Het News

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Editorial:

It has been suggested that a cumulative index of Het News would be really valuable & pehaps one of our readers might be willing to undertake this public service. Is there someone out there who would consider doing this? If so please do get in touch.

Once again there is much of interest to report in this issue. In particular, the population of another very recent arrival has 'exploded', in central London, and we now have a name for the Oxford Wellingtonia bug.

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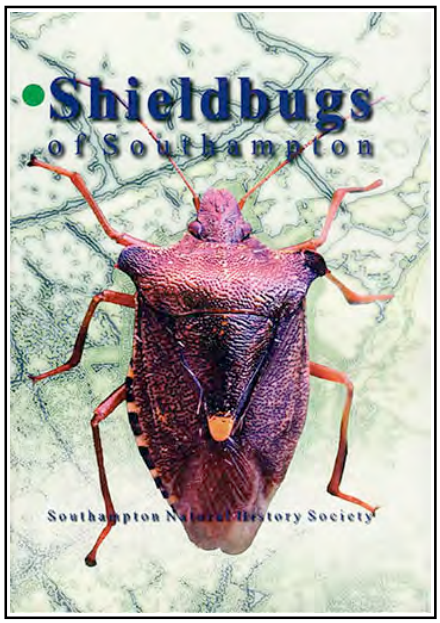
RECENT PUBLICATIONS

Book review: Shieldbugs of Southampton, by Anon
Published by *Southampton Natural History Society*, 2007, 48pp, 4 colour plates (60 photos, approx.)



Shieldbugs of Southampton: Contents

The contents list (see textbox) shows the scope of this A5-size publication of the Southampton Natural History Society. It contains all the information to get local naturalists started on recording the 25 or so species of shieldbugs. and related species, known from the Southampton area of southern England. It gives guidance on where and when to look, and how to identify these bugs.

The book is a collaborative work but, from the acknowledgements, it seems that the text was primarily the work of Andy Collins, Jason Claxton & Philip Budd - the title page and cover do not detail any authors, nor is there an ISBN number.

Each species has about half a page of text dedicated to it, information being grouped under the following headings: scientific name, English name, national status, local status & distribution, habitat, food, season, identification notes for adults and for last instar nymphs. Finally, for many species there is a detailed list of known sites, with dates, while for species with more than a few dozen records only the total number of records held in the Society's database is given. There are colour photos, taken from life, illustrating most of the species covered. These photos are perhaps more of an aid memoire than an identification aid, as they are quite small.

Much of the information is original information from the local area but good use is also made of up-to-date information from the wider literature.

This local publication shows the way for societies in other areas to follow.

BSN

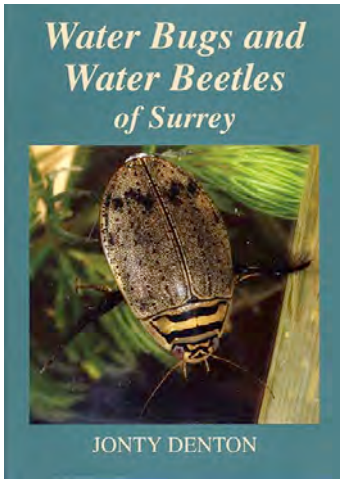
Book review: Water bugs and water beetles of Surrey, by Jonty Denton

Published by *Surrey Wildlife Trust*, 2007, 191pp, 32 colour plates (200+ photos). ISBN 978-0-9556188-0-2

This A5-size hardback book is similar in style to Roger Hawkin's shieldbug book from the same publisher. However it differs in an important respect, it is not an identification book but an atlas of the distribution of these insects in Surrey. It has the usual outline county map with tetrad dots marking the distribution of each species. Each species also has a short paragraph of text commenting on the distribution and, for scarcer species, detailing the county records.

The colour photographs are the big feature of the book, although quite small most are very clear. They illustrate each family and, for the beetles, include all the species distinctive enough to be identified from a photo - the few waterbug photos seem less succesful than those of the beetles.

BSN



ARTICLES

Non-native Heteroptera associated with imported plant material in England during 2006 & 2007

Chris Malumphy & Sharon Reid

Exotic heteropterans are regularly dispersed between countries as a consequence of international plant trade. Seventy-six samples containing heteropterans were found in association with imported plant material by the Plant Health and Seeds Inspectorate in England between January 2006 and September 2007. The samples originated from 27 countries and contained approximately 25 taxa although the majority consisted of eggs, or early instar nymphs and could not be identified to species rank. In addition capsid/mirid feeding damage (Fig. 1) could not be identified to species. The most notable non-native species are discussed below.

Two of the most commonly collected species were the 'pieris lace bug', *Stephanitis takeyai* Drake & Mao (Tingidae) and the 'green vegetable bug', *Nezara viridula* (Linnaeus) (Pentatomidae). Both species have become naturalised in England and were discussed by Reid (2005, *Het News* **6**: 11). *Nezara viridula* is a well-documented example of a species once restricted to the Mediterranean and central Europe that has recently expanded its range into more northerly latitudes presumably due to climate change.

Two species that may become established in Britain in the future are the 'platanus lacebug', *Corythuca ciliata* (Tingidae), which has already been discussed by

Malumphy & Reid (2006, *Het News* **8**: 8), and the 'western conifer seed bug', *Leptoglossus occidentalis* Heideman (Coreidae) (Fig. 2), collected by Bob Ford at Weymouth College in early 2007. *Leptoglossus occidentalis* is a severe pest for conifer seed orchards, and can be a public nuisance when large numbers of adults suddenly invade houses looking for overwintering sites. Both of these Nearctic species were first recorded in Europe in Italy.

Several non-native species of heteropteran have been intercepted on imports from Africa, for example, the coreid *Clavigralla* sp. (Fig. 3), the lygaeids *Macchiademus diplopterus* (Distant) (Fig. 4), *Lygaeus* sp. (Fig. 5), and *Naphius apicalis* Dallas (Fig. 6), the mirid *Lygocoris* spp. and the pentatomids *Antestiopsis* sp. (Fig. 7) and *Carbula ?litigatrix* Kirkaldy.

Eggs and nymphs of *Clavigralla* sp. (Fig. 3) were found on two consignments of pigeon peas imported from Kenya; several species are recorded as pests of this host in sub-Saharan Africa. The grain chinch bug, *M. diplopterus* (Fig. 4), is frequently transported in international trade and was intercepted on six occasions with plum, nectarine, orange and apple fruit imported from South Africa. It is endemic to Southern Africa, where it feeds on wild grasses and grain crops, primarily wheat. During spring, when the wheat is harvested and the grasses start drying out, the adults move to shelters, such as under the bark of bluegum trees, where they become quiescent until the following winter. In areas where wheat is grown together with fruit, these bugs seek shelter in orchards. They crawl into the calyx end of rosaceous and citrus fruit and are accidentally exported with these commodities. Two other Lygaeids, *Lygaeus* sp. (Fig. 5) and *N. apicalis* (Fig. 6) and were found on bitter melon imported from Kenya. A *Lygocoris* sp. was found on aubergine from Kenya. A colourful antestia bug, *Antestiopsis* sp. was found on cut proteas (*Leucadendron argenteum*) from South Africa (Fig. 7) and *Carbula ?litigatrix* on peas from Zambia.

The 'dusky cotton bug', *Oxycarenus laetus* Kirby (Lygaeidae) was found in association with guava fruit imported from Pakistan. This polyphagous species, with a preference for the seeds of malvales, occurs widely in Asia and is an important pest of cotton in India.

David Rider of North Dakota State University identified an adult of *Podisus maculiventris* (Say) (Fig. 8) intercepted on watercress from the USA. It is a very common predatory stinkbug that occurs throughout the United States. It feeds on many different hosts, and has been studied as a biological control agent for various pest insect species.

Finally, coreid eggs continue to be frequently intercepted, most commonly on bitter gourd from the Dominican Republic and India.

Any suspected non-indigenous plant pests should be reported to your local *Defra Plant Health & Seeds Inspector* or to:

PHSI Headquarters, York
Tel: 01904 455174,
E-mail: planthealth.info@defra.gsi.gov.uk).

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Fig. 1 Capsid/mirid feeding damage on apples from South Africa. © 2007 CSL

Fig. 2. *Leptoglossus occidentalis*. © 2007 CSL

Fig. 3. *Clavigralla* nymph on pigeon peas from Kenya. © 2007 CSL

Fig 4. *Macchiademus diplopterus* on citrus fruit from South Africa. © 2007 CSL

Fig 5. *Lygaeus* sp. on *Momordica charantia* from Kenya. © 2007 CSL

Fig. 6. *Naphius apicalis* on *Momordica charantia* from Kenya. © 2007 CSL

Fig. 7 *Antestiopsis* sp. on *Leucadendron argenteum* from South Africa © 2007 CSL

Fig. 8 *Podisus maculiventris* on watercress from USA © 2007 CSL

The Meadow Lane mystery … strange behaviour of corixids

Sheila Brooke & Bernard Nau

In the valley of the River Great Ouse, just east of Bedford, there is a worked-out gravel quarry called Meadow Lane Quarry. This has been flooded since excavation ceased in winter 2005/2006. We visited this site on a number of occasions over the last year as it has produced some interesting corixids, notably *Cymatia rogenhoferi* (1st British) and *Sigara iactans* (another recent arrival in the country).

