Het News

Newsletter of the UK Heteroptera Recording Schemes

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2nd Series

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Editorial: Yet again we can report bug species new to the British Isles, and document the spread of others! Our *HetNews* website has had some additions to its 'Additional Downloads' page and to 'Links', we hope these will be useful. Our internet newsgroup continues to flourish too. More details of both below. BSN's annual compilation of het literature appears in this isssue with a couple of new features. One is a cosmetic change, more use of colour to make it easier on the eye. The other is a supplement which lists the publications of Hannes Günther. We hope to continue this feature in future issues If other authors will provide us with their het publications life-list in similar format.

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Internet Update

Web site: hetnews.org.uk

The 'Additional Downloads' page has had three more downloadable pdf files added, these are:

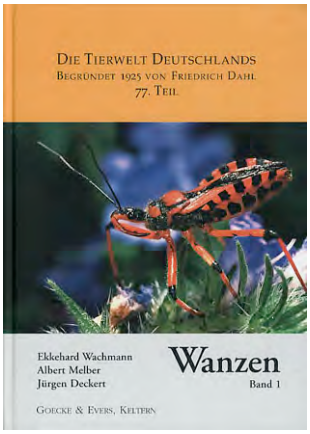
- A list of the changes to the nomenclature used in Southwood & Leston (1959). This includes changes of spelling of generic and/or specific name; and species added, deleted or split since 1959. The updated nomenclature is that of the recently published *Catalogue of the Palaearctic Heteroptera* (eds.Aukema & Rieger).
- A high resolution version of Robert Angus's paper in Het News **7**: "*Corixa iberica* in Scotland & Spain." This shows more clearly the detail in the many micrographs.
- The contents lists of recent issues of the twice yearly German heteropterists' newsletter "*Heteropteron*". Those included are the issues from December 2004 onwards. The language is usually German.

News group: hets@yahoogroups.com

This continues to flourish, particularly the steady stream of bug photos, usually taken in the field & with a request for identification - most requests seem to be resolved very rapidly. These photos are sometimes of more lasting interest, showing unusual aspects of habitat, behaviour or variation. We plan to place a selection of these on the *HetNews* website for more permanent reference. The newsgroup also proved its worth when, earlier this autumn, BSN requested details of *Corizus* sightings. It rapidly produced several dozen responses.

RECENT PUBLICATIONS

Book review: ***Wanzen 1*** **by E. Wachmann, A. Melber, & J. Deckert**
Die Tierwelt Deutschlands 77**,** 2006, published by Goecke & Evers, Keltern, Germany
ISBN 3-931374-49-1, 245x175mm, 263pp, 209 colour photographs, hardback, £42. (In German)



This, volume 1, is the *second* to be published in this beautifully illustrated 4-part series presenting the Heteroptera of Germany. This volume deals with the families preceding the Miridae in the Palaearctic Catalogue sequence (except for the Microphysidae, which are in volume2). The families included are Ceratocombidae & Dipsocoridae, all the aquatic & saldid families, the Tingidae, Nabidae, Anthocoridae, Cimicidae, and Reduviidae.

Volume 2 was published in 2004 (& reviewed previously). The present volume follows the pattern established in the earlier volume: each of the 309 species has a text account, typically three paragraphs. The first gives length, world distribution, and status in Germany & Austria; another gives details of habitat & food; and the last gives information on season and overwintering.

The nomenclature is that of the *Catalogue of Palaearctic Heteroptera*. About two-thirds of the species have a colour photo depicting a live adult in a natural setting, and for some species there are extra photos showing variants and/or nymphst. Most show the insect on a leaf, flower, or natural-looking substrate. As in the earlier volume an appendix gives dates and localities for the bugs photographed.

From the point of view of a reader in the British Isles, I found the photographs in this volume particularly useful, as they include a considerable number of species neither illustrated, nor described, in Southwood & Leston (1959).

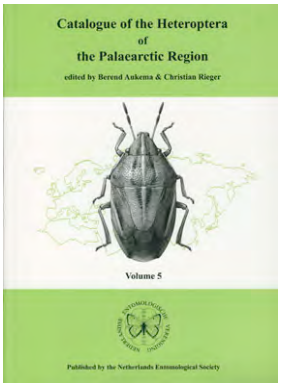
As pointed out in the earlier review, there are neither keys nor species descriptions in this series.

Volumes 3 & 4 are still in preparation, Volume 3 will cover the rest of the species and volume 4 will provide supplementary material.

As stated previously, for the reader in the British Isles this is not a book for the beginner, unless with a working knowledge of German, but for the heteropterist already in possession of the standard works it could be a useful, but quite expensive, addition to the bookshelf.

BSN

Book review: ***Catalogue of the Heteroptera of the Palaearctic Region*****. Vol.5**
Berend Aukema & Christian Rieger (eds)
In English, size 240x170mm, soft cover, UK price approx.£60 per volume.
Published by the Netherlands Entomological Society,
c/o Plantage Middenlaan 64, NL-1018 DH Amsterdam, The Netherlands.



At the opening session of the International Heteropterist's Society symposium, on 18th July 2006, the fifth and final volume of the PalCat was introduced to the assembled heteropterists of the world. The preparation of this work was clearly a mammoth undertaking, as can be seen from the statistics in Table 1: five volumes comprising 1691 pages, detailing the taxonomy of 8571 species of Heteroptera.

This had been an 18-year project. Exploratory discussions took place in 1988, and work began in earnest two years later, under the editorship of Berend Aukema and Christian Rieger, and with the promise of support for publication from NEV (Nederlandse Entomologische Vereniging). Most entomologists, even most heteropterists, are unlikely to consult this work but, for those who do, its value will be inestimable. It provides a definitive source of information for consultation whenever the names or relationships of het species are in doubt, or causing confusion – which happens more often than one might expect! I thought, therefore, that it would be useful to attempt to present an idea of what is to be found in these volumes. First, it might be as well to explain the geographical coverage, in particular what is meant here by the 'Palaearctic Region'. The western limit is defined by Iceland, the British Isles, the Canary Islands and Azores. Eastwards it extends to the east coast of Russia and China, and includes Japan and the Korean peninsula. Northwards it extends to the arctic coast of Eurasia, plus the offshore island groups to the north. The southern limit is more complex. At its southern perimeter the region includes N Africa (Morocco, Algeria, Tunisia & Egypt), the Arabian Peninsula, Iran, Asia north of the Himalayas, and China.

The bulk of these volumes is taken up by the treatments of individual species. Take as an example that for one of the commonest water boatmen in the British Isles, *Sigara dorsalis* (Leach, 1817). Beneath this definitive name is given details of the type specimen and where it is held. It is a male from Esthwaite Lake, in Cumbria, in the collection of the

Natural History Museum in London. It states that this was designated as the type in a 1978 paper by Macan & Leston. Below this are listed two invalid names that have been used for this species in the past, and the reasons for being invalid are given. Then the Palaearctic distribution of *S. dorsalis* is given (by country) as a list of 2-letter country abbreviations, eight countries in the present case. Finally, there are one or two literature references of particular significance for this species.

As can be seen from Table 1, the list of literature references at the end of each volume is a major resource, running to 50+ pages in each.

Another useful feature is that at the beginning of each infraorder and each family there is a paragraph or two of background information. For example, this may include the number of genera and species therein, their global distribution, notes on typical habitats, life cycle, and other items of interest applicable to the species in that group, together with relevant literature references.

In the introductory sections of each volume too, there is a concise guide to important literature on Heteroptera. This is grouped under headings such as: general works, bibliographies, biology, economic aspects, taxonomy, collections, and regional faunas and species lists.

BSN

Table 1 - Details of the Palaearctic Catalogue

Vol.	Published	ISBN	pp	refs (pp)	Higher taxa	Families	Spp listed	Authors
1	April 1995	90-71912-12-4	222	57	**Enicocephalomorpha**		16	I.M.Kerzhner
					Dipsocoromorpha		34	I.M.Kerzhner
					Nepomorpha		274	J.T.Polhemus, A.Jansson, E.Kanyukova
					Gerromorpha		210	N.M.Anderson
					Leptopodomorpha		113	P.Lindskog
2	Oct.1996	90-71912-15-9	359	52	**Cimicomorpha I**			
						Joppeicidae	1	I.M.Kerzhner
						Tingidae	473	J.Péricart, V.B.Golub
						Microphysidae	27	J.Péricart
						Nabidae	112	I.M.Kerzhner
						Anthocoridae	181	J.Péricart
						Cimicidae	15	J.Péricart
						Polyctenidae	3	I.M.Kerzhner
						Pachynomidae	2	P.V.Putshkov
						Reduviidae	808	P.V.& V.G.Putshkov
3	June 1999	90-21912-19-1	222	70	**Cimicomorpha II**			
						Miridae	2808	I.M.Kerzhner, M.Josifov
4	Sep.2001	90-21912-21-3	346	52	**Pentatomomorpha I**			
						Aradidae	204	E.Heiss
						Lygaeidae	1001	J.Péricart
						Piesmatidae	19	E.Heiss, J.Péricart
						Malcidae	25	I.M.Kerzhner
						Berytidae	54	J.Péricart
						Colobathristidae	7	I.M.Kerzhner
						Largidae	8	I.M.Kerzhner
						Pyrrhocoridae	43	I.M.Kerzhner
5	July 2006	90-21912-28-0	550	80	**Pentatomomorpha II**			
						Stenocephalidae	18	W.R.Dolling
						Rhopalidae	69	W.R.Dolling
						Alydidae	69	W.R.Dolling
						Coreidae	306	W.R.Dolling
						Urostylididae	131	D.A.Rider
						Thaumastellidae	1	J.A.Lis
						Parasttrachiidae	2	J.A.Lis
						Cydnidae	167	J.A.Lis
						Thyreocoridae	4	J.A.Lis
						Plataspidae	104	J.Davidová-Vilímová
						Acanthosomatidae	107	U.Göllner-Scheiding
						Tessaratomidae	30	D.A.Rider
						Scutelleridae	156	U.Göllner-Scheiding
						Dinidoridae	19	J.A.Lis
						Pentatomidae	841	D.A.Rider
Total pages: 1691						**Total species: 8571**		**Authors: 19**

ARTICLES

The IHS 3rd Quadrennial Symposium, Wageningen 2006.....Bernard Nau

In July 2006, 82 members of the International Heteropterists' Society travelled from 30 countries around the world to Wageningen, in The Netherlands, to participate in the 3rd Quadrennial Meeting of the IHS.

