



Beetle News



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Editor: Richard Wright, 70, Norman road, Rugby, CV21 1DN Email:richardwrightuk@yahoo.co.uk

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Editorial

Richard Wright

Thanks to all contributors to this issue. I must apologise to those authors (John Bratton, Eric Phil and Andrew Duff) whose articles I accidentally omitted from previous issues. I hope that all contributions received have now been published.

Unfortunately I have not had time to produce a new "Beginner's Guide" for this issue due to pressure of time. I hope to correct that during the coming winter when I have more free time. However, most embarrassingly I have had to reproduce a corrected version of the guide to Erotylidae and Tetratomidae from the previous issue. I inadvertently missed out a complete couplet which not only meant that *Triplax lacordairei* was not included, but also that the following parts were incorrect. Thanks to Steve Lane for bringing this to my attention.

Please discard the Erotylidae and Tetratomidae key from Vol. 3:2 and replace it with the one in this issue.

Please continue to send contributions to me. The final issue is due at the end of the year so what better way to spend Christmas than by writing up something interesting about beetles

Anobium inexpectatum/A. punctatum.

Anobium inexpectatum was added to the British list in 1977 by the late A.A. Allen in The Entomologist's Monthly Magazine 112: 151-154 where the two species are clearly differentiated. For those without access to this journal the two species can be easily identified by examination the their antennae, in *A. inexpectatum* segments 4-8 are slightly serrate on their inner edge, whilst in *A. punctatum* joints 4-8 are not at all serrate. This character is mentioned by Allen but is easily overlooked with the numerous other (not always obvious) characters that he gives.

Eric Philp

Meadowsweet is a host of *Cryptocephalus labiatus* L. (Chrysomelidae)

The leaf beetle atlas (Cox 2007) credited me with sweeping *C. labiatus* from meadowsweet *Filipendula ulmaria*. This could be interpreted as the capture of a stray individual on a plant of no significance, so I would like to clarify the situation.

The site was a flower-rich hedgebank beside a lane running SW-NE past Myfyrian-isaf, a farm near Gaerwen, Anglesey (SH477703-SH479706). The first record was of *C. labiatus* numerous on meadowsweet on 4 July 2001. The identification was kindly confirmed by Roger Key. I could find none in 5 hours of searching in June and July 2002. On 2 July 2003 they were back: eight adults seen on meadowsweet foliage and one on its unopened flowers, including a pair in cop. There was grazing damage on the meadowsweet leaves. A single *C. labiatus* adult was found on meadowsweet foliage on 14 June 2004 but three weeks later (6 July) I couldn't find any *Cryptocephalus*. On 2 July 2005 I found five *C. labiatus* adults, four on meadowsweet and one on grass among meadowsweet. I have not returned to the site since then.

The surrounding area is herb-poor pasture with hedges. The closest birch (*Betula* spp.), which Cox

(2007) gives as the usual food plant, is probably in the village of Gaerwen a kilometre away.

In 2003 I consulted Prof. John Owen about meadowsweet as a food plant and I am grateful to him for the following. While he had taken *C. labiatus* from only birch and bilberry *Vaccinium myrtillus*, he pointed out that Mohr (in Freude, Harde & Lohse 1966) included *Fragaria* spp. (strawberries) among its food plants in Europe. Strawberries and meadowsweet are both in the Rosaceae. By coincidence, Prof. Owen had just reared some adult *C. labiatus*, progeny of some collected from birch in Surrey the previous year. When placed with small leaves of meadowsweet, they started making holes in the leaves within a few hours and after two days, the female started laying eggs. The eggs in size and appearance matched typical *C. labiatus* eggs.

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John H. Bratton, 18 New Street, Menai Bridge, Anglesey, LL59 5HN.
 jhnbratton@yahoo.co.uk

An Improved Suction Sampler Conversion.

Clive Washington

Many entomologists have now recognised the value of suction samplers, made from modified leaf sucker/blowers, for the collection of ground-level invertebrates. I have been using one this season and it has enabled me to add quite a number of new species to my site lists. The generally described method of performing the conversion is to push a pouch of cloth netting into the intake end of the suction tube, and secure the outer edges of the net to the outside of the suction tube with strong tape.

