# HETEROPTERA STUDY GROUP

Newsletter No. 6 - December 1985

Apologies for the lateness of this issue, due partly to waiting for promised articles. However, there is now plenty to report.

## Bugs in 1985

The 1985 field season produced several interesting records. David Appleton added *Deraeocoris scutellaris* to the Hampshire list, and Steve Moran found one in Rothamsted Light-trap material from Inverpolly NNR, *Pachybrachius luridus* has appeared in numbers at one site (D Appleton again), *Tuponia carayoni* was found abundantly near Wittering, Sussex by Peter Hodge, who has also taken *Cymus obliquus*, in open, marshy pasture (not in woodland), on *Luzula silvatica*. As a useful field character, he notes that *obliquus* has partly-black femora, and is noticeably smaller than the common *Cymus* species.

Records of *Elasmostethus tristriatus* continue to trickle in. These will be reviewed fully in the Spring '86 issue.

The two organized meetings were both successful. The Monks Wood weekend (joint with Brit. Ent. & N.H.S. and several other recording schemes) attracted about 30 entomologists covering a range of groups, but with a strong heteropterist contingent. The visit to Bedford Purlieus was especially rewarding and suggests the site still has much to offer. An account of the Anglesey weekend has been provided by Bernard Nau.

## The Bug Book

Plans for a new identification manual are now in hand. Drs Nau and Kirby have agreed to write the text, and John Read (whose *Gerris* figures are enclosed with this Newsletter) will undertake the bulk of the illustration. I shall co-ordinate the work, and arrange circulation of draft keys etc with the Newsletter, and Brit. Ent. & N.H.S. (who produced Stubbs' & Falk's magnificent 'British Hoverflies') has expressed interest in publishing the guide. To make such a work effective, we need critical responses to draft keys. Please make all your suggestions/difficulties in using earlier keys known to their respective authors, and try out the latest batch too.

## With this issue

A finalized list of Priority Squares for the Heteroptera recording scheme is enclosed.

Pete Kirby has produced a new key to the two *Leptopterna* species, which had caused problems hitherto.

John Read has illustrated the genital abdominal segments of *Gerris*, providing new confirmatory characters for a genus which can seem difficult for beginners. Unlike earlier genital features, these avoid the chore of dissecting out and clearing the genital capsule. (I apologize for any loss of clarity in reproduction; but photocopies cannot retain all the superb detail of the original.)

## Other Items Available

Some of you have copies of two other draft keys, written by Bill Dolling:

*Eurydema* (all European, N. African) and

Lygaeidae : Orsillinae (Western European)

These are rather more technical than other draft keys, so full circulation has been delayed till illustrations are available. If anyone would like copies now, please let me know.

Brian Eversham
Biological Records Centre
Monks Wood Experimental Station
Abbots Ripton
Huntingdon
Cambs
PE17 2LS

Tel: Abbots Ripton (04873) 381

## Future Meetings

Three meetings have been arranged for 1986.

OXFORDSHIRE - 27-29 June

Dr George McGavin is organizing the meeting. The itinerary will include Wytham & Bagley Woods on Friday afternoon/evening, Wychwood NNR and adjoining area on Saturday, and Aston Rowant NNR on Sunday. Bench-space will be available in the University Museu in the evenings. Dr McGavin has been able to secure accommodation in Keble College, a very attractive building and immediately adjacent to the Museum, at the extremely favou able rate of £11 for B&B, and £5 for evening meal. As numbers have to be limited, ea booking is advised.
Please contact: Dr G C McGavin, Hope Entomological Collections, University Museum, Parks Road, Oxford OX1 3PW.
(If anyone would like details of hotel accommodation in the area, contact Oxford Tour Information, St Aldate's, Oxford OX1 1DY, tel. Oxford (0865) 726871).

On a more adventurous note,

Would you like to ..... cruise through the pine-clad archipelagoes of Loch Maree .... ramble through Rassal Ashwoods ..... sample the saltmarshes at Torridon ..... or just generally push back the frontiers of science?