Most of us arrived on Monday 17th and dispersed on Saturday 22nd. In between, we spent two very full days in conference sessions (35 papers), one day perusing major collections of Heteroptera (Amsterdam, Leiden & Wageningen), an evening enjoying the conference dinner on and beside the Rhine, and a day in the field at the De Hoge Veluwe national park – a large area of superb breckland habitat. On Saturday there was an optional field trip to a very nice, rather large heath called Laag Wolfheze, just a short drive from Wageningen.

The photograph above shows the assembled delegates. In the shadows at top right is Berend Aukema who orchestrated the event in impeccable fashion. Beside him is the incoming President of IHS, Ernst Heiss from Austria, and the lady at bottom right is the outgoing president, Jocelia Grazia from Brazil. Somewhere in the middle are three heavily outnumbered Brits – Roger Hawkins, Sheila Brooke and myself. Scattered among the assembled heteropterists are enough 'big names' to stock a library! More surprising was the considerable number of young heteropterists, quite a few of whom authored papers.

My over-riding memory of the formal sessions is of the number of cladograms! Taxonomic family trees. Taxonomists all now seem to have statistics software which they feed with a large set of data, 50-100 bug characteristics, say, then the software carries out a multivariate correlation analysis to predict which species and/or genera and/or higher taxa are most closely related. Stand by for more changes of nomenclature and checklist sequences!

But there were papers on other subjects too. One down to earth paper that caught my attention presented results of a study using flight-interception traps to establish the variation of bug numbers and species, with height, in a forest canopy in southern Germany. There were several papers concerned with bug hemelytra, one a study of wing loadings, two others concerned with their evolution. Then again, several papers presented results from an international consortium project on mirids and their hosts, and there was a related paper on work at the American Museum of Natural History to produce an on-line catalogue of mirids. Delegates were provided with a set of printed abstracts of the presentations, but not the full-length papers.

We may sometimes think that we have identification problems in the British Isles, but a South African and an Australian put this into perspective. In South Africa it is thought that barely 10% of the heteropterous fauna is known, there is one heteropterist and he is not primarily a heteropterist. Australlia is little better. Both authors said that a few days in the field in their respective countries is likely to produce species new to science!

Coffee breaks were an opportunity to get to know other heteropterists or browse around the many impressive poster displays – mostly glossy A0 size posters, putting our puny A4 efforts in the shade. Nevertheless it was interesting to see what they are doing in other parts of the world, and especially what our near neighbours in western Europe are doing.

One short session was devoted to IHS business, especially deciding the venue for the next meeting. This is to be hosted by the Entomological Laboratory of Nankai University, Tianjin, China, in 2010.

IHS Symposium field trips – a British view. ..... Sheila Brooke

The delegates' principal field visit was to The National Park De Hoge Veluwe, one of the largest and oldest in the Netherlands, with over 5000 hectares of breckland, heath, woodland, lakes and drifting sand, the latter habitat being particularly interesting. The preferred mode of transport was the white bicycle, provided free, and we set off in all directions in sweltering heat (30C+), with our nets and lunch attached to the rear, spring-loaded carrier racks we remember so well from our youth.

We (BSN & SEB) found the dry grassy areas teeming with bug life and they provided us with several highlights: *Aelia klugii* - smaller and more strongly marked than our *A. acuminata*, and without the black spots on the mid and hind femora *Trigonotylus pulchellum* – smaller than *T. ruficornis* and with distinct reddish longitudinal markings.

Amblytylus albidus – an aptly named, very pale *Amblytylus*, rather more elongate than *A. nasutus* & *A. delicatus*, and with 2 longitudinal brownish streaks on the pronotum & hemelytra. The preceding were all found in good numbers, as was *Sciocoris cursitans. Xanthochilus quadratus*, a Jersey species and close relative of *Raglius alboacuminatus*, was less common – it is a striking lygaeid with cream margins at the base and sides of the pronotum.

In heather patches we found an interesting lygaeid of a genus unknown in Britain, *Geocoris grylloides*, a small black shiny bug with bulging eyes and cream edges to corium and pronotum, our 'bug of the day'!

It was impossible to cover the whole area in a day but everyone enjoyed the opportunity to visit this interesting site. We returned our bikes and met up with the cooler, less dishevelled delegates who had spent the day in the Kröller Müller Museum, & gardens.

Geocoris grylloides
(©2006 B.S.Nau6)

On the last day, before heading for the port, we had time for a morning visit to the Laag-Wolfheze Reserve, close to Wageningen. This is a heathland reserve with scattered pines and sandy tracks. Most species here were familiar but we did take a *Megacoelum* from the pine and await confirmation from Berend Aukema that it is *M. beckeri*, he knows the bug well at this site. It is a bug that has evaded us in the UK. We found *Geocoris* again here and it was especially pleasing to find *Nysius helveticus* a bug neither of us has found in the UK.

Large parts of both sites remained unexplored and both are well worth a visit if you are in the area.

De Hoge Verluwe National Park .....

Heathland at Laag Wolfheze, near Wageningen

The British National Grid.....Bernard Nau

A recent plea from Dmitry Musolin, for use of latitude and longitude when referring to bug sites in the British Isles, set me thinking. It would not be practical to meet this apparently simple request but it might be helpful to our international readers to explain the system of Ordnance Survey 'National Grid References' used in biological recording.

The basis of the system is a map of the British Isles on a *Transverse Mercator* projection. With this projection and a tall thin land area like Great Britain, the distances, areas and angles on the ground are reproduced very accurately on the map – not so well in large land masses like Russia or the USA!

Next, the origin for a rectilinear coordinate system was chosen as 49°N 2°W, because the 2°W longitude line conveniently divides the land mass of Great Britain about equally. This origin is somewhere off France, near the Channel Islands.

Starting at the origin, a grid of 100km squares was drawn across the area as shown in the adjacent map (the map does not extend to the Channel Is.). But, before defining the coordinates with which to label this grid, a new working origin was chosen off the bottom left corner of Great Britain (red spot on map). This was so that there would be no negative values.

Next, each 500x500 km block (outlined by the red lines) was assigned an identifying letter (S, T, N, O or H), and within each block each of the twenty-five 10x10km squares was assigned a letter, thus:

A	B	C	D	E
F	G	**H**	J	K
L	M	**N**	**O**	P
Q	R	**S**	**T**	U
V	W	X	Y	Z

The letters applied to the 500km blocks (S,T,N,O or H), are based on this same array, I have shown these in red.

The way this elaborate coordinate system works can be shown by an example. According to my GPS I live within a few metres of a location having the Ordnance Survey National Grid Reference:

TL 00534 29083.

The two letter prefix 'TL' identifies the relevant 500km block as 'T', and the relevant 100km square therein as 'L'. From the outline map you will see that TL is a 100 km square in the SE of Great Britain.

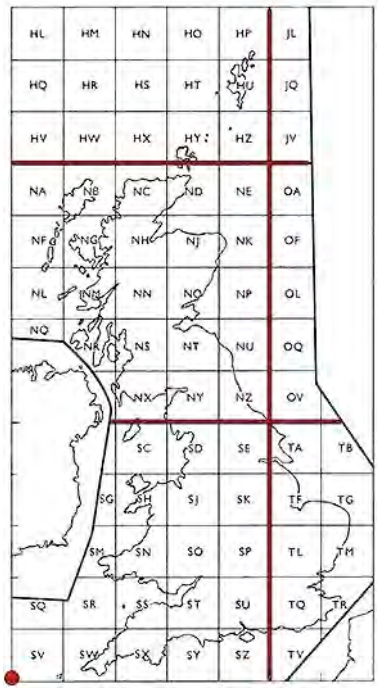
My location is further refined by the numerical part of my grid reference, this says that I live 0.534km (strictly speaking, 534 metres) to the E of the lower left corner of TL, and 29.083km (29083 metres) N of this corner.

Naturalists mostly work with only six digits (e.g. TL 005 290) as this defines the 100m square within which a site is located, this is often good enough. Also, the spaces are commonly omitted.

So, if you don't have a map showing the Ordnance Survey National Grid, the two letter prefix and my outline map give a good idea of the part of the country referred to, and the numerical coordinates refine this further.

A final complication is that Ireland has its own grid! This is angled relative to the British grid, so as to fit in a single 500km square, and therefore needs only a one-letter prefix, defined by the array already described.

Much of the information presented here is culled from www.bangor.ac.uk/is/isx025/osgbfaq.htm, and you might like to visit this for more details. The map is adapted from a 1987 Ordnance Survey Gazetteer of Great Britain.



Two species of *Orthops* Fieber coexisting on *Eryngium* in a garden, with populations delimited by flower morphology..…..P.F.Whitehead

Although there is no doubt that gardens with their wide ranges of cultivated plants in one place significantly enhance the fortunes of globally warmed invertebrates, they also sustain populations of invertebrates known to have been present widely in Britain prior to the present episode of climatic warming. The mirid bugs *Orthops basalis* (A. Costa, 1853) and *Orthops campestris* (L.) are two such species which find cultivated Apiaceae (for long known as umbellifers) to their liking. In my own garden in Worcestershire (SO94) successional sowings of annuals and the sequential maturation of perennial Apiaceae provide breeding continuity for *O. basalis* delimited only by season.

Coriander *Coriandrum sativum* L. is markedly favoured by *O. basalis* and has been for at least 10 years. In all Apiaceae utilised, nymphal development is timed to coincide with fruit maturation, access to the soft developing mericarps being necessary for nymphal development. Once the mericarps harden, the plants are largely abandoned. Populations of *O. basalis* on Coriander can be very large and perennial Lovage *Levisticum officinale* Koch is also strongly favoured. Smaller numbers of *Orthops* occur on the developing mericarps of perennial Fennel *Foeniculum vulgare* L.

Amongst the plant genus *Eryngium*, I have for some years grown *Eryngium agavifolium* Griseb., the small flowers of this South American plant being densely packed into cone-like inflorescences, just next to *Eryngium bourgatii* Gouan, of the south-west Palaearctic Region. *E. agavifolium* is very strongly favoured by *Orthops*, the nymphs of which feed on the developing mericarps and use the intensely spiny bracts for easy refuge. A single inflorescence may support eight developing *Orthops*. The flowers of *E. bourgatii* are arranged in the same way, but *Orthops* never occurs on them.

