Since the Invertebrate Site Register circular went out to most of you in February or March of this year, the response has been very encouraging. NCC now has far more data on scarce and threatened species, and the new information is summarized in the revised list of notable species attached. Comments on any of the listed species, and new records for any, will still be gratefully received. Likewise suggestions for further additions to the list.

The need for a channel for communication between heteropterists is emphasised by the flow of articles for the newsletter, some of which have had to be held in reserve because of lack of space. There have also been several suggestions for new identification literature, and several ideas for some form of recording scheme. In fact, such a scheme already exists for freshwater bugs, run by John Blackburn, who is willing to check any problem identifications in the freshwater species. A recording card is also being prepared for aquatics.

To discuss the various possibilities for publications, and if/how the newsletter should continue and develop, a meeting has been proposed. It will be held at NCC headquarters, 19-20 Belgrave Square, London on Sat. 22nd October, starting at about 11 a.m. I hope as many of you as possible will attend : if those planning to do so let me know, by letter or 'phone, I will send directions for finding Belgrave Square, and may be able to help with accommodation, if needed.

Mr. Paul Harding, of the Biological Records Centre, will be present, and can advise on the feasibility and usefulness of the various proposals for recording. Even if it is too soon to launch a full-scale scheme for terrestrial species, (which will be difficult as long as there is no in-rpint identification guide) we can at least make sure that all workers are keeping their data in a form which can be used when a scheme starts. John Blackburn also hopes to attend, so fresh-water specialists may have the opportunity of idscussing the development of the aquatic scheme. Details of the outcome of the meeting should be sent out shortly afterwards.

The rest of this newsletter seems to show that work on Het.s is progressing well in several areas. The articles on computer mapping and 'priority squares' give food for thought, while on a more practical level the list of 'common' Bedfords. bugs show what can be achieved by intensive fieldwork. The summary of northern Scottish records highlights a region where more work is urgently needed; but isn't it time we had a similar base-line for the better-known parts of Britain ?

Two new keys are included. Stuart Foster's Phytocoris key should appeal to all who use a measuring graticule, and perhaps persuade the rest to buy or make one. His translation of Pericart's Anthocoris key fills an important gap : I am very grateful to M. Pericart not only for allowing me to circulate the translation but for making many constructive changes to the original draft.

Work such as this, providing new identification features, is probably the most valuable thing to include in a newsletter. More of the same, however preliminary, would be very welcome.

Brian Eversham,
Invertebrate Site Register
(Nature Conservancy Council)

Tel. 01-235-3241 ext. 29 (office)
01-504-6697 (home)

Heteropterists Mailing List September 1983

Dr.K.J.Adams,
Capstone Farm House,
343 Capstone Road,
Gillingham,
Kent ME7 3JE

Mr. K.N.A.Alexander,
National Trust,
Phoenix House,
Phoenix Way,
Cirencester,
Gloucestershire GL7 1QG

Mr.A.F.Amsden,
Keeper of Entomology,
National Museum of Wales,
Cathays Park,
Cardiff CF1 3NP

Mr.A.A.Allen,
49 Montcalm Road,
London SE7 8QG

Sir C.H.Andrewes,
Overchalke,
Coombe Bissit,
Salisbury,
Wiltshire SI5 4LF

Mr.D.Appleton,
86 Southampton Road,
Park Gate,
Southampton,
Hampshire

Mr. C.B.Ashby,
31 Tudor Close,
Cheam,
Surrey

Mr.J.Blackburn,
Freshwater Biological Assoc.,
River Laboratory,
Wareham,
Dorset

Mr.D.Budworth,
121 Wood Lane,
Newhall,
Burton-on-Trent,
Staffordshire

MrJ.K.Campbell,
16 West Newington Place,
Edinburgh EH9 1QU

Mr.M.Claridge,
Dept. of Zoology,
University College,
Park Place,
Cardiff

Mr.L.Clemons,
76 Tonge Road,
Sittingbourne,
Kent

Mr.R.Cropper,
14 Rosewood Close,
Burnham-on-Sea,
Somerset

Mr.R.Crossely,
46 St.David's Road,
Otley,
West Yorkshire

Mr.W.R.Dolling,
Dept. of Entomology,
British Museum (Natural Hist
Cromwell Road,
London SW7 5BD

Mr. P.Dulwich,
Epping Forest Conservation Centre,
High Beach,
Loughton,
Essex

Mr.W.A.Ely,
30 Broom Terrace,
Rotherham,
S.Yorkshire S65 1JH

Mr.M.Eyre,
Dept. of Zoology,
The University,
Newcastle upon Tyne

Mr.J.Flint,
7 Norfolk Mount,
Leeds,
West Yorkshire LS1 4PU

Mr.S.Foster,
33 Arden Gate,
Balby,
Doncaster,
S.Yorkshire DN4 9DW

Mrs.E.Gillespie,
11 Drylaw Crescent,
Edinburgh EH4 2AU

Mr.E.W.Groves,
Dept. of Botany,
British Museum (Nat.Hist.)
Cromwell Road,
London SW7 5BD

Mr.K.H.Halstead,
Mistletoe Cottage,
Masseys Lane,
East Boldre,
Brockenhurst,
Hants.

Mr. P.Hodge,
8 Harvard Road,
Ringmer,
Lewes,
~~Hants.~~ Sussex

Mr.D.Horsfield,
c/o NCC,
Edinburgh

Mr.L.Jones-Walters,
NCC,
Banbury

Mr.R.Jones,
29 Dean Road,
Willesden Green,
London NW2 5AB

Dr.P.Kirby,
Dept. of Biology,
Derby Lonsdale College,
Kedleston Road,
Derby
~~55~~ 55 Holcombe St, Derby

Mr.A.H.Kirk-Spriggs,
11 Wellfield Place,
Roath,
Cardiff CF2 3PD

Dr.I.F.G.McLean,
NCC,
Belgrave Square,
London SW1X 8PY

Dr.M.G.Morris,
ITE,
Furzebrook Research Sta.,
Wareham,
Dorset BH20 5AS

Dr.B.S.Nau,
15 Park Hill,
Toddington,
Dunstable,
Bedfordshire

Mr.M.Newcombe,
2, Old Cottages,
Bladbean,
Elham,
Canterbury,
Kent

Mr.E.G.Philp,
Maidstone Museum &
Art Gallery,
St.Faith's Street,
Maidstone,
Kent

Mr.D.Porter,
76 London Road,
Hailsham,
East Sussex

Mr.P.Skidmore,
Doncaster Museum & Art Gallery,
Chequer Road,
Doncaster,
S.Yorkshire DN1 2AE