Then why not come along to the HETEROPTERISTS' HIGHLAND MEETING, Beinn Eighe, Wester R 2-9 August 1986?

This will be based on the Anancaun Field Station (28/024629) adjacent to the Beinn Eigh NNR. Apart from the reserve itself, visits are planned to Loch Maree Islands NNR, Ra Ashwoods, Coulin SSSI, and a range of other habitats in the area.

Accommodation will be at the Anancaun Field Station, where there is a small hostel, a "mess hut" and camping facilities. Bed and breakfast accommodation will also be avai in nearby Kinlochewe.

The meeting is being arranged by Steve Moran (Inverness Museum & Art Gallery, Castle W Inverness IV2 3ED). More details and booking forms will be circulated in the Spring Newsletter.

NORTH YORKS MOORS AREA - 5-7 September 1985

Full details of this meeting, arranged by Rosy and Roger Key, and a booking form, are given on a separate sheet (enclosed).

## Atlas of Oxfordshire Pentatomomorpha

This has recently been produced and includes a range of maps, with full details of records of scarcer species. It incorporates unpublished records from G G E Scudder and the Hope Department collections, and the results of recent fieldwork. Copies are available at 85p + postage from Mr J M Campbell, Oxford Museums Service, Woodstock, Oxford OX7 1SN.

## Stephanitis rhododendri

T R E Southwood

This species was very common before the war and in the immediate post-war years. When Imperial College purchased Silwood Park, it was very abundant on the rhododendro there and I believe Professor R G Davies collected tubefuls for practical work. By time I was at Silwood in 1949, I seem to recollect I found only one or two, and by 1962 when I returned for a longer collecting spell, I was unable to find any, nor after 1955 when I was on the staff.

## Anglesey bug weekend

Bernard Nau

For those not fortunate enough to participate in the weekend meeting on the island of Anglesey on 17-18 August it may be of interest to list some of the 74 species we found on the Newborough Warren National Nature Reserve, on the Saturday. Some of the more unusual species are underlined:

| | | |
|---|---|---|
| Aelia acuminata | Berytinus minor | Calocoris roseomaculatus |
| Chlamydatus pullus | Coranus subapterus | Corizus hyoscyami |
| Cymus glandicolor | Cyrtorhinus caricis | Dictyonota strichnocera |
| Dicyphus annulatus | Dolycoris baccarum | Gampsocoris punctipes |
| Gastrodes grossipes | Globiceps cruciatus | Kalama tricornis |
| Lygus maritimus | Macrotylus paykulli | Megalonotus chiragra |
| Monosynamma sabulicola | Nabicula lineata | Myrmus miriformis |
| Neides tipularis | Nysius thymi | Nysius ericae |
| Orthocephalus saltator | Orthotylus ochrotrichus | Piesma maculatum |
| Piesma quadratum | Piezodorus lituratus | Pithanus maerkeli |
| Stenodema holsatum | Teratocoris saundersi | Thyreocoris scarabaeoides |
| Troilus luridus | | |

The species not listed are all 'ubiquitous' ones (bold type on site-visit card). There may be a couple of Saldids to add, but I haven't yet had the details. After Newborough Warren we went on to more dunes further west, at Aberffraw, finishing the day nearby at a cove with some pleasant sandy cliff-top grassland. On the Sunday we visited two wetland reserves, Cors Erddreiniog and Cors Goch, and then went on to a coastal lagoon on the north coast at Cemlyn Bay.

Over the weekend we accumulated the rather grand total of 27 site-visit cards, those from Anglesey being supplemented by a collection of useful records obtained en route by Pete Kirby and Sarah Lambert in the vice-counties of Caerns and Denbigh, and by me in Shropshire, Hereford and West Gloucestershire. The former included a locality for Cryptostemma alienum, a very easy-to-miss bug; and the latter included a site for Lygocoris populi on the banks of the Severn Estuary on its usual plant host, Grey Poplar. The status of this relatively recently-recognized species is inadequately known as yet so, if you see any Grey Poplar in July-August, stop and check!