This device has a number of disadvantages and, to me at least, was crying out for improvement. It's difficult to empty the specimens from the net pouch. If the tape comes adrift in the field it's troublesome to repair, and if the netting itself gets damaged, then it can mean the end of your collecting session. Of course, if your leaf sucker has to actually perform real leaf-sucking duties then you have to untape the whole affair.

My solution (which I can hardly imagine is original although I have never seen it described) is to use a small removable net which fits in the end of the suction tube. To make this you choose a plastic flowerpot which is just the right size to push firmly into the end of the tube without entering fully. Cut off the base of the pot (I used a junior hacksaw) to leave a tapered plastic tube. Now cut a disc of netting of approximately a foot in diameter and attach it edgewise around the flowerpot base, using an ordinary office stapler, which will pierce the plastic pot easily. You now have a pot whose base has been replaced by a small net bag. Add a couple of turns of stretchy electrical tape to cover the staples, and secure the edges of the netting. You then push this mounted net into the outer end of the suction tube and begin to collect. After a few minutes of sampling, you can easily pull the pot and net out of the sampler and empty it into a tray for sorting. If you carry a few of these 'potnets' then you can replace them on the spot if they get damaged. They empty much more easily than the old net pouch, and the blower can also be used for sucking in the garden at a moment's notice.

Simple.

A Modification of Farrants mountant for use in examining Carabid gut contents

Andrew Chick

Abstract

The study of Carabidae gut contents is useful in understanding the biology of species, and understanding of species place within an ecosystem. This paper aims to re-evaluate mounting media for the microscopical examination of Carabid gut contents.

Introduction

Chick *et al* (2008) suggested that Carabid beetles may serve as biological indicators of the presence of toxins in forensic cases, and that diet was a defining factor in such indicator species. Forsythe (2000) includes notes regarding the dissection and preparation of Carabidae gut contents and faecal pellets for study in Polyvinyl lactophenol. However Brown (1997) states that Polyvinyl lactophenol, is unsuitable for natural history specimens due to over clearing, shrinking, and crystallisation. At Nottingham Trent University slides for undergraduate study have been prepared using Glycerol as a mountant, even when ringed with nail varnish this has proven to be only a temporary mountant, possibly due to the difficult nature of ringing a fluid mount. Given the soft and partially digested nature of crop contents the abrasive nature of preparation for a Canada balsam mount could be destructive. Given that Glycerol provides a good general mountant in the short term it appeared logical that a Glycerol based media would be the logical choice of mountant. Grey (1973) notes that Farrants media is a mixture of Glycerol, gum Arabic and water, such a media would solidify, and preserve the mounted crop contents.

Materials and Methods

The original formula for Farrants media, sited in Gray (1973) calls for 40ml of water and 40g of Gum Arabic, to which 20ml of Glycerol is added. Personal experience shows this is too much Gum Arabic and the following formula is preferable:

Water 40ml
Glycerol 20ml
Gum Arabic 20g
Antiseptic 1ml*

*T.C.P. was used however any commercial antiseptic or a thymol crystal can be used.

The above ingredients are combined and left overnight in a warm place, if lumped gum Arabic is used it is preferable to suspend the lumps in a cloth bag and dissolve in the water prior to adding the other ingredients.

The authors preferred method of dissection is based upon a mixture of Rowetts (1973), cockroach dissection protocol, and Forsythes (2000) protocol. Firstly using Rowetts protocol, molten paraffin wax is poured into a deep watch glass (using glycerol as a mould release), the beetle is then gently embedded into the molten wax to hold it steady during dissection and then when the wax has set, is covered in glycerol, then Forsythes (2000) protocol is followed to remove the crop and its contents. Temporary preparations are can be mounted in glycerol, more permanent preparations are mounted directly into the modified Farrants mountant and allowed to dry, to increase permanence ringing of the coverslip with nail varnish is recommended.

