LEICESTERSHIRE & RUTLAND ENTOMOLOGICAL SOCIETY

VC55

NEWSLETTER 69

September 2023

Variable Longhorn Beetle *Stenocorus meridianus* in the meadow attached to Charley Woods NR on 26 of June. Photo: Gianpiero Ferrari FRPS.

In this edition

LEICESTERSHIRE & RUTLAND ENTOMOLOGICAL SOCIETY

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The editor will be happy to receive articles, short notes and photos (in focus please!) about insects or other invertebrates in Leicestershire and Rutland, also news of members' activities further afield. Photos to be sent separately please at high resolution. Unless otherwise credited, photos are by the author of the article.

Next Copy Deadline: 5 Jan 2024

Editorial

Thank you to all contributors for this edition … a few more next time would be nice. Alan Cann has a spider update for us and Chris Leach has been studying galls on Bird's-foot Trefoil. I also have a new gall to report. Two members have been impressed by the insects in the wilder parts of their gardens, so Reg Price and Gianpiero Ferrari have sent in collections of photos. Should the garden butterflies become too numerous, you could always make them into soup … see below.

An unfortunately ambiguous notice at Sutton Cheney.

Once again my own year's fieldwork has been focused on plants and insects have been incidental. A highlight was an insect seen in Italy, from a family related to lacewings that is not represented in Britain.


Ascalaphus libelluloides, from Avezzano, Italy. These are predatory insects in the family Ascalaphidae of the order Neuroptera.

Steve Woodward
Editor

Garden Insects - 1

Having left our lawn (at Burbage SP4493) unmown though the summer, we seem to have had far more insects than in recent years.

Box Moth: obviously not welcome, the first year I have seen them, at least ten sightings. I do not have any Box plants!

Hornet Hoverfly: I have seen odd ones over the last three years but several this year over many weeks.

The Southern Hawker Dragonfly emerging, we get at least 20 of these per year in our pond.

Spotted Longhorn Beetle:Again, the first time I have seen one. A delight to see this, it stayed on the flower for at least 20 minutes.

Reg Price

Bird's-foot Trefoil - research opportunities for entomologists and cecidologists?

Introduction

Many will be familiar with Bird's-foot Trefoil (*Lotus corniculatus*, also known as Birdsfoot Deervetch, Eggs and Bacon or, perversely, Bacon and Eggs), commonly found across Europe and northern Asia. It is common in hedgerows and meadows and untamed areas of garden lawns (Fig. 1) and seems to be favoured by sandy soil. It is a small plant (typically 10 – 20 cm in height, but can be taller depending on its surroundings) and produces flowers (Fig. 1, inset) characteristic of the pea family (Fabaceae). Typical of members of this family, Bird's-foot Trefoil has a symbiotic relationship with the nitrogen-fixing bacteria, *Rhizobium* sp. which induce small root nodules on the roots of this plant. The plant gets its name from the appearance of the seed pods on their stalks.

Fig. 1. Bird's-foot Trefoil *Lotus corniculatus* in a lawn.

Paucity of Records of *Asphondylia melanopus*

My attention was drawn to this plant by a posting, by British Plant Gall Society member Jerry Bowdrey of Suffolk, on the British Plant Gall Facebook during August 2023, of a photograph (reproduced here, Fig. 2) of galls induced by the gall midge *Asphondylia melanopus* Kieffer on the seed pods of this trefoil. An accompanying post indicated that there were, at that time, only two records for this species in the National Biodiversity Network (NBN) database, one "confirmed" in 2004 in Sussex (P. Roper), the other "unconfirmed" in 1915 near Southport (R. Bagnall); that was stimulus enough to suggest it being worthwhile looking locally for the plant and this gall. Within three days, I had found both the plant and the gall in three separate locations within VC55; on a footpath adjacent to Brocks Hill Country Park, in a

Fig. 2. Galls on the seed pods of Bird's-foot Trefoil. Photo: Jerry Bowdrey.

grassy embankment near Knighton Green and in a "neglected" grass area in my son's garden (Oadby) that he leaves as the children's play area. These observations suggest that, despite the paucity of records, this gall-causer is probably quite common. Although further records were found in a limited number of more localised databases (e.g. Dorset Nature), the paucity of records suggests that it might be fruitful to make this gall-causer and its host a target for subsequent searches.