On the afternoon of 28th August 2007 we visited the site again and found that the site had been 'reprofiled'. Before excavation of the gravel, the over-burden was cleared away to expose the gravel, by bulldozing it to form a ridge along the edge of the site. The ridge was about 5 metres high and had acquired a dense growth of weeds. A few weeks prior to our latest visit this ridge had evidently been bulldozed and spread out across about 20m of the former beach and shallows of the lagoon, to form a new beach & shallows with a clayey substrate.

The photos show the site a year ago and as it was after this treatment. In the former, the ridge is visible near the top right.

We did not expect to find corixids here after such recent drastic changes to the habitat but in fact, there was already a considerable population of nymphs and adults of several species. These were on the bare clay-

like substrate of the transparent vegetation-free water of the new shallows. We then noticed a number of moribund corixids floating on the surface. On netting and handling these they became active but on returning to the water, they floated and either remained motionless or swam on the surface in small tight circles about 2cm diameter. We then noticed other corixids, a few cm below the surface, also swimming in tight circles. A large water-beetle on the surface behaved similarly, so the phenomenon was not confined to the bugs.

The number of bugs amounted to some dozens along about 20m of shoreline and comprised several species, mainly *Corixa panzeri*, *C. dentipes*, *Paracorixa concinna*, *Cymatia rogenhoferi*.

It was as if the insects were uncontrollably buoyant, for some reason we did not understand. We have no explanation for this phenomenon other than possible pollution, although none was apparent. The water originates from the underground water-table. The site is a few 100m from the river and is also near a modern sewage purification works, beyond the river. Over the previous month or so the weather was mild with heavy showers and before that there was a month of hot sunny weather.

Have any readers observed such behaviour, or have an explanation?

Excursions into East Anglia in 2006 & 2007

John Widgery

The following observations arose during trips back to the east of England after recently moving home from Hertfordshire to the west of England, Gloucestershire.

In 2006 & 2007, September visits to Lakenheath RSPB bird reserve on the edge of the Suffolk Brecks (TL7286) produced a distinctive group of species. I suppose, these would not be considered particularly unusual for the Brecks were it not for the fact that there is now only an extremely small amount of breckland sand-heath habitat remaining at this site. The text box shows the species. The small area of this habitat has recently been further reduced by the building of a visitor centre with associated car park and picnic area, together with the ensuing increased public usage.It is for conjecture whether the bugs will survive at this site in the long term.

On a more positive note, week-long visits to the North Norfolk coast, in September of both years, produced another interesting group of species, from more diverse coastal habitats, but with a future that seems more assured.

Lakenheath breckland species:

Saldidae	*Saldula orthochila*
Nabidae	*Nabis pseudoferus*
Reduviidae	*Coranus subapterus*
Lygaeidae	*Nysius ericae*
	Trapezonotus arenarius
Coreidae	*Arenocoris fallenii*
Alydidae	*Alydus calcaratus*

Particularly significant was the discovery here of *Spathocera dahlmanii* on established dunes at Blakeney Point (TG0046), This is possibly the most northerly record of this species in the UK.

Rhopalus parumpunctatus seems to be fairly widespread in the area as it turned up at Salthouse Heath (TG0747), Holkham Gap (TF8845) and Holme Dunes (TF7144).

It was interesting to see the two *Stictopleurus* spp and *N. senecionis* this far north, these only having recently established themselves in the south of England and are still spreading northwards.

Orthotylus rubidus, a designated BAP species, was found behind the shingle beach at Cley-next-the-Sea (TG0445). It was on glasswort (*Salicornia* sp.) colonising brackish muddy silt resulting from the reconfiguration & widening of flood channels by the Environment Agency within the last two years. Although no doubt present nearby previously, it is encouraging that a highly specialised species such as this is capable of colonising a new area so quickly.[It was well established on brackish seepage pools about 2km to the E, at Salthouse Beach.(ed.)]

Finally some unusual Norfolk observations of a common and widespread arboreal lygaeid, *Kleidocerys*

resedae. Firstly, I swept one from grass on the dunes of Blakey Point (TG00460) then, on another day, a specimen landed on me me at the beach at Titchwell (TG0544) In both instances the nearest suitable hosts were about 2km distant. Also, on the latter occasion several Red Admiral butterflies (*Vanessa atalanta*), a regular migrant to Britain, were seen coming ashore over the sea. This raises the possibility that the *Kleidocerys* were also migrants! I seem to recall too that some years ago *K. resedae* turned up in an air-sampling insect-trap. Does anyone else have any evidence of this species migrating?

Address:
12 Bushcombe Close, Woodmancote,
Cheltenham. Glos GL52 9HX

North Norfolk coast species:

Miridae	*Stenodema trispinosa*
	Orthotylus rubidus
Anthocoridae	*Brachysteles parvicornis*
Nabidae	*Nabis ericetorum*
Reduviidae	*Coranus subapterus*
Lygaeidae	*Nysius senecionis*
	Microdema micropterum
	Trapezonotus arenarius
Rhopalidae	*Rhopalus parumpunctatus*
	Stictopleurus abutilon
	S. punctatonervosus
	Chorosoma schillingi
Coreidae	*Spathocera dahlmanii*

Further observations on two species of genus *Lygus* in Britain

Paul Whitehead

The difficulties in identifying British *Lygus* have been mentioned for long by a variety of authors. This note makes further observations on *Lygus pratensis* (L., 1758) & *Lygus wagneri* Remane, 1955, & in the light of their continuing range changes commented on by Nau (2004, *Het. News.,* **3**:11), supports much of what has gone before. The breeding niche of *L. pratensis* has been confirmed in Worcestershire & it is hoped that comparable studies may be made there for *L. wagneri*.

During 2007 *L. pratensis* was confirmed breeding in Worcestershire for the first time, in the Evesham area (PFW., pers. obs.). Kirby (1992, *U.K. Nature Conservation* **2**), in a monograph packed with ecological information, refers to *L. pratensis* as a largely woodland insect in Britain. This may, up until then, have been a microclimatic response of the type sometimes observed at northern range edges. In the Evesham area, *L. pratensis* has recently colonised open weedy fields with the asteraceous Bristly Oxtongue *Picris echioides* L. confirmed as the host plant during September 2007. Adults, as dispersing pre-hibernants, were also observed during September 2007 in the Bredon area of Worcestershire (VC37 SO93 14m O.D.) on seeding Stinging Nettle *Urtica dioica* L. on an open floodplain.

In 2006, during work for the Countryside Council for Wales, I observed relatively large reddish pre-hibernant *Lygus* around ancient woodland edges near Usk (VC35 SO49 110-125m O.D.) during October. I called these *L. wagneri*. Most of them were generally reddish or reddish-brown, although one should be prepared to accept this as a seasonal pigment change, most literature seen up to now making no reference to seasonal or maturation pigmentation changes in the genus. Later in 2006 I observed a pre-hibernant *L. wagneri* feeding on the developing seeds of the cultivated shrub *Caroypteris x clandonensis* Simmonds along the Cotswold Hill footslopes in south Worcestershire (VC37 SP13 101m O.D.), & other pre-hibernants in woodland on the Malvern Hills (VC37 SO74 310m O.D.) on 28 October 2006.

To separate *L. pratensis* from *L. wagneri*, Woodroffe (1966, *The Entomologist*, **99**:201-206) used the relative lengths of their wing-membrane cells. The implication from this is that *L. pratensis* may be longer & narrower than *L. wagneri* & this is confirmed. Some Worcestershire *L. pratensis* are notably relatively narrow & elongate in relation to the Welsh *L. wagneri*, but this may also be somewhat subjective. One or two isolated dispersed *L. wagneri* found on *Urtica dioica* on the Cotswold Hills on 14 October 2007 (VC33 SP03 190m O.D.) were much paler & noticeably longer & narrower than the Welsh specimens referred to. It is not clear to me whether this is a metapopulation feature or within normal infraspecific variation, but the specimens seen were thought to be not long moulted which may explain their colouring. Very distinctively marked examples of mature adult *L. wagneri* were found on *Urtica dioica* beneath the Cotswold Hills at Broadway (VC37 SP03 77m O.D.) on 23 October 2007. These were strongly variegated with irregular dark brown fasciae running across the hemelytra which were paler basally. The pronota of all five specimens found were longitudinally striped with orange bands & these are undoubtedly from a population that developed locally.

