HETEROPTERA STUDY GROUP

Newsletter No. 11 **April 1992**

I may as well begin with the confession. Those who still recall Newsletter 10 will remember my promise to produce an extensive bibliography of literature on the British Heteroptera since the beginning of the Recording Scheme. I also expressed the hope that it would not be a rash promise. Well, the bibliography is notable by its absence. There are good reasons, but I shall not go into them. I shall make only one promise for this Newsletter, which is to make no more promises. I hope the result will be that in the future my achievements will come as pleasant surprises, rather than my failures as disappointments.

Having disposed of what isn't in this Newsletter, it is good to be able to report that what it actually does contain is positive and interesting. There is good news about the Review of the rarer British Heteroptera, which I first bothered you all about some years ago while with the Nature Conservancy Council. A report of the 1991 field meeting shows all the non-participants what they missed - apart, that is, from getting surprisingly cold and wet for August. Bernard Nau's article on birch bugs invites a lateral approach to getting to know the Heteroptera, host plant by host plant. His article on salt-marsh *Conostethus* puts our fauna in a European context, and reveals that we must cope with another name-change.

The list of recent publications is more complete than last year, though I remain acutely aware of its limitations. My usual plea for help still applies: any news of articles on Heteroptera that I might otherwise miss, especially from regional journals and newsletters, is always appreciated. Responses to this plea continue to trickle, rather than flood, in. This year's prize for public-spiritedness goes to Martin Newcombe, for the following gleanings from the Transactions of the Kent Field Club:

Massee, A.M. 1957. The occurrence of the anthocorid bug *Anthocoris limbatus* in Kent. **TKFC, 1(1):** 21.

Massee, A.M. 1960. The Hemiptera-Heteroptera plant bugs recorded in the parish of East Malling, Kent. **TKFC, 1(2):** 83-106.

Felton, J.C. 1967. *Deraeocoris scutellaris* in East Kent. **TKFC, 3(2):** 122.

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Forward planning

I would like to try the experiment of having a theme for the next Newsletter. My selected subject is Saldidae. Now that Pericart's work on them is published, and we know that we don't have to re-think all our past identifications, and also that he has not solved all our problems at a single stroke, it might be a good idea to pool some thoughts. So, anything that anyone wishes to say about Saldidae (even if only questioning or derogatory) would be very welcome. I do not prpose to be exclusive: articles or notes on other subjects will be welcomed.

News Digest

1991 seems to have been a rather less exciting year than others recently, but perhaps its just that I've not been keeping in touch so well as in the past, or even that my own relatively unexciting year has jaundiced my outlook. The literature sees a number of records briefly reported in the last Newsletter now formally published. The most extensive series of interesting records is that from Keith Alexander and Simon Grove on Heteroptera from Cornwall and Devon. They seem to have captured most of the interesting species they might have hoped for, and to have extended the known ranges of several of them, most notably *Lasiacantha capucina* (nine localities in East and West Cornwall, including the north coast). The finding of four new localities for *Trapezonotus ullrichi* in East and West Cornwall and South Devon suggests that this species is probably as much difficult to find as actually rare in the south-west: the discovery of an apparent association with ox-eye daisy may make future searches easier. Other records of particular note are *Physatocheila smreczynskii* new to Cornwall from Boconnoc Park, E. Cornwall, and *Saldula arenicola* from South Devon.

Keith Alexander's wandering's with the National Trust's Biological Survey Team this year took him to the Lake District, whence came the several Heteroptera he exhibited at the 1991 Annual Exhibition of the British Entomological and Natural History Society. His records of *Salda morio* and *muelleri*, if not wholly surprising, are certainly welcome. These animals are easily overlooked, and the distribution of recent records bears a marked similarity to that of major pitfalling exercises. He found *Polymerus palustris* to be widespread in marshy localities. This insect has sometimes been regarded as rather a rarity, but it seems clear that it is not infrequent in the west of southern Britain. The finding of *Xylocoris cursitans* widespread in ancient woods and parkland supports Keith's past observations of the close association of this insect with these habitats.

At the same exhibition, Peter Hodge showed a specimen of *Peritrechus gracilicornis* from Southborne, West Sussex, a pleasing record for an insect whose status in this country is still not entirely clear. He also showed *Plesiodema pinetellum* from West Sussex (surprisingly, new to the county) and *Teloleuca pellucens* from Easterness.

Perhaps the most intriguing discovery of the year has been that *Gonocerus acuteangulatus*, for so long restricted to box at Box Hill,

Surrey, is no longer confined either to that plant or to that locality. Ian Menzies reports the finding of adults and nymphs (the latter especially on hawthorn) at Bookham Common by himself and Roger Hawkins. This is apparently not the only new locality. It has always seemed odd that this species, polyphagous elsewhere in Europe, should be confined to box in Britain (and indeed there have been occasional suggestions that it might not be quite so restricted in diet), though at least this did give some logic to its being confined to the single locality. The decision of the insect, after staying put for well over a hundred years, to suddenly wander off into the surrounding countryside and broaden its menu is in a way even odder.

Roger Hawkins reports that he is continuing to find new colonies of *Orsillus depressus*, and has expressed surprise that apparently nobody else is. Is this really true, or are other people finding more localities for this species? Any reports on *Orsillus*, including failures to find it despite searching, would be welcome. I can report a total failure to find it so far in Peterborough.