The explanation for this is simple. Each mericarp of *E. agavifolium* supports a rigid sepal which is drawn into a single broad-based point in such a way that it allows ready access to the developing mericarps by nymphal *Orthops*. The mericarps of *E. bourgatii* are subtended by a number of long acicular rigid sepals at fruiting, which interfinger with each other forming a dense wall of spines over and between which developing *Orthops* would be completely prevented from accessing the mericarps, which is why they are never found on that plant.

The question of which species of *Orthops* is breeding on *E. agavifolium* in the garden is a frustrating one which depends on microscopic examination of male genitalia, but at the same time, since adult *O. basalis* (A. Costa, 1873) and adult *O. campestris* were found during 2006 to coexist on the same inflorescence, does not confirm which the breeding species is. Additionally, the external details of the adult bugs of both species are generally closely similar, apart from their respective antennal lengths which require close comparative scrutiny, and a tendency for some adult and nymphal *O. basalis* to be more heavily pigmented. Studies of the behaviour of the relatively pale nymphs in relation to the adults present, indicate that *O. campestris* is dominantly the species breeding on *E. agavifolium*.

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SPECIES REPORTS:

First British Record of *Corythucha ciliata* (Say), Tingidae

Chris Malumphy & Sharon Reid

During September and October 2006, the Plant Health and Seeds Inspectorate (Defra) visited two nurseries in Bedfordshire where they discovered lace bugs infesting London plane (*Platanus* x *acerifolia*) and oriental plane (*P. orientalis*) trees imported from France and Italy. Some of the infested trees were 30 feet tall and some had been imported six years previously. The lace bugs had also spread to mature locally grown plane trees outside the nursery. Samples were submitted to the Central Science Laboratory and identified as *Corythucha ciliata* (Say) (Hemiptera: Tingidae). It is commonly known as the 'sycamore lace bug' in North America, which is misleading, as it does not feed on *Acer pseudoplatanus*. 'Platanus lace bug' would be a more accurate designation in the UK.

Corythucha ciliata is native to North America and was introduced to Italy in the 1960s. Since then it has spread through much of southern and central Europe. It feeds on *Platanus* spp., especially *Platanus occidentalis*. In northern Italy the lace bug is associated with two fungal diseases, which in combination with the lace bug, causes decline and death of the trees.

The lace bug feeds on the underside of leaves but damage is most apparent on the upper surface, initially causing a white stippling (Fig. 1) that can eventually progress into chlorotic or bronzed foliage and premature loss of leaves. The lower surfaces of the leaves are typically covered with droplets of black liquid frass and shed nymphal skins that remain attached after moulting. The nymphs are flat, oval in shape, black and spiny, whereas the adults are whitish in colour and about 3.5 mm in length (Figs. 2 and 3).

If anybody suspects they have found *C. ciliata*, could they please forward the details to:

c.malumphy@csl.gov.uk

[redacted]

Fig.1

Fig.2

Fig.3

Figure 1 : *Corythucha ciliata* adult (©2006James Turner)

Figure 2 : Nymph (left) and adult (right) of *Corythucha ciliata* on *Platanus*. (Crown copyright courtesy CSL)

Figure 3 : *Corythucha ciliata* feeding damage to upper surface of leaf. (Crown copyright courtesy CSL)

Published records of two species new to the British Isles.

For readers who do not have ready access to *Antenna* and *Entomologist's Monthly Magazine*, we give brief notes below of two species recently added to our fauna:-

***Macrotylus horvathi* (Reuter), Miridae**

In *Antenna*, **30**(4), p.184,(2006) it is reported that Peter Hodge exhibited the mirid *Macrotylus horvathi* at the AES/RES York Exhibition in April 2006. He had found 'many' on Black Horehound (*Ballota nigra*) on 22nd July 2005 at Queenborough on the Isle of Sheppey (TQ916717, VC15 E Kent). Compared with our other *Macrotylus* species, it is slightly smaller than *M. solitarius* (host: Hedge Woundwort, *Stachys sylvatica*) and much larger than *M.paykulli* (host: rest-harrow, *Ononis* spp). It also differs from *M. solitarius* in having the apex of the femora densely covered with fine dark dots and the black mark beyond the apex of the membrane cells having the form of a small circular disc.

***Oncocephalus pilicornis* Reuter, Reduviidae**

In *Ent.Mon.Mag.*,142, pp235-241 (2006), Paul Whitehead reports that on 25th July 1990 J.W.Meiklejohn found a specimen near Pershore (SO94, VC37 Worcs.). The habitat was tall dense *Phragmites+Urtica* fen beside the River Avon (National Vegetation Category S26). It is a large robust predatory bug, slightly smaller (L=13.0-16.5mm) than *Reduvius personatus* & the very rare *Pygolampis bidentata*. Also, it differs from *Pygolampis* in having the head constricted behind the eyes and differs in colour from *Reduvius*, being pale to mid-brown rather than dark brown to black. In continental Europe it has an essentially Mediterranean distribution. The cited reference gives more details.

Brachynotocoris puncticornis, a mirid genus new to Britain

Sheila Brooke & Bernard Nau — On 15th & 16th of August this year we found a number of female *Brachynotocoris puncticornis* Reuter, 1880, on two Ash trees (*Fraxinus*) just E of Bedford (VC30, TL 0803 4972). This is an orthotyline genus new to Britain, the genus is closely related to *Orthotylus* and *Platycranus*.

Brachynotocoris puncticornis
©2006 B.S.Nau

The bug is about 4.8mm long green with yellow borders adjoining the hemelytral margins (usually). The base of the hemelytra is wider than the pronotum and the scutellum is longer than the pronotum. The rostrum is short, and expanded near the apex as in *Platycranus bicolor*, a common late summer gorse (*Ulex*) species.

We plan a more detailed account for formal publication.

Syromastus rhombeus (L.), Coreidae, in E Suffolk & N Essex.

Jerry Bowdrey

In common with several other bug species, *Syromastus rhombeus* seems to be increasing its range in recent years. Last year it was reported for the first time from Norfolk, in the Brecks, having been known from the Suffolk Brecks for some years (Toms, 2005).

During a Suffolk Naturalists' Society survey on 13th May 2006 I took one on the edge of woodland by a track at Pannington Hall near Wherstead, East Suffolk (TM1440). It had presumably emerged from hibernation and was making its way to the sandy, sparsely vegetated ground nearby. This is apparently the first record of *S. rhombeus* for East Suffolk.

My first encounter with the species was in the Colchester area of North Essex when I swept one on dry, sparsely vegetated ground behind the rifle butts at Middlewick Ranges (TM0022) on 10.viii. 2001. No more were found in this area until a survey of the Villa Farm quarry at Arlesford (TM0521) on 1.vii.2006 located several final instar nymphs beneath a dried up plant of chickweed (*Stellaria* sp.) An example was retained in an attempt to rear it through to the adult stage, but it showed no interest in the foodplant and subsequently died. A return visit on 29.vii.2006, with Nigel Cuming, revealed several adults by general sweeping of sparse vegetation. This site is also adjacent to woodland.

As I was putting the finishing touches to this note on the afternoon of16.ix.2006, another *S. rhombeus* alighted on one of the windows of my house at Thorpe-le-Soken (TM173229)!

I thank Nigel Cuming, Terrestrial Heteroptera Recorder for Suffolk for his assistance and the owners of the above mentioned sites for permission to record on their land..

Reference

Toms, M.P., 2005 *Syromastes* [sic] *rhombeus* (Coreidae) – a hemipteran bug new to Norfolk. Trans. Norfolk & Norwich Naturalists' Society, **38**(1), pp62-64.

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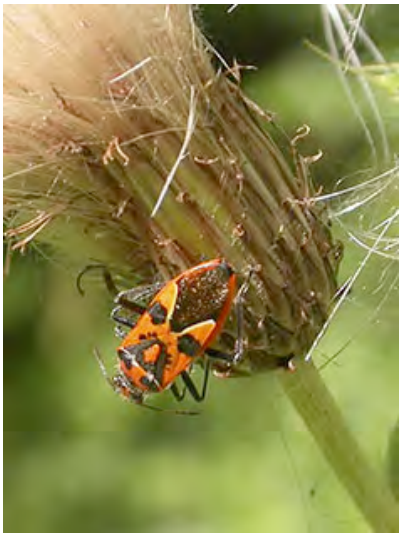
Corizus hyoscyami, range expansion in the British Isles

Bernard Nau: On 4th September 2006 I sent out an e-mail to members of the het newsgroup (hets@yahoogroups.com), drawing attention to the spread inland of *C. hyoscami* and asking for details of any records of the species from recent years. The resoponse was very good and, as promised, the results are summarised in the table below.

Without getting into a detailed analysis, it is worth drawing attention to the large proportion of records in which the bugs are on plants of the family Asteraceae, marked in red, particularly thistles (*Cirsium* spp).