Dr.D.Sheppard,
NCC,
Banbury,
Oxfordshire

Prof.T.R.E.Southwood,
Dept. of Zoology,
South Parks Road,
Oxford OX1 3PS

Mr.A.E.Stubbs,
NCC,
19-20 Belgrave Square,
London SW1X 8PY

Mr.R.D.Tilt,
50 Hindover Road,
Seaford,
East Sussex BN25 3NR

Mr.A.R.Waterston,
9 Morey Place,
Edinburgh 3

Mr.D.Whiteley,
Sheffield City Museum,
Weston Park,
Sheffield S10 2TP

Mr. R.P. Ryan,
Trinity College,
Oxford OX1 3BH

Mr.G.J.Forrester,
c/o Hancock Museum,
Barras Bridge,
Newcastle upon Tyne
NE2 4PT

Mr. L. Jessop,
9 Manville Road,
London SW17

Referees for critical groups

The following have kindly agreed to check the identification of material in certain difficult families/genera. Please bear in mind that this is a time-consuming task, and submit material in good condition where possible. If you have a large volume of material to be checked, please consult the specialist before sending it.

Saldidae	R. Crossley
Corixidae	E.G. Philp, J. Blackburn (aquatics in general)
Psallus	B.S. Nau
Orius	M. Newcombe
Scolopostethus	M. Newcombe
Phytocoris	S. Foster

If anyone feels able to tackle other groups not listed but which cause problems for beginners, please let me know. Likewise, anyone who is preparing new keys or attempting revisions of particular genera and who would like to look over material from other collectors.

(If a taxon is causing particular difficulty, or if an addition to the British list is suspected, Mr. Dolling is prepared to examine material, whatever its family

A REVISED LIST OF THREATENED AND RARE HETEROPTERA

(Based on comments received by NCC's Invertebrate Site Register in March-May 1983)

\+ = status elevated since first listing

\- = demoted

1. Endangered : species known from a single site; or a few sites in very vulnerable habitat; or believed to be extinct.

+Elasmucha ferrugata Fabricius
Geotomus punctulatus Costa
Chlorochroa (Pitedia) juniperina (L.)
Pyrrhocoris apterus L.
+Ischnodemus quadratus Fieber
+Eremocoris fenestratus H-S.
+Lasiacantha capucina Germar
Physatocheila hardwoodi China
+Prostemma guttula Fabricius
+Cimex columbarius (Jenyns)
Monosynamma maritima Wagner
+Halticus macrocephalus Fieber
+Placochilus seladonicus Fallen
+Microvelia umbricola Wroblewski
+Aethus flavicollis Fabricius
+Eurygaster austriaca Schrank
Gonocerus acuteangulatus Goeze
+Henestaris halophilus Burmeister
+Macroplax preyssleri Fieber
+Piesma quadratum ssp. spergulariae Woodroffe
+Pygolampis bidentata Goeze
+Anthocoris sibiricus Reuter (pilosus Yakovlev)
Pilophorus confusus Kirschbaum
Polymerus vulneratus Wolff
+Hydrometra gracilenta Horvath

2. Vulnerable : species which are declining sharply & seem likely to move into category 1.

-Eysarcoris aeneus Scopoli
+Xanthochilus (Graptopeltus) brevirostris Ribaut
+Eremocoris abietis L.
+Myrmecoris gracilis Sahlberg
Tuponia carayoni Wagner
+Micronecta minutissima (L.)
Arenocoris waltli H-S.
+Eremocoris plebejus (Fallen)
Saldula setulosa Puton

3. Rare : species which are likely to be found in 15 or fewer 10km squares in Britain.

Aradus corticalis L.
Aradus aterrimus Fieber
+Odontoscelis fuliginosa (L.)
Carpocoris purpureipennis (Degeer)
+Heterogaster artemisiae Schilling
Pachybrachius luridus Holm
Megalonotus sabulicola Thomson
Pterometus staphyliniformis Schilling
Emblethis verbasci Fabricius
Drymus pilipes Fieber
+Taphropeltus limbatus (Fieber)
Cymus obliquus Horvath
Tingis angustata H-S.
+Nabis brevis Schultz
Temnostethus tibialis Reuter
+Anthocoris simulans Reuter
+Xylocoris formicetorum (Boheman)
-Cimex pipistrelli Jenyns
Chlamydatus pulicaris Fallen
Hallodapus montandoni Reuter
Orthotylus virens Fallen
Aradus betulae L.
+Aradus cinnamomeus (Panzer)
Holcostethus vernalis Wolff
Liorrhysus hyalinus Fabricius
Ortholomus punctipennis H-S.
+Peritrechus gracilicornis Puton
Trapezonotus ullrichi Fieber
Pionosomus varius Wolff
Acompus pallipes H-S.
Drymus pumilio Puton
Taphropeltus hamulatus Thomson
Berytinus hirticornis Brulle
Empicoris baerensprungi Dohrn
+Nabis pseudoferus Remane
+Anthocoris minki Dohrn
+Anthocoris amplicollis Horvath
+Xylocoridea brevipennis Reuter
-Monosynarma bohemani Fallen
Chlamydatus evansecens Boheman
Globiceps woodroffei Wagner
Lygus punctatus (Zetterstedt)

3 (continued)

-Charagochilus weberi Wagner
Phytocoris insignis Reuter
Teratocoris caricis Kirkaldy
Saldula fucicola Sahlberg
Micracanthia marginalis Fallen
-Microvelia pygmaea (Dufour)
+Adelphocoris seticornis (Fabricius)
+Capsus wagneri Remane
+Pachycoleus rufescens Sahlberg
Saldula opacula Zetterstedt
+Teloleuca pellucens (Fabricius)
Sigara striata (L.)