Paul Whitehead's publications on the finding of *Scolopostethus pictus* in Worcestershire provide a new county record for this species, now rarely recorded, and an additional record for the species from its "natural" habitat at the margins of rivers, lakes and (sometimes) the sea. One specimen of *S. pictus* turned up this year in material I identified from pitfall traps run by Peter Harvey at Mucking Heath, South Essex, the first record I know of for the county for many years.

Since it is becoming a habit to make mention of additional records of *Capsus wagneri* in the News Digest section of these Newsletters, this is probably an appropriate place to mention my own finding of the species this year in Middlesex (Frays Farm Meadows SSSI, TQ058860, 29 June 1991). It was fairly common in tall rather undistinguished wet grassland subject to frequent flooding.

Recent (1991) literature

Alexander, K.N.A. & Grove, S.J. Heteroptera recording in Cornwall and Devon during 1989 and 1990. **British Journal of Entomology and Natural History, 4**: 119-121.

Allen, A.A. *Dicyphus errans* (Wolff) (Hem., Miridae) breeding on *Nicotiana*. **Entomologist's Monthly Magazine, 127**: 214.

Allen, A.A. *Cyphostethus tristriatus* F. (Hem.: Acanthosomatidae) in S.E. London, and its occurrence on *Thuja orientalis* L. **Entomologist's Record and Joural of Variation, 103**: 296.

Dolling, W.R. The Hemiptera. Natural History Museum Publications; Oxford University Press. ix + 274 pp.

[Jones, R.A.] 1990 Annual Exhibition, Imperial College, London SW7 - 27 October 1990. Hemiptera. **British Journal of Entomology and Natural History, 4**: 43.

Kirby, P. Unusual host plant records for some Heteroptera (Hem., Miridae, Pentatomidae). **Entomologist's Monthly Magazine, 127:** 38.

Kirby, P. Further inland records of *Chorosoma schillingi* (Schummel) (Hem., Rhopalidae). **Entomologist's Monthly Magazine, 127:** 250.

Kirby, P. A provisional list of the Heteroptera of Carmarthenshire (VC 44). **Dyfed Invertebrate Group Newsletter, 23:** 6-17.

Knill-Jones, S.A. The status of *Tuponia carayoni* Wagner (Hemiptera: Miridae) in the Isle of Wight. **Entomologist's Gazette, 42:** 36.

Menzies, I.S. Survey of Bookham Common. Hemiptera-Heteroptera. **London Naturalist, 70:** 134-135.

Savage, A.A. Variation in the diagnostic morphological features of *Corixa punctata* (Illiger) and *Corixa iberica* Hansson (Hem.- Het., Corixidae). **Entomologist's Monthly Magazine, 127:** 145-149.

Whitehead, P.F. *Scolopostethus pictus* (Schill.) (Hem.: Lygaeidae) new to Worcestershire. **Entomologist's Record and Journal of Variation, 103:** 82.

Whitehead, P.F. A further note on *Scolopostethus pictus* (Schill.) (Hem., Lygaeidae). **Entomologist's Record and Journal of Variation, 103:** 262.

The major work on the Hemiptera by W.R. Dolling deserves a full review but since, owing to a minor administartive lapse on the part of my book supplier, I have, at the time of writing, had my copy for only three rather busy days what I have produced is more in the nature of a brief description and first impressions. The book covers all the Hemiptera. It provides a general introduction to the biology of the group, considering such aspects as their food, relationships with other organisms and distribution. There are keys to families for all Hemiptera and, for Heteroptera, a key to families of nymphs. In addition to the general chapters, there is a separate account of the biology of each family. There is a very useful glossary, and a considerable list of references. Though the book considers the Hemiptera in a world context, the emphasis is very much on the British fauna. Inevitably, in covering such a large field in a single book, there is little scope for dealing in depth with any given topic. The book is a combination of readable introduction and technical reference guide and, considering the difficulty of combining these two functions, does rather well. For me, one of the most valuable features of the book is the information it provides about things other than Heteroptera. I'm very prone to twinges of guilt about my ignorance of some other groups of Hemiptera. Through reading the chapters on these groups, I now know what it is that I don't know, which is the first step towards knowing and an essential starting point for finding out if the need arises. The book can be obtained from Natural History Museum Publications for £40 plus postage.

The National Review of Hemiptera

Peter Kirby

The long-promised National Review of Hemiptera, covering Heteroptera and Auchenorhyncha, is now out. For those who are new to this Newsletter or have simply forgotten, this is a set of accounts of the rarer British members of these groups (those believed to occur in 100 or fewer 10-km squares in Britain), detailing status, distribution, habitat requirements, threats and possible conservation measures. Those Heteropterists who generously contributed information to the review should by now have received the free copy that I promised them in return for their assistance. If anyone thinks they qualify for a free copy but hasn't received one, then it is likely to be the result of clerical error on my part. Let me know, and I will, as they say, investigate your claim and pass it on to the relevant authorities. For those who would like a review but aren't entitled to a free one, copies can be obtained from Joint Nature Conservation Committee, Monkstone House, City Road, Peterborough PE1 1JY. The full title is "A review of the scarce and threatened Hemiptera of Great Britain". It is published by the JNCC as no. 2 in the series "U.K. Nature Conservation", and costs £9, post-free.

It is almost inevitable that a review of this kind quite rapidly needs updating. I already have a small stock of additional information, mostly on distribution, for various species. It would seem sensible periodically to list additions and corrections to the Review in this Newsletter. I have not done so this time, because I've not yet had time to do the necessary work. I shall hope to do so in the next issue. I shall of course try to include information published elsewhere, and will welcome notes on the rarer Heteroptera for publication in the Newsletter. If anyone knows of any ommissions or errors, disagrees with statements in the Review, or has recent information to impart which they do not want to turn into a publication, I shall be delighted to receive it. The Invertebrate Site Register, now with the JNCC, continues to welcome records of rarer Heteroptera, and I will ensure that any records sent to me are forwarded to them. Complete records from site visits should, of course, continue to be sent to Bernard Nau for the National recording Scheme.