***Corizus hyoscyami*, this bug spent ca 2 weeks on this thistle head at Duck End NR, Maulden, in Bedfordshire.**
© 2006 Stephen Plummer

VC#	VC name	Grid ref	Date (from)	Date (to)	No.	Location	Habitat	Host	Source
3	Devon, S	SX9253	05Sep03		1	Mansands, Brixham	—	—	J.M.Walters (per M.Telfer)
4	Devon, N	SS496364	19Aug06		several	Braunton	roadside	Rubus,leaves	K.Merrifield
4	Devon, N	SS45184154	22Sep06		1	Woolacombe Warren	foreshore	Aster	J.Flanagan
9	Dorset	SZ038785	14Jun05		1	Peveril Point	—	Sonchus, head	I.Cross
9	Dorset	SY952770	11Aug05		1	Chapman's Pool	—	Daucus, head	I.Cross
9	Dorset	SY943772	11Aug05		2	Egmont Bight	—	Ononis	I.Cross
9	Dorset	SU056047	17Aug05		1	Holt Heath	—	Matricaria s.l.	I.Cross
9	Dorset	SU049035	17Aug05		1	W. Moors	plantation	Cirsium, calyx	I.Cross
10	I. of Wight	SZ4975	31Aug05		1	St Catherines Point	field	—	A.Binding
10	I. of Wight	SZ558779	28May06		1f	Ventnor	storage depot	(swept)	A.Binding
11	Hants, S	[SU7320]	[2006]		1	Petersfield	country park	Cirsium,head	B.Pinchen
12	Hants, N	SU61506097	16Jul06		1	Pamber Forest	woodland	Cirsium,head	M.Storey
14	Sussex, E	TQ7920	26Sep92		1	Brede High Wood	heathy clearing	swept	D.Porter (per P.Hodge)
14	Sussex, E	TQ782188	20Aug06		1	Sedlescombe	garden	Senecio	P.Roper
14	Sussex, E	TQ787182	13Sep06	17Sep06	1	Sedlescombe	garden	Centranthus	D.Monk
14	Sussex, E	TQ7716	[20aug06]		1	Battle Great Wood	woodland	—	D.Monk
14	Sussex, E	TQ8020	[aug2006]		2	Brede High Wood	woodland	—	D.Monk
15	Kent, E	TR2939	23Jun98		1	Samphire Hoe	cliff slope	Euphorbia	BSN
15	Kent, E	TR2939	23Jun98		1	Samphire Hoe	tunnelling spoil	Picris	SEB&BSN
15	Kent, E	TR065198	13Oct06		2a,imm	Dungeness	sand ridge	Erodium	BSN
16	Kent, W	TQ7333	27Oct90		1	Bedgebury Forest	woodland	—	E.Philp
18	Essex, S	TL858012	09Aug06		1	Roundbush, Mundon	field margin	Cirsium et al	A.Ramsay
21	Middlesex	TQ160837	05Aug06		1	Perivale Wood	woodland	—	K.Merrifield
21	Middlesex	TQ375854	10Sep06		1	Hackney Wick	woodland	Artemisia	L.Wilson (perP.M.Abbott)
22	Berkshire	SU4597	16Aug06		1	Marcham Park	parkland	Spruce foliage	J.Campbell
24	Bucks	SU955847	03Oct06		1	Burnham Beeches	scrubby bog	Cirsium	M.Albertini
25	Suffolk, E	TM4158	09May02		1	Friston	acid woodland	Corydalis	N.Cuming, BJENH,17(3)
25	Suffolk, E	TM485837	08Aug06		4	Wrentham, Beccles	field margin	Cirsium et al	A.Ramsay
30	Bedford	TL052374	07Aug06	21Aug06	1	Duck End NR, Maulden	glade in scrub	Cirsium	S.Plummer
34	Gloucs,W	ST515779	18May05		1	Avonmouth Docks	railway sidings	—	M. Smith
40	Shropshire	SO680934	27Jul06		1	Morville	old sand quarry	—	N.P.Jones
45	Pembs	SN155487	08Jul90		1	Poppit Sands	sand dunes	under Ononis	BSN
45	Pembs	SM7323	[1993]			St David's	cliff-top	Leucanthemum	K.Alexander, BJENH,9(1)
48	Merioneth	SH577077	24Dec08		1	Tywyn	—	—	Charles Darwin (per I.Smith)
49	Caerns	SH205264	19Aug05		1	Galit y Mor, Lleyn	cliff	Inula,flower	I.Smith
49	Caerns	SH156290	07Jun06		2	Carreg, Porth	cliff	—	I.Smith
52	Anglesey	SH4065	17Aug85		ads+imms	Newborough Warren	sand dunes	—	BSN
52	Anglesey	SH4063	16Sep02		1	Newborough Warren	conifer plantn.	—	A.Binding
H.12	Wexford	T24	28Jun06		1	Cahore Point	sand dunes	—	M.Telfer

***Corizus hyoscyami* - information request**

Paul Whitehead: Readers may be aware that the rhopalid *Corizus hyoscyami* (L., 1758) has been especially dispersive in England during 2006, and Bernard Nau has assembled some data on the matter. Additionally, I now have enough significant data on the subject to produce a modest publication for the entomological press in due course, hopefully during the coming winter.

I should be happy to include further observations from anyone in Britain wishing to submit records to me from any contexts. For well-known coastal populations, any evidence of rapid population increase observed first hand would be invaluable. Records should include brief habitat notes (e.g. set-aside, ruderal, brownfield, grassland, scrub), date(s) or date-runs, parish or settlement name, vice-counties, altitude where possible, and six figure map references, along with any background or supporting data, and the numbers involved. Inland records prior to 2006 would also be welcome. Binomial names for plants on which *Corizus* may have been observed (regularly or otherwise) would be useful. For random observations, contributors are especially asked to provide their distances from the nearest known breeding sites if possible. Evidence of aggregations or site-fidelity would also be useful.

Possible records of any of the similarly coloured southern 'exotic' lygaeids would also be welcome, as there is evidence from some other insect groups for incursions of more typically southern seldom-recorded species.

Observations can be posted to me at the address below, or manageable files e-mailed to me.

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River Bug's Revenge

Thomas Huxley: Drs David Summers and Kjersti Berkelund of the Tay District Salmon Fisheries Board were recently electrofishing in the Lunan Burn for *Argulus* on salmon parr, when they both received nasty 'bites' from a small flat beast, substantial numbers being collected in the net from a single kick sample. The culprit was, of course, the river bug, ***Aphelocheirus aestivalis***, already recorded from this small river in 1993 (see the Provisional Atlas page 45) and later repeated by me but in small numbers. Hopefully sampling by the Fisheries Board staff will continue downstream to where the Lunan joins the Isla and we may learn whether or not the Lunan population is isolated from other parts of the Tay system.

Thomas Huxley
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FROM THE REGIONS

CORNWALL (VCs 1 & 2)

Keith Alexander:

***Cardiastethus fasciiventris* arrives with a flourish**

Cornwall has been subject to considerable recording effort during the compilation of the county review (due to be published this winter). The appearance of ***C. fasciiventris*** across much of the eastern vice county (VC2) in 2006 has therefore been dramatic. It was found in the very typical habitat of old orchards at Cotehele (SX46), 18th July; then on lichen-covered blackthorns at Lundy Hole (SW97), St Minver Highlands, 3rd August; also on lichen-covered blackthorns of a hedge bank at Carne Farm (SX15), Lanteglos, 26th August; and on streamside sallows and blackthorns in the Port Quin valley (SW98), 31st August. Paul Gainey has also sent me a voucher for his record from Harbour Cove, Padstow (SW97), 26th August, in VC1.

The expansion of this species northwards and westwards out of the South East has been less precisely dated in other counties that I know well. The first Gloucestershire records were made in 2000, when it was independently detected by me, Pete Kirby and Andy Foster at three sites. It has been found regularly around the county since then. I had been actively recording Heteroptera in the county through the 1980s and 1990s and so it is likely that it had only arrived in the county that year or maybe shortly before. I found it at Lisvane (ST28) in Glamorgan (VC41) in 2005, and so it would be interesting to hear of other Welsh records as it continues to spread. I added it to the Devon list from two sites back in 1990, and have seen it again since moving to the county in 2003, but I am not aware of much recording effort in that county prior to 1990 and so the date of its arrival there is not precisely known.

S HAMPSHIRE (VC 11)

Richard Dickson:

My friend David Appleton made the following record. In S&L the species is not given for Hampshire, though we are both very much aware the situation may have changed in the last 40 years. ***Aphanus rolandi*** (L.) one running fast over large pine log on Southampton Common SU4414 5.8.2006 detd. D.M. Appleton, in coll. R.J.Dickson.

HERTFORDSHIRE (VC 20)

I. Aquatic,2005: Stuart Warrington

The large skater ***Aquarius paludum*** had not been recorded in Herts since 1953, however, I am delighted to report that it has been refound in the county. Dave Leeming netted it on the 26th May 2005 in the River Red at Redbourn (TL104117). In 2005 he continued his study of aquatic invertebrates of the River Ver and found 9 water bug species, including the water scorpion ***Nepa cinerea*** and the tiny water boatman ***Micronecta poweri*** (the 1st record from this river for 35 years). Twenty water bug species have been recorded from the River Ver, with the lesser water boatman ***Sigara dorsalis*** being the most widespread, while the pond skater ***Gerris thoracicus*** and the tiny water cricket ***Microvelia reticulata*** were each restricted to one record at one site.

II Terrestrial, 2005: John Widgery

Much of the season's fieldwork is now concentrated on surveys of nature reserves and other quality habitats. Importantly, however, other superficially less interesting sites are not ignored. For example derelict, weedy waste ground is a prime habitat for several species now colonising the UK; also, interesting ground bugs may be found in litter bordering hedgerows or scrub, particularly along dryish paths,.

The Meads NR, Hertford/Ware (TL3514)

This wetland reserve lies on the flood plain of the River Lea, between Hertford and Ware. A visit in late April produced the rarely seen Flat Bug ***Aradus depressus,*** which lives on stumps and under the bark of dead trees feeding on mycelia and fruiting bodies of certain fungi. I can only trace one previous Herts record for the species, in 1946! It is probably more common than this suggests but it is an insect which is difficult to detect, except when it flies in a comparatively short period in the spring. On this occasion, by pure luck, this 6mm long insect alighted on my wife for long enough for me to collect it. Later in the year I found a large number of the Lace Bug ***Dictyla convergens*** which feeds solely on Water Forget-me-not (*Myosotis scorpioides).* This latter bug is very local in the county, having previously been found at only a few sites, usually in small numbers.

Danemead NR, Broxbourne (TL3408).

In early June the Common Bark Bug ***Aneurus laevis*** was found under the bark of old logs of Aspen (*Populus tremula*). Despite its colloquial name, this is another very hard to find species for which I can trace no previous county records. It has a similar lifestyle to the aforementioned Flat Bug, being found under the bark of logs and trees infested with fungi.

Pond Wood NR (TL2700)

A late June visit resulted in a new species for the county when the Damsel Bug ***Himacerus boops*** was swept from long grass. Several other choice species were found here during the year including the Ground Bug ***Megalonotus chiragra*** and the tiny microphysid bug ***Myrmedobia coleoptrata.***

Balls Wood NR, Hertford Heath (TL3410)

Within a month of the first record for the Common Bark Bug ***Aneurus laevis*** at Danemead the species was also found in Balls Wood under the bark of an Aspen log in early July.

