Het News

Newsletter of the UK Heteroptera Recording Schemes

Issue 14
Autumn 2009
2nd Series

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Editorial:

In the spring issue we remarked upon the sparsity of bugs, and contributions, for the two previous years. We can now extend that by another year and again we attribute this to adverse weather in the British Isles during the main het hunting season.

Having just completed the editing of the current issue (well almost!) we would like to ask that contributors simplify our task in future by following the formatting style of similar contributions in the present issue.

We are hoping that by the time of the next issue we may be able to announce some improvements to the Het recording schemes. Not least, rationalising the scope of 'water bugs' to include all of the first 94 species of the current British checklist. This involves the addition of 3 dipsocorids anteriorly, and 23 saldids posteriorly. The 1st volume of the het atlas of The Netherlands created a sensible precedent for this!

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Contents

RECENT PUBLICATIONS

Book notice:

A pocket guide to the Shieldbugs and Leatherbugs of Britain and Ireland

B.J.Pinchen

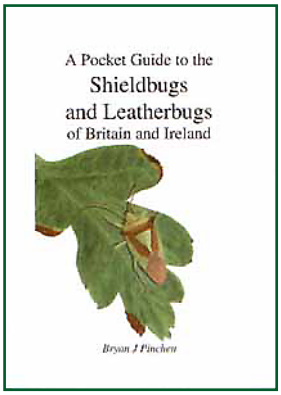
Published by *Forficula Books*, 116pp. (small format, ca. 150x100mm), 70 colour & 20 b&w illustrations.

Soft cover. ISBN-13: 9780954934941, £8.50.

Publishers description:

Illustrations of adults of all 36 species of shieldbug and 10 species of leatherbug currently native or recently colonised in Britain and Ireland. As well as illustrations of all the adults, last instar nymphs are also included of the most frequently found and common species.

Text includes information on life cycles, recognising both the groups and separating them from similar-looking insect groups. Concise text for each species includes field characters, similar species, colour variants, active season, habitat and general distribution. A number of the species included are not illustrated in other guides on the group.



ARTICLES

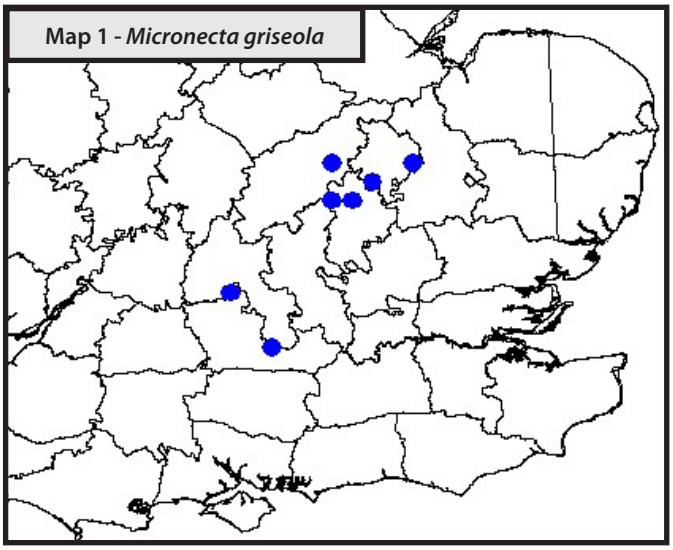
A review of water bug species recently arrived in Britain.

Sheila Brooke

In 2001 Bernard Nau (BSN) and I set out to look for *Micronecta minutissima* after BSN had noticed a specimen of this species in his collection of *M. scholtzi* from 1973, collected from the River Stour at Flatford Mill. No records had been reported for about 50 years but it seemed possible that this species might still be out there and might have been overlooked. We started searching and our efforts were rewarded as, not only did we find the rarity *M. minutissima*, we also found *M. griseola,* not previously known in Britain but a recent colonist in the Netherlands. This was the first of several water bugs new to Britain.

The first British record of *M. griseola* was retrospective, a specimen collected in the River Great Ouse in 2000 but only recognised when re-examined in 2001. In 2001 and 2002 more were found in the River Gt. Ouse (Beds & Hunts), in the R. Thames above Oxford (Wolvercote & Swinford, on the border between VCs 22 &23), and in the R. Nene (Northants). **Map 1** shows the present distribution, two records of *M. griseola* not listed in ref.1 are detailed in **Table 1.**

Map 1 - *Micronecta griseola*



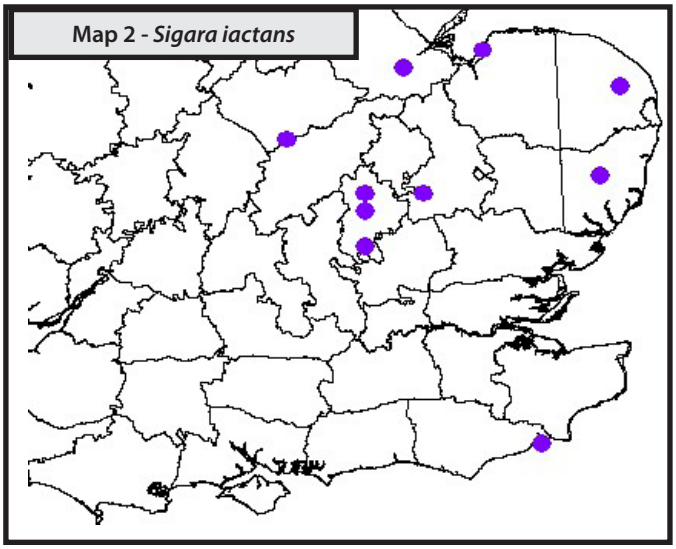
In the course of these searches, *M. minutissima* was found in the R. Lee (Herts), the Gt. Ouse (Beds), R. Thames (as above), Frensham Little Pond (Surrey) and by Jonty Denton in the Basingstoke Canal (ref 1). Interestingly, on 25th June 2002, in the R. Thames (Wolvercote + Swincote sites combined), we found all four British species of *Micronecta*.

These records were the result of labour-intensive searches made mainly between June & August, and involved dissection of dozens of tiny bugs, trying not to lose the microscopic genitalia in the process! We have not repeated this exercise – maybe someone would like to take up the challenge!