The relative hairiness of the corium (Nau, *op. cit.*) appears to stand well as a distinguishing feature & is supported in particular by the *L. pratensis* from Evesham. The Welsh *L. wagneri* from near Usk (<10 individuals) show some minor variation in this regard but tend to confirm the *L. wagneri* expectation. Woodroffe (*op.cit.*) illustrated the aedeagal spicules stating that for most species they were diagnostic. To attempt to further establish the identity of the Welsh specimens I dissected the aedeagus of a mature male, cleared it in Euparol & set it on a blob of Euparol; in this way the structures can be rotated in a quest to observe the spicule which is located medially within the aedeagus. To do this one requires optical equipment magnifying about 100x in high illumination, the operation being somewhat onerous & time-consuming

for a large sample. On this basis, in conjunction with the hair disposition at the apex of the corium (but nothing else), I was able to support the ascription of the Welsh specimen to *L. wagneri*.

The real difficulties in separating these two sympatric mirids are mirrored by that of two sympatric arboreal beetles, *Melanotus villosus* (Geoffroy in Fourcroy) & *Melanotus castanipes* (Paykull), which, to confirm their distinctness & differences, recently required study at a molecular level.

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Pershore, Worcestershire WR10 3EH

Summary

- *Lygus pratensis* & *L. wagneri* are becoming expansive in the English midlands & Welsh Marches; *L. pratensis* is pratincolous.
- Adult *L. pratensis* may be somewhat longer & narrower than adult *L. wagneri*, but this is indicative only, & a range of specimens will need to be compared.
- The relative hairiness of the apex of the corium remains the single most useful somatic feature to aid identification; the shape of the aedeagal spicule is useful for diagnosing males.
- Colour & its disposition probably never have any diagnostic significance.
- *Lygus pratensis* **may** prove to be a relatively more lowland species, & *L. wagneri* a relatively more upland species, as their ranges expand.

A statistical overview of Heteroptera recording in Bedfordshire, 1996-2006

Bernard Nau

Bedfordshire is one of the smaller English counties, it has an area of about 1200 km^2. The solid geology is quite diverse with significant areas of Chalk, Gault Clay, Lower Greensand, Oxford Clay, calcareous Boulder Clay, & river gravels. It is traversed by one sizeable river, the R. Great Ouse, plus several tributaries.

As Recorder for Heteroptera of the Bedfordshire Natural History Society, for each year since 1972 I have published a report on my year's Heteroptera recording in the county of Bedfordshire (Vice County 30), for publication in the society's annual journal, *The Bedfordshire Naturalist*. In last year's report I gave a 10-year summary table for the county's Heteroptera, showing the annual recording effort in terms of site-visits & the results of that effort in terms of number of species recorded & number of species new to the county. The table is reproduced below.

'Records' are defined here as the number of species recorded during a visit to a site. However from 2001 onwards, I used 'sub-sites' in my database, and thereafter a species seen at several 'sub-sites' during a visit to a 'site' is counted as several 'records'. A sub-site in this context is typically a large proportion of the geographical site, often a distinct habitat but not a 'microhabitat'.

The number of 'site-visits' appears lower in 2006 than in 2005, the reason for this is mainly because light-trap material (from Cockayne Hatley) had not been processed at the time of compilation of the table. Notwithstanding this, the records total for 2006 is well above average, as is the number of new species.

After the table was compiled another species new to the county (and to Britain) was found, when the Cockayne Hatley light trap material was processed.

The British List currently stands at about 588 species. Thus the Beds species total is about 65% of of the British List and the average annual species total is 36% of the latter. The increase in number of species from 1996 to 2006 was 11%, many of which are believed to be attributable to species spreading northwards due to shorter milder winters.

Table 1 Heteroptera recording in Vice-County 30, Bedfordshire, 1996-2006.

Year:	11 yr mean	**2006**	**2005**	**2004**	**2003**	**2002**	**2001**	**2000**	**1999**	**1998**	**1997**	**1996**
Beds.Nat. #	—	*61*	*60*	*59*	*58*	*57*	*56*	*55*	*54*	*53*	*52*	*51*
Site-visits	100	79	135	76	105	109	166	115	90	85	83	57
Records	815	868	863	864	926	1261	870	578	775	774	570	616
Year's spp	209	211	221	226	221	239	222	187	215	220	180	158
New Beds spp	4.5	8	3	0	3	3	4	6	6	2	2	13
VC spp	—	383	375	372	372	369	366	362	356	350	348	346

Some observations and thoughts on the *Platanus* feeding *Arocatus 'roeselii'* (Lygaeidae) established in London.

Max Barclay

In March 2007 I collected an adult and a small nymph of an unfamiliar lygaeid bug in leaf litter on the path leading to the Natural History Museum's 'Wildlife Garden' (VC21: TQ2679). The garden is a small area to the west of the museum planted with a wide variety of native vegetation, and with several extremely large London Plane trees (*Platanus* x *hispanica*). It is adjoined by a small formal area recently planted with standard ornamentals (*Photinia, Lavandula* etc.) at the entrance to the new zoology building. On further visits to the garden in May I found the bug to be very common, on a wide variety of vegetation and crawling on vertical surfaces, in both the 'natural' and artificial areas.

In May, Nau & Straw (2007) published records, including a photograph, of what was clearly the same bug, collected in November 2006 at Regent's Park (TQ28) and April 2007 at Gray's Inn (TQ38), identified as *Arocatus roeselii* (Schilling) based on Pericart (1998); they mentioned an observed association with *Platanus*, which is entirely credible for the Natural History Museum population, as the whole area where the bug occurs is overshadowed by huge *Platanus*, which must, in terms of biomass, be the dominant vegetation of the wildlife garden, and contribute more than any other plants to the garden's humus/ litter layer. In summer the trees produce seed balls and numerous seeds which cover the ground and vegetation beneath; the seeds are also carried short distances by the wind, and dispersed over the surrounding area. They are little utilised by insects.

In August and September 2007, while beating and sweeping in the Wildlife Garden, the *Arocatus* was found in extraordinary numbers, more individuals being seen than of any other species of insect; it was not uncommon to have 20 or 30 individuals on a beating tray (along with dozens of plane seeds) while beating vegetation beneath the plane trees. The adults fly extremely well, and in warm weather will fly from the beating tray, or even take flight when displaced from vegetation, an unfamiliar behaviour for Lygaeidae. It is suspected that very large numbers are present in the inaccessible canopy of the plane trees, and those found in the gardens below are just a subset of this population.

The bugs climb up any vertical surfaces that they come into contact with, and hence will gather on the tops of items like pillars, fenceposts etc. It is usual to observe specimens of this bug on the outside of all seven floors of the zoology building. It is also common for individual adults to fly through the upstairs windows of the office areas of the Natural History Museum during the day; this was observed from July to November.

In October the bugs were still extremely abundant, though a large proportion of them had transferred from the general vegetation to ivy growing on the plane trees, where presumably they will overwinter. Adults and nymphs have been noted together in every month from March to October, and in August all developmental stages (5 recognisable nymphal stages and adults) were present synchronously, although adults were apparently less abundant than in other months.

Bugs in the final two instars are greyish beige, but in earlier stages the abdomen is bright red. By mid October only a few 5th instar, and even fewer 4th instar bugs were present, the vast majority of specimens being adult. Some 5th instar nymphs collected for examination on the 9th of October all moulted the following night. It seems likely that only adults overwinter, but if this is the case, the presence of a small nymph in March suggests that breeding begins early in the spring.

From July onwards adult bugs were noticed in other areas of London, including Chelsea Embankment (TQ2777), Fulham Road (TQ2678), Imperial Wharf (TQ2676) and Eelbrook Common (TQ2576). All the sites reported here are in VC21 (Middlesex) but considering the flight capability of this insect, and the proximity of some of these sites to the river, it should certainly be looked for in VC17 (Surrey) and probably further afield. Apart from natural dispersal by flight, this bug is probably spread artificially, for example by street cleaners who collect huge quantities of the *Platanus* seeds and foliage from the roadsides and pavements for disposal elsewhere.

It is interesting to note that the gorse bushes beneath the plane trees in the wildlife garden, which contained hundreds of this bug in October 2007, did not yield any specimens at all when beaten in October 2006; to my knowledge no specimens of this conspicuous insect were noticed in or around the museum in 2006.

I have not been able to match the London bugs, with certainty, with any of the species of *Arocatus* represented in the Natural History Museum's collections. I agree with Nau & Straw (2007) that it very closely resembles *A. roeselii*, and using Pericart's (1998) key to the Euro-Mediterranean fauna, both adults and final stage nymphs of the London population key to this species. However, there are subtle but consistent differences between the central European specimens of *roeselii* that I have seen, and the London material. The central European specimens are more strongly marked, and, in spite of being 100 or more years old, are a much brighter red than the London specimens.

In an attempt to identify the London population I took some to Petr Kment at the National Museum in Prague, Czech Republic. He showed me his central European material of *roeselii*, which were brightly coloured and resembled the European specimens in the NHM collection, but he also showed me a single specimen from Nice, (Southern France), collected from *Platanus* in 1991, which was identical to the London material.