Therfield Heath NR, Royston (TL3339)

Two specimens of the scarce small black Shieldbug ***Thyreocoris scarabaeoides*** were found in moss on Church Hill during September at this high quality chalk grassland site in northeast Herts. The only other current known site in the county is at Aldbury Nowers, also a quality chalk grassland site, but in the far west.

Aldbury Nowers NR, Tring (SP9513)

In early September I was surprised to find the rhopalid bug ***Liorhyssus hyalinus*** in moss, which is an unusual habitat. This is only the second Hertfordshire record for this recent coloniser of southern Britain.

Hertford Heath NR (TL3510)

Examination of moss beneath Gorse (*Ulex europaeus*) in early June produced the 4th record of the scarce ground bug ***Megalonotus dilatatus,*** which until 2004 had only one known county site.

Northchurch Common, Berkhamsted(SP9710)

Early September saw yet a further record of ***Megalonotus dilatatus,*** this time in leaf litter but yet again under Gorse. This brought the total of known Herts sites for the species to five, all of which were associated with Gorse on acid heathiand.

Lea Valley Country Park (TL3602)

A second county record of the small anthocorid bug ***Buchananiella continua*** was obtained in March. It was found, like the first record, last year, in Ivy (*Hedera helix*), presumably an overwintering site. Another new species for the county was discovered in leaf litter during September. This was the tiny (c. 2mm) anthocorid ***Brachysteles parvicornis.*** Also worthy of comment was the Stilt Bug ***Berytinus hirticornis*** with both adults and nymphs present in good numbers. This Notable B species is another which has spread in recent years. It has been found previously at this site and at one other in Herts, but only as single adult specimens.

Northaw Great Wood, Cuffley (TL2803)

The small mirid bug ***Psallodema fieberi*** was found in June. This is a specialist feeder on Wych Elm (*Ulmus glabra*), which is local in the county. It is apparently the third record of the insect in Herts.

Gustardwood Common, Wheathampstead (TL1716)

In the UK three mirid species of genus *Orthotylus* occur on Broom (*Cytisus*). The least common of these, ***Orthotylus concolor*****,** was found at this site in early September. This is the first record of the species in Herts since 1937.

Other sites

There were a few other records which warrant comment, such as the first county record of the mirid

Campylomma annulicorne which is a fairly recent arrival in the UK. This was found several times during the season on willows *(Salix*), the host plant.

[BSN: I found it at **Rye Meads** in September 1979.]

There were a number of records of less common lygaeid bugs. These included 4 records, of a previously scarce species in Herts, the Ground Bug ***Eremocoris podagricus****;* making seven modern records, showing that it is actually quite widespread.

During September, the least common of the three *Peritrechus* species in the county, ***Peritrechus lundii****,* was found in good numbers in litter at the edge of **Nicholson's Wood** (TL2871), part of the **Bramfield Woods** complex. This is only the third contemporary record for the species in Herts. In May, Phil Attewell got a second county record for the Ground Bug ***Trapezonotus dispar*** whilst searching for ants at **Rowley Green Common NR** (TQ2196). Finally, there were two further records of the attractive and scarce (Notable B) Ground Bug ***Raglius alboacuminatus***. Bernard Nau & Sheila Brooke found it in late April at Ware, just outside **The Meads NR**,(TL3514), and Phil Attewell found it in May at **Standon** (TL4022). These were the second and third county records.

[*Acknowledgements:* Based on original reports in *Trans. Herts. Nat. Hist. Soc.*, **38** (2), pp156-159, 2006. Kindly made available by the Editor, Stuart Warrington]

BERKS. & OXFORDSHIRE (VCs 22 & 23)

John Campbell:

Corizus hyoscami - several taken from two sites near Marcham SU49 (VC 22), including beaten from a Tsuga tree.

Stictopleurus abutilon - after finding one last year it has been numerous and quite widespread in the Marcham area SU49, 4 tetrads.

Aquarius najas - near Faringdon SU29 (VC 22) a new 10 km square.

Coreus marginatus - has been widespread and abundant this year, and feeding on Rhubarb in my garden.

Piezodorus lituratus & ***Dolycoris baccarum*** have also been widespread and very numerous, the former in my garden on several occasions with the nearest Gorse some two miles away.

E NORFOLK (VC 27)

Geoff Nobes:

New to Norfolk

Glaenocorisa propinqua propinqua was found in 2005 and ***Notonecta obliqua*** in 2006 by GN. These records await formal publication.

Sheila Brooke:

Andy Foster sent me a 1997 record of ***Sigara striata*** taken at Heigham Holmes, Norfolk Broads during a NT survey. In England, this extreme south-eastern species has no other records this far north. A.F. kindly sent me the specimen and the dissection showed it to be *S. striata*, which Eric Philp confirmed, he has years of experience of *S. striata,* & *S. striata* / *S. dorsalis* intermediates in Kent. It is, therefore, worth checking the male genitalia of *S. dorsalis* in East Anglia – it might be *S. striata*! My thanks to Andy and Eric for their co-operation.

BEDFORDSHIRE (VC 30)

Sheila Brooke & Bernard Nau

Following the discovery by BSN of ***Cymatia rogenhoferi*** in a gravel pit in Bedfordshire in October (not September) 2005 (Het News, 2nd Series, No7, Spring 2006) we revisited the site on several occasions in the hope of finding more and as noted in Issue 7 our efforts in November 2005 & April 2006 failed. We returned on 26 September 2006 and although we found no adult *Cymatia* we did find 5th instar nymphs, which were too large to be ***C. coleoptrata***, so we felt optimistic as we have never had ***C. bonsdorffii*** at this site. We returned again on 12 October 2006 and did find one dead male *C. rogenhoferi*, which was encouraging, but despite searching for an hour we found no more. There were still 5th instar nymphs but the few taken home to rear were dead the following day. We found a number of dead adults of other species that day which is somewhat puzzling. Anyhow we shall return in the vain hope that these nymphs will become *C. rogenhoferi* adults in the next week or two although we incline to think the nymphs are *C.bonsdorfii.*

W GLOUCESTERSHIRE (VC 34)

Keith Alexander:

Corizus hyoscyami arrives in West Gloucestershire

This distinctive bug was first reported to me from a Gloucestershire site in 2003, at Lower Woods Nature Reserve (ST78), 12th October, by local naturalist Colin Twissell. This is a large complex of ancient coppice woodland on heavy clay soils and so the specimen was assumed to be just a vagrant. However, three further records have arisen during 2006: from the coastal Beachley Point (ST59), 20th July, John Harper; from deep in the Forest of Dean at Woorgreens Reserve (SO61), 25th July, Colin Twissell; and also reported by John Widgery (details not available at time of writing). The Forest of Dean has a large network of very suitable dry sandy areas and it is expected that this newly arrived population will expand enormously over the next few years.

N YORKSHIRE & TEESSIDE (VCs 61-66)

Some recent water bug records

Martin Hammond

The Ripon area of North Yorkshire (Vcs 64 & 65) continues to produce some interesting records. ***Ilyocoris cimicoides*** & ***Plea minutissima*** were found readily at Nosterfield NR (SE27, VC64) in September 2005. These species were not recorded during an intensive survey of the site in 1997, so are presumably recent colonists (along with the Screech Beetle, *Hygrobia hermanni*). ***Sigara limitata*** has

now been found at three sites north of Ripon whilst ***Hesperocorixa castanea*** was in markedly calcareous lowland pools at two locations in the same area.

A roadside drainage lagoon by the A1 between Wetherby and Boroughbridge (SE45, VC64) produced vast numbers of ***Micronecta scholtzi*** on 29th August 2006, apparently the first record for this species in North Yorkshire, though it has now been recorded further north in Wearside (Eyre et al. 2005)

As of September 2006, ***Ranatra linearis*** has now been found as far north as Skipwith Common (SE63, VC61), between York and Selby. There have also been records from the Wakefield and Pontefract areas (VC63) of West Yorkshire.

In the far west of North Yorkshire, the local ***Hebrus ruficeps*** was found in Sphagnum-dominated former peat cuttings at Austwick Moss near Settle in the Craven lowlands (SD76, VC64).

In the uplands, the scarce ***Arctocorisa carinata*** has been discovered at two new locations. At Woogill Tarn in Nidderdale (SE07, VC64, elevation 515 metres) it was found on 12th April 2005 with ***Glaenocorisa propinqua propinqua*** & ***Callicorixa wollastoni***. At Greensett Tarn on the flank of Whernside (SD78, VC64, elevation 580 metres), *A. carinata* was abundant on 2nd June 2006.

Although straddling two Vice-counties (VC62 NE Yorks and VC66 Durham), the Teesside lowlands form a distinct area, traditionally lacking most of the 'southern' aquatic insects which extend north into south-east Yorkshire or the Vale of York. This may now be changing.

Notonecta viridis is currently well-established in the Tees Valley and has been recorded from several ponds on both sides of the river (VC62 & VC66).

Cymatia coleoptrata has been found in great abundance in one pond at Billingham Beck Valley Country Park (NZ 42, VC66); when data was collated for the recent *Provisional Atlas* of British water bugs (Huxley, 2003), its most northerly known stations were on the south bank of the Humber! Of course it could be argued that these species have simply been overlooked in the past; stronger evidence of sustained northwards expansion amongst certain water bugs will come when ***Ilyocoris cimicoides*** colonises Teesside, as it surely must. Eyre et al (2005) report collecting a nymph from a site in south Northumberland but it has not been found in recent surveys covering 40+ lowland ponds around Teesside.

References

Eyre, M.D., Woodward, J.C. & Luff, M.L. (2005). Expanding northern ranges of aquatic invertebrate species: a possible effect of climate change? *British Jnl. of Entomology & Natural History*, **18**: 219-223.

Huxley, T. (2003). *Provisional atlas of the British aquatic bugs (Hemiptera,Heteroptera).* Biological Records Centre. Huntingdon

martinhammond1@tiscali.co.uk

[BSN: In Beds & Herts ***C. coleoptrata*** has become widespread & often abundant, having increased greatly since the 1960s. In the 1940s records in SE England were sufficiently notable to be published in national journals! ***N. viridis*** has also increased, it is now as widespread and almost as numerous as ***N. glauca***

UK HETEROPETERA RECORDING SCHEMES

Water Bug Recording Scheme – Update ..... Sheila Brooke

There have been a number of additions to the list of British water bugs in recent years but the checklist that appeared in *HetNews*, **7**, Spring 2006 is still current

Verification & validation

NBN published a booklet recently regarding verification and validation of records, stressing the importance of accurate identification of specimens, and outlining ways in which various organisations could help with this process. In *Het News*, **5**, Spring 2005, in an article featuring the water bug scheme, we made a few recommendations regarding ID verification, they are:

Please send specimens to the Organiser to be verified and returned to you for future reference if:

- you are new to water bug recording and/or uncertain of a particular ID;
- a bug is out of its normal range;
- a bug is in an unusual habitat.