Discussion

Other Gum Arabic based media, such as Hoyers and Berlese are already in common usage for Mites and certain families of Diptera as well as other groups (Chick 2010). It was determined that a gum chloral or lactic gum mountants might over clear the delicate and partially digested structures which may be part of the crop contents. Gum based mountants are considered by some to be permanent when suitably ringed, however as per Brown (1997) a watch brief period would be wise to maintain.

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Alternative foodstuffs of *Coccinella septempunctata*

Throughout August 2011 Lincolnshire experienced a notable increase in the number of Seven-spot Ladybirds, *Coccinella septempunctata*. Recording at a Lincolnshire Naturalists' Union field meeting to Alkborough Flats, a large managed realignment site on the banks of the Humber, resulted in seven species of ladybird being found: *C. septempunctata*, *Propylea quattuordecimpunctata*, *Tytthaspis sedecimguttata*, *Adalia bipunctata*, *Anisosticta novemdecimpunctata*, *Coccinella undecimpunctata* and *Hippodamia variegata*. Numbers of *C. septempunctata* were uncountable. Most were seen feeding on or in the vicinity of aphids (*Hyalopterus pruni*?) on *Phragmites australis*.

On the journey towards Alkborough Flats I had unavoidably collided with a number of unidentified soft bodied insects whose remains were smeared across my windscreen. As I was leaving Alkborough Flats, I noticed a single *C. septempunctata* feeding on the bug goo. It remained apparently feeding on the goo for a good 20 miles until we reached Scunthorpe, at which point it was unceremoniously swept away by the wind currents.

A couple of days later whilst wandering around the Lincolnshire Wildlife Trust headquarters at Banovallum House in Horncastle (where ladybird numbers were not quite so dramatic) I came across a motionless *C. septempunctata* that had apparently succumb to the spider *Enoplognatha ovata*. On closer inspection the beetle was not in fact entangled in the web, but was actually busy feeding on the remains of a syrphid that itself had become trapped. After a little teasing, it proceeded to feed a wing through its mouthparts a number of times and then continued by attacking the rear segment of the abdomen of the syrphid.

Finally, whilst surveying for invertebrates at Wolla Bank Reedbed Lincolnshire Wildlife Trust Nature Reserve in mid-August, I came across a dozen or so motionless *C. septempunctata* amassed on the stalk of a *Sonchus asper*, arranged like the petals of a flower. Expecting to see a single remaining aphid being sucked dry I brushed aside a few ladybirds but found, instead of aphids, the severed stem of the *Sonchus asper* which was oozing liquid. The remaining ladybirds then clambered for position around the stem and reformed their bud-like positions

Charlie Barnes

Micrambe ulicis (Stephens) (Cryptophagidae) on cultivated blackcurrant

On 10th October 2010 I was surprised to find two specimens of *Micrambe ulicis* (= *vini*) among some blackcurrants which had just been gathered from a mature bush in my garden. This species is invariably associated with flowering papilionaceous shrubs, especially gorse, and it's relevant to note that a hillside behind the house is covered in gorse bushes, none of which are flowering at this time of year. Possibly *M. ulicis* has a wider range of habitats, outside of the main flowering period of gorse, than is generally realised.

Andrew Duff
110 Cromer Road
West Runton
Norfolk
NR27 9QA

Rhagium bifasciatum in the Lake District

Ralph Atherton's account of *Rhagium* swarming at high elevation in the Trossachs (Beetle News Vol. 2:2) prompts me to recall a similar experience in the English Lake District during June 2007. It was an extremely warm and sunny day of the kind not normally associated with the local district when *R. bifasciatum* occurred in some numbers on Sand Hill (NY 187218). According to the local OS Land Ranger map, Sand Hill stands at an elevation of 756m, the surrounding area comprising relatively barren terrain. The nearest conifer plantation from where the beetles may have originated is located within Hobcarton Gill, some 800m to the northeast, though in order to arrive at Sand Hill from this location it would have been necessary for the beetles to negotiate the intervening 770m summit of Hopegill Head. Ralph's suggestion that the beetles may exploit up-draughts of wind seems quite plausible as I similarly do not recall that the day was particularly windy.