A bug that had been spreading in the Netherlands and seemed a likely candidate to make the crossing to Britain was *Sigara iactans*. In early spring 2005, BSN and I set out to look for it and we found one specimen in a Norfolk seawall dyke. Another specimen was recognised when John Blackburn re-examined a 2004 sample from the Norfolk Broads, and Robert Angus found it in a gravel quarry at Camber (E. Sussex) in 2005 (ref 3). The current earliest known specimen was one found in Suffolk amongst *S. falleni* collected in 2001 by Adrian Chalkley, but probably more are languishing in other collections of *S. falleni*. The most unlikely site is a pond of about 200 sq.m, high in nutrient from falling leaves, in a paddock shared by several houses just 200m from my house in Toddington. This has a flourishing population. *S. iactans* is now known from Sussex to Lincolnshire, **Map 2 & Table 2.**

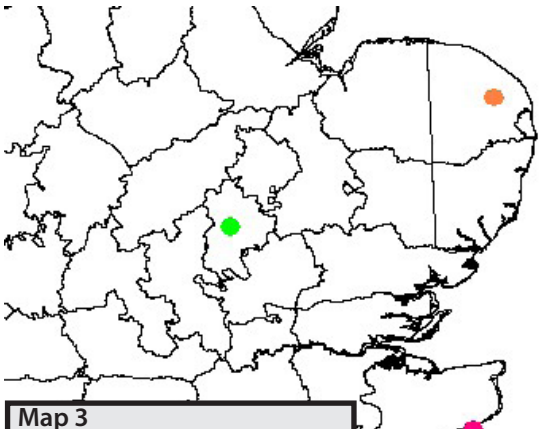
In 2004 we visited Samphire Hoe, on the Kent coast near

Map 2 - *Sigara iactans*



Dover, created by the deposition of spoil from the Channel Tunnel excavations. We looked at several fresh water pools and much to our surprise we found an unfamiliar saucer bug, smaller and browner than the common *Ilyocoris cimicoides* – it was *Naucoris maculatus*. This bug is found in nearby European countries, and there is a record from Jersey, but this was a first for Britain (ref.2). As far as is known it has not spread from this site – unless you know different! We have not had the opportunity to return to see if it is still there but if anyone is down that way have a look and let us know!

Gravel quarries are familiar sites around Bedfordshire and while I was jetting off on holiday in 2005 BSN visited a recently flooded lagoon and found *Cymatia rogenhoferi*, known in



Map 3
Cymatia rogenhoferi (green),
Sigara longipalis(orange),
& ***Naucoris maculatus***(red).

the Netherlands but hitherto not found in Britain. (ref. 3). Further searches for this distinctive bug here and in other local gravel pits eventually yielded 2 more specimens, both at the original site and one was dead. John Blackburn found a single specimen in a survey sample from Rye Harbour, about 2km from Robert Angus's Camber site for *S. iactans*. Known records are now as in **Table 3**.

John Blackburn was checking a survey sample from Upton Broad from 2006 when he came across another corixid new to Britain, *Sigara longipalis,* which is very closely related to *S. iactans* & *S. falleni*. A second sample from the same site in December 2006 yielded a further 2 specimens. (*Het News*, 2nd Series, no.9, Spring 2007). This bug has been increasing its range in the Netherlands so it is another bug to look out for in your *S. falleni* collection or in your local water body!

Collectively these recent species have all been found in the south east of England and the maps suggest that at least some of these species are waiting to be found in Essex and other south eastern counties where they have not yet been recorded. The most northerly record of *S. iactans* is in Lincolnshire and maybe 2010 will see it moving further north still. Your records may show a changing picture in the next year or two, and there might even be further additions to the water bug list.

References

1. Brooke.S.E. & Nau, B.S., 2003, *Ent Mon.Mag.,* **139**, 229-231.
2. Nau, B.S. & Brooke, S.E., 2005, *Ent Mon.Mag.,* **141**,193-196.
3. Nau, B.S. & Brooke, S.E., 2006, *Ent Mon.Mag.,* **142**,229-234.

[Maps reproduced from Recorder 2000.]

Table 1. - Unpublished records of *Micronecta griseola*

Site	Date	Grid Ref	Vice County	Nos.	Recorders
R. Gt. Ouse, St. Ives	5 Jun 2003	TL313712	VC31	2	Sheila Brooke & Bernard Nau
R. Kennet, Southcote	May 2003	SU6871	VC22	Many	Jonty Denton

Table 2. - All records of *Sigara iactans*

Site	Date	Grid Ref	Vice County	Nos.	Recorders
Framlingham Mere	29 Aug 2001	TM288635	VC25	1m	Adrian Chalkley
The Broads, Wroxham Broad	July 2004	TG31	VC27	1m	John Blackburn
Snettisham, borrow dyke B	19 Mar2005	TF652342	VC28	1m	Sheila Brooke, Bernard Nau
Camber	14 Aug 2005	TQ91	VC14	3m	Robert Angus
Camber	25 Oct 2005	TQ91	VC14	1m	Robert Angus
Priory CP, Meadow Lane Lagoon	11 Jan 2006	TL085499	VC30	1m	Sheila Brooke, Bernard Nau
Radwell Quarry	15 Jan 2006	TL010585	VC30	1m	Sheila Brooke, Bernard Nau
Toddington, Park Road pond	27 Oct 2006	TL009293	VC30	9m	Sheila Brooke
The Broads, Upton Broad	Dec 2006	TG3813	VC27	1m	John Blackburn
Toddington, Park Road pond	4 May 2007	TL009293	VC30	4m	Sheila Brooke
Cambourne, Business Park Lakes	6 May 2007	TL315599	VC29	1m	Sheila Brooke, Bernard Nau
Lower Cambourne, Lower Lake	6 May 2007	TL312591	VC29	1f (f/i)	Sheila Brooke, Bernard Nau
Lower Cambourne, Upper Lake	6 May 2007	TL313592	VC29	1m	Sheila Brooke, Bernard Nau
R. Welland, Coronation Cut, Spalding	22 Oct 2007	TF246217	VC53	1m	Richard Chadd
R. Welland, The Wrongs, Sibbertoft	28 Nov 2007	SP662834	VC32	2m	Julie Figures
Toddington, Park Road pond	08 Mar 2008	TL009293	VC30	2m	Sheila Brooke
Priory CP, Meadow Lane Lagoon	07 Nov 2008	TL085499	VC30	2m	Sheila Brooke, Bernard Nau
Wixams, lagoon 1, Bedford	10 Oct2009	TL053454	VC30	1m	Sheila Brooke, Bernard Nau

Table 3. - All records of *Cymatia rogenhoferi*

Site	Date	Grid Ref	Vice County	Nos.	Recorders
Priory CP, Meadow Lane Lagoon	29 Oct 2005	TL085499	VC30	1m	Bernard Nau
Priory CP, Meadow Lane Lagoon	12 Oct 2006	TL085499	VC30	1 m dead	Sheila Brooke, Bernard Nau
Rye Harbour	Sept 2006	TQ91	VC14	1a	John Blackburn
Priory CP, Meadow Lane Lagoon	28 Aug 2007	TL085499	VC30	1f	Sheila Brooke, Bernard Nau

The Hemiptera Heteroptera of the British Islands
E. A. Saunders, 1892

Andy Chick draws attention to te availability of this classic at the website of the *Biodiversity Heritage Library,* see below.
It is the 'large paper edition', i.e. with colour plates.
There are several format options including viewing online & a downloadable 500-page pdf.

http://www.archive.org/details/hemipteraheterop00saun

n.b. The 'small paper edition', still useful, may be found at a modest price on the antique book market, but the illustrated 'large paper edition' is expensive (£100s), when available.

Obituary — Reinhard Remane, 1929-2009

Authority on Hemiptera of the Western Palaearctic

Based on the obituary by Herbert Nickel on the Auchenorrhyncha website *Tymbal*.

