



LEDRA

No. 2
Spring 2012

*LE*afhopper *D*istribution *R*ecording & *A*nalysis

Newsletter of the Auchenorrhyncha Recording Scheme for Britain & Ireland

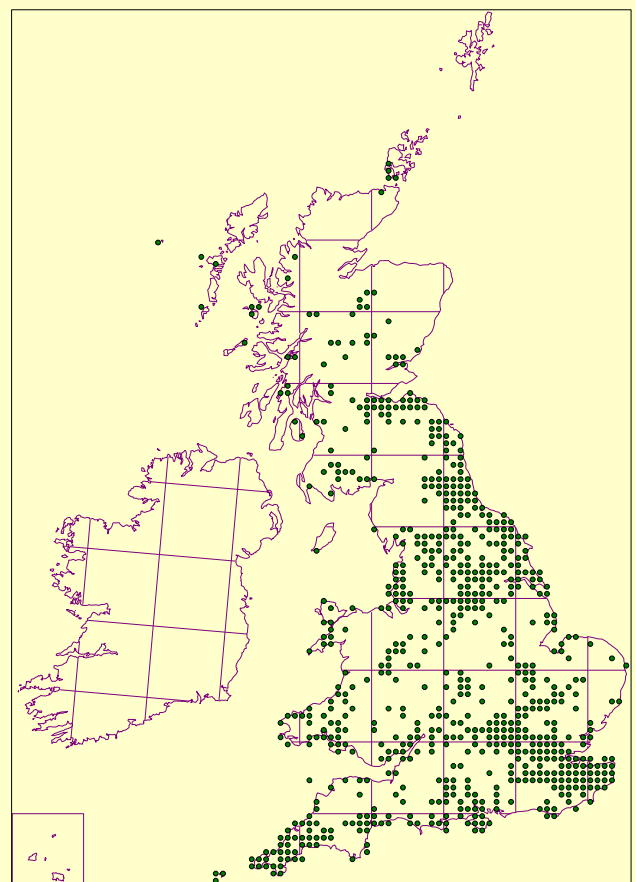
Editorial

Since being reinvigorated with a new website (<http://www.ledra.co.uk/>) in the spring of last year, the Auchenorrhyncha Recording Scheme has certainly had a busy year! It has been very gratifying to receive so many comments from people saying that they have found the website useful and to see how this renewed interest has translated into many more records being submitted to the recording scheme. Since the *Ledra* website went live in March 2011, I have received over 550 emails with records: some of them containing just a single interesting finding, others with files attached that contain many records. Not all of these have yet been incorporated into the main database, but they will be soon.

The Recording Scheme is getting to the stage where it is possible to produce meaningful maps for certain species. As an example, the map on the right is the 10km-square map for one of our commonest and most widespread species: *Philaenus spumarius*. Of course, further squares will be filled in once all records have been incorporated into the database. However, given that this species is likely to occur in a majority of squares, it is clear that there are still substantial areas of the country that remain under-recorded. This demonstrates an important principle: that the recorded geographical distribution of even very common species has quite a lot of holes even in the well-recorded south of England. This in turn bears out the importance of people submitting all their records to the recording scheme, even of the really common species; very often, these turn out to be new records for particular 10km squares.

This newsletter contains information about a number of new developments, new species to Britain and updates on selected species of particular interest. Please keep sending me your news in the form of short notes or longer articles – all are welcome.

10-km square distribution map for the Meadow spittlebug, *Philaenus spumarius*.



Finally, best wishes for an enjoyable and fruitful 2012 field season. Keep sending in those records, please!

Alan Stewart
a.j.a.stewart@sussex.ac.uk

Significant recent developments

The last year (the first with the recording scheme's new website) has certainly been a busy one. Here are some of the more memorable developments:

i) New species

Two species have been recorded for the first time Britain.

***Pithyotettix abietinus* (Fallén, 1806)**

Jonty Denton found three specimens of this medium-sized cicadellid near Woking in Surrey on 30th May 2011 in a plantation of Norway Spruce, *Picea abies*, and then a further three a fortnight later. The adults are really very distinctive, with a colour and pattern quite unlike any other leafhopper in this country. The host plant, on which the leafhopper probably overwinters as an adult, is of course widely planted for Christmas trees, so we can probably expect it to spread in the coming years.