Na : nationally notable, very local species

Sehirus dubius Scopoli
+Eurydema dominula (Scopoli)
Arenocoris falleni Schilling
Pachybrachius fracticollis (Schilling)
Berytinus clavipes Fabricius
-Orius laticollis Reuter
+Deraeocoris olivaceus (Fabricius)
Amblytylus delicatus Perris
-Atractotomus mirificus Woodroffe
+Psallus albicinctus (Kirschbaum)
+Dicyphus rhododendri Dolling
+Orthops basalis (Costa)
Zygimus nigriceps Fallen
+Chartascirta elegantula Fallen
Dichrooscytus valesianus Meyer-Dür
+Odontoscelis dorsalis (Fabricius)
Spathocera dahlmanni Schilling
Nysius helveticus H-S.
Lasiosomus enervis H-S.
Catoplatus fabricii Stal
Bothynotus pilosus Boheman
+Deraeocoris scutellaris (Fabricius)
Tythus geminus Flor.
+Psallus mollis (Mulsant) (masseei Woodro
+Monosynamma sabulicola Wagner
Orthotylus fuscescens (Kirschbaum)
-Agnocoris reclairei Wagner
+Capsodes sulcatus (Fieber)
+Limnoporus rufoscutellatus (Latreille)

Nb : uncommon or local species (many more additions would be possible here)

-Neottiglossa pusilla Gmelin
-Campylomma annulicornis Signoret
+Adelphocoris ticinensis (Meyer-Dur)
-Rhacognathus punctatus L.
-Lygocoris populi Leston
+Adelphocoris aestivalis (Fabricius)

DERBYSHIRE HETEROPTERA RECORDING

By D Budworth Revised by J M Line

My interest in Heteroptera began in 1974 after the purchase of Leston and Southwood's 'Land & Water Bugs'. I was involved with the Derbyshire Lepidoptera Survey (results of which are about to be published), but was looking for a group of insects having little support but of a manageable size.

As my confidence in identification improved, the records for the county slowly began to accumulate and it seemed logical to hold the sightings on a 1Km square basis, simply for the convenience of using Ordnance Survey maps. Tetrad records would need very careful conversion of the map reference, and the 10km square seemed to be too coarse.

The majority of records to date have been provided by Peter Kirby, but I have also been able to muster a little support from the other members of the county entomological society, at least to the point of sending me odd specimens in boxes!

Initially, the records were kept on a card index for each species, and a new entry was made if further records were obtained, either in subsequent years or by a different recorder. It was realised, after discussion with the local Trust, that to extract records for a given area, say a reserve, would be very tedious. It seemed sensible, therefore, to look into the idea of storing tha data on a computer-based system, and the advent of desk-top machines in about 1979 was very convenient.

The programs and data records reside on 2 floppy diskettes which form part of the Commodore 8032 microcomputer system. These programs are transferred into the computer as requested by the user and the records are able to be created, modified and accessed as required.

The programs I use to process the Heteroptera data are 'menu driven'. That is, they guide the user with a 'menu' of available choices, varying according to what the user is doing and the current stage of that particular task. The programs currently provide for:

- entering new records
- printing details of existing records, in various formats;
- making 'backup' copies of diskettes (since they have a limited working life, and loss of data on a faulty diskette is not acceptable);
- various 'maintenance' options, allowing editing of previously entered records.

All records contain a record number, recorder/status, family number, species number, site grid reference, and the date of the record. In addition to these 'data fields' comprising a record, the computer also stores extra information linking the new record to any existing records which have the same family, species, site or data. This enables the computer to retrieve quickly the records corresponding to any combination of family, species, site and date. In fact, the first stage after entering a new batch of records is simply to get them printed (with the family and species code numbers replaced by their names), so that the data can be checked. The new records are not actually linked in to the pre-existing data until they have been checked in this way.

Once the new records have been checked and if necessary corrected, the whole body of data (old and new records) is available, and a range of reports can be requested:

1 All records
2 Records for a selected family
3 Records for a selected species
4 Records for a selected combination of families, species, sites, and dates

In the case of options 1-3, the records can simply be listed, or they can be shown diagrammatically with a county map overlay to show their distribution.

Option 4 is more flexible, allowing selected records to be extracted. It is here that information for a particular reserve, for example, can be printed. Examples of output from option 4 are included below.

These few notes give a brief outline of the facilities which I have available, although there are a number of other options which could not be explained without giving a much more detailed description. The programs are not limited to either the Derbyshire area or to Heteroptera. In fact, I also use the system for Odonata records and for Heteroptera information from Nottinghamshire.

The amount of data which can be handled as a unit is limited primarily by the speed at which the computer can access information stored on diskette, and by the capacity of a diskette. In practice, the system copes best with groups having about 500 species, although this is not an absolute limitation since a large order could be broken down into groups of families, or series. At present, the system can store up to 5000 records on one diskette. However, data can be combined from several diskettes if necessary, for example when producing a distribution map.

The three examples of printouts shown below comprise part of an 'All records' listing for a given site (a County Trust reserve), a species list for the same site (sorted into taxonomic order), and an example of the map format (for Anthocoris nemorum).

HETEROPTERA (DERBYS AREA) 11 JUNS

RECORDS LISTING FROM DISKETTE (HET DATA 01JUN83 01)

SELECTED FAMILY/SPECIES - SITES & DATE

ALL RECORDS

LONGTITUDE SK32 TO SK34 LATITUDE 22 TO 24
CARVERS ROCKS AREA
1974 TO DATE

DET	REF	FAMILY	SPECIES	GRID REF	DA
-DB	2964	MIRIDAE	STENODEMA LAEVIGATUM	SK3222	060
-DB	2963	- # -	DICYPHUS PALLICORNIS	SK3222	060
-DB	2960	CIMICIDAE	ANTHOCORIS NEMORUM	SK3222	060
-DB	2959	ACANTHOSOMIDAE	ACANTHOSOMA HAEMORRHOIDALE	SK3222	060
-DY	2843	- # -	ELASMUCHA GRISEA	SK3222	090
-DY	2842	- # -	ACANTHOSOMA HAEMORRHOIDALE	SK3222	090
-DY	2841	- # -	- # -	SK3222	150
-PK	2007	MIRIDAE	ORTHOTYLUS OCHROTRICHUS	SK3222	000
-DB	526	- # -	STENODEMA LAEVIGATUM	SK3222	090
-DB	513	- # -	STENODEMA CALCARATUM	SK3222	141
-DB	317	- # -	DICYPHUS GLOBULIFER	SK3222	090
-DB	280	- # -	DICYPHUS STACHYDIS	SK3222	090
-DB	259	- # -	DICYPHUS EPILOBII	SK3222	141
-DB	244	- # -	PLAGIOGNATHUS ARBUSTORUM	SK3222	140
-DB	220	- # -	PSALLUS BETULETI	SK3222	170
-DB	217	- # -	PHYLUS CORYLI	SK3222	290
-DB	151	CIMICIDAE	ANTHOCORIS NEMORUM	SK3222	141
-DB	150	- # -	- # -	SK3222	270
-DB	110	- # -	ANTHOCORIS NEMORALIS	SK3222	120
-DB	69	TINGIDAE	TINGIS CARDUI	SK3222	090
-DB	16	ACANTHOSOMIDAE	ELASMOSTETHUS INTERSTINCTUS	SK3222	120
-DB	2961	CIMICIDAE	ANTHOCORIS NEMORUM	SK3322	060
-PK	1395	LYGAEIDAE	DRYMUS SYLVATICUS	SK3322	000

.....etc.