We are all mere humans and make mistakes from time to time, and so independent verification helps to ensure high quality data. I, too, ask for a second opinion for difficult species, and, if there is still uncertainty, a third opinion. It takes some time and practice to become confident with the more difficult corixids, especially the females, some of which are impossible to identify with certainty, and those that need dissection. So far this procedure has worked well – except occasionally there has been no voucher specimen!

The NBN suggests formulating a list of species defining those that require 'expert' determination, those that are acceptable by 'competent' recorders & those (if any) that are acceptable from other sources. Would recorders welcome this? If so would recorders who are not known, or little known by the Scheme Organiser be prepared to include a précis of their experience of bug identification when they first send in records?

NBN Gateway, changes

If you have looked at the NBN Gateway (www.searchnbn.net) recently you may have noticed that there is a new dataset of water bugs provided by the Recording Scheme. These are records sent to me between 2001, when the Atlas was finalised, and Spring 2006. There are over 6,000 records and

my thanks go to all of you who sent in records during that time.

There are still many areas that are unrecorded and you may like to look at the distribution near you and target some of these empty squares!

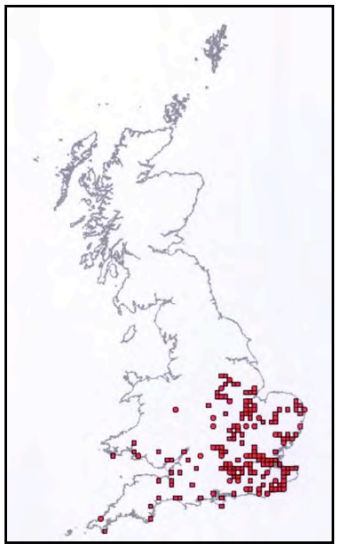
You will find that there is some data from sources other than the Recording Scheme, I cannot vouch for the accuracy of these but you can check the Metadata and consider whether you wish to include them. You do have the option of unchecking data you do not wish to have displayed. You can, for example, compare the 'up to 2001' distribution of the Provisional Atlas ("Aquatic Heteroptera Dataset of BRC") ,with the current distribution (the above dataset and the "Aquatic Heteroptera Dataset of the Aquatic Heteroptera Recording Scheme" - see the example below for *Ranatra linearis*.

You can also view a species list for a 10km square, and play with interactive maps. Have a look if you have not done so already and if you find that any errors have crept into the new dataset I will do my best to amend these.

I look forward to receiving your records and in due course they will appear in an updated dataset on the Gateway.

10km squares with NBN Gateway records for *Ranatra linearis* in Great Britain

(a) Atlas data up to 2001



(b) Data from 2001 to Spring 2006

BAP Priority Species, 2006 .....Bernard Nau

The acronym BAP stands for the *UK Biodiversity Action Plan*. The UK Priority Species concept involves promoting the active conservation of designated key species, and their habitat, so as to ensure conservation of the much wider fauna and flora associated with this habitat.

During 1998-1999 action plans were drawn up for designated species across the UK fauna and flora. The designated *Priority Species* were generally rare species, declining and at risk, put forward by specialists in the group. Detailed action plans and measurable targets were then compiled for each Priority Species.

During 2005-2006 the original lists of Priority Species have been under review. This involved specialist coordinators compiling updated lists of potential Priority Species for each group; followed by review and acceptance/rejection by a bureaucratic hierarchy of working groups. Very detailed *Criteria* had to be met to qualify as Priority Species.

In the 1999 list of Priority Species only two Heteroptera were listed: *Hydrometra gracilenta* and *Orthotylus rubidus*. The former is known from the Norfolk Broads and Pevensey Levels (Sussex); the latter from natural salt pans on coastal saltings around the coast of SE England.

For the 2006 list I coordinated views from a number of active heteropterists and submitted a list of approximately twenty potential Priority Species. Of these, four have been accepted as Priority Species: *Hydrometra gracilenta* and *Orthotylus rubidus,* as before; plus the lacebug *Physatocheila smreczynskii* and the shore-bug *Saldula setulosa*.

The rejections didn't meet the Criteria, mainly because they are so scarce that little is known about them!

REGIONAL RECORDERS

This is our current list of Regional Recorders. Is your email address correct? We would be grateful if anyone else prepared to accept records on their county's behalf would let us know, and we can include that information in the next issue.
{* denotes that recording area is administrative county}

VC 1 & 2	W & E Cornwall	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
VC10	Isle of Wight	David Biggs	Plum Tree Cottage, 76 Albert Road, Gurnard, Cowes, Isle of Wight PO31 8JU
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
VC 18 & 19	S & N Essex	Peter Kirby	peter.kirby7@ntlworld.com
VC 20	Hertfordshire	John Widgery	12 Bushcombe Close, Woodmancote, Cheltenham, GL52 9HX
VC 23 & 22	Berks & Oxfordshire*	John Campbell	john@jcampbell9.free-online.co.uk
VC 25 & 26	E & W Suffolk	Adrian Chalkley (water)	adrian@boxvalley.co.uk
		Nigel Cuming (land)	marionnigel@onetel.com
VC 30	Bedfordshire	Bernard Nau	nau.bsn@btinternet.com
VC 32	Northamptonshire	Tony Cook	tony.cook@newtonfieldcentre.org.uk
VC 33 & 34	E & W Gloucestershire	John Widgery	12 Bushcombe Close, Woodmancote, Cheltenham, GL52 9HX
VC 37	Worcestershire*	John Partridge	records@wbrc.org.uk
VC 53 & 54	S & N Lincolnshire*	Annette Binding	allan.binding@ntlworld.com (also spiders)
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 65	NW Yorks	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

LITERATURE

Literature relating to British Heteroptera

Bernard Nau

[Continued from *Het News* **6**, Autumn 2005]

INTERNATIONAL

Albrecht, A., Mattila, K., Rinne, V., Söderman, G., 2006
Check-list of Finnish Hemiptera
Unpublished document, 26-page printed A4 doc dated 1.6.2006; compiled by Finnish Hemiptera Group
[Simple list follows Pal.Cat., not annotated; includes non-Het Hemiptera]

Aukema, B., Bos, F., Hermes, D., Zeinstra, P., 2005b
Nieuwe en interessante Nederlandse wantzen II, met een geactualiseerde naamlijst (Hemiptera: Heteroptera)
Nederlandse Faunistiche Medelingen, **23**, 37-76
[Checklist of NL Heteroptera, 618 spp. Colour photos of: TINGIDAE: Copium clavicorne, Derephysia sinuatocollis; MIRIDAE: Mermitelocerus schmidtii, Heterocordylus tumidicornis; ANTHOCORIDAE: orius horvathi, Xylocoridea brevipennis; LYGAEIDAE: Horvathiolus superbus; BERYTIDAE: Metatropis rufescens; PENTATOMOIDEA: Elasmostethus minor, Carpocoris fuscispinus]

Aukema, B., Hermes, D., 2006
Verspreidingsatlas Nederlandse wantsen (Hemiptera: Heteroptera). Deel II: Cimicomorpha I (Tingidae, Microphysidae, Nabidae, Anthocoridae, Cimicidae & reduviidae)
Europeaan Invertebrate Survey publication, Nederland, Leiden, 136pp (ISBN 90-76261-04-0)

Aukema, B., Kerzhner, I.M., 2005a
Type specimens of some Palaearctic Pentatomorpha described by E. Wagner (Heteroptera: Rhopalidae, Cydnidae, Scutelleridae and Pentatomidae)
Zoosyst. Rossica (Zoological Institute, St Petersburg), **14**, pp69-72, (2005)
[In English]]

Aukema, B., Loomans, A., 2005c
De wants Orius laevigatus in Nederland (Heteroptera: Anthocoridae)
Nederlandse Faunistiche Medelingen, **23**, Waarnemingen en Mededelingen, 125-127
[Recent escape from glasshouse pest-control, 21 localities in 2005, all but one near glasshouses]

Damgaard, J., 2005
Genetic diversity, taxonomy, and phylogeography of the western Palaearctic water strider Aquarius najas (DeGeer) (Heteroptera: Gerridae)
Insect Syst. Evol., **36**(4), pp395-406
[For *A najas, A. ventralis & A.cinereus*, 62 mtDNA samples taken across W Palaearctic, 34 unique haplotypes found.]

Derjanschi, V., Matocq, A., 2005
Contributii la cunoasterea faunei Heteropterelor (Insecta, Hemiptera) din Republica Moldova
Analele Stiintifice Ale, Universitatii de Stat din Moldova, Seria :*Stiinte chimico-biologice*, 2005 (ISSN 1811-2617)
[(Part only) Lists 26 spp new to Moldova, making 560 spp total.]

Faraci, F., 2000
On the nomenclature of two species of Coreidae described by Schilling (1829): *Spathocera dalmanii* and *Arenocoris fallenii* (Heteroptera)
Zoosyst. Rossica (Zoological Institute, St Petersburg), **8**(2), 309-310, (2000)
[In English.]