In conclusion I would like to take this opportunity to thank those who organized this fruitful and enjoyable field meeting: Joan Morgan for help with organizing accommodation, laboratory, and the field visits in Anglesey; and Sarah and Pete who organized the bookings very efficiently and brought a mountain of provisions from which breakfasts and lunches were assembled; and Brian Eversham without whom none of it would have happened

## Some foods of Heteroptera larvae in the wild

Roger D Hawkins

Elasmostethus interstinctus - young female catkins of birch

Elasmucha grisea - young female catkins of birch

Kleidocerys resedae - young or ripe female catkins of birch

(This species appears to dig itself into the catkins; the other two suck from outside)

Cyphostethus tristriatus - unripe cones of Chamaecyparis and Thuja

Piezodorus lituratus - unripe pods of gorse, broom, laburnum

Palomena prasina - unripe fruits of hogweed (in late instars), + ?

Eysarcoris fabricii - Hedge woundwort, but in August may move to other plants, eg nettles and hogweed, and feeds on their ripening fruits.

Dolycoris baccarum - raised on unripe fruits of buttercups in captivity.

Troilus luridus - likes Chrysomelid larvae, but cannot handle adults; eats some Lepidopteran larvae and hoverfly larvae; in captivity ate maggots somewhat reluctantly - a messy, unsatisfactory food!

## Possible Additions to the British List

Compiled by Brian Eversham

To help focus British heteropterists' attention, I approached several eminent workers familiar with the fauna of adjacent parts of Europe, asking for their predictions of species likely to be awaiting discovery in Britain. The following is a list of suggestions so far. M Jean Péricart has once again provided full details for the families which are his speciality:

ANTHOCORIDAE

Orius minutus L. Probably present. Check the collections, and collect Heterorius on on trees, shrubs etc.

Dysepicritus rufescens Costa A relatively rare species coming up to North France (Péricard 1972, p 268). Feeds on Psocidae.

Scolopescelis pulchella (Zett.) On diseased Pinus, preying on Scolytid larvae.

TINGIDAE

Acalypta marginata (Wolff) On moss on chalky hills.

[It is surprising that neither Dictyla humuli nor D. echii has ever been found in Brit but their size and style of life on higher plants (Boraginaceae) seem to preclude their being overlooked.]

PIESMATIDAE

Piesma capitatum Wolff Seems to be absent from British collections. Nevertheless, it could be found in the UK or Ireland.

NABIDAE

Nabis punctatus Costa (= feroides Remane) Occurs in Britanny, and probably throughou France.

BERYTINIDAE, CIMICIDAE

No suggestions.

The following were suggested by Mr W R Dolling.

LYGAEIDAE

This family, especially the Rhyparochrominae, may yield several new species.

Ligyrocoris silvestris (known from Denmark, Norway, Lappland etc)

Scolopostethus pilosus (Belgium, Netherlands, Scandinavia)

Gonianotus marginepunctatus (Belgium, Netherlands, Scandinavia etc)

Sphragisticus nebulosus (Belgium, Netherlands, Scandinavia etc)

Rhyparochromus phoenicus (Belgium, Netherlands, Scandinavia)

MIRIDAE

Amblytylus albidus

Acetropis carinata

Stenodema virens

NOTONECTIDAE

Notonecta lutea

CORIXIDAE

Sigara hellensi

I hope to include descriptions/keys to all these species in future Newsletters.

MICROPHYSIDAE

Loricula rufipes (Reuter) An extremely small species easily unnoticed in the field. I think it is to be found in France and possibly the UK. Preying on Psocidae on lichen

Loricula bipunctata Perris. Preying on Psocidae on lichens.