HETEROPTERA (DERBYS AREA) 11 JUNS

RECORDS LISTING FROM DISKETTE (HET DATA 01JUN83 01)

SELECTED FAMILY/SPECIES - SITES & DATE

SPECIES LIST

LONGTITUDE SK32 TO SK34 LATITUDE 22 TO 24
CARVERS ROCKS AREA
1974 TO DATE

ACANTHOSOMA HAEMORRHOIDALE
ELASMOSTETHUS INTERSTINCTUS
ELASMUCHA GRISEA
KLEIDOCERYS RESEDAE
DRYMUS SYLVATICUS
DICTYONOTA STRICHNOCERA
TINGIS CARDUI
DOLICHONABIS FLAVOMARGINATUS
NABIS FERUS
STALIA MAJOR
DOLICHONABIS LIMBATUS
ANTHOCORIS CONFUSUS
ANTHOCORIS NEMORALIS
ANTHOCORIS NEMORUM
MONALOCORIS FI ICIS

(Arranged in taxonomic order)

.....etc.

HETEROPTERA (DERBYS AREA) 11JUN83

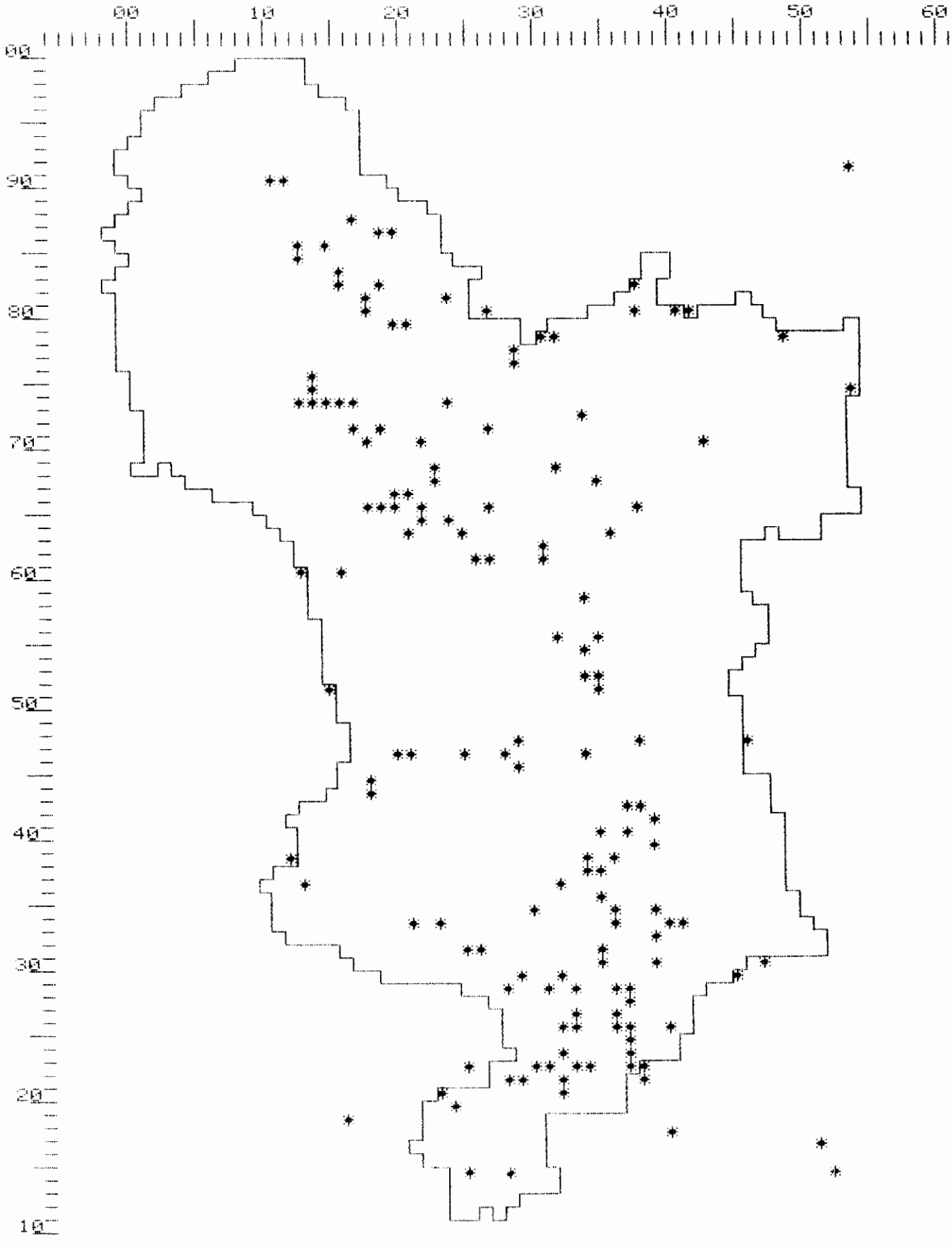
RECORDS LISTING FROM DISKETTE (HET DATA 01JUN83 01)

CIMICIDAE

ANTHOCORIS NEMORUM

END OF DATA (185 RECORDS (0 REJECTED)) - 185 VALID)

DERBYSHIRE DISTRIBUTION



"PRIORITY SQUARES" AND HETEROPTERA RECORDING

Bernard S. Nau

In attempting to utilize available resources as effectively as possible, there seems much to recommend a system of 'priority squares'. The object of this would be to acheive a more uniform geographical distribution of recording intensity, every effort being made to ensure that all priority squares are worked in depth. Such a scheme brings other advantages too : an increased probability of recording less common species in the sites visited ; a greater confidence that negative records truly indicate species absence ; and a reduction of duplicated effort in adjacent squares of similar character

To explore the idea I have looked at how priority squares might be distributed on a 10 % sample basis within the Midlands and East Anglia. The criteria applied were :

1) to include as many as possible of the major habitats of a region, taking account of geology as well as the need to include different types of woodland, grassland, heath, marsh, freshwater and coastal habitats, etc.