Part of the problem with the recording of this gall-causer may be attributed to some confusion in the early British gall literature. Although Keiffer described the species as early as 1890, the earliest widely published description of these galls seems to be Swanton's in his 1912 *British Plant Galls* in which he describes swollen and deformed seed pods of *Lotus corniculatus* as being caused by the larvae of *Contarinia loti*! The drawing (on page 15) supporting this showed distorted flower receptacles and wrinkled seed pods; the former we know as being caused by *c. loti* and the drawings of the distorted seed pods are more akin to the galls caused by the micro-beetle *Ichhnopterapion loti* Kirby rather than *Asphondylia melanopus*. Arnold Darlington, in his *Pocket Encyclopaedia of Plant Galls* (1968) rightly attributes the flower gall to *Contarinia loti* but makes no mention of any other galls on trefoil. By the time the British Plant Gall Society's *Provisional Keys* (Stubbs, 1986) was published, these omissions and misunderstandings had been largely eradicated but still these galls on this host seemed to have been under the radar.

Some Recent Observations

The proximity of my son's garden provided easy access to material to research and promptly lead to the discovery of two further galling species, one midge and one mite on this host and a multitude of other "visitors". The midge, identified as *Contarinia loti* De Geer, causes flower buds to swell and to remain closed and may cause some reddening of the distorted bud and unopened petals. (Fig. 3). Each galled bud contains

Fig. 3. The midge *Contarinia loti* causes flower buds to swell and to remain closed, distorting the bud and unopened petals.

Fig. 4. Translucent /white larva of *Contarinia loti*.

one or more translucent /white larvae (Fig. 4). The larvae become more opaque and yellow in colour as they mature. Once released from the bud, their crawling ambulation is interspersed with jumping movements. The mite-induced gall takes the form of a minute rolling of leaf margin bearing a lot of short white 'hairs". The causative mite is *Aceria euaspis* Nalepa. The "visitors", seeking out nectar included a variety of bees (tentatively identified as *Apis mellifera, Bombus terrestris, Anthidium* sp.) and a number of unidentified moths and hoverflies. The plant is also reputedly eaten by the larvae of Common Blue (*Polyommatus icarus* Rottenberg), and Small White (*Pieris rapae* L.) butterflies but, in a year of very suppressed butterfly numbers, larvae of these species were not found.

More Questions than Answers

The lifestyle of *Asphondylia melanopus* Keiffer follows a common dipteran pattern but have a number of interesting characteristics (Tokuda, 2012). Ova are deposited into the tissues of the embryonic seed pod and the larvae soon hatch. Typical of this group, the larvae have three instars. The first two instars are responsible for the induction of gall development. These larvae do not, however, feed directly on the developing gall tissue but on an associated fungus growing inside the galls. The spores of this fungus are transferred into special structures in the abdomens of the adult females and are released at the same time that ovipositing takes place (Jerry Bowdrey, personal communication). In most dipterans, the larvae prepare to leave their host using a sternal spatula (like a breast plate) to prepare an escape channel. However, sternal spatulae are uncommon amongst *Asphondylia* larvae and escape channels are prepared by the pupae. The pupa of *A. melanopus*, like many of the Asphondyliini, possess two well-developed "horns" and cut a channel out of the gall by rotating their bodies along a longitudinal axis. Once the outer edge of the gall is reached, rotation is stopped and, after a pause for further maturation, the imagines emerge. The pupal cases are left at the exit point of the gall. Examples of these pupal cases still attached to the seed pods can be seen in Jerry's photographs (Fig. 2). It is thought that there are two generations per year (bivoltine) but little is known of the duration of each instar and pupal stages nor how they survive winter.