The renowned taxonomist Reinhard Remane died in Marburg, Germany, on 27th April 2009., shortly after his 80th birthday - he was born in Kiel on 21st March 1929. Until February he continued to receive visitors for whom he identified and confirmed specimens

Professor Remane was a recognised authority on the taxonomy and systematics of Hemiptera, particularly Auchenorrhyncha but also Heteroptera. Over the years, many made the pilgrimage to Philipps-University, Marburg, where he was Professor of Zoology, to meet him and share his knowledge. He would often explain how species are rarely as illustrated in identification books but vary morphologically, ecologically and geographically. He was often first to recognize which of these differences were constant and could be used to discriminate between species.

From the early 1960s until 2007 he travelled almost annually to western and southern Europe, NW Africa and the Macaronesian Islands to collect Auchenorrhyncha and Heteroptera, many of which he described as new species in "his" journal *Marburger entomologische Publikationen*. He also collected extensively in Iraq, Sudan and Nepal.

He had an amazing ability to recognize the slightest differences between closely related species, even in the sweep net. This was helped by an excellent memory, he could often recall details of species he had seen perhaps only once or twice, many years before. No one knew the really difficult groups as well as he did, and he could even identify most females. His preparation technique of gluing specimens onto a card with the genital capsule open was amazing and perfectly preserved the aesthetics of the insects.

Many will remember him at conferences and meetings, rising promptly at the end of an author's presentation to report that he had been thinking about the material presented for decades, and often shedding new light on it. Despite his criticism, sometimes harsh, he was always open to help in all possible ways and played a major role in bringing together specialists and students.

BSN

HETEROPTERON

All published issues to date of the newsletter of the
Workgroup of Middle-European Heteropterists
are now available to read or download (pdf)
from the homepage of their website:
www.heteropteron.de

The site includes:

- contents lists of all issues of *HETEROPTERON* to date
- a checklist of German Heteroptera
- a link to Professor Hoffmann's homepage

Dr. H.J. Hoffmann, c/o Zool. Inst. Univ. Köln, Weyertal 119, D-50931 KÖLN

UK records of *Liorhyssus hyalinus* (RHOPALIDAE) wanted!

This species is an afterthought in S&L(1959), omitted from keys & main species' accounts. I've been interested in it since finding it in Pembrokeshire in 1985. In the last few years I've found adults & nymphs increasingly, often in large numbers, on the coast of Wales & in the Suffolk Brecks, always under Stork's-bill (*Erodium cicutarium*). I know too that other people have been finding it more widely across the UK with increasing regularity.

I'd like to pull together all UK records to publish a summary with distribution map, illustrations of adult & nymph, relevant biological information & taxonomic details.

To do this, I'd really appreciate it if people would send me all *Liorhyssus* records, with any associated plant & habitat information. I will acknowledge contributions in the resulting publication.

Thanks very much,

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National Museums Liverpool
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An historical influx of *Halticus saltator* Geoffroy?

by the late E.A.Butler

Edited version of an article by Butler in *Ent. Mon. Mag.*, **61**, pp276-279,1925

Until 1925 the only known British specimens of his insect, authenticated by record of place & date of capture, were two obtained by Mr. Donisthorpe at Deal on Sept. 6th, 1907. Other specimens in the Hope Collection at Oxford, though known to be British, have no details of capture. However, in summer 1925 I received numerous examples taken in two places as far apart as they are from Deal.

On 9th July Mr. F. O. Mosley (Faculty of Agriculture & Horticulture, University College, Reading) sent me a large number of live specimens for identification, they were doing considerable damage to foliage of potatoes at Winchester. In addition to plenty of adults of both sexes, brachypterous & macropterous, there were last instar nymphs, showing that the species was 'at home' on the potatoes.

On July 17th I received specimens from Dr. Hugh Scott. They had appeared in great numbers in the garden of Mr. Cecil Warburton on *Phlox* & French Beans at Grantchester, near Cambridge. Leaves showed much damage, spotting & discoloration. On two clumps of *Phlox* the bugs were extremely abundant & no other Hemiptera seemed present. On the French Beans there were other Miridae and it was hard to say what damage was attributable to each. A third clump of *Phlox* was not infested, nor were other plants in the garden, not even Scarlet Runner Beans at that date, though some *Halticus* were on these later (early August?), after they had disappeared from the *Phlox*. At various times during 7th-11th of July a long series of *Halticus* were taken, including nymphs and a mating adults Again the insects were evidently at home, and this was not a casual occurrence. Numbers gradually decreased & by the end of August *Halticus* had disappeared.

These observations raise interesting questions. What is the connexion between sudden sporadic appearances in Britain of a species normally found in central and parts of southern Europe? Eighteen years had elapsed since the 1907 record, and probably much longer since the earlier undated, unlocalised specimens in the Hope collection. Have they been here all the time or were they re-introduced on each occasion? If the 1925 bugs were descendants of the earlier ones, *some* records would be expected from intermediate dates & locations. During the 18 seasons since the Deal occurrence, there seems to have been time enough for the insect to spread northwards to Cambridge and westwards to Winchester.

It must not be forgotten, however, that most of the *Halticus* of both sexes were brachypterous and incapable of flight. This would hamper its spread and throw responsibility upon the few macropters, and the feeble saltatory power of *Halticus* would not help. immigration of adults from the continent might explain the situation at Deal but not for inland localities like Cambridge & Winchester.

H. saltator seems to be by no means particular as to diet, as witness the distant relationship of Beans on the one hand and Phlox or Potatoes on the other.

However, our experience with *Plesiocoris rugicollis* & *Orthotylus marginalis* shows that certain Miridae yield to the temptation provided by large quantities of well-nourished plants provided by human endeavour. Forsaking their natural food-plants for these rich stores, even if there is no connexion between substitute and original diets. It goes without saying that Beans, Phlox, Potatoes, and Reuter's Hollyhocks are not the natural food-plants of *H. saltator*.

Guérin-Méneville's *Iconography of the Animal Kingdom*, calls this bug *(Asternma) mercurialis*, evidently in reference to the plant on which he found it, which he calls ' La Mercuriale'; presumably some species of *Mercurialis*. The Deal specimens were on *Mercurialis annua*, a plant of cultivated ground; *M. annua* might therefore serve as an introduction to cultivated hosts. Mr. Mosley says that *M. annua* is exceedingly common around Winchester (it is even called 'Winchester Weed'); he suspects that *Halticus* migrated from this to the potatoes. The host reported by Reuter, *Echium vulgare,* is perhaps near enough, botanically to Phlox & Potato not to excite surprise.

There remains the possibility that eggs of *H. saltator* were introduced with seed of some kind. The insect matures in July and mates soon after. Ovipositing might therefore be accomplished in the autumn, in which case the eggs could be laid in seeds or, but less likely, in ordinary plant tissues. A ♀ in the Hope Collection, which I dissected, was full of eggs, but unfortunately we do not know the time of year when these specimens were taken. The ovipositor is short & stout, and capable, one would think, of piercing hard tissues to insert eggs. The eggs are of normal mirid type, cylindrical, narrowed anteriorlv, and constricted just below rim, evidently intended to be fully inserted.

If *H. saltator* hibernates, as some Miridae do, oviposition might be delayed until the following spring when the only available plant parts would be young tissue. The body of one of the Winchester females I opened contained no sign of eggs, and from external appearances I judge that the rest were in a similar condition. This points to ovipositing after hibernation, in which case there is little chance of introducing the species with foreign seed.