***Orientus ishidae* Matsumura 1902**

There is a fascinating story behind this one. Penny Frith lives in east London and is a keen, and very accomplished, amateur wildlife photographer. Taking an interest in the wildlife of her local park, Warwick Gardens in Peckham, last year she decided to visit it on a daily basis and photograph all the different sorts of insects she saw. The local council have left wild a hedge and narrow strip of rough grass that runs along one edge of what is otherwise a fairly tidily managed small urban park. Amongst many other insects, she photographed a leafhopper that looked a bit different, so she posted it on her Flickr website where Tristan Bantock quickly recognised that it was *Orientus ishidae*, a species from North America that was completely new to Britain.



You can read Penny's account of her photographic triumph in the newsletter of Greenspace Information for Greater London (GiGL):

<http://www.gigl.org.uk/GiGLer/?p=802>

O. ishidae has been reported from a number of tree species, but it does not appear to be very selective.

ii) New photo-guide

Even though it focuses on a different country, *The Leafhoppers and Planthoppers of Germany* by Robert Biedermann and Rolf Niedringhaus has become one of the standard works for identifying the species of Auchenorrhyncha that we find in Britain. This important work has now been followed up with a photo-atlas containing more than 1,500 photos of virtually all the species covered by the Biedermann & Niedringhaus key:

Kunz, G., Nickel, H. & Niedringhaus, R. (2011) *Fotoatlas der Zikaden Deutschlands / Photographic Atlas of the Planthoppers and Leafhoppers of Germany*. Freund, Scheeßel.



The photos are of live insects rather than museum specimens, often including images of both sexes, different wing forms of the same species, and even the nymphs of some species. Conveniently, it is presented in a format such that each species can be directly cross-referenced between the two books.

iii) RES Handbooks available online

People interested in getting started with identifying leafhoppers have often expressed frustration at the fact that three of the four Royal Entomological Society handbooks (keys) to the species in Britain by Walter Le Quesne have been out-of-print for several years and hard to get hold of on the second-hand market. To their great credit, the RES has now made these freely available as pdf's to download from their website:

<http://www.royensoc.co.uk/content/out-print-handbooks>

The three handbooks are Parts 2a, 2b and 3 of Volume II that cover all species except the Typhlocybinae which are dealt with separately in Part 2c. This latter key is still in print and can be obtained directly from the Society by contacting Sarah Peachey (sarah@royensoc.co.uk). The cost is £7.60.

The last of these keys is now over thirty years old, so it is not surprising that many species have been added since. Nevertheless, they remain an invaluable source of reference especially for their detailed descriptions of each species.

iv) Identification workshops

Tristan Bantock and I have been running a very successful series of leafhopper identification workshops over the last year. These have been generously funded the Open Air Laboratories (OPAL) initiative, administered by the Natural History Museum in conjunction with the Open University.

We ran workshops at the World Heritage Museum in Liverpool, the Royal Scottish Museum in Edinburgh, the Angela Marmont Centre at the Natural History Museum in London and at the British Entomological & Natural History Society's headquarters at Dinton Pastures near Reading. In total, the one-day workshops were attended by fifty-five people, the majority of whom were either complete or relative newcomers to identifying leafhoppers.

v) Future workshops

We are planning to run another two identification workshops over the next year. These will be on Saturday 10th November 2012 at the Angela Marmont Centre and on Saturday 19th January 2013 at Dinton Pastures. Further details will be available on the BENHS website (<http://www.benhs.org.uk/>). Attendance will be free but booking through the Society will be essential.

I will also be running a week-end leafhopper identification workshop for the Field Studies Council at Preston Montford Field Centre from 20th-22nd July this year. This will be aimed primarily at newcomers to this group of insects, although anyone with more experience is welcome too. Further information is available from the FSC website:

<http://www.field-studies-council.org/>

vi) Hemipterists' Day

A very successful Hemipterists' Day was held at the British Entomological & Natural History Society's headquarters at Dinton Pastures near Reading on Saturday 3rd February this year. The morning consisted of a series of talks followed by informal discussions between participants in the afternoon, many of whom took the opportunity to bring along specimens for verification.