Ron Carr

RONCARR200@aol.com

***Lycoperdina bovistae* (Fabricius) in Kent.**

When walking through woodland on the North Downs near Blue Bell Hill, Maidstone (TQ 748613) in January 2011 I came across four residual fruit bodies of *Lycoperdon* puff balls, two of which contained single specimens of *Lycoperdina bovistae*.

Hymen (1992) assigned *L. bovistae* RDB3 status and in relatively recent years the species has attracted some degree of attention from a number of coleopterists. Clive Turner (2003) relates the capture of a specimen in a pitfall trap at Roborough Common near Plymouth, South Devon in 1996 and lists post 1970 records for South Hants, East Sussex, West Norfolk, East Kent and Warwickshire. Keith Alexander (2003) refers to the presence of larvae in puff balls gathered on Saddleworth Roughs, Gloucestershire in 1991, from which subsequently emerged dozens of beetles. Additional records of the species in Gloucestershire included Stinchcombe Hill by John Bratton in 1998 and Buckholt Wood by David Atty in 1966 (Alexander, 2003). D M Green (1997) describes the occurrence of *L. bovistae* in a sessile earthstar *Geastrum fimbriatum* at Cruise Hill Wood near Alfrick, Worcestershire in October 1997.

Eric Philp informs me that he has collected the species at Bedgebury, Knole Park and Holly Hill in West Kent and at Orlestone Forest in East Kent. Kevin Chuter also took *L. bovistae* at Detling (East Kent), within three miles of the Blue Bell Hill location.

Joy (1932) describes the species as being very local and occurring in the south of the country as far north as Leicester. The apparent rarity of *L. bovistae* may well be attributable to the sporadic occurrence of its fungal hosts, closer attention to which could result in a wider understanding of the species' distribution.

My thanks to Eric Philp for details of his Kent records.

Ron Carr

RONCARR200@aol.com

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Lycoperdina bovistae



Lycoperdina succincta

For those who are not familiar with this rather distinctive species, I have provided a photo opposite of *L. bovistae* and the even rarer *L. succincta*

Richard Wright

***Paracorymbia fulva* in Nottinghamshire**

On Saturday 9th July my wife Pat and I visited Toton Sidings in southwest Nottinghamshire near the Derbyshire border (SK 490350). It was our first trip there. We had heard that the site has a small colony of Marbled White butterflies but our primary interest was to study the hoverflies on this disused railway sidings, now overgrown with birch scrub and flowering plants. You will gather from this that I am not a beetle specialist. We investigated a small part of the site, probably not more than 100 metres by 30 metres. We found five specimens of *Paracorymbia fulva* mostly on Wild Carrot.

I took one specimen home and with the help of my 20-40x binocular microscope and a copy of Norman Joy's "Practical Handbook of British Beetles" I determined it initially to be *Leptura fulva*. I then, perhaps wrongly in hindsight, released it in my garden in Wollaton, Nottingham. Watch out for records there!! When looking on the Internet at the NBN Gateway site, I found that its taxonomy had changed to *Paracorymbia fulva* and that there were apparently no other records in Nottinghamshire or anywhere this far north. I notified the county recorder Sheila Wright of the discovery. I also found on the Internet reference to a discovery of this species in 2009 and 2011 at Sapcote in Leicestershire by Graham Calow. (See his reports in "Beetle News, Volume 3 Issue 1, March 2011" and "Volume 3 Issue 2, June 2011".

The following morning I let my friend and fellow naturalist Richard Rogers know of the finding and he visited the site on Sunday 10th July where he reported seeing two specimens and photographed them (photo opposite).

The June 2011 edition of "British Wildlife" contained a note by Richard Wright on *Paracorymbia fulva* in the "Wildlife Reports" section. That further informed me of

the rarity (RDB 3) of the species and the importance of our find so I notified Richard of my discovery.

Toton Sidings is next to a still active rail freight depot. That these beetles have arrived there in association with timber imports is a realistic possibility. However seven specimens in two days suggest that there is a breeding site for the beetles here or hereabouts. The site has recently been the subject of controversy because a birch wood on part of the site was illegally felled and there was a prospect of development of the site. A lot of birch logs and brash from the felling still remain in piles on the site. It is to be hoped that the site may be saved as it adjoins a Local Nature Reserve.