Perthshire Field Meeting, 1990: revised table of records

Bernard Nau

List of sites:

Site no	Nat.Grid	V.C	Site	No of species
1	NN973536	88	Balliniuig Shingle Is.	55
3	NO170509	89	Milton Wood NNR	53
2	NO135230	89	Kinnoull Hill,Perth	52
4	NO040437	89	Loch of Lowes	48
5	NO19-42-	89	Stormont Loch, Rosemount	48
6	NN57-56-	88	Black Wood,Rannoch	41
7	NN719572	88	Loch an Daim	39
8	NN69-587	88	Dunalastair Water,Rannoch	36
9	NO034646	89	Straloch Moraines	36
10	NN536455	88	Croch na Keys Wood, Glen Lyon	30
11	NO016240	88	Methven Moss, W of Perth	30
12	NO083213	88	Minkie Moss, SW of Perth	30
13	NN180998	85	Loch Leven,Levenmouth Fm	27
14	NO048176	88	Forteviot	23
15	NN654478	88	Invervar, Glen Lyon	23
16	NN711472	88	Macgregors Leap,Glen Lyon	22
17	NO056265	88	Methven Wood, W of Perth	20
18	NN595413	88	Lochan na Lairige,Ben Lawers	18
19	NN906671	88	Loch Moraig,Blair Atholl	17
20	NN79944-	88	Kenmore-Quaich pass	16
21	NO123233	88	Moncreiffe Is., Perth	15
22	NO49-33-	90	Monifieth: foreshore	15
23	NN857600	88	Queen's View,Loch Tummel	14
24	NN940514	88	Balmaguard Glen	13
25	NN68-24-	88	Loch Earn	12
26	NO52-38-	90	Monikie	12
27	NN716660	88	Dallchalloch, Glen Errochty	11
28	NN783639	88	Bochonie,Glen Errochty	10
29	NN774453	88	Loch Tay, Kenmore	8
30	NO55-34-	90	Carnoustie:foreshore	3