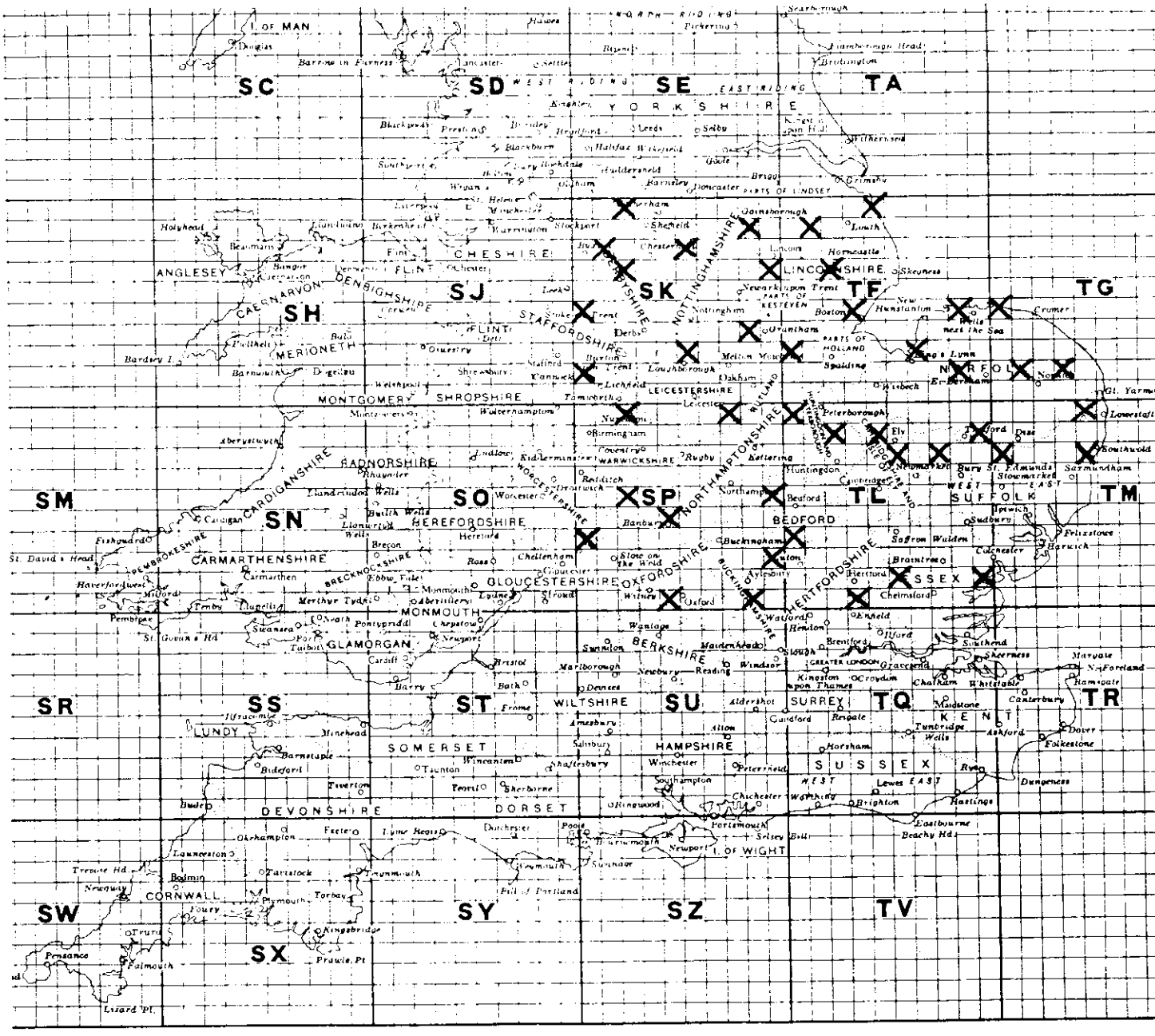
2) to achieve a high degree of uniformity of cover within each 100km square.

To meet the first criterion I made use of the Geological Survey "Ten Mile" map and the Ordnance Survey "Quarter Inch" maps, plus my own knowledge of the areas in question. To meet the second, each 100km square was considered first as four independent quadrants of 25 squares each. The two to three 10km squares in each quadrant which appeared best to meet the above requirements were then identified, account being taken of coverage in adjecent areas before finalizing the choice. Also, other things being equal, squares having well-worked sites or major nature reserves were preferred. Figure 1 illustrates the resulting distribution of priority squares.

East Anglia, with its Fens, Brecks, Broads and coastal habitats, presented more difficulties than the relatively uniform S. Midlands. Nevertheless, a 10 % sample appears to give reasonable coverage even in such a varied region.

This desk survey has reinforced my feeling that a National Recording Scheme based on a core 10 % sample of Priority Squares (plus whatever other records are available) could have a chance of successful completion on a timescale of the order of ten years or so. To put it at its lowest, the chances of covering 350 squares must be better than for the 3500 squares in the British Isles!

BSN, May 1983



Suggested 'Priority Squares' in the East Midlands and East Anglia

Oeciacus hirundinis (Jenyns, 1838) new to Wales ?

Specimens of this species were sent to me for identification by Mr. Stephen Clarke of Monmouth, Gwent, in early June 1983. They included both nymphs and adults, alive and dead. This appears to be the first Welsh record.

The species was taken by both Mr. Clarke and myself in an annexe of the Haberdasher Monmouth School for girls, Hereford Road, Monmouth. Throughout the first half of June both O. hirundinis and the fly Crataerina hirundinis L. (Diptera : Hippoboscid also a parasite of martins and occasionally swifts, appeared regularly on the windo of the house, in the case of Oeciacus in large numbers.

Ashley Kirk-Spriggs

(Without having a reliable up-dated version of Massee's county distribution tables it is impossible to be sure if a record is new to sn area without undertaking a lengthy literature search. A revision of the county table would be extremely usefu interim measure as a basis for future work. Any offers ?

Brian Eversham.)

THE MORE FREQUENT BEDFORDSHIRE BUGS

Bernard Nau has been recording Heteroptera in Bedfordshire on a 10km square basis for several years, and all squares except a few marginals now have at least 100 species recorded. The 'best' have over 200. This gives us some idea of what can be achieved, as does the observation that a one-day visit to a rich site in Beds. can produce 50 species at the right time of year.