Brian Wetton



Photo by
Richard Rogers

***Paracorymbia fulva* - further information received**

Richard Wright

I have received two communications concerning *Paracorymbia fulva* with reference to the records described above and to those found by Graham Calow in Leicestershire and reported earlier this year in Beetle News.

Michael Darby sent the following :

"This beetle is common in Wiltshire but invariably on chalk grassland sites where there is no dead timber and not in woodland. We thought fence posts might be a possibility but have not succeeded in finding any sign of breeding in them on sites where adults have been

present. My own suspicion is that they breed underground perhaps on fungi or plant roots. "

Martin Rejzek kindly confirmed the identity of the species from the photograph above and added the following comment :

"Interestingly enough, *Paracorymbia fulva* is one of the last European species with entirely unknown host plant, larval morphology and life history. The reason for this is probably the fact that the beetle does not develop in timber. It may for example develop in subterranean parts of trees or shrubs or even the larvae might move freely in soil feeding for example on fungi."

Clearly there is still a good deal to discover about this species which appears to be spreading in parts of the country.

Beginner's Guide :
The British species of Erotylidae and
Tetratomidae (corrected from Vol 3:2)

It may seem strange to provide a guide to two families of beetles which are not closely related. However, from the purely practical perspective it makes sense as members of these families are both found in similar situations, specifically on or in tree fungi. In addition, the two families may easily be confused by the beginner owing to superficial similarities. The key provided is based largely on colour and the majority of the species can easily be recognised with practice.

1. Antennae without a club. Shape and colour as shown.

Hallomenus binotatus
(Tetratomidae)

Although this species is very different from other members of the family, it can easily be confused with some Melandryidae, particularly *Orchesia*, but can be distinguished by the short tibial spur which is less than half the length of the first tarsal segment..



Antennae with a 3 or 4-segmented club
 Shape less elongate.

2

2. Elytra with a pattern as shown

Tetratoma ancora

This species is distinct in coloration from the others considered here but beware of some Mycetophagidae, found in similar situations, which also have patterned elytra. Scarce.



With a pale spot on each elytron behind the shoulder (Erotylidae)

3

Elytra uniformly dark coloured

5

3. Sides of elytra rounded

Tritoma bipustulata

Quite scarce



Elytra much more parallel-sided

4

4. Pronotum largely rufous

Dacne bipustulata

Common



Pronotum dark
Dacne rufifrons
 Quite common



5. Pronotum dark, same colour as elytra

Tetratoma desmaresti

Scarce



6

Pronotum rufous

6. Antennal club of 4 segments
 Elytra with scattered punctures, without punctate striae.

Tetratoma fungorum

Common



Antennal club of 3 segments

Elytra with punctate striae

Triplax (Erotylidae)

7

7. Elytra metallic blue or green

Triplax aenea

Common



Elytra blackish

8

8. Abdomen dark. Smaller, 3.5 - 4.5 mm

Triplax lacordairei

Scarce

Abdomen orange. Larger, 4.5 mm or more

9

9. Base of pronotum very finely margined, base of elytra not margined.

Basal joints of antennae pale.

Triplax scutellaris

(Scarce, recorded only from a small area of north-east England)

Base of both elytra and pronotum strongly margined.

Antennae dark

Triplax russica

Quite common.



As noted earlier, all of these species are associated with tree fungi. It is likely that each species has a limited range of hosts, but some fungi genera involved include *Pleurotus*, *Inonotus*, *Laetiporus*, *Piptoporus*, *Fomes*, *Phlebia* and *Stereum*. Specimens can often be obtained by breaking up and sieving the fungus, while some can easily be reared by collecting fungi containing larvae. A good deal could be added to our knowledge by someone willing to undertake an extensive programme of rearing. Other families often found in the same circumstances are Ciidae, Melandryidae, Mycetophagidae and Staphylinidae, but these should not be easily confused with those covered here.