Note

There are a number of other gall-causing species known on this host, not found in this study, which include a pod-distorting beetle *Ischnopterapion loti* Kirby (sometimes reported as an inquiline/parasitoid present in the galls of *A. melanopus* or simply causing the distortion of pods by eating the seeds within them. Jerry Bowdrey, personal communication), a stem-distorting Agromyzid fly *Melanagromyza cunctans* Meigen, and two further flower-distorting dipterans, the non-jumping *Jaapiella loticola* Rübsaamen and the jumping *Contarina barbichei* Kieffer. (Redfern, Shirley and Bloxham, 2023) The galls of the latter are quite distinct from those of *C. loti* found in this study.

Acknowledgement

Thanks to Jerry Bowdrey, of the British Plant Gall Society, for both initiating and reviewing this note.

References

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NBN Atlas (consulted August, 2023) SPECIES.NBNATLAS.ORG/Asphondylia melanopus.

Redfern, M., Shirley, P. and Bloxham, M. 2023. *British Plant Galls.* Field Studies Council Occasional Publication 206.

Stubbs, F. B. 1986. *Provisional Keys to British Plant Galls.* British Plant Gall Society.

Swanton, E. W. 1912. *British Plant Galls.* London Methuen.

Tokuda, M. 2012. Biology of Asphondyliini (Diptera:Ceciomyiidae) *Entomological Science* Vol **15,** issue 4: 361-383.

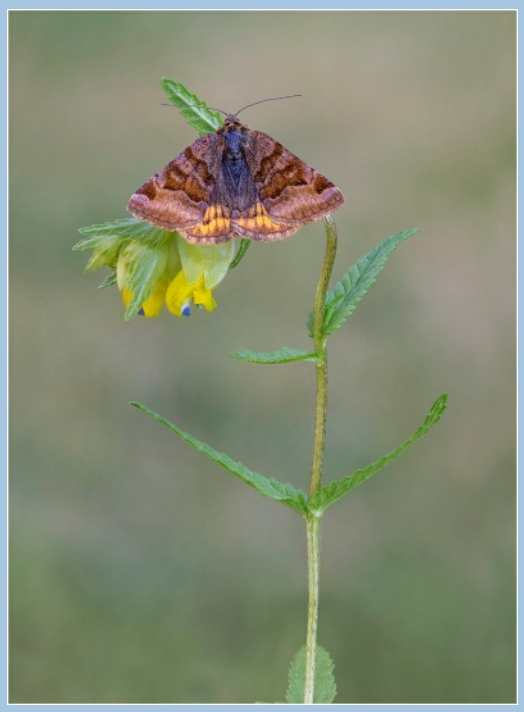
Chris Leach

Garden Insects - 2

This year I converted half of my Barrow upon Soar garden into a meadow. I was pleasantly surprised to see what turned up.

Small Skipper

Also attracted were Common Blue, Gatekeeper, Speckled Wood, Orange-tip and Brimstone butterflies, along with Banded and Azure Damselflies. Dozens of bumblebees visited every day. This shows how important gardens are for insects.



Burnet Companion

Meadow Brown

Gianpiero Ferrari

Spider *Mangora acalypha* in VC55

Fig. 1: *Mangora acalypha*, female specimen. Photo: Alan Cann.

Mangora acalypha is known as the "Cricket Bat Spider" because of the pattern on its abdomen, which makes this orb web-weaver easy to identify. Quite common in the south of England, it was first recorded in VC55 (Leicestershire & Rutland) in an Anstey garden in 2021 (Fig. 1). In 2022 it was recorded on Gorse at Billa Barra, just a few miles away from the first site. However the 2023 season (to date - August) has seen a remarkable spread with this relatively distinctive spider being recorded on shrubs and grassland in all corners of the vice-county (11 records from 9 sites). It seems that *Mangora acalypha* has joined the legions of species currently undergoing a north-westerly range expansion. Please keep an eye out for this spider and record all sightings.

Fig. 2: VC55 distribution of *Mangora acalypha*. Original recorded location indicated by arrow.

Alan Cann

First VC55 record of a gall midge *Wachtliella caricis* on Pendulous Sedge

The midge *Wachtliella caricis* (Diptera: Cecidomyiidae) causes a gall on Pendulous Sedge *Carex pendula*. A single larva inflates a fruit, making a conical cap. Many of the fruits on the female flower spike are usually affected, making this gall fairly conspicuous. I had previously been shown the gall in Warwickshire. During botanical surveys I must have seen hundreds of female spikes of this common sedge, yet the gall had proved elusive in VC55 until a visit to the grounds of Kibworth House Hotel on 14 June 2023. In woodland near an ornamental lake SK599834, I found a plant with a galled spike.