TOTAL = 777

HETEROPTERA: Perth area, 27th July–3 August 1990

Species		Ulr. Status	Site no. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	SUM
Anthocoris	*nemorum*	C	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*		*		*	*		*	*	*	*					22
Pachytomella	*parallela*	C	•	•	•	•	•	•	•	•	•	•		•	•		•	•	•	•	•	•	•		•	•	•		•			22
Plagiognathus	*arbustorum*	C	•	•	•	•	•		•	•	•			•	•	•	•	•	•		•		•	•		•	•	•	•			21
Plagiognathus	*chrysanthemi*	C	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•			•	•	•			•	•					21
Stenodema	*holsatum*	C	•	•	•	•	•	•	•			•	•	•	•	•	•	•		•	•	•			•		•	•	•				21
Hesperocorixa	*sahlbergi*	C	•	•	•	•	•	•	•	•	•	•	•	•	•																		20
Lygocoris	*contaminatus*	C	•	•	•	•		•	•	•	•	•	•	•	•		•	•	•						•			•					17
Lygocoris	*pabulinus*	C	•	•	•	•	•	•	•	•	•	•	•	•			•		•		•		•		•								17
Nabicula	*limbata*	C	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•				•		•									17
Anthocoris	*nemoralis*	C	•	•	•	•	•	•	•	•	•		•	•			•						•	•		•		•					16
Temnostethus	*gracilis*	L	•	•	•	•	•	•		•	•	•						•	•	•	•				•					•	•		16
Plagiognathus	*angulatus*	C	•	•	•	•	•	•	•	•	•	•		•			•		•											•			15
Leptopterna	*ferrugata*	C	•	•	•	•		•			•					•		•		•	•	•						•	•				14
Pithanus	*maerkeli*	C	•	•	•		•	•	•	•	•	•		•		•				•	•	•											14
Psallus	*haemotodes*	C	•			•	•	•	•	•	•		•		•		•	•			•						•		•				14
Saldula	*saltatoria*	C	•	•			•		•	•	•	•	•		•	•	•			•										•			13
Trigonotylus	*ruficornis*	C	•	•	•			•	•	•	•	•		•			•				•	•		•									14
Nabicula	*flavomarginatus*	C	•		•	•		•	•	•	•			•	•		•				•	•							•				13
Tingis	*cardui*	C	•	•		•	•			•	•	•		•	•	•									•	•			•				13
Atractotomus	*magnicornis*	C	•	•	•	•	•			•	•								•				•		•	•	•						12
Orthotylus	*marginalis*	C	•	•	•	•	•	•	•	•			•		•		•							•									12
Phytocoris	*longipennis*	C		•		•	•	•			•		•				•	•	•								•	•					11
Stygnocoris	*sabulosus*	C		•	•			•	•		•	•	•	•		•		•	•														11
Orymus	*brunneus*	C		•	•	•	•	•				•	•	•					•							•							10
Leptopterna	*dolabrata*	C	•	•	•	•	•	•			•			•		•	•																10
Monalocoris	*filicis*	C	•	•	•	•	•			•				•	•		•								•		•						10
Orthotylus	*virescens*	C	•	•	•	•	•							•		•		•						•			•						10
Psallus	*salicis*	C		•		•		•	•		•	•	•				•								•				•				10
Asciodema	*obsoletum*	C	•	•	•	•	•							•				•						•		•							9
Cyrtorhinus	*caricis*	C					•		•	•	•			•	•						•	•								•			9
Lygus	*rugulipennis*	C	•	•		•	•				•					•							•				•				•	9
Saldula	*scotica*	C	•	•								•				•		•	•	•									•		•		9
Teratocoris	*saundersi*	C				•	•	•	•	•	•			•	•					•													9
Calocoris	*norvegicus*	C	•	•			•								•			•						•		•		•			•		8
Liocoris	*tripustulatus*	C		•	•	•	•						•		•												•						8
Loricula	*elegantula*	C		•	•	•	•	•			•							•											•				8
Orthotylus	*ericetorum*	C			•			•	•		•	•	•	•							•												8
Cecyplus	*pallicornis*	C		•		•				•				•											•	•			•				7
Acompocoris	*pygmaeus*	C			•			•				•												•				•					6
Anthocoris	*confusus*	C		•	•	•	•						•		•									•									6
Malachocoris	*chlorizans*	C		•													•		•				•		•		•						6
Orthops	*basalis*	C			•		•								•								•				•	•					6
Orthops	*cervinus*	C		•	•	•	•			•			•																				6
Psallus	*diminutus*	C		•	•	•				•																	•		•				6
Velia	*caprai*	C		•				•	•						•				•		•												6
Velia	*saulii*	C	•	•		•		•	•									•															6
Capsus	*ater*	C	•	•		•	•							•																			5
Charagochilus	*gyllenhali*	L	•	•	•					•						•																	5
Orthops	*campestris*	C			•								•		•									•		•							5
Piezodorus	*lituratus*	C		•	•	•								•		•																	5
Saldula	*c-album*	C	•					•								•			•											•			5
Stenodema	*calcaratum*	C	•			•							•					•						•									5
Bryocoris	*pteridis*	C		•	•		•			•																							4
Chlamydatus	*wilkinsoni*	N							•		•	•								•													4
Gastrodes	*grossipes*	C			•			•							•									•									4
Gerris	*lacustris*	C	•						•	•												•											4
Gerris	*odontogaster*	C							•	•										•								•					4
Lygocoris	*viridis*	C	•	•	•		•																										4
Nysius	*ericae*	C	•								•	•				•																	4
Nysius	*thymi*	C	•									•		•	•																		4
Orthotylus	*adenocarpi*	C	•			•	•																		•								4
Pentatoma	*rufipes*	C	•		•	•													•														4
Polymerus	*unifasciatus*	L	•		•						•										•												4
Scolopostethus	*thomsoni*	C					•			•																	•	•					4
Stenodema	*laevigatum*	C	•										•	•		•																	4
Acalypta	*carinata*	N		•		•		•																									3
Chartoscirta	*cincta*	C					•		•	•																							3
Cryptostemma	*alienum*	L	•															•	•														3
Heterocordylus	*tibialis*	C	•		•													•															3
Lamproplax	*picea*	N					•						•	•																			3
Loricula	*pselaphiformis*	C			•	•																				•							3
Lygocoris	*lucorum*	C							•									•															2
Lygus	*wagneri*	C	•	•																			•										3
Phoenicocoris	*obscurellus*	C			•			•				•																					3
Phylus	*melanocephalus*	C			•		•	•																									3
Phytocoris	*pini*	C						•				•			•																		3
Plesiocoris	*rugicollis*	C				•	•			•																							3
Psallus	*variabilis*	L			•	•											•																3
Salda	*littoralis*	C						•	•	•																							3
Saldula	*fucicola*	R3	•												•				•														3

Species	Status	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	SUM
Saldula orthochila	C							•			•									•												3
Teratocoris cervicalis	R3							•	•												•											3
Acalypta parvula	C			•						•																						2
Acalypta brunnea	L		•		•																											2
Anthocoris sarothamni	C			•									•																			2
Berytinus minor	C														•																	1
Calocoris stysi	C	•				•																										2
Chlamydatus pulicarius	R3							•																								1
Chlamydatus pullus	C	•								•																						2
Dicyphus annulatus	C	•																					•									2
Dicyphus stachydis	C		•														•															2
Globiceps dispar	N									•	•																					2
Hesperocorixa castanea	C							•											•													2
Hesperocorixa sahlbergi	C							•					•																			2
Lopus decolor	C	•											•																			2
Lygus maritimus	C														•																•	2
Megalocoleus molliculus	C	•																					•									2
Megalocoleus pilosus	C														•							•										2
Nabis ericetorum	C										•	•																				2
Orthops rubricatus	C					•												•														2
Phylus coryli	C		•													•																	2
Plagiognathus vitellinus	L			•						•																						2
Polymerus nigritus	C		•			•																										2
Psallus ambiguus	C	•					•																									2
Psallus betuleti	C		•	•																												2
Salda muelleri	N							•											•													2
Scoloposthetus decoratus	C			•							•																					2
Sigara distincta	C				•			•																								2
Sigara scotti	C																		•									•				2
Teratocoris viridis	L							•											•													2
Tetraphleps bicuspis	C																					•								•		2
Adelphocoris lineolatus	C																						•									1
Anthocoris gallarum-ulmi	C								•																							1
Atractotomus mirificus	C			•																												1
Bothynotus pilosus	NL																				•											1
Calocoris roseomaculatus	C	•																														1
Camptozygum aequale	C						•																									1
Chlamydatus saltitans	C	•																														1
Dichrooscytus rufipennis	C						•																									1
Dicyphus globulifer	C		•																													1
Elasmostethus interstinctus	C											•																				1
Elasmucha grisea	C											•																				1
Empicoris culiciformis	C					•																										1
Empicoris vagabundus	C			•																												1
Gerris costai	L																		•													1
Gerris gibbifer	C																		•													1
Gerris lateralis	N								•																							1
Gerris thoracicus	C																											•				1
Halticus rutescens	N									•																						1
Hebrus ruficeps	L					•																										1
Kleidocerys truncatulus	C											•																				1
Lyctocoris campestris	C					•																										1
Macrodema micropterum	C											•																				1
Myrmedobia exilinguenas	N						•																									1
Orthocephalus saltator	C	•																														1
Orthotylus bilineatus	C										•																					1
Orthotylus fuscescens	N						•																									1
Orthotylus tenellus	C				•																											1
Psylus pelliceps	C			•																												1
Phytocoris tiliae	C					•																										1
Picromerus bidens	C											•																				1
Pilophorus clavatus	N	•																														1
Plesiodema pinetellum	C						•																									1
Psallus flavellus	C		•																													1
Psallus lepidus	C				•																											1
Psallus lunulus	L																					•										1
Psallus perrisi	C															•																1
Psallus varians	C				•																											1
Rhacognathus punctatus	L											•																				1
Scoloposthetus affinis	C																													•		1
Sigara dorsalis	C																				•											1
Trapezonotus desertus	C										•																					1
SUM		55	53	52	48	48	41	39	36	36	30	30	30	27	23	23	22	20	18	17	16	15	15	14	13	12	12	11	10	8	3	777