Pericart (1998) mentions that *roeselii* has for a long time been strongly associated with alders (*Alnus*), but

that in Provence and the Paris region it is associated with *Platanus*. It is therefore interesting that Petr Kment's specimen from *Platanus* in Nice (Provence) has been the only specimen I have seen that has matched the London material. Petr Kment was also aware of the differences between the typical '*Alnus*' form and the '*Platanus*' populations.

Pericart (1998) describes *roeselii* as 'quite rare' and it is surprising that an insect generally considered to be uncommon should suddenly appear in enormous numbers in such a short time; such huge, sudden, populations remind one of adventive species rather than long term members of the European fauna. Pericart (1998) states that the *Platanus* '*roeselii*' is subject to considerable fluctuations in population, citing an account by Carayon that the bugs existed in thousands between 1966 and 1969, and in subsequent years became very rare.

It is possible that, if it is *roeselii*, by making the host switch from *Alnus* to *Platanus* it has entered a vacant ecological niche, or escaped some constraint, that has allowed it to become much more abundant and invasive. This hypothesis may also explain the slight morphological differences noticed between the '*Platanus'* and '*Alnus'* forms, if the founders that made the original switch to *Platanus* carried only a subset of the genes for the full spectrum of variation. The account above from Provence implies that any 'escape from a constraint' may be only temporary, and it will be interesting to track the fate of the London population.

The other possibility, of course, is that the '*Platanus*' population is not *roeselii* at all. The tree genus *Platanus* is widespread throughout the temperate Northern Hemisphere, including in the Eastern Palaearctic, and into Laos and Vietnam, as well as in North America. The genus *Arocatus* is also widespread, with species from much of the Palaearctic as well as China, India and Australia.

It is not uncommon for undescribed, invasive insects of unknown origin to appear in the Western Palaearctic, and there are several cases where they have become abundant here. Famously, the Horse Chestnut Leaf Miner *Cameraria ohridella* (Lepidoptera: Gracillariidae) was described in 1986 from Macedonia (Deschka & Dimic, 1986) and is now extremely numerous over much of Europe. Schülke (2006) describes three new, adventive staphylinid beetles now established in Western Europe, at least one of which was for some time confused by entomologists with a European species, which was thought to have 'changed its range'. It is necessary to be open to the possibility that the bug in question is a *Platanus* feeding species from outside Western Europe, related to, but not conspecific with, *Arocatus roeselii*.

The status of the *Platanus*-feeding populations presently attributed to *Arocatus roeselii* is therefore in need of further study, morphological or molecular. In addition to the hypotheses discussed above, there is a third possibility, that it is a hybrid between *A. roeselii* and the *Platanus* feeding *A. longiceps* Stål, but I do not consider this to be particularly credible.

Whatever its origin and status, this bug has apparently shifted from Provence to the Paris region and now to London. As *Platanus* is one of the most widely planted street trees in the temperate cities of the world, and the bug has demonstrated its ability to thrive in urban environments, flies readily, and reproduces rapidly, it has great potential to expand its range still further, and should be looked for wherever plane trees are planted, in Europe and beyond.

Acknowledgements

Many thanks to Petr Kment, Howard Mendel, Darren J. Mann & Mike Morris for useful discussions, & to many colleagues for accompanying me on trips to the garden.

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Address :
Maxwell Barclay, Department of Entomology,
The Natural History Museum, London SW7 5BD.

REQUEST

To assist with a publication Paul Whitehead would welcome the opportunity to examine specimens of *Peritrechus* (Lygaeidae) from western Greece & in particular from the Ionian archipelago, ideally, but not necessarily with habitat data. Please send specimens to P. F. Whitehead, Moor Leys, Little Comberton, Pershore, Worcestershire WR10 3EH, England (paul@moorleys.freeserve.co.uk) indicating whether they are loans or gifts and providing any deadlines for their return.

Please send contributions for the next issue by 30th April 2008

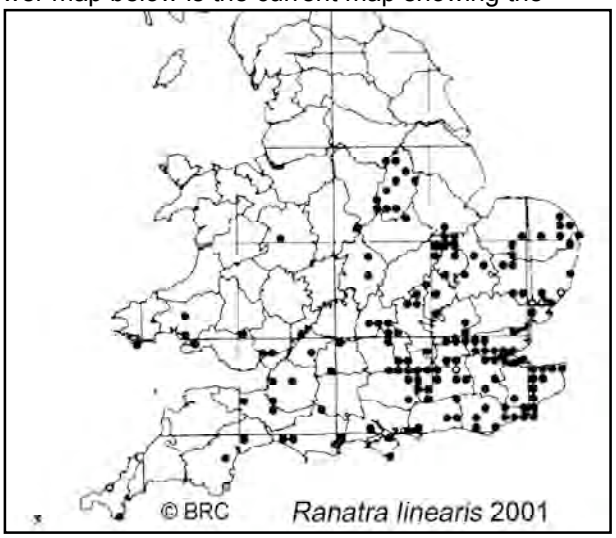
SPECIES REPORTS

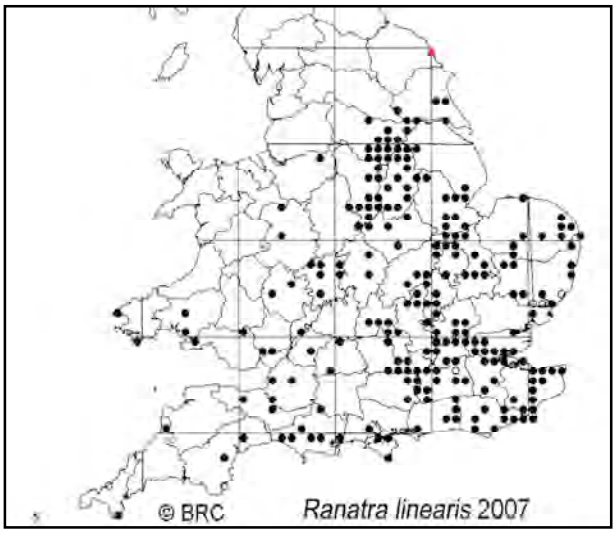
***Ranatra linearis* moving northwards, again!**

Sheila Brooke — Richard Shilaker very kindly sent the following excerpt from the website of the Scarborough Field Naturalists' Society:

> "I held a pond dipping activity on Saturday 18 September at Throxenby Mere (TA0088) and we were lucky enough to find a Water Stick Insect. This is the second time we have found one as I did a similar event last year and found one then too. I read that you don't usually find it in this part of the country…..so I thought is was worth a mention."
>
> **Helen Percival**
> Community Involvement,
> Scarborough Borough Council , N Yorks

This is the most northerly *Ranatra linearis* record I know of, previous sites being just north of the Humber Estuary, and at Skipwith Common near Selby. Below are 2 distribution maps, the first is that published in the *Provisional atlas of the British aquatic bugs (Hemiptera-Heteroptera)* by Thomas Huxley (BRC, 2003) which includes records up to July 2001. The lower map below is the current map showing the position of the new record in red. This bug had progressed about 50km north since 2001 but with this record its advance is about 100km in 5 years, if we count the 2006 at Scarborough. In another 5 years it will be knocking at Scotland's door.





SEE

Pantilius tunicatus (MIRIDAE)

Newsgroup dialogue: hets@yahoogroups.com

Joe Botting : Along the banks of the Wye in Hereford in mid-September I found *Pantilius tunicatus*, a most striking bug. For something so obvious, I note that the NBN records are remarkably sparse, especially as S&L commented that it was widespread across the country. I can't find any records for Herefordshire at all on the web. Is this a species that is declining dramatically? Is anyone studying it?

j.botting@nhm.ac.uk

Jerry Bowdrey: I found *Pantilius tunicatus* at the weekend (September) at Tendring in North Essex. It's the first time I've found it in my home county, though I'm not sure of its status here.

jerry.bowdrey@colchester.gov.uk

Colin Plant: I find it sparingly in Essex, Jerry - I don't think it is common, but I do think it is widespread.

cpauk1@ntlworld.com

Peter Hodge: *Pantilius tunicatus* is pretty common here in East Sussex, on hazel and alder. It never matures before the end of August. Interestingly I caught the bus into Lewes on Friday afternoon and there was one crawling on the window. As we approached Lewes it fell onto a person's shoulder. I followed him down the High Street for a while and it was still there when he disappeared down a side street. An interesting example of how humans can assist insects to migrate!

Peter.J.Hodge@tesco.net

Bernard Nau: *Pantilius tunicatus* is widespread & common on Alder, Birch & Hazel in the British Isles. In spite of being a large and striking species it is much overlooked because of its late season, mainly September-October.

nauhet@btinternet.com

Sheila Brooke: Maybe you have some observations from your part of the country?

brooke.aquahet@btopenworld.com

***Orthotylus caprai* Wagner,1955** (MIRIDAE)

Bernard Nau — The note in the last issue, on the unidentified *Orthotylus* from Wellingtonia trees in Oxford, stimulated a response from Berend Aukema drawing attention to the likelihood that these bugs are *Orthotylus caprai* Wagner, 1955. Rob Ryan has now prepared a formal paper for publication in the *Ent. Mon.Mag.* on this basis. Here I will confine myself to some remarks on the pubescence and relationships.