It is intended that this should become an annual event, the next one being scheduled for Saturday 2nd February 2013. Put it in your diary!

vii) Recording Invasive Species Counts (RISC) project

This Defra-funded project provides a means for the general public to record sightings of invasive non-native animal and plant species in Britain. The objective is to help track the spread of these species, contributing to our knowledge of their ecology, and to increase public participation in recording.

Initially at least, records are being invited for 14 non-native species, one of which is the Rhododendron leafhopper, *Graphocephala fennahi*. This species is native to North America, was first recorded in 1935 and is now well established across much of southern England. Additional records, especially from locations further north and west would be especially useful for establishing the true distribution of this species.

Further information about the project and a form for submitting records and photos can be found at:

www.nonnativespecies.org/recording

Species focus:

Doratura impudica

By Alan Stewart

The Large dune leafhopper, *Doratura impudica*, is a sand-dune specialist that was historically known from only a few sites along the north Norfolk coast. As one of the recently-declared BAP Priority Species, it was the subject of a Defra-funded survey in 2010-11 to establish its geographical distribution and habitat requirements.

Twelve sand dune sites were visited along the coasts of East Anglia and south-east England. As a result, the species is now known from a total of eight 10-km squares across three counties: Kent, Essex and Norfolk. Attempts to find it at apparently suitable sites in Suffolk and Sussex have so far failed.

It is clear that the preferred habitat for this species is the extreme seaward edge of coastal sand dunes. The picture below of Sandwich Bay NNR shows the typical habitat.



D. impudica was found only in areas where sand couch, *Elymus farctus* (= *Elytrigia juncea*), formed mono-specific stands or dominated the foredune plant community. This plant species is therefore assumed to be the leafhopper's host plant.

Sand couch normally forms a narrow strip (maximum 10m.) between the top of the beach and the stabilized dune dominated by marram grass, *Ammophila arenaria*. As such, the preferred habitat of this species is very vulnerable to a number of disturbance factors including erosion by storm wave action and human trampling.

Future survey work will focus on other sand dune sites further north and west to establish whether the species is genuinely confined to south-east England and East Anglia.

Erotettix (= *Macrosteles*) *cyane*

By Alan Stewart

The so-called Pondweed leafhopper, *Erotettix cyane*, is currently known from only four locations in southern England. It feeds on the floating leaves of Broad-leaved Pondweed, *Potamogeton natans*, usually where it grows in ponds with very clean water.



This species was declared a BAP Priority Species on the basis of its extreme vulnerability: only very few known sites and a habitat (typically small ponds) that can easily be degraded. One case in point was a small population in a Sussex downland dewpond (below) that survived for several years but now appears to have died out after the water level dropped drastically in the summer of 2010.



Against this background, it is pleasing to report that Pond Conservation have decided to dig new ponds at two of the known sites for *E. cyane* with the specific intention of stocking them with the host plant and then attempting to set up new populations of the bug by translocating a number of individuals at some later date. Given that the known populations are spread across so few sites, the intention is to spread the risk by providing new habitat in the immediate vicinity of existing populations.

You can read more about this species on the following Pond Conservation downloadable factsheet:

<http://www.pondconservation.org.uk/Resources/Pond%20Conservation/Documents/PDF/Pondweed%20Leafhopper.pdf>

Ribautodelphax imitans

Ribautodelphax imitans (Ribaut) at Coe Fen, Cambridge

By Alvin J. Helden, Alex Dittrich & Rodi Mckenzie

Animal and Environmental Research Group,
Department of Life Sciences, Anglia Ruskin University,
East Road, Cambridge CB1 1PT, UK

In 2010 a male tall fescue planthopper, *Ribautodelphax imitans* (Ribaut) (Hemiptera: Delphacidae) was discovered at Coe Fen (below) in Cambridge. Given the BAP status of *R. imitans*, it was important to find out more about the size and distribution of the population of the species at this site. So a research project was launched to carry out a survey of Hemiptera at Coe Fen to determine the size of the *R. imitans* population in the context of the wider insect community. This was funded by Cambridge Sustainable City and the Cambridge and Peterborough Biodiversity Partnership.



Photo: Coe Fen, looking northwards to Peterhouse College.