Total species = 152

Heteropterists' Field meeting 1991: Carmarthenshire
Peter Kirby

The long weekend field meeting in Carmarthenshire, based at the Ferryside Adult Education Centre from the 8th to the 11th of August, was marred only by bad weather and a rather poor turn-out of Heteropterists. In spite of these limitations, a very healthy list of species was produced. Ian Morgan, master of his county, guided us unerringly to likely spots, and only one cold, rain-lashed site visited immediately after breakfast had me thinking of cosy tea-rooms and hot coffee so hard that I couldn't concentrate on Heteroptera. With twice as many people and sunshine, who knows what might have happened.

One result of the poor weather was that dense vegetation, the majority of trees and most inland sites never really got dry enough to be recorded properly. Recording was therefore concentrated on coastal localities. This was no hardship, since the coast is a thing that Carmarthenshire does rather well, but did mean that we tended to re-record in the areas already best-known, and that the final species list is rather deficient in, for example, arboreal mirids.

The richest site visited was Pembrey Forest, where remnant dune and slack vegetation survives in sheltered pockets amongst conifer plantation. Inherently rich anyway, this site provided just the conditions needed to persuade Heteroptera into activity. The rarest species of the trip was found here: Mark Pavett swept *Adelphocoris seticornis* from tall pathside vegetation. This is the first record of this species from the county, and only the second from Wales.

The dunes of Pembrey in their various guises produced most of the more local species found. Most, though pleasing, were not surprising for a large dune system in this part of Britain: *Arenocoris falleni, Chorosoma schillingi, Corizus hyoscyami, Dicranocephalus agilis, Globiceps cruciatus* and *Rhopalus parumpunctatus* are all species one might expect. A thriving population of *Alydus calcaratus* at Pembrey Forest was a pleasant surprise; coming across this species always is. *Trigonotylus psammaecolor* (a single female from the seaward margin of the Burrows), though again not a great surprise, is a creature more often expected than found. The most interesting inland record was probably that of the local *Psallodema fieberi* from wych elm in Stradey Woods.

Carmarthenshire 1991: list of sites visited:

1. Ferryside, 22/367107
2. Ffrwd Fen, 22/418023
3. Machynys, 21/517977
4. Pembrey Burrows, 21/4399
5. Pembrey Country Park, 21/403977
6. Pembrey Forest, 22/392027 (and pool at 390032)
7. Penrhyngwyn, 21/517974
8. Sandy Water Park, Llanelli, 22/495005
9. Stradey Wood, 22/490017

Species list

	1	2	3	4	5	6	7	8	9
Acalypta parvula					+				
Adelphocoris lineolatus			+	+		+			
Adelphocoris seticornis						+			
Alydus calcaratus						+			
Anaptus major						+			
Anthocoris nemoralis			+	+	+	+			+
Anthocoris nemorum		+	+	+	+	+	+		+
Anthocoris sarothamni						+			
Aptus mirmicoides				+		+			
Arenocoris falleni					+				
Asciodema obsoletum						+			
Berytinus minor						+			
Blepharidopterus angulatus						+			+
Bryocoris pteridis									+
Calocoris norvegicus	+	+	+	+	+	+		+	+
Campyloneura virgula									+
Chartoscirta cincta			+						
Chorosoma schillingi	+			+	+	+			
Compsidolon salicellus						+			
Coranus subapterus						+			
Coreus marginatus						+			
Corixa punctata			+			+			
Corizus hyoscyami	+			+		+			
Deraeocoris ruber						+			
Dicranocephalus agilis					+				
Dicyphus annulatus				+	+	+			
Dicyphus constrictus									+
Dicyphus epilobii						+	+	+	
Dicyphus errans									+
Dolycoris baccarum	+			+		+			
Eurygaster testudinaria						+			
Gampsocoris punctipes				+	+	+	+		
Gastrodes grossipes						+			
Gerris lacustris			+			+		+	
Gerris thoracicus			+			+			
Globiceps cruciatus						+			
Hesperocorixa linnei			+						
Heterotoma meriopterum						+			+
Hydrometra stagnorum			+						
Kleidocerys resedae									+
Leptopterna dolabrata						+			
Leptopterna ferrugata						+			
Liocoris tripustulatus						+	+	+	+
Lygocoris pabulinus						+			+
Lygus maritimus	+		+	+	+	+	+		
Lygus rugulipennis			+	+	+	+			
Macrotylus paykulli				+	+	+	+		
Malacocoris chlorizans									+
Mecomma ambulans						+			
Megalocoleus molliculus							+		
Megalonotus chiragra							+		