In Wagner's, 1973, 3-volume monograph of the Mediterranean Miridae, there is a brief description of *O. caprai* and drawings of the parameres, based on a male found on the island of Sardinia. His drawing resembles the parameres of the Oxford bugs, although differing in some details.

O. caprai is also listed in the 'Palaearctic Catalogue' with additional references, including Carapezza's 1997 *Heteroptera of Tunisia* – hence one may conclude that this species is probably now known from Tunisia too, although I have not examined this publication. The Pal.Cat. also states that the type specimen, from Sardinia, is lodged in the Museo Civico di Storia Naturale, Verona, Italy.

In Wagner's 1973 work, his key to *Orthotylus* species divides the genus into 6 sub genera and he places *O. caprai* in subgenus *Orthotylus*. This assignment is based mainly on the the colour of the dorsal pubescence; in this subgenus all semi-erect hairs are said to be whitish or whitish yellow, while adpressed hairs are either absent or brownish.

Wagner next divides subgenus *Orthotylus* into 5 groups, placing *O.caprai* in the *nassatus*-group alongside such British species as *O. nassatus, O. viridinervis, O. prasinus* & *O. ochrotrichus*. A characteristic of the *nassatus*-group is that all hairs of the upperside are pale.

It is noticeable that the four British species mentioned, are significantly larger & more elongate species than the Oxford bugs, typically about 5 mm in length whereas my Oxford males average 3.0mm and females 2.8mm. Furthermore, the pubescence of my Oxford material is not consistent with that of Wagner's subgenus. A conspicuous feature of the foreparts and corium of most of my Oxford specimens is the presence of quite dense long dark semi-erect hairs, as well as more or less prone fine yellowish hairs. The dark hairs appear blackish in diffuse tangential illumination, although browner in one female (a number of my specimens have only a few hairs of either type remaining, the majority apparently having been lost by abrasion).

The Pal.Cat. places *O. caprai* in subgenus *Parapachylops* Ehanno & Matocq, 1990. The type of this subgenus being *Orthotylus armoricanus* Ehanno & Matocq, 1990 (Pal.Cat. treats this as one of many sub-species of *O. junipericola* Linnavuori). '*O. armoricanus*' was found in 1985 by beating *Thuya* (mixed with *Tamarix*), on the coast of Finisterre, in NW Francei. In 1990 it was described as a new species (Ehanno, B. & Matocq, A., *Bull. Soc. Ent. Fr.*, **94** (9-10), pp265-272); the authors show drawings of the parameres and these differ considerably from those of *O. caprai*.

Ehanno & Matocq's definition of subgenus *Parapachylops* relies on the colour of the pubescence (semi-erect brown or dark brown hairs) and details of the genitalia. The Oxford material does not fit comfortably within this definition any more than in Wagner's subgenus.

I am led to the conclusion that the most appropriate existing subgenus for *O.caprai*, based on Oxford material, is *Melanotrichus* Reuter, 1875. As presented in the Pal.Cat. this subgenus contains three British species: *O. flavosparsus*, *O. moncreaffi* & *O. rubidus*. These are much closer in appearance, size & pubescence to the Oxford material.

Himacerus apterus (NABIDAE)

Newsgroup dialogue: [hets@yahoogroups.com]

On 08.viii.2007 and 10.ix.2007 at Epsom Racecourse (TQ223572), V17, I recorded a series of *Himacerus apterus* - not an uncommon find. However, within the series was a long-winged male individual, the wings extending beyond the tip of the abdomen. Southwood (1959) states that; "...occasionally...specimens occur with the membrane reaching to the end of the abdomen, but this condition is more frequent in females than in males...". Presumably this is an adaptation for dispersal when a population becomes overcrowded. I wondered if other members had encountered this macropterous form in males? As Southwood suggest, I would expect to see this in females but no macropterous females were observed on either visit.

Scotty Dodd, jaapiella@yahoo.co.uk

I have no macropterous *H. apterus* but I do have a male *H. mirmicoides* macropter.

SEB: brooke.aquahet@btopenworld.co

Heterogaster urticae (LYGAEIDAE) **- 'late'!**

Paul Whitehead — Whitehead (2007, *Entomologist's monthly Magazine*, **143**: 137-140) supported the claimed contention that *Heterogaster urticae* (F.) is not frequently observed on its usual host-plant Stinging Nettle, *Urtica dioica* L., much after the end of August despite the comment in Southwood & Leston (1959, *Land and water bugs of the British Isles*).

Lygaeids respond sensitively to climatic trends over a variety of time-scales. During 2007 exceptional rainfall in the English midlands on 20 July had a profound impact on both animals and plants, with a subsequent proliferation of fungi. Invertebrates were impacted on not only by prolonged inundation, but also by the volume of rain, as well as by surface sheet run-off. In recent years many Hemiptera have been favoured by extended settled autumns, enabling further generations of adults to be produced. In this regard 2007 is happily proving to be no exception.

On 30 September 2007, I chanced upon a thicket of Stinging Nettle above Elmley Castle (VC37 SO94 265m O.D.) on the biologically renowned slopes of Bredon Hill. The nettles had grown slowly on well-drained minerogenic sediments brought up by rabbits from a maze of warrens. They had then been topped by cattle which had caused some retardation of flowering, followed on by a great proliferation of flowers and seeds which attracted visiting *Acanthosoma haemorrhoidale* (L.), breeding *Palomena prasina* (L.),

and still supported at least 11 *H. urticae* on that date. Five of these were fifth instar nymphs and three were third instar nymphs, confirming that in particular circumstances, development will continue well into October, long after the first of the adults to overwinter have secured their niches. Then, on 24 October 2007, I found five adult *H. urticae* on *U. dioica* in my garden in Little Comberton (VC37 SO94 30m O.D.) with a single depauperate fifth instar nymph measuring 3.9mm in length. During the summer these nettles had been completely submerged by torrential flood water, and this would have obliterated any *H. urticae* present at the time. Presumably late developing generations such as these simply take their chances as autumn advances, which in recent years has proved worthwhile for various insect groups.

I took the opportunity to compare the fifth instar nymphs of *H. urticae* with those found on fruiting Sea Buckthorn *Hippophae rhamnoides* L. in South Lancashire during 2006 (Whitehead, *op. cit.*). Those from the *Hippophae* were all significantly larger, plumper, brighter, and much more strongly pigmented with red on their abdomens. Most of the Bredon Hill specimens were simply brown, although one did show a slight reddish flush on the exposed abdominal tergites, and the Little Comberton nymph was also marked with red in the same way.

On 1 November 2007 I noted five adult and one 5th instar nymphal *H. urticae* on densely seeded *Urtica dioica* at Broadway, Worcestershire (VC37 SP03); & on 3rd November 2007, an adult *H. urticae* was found on an open field on the Cotswold Plateau at Leckhampton, Gloucestershire (VC33 SO91 286m O.D.) on Mugwort (*Artemisia vulgaris*) with desiccated Stinging Nettle (*Urtica dioica*) nearby. The final result of a late generation, it may be that in 'normal' years these would fail naturally or pass unnoticed. In this 'abnormal' year success appears to have been more commonplace, although an adult so late at this altitude must be unusual. Close by, a number of plants normally regarded as either annuals or perennials had been enabled to flower again. Borage (*Borago officinalis*) was in full bloom en masse, as was (*Scabiosa columbaria*), whilst Hogweed (*Heracleum sphondylium*) had produced a second flush of flower on stems over 40 cms in height.

P.F. Whitehead,
Moor Leys, Little Comberton, Pershore, Worcestershire WR10 3EH

***Pyrrhocoris apterus* now in Bedfordshire**

Sheila Brooke & Bernard Nau: On 22nd July this year a local naturalist, Alan Wakeford, e-mailed BSN to say that he had found a large colony of 'firebugs' around derelict glasshouses, near Sandy (TL14) and the the owner (Roger Cope) had seen the bugs there several months earlier. Next morning was sunny so we visited the site, & found the bugs almost at once. The first were a few on seed heads of Common Mallow (*Malva sylvestris*) – a known hostplant of the species, another being Lime (*Tilia* spp). However, we then found that most were on the ground amongst litter under the overhanging vegetation along the sunny S-facing edge of the E-W tarmac access road.

We estimated 100-200 bugs along on the edge of the road, with many mating pairs & some nymphs of various ages. As usual in this species the adults were mostly short-winged (flightless) but we did see one submacropter, a female. In view of the abundance of the bugs, it seemed likely that they had been at the site for several years.

The access road passes between the glasshouses with rough grassland before & after the glasshouses. Mallow is abundant in the grassland and along nearby field margins. There is some Lime about 200m distant but we found no bugs near these.