Propagation of potatoes by planting tubers and burning the haulms after harvesting the crop, seems to put the question of foreign seed case out of court for this host; Phlox is a perennial, so again this possibility fails. The only chance would be with beans, which would involve ovipositing in autumn. I understand that the seed beans were grown in France, but carefully selected by the English vendors' agents. On the whole, therefore, it seems most likely that the insects were here already, on some wild plant, and moved to the cultivated hosts and flourished there.

As I was finishing this paper I received a note from Mr. W.E. China (British Museum)*. In the Power Collection, under the name *Halticus apterus* L., he had found 11 *H. saltator* mixed with 4 *H. apterus*; all with the label 'Cowley, Oxon,' but no date of capture. This further enlarges the known range. Also it is possible that there are mixtures of *Halticus* species in other collections too, and the insect may be commoner here than supposed. At any rate, it is a species that should be watched lest it become a permanent pest.

[* In a 1926 publication (*Ent.Mon.Mag.*, **62**, p93) China corrected the information attributed to him in the last paragraph. The collection was actually the Stephenson Collection, from the early 1800s, and the supposed *H. saltator* were actually *Orthonotus rufifrons* - presumably females!

On the subject of confusing *Halticus* spp., it is worth pointing out that the common & widespread member of this genus is *H. luteicollis*, usually found on Goosegrass (*Galium aparine*) or White Bryony (*Bryonia dioica*). It is advisable to have specimens of other species verified. (Ed.)]

BSN

Please send contributions for the next issue by 30th April 2010

… longer articles especially welcome

What are Hemiptera & Heteroptera?

Bernard Nau

Based on the article "Heteroptera: An Overview of the Classification and Morphology"
on the website of the *Plant Bug Biodiversity Inventory*: http://research.amnh.org/pbi/bugs/true_bugs.html

Hemiptera were recognized as an entity by Linnaeus, the mouthparts being highly modified compared with other insects. In Hemiptera the *labium* is an elongate sheath enclosing the other mouthparts to form the *rostrum*: the *maxillae* becoming concentric saliva & food canals while the *mandibles* have a sawlike function. Saliva passes down the salivary canal into the food source, where its functions may include breaking down tissue, paralysing prey, & acting as an anticoagulant. The liquid food is then drawn into the gut by the suction of a cibarial pump in the head.

'Homoptera' as a name for 'Hemiptera other than Heteroptera' cannot be justified in light of a modern natural classification, now well-defined by statistical analysis of DNA, morphology & other characteristics. So what are the component groups of the Hemiptera now? In the numbered sections below, these are briefly discussed in the chronological order in which they branch from the main evolutionary stem of the Hemiptera.

1. Sternorrhyncha This is the earliest branch and includes scale insects (Coccina), aphids (Aphidina), white flies (Aleyrodina), and psyllids (Psyllina). These include some of the most highly modifed Hemiptera. Their diagnostic feature is the position of the rostrum, which appears to arise between the front coxae (i.e. they are 'opisthognathous'). They also have at most two tarsal segments, and some wing details are characteristic too.

2. Auchenorrhyncha Opinions vary on the composition of this group but in a broad sense it includes plant hoppers (Fulgoroidea) as well as cicadas, leafhoppers, & frog hoppers, and their relatives. They re recognised by a tymbal acoustic system and an aristoid antennal flagellum. Also, the posterior pronotal lobe covers at least the anterior portion of the mesonotum.

3. Coleorrhyncha These 'moss bugs" feed on mosses in the cool temperate forests of New Zealand, Australia, & southern South America; suggesting a remnant of a once widespread group. The head has unusual frontal lobes, the tarsi have 2-segments, & the insertion of the antenna is hidden.

4. Heteroptera The Heteroptera are now regarded as a suborder of the Hemiptera - as are Sternorrhyncha, Auchenorrhyncha, & Coleorrhyncha.

Characteristics of Heteroptera are the rostrum, positioned at the *front* of the head, which has a *distinct 'throat' (gula)*; details of the eye; & a frenum which can link the hind edge of the forewing to the scutellum. In addition, nymphs have 1-4 pairs of diagnostic scent glands, opening dorsally between abdominal segments 3-7, although scent glands on the adult thorax are not diagnostic.

The Heteroptera are now divided into seven infraorders with the name-ending 'morpha'). This concept originated in Leston, Pendergrast, & Southwood (*Nature*, **174**, 91-92, 1954). These authors introduced the terms Cimicomorpha & Pentatomomorpha to recognize natural groups within the 'Geocorisae' of older authors, which incorporated all terrestrial Heteroptera but had no unique characteristics.

The influence of the LPS'paper was profound, other authors adopted the infraorder concept and applied it to other taxa of Heteroptera (with spelling variants). More importantly, it spurred the attempt to document the higher taxa of the Heteroptera, with the eventual definition of 7 infra-orders as follows.

4.1 Enicocephalomorpha A little known group notable for its single-sex mating swarms. The head is divided into anterior & posterior lobes by a postocular constriction. The fore tibia is dilated & bears 1-2 clusters of bristles, and can be opposed by the 1 -2-segmented tarsus. The male genitalia are symmetrical & have paired genital plates. The female subgenital plate is formed by abdominal sternum 8, rather than 7 as in other Heteroptera.

4.2 Dipsocoromorpha These lack an accepted common name but might be referred to as 'litter bugs'. They have distinctive flagelliform antennae with segments 1 & 2 short (except in Stemmocryptidae); the male genitalia are asymmetric (except in some Ceratocombidae).

4.3 Gerromorpha Semiaquatic bugs which can live on the water surface. Diagnostics include 3-4 pairs of trichobothria on the head inserted in deep pits, and structures known as peg plates (or sieve pores) widely distributed on the body surface. The wings are not divided into leathery & membranous parts.

4.4 Nepomorpha These are true water bugs, and long recognized as a group. The reduced antennae, usually hidden, are diagnostic.

4.5 Leptopodomorpha The shore bugs were at one time classed as semiaquatic bugs. Distinctive features include a grasping device between abdominal segments 2 & 3 in males, used to hold the female's forewing during mating, and the reduced parempodia in most species.

4.6 Cimicomorpha This contains the two largest families of Heteroptera, the assassin bugs & plant bugs. Diagnostic characters are obscure: reduction of the median spermatheca to a non-functional state or vermiform gland; and the aeropyles & micropyles of eggs, arranged in a ring outside the operculum.

4.7 Pentatomomorpha Includes bark bugs, seed bugs, & shield bugs. These usually have pads (pulvilli) on the base of the claw, outgrowths from the wall of the midgut, and micropylar processes on the end of the egg. All except the Aradidae & Termitaphididae have 2+ trichobothria on several abdominal segments.

[For more definitive accounts, consult the PBI website and Bill Dolling's readable 1991 book *The Hemiptera (*out of print).]

SPECIES NOTES

MIRIDAE

Brachynotocoris puncticornis pre-dating 1st British record.

John Widgery, Bernard Nau

In February 2009 JW wrote to BSN explaining that whilst sorting his photographic slides he had come across a photo of a mirid which he now thought to be *Brachynotocoris puncticornis* (see below), which BSN confirmed.