Hemiptera were collected using a Vortis suction sampler every two weeks between April and October 2011. In order to reduce the time spent sorting samples, each Vortis catch was emptied into a sweep net and a pooter was used to collect all adult Hemiptera. A total of 7178 individuals of 42 species of Auchenorrhyncha were collected. Of these, 226 (3.1%) were *R. imitans*, which were found between April and the end of July, with a main peak in June and a lesser one in April. Given the small area of the

site sampled, this indicates that there is a substantial population of *R. imitans* at Coe Fen.

In addition to entomological survey, the distribution and percentage cover of tall fescue *Festuca arundinacea* Schreber, the probable food plant of *R. imitans*, was recorded. The distribution data of insect and plant have not yet been investigated in detail but visual inspection of the data does seem to indicate a good relationship between the two.

Batracomorphus allionii

By Tristan Bantock & Sarah Barnes

The hillside south of Banstead Woods in Surrey (VC17) is often referred to as 'Chipstead Downs' and includes some areas of high quality chalk grassland. In particular, Fames Rough field (TQ263572) supports a rich flora and has an interesting associated Auchenorrhyncha fauna. Common Rockrose *Helianthemum nummularium* is abundant here and *Batracomorphus irroratus* and *Arboridia parvula* are both frequent species.

On 10th July 2011 we swept several *Batracomorphus* adults and nymphs several hundred metres east of Fames Rough (TQ271577), where *Helianthemum* was completely absent. This field is semi-improved and is dominated by clovers, meddicks and trefoils, with abundant Wild Basil *Clinopodium vulgare*, Common Agrimony *Agrimonia eupatoria* and patches of Marjoram *Origanum vulgare*. It later became apparent that the *Batracomorphus* specimens we collected here were *B. allionii*, which is somewhat larger than *B. irroratus* and lacks the extensive black dots covering the forewings (Biedermann & Niedringhaus, 2009, *The Plant- and Leafhoppers of Germany*). It has been recorded before in Britain, but only at Ewe Down in Hampshire and Yocklett's Bank in Kent.

Further visits in late July produced larger numbers of *B. allionii*, including many females, but the population appeared to be confined to this particular field, raising an intriguing question regarding potential hostplants. In Germany *B. allionii* has only been found on woody legumes such as Common Broom *Cytisus scoparius* and Dyer's Greenweed *Genista tinctoria* (Nickel, 2003, *The Leafhoppers and Planthoppers of Germany (Hemiptera, Auchenorrhyncha: Patterns and strategies in a highly diverse group of phytophagous insects)*) and has never been recorded on herbaceous species. Interestingly, Ian Boyd recorded a single specimen of *B. allionii* on 1st September 2011 at a site in Newport on the Isle of Wight (VC10), also in the absence of woody Fabaceae.

Incidental records

An unusual record of Trigonocranus emmeae

I swept two specimens (male and female) of this cixiid from a damp meadow in Brimsdown, Essex (VC18) (TQ369964) on 20th June 2011. Most records of this enigmatic and poorly known species are from very dry sites, and have been taken in pitfall traps.
Tristan Bantock

Hopper on the edge

One of the things I do to amuse myself when out recording is to look for insects in odd places, or at extremes such as the tops of mountains, edges of counties, etc. During a visit to the Isle of Wight on 24 July 2011 my family visited the Needles, and looked round the Old Battery (www.theneedlesbattery.org.uk), a fascinating site maintained by the National Trust. At the far west of the battery is a small searchlight post, built in 1899, and overlooking the Needles themselves. A tunnel in the chalk takes you to a tiny building with mesh-covered windows, providing spectacular views and allowing insects easy access in and out. Sitting on the wall inside was a cixiid hopper, which turned out to be a male of the Nationally Scarce species *Cixius remotus*. This is a species of southern coastal habitats, especially cliffs and shingle, so its occurrence on the Isle of Wight cliffs is not surprising. However, I contend that this record at grid ref SZ29478489 is as far west as it is possible to record insects on the Isle of Wight, at least without the use of ropes, boat or helicopter!

Martin C. Harvey
(kitenetter@googlemail.com)

A mating aggregation of Centrotus cornutus?