Workers further North may be surprised by the following lists of 'common' species : nearly 100 are recorded from over half the squares in Beds., and a further 60 in 25-50% of squares ; which is rather more than the total recorded fauna of the far northern part of Scotland (see Bill Dolling's paper).

Species recorded from 50% of 10km squares in Beds. (or more)

Acanthosoma haemorrhoidale
Anthocoris confusus
Anthocoris nemorum
Blepharidopterus angulatus
Calocoris norvegicus
Capsus ater
Corixa punctata
Deraeocoris lutescens
Dicyphus epilobii
Dicyphus globulifer
Dolichonabis limbatus
Dryophilocoris flavo-4-maculatus
Eysarcoris fabricii
Harpocera thoracica
Heterogaster urticae
Himacerus apterus
Leptopterna dolobrata
Lygocoris contaminatus
Lygocoris pabulinus
Lygocoris viridis
Macrotylus paykulli
Malacocoris chlorizans
Megalocoleus molliculus
Nabis ferus
Nabis rugosus
Notostira elongata
Orius niger
Orthonotus rufifrons
Orthops cervinus
Orthotylus flavosparsus
Orthotylus ochrotrichus
Orthotylus viridinervis
Phylus melanocephalus
Phytocoris tiliae
Phytocoris varipes
Plagiognathus arbustorum
Psallus assimilis
Psallus diminutus
Psallus flavellus
Psallus perrisi
Psallus varians
Saldula saltatoria
Scolopostethus thomsoni
Amblytylus nasutus
Anthocoris nemoralis
Atractotomus mali
Callicorixa praeusta
Campyloneura virgula
Compsidolon (Coniortodes, Psallus) salicel
Cyllecoris histrionicus
Deraeocoris ruber
Dicyphus errans
Dicyphus stachydis
Drymus sylvaticus
Elasmostethus interstinctus
Gerris lacustris
Hesperocorixa sahlbergi
Heterotoma planicornis
Hydrometra stagnorum
Liocoris tripustulatus
Lygocoris lucorum
Lygocoris spinolai
Lygus rugulipennis
Macrotylus solitarius
Megaloceraea recticornis
Monalocoris filicis
Nabis flavomarginatus
Notonecta glauca
Nysius ericae
Orius vicinus
Orthops campestris
Orthotylus diaphanus
Orthotylus marginalis
Orthotylus tenellus
Phylus coryli
Phylus pallipes
Phytocoris ulmi
Plagiognathus albipennis
Plagiognathus chrysanthemi
Psallus betuleti
Psallus falleni
Psallus lepidus
Psallus haematodes (roseus)
Psallus wagneri
Scolopostethus affinis
Sehirus bicolor

Species in 50% of squares (continued)

Sigara dorsalis
Sigara lateralis
Stalia major
Stenodema laevigatum
Tingis ampliata
Trigonotylus ruficornis
Sigara falleni
Sigara nigrolineata
Stenodema calcaratum
Stenotus binotatus
Tingis cardui
Velia caprai

Species recorded from 25-50% of 10km squares in Beds.

Adelphocoris lineolatus
Anthocoris sarothamni
Arctocorisa germari
Atractotomus magnicornis
Bryocoris pteridis
Chartascirta cincta
Corixa panzeri
Cymus melanocephalus
Dictyonota strichnocera
Dicyphus rhododendri
Elasmucha grisea
Gerris thoracicus
Heterocordylus tibialis
Kleidocerys resedae
Leptopterna ferrugata
Mecomma ambulans
Micronecta scholtzi
Myrmus miriformis
Nepa cinerea
Notonecta marmorea
Orius laevigatus
Orthops kalmi
Orthotylus flavinervis
Orthotylus prasinus
Pachylops bicolor
Peritrechus genicu atus
Phytocoris longipennis
Picromerus bidens
Psallus ambiguus
Saldula orthochila
Sthenarus (Salicarus) roseri
Sigara distincta
Sthenarus rotermundi
Stygnocoris pedestris
Anthocoris butleri
Aptus (Himacerus) mirmicoides
Asciodema obsoletum
Atractotomus mirificus
Campylomma annulicornis
Chilacis typhae
Cymus glandicolor
Cyrtorhinus caricis
Dicyphus annulatus
Drymus brunneus
Gerris odontogaster
Hesperocorixa linnei
Ischnodemus sabuleti
Legnotus limbatus
Lopus decolor
Megalocoleus pilosus
Microvelia reticulata
Neomecomma bilineatus
Notonecta maculata
Oncotylus viriflavus
Orius majusculus
Orthotylus adenocarpi
Orthotylus nassatus
Orthotylus virescens
Pentatoma rufipes
Phoenicocoris obscurellus
Phytocoris reuteri
Piezodorus lituratus
Pseudoloxops coccineus
Saldula pallipes
Sigara concinna
Sigara fossarum
Stygnocoris fuliginosus

HETEROPTERA OF THE FAR NORTH OF BRITAIN - by W R Dolling

I have chosen vice-counties 100-112 as representing the 'far north'. This definition excludes the Eastern Highlands, which have a special faunal element that is absent from areas to the North of the Great Glen.

Acanthosoma haemorrhoidale: Rhum; in Scotland only Rhum and Ayrshire. Perhaps extending range northwards.
Elasmostethus interstinctus: Inner Hebrides; widespread in Scotland.
Elasmucha grisea: Inner Hebrides; widespread in Scotland.
Palomena prasina: Scalpay is the only Scottish record; perhaps casual introduction.
Pentatoma rufipes: Arran, Inner Hebrides, W. Ross, E. Sutherland; widespread in Scotland.
Zicrona caerulea: Arran; widespread in Scotland but no recent records.

Nysius thymi: perhaps confused with ericae and groenlandicus (known from Iceland and Greenland but nowhere else). Mainland, including N. coast, inner and Outer Hebrides; widespread in Scotland; Woodroffe found it in a typical 'ericae' habitat on waste ground at Braemar and commented that he had not seen ericae anywhere in Scotland.
Trapezonotus arenarius: Inner Hebrides; widespread in Scotland.
Macrodema micropterum: W. Ross; widespread in Scotland.
Stygnocoris fuligineus: Inner Hebrides; widespread in Scotland.
Stygnocoris pedestris: Inner and Outer Hebrides, Mainland including North Coast; widespread and common in Scotland.
Stygnocoris rusticus: Inner Hebrides; also Clyde area and Edinburgh in Scotland.
Drymus brunneus: W. Ross and N. Coast; widespread and common in Scotland.
Drymus sylvaticus: Inner Hebrides and W. Ross; widespread in Scotland.
Lamproplax picea: Rhum; in Scotland only here and Dumfriess.
Scolopostethus decoratus: Rhum, Barra, N. Coast; widespread and common in Scot.
Scolopostethus thomsoni: E. Ross; in Scotland also in Dumfriess. Fife and Midlothian.
Gastrodes grossipes: Inner Hebrides; widespread in Scotland.
Eremocoris abietis: N. Coast; also S. Aberdeens., E. Inverness; not in England.