The specimen had been collected 7 years earlier, on 27th August 2002. It was beaten from an Ash tree near the River Ash(!) at Easneye, near Ware, Hertfordshire (vc20, TL378137). After photographing the specimen he had unfortunately discarded it as of no particular significance. In fact this record predates the first published record of the species in Britain, taken from an Ash tree beside the River Great Ouse near Bedford (vc30) on 15th August 2006 (Nau & Brooke, *Ent. Mon.Mag*., **143**, 135-136,(2006). Thus the bug has now been found in the counties of Hertfordshire, Bedfordshire & Oxfordshire.

johnwidgery@waitrose.com

***Brachynotocoris puncticornis*, Easneye, Herts, 2002**

Chlamydatus evanescens at Newborough, Anglesey

Mike Howe & Dick Loxton

On 17th June 2008, Mike Howe (MAH) found several adults of the RDB3 *Chlamydatus evanescens* under White Stonecrop (*Sedum album*) growing in open, sandy conditions on Newborough Warren (vc52, Anglesey, SH387648). Subsequent searches here recorded small numbers of adults & nymphs, always under *S. album*, never associated with Biting Stonecrop (*Sedum acre*), equally abundant here. The authors found several adults at SH388655 on 15th July 2008, again under *S. album,* which grows in luxuriant stands on this part of the dunes. More than 300 nymphs were recorded here on 30th May 2009. Table 1 summarises the records.

C. evanescens has also been recorded from a site in Newborough Forest[2], and two areas in Newborough Warren NNR, indicating that the species is widespread on the site & likely to be found where there are stands of *S. album*. A single adult found under *S. album* in 2006 was noted as requiring confirmation as it evaded capture, but it is now considered to be *C. evanescens*.

Newborough Warren is the 4th locality in Wales to support extant populations of *C. evanescens*, with recent records from Little Ormes Head (vc49, SH813821), Graig Fawr (vc51, SJ059803)[1], & Barmouth Hillside (vc48, SH609172) (A. Fowles pers. comm.). Elsewhere it is only known from Dovedale (Derbyshire, vc57); Southbourne (vc10, S. Hants)[3]; & stonecrop roofs near Canary Wharf (S. Essex, vc18), where the hostplant had Polish origins.

Table 1 - Records of *C. evanescens* at Newborough Warren

Grid Ref	Date	Nos.	Recorders
SH425638	11 Jun 2006	1 adult	MAH
SH387648	17 Jun 2008	several adults	MAH
SH387648	13 Jul 2008	2 adults, several nymphs	MAH
SH387648	15 Jul 2008	several adults & nymphs	RGL, MAH
SH387648	30 May 2009	several nymphs	MAH
SH388655	15 Jul 2008	several adults	RGL, MAH
SH388655	30 May 2009	300+ nymphs	MAH
SH397653	2008	several adults	RGL
SH422629	4 Jun 09	1 nymph	MAH

References

1. **Foster, A.P. & Howe, M.A. 2005**. Modern records of *Chlamydatus evanescens* (Boheman, 1852) (Hem., Miridae) from Derbyshire & north Wales. *Ent. Mon. Mag.*, **141**: 111-112.
2. **Loxton, R.G. 2009**. Pitfall trapping & collecting of invertebrates at Newborough Forest & Newborough Warren NNR, 2007 & 2008. Report to Countryside Council for Wales & Forestry Commission Wales.
3. **Nau, B.S. & Brooke, S.E. 2006**. *Chlamydatus evanescens* (Boheman) (Hem., Miridae), on the south coast of England. *Ent. Mon. Mag.*, **142**: 40.

Acknowledgements

We thank the Countryside Council for Wales, & Forestry Commission Wales, for access to Newborough Warren & Newborough Forest.

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Macrotylus horvathi – spreading in London area

Tristan Bantock

I have found this bug widely in the London area this year during July & August; it seems well-established on large stands of Black Horehound (*Ballota nigra*) along the Thames, and northwards up the Lea Valley. I wonder whether it has been recorded outside the south-east?

[In September 2009 I found a ♂ in Flitton, Beds. - BSN]

***Hallodapus montandoni* macropter in Surrey (vc17)**

I took a specimen of the scarce macropterous form of this ant mimic on 12th June 2009, & a brachypter on 13th August 2009, at Merstham, Quarry Hangers SSSI (TQ3153); they were confirmed by Bernard Nau. This species is believed to be new to Surrey. The bugs were suction sampled from rabbit grazed turf on south facing chalk downland, the ant *Myrmica scabrinodis* Nylander was present in the sample.

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Figure 1 - Two wing-forms of *Hallodapus montandoni*

ANTHOCORIDAE

Buchananiella continua

Keith Alexander

Recently, I thought I might be overlooking this species, so I went through all of my '*Cardiastethus*' very carefully and .... surprise surprise... there they were! Specimens from Monmouthshire (**vc35**) in 2005 & 2008, my 2008 specimens from Belton Park in S. Lincolnshire (**vc53**, SK9239)and 2008 specimens from Dunham Park in Cheshire (**vc58,** SJ7487), all proved to be *Buchananiella continua*!

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[Has anyone else got these lurking in their collection? - Ed.]

LYGAEIDAE

Nysius huttoni

***N. huttoni* spreading**

Jerry Bowdrey

On 19th July 2009 several *N. huttoni* were found at a partly infilled gravel pit at Thorpe-le-Soken (**N Essex,vc19**, TM1921). Nigel Cuming kindly confirmed the identity. It is the first known occurrence in Essex since its discovery in Britain in East Suffolk in September 2007 (Cuming,N., 2008, *Het News* **10**,p11).

RHOPALIDAE

Inland *Corizus hyoscyami* - update
(vc 17, 19, 23, 24, 32, 33)

A few more records of this species have turned up since the influx of inland records in 2006-2007:-

Tristan Bantock: found singles at Ash Ranges (**Surrey, vc17)**, SU897535) on 20th & 27th August 2009; and at Warburg NR, Nettlebed (**Oxfordshire ,vc23**),SU715879) on 17th August 2009.

Jerry Bowdrey: reports seeing one on 7th September 2008 at High Woods, Colchester (**N Essex, vc19**, TM0027), in an area of tall, mixed herbaceous vegetation. Being without entomological equipment, an attempt to capture it failed dismally he says! This year a second Colchester example was kindly donated to Colchester Museum by Maria Fremlin, she found it in her garden (TL986244) on 20th September 2009.

Rob Ryan: reports three records (all in **Oxfordshire, vc23**): one on 2nd August 2007 at Spartum Fen SSSI, Latchford (SP654015)by sweeping a pond edge; two in Whitecross Green Wood (SP601146), on 15th August & 30th August 2008 respectively, by sweeping a ride.

John Tyler: sent a photo of one collected while beating Juniper at Windsor Hill NR, Princes Risborough (**vc24, Bucks**, SP827026) on 16th March 2009 - very early in the season!

Tony White: found one in his garden at Byfield (**Northants, vc32**, SP516529) on 26th August 2009 whilst deadheading border plants , he noticed it scurrying around on a collecting-sheet & checked its identity via S&L(1959).