Adrian Royle (adiroyle@aol.com) reported that on 8th May at Chambers Farm Wood, part of the Bardney Limewoods NNR, Lincolnshire, he found a total of eleven *Centrotus cornutus*, ten of which were on the same bush and five of which were together in what he described as some sort of "breeding frenzy" (see pictures below).

Has anyone seen anything like this before? This species is usually encountered single or in small numbers, so eleven must be really quite unusual.



Habitat focus

Some hoppers from the Northamptonshire 'ironstone gulleys'

by Martin C. Harvey (kitenetter@googlemail.com)

In 2010 I carried out invertebrate surveys for Northamptonshire Wildlife Trust at six ex-quarry sites (one a Wildlife Trust reserve and SSSI, the others privately owned Local Wildlife Sites). The surveys mainly focused on Diptera, Hymenoptera and Coleoptera, but a range of trapping methods was employed and where possible Auchenorrhyncha were also recorded.

The quarry sites surveyed are examples of 'ironstone gulleys', created as a result of ironstone and limestone extraction, and a characteristic feature of parts of Northamptonshire. Some of these gulleys were abandoned after quarrying stopped, and have more-or-less naturally re-vegetated. The gulleys are linear in nature, with steep slopes and other topographical variation, and a mix of bare ground, short turf and denser vegetation grading into scrub and woodland, sometimes with pools or marshy areas in the bottom of the gulleys – in other words, rather good habitats for invertebrates!

Sampling was deliberately targeted at species of drier, open habitat (short-turf botanically-species-rich grassland, bare ground, slopes and hummocks). These early successional habitats were considered priorities for survey work, since they are known to support important invertebrate communities, and are likely to be particularly at risk if the sites were to remain un-managed for too long, or become used for other purposes.

Eighteen species of hopper were recorded, including two Nationally Scarce species. The table shows the methods of capture for each species with number of individuals found by each method. The samples were small and not standardised, so I wouldn't want to put too much interpretation on the data, but in this survey each sampling method produced at least one species that was not found by the other methods, reinforcing the desirability of multiple trapping methods if attempting to record a full range of species. Pitfall traps produced the fewest species, suction sampling the greatest number of species (using a converted petrol-driven leaf-blower).

The water traps (pan traps) used were shallow plastic bowls, yellow, blue or white in colour. Perhaps unsurprisingly, there was no clear association between colour of the bowls and number of specimens trapped.

Of the two Nationally Scarce species, *Agallia brachyptera* was found in five of the six quarries, and appears to be well-established in these habitats. It seems to spend its time very much at ground level, being found by all methods except sweeping. Peter Kirby's *A review of the scarce and threatened Hemiptera of Great Britain* (1992) includes "sparsely vegetated limestone quarries" as one of its habitats, which fits with these records. Some of the quarry sites are isolated within agricultural landscapes, and one wonders how a flightless, brachypterous hopper is so readily able to colonise these early successional habitats.

At the time of Peter Kirby's *Review*, only six records were known for *Trigonocranus emmeae*, but recently reports have been appearing on the web for various locations (including London, Kent and Yorkshire), and it may be that with more recording, especially using suction-samplers, this species will be found to be more widespread. The two specimens from suction sampling in this survey were both macropterous females; nymphs and brachypterous adults are believed to live underground, feeding on plant roots, and a report of finding it in subterranean pitfall traps in Norfolk was included in the recording scheme newsletter no. 16, 1997.

Two examples of the ex-quarry sites surveyed are shown on the next page.

Full details of these records have been supplied to the recording scheme.