Following Pete Kirby's article on bugs on tree-trunks, I have prepared a key to Loricula which includes the two suggestions above, and is a translation of parts of Péricart (1972

Péricart (1972) Loricula : Key to species

1. Fully winged. Ocelli well developed. Whole animal elongate. Males ..... 2

   Brachypterous or hemelytra without membrane. Ocelli vestigial or absent. Abdomen short and wide. Females ..... 5

2. (Males) Rostrum reaching or exceeding mid-coxae, 2nd segment reaching base of head. Pronotal callus, and transverse groove at hind-edge of pronotum, clearly visible. 2.2 - 2.5 mm ..... L. pselaphiformis

   Pronotum more shiny on the callus. Outer area of exocorium more or less raised for almost all its length ..... 3

3. Head bright red. Temples less distinctly-delimited behind. Very small: length c. 1.5 mm ..... L. ruficeps

   Head brown, yellow-red or brown-red, never bright red. Temple sharply-delimited behind. Larger ..... 4

4. Pronotum wholly shiny. Outer edges of hemelytra parallel. Cuneus red or brown-red, with an acuminate apex. 2nd antennal segment about 1.15x as long as width of head including eyes. Length 2 - 2.3 mm ..... L. elegantula

   Pronotum semi-mat in the basal portion, partly shiny on anterior callus. Cuneus brownish, paler towards its base, rounded at its apex. Hemelytra widening a little from the base toward the costal fracture. 2nd antennal segment 1.3 - 1.4x as long as width of head including eyes. 2.1 - 2.5 mm long ..... L. bipunctata

5. (Females) Hemelytra at least twice length of scutellum, and often wider behind than at pronotum ..... 6

   Hemelytra less than 1.5x as long as scutellum, and scarcely as wide as pronotum base. Head, pronotum (except hind-angles) and scutellum more or less dull yellow-red. Hemelytra whitish, with a black spot close to the hind-angle. Pronotum sinuate at sides, with pointed hind-angles. 1.4 - 1.8 mm long ..... L. elegantula

6. Head bright red. Hemelytra only twice as long as scutellum. Very small: length 1.2 - 1.25 mm ..... L. ruficeps

   Not as above. Hemelytra 2.5x as long as scutellum ..... 7

7. Insect appearing mat, slightly 'silk-finish' above. Hemelytra variable in colour, yellow-brown to brown-black, sometimes reddish yellow or reddish brown. Head at least in part brick-red. Antennae brownish, the 2nd segment yellowish in the middle. 1.5 - 1.85 mm long ..... L. pselaphiformi

   Glossy. Head never brick-red. A diffuse black spot on each hemelytron. Antennae stout, very long, 3rd segment black, 4th white. Length 1.6 - 1.9 mm ..... L. bipunctata

## Further notes on immature bugs

I am grateful to Sir Richard Southwood for drawing my attention to the following helpful papers.

Southwood, T.R.E. 1954. Ent. mon. Mag. 91 : 82.
(Bugs near Flatford Mill : figures Stenodema trispinosum nymph)

Southwood, T.R.E., & Scudder, G.G.E., 1956. Ent. mon. Mag. 92 : 313-325.
(Nymphs of bugs on stinging-nettles)

Southwood, T.R.E. 1956. Entomol. 89 : 220-222.
(Key to larval instars)

Southwood, T.R.E. & Fewkes, D.W. 1961. Trans. Soc. Brit. Ent. 14 : 147-166.
(Immatures of the commoner British Nabidae)

Dr George McGavin produced keys to very many species of Mirid in his PhD thesis, working on material accumulated by Sir Richard. He and Pete Kirby are keen to extend the coverage of these, and the following list is of those mirids NOT represented so far. Specimens of any would be very gratefully received. (Please send to Pete Kirby, Nature Conservancy Council, Northminster House, Peterborough, Cambs PE1 1UA in the first instant.)