	1	2	3	4	5	6	7	8	9
Metatropis rufescens									+
Microvelia reticulata			+						
Monalocoris filicis									+
Myrmus miriformis				+	+	+			
Nabicula limbata				+		+			
Nabicula lineata				+					
Nabis ferus				+		+	+		
Nabis rugosus						+			
Notonecta maculata						+			
Notostira elongata	+	+		+	+	+	+		
Nysius ericae							+		
Nysius thymi				+	+	+			
Orius laevigatus			+					+	
Orius niger			+						
Orthops campestris									+
Orthops cervinus								+	+
Orthotylus flavosparsus				+					
Orthotylus ochrotrichus									+
Orthotylus virescens						+			
Palomena prasina						+			
Pentatoma rufipes									+
Phytocoris dimidiatus	+								
Phytocoris longipennis									+
Phytocoris varipes	+		+			+			
Piesma quadratum				+					
Piezodorus lituratus				+		+			
Plagiognathus albipennis f. littoralis			+						
Plagiognathus arbustorum				+		+	+	+	+
Plagiognathus chrysanthemi			+	+	+	+	+		
Polymerus palustris						+			
Polymerus unifasciatus						+			
Psallodema fieberi									+
Psallus haematodes						+			
Rhopalus parumpunctatus				+					
Saldula pallipes						+			
Saldula saltatoria						+			
Scolopostethus puberulus							+		
Sigara dorsalis								+	
Stenodema calcaratum		+				+			
Stenodema laevigatum	+	+		+		+			+
Stenotus binotatus						+			
Sthenarus rotermundi					+				
Stygnocoris sabulosus			+						
Tingis cardui							+		
Trapezonotus desertus						+			
Trigonotylus psammaecolor				+					
Troilus luridus									+
Velia caprai									+

Total 99 species

Salt-marsh species of *Conostethus* (Miridae:Phylinae) in Britain.

B.S.Nau

Southwood and Leston (1959) give two British salt-marsh species in this genus, namely *C.frisicus* Wagner and *C.brevis* Reuter. They are very similar bugs, mainly fawn and green in colour, about 3-4mm in length, and occur in rather similar salt-marsh habitats, on grasses such as *Puccinellia* spp. In Kloet and Hincks (1964). *C.frisicus* Wagner 1952 is listed as a synonym of *C.griseus* Douglas and Scott 1870.

In Nau(1979) I have described the habitat and occurrence of these bugs at various sites ranging from NW Scotland to East Anglia, considerably extending the known range of *brevis*, which is a British endemic, and clarifying the host-plants, hitherto believed to be Sea-Lavender (*Limonium* spp.). Another, non-British, salt-marsh species has been described from Western Europe, *C.salinus* Sahlberg 1871. This otherwise entirely salt-marsh species-complex is completed by *C.hungaricus* Wagner, from central Europe. This is where the matter rested until recently.

In June 1986 I spent some time bug-hunting in Vendée, on the Biscay coast of France, with Armand Matocq and Jean Péricart. The day before I joined them they had collected specimens of what seemed to be '*C.salinus*', when we returned to the site a few days later the bug was in considerable numbers on the saltings. Subsequently, Armand Matocq compared the Vendée bugs with material of the known *Conostethus* species and concluded that that they represented a new species, which he named *C. major* (Matocq 1991) - for the size rather than the politician, I assume ! He also reviewed the status of the other species of the genus and concluded that *griseus* (= *frisicus*) is a synonym for *salinus* and that the same may be true of *hungaricus*, of which he examined only a few specimens. The species of this complex are very similar in coloration and structure of the genitalia, differing mainly in size: *brevis* is smallest, *major* largest, and *salinus* and *hungaricus* are of intermediate size.

Interestingly, the priority of the synonyms C.*salinus* Sahlberg and C.*griseus* D&S seems a very close-run thing. Summarising Matocq's discussion: the former is named in an 1871 publication and the latter in one dated March 1870, however the name, *salinus*, is actually dated January 1870 in the text, giving it priority.

The only English (as opposed to Scottish) specimens I have found which I believe to be *brevis*, are from two sites in Northumberland, and from Morston in Norfolk (Nau 1979). These *brevis* sites leap-frog *salinus* (sensu Matocq) sites, so it seems that the two species are sympatric, although more information on the distribution of the two species in Britain is desirable. I have not yet found the two species at the same site, nor have I found *salinus* in Scotland. There is a confusion in Matocq's paper. He refers to a series of '*brevis*' I collected, from N.Coates(Lincs) in 1978, which he recently examined and found to be *salinus*; in fact they were actually labelled '*frisicus*' and are so referenced in Nau (1979).

Diagnostic characteristics of the Western European Conostethus are presented in the accompanying diagram, which also indicates their inter-relationships.