We returned on 18th September to identify the geographical limits of the population more precisely. There now seemed to be more small nymphs and there were also adults on the wooden structure of the glasshouses, inside & out. The bugs extended along the roadside for about 100m W of the glasshouses and 25m east, at the latter point the vegetation becomes less diverse, being a dense growth of lush coarse grasses, and apparently unsuitable for the bugs..

It seemed possible that the bugs had been accidentally imported when the nursery was still active and, in response to our questions, Roger Cope said that *Eucalyptus* wood had been imported from Portugal. for the construction of boxes on the site & his could have been the origin of the bugs.

For 150+ years the only permanent colony in Britain was on Tree Mallow on a rocky islet in the sea about 1km offshore from Torquay, Devon (S&L,1959). But in 1996 a colony was found at an urban site in Epsom, Surrey, and has survived to the present time (Hawkins,2003).

Photos: *Pyrrhocoris* habitat (wide view to close-up)
& a sub-macropterous female (lt) with brachypterous male (rt). male.

AROUND THE BRITISH ISLES

COUNTY KERRY EIRE
Shieldbugs & coreids from Ireland
Jerry Bowdrey

The following were noted during a week in Ireland in August 2007. In addition, a male of the distinctive dipteran *Alophora hemiptera* (F.), a parasitoid of Heteroptera, was noticed on *Angelica sylvestris* blossom on 19th August at Templenoe (V0806).

ACANTHOSOMATIDAE -
Acanthosoma haemorrhoidale: V0806 Gleninchaquin Park, Beara Peninsula 22nd August. *Elasmostethus interstinctus:* V0606 Sneem 19th August.

PENTATOMIDAE - *Palomena prasina*: V0806 Templenoe 18th August a late instar nymph, adults seen later in the holiday. *Piezodorus lituratus* : V0806 Templenoe 21st August adults and late instar nymphs on *Ulex europaeus* near shoreline. *Pentatoma rufipes*: V0806 Templenoe in forestry plantation 25 August; V0908 Killarney National Park on *Achillea millefolium*. *Troilus luridus*: V0908 Killarney National Park 25th August 2007. Late instar nymph on lakeside *Salix* sp. *Zicrona caerulea*: V0907 Kenmare uplands, Kerry Way 28th August a nymph on roadside vegetation.

COREIDAE - *Coreus marginatus*: V0907 Kenmare uplands, Kerry Way 28th August on roadside verge.

Address: Jerry.Bowdrey@colchester.gov.uk

MIDDLESEX Vice County 21
***Arocatus roeselii* & *Cimex* in High Holborn**
Stuart Foster

I found *A.roeselii* on an office printer on 10th August 2007 & another on a door portal on 5th October; and on 4th October on two white vans parked in Red Lion Square. In High Holborn on 31st August I found a small pale adult *Cimex lectularius* on a leaf of a Plane tree (*Platanus* sp). I would be interested to know if anyone has associated '*columbarius'* with London pigeons

BERKS & OXFORDSHIRE Vice County 22 & 23
***Gonocerus acuteangulatus* new for Berkshire**
John Campbell

A number of *Gonocerus acuteangulatus*, including 5th instars, was found on 5th Oct 2007 in SU49 near the village of Marcham Oxon. They were on large old Box bushes in parkland. *Neides tipularius* was found in the same area earlier in the year. They were in the vegetation on an arable strip left for cornfield weeds.

Address: campbell397@btinternet.com

HEREFORDSHIRE Vice County 36
***Cymatia* spp & a new county record?**
Robert Aquilina

RA found *Cymatia coleoptrata* & *C. bonsdorffii* in Brockhall Quarry (SO4542). The one *C. bonsdorffii* was amongst many *C. coleoptrata* at the water's edge, over mud. He also found *C. coleoptrata* in a settling pond nearby. The Provisional Atlas (2003) does not show any *Cymatia* in Herefordshire, but in 2006 Garth Foster found *C. coleoptrata* in a new pond at The Flits (SO3840), but *C. bonsdorffii* seems to be a new VC record for Hereford – unless you know different!

Address: robert.aquilina@btopenworld.com

S. LINCOLNSHIRE Vice County 53
***Sigara iactans* (CORIXIDAE) new to VC 53**
Richard Chad

On 22nd October 2007, in the course of work for the Environment Agency, I took a male of this recent arrival in Britain. It was in a general riverine invertebrate sample from the Coronation Cut flood relief channel of the River Welland at Spalding (TF246217). It was swept from stands of *Glyceria maxima* in association with a large population of *Sigara dorsalis*. Late instar nymphs of *Gerris lacustris* & adult *Notonecta viridis* were also present.

richard.chadd@environment-agency.gov.uk

N. LINCOLNSHIRE Vice County 54
***Aelia acuminatus* new for Lincolnshire**
Annette Binding

A specimen of Bishop's Mitre *Aelia acuminata* was collected by Colin Smith in Minting Wood on 13th May 2007. The bug was on forget-me-nots & is the first record for Lincolnshire. Minting Wood is part of the Lincolnshire Limewoods, these date back to prehistoric times and are mentioned in the Domesday Book.

Address: allan.binding@ntlworld.com

BRC RECORDING SCHEMES

Biological Records Centre recording scheme organisers for Britain:

Water Bugs: Sheila Brooke
18 Park Hill, Toddington, Dunstable, Beds LU5 6AW
brooke.aquahet@btinternet.com

Land Bugs: Bernard Nau
15 Park Hill, Toddington, Dunstable, Beds LU5 6AW
nauhet@btinternet.com

- **Submitting records by e-mail:** please format as tab delimited text, or spreadsheet, & send to the national organiser with a copy to the local scheme.
- **Local recorders:** are listed below (* denotes administrative county)
- **Recorders needed:** if you are not listed below but are willing to accept records on your county's behalf let us know please, and we will add you to the list.

Land Bug Recording Scheme & the Gateway…. BSN

Twice recently, I have seen land bug records held on the NBN Gateway quoted as if they give the definitive distribution of a species. This is far from the case, the land bug scheme records are not yet digitised!

Scheme records except those from the last few years, are still on record cards. When received, these were checked for obvious errors (identification, grid ref., & vice-county) but BRC never had funding to digitise them & I only became organiser of the land bug scheme on a 'care & maintenance' basis, - I was earning a living, working on the S&L follow-on book, & doing fieldwork.

An exception is my personal records, dating back to ca.1960. Most of these (25,000+) are in a computer relational database I maintain, this also holds taxonomic information & the up-to-date British List.

A crucial point about the NBN Gateway is that *anyone* can submit data and, in general, there is no easy way of knowing its validity! At best you can ascertain the originator of a data set. Many NBN data sets originate from reputable sources with their own validation procedures, e.g. BRC recording schemes & national societies. However, a data set could equally come from an over-confident inexpert beginner, so be warned!

I understand this situation exists for the rather odd reason that NBN must not discriminate between data originators, so it is up to the end user to decide whether a data set is reliable!

Water Bug Recording Scheme Update .....SEB

I have recently sent a large data set to BRC & NBN Gateway including many records gathered by Bob Merritt for the *Atlas of water beetles (Coleoptera) & water bugs (Hemiptera) of Derbyshire, Nottinghamshire & South Yorkshire, 1993-2005.* These are now available for you to peruse, together with the BRC atlas dataset, thanks to the efforts of all those who collected the records & those who facilitated transfer to the Gateway. The two data sets are the ***Aquatic Heteroptera Dataset*** and ***Water Bug data for Britain.*** Together these provide the most up-to-date distribution of water bugs although I received some records too late to include this time - apologies if yours are not there yet.

Also, there are some duplicates & this, I think, results from importing into *Recorder 2002* records with abundance & sex/stage data. However, the presence of 2 records is better than having none!

If you have further records, especially from the less well-recorded areas I would be very grateful for those.

VC 1 & 2	**Cornwall**	**Keith Alexander**	keith.alexander@waitrose.com
VC 3 & 4	**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 11 & 12	**Hampshire**	**Jonty Denton**	JontyDenton@aol.com
VC 15 & 16	**Kent**	**Eric Philp**	eric.philp2@virgin.net
VC 18 & 19	**Essex**	**Peter Kirby**	peter.kirby7@ntlworld.com
VC 20	**Hertfordshire**	**John Widgery**	12 Bushcombe Close, Woodmancote Cheltenham, Glos GL52 9HX
VC 23 (22)	**Oxfordshire***	**John Campbell**	campbell397@btinternet.com
VC 25 & 26	**Suffolk**	**Adrian Chalkley (water)**	adrian@boxvalley.co.uk
		Nigel Cuming (land)	marionnigel@onetel.com
VC 30	**Bedfordshire**	**Bernard Nau**	nauhet@btinternet.com
VC 32	**Northamptonshire**	**Tony Cook**	tony.cook@newtonfieldcentre.org.uk
VC 33 & 34	**Gloucestershire**	**John Widgery**	12 Bushcombe Close, Woodmancote Cheltenham, Glos GL52 9HX
VC 37	**Worcestershire***	**John Partridge**	records@wbrc.org.uk
VC 53 & 54	**Lincolnshire***	**Annette Binding**	allan.binding@ntlworldcom
VC55	**Leics & Rutland**	**David Budworth**	dbud01@aolcom
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	**Lancashire**	**Steve Judd**	Steve.Judd@liverpoolmuseums.org.uk
VC61 & 62	**SE & NE Yorks**	**Stuart Foster**	stuart@blackdan6.plus.com
VC63	**SW Yorks**	**Jim Flanagan**	jimflanagan@btinternet.com
VS64	**Mid-W Yorks**	**Stuart Foster**	stuart@blackdan6.plus.com
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 RELATING TO BRITISH HETEROPTERA

Continued from Het News 8, Autumn 2006

INTERNATIONAL

Aukema, B., Hermes, D., Nelson, B., 2006a
Eleven land & water bugs new to the Irish list (Insecta:*Het.*)
Irish Naturalists' Journal, **28**(8), 327-333(2006)
[*Arcto.carin.,Meso.furcata, Bothy.pil., Der.scut., Lygus marit.,Orthops bas., Glob. fulv., Tytthus pub., Orius lat., Him boops, Drymus pil.*]

Cuppen, J.G.M., Nelson, B., 2007
Micronecta griseola Horváth, a new water boatman for Ireland (*Het.*: Corixidae)
Irish Naturalists' Journal, 28, no.10, 410-413, (2007)
[Co Clare July 2004, 22 refs.]