Bothynotus pilosus
Conostethus brevis
Conostethus griseus
Amblytylus delicatus
Amblytylus brevicollis
Tytthus geminus
Phylus palliceps (= pallipes)
Psallus ambiguus
Psallus assimilis
Psallus perrisi
Psallus wagneri
Psallus falleni
Psallus flavellus
Psallus albicinctus
Psallus diminutus
Psallus mollis (= masseei)
Pityopsallus luridus
Plagiognathus vitellinus
Chlamydatus pulicarius
Chlamydatus saltitans
Chlamydatus wilkinsoni
Chlamydatus evanescens
Phoenicocoris obscurellus
Monosynamma maritima
Monosynamma nigritula
Monosynamma sabulicola
Campylomma annulicorne
Campylomma verbasci
Placochilus seladonicus
Macrolophus nubilus
Macrolophus rubi
Pilophorus clavatus
Halticus macrocephalus
Halticus luteicollis
Fieberocapsus flaveolus
Globiceps cruciatus
Globiceps (= Mecomma) dispar
Orthotylus fuscescens
Orthotylus tenellus
Orthotylus viridinervis
Orthotylus marginalis
Orthotylus virens
Orthotylus nassatus
Orthotylus diaphanus
Lygus pratensis
Lygus punctatus
Lygus wagneri
Orthops atomarius
Orthops cervinus
Orthops rubricatus
Orthops kalmi
Orthops basalis
Lygocoris populi
Lygocoris viridis
Lygocoris limbatus
Lygocoris lucorum
Lygocoris spinolai
Agnocoris reclairei
Zygimus nigriceps
Plesiocoris rugicollis
Polymerus vulneratus
*Hadrodemus m-flavum
Calocoris fulvomaculatus
Megacoelum beckeri
Phytocoris dimidiatus
Phytocoris longipennis
Phytocoris populi
Phytocoris reuteri
Phytocoris ulmi
Phytocoris insignis
Phytocoris varipes
Capsus wagneri
Notostira erratica
Trigonotylus psammaecolor
Tuponia carayoni

* Extinct in Britain

Steve Judd (Merseyside County Museum, William Brown Street, Liverpool L3 8EN) is working on Lygaeid nymphal taxonomy and identification and has limited material of many species. However, nymphs of any Lygaeids will be very keenly received.

OBSERVATIONS ON SOME WATER-BUGS

Bernard Nau

(1) Mesovelia furcata : Saunders regarded this as "rare". Butler, at the end of a long and interesting account of the bug, concludes "It is probably less rare than has been generally supposed, and is no doubt often passed over because of the difficulty of seeing it, and because of the larval appearance of the usually appearing form". Butler describes how he first met it on a pond amongst floating leaves of Potamogeton natans ".... promiscuous skimming with a water-net yielded a plentiful supply of the previously invisible Mesovelia". Having learned the art he proceeded to find the bug at several other sites.

I have found the bug at a couple of sites over the years but this "summer" (for want of a better word!) I finally 'clicked'. Whilst engaged in a survey of a flooded gravel pit near Ware in Herts, I observed Mesovelia in quantity, inhabiting 'rafts' of yellowish-green filamentous algae, perhaps a dozen or two on an A4-size raft. Their mode of locomotion distinguished them from the many tiny Gerris in the vicinity. Once disturbed they move in a very fast continuous fashion until they reach sanctuary - like a miniature clockwork mouse! This is quite different from the jerky, slower stop-start motion of Gerris.

Next day I went to a local gravel pit convinced that I ought to be able to find the bug there, too. Sure enough, as soon as I located some algal rafts I found Mesovelia. I then toured a number of other Bedfordshire gravel pits with similar success. Indeed, at one site a raft some 2 metres long bore literally hundreds. 'Promiscuous skimming' was not called for!

On subsequent weekends I extended my search into the adjacent counties of Hunts and Cambs with similar success, though not in quite the same quantity.

Apart from the larval appearance of the normal apterous adults, Mesovelia is extremely active and quickly escapes from the net, which must further add to the probability of their passing unrecorded.

(2) Aphelocheirus aestivalis : this is another species which is probably under-recorded, living, inconveniently for Heteropterists, under stones at the bottom of fast-flowing rivers. I had limited success in finding this bug until I happened on a site where the clear shallow water enabled me to observe its behaviour.