John Widgery: wrote saying that *Corizus hyoscyami* had turned up on 24th April 2009 about 5km N of Cheltenham, at Gotherington (**vc33, E Gloucestershire**, SO9629) - exactly the same spot where he saw it in 2007 so not a new site. As none found here last year perhaps it bodes well for this year.....or is that just wishful thinking?

BSN

COREIDAE

***Gonocerus acuteangulatus* reaches Bedfordshire (vc30)**

Sheila Brooke

During a butterfly survey on 31st July 2009, at Totternhoe Quarry, a disused chalk quarry & Wildlife Trust Reserve in Bedfordshire (vc30), my WT colleagues spotted a bug on a Buckthorn bush (*Rhamnus cathartica*) & called me over. It was *Gonocerus acuteangulatus,* the first for Beds (vc30)!

About 1990 *Gonocerus* began to spread across SE England from Box Hill (Surrey). Recently it has been spreading NE along the Chiltern Hills & reached the Wendover area about 2005 (M. Harvey, *Ent.Rec.*,**118**, p144) (Bucks, vc24) & seemed likely to reach Bedfordshire soon. It has now arrived and although we only saw one adult there were numbers of nymphs & eggs.

The eggs are beautiful golden spheres, laid usually two per leaf - sometimes more (Fig.2). They were not recognised at the time as *Gonocerus* eggs but I took a leaf home hoping something would emerge. To my surprise & delight two

Figure 2 - Eggs of *G. acuteangulatus*, on *Frangula*.

Figure 3 - 4th instar *G. acuteangulatus*, on *Frangula*.

small *Gonocerus* nymphs appeared within a few days. Unforunately, despite offering a range of tempting leaves & fruits, they did not survive beyond the second instar.

I returned on 8th August with BSN and there were eggs & numerous nymphs on the original Buckthorn (Fig.3) but we failed to find any on the few Buckthorn elsewhere on the site. The bug is also known to enjoy Hawthorn & Rose, but searches of these proved negative too.

Unsuccessful searches at other apparently suitable sites in the area were made in ensuing weeks.

However, on 22nd August, during a Bucks Invertebrate Group field meeting near Ivinghoe Beacon in Bucks (vc24), we came across a Box thicket (*Buxus sempervirens*) & on one of the bushes were large numbers of *Gonocerus* nymphs of varying ages. This was only a few km from the Beds border & within sight of the Totternhoe site! I am sure these were not the only two bushes with *Gonocerus* in our area so maybe in 2010 it will be more conspicuous in Beds.

Leptoglossus occidentalis influx & breeding

Tristan Bantock & Bernard Nau

TB: As I write in late September 2009, records of this distinctive bug are once more arriving thick & fast from many parts of the UK. As in autumn 2008, the vast majority are from the S of England & refer to adults apparently making landfall after crossing the English Channel. Multiples have again been taken in moth traps in the Dungeness/Romney Marsh area & Portland Bill. A wide scatter of individuals have been found by day at sites on the S coast, as well as the coast of East Anglia. There have also been numerous reports from inland sites. Significantly, several of these (Norfolk, Notts & Northants) have been in proximity to mature pines and suggestive of established breeding populations. Surely this spectacular bug is now here to stay.

BSN: Chris Malumphy is collating records & doubtless there will be a sequel to the account in *Het News* **12** , he would welcome additional records.

There was a particularly significant record recently. David Biggs sent me a photo (see below) taken by Dave Dana on 26th Oct. 2009 at Wroxall, **Isle of Wight** (**vc10**, SZ551802). It shows a 5th instar nymph found on DD's kitchen door. Probably the first direct evidence of breeding in Britain.

The scarcity of records of nymphs is almost certainly due to observer bias. Many, even most, of the records of adults are from non-heteropterists, few of whom would be likely to closely examine the foliage of likely coniferous hosts. Clearly there is scope here for enthusiastic heteropterists!

Figure 4 - 5th instar *L. occidentalis,* from Isle of Wight

East coast cluster of *Leptoglossus* records

Jerry Bowdrey

On 2nd Sep. 2009 Colchester Museum were contacted by the Borough Tree Inspector, a colleague had noticed what proved to be ***L. occidentalis,*** on a second floor office window in Colchester (**N Essex, vc19**, TL9925). We then heard of one seen the day before at Felixstowe (**E Suffolk, vc25**, TM23). But imagine our surprise when we found one in our entomological store at High Street Ipswich Museum! On showing this to Martin Sanford (Suffolk Biological Records Centre) he produced details of another in Felixstowe the previous year! A request for records was then circulated and produced several records from southern England, one in Norfolk & several in Suffolk. The list of Suffolk records is now as follows:

Felixstowe: 22nd Oct. 2008, plastic bin at factory. Found J. Zantboer, det. M.Sanford from photo.
Felixstowe: 1st Sep. 2009, Hamilton Road (TM304348), on pavement, collected S.Wise, det. R.Ruffell.
Ipswich: 8th Sep. 2009, High St Museum (TM160449), 1♂ in entomology store, found JPB & Jayne Austin (Collns. Mgr), det.JPB.
Dunwich Forest: 19th Sep.2009, R.Parker, SNH Yahoo Gp posting)
Minsmere: 20th Sep.2009, det. M.Sanford from photo.
Bramford: 10th Oct. 2009, P.Wilkins indoors (SNH Yahoo Gp).
Felixstowe: 12th Oct. 2009, Victoria St., found & det. J.Brinkley, indoors on bedroom window, per M.Sanford.

[The Suffolk, & Colchester, records are within 30-40km of Britain's largest container port, at Felixstowe; & three are very close. Perhaps they had an assisted passage! BSN]

PENTATOMIDAE

Nezara viridula still breeding in Staines (Middlesex, vc21)

Bernard Nau & Alan Diver

AD sent BSN a photo of a 3rd instar nymph of this recent colonist, taken on 20th August 2009; it was one of 20 or so nymphs, mostly smaller, on Runner Beans in his garden, where *Nezara* has been present for several years now.

AROUND THE BRITISH ISLES

South Hampshire vc11

Jason Claxton

Some records from Southampton area

LYGAEIDAE

Aphanus rolandri One on a relic of heathland at Lords Wood, Rownhams (SU400171) on 13th May 2009.

Rhyparochromus pini At Lords Wood, nr Southampton, (SU39958 17141)8th September 2009.

RHOPALIDAE

Liorhyssus hyalinus One on sandy bare ground, at Nursling Substation (SU36089 11579) 24th August 2009.

COREIDAE

Ceraleptus lividus I was suprised to find a specimen of this on the flowers of Hemlock Water-dropwort (*Oenanthe crocata*), at Rownhams Wood on 4th of June 2007.

Spathocera dahlmannii One ascending Sheep's Sorrel (*Rumex acetosella*) at Lords Wood on 15th June 2009.

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Surrey.. ..... vc17

Tristan Bantock

Megalonotus dilatatus: One at Oxshott Heath (TQ140611) on 1st July. 2009.

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Scotty Dodd

Some noteworthy Heteroptera from Surrey

VELIIDAE

Microvelia pygmaea: Rare in Surrey, but possibly under-recorded due to small size [2]. Netted amongst marginal vegetation & litter at Glovers Pond, Chobham Common NNR (SU9764) on 21st April 2009.