Damgaard, J., 2006
Phylogeny & mtDNA phylogeography of two widespread European pond skaters (*Hem.-Het,*: Gerridae: Gerris Fabricius).
Insect Systematics & Evolution, **37**, 335-0350,(2006)
[*G. costae* & *G. thoracicus* not closely related; *G.sahlbergi* is subspecies of *G.costae*. (BSN: title page & abstract only)]

Derjanschi, V., Pericart, J., 2005a
Hémiptères Pentatomoidea Euro-Méditerranéens. Volume 1, Généralités Systématique: Première Partie.
Faune de France, No. **90**, 494pp+16 colour plates, (2005).
Book publ. by: Fédération Française des Sociétés de Sciences Naturelles, Paris.

Dusoulier, F., 2006
Un témoignage biohistorique au sein des archives: la découerte d'une Punaise du xvth siécle (*Het.* Reduviidae).
L'Entomologiste, **62**(1-2), p53,(2006?)

Dusoulier, F., 2006b
Confirmation de la présence en France de Lamproplax picea (Flor, 1860) (Hem., Lygaeidae).
Bulletin de la Société entomologique de France, **111**(4), p488, (2006).
[1st modern records in Francee : Ardennes 21jul1991 & Manche 2aug2003.]

Dusoulier, F., Lupoli, R., 2006
Synopsis des Pentatomoidea Leach, 1815 de France métropolitaine (*Hem.*: *Het.*).
Nouvelle Revue Entomologie (N.S.), Fasc **1**, pp11-44 (13oct2006)
[Annotated checklist of French shieldbug species.]

Friess, T, Rabitsch, W., Heiss, E., 2005
Neu und seltene Wanzen (Insecta, *Het.*) aus Kärnten, der Steirmark, Tirol und Salzburg
Beiträge zur Entomofaunistik (ISSN 1563-1400), *Band* 6, 2005
[English summary. Photos: *Kalama aethiops, K. tricornis, Macrodema mic., Meg. praetextatus*]

Grosso-Silva, J, Aguiar, A., 2007
Corythuca ciliata (Say, 1832) (*Hem.*, Tingidae), the Nearctic Sycamore lace bug, found in Portugal.
Boln.S.E.A., **40**, pp366, (2007)
[4 sites, already known from 9 provinces in N half of Spain. Details Palaearctic distribution.]

Hawkins, R.D., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p192-193, (2007)
[Wageningen area, Netherlands: *Stephanitis oberti* (rhododendron), *S. takeyai* (Pieris & rhodo.), *Elasmucha ferrugata* (Bilberry), *Rubiconia intermedia, Holcostethus vernalis , Arma custos, Graphosoma lin.*]

Hjältén, J., et al., 2006
Occurrence of flat bugs (*Het.*: Aradidae) in burned & unburned forests.
Entomologica Fennica, **17**, 130-135(2006)
[Sampled using flight interception traps (40x60cm Plexiglass). No British spp. In English.(Co-authors=O.Atllegrim, F.S&ström,R,Pettersson & E.A.Rexstad)]

Hoffmann, H-J, 2006
Zur ausbreitung der Platanengitterwanze *Corythuca ciliata* innerstädtisch in Köln und in NRW.
Heteropteron, **23**,31-32
[Map shows rapid expansion in Koln in 4 years.]

Hollier, J., 2006a
Host plant use by *Ischnodema sabuleti* (Fallén, 1826) (*Het.*: Lygaeidae) in a dry grassland in southern Britain.
Ent.Mon.Mag., **142**, p80, (2006)
[Vacuum samples from grassland plots at Silwood Park, Berks.]

Hollier, J., 2007
Stratification & phenology of a woodland *Het.* assemblage in southern Britain.
Brit.J.Ent.Nat.Hist., **20**(1), 49-55, (2007)
[Silwood Pk, Berks; 4445 bugs of 40 spp from Malaise traps on ground & in canopy of 70 yr old birch woodland, also 14 yrs earlier by beating & vacuum sampler.]

Lis, J.A., Webb, M., 2007
Redescription of the burrower bug *Adrisa sepulchralis* (Erichson, 1842) (Insecta:*Hem.*:Cydnidae), based on the only known male (recently introduced to the UK from Australia), & the lectotype from Tasmania.
Ent.Mon.Mag., **143**, pp 59-65, (2007)
[Known hitherto only from a female from Tasmania. Horticultural importof a male on tree-fern (*Dicksonia antarctica*) in 'early 2004', no locality . Dwgs, description, remarks on distribution & biology.]

Matocq, A., Magnien, P., 2006
Book review: " Hémiptéres Pentatomoidea euro-méditerranéen. Vol.I, Derjanschi &Péricart, Faune de France ."
Bull. mens. Soc. Linn. Lyon, **75**(9), 366-368
[Includes comments family by family. *Sciocoris* & *Eurydema* still present problems & require use of a reference collection.]

Matocq, A., Pluot-Sigwalt, D, 2006a
On some particular sclerotized structures associated with the vulvar area & the vestibulum in Orthotylinae & Phylinae (*Het.*, Miridae).
Denisia, zugleich Kataloge der OÖ.LAndesmuseen Neue Serie, **50**, 557-570
[In English. includes colour photos & many line drawings showing differences in these features between females of many genera of the 2 sub-families.

Mertinez-Cascales, J.I., et al., 2006
Species identity of *Macrolophus melanotoma* (Costa 1853) & *Macrolophus pygmaeus* (Rambur 1839) (Insecta:*Het.*:Miridae) based on morphological & molecular data & bionomic implications.
Insect Systematics & Evolution, **37**, 385-404, (2006)
[*M.melanotoma* (=*M.caliginosus* Wagner) & *M. pygmaeus* are good species. Only reliable external character is black band behind eye, parallel-sided & diffuse in *M.mel*. [(title page & photos only)]

Musolin, D. M., 2007
Insects in a warmer world: ecological, physiological and life-history responses of true bugs (Heteroptera) to climate change.
Global Change Biology **13**, 1565–1585,

Rabitsch, W., 2005a
Die Wanzenfauna (Insecta, *Het.*) im Nationalpark Thayatal (Niederösterreich).
Beiträge zur Entomofaunistik (ISSN 1563-1400), Band 6, pp87-106 (2005)
[English summary. 248 spp known, 27.5 % of Austrian Het list.]

Rabitsch, W., Matocq, A., 2005
Megalocoleus naso (Reuter, 1879) (*Het.*: Miridae) new to Austria.
Beiträge zur Entomofaunistik (ISSN 1563-1400), *Band* 6, 2005, pp166-167
[In English. Photos Meg.naso. Waachmann et al. (2004, Fig209, p211) shows a female of *M.naso*!]

Rieger, C., Rabitsch, W., 2006
Taxonomy & distribution of *Psallus betuleti* (Fallén) & *P. montanus* Josifov stat.nov. (*Het.*, Miridae).
Tijdschrift voor entomologie, **149**, pp161-166, (2006)
[*P.montanus* raised to species from P.betuleti montanus. Genitalia dwgs, colour photos, & confirmed records of both species (continental Europe to N America).]

Sanchez, J.A., Martinez-Cascales, J.I., Cassis, G., 2006
Description of a new species of Dicyphus Fieber (Insecta: *Het.*: Miridae) from Portugal based on morphological & molecular data.
Insect Systematics & Evolution, **37**, pp281-300
[(Summary) D.umbertae from several places in central & southern Portugal on tomato & *Hyoscyamus*; closely related to D.cerastii which is redescribed; left parameres differ. Male & female genitalia illustrated]

Silfverberg, H., 2007
Changes in the l,ist of Finnish insects during 2001-2005.
Entomologica Fennica, **18**, p84 ,(6 Jun 2006)
[For *Het.* p84 lists 1 deletion (Aradidae), & 10 additions - including *Phytocoris reuteri, Europiella artemisiae, Liorhyssus hyalinus, Odontoscelis fuliginosa, Eysarcoris aeneus, Cyphostethus tristriatus*]

Simov, N., Antonov, A., 2006
First data of the true bugs (*Het.*) in the diet of the second brood of palid swift (Apus pallidus)(Shelley) in Bulgaria.
Ent.Mon.Mag., **142**, pp243-245, (2006).