Hollier, J., 2006
Hemiptera syntypes from the collection of John Sahlberg present in the Natural History Museum of Geneva.
Entomologist's Monthly Magazine, 142, p126, (2006)
[*Strongylocoris stegamoides* (Saldidae), *Calcanthia alpicola* (Saldidae)]

Hollier, J., Matocq, A., 2004a
Dicyphus escalerae Lindberg, 1934 (Hemiptera: Miridae), a plant-bug new for Switzerland
Mitteilungen der Schweizerischen Entomologischen Gesellschaft, **77**, pp333-335, (2004)
[On *Antirrhinum majus*; accidental horticultural introduction? Also known in Spain, Italy & SW France. Coarse erect black pubescence, A2 has strong black band at base & apex. Confirm by genitalia check (eg W&W 1964)]

Kment, P., 2006
A contribution to the faunistics of aquatic and semiaquatic bugs (Heteroptera:Nepomorpha, Gerromorpha) in Portugal, with the review of biology of the Nearctic corixid Trichocorixa verticalis (Fieber, 1851)
Boln.S.E.A., **38**, pp 359-361, (2006)
[Full record details of 20 spp given, inc. Trichocorixa, Anisops, Parasigara transversa. (1st page only)]

Koncicka, M., Hula, V., Fric, Z., 2005
Picromerus bidens (Heteroptera: Pentatomidae) as predator of the Checkerspot *Euphydryas aurina* (Lepidotera: Nymphalidae)
Entomologica Fennica, **16**, pp 233-236

Matocq, A., 2004c
Une nouvelle espèce de *Rhabdoscytus* de Sardaigne (Hemiptera, Miridae)
Revue française d'Entomologie, **26**(4), pp 175-178, (2004)
[Mirinae: Mirini: R. carapezzai]

Matocq, A., Pluot-Sigwalt, D, 2005
Réexamen du genre Lopus Hahn, 1831 (Heteroptera, Miridae, Phylinae)
Bulletin de la Société entomologique de France, **110**(3), pp 249-258
[Diags of head, pretarsus, & aedeagus. Also Amblytylus.]

Schmitz, G., Werner, D.J., 2000
The importance of the alien plant *Senecio inaequidens* DC.(Asteraceae) for phytophagous insects.
Zeitschrift für Ökologie und Naturschutz, Urban & Fischer Verlag, **9**, pp 153-160, (2000)
[The plant *S. inaequidens*, from South Africa, invaded ruderal sites in Central Europe over.20 years. Het spp recorded in study: 52 spp on *Senecio* spp, 15 on S. jacobae, 34 on *S.inaequidens*. Proved breeding spp are: *Melan- ocoryphus albomaculatus, Nysius senecionis, Stictopleurus punctato- nervosus, Lygus gemellatus, L.pratensis, L. rugulipennis*. (In English)]

Tiberghien, G., Pericart, J., Matocq, A., 2005
Homage à Bernard Ehanno
Bulletin de la Société entomologique de France, **110**(3), pp369-372
[Obituary & bibliography (39 publns, mainly Miridae)) of B. Ehanno 1935-2004.]

Wachmann, E., Melber, A., Deckert, J., 2006
Wanzen
Die Tierwelt Deutschlands, **77** Teil, Band 1, book publ.by Goecke & Evers, Keltern,
[Covers spp in PalCat vols 1&2 (but Microphysidae in Band 2): Dipsocoromorpha, Nepomorpha, Gerromorpha, Leptopodomorpha, Cimicomorpha (pt 1).]

Werner, D.J., 2001a
Vier Verbreitungskarten von Wanzen und ihre Interpretation.
Heteropteron, **10**, 7-16, (2001)
[Distribution maps for SW Germany, for Lygaeidae: Melanocoryphus albomaculatus, Horvathiolus superbus; & Tingidae: Copium clavicorne, C. teucrii., Copium spp are gall makers on, respectively, Teucrium chamaedrys (Wall Germander - rare in GB) & T. montanum (plant not in GB).]

Werner, D.J., 2001
Gallwanzen und Wanzengallen (Heteropteraa: Tingidae)
Verh. Westd. Entom. Tag, 2000, pp 211-228, Löbeckke-Mus., Düsseldorf 2001
[English summary, ca 70 refs.]

Werner, D.J., 2001b
Vier Verbreitungskarten von Wanzen und ihre Interpretation II - Ergänzungen, Funddaten, Literatur
Heteropteron, **12**, pp 7-22, (2001)
[Lygaeidae - *Melanocoryphus albomaculatus, Horvathiolus superbus;* Tingidae - *Copium clavicorne, C. teucrii.* Many refs., details of records in Germany.]

Werner, D.J., 2002a
Die 'Hexenkraut'-Wanze *Metatropis rufescens* und ihre Verbreitung in Deutschland (Heteroptera: Berytidea)
Heteropteron, **13**, pp15-26, (2002)
[All known records & distribution map for this sp in Germany.]

Werner, D.J., 2002b
Ergänzungen zur Verbreitung van *Metatropis rufescens* in Deutschland (Heteroptera: Berytidae).
Heteropteron, **14**, pp 30-32, (2002)
[Additional records to DWer2002a.]

Werner, D.J., 2002c
Nachtrag zur Veröffentlichung 'Gallwanzen und Wanzengallen' (Heteroptera: Tingidae).
Heteropteron, **15**, pp 31-32, (2002)
[African spp of Paracopium, 19 lit refs]

Werner, D.J., 2004
Die Andromeda-Gitterwanze (*Stephanitis takeyai* Drake & Maa, 1955) vermehrt auf Friedhofen und in Privategarten gefunden
Heteropteron, **18**, pp 11-12, (2004)

Werner, D.J., 2004a
(Distribution, changing host-plants and aspects of nature conservation of Heteroptera on Cupressaceae in Germany.)
Entomologie heute, **16**, pp 117-140
[Species treated: 1.Chlorochroa juniperina,2. Cyphostethus tristriatus, 3.Gonocerus juniperi 4.Orsillus depressus. Distribution maps for Germany show: #1=sparse throughout (Juniperus communis) ;#2=more common (Juniperus & Cupressus,[Empetrum]); #3= mainly south-central, increasing (Juniperus & Cupressus); #4= west , mainly SW, increasing (Juniperus & Cupressus).In German (English summary).]

Werner, D.J., 2005
Biology, ecology and distribution of *Coptosoma scutellatum* (Heteroptera, Plataspidae).
Entomologie heute, **17**, pp 65-90, (2005)
[In German (English summary). Capsules containing symbiont bacteria are deposited with the eggs & sucked by hatchling nymphs; hostplant is a legume, Securigera Distribution map shows bug is widespread S & central Germany. Diagrams show pre-mating behaviour.]

Werner, D.J., 2005a
Nezara viridula (Linnaeus, 1758) in Köln und in Deutschland (Heteroptera, Pentatomidae).
Heteropteron, **21**, pp29-31, (2005)
[Discussion of spread,18 international lit refs]

Yamazaki, K., Sugiura, S., 2005
Hemiptera as cecidophages
Entomological News, **116**(3), pp121- (2005) [Gall feeding]

Zeinstra, P., Aukema, B., 2005
Wantsen in Fryslan (Deel 5) de Esdoornwants nu ook in Fryslan.
TWIRRE natuur in Fryslan, **16**,4, pp148-152
[*Deraeocoris flavilinea* range expansion in Europe & NL, list of host plants, life-cycle]

NATIONAL

Alexander, K., 1999
Nysius senecionis (Schilling) (Hemiptera: Lygaeidae)
British Journal of Entomology and Natural History, **12**(3), p141, (1999)
[1997: *Artemisia m*arit.& *Aster trip*.,saltmarsh fringe at Brancaster Marsh (TF782451); under *Silene maritima* Little Eye, Salthouse (TG078443).]

Alexander, K., 1999a
[Exhibit at 1998 Annual Exhibition.]
British Journal of Entomology and Natural History, 12(3), pp179, (1999)
[1998: *Odontoscelis lin*, 15 Jul, Frensham Cmn, Surrey, VC17; *O. fulig.* pitfall, Jun-Jul , Sutton Hoo, E.Suffolk, VC25; *Dicrano.medius*, suction sampler, 25 Oct , Randwick, Glos; Aphanus rol., 19 May, Woolacombe, N.Devon, VC4; *Dufour.ater*, a+ii,u/oak bark, 22aug, Castle Ward Pk, Co.Down VC H38; *Glob.juniperi*,regenerating *Calluna*, 7 Jul, Ludshott Cmn, N. Hants VC12.]

Alexander, K., 2005c
The invertebrate assembvlage of some arable fields in West Cornwall: a mismatch between invertebrate and plant conservation prioritisation.
British Journal of Entomology and Natural History, 18(3), pp165-170, (2005)
[17 spp, incl.: Aphanus rolandri, Scol.pictus, Chorosoma, Dicranocephalus]

Alexander, K., 2006
New county records of Heteroptera (Hemiptera) from Gloucestershire.
British Journal of Entomology and Natural History, 19(1), 34-37, (2006)

[18 spp inc.: Rhacognathus, Fieberocapsus, Pilophorus clavatus, Orius laticollis, Miridius quadrivirgatus, Megalonotus antennatus, Peritrechus nubilus, Berytinus crassipes, Psallus albicinctus, Mecomma dispar]

Anderson, R., 2006
Rhacognathus punctatus (L.) (Hem., Pentatomidae) confirmed as an Irish species with three new sites in northern counties.
Entomologist's Monthly Magazine, **142**, p62, (2006)

Angus, R.B., 2006
Evidence of hybridisation between *Corixa punctata* (Illiger) and C. iberica Jansson in western Scotland
Entomologist's Monthly Magazine, **142**, pp23-28, (2006)
[Photos of mid-femora & right paramere of the two species & intermediates.]

Anon., -, 2003b
Explanatory leaflet on importing invertebrate plant pests,
Department for Environment, Food & Rural Affairs publication, **PHI 8** (Rev.5/03)
[Covered - any plant feeding inverts; not covered - dead specimens, live inverts that do not feed on plants. Prior consultation reqd for Heteroptera , & certain other groups.]

Anon., -, 2005
[BENHS Indoor Meetings: 14 September 2004]
British Journal of Entomology and Natural History, **18**, pp 123-124, (2005)
[A.J. Halstead reported Nezara viridula, 'a cluster of 1st instar nymphs' on runner beans on an allotment, Sheets Heath, Brookwood, Surrey - no date.]

Badmin, J., 2006
Obituary: Sir Richard Southwood 1931-2005
British Journal of Entomology and Natural History, **19**, 128-131, (2006)
[Selected bibliography of 23 British Heteroptera publns.]