MIRIDAE

Deraeocoris olivaceus: Beaten from *Crataegus monogyna* scrub on chalk downland at Hackhurst Down (TQ0948) on 25th June 2009.

COREIDAE

Bathysolen nubilus: Swept with ***Coriomeris denticulatus*** from a ruderal area of ground rich in leguminaceous ground cover adjoining abandoned sports courts at Ewell, Priest Hill (TQ2361) on 2nd July 2009. Adults & nymphs present. Appears to be 2nd record for Surrey (Denton, & Hawkins, pers. comm.).

Leptoglossus occidentalis: Recorded by Miss Fiona Haynes (det. SD) in a tool store at Surrey Wildlife Trust HQ, Pirbright (SU9456) on 30th October 2009.

References:

(1) Denton, J.S., 2001. *Ent. Mon. Mag.*, **137**: 231-232.
(2) .. , 2007. *Water Bugs & Water Beetles of Surrey.* Surrey Wildlife Trust.
(3) Hawkins, R.D., 2003. Shieldbugs of Surrey. Surrey Wildlife Trust.

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S Essex vc18

Tristan Bantock

Megalonotus antennatus: One at Gunpowder Park , Waltham Abbey (TQ381991) on 11th May 2009.

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Herts vc20

Tristan Bantock

Raglius alboacuminatus: Two under Ballota at King's Mead, Ware (TL354140) on 25th August (as per BSN in 2005).

M. praetextatus: Several under Erodium at Waterford GP (TL 318150) on 9th May

Peritrechus lundii: Abundant at Waterford GP (TL 318150) and Frogmore GP (TL143027) on 9th May 2009.

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Oxfordshire vc23

John Campbell

Two interesting records from the county

Gonocerus acuteangulatus: This year I found this species new to VC23, there were several on two Box bushes in Burford churchyard (SP21).

Calocoris alpestris: I found 4th instar nymphs nr Westwell (SP20) this year, the 4th record for the vice county. We are getting a nice western band of records in the county for this 'Cotswold species'.

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Gloucestershire, East & West .....vc33 & 34

John Widgery

Gloucestershire news, 2008

The cumulative effect of two successive cool, wet summers had a marked impact on warmth-loving species, especially those expanding their range northwards due to the, hitherto, warming climate. This particularly applied to the Bishop's Mitre Shieldbug, ***Aelia acuminata***, and the rhopalids ***Stictopleurus abutilon***, ***S. punctatonervosus*** & ***Corizus hyoscyami*** which despite searches could not be found at all during 2008. If current majority scientific opinion is correct this is probably a temporary blip, it will be interesting to see how the situation develops. This clearly demonstrates however just how climate-sensitive some species are. However, it turned out to be an interesting year, producing four new species for the administrative county although at least some of these have probably been overlooked previously.

New species for admin Gloucestershire

MIRIDAE

Agnocoris reclairei: One beaten from White Willow (*Salix alba*), its principal host, at Coombe Hill Canal NR (vc33, SO8827)on 24 August 2008.

Capsus wagneri: Several were swept from Reed Canary Grass (*Phalaris arundinacea*) at Ashleworth Ham NR (vc34, SO8026) on 15 August 2008.

Pilophorus cinnamopterus: Generally common on Scots Pine (*Pinus sylvestris*) in southern England but, surprisingly, no records from Gloucestershire until 15th August 2008 when found on this host at Foscombe Hill, Ashleworth (vc34, SO8026). It is for conjecture whether it has been overlooked previously or is a recent arrival. S&L(1959) give it as present south of a line between The Wash & Glamorgan, so Gloucestershire may always have been near the edge of its range.

ANTHOCORIDAE

Buchananiella continua: First Gloucestershire record,15th August 2008 on dead twigs at Ashleworth (vc34, SO8126); on 9th October it was found at Woodmancote (vc33, SO9727), in a bird feeder containing rotting peanuts.

County rare or scarce species

MIRIDAE

Capsodes gothicus: This very local insect was found at Staple Edge Wood (vc34, SO6411) on 12th July 2008; all Gloucestershire records so far are from the Forest of Dean. This is the 6th for the county.

Teratocoris antennatus: A male was found at Coombe Hill Meadows NR (vc33, SO8727) on15th August which was only the third modern record for Gloucestershire. It was also refound later the same month at the only previously known site in the county, Ashleworth Ham NR (vc34, SO8326), when two females were swept from Reed Canary Grass (*Phalaris arundinacea*).

Megalocoleus molliculus: The sixth Gloucestershire record, found near Woodmancote (vc33, SO9727) on 14th August when it was swept from Mugwort (*Artemisia vulgaris*). Yarrow (*Achillea millefolium*), its usual host, growing nearby.

Oncotylus viridiflavus: Found again this year on Common Knapweed (*Centaurea nigra*) its food plant, near Wickridge Street (vc34, SO8126) on 15 August – 5th county record.

ANTHOCORIDAE

Elatophilus nigricornis: Following a county first for this species in 2007 at May Hill (vc34, SO6921), in 2008 it was found again,on its host Scots Pine (*Pinus sylvestris*) near Wickridge Street (vc34, SO8027) on 15th August.

LYGAEIDAE

Heterogaster artemesiae: Following its rediscovery in the county on Cleeve Hill (vc33, SO9825) in 2006, after a gap of over 60 years, it was found again in good numbers at the same site on 13th July 2008. It was formerly recorded at Rodborough Common in 1944 and is probably still there and may well be widespread throughout the Cotswolds.

SCUTELLERIDAE

Eurygaster testudinaria: Previously regarded as county scarce but this status is no longer justified. It is now quite widespread in both vice-counties, being found at 19 sites since 2004 & collected at a further three in 2008.

PENTATOMIDAE

Eurydema oleracea: The 6th modern county record of the Crucifer Shieldbug was obtained at Ley Park Wood (vc34, SO7117) on 13th April.

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Worcestershire vc37

Mike Bloxham

Northerly record of *Miridius*

MIRIDAE:

Miridius quadrivirgatus: Whilst surveying an area of wasteland in Warley Woods, (northern Worcestershire, SP010 862) in warm sultry overcast conditions, I swept a small wildflower area and on examination of assorted debris in the net, noticed a *Stenodema*-like bug, 9-10mm body length (see photo). It keyed out as *M. quadrivirgatus* when using S&L but the pronotal collar character is far from clear and only by elimination did I come to the conclusion it ought to be this species.

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Miridius quadrivirgatus from Worcestershire.
(©2009 Mike Bloxham)

Shropshire ..... VC 40

Scotty Dodd

Northernmost vice-county record of *Miridius?*

MIRIDAE

Miridius quadrivirgatus: Several swept from an un-grazed area of rank grassland at Preston Montford Field Centre (SJ4314), on 10th July 2009. Apparently a northern extesion of the species' range since it was reported in Warwickshire (VC 38) a few years ago (Nau, pers. comm.).

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Merionethshire vc48

Tristan Bantock

MIRIDAE

Globiceps fulvicollis: Quite numerous on creeping willow at Morfa Harlech (SH572313) on July 17th 2009.

