man's beard was growing over brambles close to a clump of nettles from which Harold Godsmark put up several nettle tap moths and a thistle ermine.

Two sorts of fluellen

Having waited in vain for about ten minutes for the rest of the stragglers to catch up - during which time a green woodpecker flew over - the leading group of ten set off up the stone track to look for interesting arable weeds. We had only walked about 50m when Jan found round-leaved fluellen in flower at the side of the ploughed field and, as the rest of us

gathered round, sharp-leaved fluellen was noted close by. Jim Venables spotted a speckled wood as we continued to walk north adjacent to a strip of woodland containing pheasant pens. I found a couple of wall browns taking the total butterfly species list to 13 for the day.

As the track petered out into a wheatfield, we turned and started to retrace our steps. Although we had only walked just over a kilometre, by the time we returned to the cars, this wonderful quarry had entertained us for over three hours.

Jon Daws

NEW!

PROVISIONAL ATLAS O F T H E LEICESTERSHIRE MICROLEPIDOPTERA

by Jane McPhail

First thorough listing of county lepidoptera since 1907!

Order your copy now!

Narborough Bog trapping

Six members and friends joined for an evening's moth trapping at the LRTNC reserve at Narborough Bog on 24th April 1993. The site, which has been the subject of an intensive survey over the previous years, gave a total of 13 moth species on what turned out to be quite a cool night.

Whilst the typical early season species predominated, single specimens of the early tooth-striped (*Trichopteryx carpinata*) and the yellow-barred brindle (*Acasis viretata*) provided interesting records for the evening.

Adrian Russell

Miscellany

Green hairstreak

Not a common butterfly in Leicestershire so a record of *Callophrys rubi* from Brown's Hill Quarry (LRTNC reserve) is most welcome. Spotted by Jenny Harris on June 10th 1992, the lone butterfly was seen fluttering close to the ground and alighting on bird's foot trefoil

Some trap!

Adrian Russell trapping at Pickworth Great Wood on 12th March 1993 (!!!) succeeded in having 402 moths in three actinic light traps. The time of the year and the type of trap do not usually result in such captures - but then 1993 was an odd year!

Good micro!

Again from Adrian Russell comes a record of a pyralid moth taken in his garden to the east of Leicester on 9th August 1993. *Catoptria falsella* is rated by Goater as being local and rather uncommon from Aberdeen southwards! Most frequently found in southern England in villages where thatch and mossy walls abound.

According to Jane McPhail's *Provisional Atlas of Leicestershire Microlepidoptera*, the species was first noted in 1974 by the late Don Hall-Smith at Cottesmore. Since then a few more records have come to light. Localities listed are Blaby, Leicester, Shearsby and Kirby Muxloe. In addition, Adrian had already had one at home during 1990!

Morley Quarry

This small but incredible little ex-quarry near Shepshed is one to keep an eye on! Vertical cliffs surround an absolutely flat area of impoverished grassland with a good shrub and tree development to one side. During mothing sessions here in 1993 notable species reported by Peter Gamble and others included the annulet (*Gnophos obscuratus*), antler (*Cerapteryx graminis*), the scarce footman (*Eilema complana*), grass emerald (*Pseudoterpna pruinata*), beautiful carpet

(*Mesoleuca albicillata*), purple bar (*Cosmorhoe ocellata*), hedge rustic (*Tholera cespitis*), slender brindle (*Apamea scolapacina*) and bird's wing (*Dyperygia scabriuscula*).

Extremely rare ladybird!

Once again it is a great pleasure to report another entomological discovery from that haven for wildlife - the Frankum's garden in Knighton!

This time they have come up with something really special. When observing the behaviour of a *Bombus pascuorum* at a water tank on June 3rd 1993, it was noticed that the insect was being prevented from flying away by a ladybird hanging onto the front leg and holding it down.

The ever alert Frankums soon saw that that this ladybird was something unfamiliar and when keyed out it proved to be the adonis ladybird (?*Adonis variegata*). To date records suggest that this may be the first record for the species since a late 19th century record reported in the 1907 Victoria County History!

The species is very small, about 3-6mm in size, can be variable in both colouring and in the number of spots and is found throughout central and northern Europe. Its size may well be the reason that it has not been recorded previously this century plus, of course, the relatively recent acquisition to the county of the Frankum's optical apparatus!

Another county rarity from a garden!

That other haven for wildlife, Jane McPhail's garden at Kirby Muxloe, also threw up a county rarity. The Notable Nb species, *Atolmis rubricollis*, the red-necked footman turned up at mv light on 2.vii.93. Several members of the LES were fortunate enough to have a chance to view this little beauty and confirm the identification.

Gallwasps on the march!

[From "The genetics of invading gallwasps" NERC News July 1993.]

The distributions of many organisms are probably unstable being limited by a host of factors including historical accidents. When these barriers are removed or crossed a species may become invasive, expanding its range until once again limited. Understanding the process of invasion may be the key to the control of many insect pests. The gallwasps of oak are an excellent example of natural invasion having occurred in recent times.

Wasps and turkeys

Many of the gallwasps (*Hymenoptera*, *Cynipidae*) have a life cycle which depends on the alternation of generations between two species of oak. One host is the pedunculate oak (*Quercus robur*), found throughout Europe, while the second is the Turkey oak (*Quercus cerris*), endemic only to southern and eastern Europe. Gallwasps associated with this pair of oaks were thus restricted to the south and east of the continent.