Acalypta brunnea: Inner Hebrides; in Scotland also in Midlothian, Morays.
Acalypta nigrina: Inner Hebrides, N. Coast; widespread in Scotland; Iceland.
Acalypta parvula: Inner and Outer Hebrides, N. Coast; widespread in Scotland and recorded from St Kilda.
Tingis cardui: Inner Hebrides, Outer Hebrides, W. Ross; common in Scotland.

Nabis flavomarginatus: Inner and Outer Hebrides, Mainland to N. Coast; widespread and common in Scotland; Greenland.
Nabis ferus: inner and Outer Hebrides, Arran; widespread and common in Scotland.
Nabis ericetorum: Inner Hebrides, N. Coast; widespread and common in Scotland.
Nabis rugosus: Rhum; widespread in Scotland.
Dolichonabis limbatus: Inner and Outer Hebrides, Arran; widespread and common in Scotland.

Temnostethus gracilis: Inner and Outer Hebrides, N. Coast; widespread in Scot.
Temnostethus pusillus: Inner Hebrides, Outer Hebrides including St Kilda and Flannan Is.; widespread in Scotland.
Anthocoris pilosus: Scalpay, once; not re-found in Britain; casual introduction?
Anthocoris confusus: Inner Hebrides; widespread and common in Scotland.
Anthocoris nemoralis: Inner Hebrides, Mainland to N. coast; widespread and common in Scotland.
Anthocoris nemorum: Arran, Inner and Outer Hebrides, Mainland to N. Coast; widespread and common in Scotland.

Acompocoris alpinus: N. coast; in Scotland also Aberdeens., Morays., Easterness.
Acompocoris pygmaeus: Rhum; widespread and common in Scotland.
Lyctocoris campestris: Rhum; widespread in Scotland.
Cimex lectularius: no record in the area but widespread in Scotland; also Faroes, Iceland, Greenland.

Loricula elegantula: Inner and Outer Hebrides; in Scotland also S. Aberdeen and Midlothian.
Loricula pselaphiformis: Inner and Outer Hebrides, N. coast; widespread in Scotland; 1 old record (? error for M. tenella) from Iceland.
Myrmedobia tenella: Rhum, E. Sutherland; in Scotland also Perths., Aberdeens. Easterness; also Iceland.

Monalocoris filicis: Inner Hebrides, N. coast; widespread and common in Scot.
Bryocoris pteridis: Eigg; widespread and common in Scotland.
Bothynotus pilosus: Inner Hebrides; widespread and fairly common in Scotland.
Conostethus brevis: W. Ross, E. Ross, N. coast; widespread on E. coast of Scotland.
Harpocera thoracica: W. Ross; widespread in Scotland.
Psallus ambiguus: Inner Hebrides, Mainland including N. Coast; widespread in Scotland.
Psallus betuleti: Inner Hebrides, N. coast; widespread and common in Scotland.
Psallus variabilis: Inner Hebrides; widespread in Scotland.
Psallus falleni: Inner Hebrides, Arran; widespread and common in Scotland.
Psallus lepidus: Inner Hebrides, N. Coast; widespread in Scotland.
Psallus haematodes (= roseus): Arran, Inner and Outer Hebrides, Mainland to N. Coast; widespread and common in Scotland.
Psallus varians: Inner Hebrides, N. coast; widespread and common in Scotland.
Compsidolon (Coniortoides) salicellus: Inner Hebrides, 1 old record; no other Scottish record; probably a casual introduction.
Plagiognathus arbustorum: Arran, Inner Hebrides, Mainland to N. coast; widespread and common in Scotland.
Plagiognathus chrysanthemi: Arran, Inner and Outer Hebrides, Mainland to N. coast; widespread and common in Scotland.
Chlamydatus wilkinsoni: Inner Hebrides, Mainland to N. coast; widespread and common in Scotland.
(Chlamydatus pullus: Greenland; old record for 'Scotland'; no recent records anywhere in Scotland.)
Asciodema obsoletum: Rhum, N. coast; widespread and common in Scotland.
Hallodapus rufescens: Outer Hebrides; widespread in Scotland.
Dicyphus errans: Eigg (old record); no other Scottish record.
Dicyphus pallicornis: Inner Hebrides, Outer Hebrides, Mainland to N. coast; common and widespread in Scotland.
Campyloneura virgula: Rhum; widespread in Scotland.
Pachytomella parallela: N. coast; in Scotland also Perths., Fife, Aberdeens., Inverness.
Malacocoris chlorizans: N. coast; widespread in Scotland.
Globiceps fulvicollis: N. coast; in Scotland also Aberdeens., Inverness.
Blepharidopterus angulatus: Inner Hebrides; Mainland to N. coast; widespread and common in Scotland.
Orthotylus marginalis: Inner Hebrides, N. coast; in Scotland also Perths., Aberdeens., Dumbartons.
Orthotylus nassatus: Inner Hebrides; in Scotland also Perths., Morays.
Orthotylus ericetorum: Inner and Outer Hebrides; widespread and common in Scotland.
Cyrtorhinus caricis: Rhum, Outer Hebrides, N. coast; widespread and common in Scot.
Neomecomma bilineatum: Ross & Cromarty; widespread and fairly common in Scotland.
Mecomma ambulans: Mainland to N. coast, Arran, Inner and Outer Hebrides including St Kilda, Orkney, Shetland; common throughout Scotland.