On closer inspection, the galls contained orange maggots and matched precisely the illustration in Redfern, Shirley and Bloxham (2023). I thank Sue Timms for checking the ID.

Galled and ungalled fruits among withered styles.

Reference

Redfern, M., Shirley, P. & Bloxham, M. 2023. *British Plant Galls* (3rd edition). Field Studies Council Occasional Publication 206.

Steve Woodward

Looking for help?

The following are willing to act as an initial point of contact for providing advice and information to members.

Arachnids (Mites & Ticks):- Ivan Pedley, 48 Woodlands Drive, Groby, Leicester LE6 0BQ. 0116 287 6886. ivan.pedley@gmail.com

Arachnids (Opiliones, Harvestmen): - Ray Morris, see page 2.

Arachnids (Spiders):- Paul Palmer palmerpjp@gmail.com

Biological Recording:- LRERC; Room 400, County Hall, Glenfield LE3 8RA. 0116 3054108.

Chilopoda:- Helen Ikin, 237 Forest Road, Woodhouse, Woodhouse Eaves, Leics LE12 8TZ. 01509 890102. helen.canids@btinternet.com

Coleoptera:- Graham Finch, 14 Thorndale, Ibstock, Leics. LE67 6JT: finchgraham1@gmail.com

Collembola: Alan Cann, 17 Overdale Road, Leicester LE2 3YJ. alan.cann@gmail.com Online identification guides: https://collembolla.blogspot.com/p/identification-guides.html

Diplopoda:- Helen Ikin (see Chilopoda).

Diptera (Some families):- Ray Morris (see page 2).

Diptera (Nematocera - Mosquitoes, Blackflies & Craneflies):- John Kramer, 31 Ash Tree Road, Oadby, Leicester LE2 5TE. 0116 271 6499. john.kramer@btinternet.com

Hymenoptera (Symphyta - Sawflies):- Dave Nicholls, 69-71 Church Lane, Ratby, LE6 0JF. davidnicholls125@gmail.com

Hymenoptera (Bumblebees):- vacant.

Hymenoptera (Other aculeates - Bees, Wasps & Ants):- Helen Ikin (see Chilopoda).

Hemiptera:- Alan Cann, 17 Overdale Road, Leicester LE2 3YJ. alan.cann@gmail.com

Sue Timms, 17 The Square, Bagworth, Leics. LE67 1DQ. sue.timms@clara.co.uk

Kate Nightingale, 12 Latimer Road, Cropston, Leics. LE7 7GN. kate.h.nightingale@gmail.com

Isopoda (Woodlice):- Helen Ikin (see Chilopoda).

Lepidoptera:- County Moth Recorder Team:- VC55CMR@gmail.com

Mecoptera, Neuroptera, Plecoptera :- Steve Woodward, see page 2.

Mollusca: - Dave Nicholls (see Hymenoptera (Symphyta)).

Odonata:- Ian Merrill i.merrill@btopenworld.com

Orthoptera:- Helen Ikin, see Chilopoda.

Psocoptera:- Helen Ikin, see Chilopoda.

Thysanoptera: - Ivan Pedley, see Arachnids - Mites.

Trichoptera (adults):- Ray Morris, see page 2.

2023/4 Indoor Meetings Programme

All meetings 7-9 pm in St Bart's Community Hall, Main Street, Kirby Muxloe, LE9 2AL (unless otherwise stated). Guests are welcome to join us at meetings.

- Friday October 20 - Members' Evening
- Friday November 17 - Sue Timms & Kate Nightingale - "Hemiptera (Bug) recording in VC55 - towards a checklist"
- Friday December 8 - Paul Palmer - "Identifying those tricky little micro moths"
- Friday January 19 - Ivan Pedley - "Sardinian Arthropods"
- Friday February 16 - Sue Timms & Hazel Graves - Mines and Galls
- Friday March 15 - AGM & Members' Evening

Alan Cann
Secretary