They seem to frequent largish stones, lurking under the upstream edge. If one works one's net upstream, as would seem logical, as soon as the downstream end of the stone is nudged, the bug ejects with remarkable speed upstream to new cover. If one works downstream, then one can't catch up with the bug anyway. The art appears to be to work upstream, but immediately follow an initial nudge of a likely stone by a rapid sweep ahead, upstream of the stone. I have had considerable success with this procedure.

(3) Micronecta poweri & M. scholtzi : these 2 tiny corixids both frequent shallows over a mineral substrate. The former species is said to be the commoner, yet over the years I have found scholtzi much more frequently; which puzzled me. But I believe that I have now resolved the problem. It seems to me that there is a very clear ecological separation of the species - at least here in the south. M. poweri is associated with quite fast-flowing water, such as the margins of gravelly streams or rivers, whilst scholtzi is associated with still or slowly-flowing water. This is hinted at in S&L, but my experience seems to indicate that it is quite definite. It seems to me possible that the 2 species may be mis-identified rather often. I find that scholtzi is variable in the degree of contrast and extent of the dark markings on the forewings: several times I have thought I had poweri but when checked carefully have found the bugs to be scholtzi Even the characteristic shape of the lateral margin of the pronotum can be confusing, depending on the degree to which the head is up or down. It is wise to check male genitalia until experienced.

One final remark on habitats: in the north, it appears from S&L, that scholtzi is absent whilst poweri occurs in upland lakes as well as streams.

## MISTLETOE BUGS

Bernard Nau

When the opportunity presents itself, which is all too rarely in my part of the country, this plant can be a rewarding one for the Heteropterist. It is the host for Anthocoris visci and for Orthops viscicola.

In Bedfordshire, Mistletoe is very local and is usually confined to the tops of very tall trees. However, I have had some success, in the field, with this plant. At one time there was a clump growing high in a Poplar in a local wood I visited quite frequently. I often eyed it in passing but it was quite inaccessible. However, one autumn day a week or two after some gales I saw that a large piece of Mistletoe had blown down. It was already beginning to die off but I thought it worth shaking over a tray. To my surprise I was rewarded with a specimen of Anthocoris visci and my pleasure was only slightly marred, on reaching home, to find that the specimen had been macerated between collecting-tube and lid.

The following year I noticed some very accessible Mistletoe in a Field Maple in a field. Inspection revealed a good-size colony of Orthops viscicola.

The moral is, if you see Mistletoe which you can reach, check it for bugs. Both of the above species are probably under-recorded.

## PSALLUS POSTSCRIPT

Bernard Nau

(1) Psallus variabilis : in my note on Psallus identification last September I remarked that I had not certainly taken this species. Since then Dr Aukema kindly sent me specimens from The Netherlands, which have solved my problems with this species. In S&L the only reliable character is a hooked tip to the basal process of aedeagus, which I find difficult to see. However, a very easy character, when comparative material is available for variabilis and the very very similar assimilis, is the general appearance of the entire basal half of the aedeagus : shorter and broader in variabilis, longer and more slender in assimilis.

I have now confirmed several suspected records collected over the years as variabilis. Even better, I have now collected Psallus which I thought 'looked like' variabilis and have been able each time to confirm this by dissection. These bugs were in each case on Oak and my attention was drawn by their redness, a deep Burgundy shade which is quite extensive over much of the forewings and hind femora. The moral is: if you see dark red Psallus on Oak, check them carefully.

As a footnote, regular readers will have noted the discovery in western Europe of a new species, on Sycamore, Psallus pseudoplatanus. This is very like the 2 species mentioned above and I understand from Dr Aukema that all 3 species are now known from The Netherlands. I couldn't find any Psallus on Sycamore this year!

(2) Psallus scholtzi (= alnicola sensu S&L) : in my note last year, I implied that a short rostrum distinguishes this species from the similarly-coloured P. falleni. It does, but scholtzi often has a long rostrum, so this is a one-way character, to be used with caution.