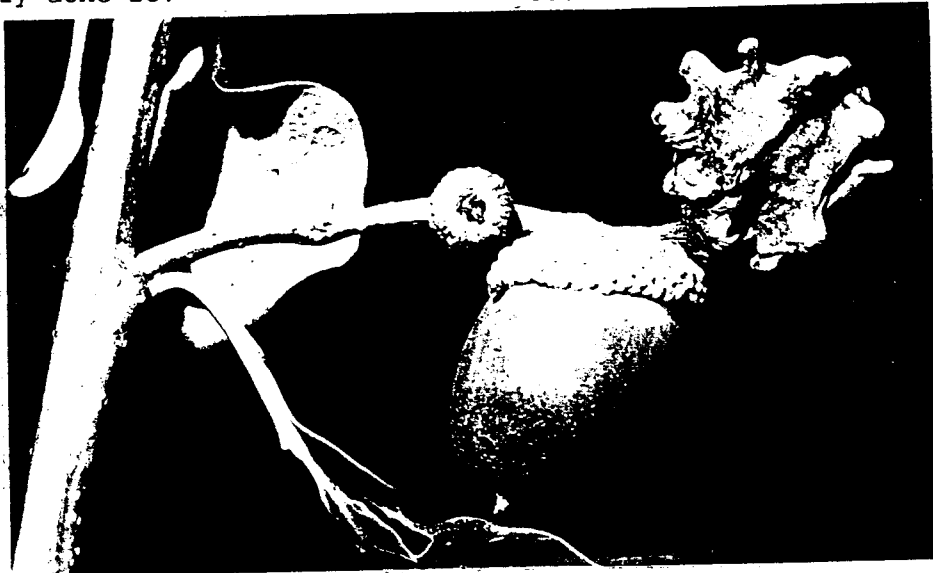
However, over the last 400 years, Turkey oak has been widely planted outside its natural range with the first in Britain in the early 18th century. This has resulted in the introduction of Turkey oak into an existing mosaic of pedunculate oak thus allowing the potential for the spread of associated gallwasps westwards. And indeed, they have successfully done so!

Andricus wasps

Four gallwasps with this pattern of oak host alternation are now found in Britain, all of the genus *Andricus*. The marble gall (*A kollari*) was deliberately introduced as a raw material in producing ink. The knopper (*A quercuscalicis*) made it on its own. The species reached Britain in the 1950s and by the 70s and 80s had reached severe infestation levels. Despite the initial fear that oaks may be irretrievably damaged by such massive infestations, it now seems that this is unfounded. It is likely that other factors will have come into play, notably parasites, which have established a balance. Indeed in some years it is now difficult to find any knoppers.

The *Andricus* species have been useful in genetic studies of invasions. Investigation of the knopper genetic variability has indicated that the diversity of the species has decreased with its spread across Europe. This is not an isolated event as the two other *Andricus* species, *lignicola* and *corruxpatrix*, have similar histories.

All in all the gallwasps, many of which are only a matter of a couple of millimetres in size, provide an excellent system in which to examine the way in which plant distributions affect associated insects.



Winter programme 1993-4

All winter events are held at the New Walk Museum, Leicester. Evening sessions start at 7.30 p.m. whilst workshops commence at 10.30 a.m.

- Wednesday November 3rd ***Annual General Meeting + Leicestershire Moth Survey***
A series of presentations/reports from Society members of fieldwork carried out in 1993 on the status of our moth species in the county. Presentation of the first major work published by the Society - Jane McPhail's "Provisional Atlas of Leicestershire Microlepidoptera".
- Saturday November 20th ***Soldiers, snipes and stiletos***
Identifiacion workshop for the larger brachycera - the large attractive flies such as snipe flies, soldier flies, robber flies etc. To be led by Martin Drake of English Nature. Learn of this little recorded group in Leicestershire, become an enthusiast and then send us your records!
- Wednesday December 1st ***Palaeoentomology - using insects to reconstruct past environments***
Malcolm Greenwood, Lecturer in Geography at Loughborough Iniversity and LES member since its inception, has been looking at ancient remains of insects in peaty deposits in the Trent Valley and has been using them to determine local conditions thousands of years ago. Will he produce the oldest species records for the county?
- Wednesday January 12th ***The hidden world of the flea - the ecology of ectoparasitic arthropods***
Frank Clarke of the Zoology Department at Leicester University is another of our academic members with an itch! Curently he is researching the ecology of ticks, lice and fleas and their effects on vertebrate sexual behaviour! You'll have to scratch around for an excuse to miss this one!
- Wednesday February 9th ***Lepidoptera in Northern Italy***
Many of our members will remember the superb slides of Gianpiero Ferrari when he first joined the LES a couple of years ago. Since that time he has built up a reputation in the county for giving excellent talks. He will be introducing us to the varied lepidoptera of his home area of Northern Italy.
- Saturday March 12th ***Little piggies workshop***
Those interesting little woodlice that seem to pop up wherever you are ant any time of the year. At last a chance to learn how to identify them and contribute to Jon Daws' (the leader on this occasion) list of records - bring along specimens if you have any!
- Wednesday 16th March ***Geysers, wetas and keas - insects and general natural history in New Zealand***
The results of a botanical, geological, ornithological and entomological tour of the antipodes by our own programme secretary Roger Key from English Nature. Joint meeting with the Leicester Literary & Philosophical Society Natural History Section. Come early - seats will be at a premium!