| Species | Sites | SW | WT | | | PT | SU |
|--------------------------------|-------|----|----|---|---|----|----|
| | | | w | y | b | | |
| <i>Adarrus multinotatus</i> | 1 | 1 | | | | | |
| <i>Agallia brachyptera</i> | 5 | | | 1 | | 6 | 3 |
| <i>Agallia ribauti</i> | 4 | | 2 | 4 | 1 | | 1 |
| <i>Agallia venosa</i> | 1 | | | | | | 1 |
| <i>Aphrodes albifrons</i> | 3 | | | | | 7 | |
| <i>Aphrodes bicinctus</i> | 6 | 2 | | | | 20 | 3 |
| <i>Aphrophora alni</i> | 1 | 1 | | | | | |
| <i>Doratura stylata</i> | 1 | | | | | 1 | |
| <i>Eupelix cuspidata</i> | 5 | 1 | 4 | 4 | 4 | 4 | 2 |
| <i>Eupteryx notata</i> | 1 | | | 1 | | | |
| <i>Euscelis incisus</i> | 2 | 3 | | 1 | 1 | | |
| <i>Evacanthus interruptus</i> | 2 | 5 | | 2 | | 3 | 1 |
| <i>Javesella pellucida</i> | 1 | | | | | | 1 |
| <i>Macropsis fuscula</i> | 1 | | | 1 | | | |
| <i>Megophthalmus scanicus</i> | 2 | | | | 1 | | 1 |
| <i>Neophilaenus campestris</i> | 3 | 4 | | | | | 2 |
| <i>Philaenus spumarius</i> | 4 | 7 | | | | | 3 |
| <i>Trigonocranus emmeae</i> | 2 | | | | | | 2 |
| Total species | | 8 | 2 | 7 | 4 | 6 | 11 |

Legend Sites: number of sites at which species was recorded; SW: sweep netting; WT: water trap (w: white; y: yellow; b: blue); PT: pitfall trap; SU: suction sampling



Duckend Quarry



Sandy Spinney Quarry

Submitting records to the Recording Scheme

Please submit records either directly to me (using the contact details below) or via the enquiries link on the *Ledra* website. Ideally, records should be submitted either as MapMate files (my CUK is 7q2) or on the specially formatted recording form (in Excel) that can be downloaded from the website. However, I am happy to receive data in other Word or Excel formats as well.

Alan Stewart
 School of Life Sciences
 University of Sussex
 Falmer
 Brighton
 BN1 9QG
a.j.a.stewart@sussex.ac.uk

Recent literature

Full lists of publications on leafhoppers in Britain and Ireland since 2000 can be found on the *Ledra* website, but the following is a list of papers published since the last newsletter:

- Alexander, K.N.A. (2012) *Issus muscaeformis* (Schrank) (Hemiptera: Issidae) in Cornwall. *British Journal of Entomology and Natural History* 25: 14.
- Anon (2011) Hemiptera. *British Journal of Entomology and Natural History* 24: 170. [report of BENHS Annual Exhibition, 2010]
- Badmin, J.S. (2010) Decline of *Prokelisia marginata* (Van Duzee) (Hemiptera: Delphacidae) in Kent 2010. *British Journal of Entomology and Natural History*, 23, 234.
- Bantock, T. (2011) *Macropsis megerlei* (Hemiptera-Auchenorrhyncha: Cicadellidae) new to Britain. *British Journal of Entomology and Natural History*, 24, 87-89.
- Bantock, T. (2012) Hemiptera report for 2010. *The London Naturalist* 90: 207-209.
- Littlewood, N.A., Pakeman, R.J. & Pozsgai, G. (2012) Grazing impacts on Auchenorrhyncha diversity and abundance on a Scottish upland estate. *Insect Conservation and Diversity* 5: 67-74.
- Littlewood, N.A. & Stewart, A.J.A. (2011) Upland grassland Auchenorrhyncha at Glen Finglas, Perthshire. *Glasgow Naturalist* 25, 61-65
- Ramsay, A.J. (2010) *Gargara genistae* (Fabr.) (Hemiptera: Membracidae) recorded from gorse *Ulex europaeus* in Suffolk. *British Journal of Entomology and Natural History*, 23, 261.
- Whitehead, P.F. (2010) Further observations on *Empoasca vitis* (Goethe, 1875) (Hem., Cicadellidae). *Entomologist's Monthly Magazine* 146, 20.
- Whitehead, P.F. (2010) *Allygus mixtus* (F., 1794) (Hem., Cicadellidae) a potential vector of the bacterium *Pseudomonas syringae* pv. *aesculi* on Horse Chestnut (*Aesculus hippocastaneum* L.). *Entomologist's Monthly Magazine* 146, 40.
- Whitehead, P.F. (2010) The impact of severe weather during January 2010 on some invertebrates in Worcestershire (VC37). *Entomologist's Monthly Magazine* 146, 62.