References
Kloet, G.S. and Hincks, W.D., 1964, A check list of British Insects, Pt 1: Small Orders and Hemiptera. 2nd Edition, Roy. Ent. Soc., London.
Matocq, A., 1991, Contribution à l'étude du genre *Conostethus* Fieber, avec la description d'une espèce nouvelle de France (Heteropetera, Miridae). Nouv. Revue Ent. (N.S.), 8, 2, pp135-148.
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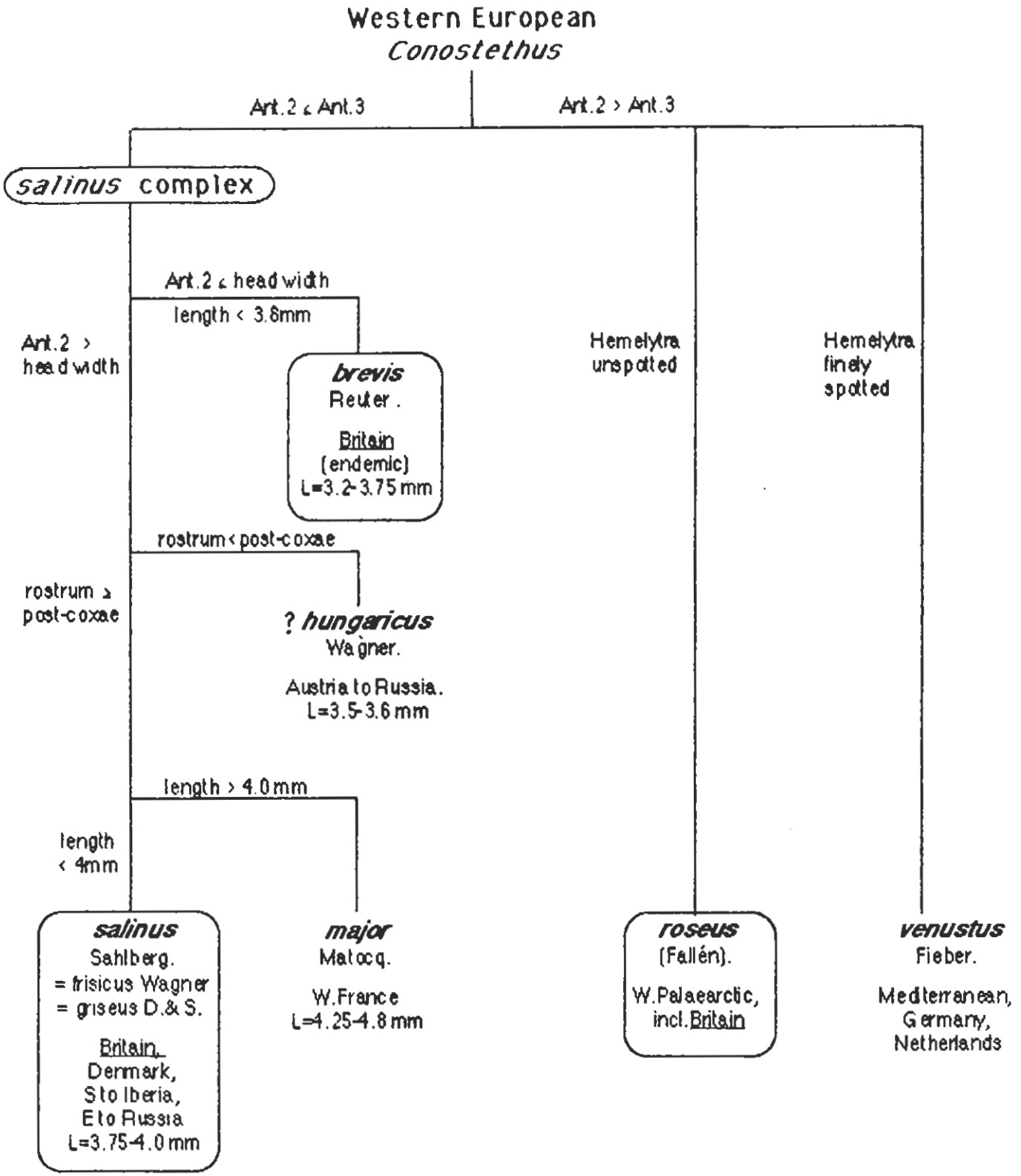

An Introduction to Bugs on Birch

B.S.Nau

For someone interested in getting better acquainted with Hets, without getting in over the top, the bugs characteristic of Birch foliage form a conveniently sized 'starter group'. The group comprises two shield-bugs (of the family Acanthosomidae) , a Lygaeid related to the 'Ground Bugs', and five 'Plant Bugs' (Miridae). Equally important, there are not too many 'stray' species or non-specialists which are likely to be encountered on Birch.

The two shield-bugs and the Lygaeid over-winter as adults and oviposit in spring, so these are likely to be the first species encountered early in the season. They spend the winter in sheltered spots, for example under bark, or in nearby litter, dead leaves or under heather. By May or June they are likely to be found quite readily on Birch trees by inspection of leaves and buds, or by beating.

The two shield bugs are *Elasmostethus interstinctus* and *Elasmucha grisea*, both are widespread in Britain. The former is a smaller version of the large green and brown 'Hawthorn Shield-bug' (*Acanthosoma haemorrhoidale*), but it is readily distinguished from this by its smaller size, under 10mm long compared with the Hawthorn Shield-bug's 12-15mm. It is also rather similar to another green shield-bug *Elasmostethus tristriatus* (called *Cyphostethus tristriatus* in S&L), but this is unlikely to be encountered on Birch and is easily distinguished by the colour of the punctures on the pronotum. These are black in *interstinctus* and green in *tristriatus*. The latter is a Juniper species most often found on the cones of planted Lawson Cypress.