COREIDAE

Liorhyssus hyalinus: Found abundantly (10+) at Morfa Dyffryn (SH577224) on 5th June 2009 in an area of dune grassland dominated by sorrel. A further individual swept from creeping willow at Morfa Harlech (SH572313) on 6th June.

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Denbighshire vc50

[Eds.]

GERRIDAE

Aquarius najas: [*Correction*: **HN13**, p11, gave the date of the 200 *A. najas* as 14th April 2008, it was actually 14th September 2008. Our apologies for this editorial error.]

N Lincolnshire vc54

Michael Talbot

ANTHOCORIDAE

Dufouriellus ater: Specimens under bark of a London Plane tree (Platanus xhispanica) within the City of Lincoln.

Xylocoris cursitans: Found under the bark of a decaying oak (*Quercus* sp.), within the City of Lincoln.

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SW Yorkshire(& Derbyshire) .....vc63 (& vc57)

Jim Flanagan

2009 records from admin. county of S. Yorkshire

MIRIDAE:

Charagochilus gyllenhalii: recorded from acid grassland at Black Moor Nature Reserve to the southwest of Sheffield (vc57, SK2880); new to admin South Yorkshire.

Conostethus roseus: nationally scarce, found by John Coldwell on a sloping bank of dry soils on which fine grasses, clovers and trefoils grew at the Manvers site (SE4601), Barnsley in June. There are currently very few records for Yorkshire).

Oncotylus viridiflavus: has continued to turn up in several sites around Barnsley and north Sheffield showing it to be well established since its first discovery in Yorkshire from the Rotherham area (Ickles) by Bill Ely in 2006.

Psallodema fieberi: much under-recorded, only a handful of records for Yorkshire, it was beaten from its usual host plant Wych Elm *(Ulmus glabra)* at Barrow Pit near Barnsley (SE3502).

RHOPALIDAE:

Chorosoma schillingi: Inland records continue to be made in new sites around Barnsley.

Rhopalus subrufus: There was a further record of from a new site (Stocksbridge, SK29) in South Yorkshire.

Stictopleurus punctatonervosus: was again recorded from the Manvers site (SE4501 & SE4601), Barnsley (new to Yorkshire in 2008 from two sites in South Yorkshire).

PENTATOMIDAE:

Neottiglossa pusillus: Continued to be recorded widely from old & new sites (especially in the Barnsley area).

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Durham..... vc66

Martin Hammond

Notonecta maculata spreading northwards

NOTONECTIDAE

Notonecta maculata: Present in two ponds at Darlington water works. It appears to be new to vc66 and the most northerly record E of the Pennines. I notice on the NBN Gateway there is a record further north on the west coast. It's a species I've been expecting to appear in the Tees lowlands for a few years.

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BRC RECORDING SCHEMES

Vice County #	Vice County name	Contact	Contact address
VC 1 & 2	W (inc. Scilly) & ECornwall	Keith Alexander	keith.alexander@waitrose.com
VC 3 & 4	S & N Devon	Keith Alexander	keith.alexander@waitrose.com
VC 9	Dorset	Ian Cross	I.Cross@dorsetcc.gov.uk
VC 10	Isle of Wight	David Biggs	Plum Tree Cottage, 76 Albert Rd,Gurnard, Cowes, Isle of Wight PO31 8JU
VC 11 & 12	S & N Hampshire	Jonty Denton	JontyDenton@aol.com
VC 13 & 14	W & E Sussex	Peter Hodge	peter.j.hodge@tesco.net
VC 15 & 16	E & W Kent	Eric Philp	eric.philp2@virgin.net
VC16-21,& 24	London Nat Hist Soc Area	Tristan Bantock	tristanba@googlemail.com
VC 17	Surrey	Jonty Denton	JontyDenton@aol.com
VC 18 & 19	S & N Essex	Peter Kirby	peter.kirby7@ntlworld.com
VC 20	Hertfordshire	John Widgery	johnwidgery@waitrose.com
VC 23 (& 22pt)	Oxfordshire**	John Campbell	campbell397@btinternet.com
VC 25 & 26	E & W Suffolk (water bugs)	Adrian Chalkley	adrian@boxvalley.co.uk
,,	E & W Suffolk (land bugs)	Nigel Cuming	nigelcuming330@btopenworld.com
VC 30	Bedfordshire*	Bernard Nau	nauhet@btinternet.com
VC 32	Northamptonshire	Tony Cook	tony.cook@newtonfieldcentre.org.uk
VC 33 & 34	E & W Gloucestershire	John Widgery	johnwidgery@waitrose.com
VC 37	Worcestershire*	John Partridge	records@wbrc.org.uk
VC 53 & 54	S & N Lincolnshire* (shieldbugs & allies)	Annette Binding	allan.binding@ntlworld.com (also spiders)
..	.. (other land bugs)	Colin Smith	Csmith@countrywidefarmers.co.uk
..	.. (water bugs)	Richard Chadd	richard.chadd@environment-agency.gov.uk
VC 55	Leics & Rutland	David Budworth	dbud01@aol.com
VC 56	Nottinghamshire	David Budworth	dbud01@aol.com
VC 57	Derbyshire	David Budworth	dbud01@aol.com
VC 58	Cheshire	Steve Judd	Steve.Judd@liverpoolmuseums.org.uk
VC 59 & 60	S & W Lancashire	Steve Judd	Steve.Judd@liverpoolmuseums.org.uk
VC 61 & 62	SE & NE Yorkshire	Stuart Foster	stuart@blackdan6.plus.com
VC 63	SW Yorkshire	Jim Flanagan	jimflanagan@btopenworld.com
VS 64	Mid-W Yorkshire	Stuart Foster	stuart@blackdan6.plus.com
VC 65	NW Yorkshire	Steve Hewitt	SteveH@carlisle-city.gov.uk
(—)	Cumbria*	Steve Hewitt	SteveH@carlisle-city.gov.uk
VC 69	Westmorland	Steve Hewitt	SteveH@carlisle-city.gov.uk
VC 70	Cumberland	Steve Hewitt	SteveH@carlisle-city.gov.uk
(—)	Ireland (all)	Brian Nelson	brian.nelson@magni.org.uk

* records from administrative county too. **not Berks admin. county
Recorders listed above are either the designated County Recorder, or an acting recorder who accepts records for the county.

Organisers of the UK Heteroptera Recording Schemes
Water Bugs : Sheila Brooke … brooke.aquahet@btopenworld.com
Land Bugs : Bernard Nau … nauhet@btinternet.com

Guidelines for Submitting Records

Preferably submit records as a spreadsheet file (e.g. Excel), with the following 7 essential columns:

1-species name| 2-date (dd/mm/yyyy)| 3-site name|
4-grid ref(XX######)| 5-VC| 6-recorder| 7-determiner|

Optional additional columns can be dedicated to:
admin region | abundance | age | sex | habitat | …etc.

Alternatively: use a word processor document with *tabs set to match the above column arrangement*. Enter records one per row, then save the document as an rtf or a tab-delimited-text file.

Organisers check for errors or omissions, & ensure that formatting meets requirements of the BRC/NBN data management systems -but this can be extremely time-consuming if you have not followed the guidelines.