Bowdrey, J.P., 1999a
[Exhibit at 1998 Annual Exhibition.]
British Journal of Entomology and Natural History, **12**(3), p180, (1998)
[*Sticto. punct.*,23 Sep 1997, W Bergholt Hth, Essex (VC19, TL9527)]

Brooke, S.E., Nau, B.S., 2005b
[*Eysacoris aeneus* habitat in New Forest; some bugs of the Bedfordshire Greensand. Exhibit at 2004 annual exhibition.]
British Journal of Entomology and Natural History, **18**(3), p208, (2005)

Brown, J.M., 1925a
Hemiptera from North Wales.
Entomologist's Monthly Magazine, **61**, 62-63
[Llandudno, 43 spp inc: *Chl. evanescens* on *Sedum* at Conway, *Sigara moesta*]

Collins, A.R., Nau, B.S., 2006
The rare British shieldbug *Carpocoris purpureipennis* (DeGeer) (Het.:Pentatomidae) from Portland Bill, Dorset.
Entomologist's Record & Jnl of Variation, **118**, 31-33, (2006)
[Colour photo.]

Collins, A.R., Slade, D., 2006a
Two rare shieldbugs at Portland in 2005
Portland Bird Observatory Report, Report for 2005, pp 92-94
[*Eurydema ornata, Carpocoris purpureipennis*]

Cross, I., 2000
Eurydema dominulus (Scopoli) (Hem., Pentatomidae) new to Dorset.
Entomologist's Monthly Magazine, 136, p52, (2000)
[Weymouth gdn 1stApr1997 (SY670819). Later proved to be *E. ornata*]

Denton, J. S., 2001a
Ranatra linearis (L.) (Heteroptera: Nepidae) in flight.
British Journal of Entomology and Natural History, **13**, p243, (2001)

Denton, J. S., 2005a
Gerris lateralis Schummel (Hemiptera: Gerridae) in Hampshire.
British Journal of Entomology and Natural History, **18**, 4, p252, (2005)

Dickson, R., 2005
[Interesting bugs from Hants. Exhibit at 2004 annual exhibition]
British Journal of Entomology and Natural History, 18(3), p208, (2005)
[Eurydema oleracea, Nysius graminicola, Stictopleurus punctatonervosus]

Dolling, W.R., 1999
Europiella Reuter (Hem., Miridae) in Britain
Entomologist's Monthly Magazine, 135, 103-105, (1999)
[Description of E.decolorDwgs of apex of vesica: decolor, artemisiae & albipennis]

Eyre, M.D., Woodward, J.C., Luff, M.L., et al., 2005
Expanding northern ranges of aquatic invertebrate species: a possible effect of climate change.
British Journal of Entomology and Natural History, **18**(3), pp 219-222, (2005)
[5spp-: Hesp.moesta, Micr.scholtzi, Sig. stag., Ilyo.cim., Plea min.]

Gibbs, D., 2005a
[Tuponia mixticolor from Suffolk. Exhibit at 2004 annual exhibition]
British Journal of Entomology and Natural History, **18**(3), p208, (2005)
[Minsmere dunes]

Gibbs, D., Nau, B.S., 2005
Hypseloecus visci (Puton) (Hemiptera: Miridae)
British Journal of Entomology and Natural History, 18(3), pp159-162, (2005) [Somerset in ST5019 & ST3918, July2003]

Guest, J., Savage, A. A., Wallace, I., 2003
The freshwater bugs (Hemiptera: Heteroptera) of Cheshire.
Lancashire & Cheshire Entomological Society, **127**, pp10-22
[10km grid maps for 36 of 48 spp known from area, incl: Glaenocorisa, H. castanea, S.venusta , S.semistriata]

Harvey, M., 2006
The first records of *Gonocerus acuteangulatus* (Goeze) (Het.: Coreidae) in Buckinghamshire, and another Hampshire record.
Entomologist's Record & Jnl of Variation, **118**, p144,(2006)
[Beaten from evergreens in winter.]

Hawkins, R.D., 2005
[Some bugs from Surrey. Exhibit at 2004 annual exhibition]
British Journal of Entomology and Natural History, **18**(3), p208, (2005)
[Aphanus rolandri, Berytinus hirticornis, Buchananiella, Der.flavilinea]

Helden, A.J., Leather, S.R., 2005
The Hemoptera of Bracknell as an example of biodiversity within an urban environment.
British Journal of Entomology and Natural History, 18,4, pp233-252, (2005) [55spp from arboreal & grassland samples on road roundabouts, plus 34 spp collected randomly.]

Hodge, P. J., 1999
[Exhibit at 1998 Annual Exhibition.]
British Journal of Entomology and Natural History, 12(3), p180, (1999)
[Deraeo.flav., Forty Hall, Enfield(TQ3398, VC21);]

Hollier, J., 1999
The specialist Hemiptera associated with mistletoe.
British Journal of Entomology and Natural History, **12**, pp 237-238, (1999)

Hollier, J., 2006a
Host plant use by *Ischnodema sabuleti* (Fallén, 1826) (Heteroptera: Lygaeidae) in a dry grassland in southern Britain
Entomologist's Monthly Magazine, 142, p80, (2006)
[Vacuum samples from grassloand plots at Silwood Park, Berks.]

Jones, R. A. , 1999a
Nysius senecionis (Schilling) (Hemiptera: Lygaeidae) feeding in large numbers on Guernsey fleabane.
British Journal of Entomology and Natural History, **12**(4), pp229-231
[ca 100,000, brownfield site, Wandsworth (London) (VC17, TQ253752).]

Jones, R. A. , 2001
Further records of *Nysius senecionis* (Schilling) in the London area.
British Journal of Entomology and Natural History, **14**,1, p28

Jones, R. A. , 2005
[Some bugs from brownfield sites. Exhibit at 2004 annual exhibition]
British Journal of Entomology and Natural History, **18**(3), p208, (2005)
[London & Kent: Eurygaster maura, Stict.punct., Stict.abut., Scio.curs., Neott.pus., Syro.rhomb., Piesma quad., Myrmus mir., Der.flav.]

Kirby, P., 2000
Peritrechus gracilicornis Puton (Heteroptera: Lygaeidae) in West Cornwall.
British Journal of Entomology and Natural History, **13**, pp106-107
[*Peri. grac.* from 2 sites on Lizarde, 16th & 23rd Sep 1993: SW772277 (5 in compost heap), SW797233 (1 on *Plantago maritima* on sea cliff).]

Knill-Jones, S.A., 1999
[Exhibit at 1998 Annual Exhibition.]
British Journal of Entomology and Natural History, **12**(3), p180, (1999)
[*Enoplops scapha*, Freshwater, Isle of Wight 13 Oct 1998]

Littlewood, N.A., Dennis, P., Pakeman, R.J. & Woodin, S.J. 2006
Moorland restoration aids the reassembly of associated phytophagous insects.
Biological Conservation **132**, 395-404.

Littlewood, N.A., Pakeman, R.J. & Woodin, S.J. 2006
The response of plant and insect assemblages to the loss of *Calluna vulgaris* from upland vegetation.
Biological Conservation **128**, 335-345.

Lott, D., Butterfield, I,, Jeeves, M.B., 1999
Terrestrial invertebrates in site assessment: a local perspective.
British Journal of Entomology and Natural History, **12**(2), pp96-104, (1999)
[Leics., 4 Nationally Scarce & 1 locally notable species (no details).]

Miller, D.J.P, 2001
Deraeocoris flavilinea (A. Costa) (Hemiptera:Miridae), new to Britain.
British Journal of Entomology and Natural History, **14**, 133-136
[Descriptionh, key & photo. (n.b.Light & dark forms referred to are male & female.)]

Nau, B.S., 2005b
[*Naucoris maculatus,* Exhibit at 2004 annual exhibition]
British Journal of Entomology and Natural History, **18**(3), p208, (2005)

Nau, B.S., 2006
Notes on the bugs *Buchananiella continua* (Buchanan White) (Hem., Anthocoridae) and Kleidocerys resedae (Panzer) (Hem., Lygaeidae).
Entomologist's Monthly Magazine, **142**, p22, (2006)

Nau, B.S., Brooke, S.E., 2006a
Chlamydatus evanescens (Boheman) (Hem., Miridae), on the south coast of England.
Entomologist's Monthly Magazine, **142**, p40, (2006)

O'Connor, J. P., 2005
A catalogue and index of the publications of the Irish Biogeographical Society (1977-2004)
Irish Biogeographical Society Publication, **8,** 2005

Philp, E.G., 2005
Book review: "Provisional atlas of the British aquatic bugs (Hemiptera Heteroptera)' by T.Huxley.
British Journal of Entomology and Natural History, **18**, 4, pp289-290, (2005)

Philp, E.G., 2006
A further record of *Gerris lateralis* Schummel (Hemiptera: Gerridae) from Hampshire.
British Journal of Entomology and Natural History, **19**, p131, (2006)
[SU3737, Leckford Estate (Hants, N)]

Philp, E.G., 2006a
Deraeocoris flavilinea (A. Costa) (Hem., Miridae) and *Orsillus depressus* Dallas (Hem., Lygaeidae)in east Kent.
Entomologist's Monthly Magazine, **142**, p101, (2006)

Reid, S., 2006
A significant interception of the green vegetable bug, *Nezara viridula* (Linnaeus) (Hemiptera: Pentatomidae) in the UK.
Entomologist's Record & Jnl of Variation, **118**, pp123-125 (2006)
[Barnstaple, Devon, Feb 2005;132 adults in terracotta pots from Italy, 5 colour forms (colour photo).]

Shardlow, M., 1999
[Exhibit at 1998 Annual Exhibition.]
British Journal of Entomology and Natural History, **12**(3), p180, (1999).
[Hydrometra gracilenta, Catfield Fen, VC27, E.Norfolk]

Verdcourt, B., 1999
Gonocerus acuteangulatus (Goeze) (Hemiptera: Coreidae) in a house at Hame, Surrey.
British Journal of Entomology and Natural History, **12**(2), p91, (1999)
[In mid-Dec 1998, TQ174716, VC17; 'dazzlling yellow' dorsum when wings lifted; in captivity fed on cherry tomato.]

Whitehead, P. F., 2005d
Observations on the invertebrate coenoses of cypress trees in cultivation (Cypressaceae).
Entomologist's Monthly Magazine, **141**, p248
[Buchananiella, Empicoris vag., Anth.nmm., Orius vic.]

Whitehead, P. F., 2006
Orsillus depressus (Mulsant & Rey, 1852) (Hem., Lygaeidae) new to Worcestershire.
Entomologist's Monthly Magazine, 142, p52, (2006)

REGIONAL

Armitage, P.D., Walsh, E., Corbin, T., Blackburn, J., 2004
The environmental quality of the River Jordan (Dorset), assessed with macroinvertebrate data.
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