The second of the Birch shield-bugs is *Elasmucha grisea*, the 'Parent Bug'. This is a browner bug than the preceding, distinguished by rectangular black spots along the margin of the abdomen, these are easily seen from above since the wings do not cover the sides of the abdomen. It is also slightly smaller on average and its outline is broader, less tapered posteriorly. It is an interesting insect in that the female protects its offspring, literally standing over its clutch of eggs and continuing to 'guard' the brood of nymphs after the eggs have hatched. Broods can be found by inspecting Birch leaves in mid-June.

The new generation of both Birch shield-bugs mature in August but *E. grisea* is a week or two later than *Elasmostethus interstinctus* throughout its life-cycle. *E.interstinctus* is usually the more numerous species, although both can usually be found by searching a few Birch trees. The best trees are those with dense foliage and plenty of catkins or seed cones .

The Lygaeid bug mentioned earlier, *Kleidocerys resedae* , has a very similar season to the shield-bugs and is often found with them. *K. resedae* is widespread in the southern half of Britain, and is usually abundant. It is much smaller than the shield-bugs discussed above, only 5 mm in length on average, and is pinkish-brown in colour. It is quite a robust bug and only likely to be confused with its congener, *K.truncatulus* , but this is a Heather species. When Birch and Heather occur together separation of the two *Kleidocerys* can be quite difficult. However, each is fairly

faithful to its host plant therefore the host plant is a fairly reliable means of identification. Although there is an overlap in size, *truncatulus* is usually visibly smaller.

Two Mirid plant-bugs of the genus *Psallus* are Birch species. This can be a difficult genus to key out but fortunately these two species present little difficulty, especially when found on their host tree. They can be distinguished from each other by size and season. The early species is *Psallus betuleti*, which is mainly found in June and July, and is about 5 mm in length; the late species is *P. falleni*, which is mainly found in August and September, and is about 4 mm in length.

P. betuleti is a robust bug, blackish in the male and brownish-red in the female, which may sometimes be blackish in part too. The only similar bug is *P. ambiguus*, which is found at the same time of year as *P. betuleti* although usually not on the same host. The two are easily separated by the colour of the third segment of the antennae: black in betuleti, pale in *P. ambiguus*. The latter species is most often found on Alder, but has quite a range of hosts so can occur casually on Birch.

The second of the Birch *Psallus* is *P. falleni*. This is smaller and more delicate than *P. betuleti*, both sexes are a rather uniform brick-red except for the triangular cuneus, near the apex of the forewing, which is white at base and apex. Again there is only one other bug which might be confused with this, namely *P. scholtzi* (*alnicola* in S&L). The latter is similar to *P. falleni* in season, size and colour but is an Alder species and lacks the white apex to the cuneus.

There are two green Mirid plant bugs which are common on Birch : *Lygocoris contaminatus* and *Blepharidopterus angulatus* - the 'Black-kneed Capsid'. Fortunately they are easily distinguished from each other. In the first place, their seasons are staggered. *L. contaminatus* has the earlier season, adults being found on the foliage of Birch from the second half of June through to August, whilst the adults of *B. angulatus* dont usually occur in numbers until July but continue well into October. Secondly, *B. angulatus* has conspicuous black 'knees', i.e. the base of the tibia is black, this is visible even in quite small nymphs enabling these to be identified as easily as the adults. The two species differ in shape too, *L. contaminatus* is broader, with a convex outline, as opposed to the straight-sided rather slender shape of the black-kneed species. *L. contaminatus* has diffuse brownish 'blotches' near the middle of the forewings which distinguish it from its concongeners as well as from *B. angulatus*.

This pair of species come from different sub-families of the Miridae and therefore provides an opportunity to observe some taxonomic features characteristic of these. For example, the conspicuous pronotal collar of *Lygocoris* is characteristic of sub-family Mirinae. The collar is absent in *Blepharidoperus*, as is often the case in its sub-family, Orthotylinae. With 50x-100x magnification one can also see differences in the arolia, structures between the tarsal claws, which also distinguish the sub-families, being divergent in Mirinae, but parallel or convergent in Orthotylinae.

In early autumn, the last of the Birch Mirids appears, this is *Pantilius tunicatus*, a good big insect, reaching 10 mm in length. It is interesting to note that *P. tunicatus* is

equally at home on Alder, highlighting the fact that the alders belong to the birch family! For some reason I used to have difficulty recalling this bug's name, but then on thinking about it more deeply concluded that pantilius = 'pantile' and tunicatus = 'jacket'. I dont know where the 'pantiles' are on this bug, but just knowing about them helps! I can remember its name now.

Although this is a large and quite striking bug it can be surprisingly well camouflaged at rest on a leaf in the autumn sun. At first the adults are predominantly olive in colour, but they soon become dusky red. Conspicuous or not, it is easy to miss *Pantilius* because one tends to tire of looking at Birch trees by the time it is about.

Hopefully these notes on some common bugs of Birch foliage may stimulate a reader or two to pause at a Birch tree or two, to become familiar with a group of bugs which can provide a useful frame of reference when keying out their relatives found elsewhere, a task which otherwise might be more difficult. For someone with more time available, it would be interesting to work out how the species share out the ecological niches presented by a Birch tree.

B.S.Nau
14th March 1992