Wheeler, A.G., 2006
First North Carolina & southeasternmost U.S. records of five Palaearctic *Het.*ns (*Hem.*: Berytidae, Miridae, Tingidae) *Entomological News* (USA), **117**(3), 265--271, May & June 2006
[*Berytinus minor, Megalocoleus molliculus, Orthocephalus coriaceus, Phoenicocoris dissimilis, Dictyla echii.* Many refs.]

BRITISH ISLES

Albertini, M., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, pp191, (2007)
[Corizus]

Alexander, K., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p191, (2007)
[*Aphanus rol.]*

Anon., 2005c
Organising surveys to determine site quality for invertebrates.
English Nature publication , EN catalogue no. **IN18.0**; ISBN 1 85716 899 2
[Defines status designations: Unknown, Common, Local, Nationally Scarce, Nationally Scarce A, Nationally Scarce B. Red Data Book: RDB3, RDB2, RDB1, RDBI, RDBK]

Brooke, S.E., Nau, B.S., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., 20, p191-192, (2007)
[*Brachynotocoris punc., Oeciacus hir., Anthocoris minki, Corixa spp*]

Hodge, P. J., 2006
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., 19, p190, (2006)
[1st GB:*Macrotylus horvathi* 22jul2005,VC15, I. of Sheppey, TQ916717. *Eurydema ornata*, VC14, Peacehaven, TQ414017, light trap; *Agno.rec.*& *Lygus prat.*VC14,]

Hodge, P. J., 2006a
Four species of Het. collected in Sussex & Kent during 2005.
Antenna, Bull. Roy.Ent.Soc, **30**(4), p184, (2006)
[Same spp as Hodge 2006 (BENHS Ann.Exhib.2005.]

Ismay, J., Schulten, B., 2006
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., **19**, p190, (2006)
[*Nezara viridula* nymphs+1ad, 9sep2005, Isleworth, VC21, on Rubus & Urtica]

Jones, R. A. , 2007
Further records of *Brachycarenus tigrinus* (Schilling) (*Hem.*: Rhopalidae).
Brit.J.Ent.Nat.Hist., **20**, p55, (2007)
[21jun2006 - Swanscombe Marshes (TQ605765, vc16, W.Kent). 13sep2006 - Thames Barrier Pk E (TQ413800, vc18, S.Essex) plus *Liorhyssus hyalinus*; Belvedere (TQ501800, W.Kent); Woolwich (TQ412785, W.Kent).]

Nau, B.S., 2006b
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., **19**, p190, (2006)
[*Cymatia rogenhoferi, S.iactans, Sphragisticus nebulosus, Eurydema ornata, Carpocoris purp.,Lygus pratensis* 24 (showing variability)]

Nau, B.S., Brooke, S.E., 2006c
Two water bugs new to Britain, *Cymatia rogenhoferi* Fieber & *Sigara iactans* Jansson (Hem., Corixidae), with comments on migration.
Ent.Mon.Mag., **142**, pp229-234, (2006)

Nau, B.S., Brooke, S.E., 2007
Brachynotocoris puncticornis (Reuter, 1880) (Hem., Miridae) new to Britain.
Ent.Mon.Mag., **143**, pp135-136

Whitehead, P. F., 2006a
Is *Nysius senecionis* (Schilling,1829) (Hem., Lygaeidae) omnivorous?
Ent.Mon.Mag., **142**, p218, (2006)

Whitehead, P. F., 2006b
Oncocephalus pilicornis Reuter, 1882 (*Hem.*, Reduviidae, Stenopodainae) new to the British fauna with comments on British primary S26 plant communities.
Ent.Mon.Mag., **142**, pp235-241, (2006)

Whitehead, P. F., 2007
Invertebrate response to rapidly changed floodplain sedimentology at urban Diglis, Worcester, England.
Ent.Mon.Mag., **143**, pp11-16, (2007)
[Aelia acuminata, Trapezonotus arenarius, Plinthisus brevipennis - on riverside sandy dredgings.]

Whitehead, P. F., 2007b
Eleagnaceae a new host-plant family for *Heterogaster urticae* (F.,1775) (*Hem.*, Lygaeidae).
Ent.Mon.Mag., **143**, pp137-140, (2007)

REGIONAL

Anon., 2007
Shieldbugs of Southampton.
Southampton Nat.Hist.Soc. publication, 48pp, 4 colour plates, (2007)

Bowdrey, J.P., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., 20, p191, (2007)
[E Suffolk, 2006: *Brachycarenus tig.* 2005; N Essex:*Areno.fal. , Syro.rhomb., Oeciacus hir.*]

Cuming, N. St J., 2006
Four species of *Hem.* new to Suffolk.
Suffolk Natural History, Trans. Suffolk Nat. Hist.Soc., **42**, pp69-70, (2006) [*Aphanus rolandri, Perit. convivus, Brachycarenus tigrinus*]

Dickson, R., 2006
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., **19**, p189, (2006)
[7spp from VC11, incl: *Adelph.ticin., Aneurus laevis, Dictyla convergens*]

Dickson, R., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p192, (2007)
[S Hants: *Lygus prat., Aphanus rol., Nysius gram.(5 sites), N.senec., Drymus latus*]

Gibbs, D., 2006
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., 19, pp189-190, (2006)
[*Stict.punct*. VC26, *Orth.rubidus* VC26 & VC28]

Halstead, A.J., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p192, (2007)
[2006 – Surrey: *Sehirus luct.* , *Rhacog.pun*, *Rhopalus rufus*; Herefords: *Corizus hyo.*; S Essex:*Sticto.abut.*]

Harvey, M., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p192, (2007)
[8 records from Bucks in 2005-2006; on *Cup. leylandii* & native Juniper]

Hawkins, R.D., Keay, A.N., 2006
[BENHS Annual Exhibition 2005, exhibit]
Brit.J.Ent.Nat.Hist., **19**, p190, (2006)
[*Eurydema ornata* female, VC19, 17apr2005, Woodmansterne TQ272588]

Hodge, P. J., 2007
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., 20, p193, (2007)
[2006: E Sussex: *Arctocorisa germari, Sigara iactans, S. falleni;* W Sussex: *Spathocera dahl.;* S Hants: *Gonocerus acut.*]

Jones, R. A. , 2007a
[BENHS Annual Exhibition 2006, Exhibit]
Brit.J.Ent.Nat.Hist., **20**, p193-194, (2007)
[2006 - W Kent & S Essex: *Brachycarenus tig., Syromastus rhomb*.; W Kent: *Dictyla conv., Dictyonota tricornis., Globiceps cruciatus,Chorosoma.sch., Eurygaster maura , Neottiglossa pus., Sciocoris cursitans*; Middlesex: *Gonocerus acu., Chorosoma sch.* S Essex: *Liorhyssus hy., Alydus calc., Megalonotus ant.., Raglius alb.* Widespread: *Stict.abut*. & *S. punct*.]

Judd, S., Howe, M.A., 2004
First records of true bugs (*Hem.*: *Het.*) from North Wales.
Jnl. of Lancashire & Cheshire Entomological Society, **128**, 15-17,(2004)
[*Liorhyssus hyal., Perit. lundii, Meg.praetext., Meg.dil.*]

Skidmore, P., 2007
An inventory of the invertebrates of Thorne & Hatfield Moors.
Thorne & Hatfield Moors Conservation Forum, PO Box 879,Thorne , Doncaster DN8 5PU, Monograph No.2,iv+162pp, (2006)
[Notice of publication, in *Ent.Mon.Mag.* **143**, p173,(2007)]

Ward, S., 2006
Aquatic Heteropters (Water Bugs):2005
Trans. Herts. Nat. Hist. Soc, **38**(2), 156-157, (2006)
[*Aquarius paludum* in Herts]

Whitehead, P. F., 2007a
Stictopleurus abutilon (Rossi, 1790) & *Stictopleurus punctatonervosus* (Goeze, 1778) (Hem., Rhopalidae)new to Worcestershire. *Ent.Mon.Mag.*, **143**, p89, (2007)(

Widgery, J., 2006a
Terrestrial *Het.* (True Bugs): 2005 [Herts]
Trans. Herts. Nat. Hist . Soc., **38**(2), pp157-159, (2006)
[Incl: *Aneurus laevis, Myrmedobia coleoptrata, Liorhyssus, Thyreocoris, Buchananiella, Berytinus hirt., Raglius albo., Psallodema fieberi*]