Mecomma dispar: Rhum; in Scotland also Dumfriess., Aberdeens., Easterness, Morays.
Pithanus maerkeli: Mainland to N. coast, Inner and Outer Hebrides, Orkneys, Shetlands; common throughout Scotland; also Faeroes.
(Lygus pratensis: numerous old records probably all refer to rugulipennis.)
Lygus wagneri: Rhum; in Scotland only Rhum, Aberdeens. and Inverness.
Lygus rugulipennis: Rhum, N. coast, Outer Hebrides; widespread and common in Scotland.
Orthops cervinus: Bute, Rhum, N. coast; widespread and common in Scotland.
Orthops rubricatus: Inner Hebrides; widespread in Scotland.
Orthops basalis: N. coast; also S. Aberdeens., under-recorded in British Isles.
Orthops campestris: Rhum, N. coast, Outer Hebrides; widespread in Scotland.
Orthops kalmi: Easter Ross; widespread in Scotland.
Lygocoris pabulinus: Arran, Inner and Outer Hebrides, Mainland to N. coast; widespread and common in Scotland.
Lygocoris contaminatus: Inner and Outer Hebrides, Mainland to N. coast; widespread and common in Scotland.
Lygocoris viridis: Inner Hebrides; Mainland to N. coast; widespread in Scotland.
Plesiocoris rugicollis: Arran, Inner and Outer Hebrides, Mainland to N. coast; widespread and common in Scotland.
Dichrooscytus rufipennis: Wester Ross; widespread and common in Scotland.
Calocoris quadripunctatus: Inner Hebrides, W. Ross; widespread and common in Scotland.
Calocoris sexguttatus: Inner Hebrides; widespread and common in Scotland.
Calocoris norvegicus: Mainland to N. coast, Arran, Inner and Outer Hebrides, Orkney, Fair Isle; widespread and common in Scotland.
Calocoris roseomaculatus: Mainland on N. coast, Inner Hebrides; widespread in Scotland.
Adelphocoris lineolatus: Inner Hebrides; in Scotland also in Perths., Lanarks., Fife.
Phytocoris longipennis: Inner Hebrides; widespread and common in Scotland.
Phytocoris pini: Wester Ross; widespread and common in Scotland.
Phytocoris varipes: Rhum; no other Scottish record.
Capsus ater: Inner Hebrides, N. coast; widespread and common in Scotland.
(Capsus wagneri: recorded from Rhum in error.)
Stenodema calcaratum: Arran, Inner Hebrides; widespread and common in Scotland.
Stenodema holsatum: throughout the area to Orkney; widespread and very common in Scotland.
Stenodema laevigatum: Inner Hebrides; widespread in Scotland.
Trigonotylus ruficornis: throughout the area to Orkney; widespread and common in Scotland.
Teratocoris saundersi: Inner and Outer Hebrides, Mainland to N. coast; widespread in Scotland; also in Iceland.
Teratocoris viridis: Inner and Outer Hebrides, Mainland to N. coast, Orkney; widespread and common in Scotland.
Leptopterna dolabrata: Easter Ross; widespread in Scotland.
Leptopterna ferrugata: throughout the area to Shetland; widespread and common in Scotland.

Cryptostemma alienum: Inner Hebrides; widespread in Scotland.

Salda littoralis: throughout the area to Shetland; widespread and common in Scotland; also in Faroes and Iceland.
Salda morio: Arran, Inner and Outer Hebrides, N. coast; widespread in Scotland.
Salda muelleri: Arran; widespread and common in Scotland.

Saldula scotica: Bute, Inner Hebrides, Mainland to N. coast; widespread and common in Scotland.
Saldula orthochila: Rhum, N. coast, Outer Hebrides, N. Rona, Shetlands; widespread and common in Scotland.
Saldula c-album: Arran, N. coast; widespread and common in Scotland.
Saldula fucicola: Orkney and Shetland (old records); Perths., Dumbartons., Fife, N. England.
Saldula opacula: E. Sutherland; in Scotland also Morays., Easterness.
Saldula pallipes: Inner Hebrides, W. Ross; in Scotland also 3 other scattered records; all Scottish records are old and perhaps refer to S. palustris.
Saldula palustris: Rhum, N. coast, Outer Hebrides; no other Scottish records.
Saldula saltatoria: Arran, Inner and Outer Hebrides, Mainland to N. coast; widespread and common in Scotland.
Chartoscirta cincta: Rhum, Outer Hebrides, N. coast; widespread in Scotland.
Chartoscirta elegantula: W. Ross; in Scotland Renfrews and Perths. All old records.

"Velia currens": old records throughout Scotland to Shetland.
Velia caprai: Inner and Outer Hebrides, N. coast, Fair Isle; widespread in Scotland.
Velia saulii: Wester Ross, Outer Hebrides; in Scotland also Stirlings., Morays., Dumbartons., Lothian.
Gerris costai: throughout the area to Orkney; widespread and common in Scotland.
Gerris lateralis: Inner and Outer Hebrides, E. Sutherland, Shetland; widespread and common in Scotland.
Gerris thoracicus: Inner and Outer Hebrides, W. Ross; in Scotland also Morays. Lothian and Clyde area.
Gerris lacustris: Inner Hebrides (common), mainland to N. coast; widespread and common in Scotland.
Gerris odontogaster: Inner and Outer Hebrides, W. Ross; widespread and common in Scotland.

Nepa cinerea: Inner and Outer Hebrides, Orkney; widespread and common in Scotland.

Notonecta glauca: Inner and Outer Hebrides, W. Ross, Orkney; four widespread old records in S. Scotland; common in Lothian region (Gillespie).
Notonecta obliqua: Inner Hebrides, Outer Hebrides; no other Scottish records.
Micronecta minutissima: Islay, S. Uist (both old records, probably misidentifications of M. poweri); only other Scottish record is an old one for Perthshire.
Micronecta poweri: Rhum, Barra, S. Uist (all modern); no other Scottish records.
Cymatia bonsdorffi: Inner and Outer Hebrides, W. Ross; in Scotland also Perths., Morays., Easterness., Lothian.
Cymatia coleoptrata ssp insularis: Tiree, Lewis w. Harris; no other Scottish records of this or the nominate subspecirs.
Glaenocorisa propinqua: Inner and Outer Hebrides, W. Ross; only other Scottish record in Morays.
Callicorixa praeusta: Inner and Outer Hebrides, Orkney, Shetland; widespread and common in Scotland.
Callicorixa wollastoni: Bute, Inner and Outer Hebrides, Mainland to N. coast, Shetland; widespread and common in Scotland.
Corixa dentipes: S. Uist; in Scotland also W. Lothian, Easterness in Scotland.
Corixa punctata: Inner and Outer Hebrides, Mainland, Shetland, widespread in Scotland.
Corixa panzeri: Inner and Outer Hebrides, Orkneys; few other Scottish records.
Hesperocorixa linnei: Inner and Outer Hebrides; widespread in Scotland.
Hesperocorixa sahlbergi: Inner and Outer Hebrides; W. Ross; widespread and common in Scotland.
Hesperocorixa castanea: Inner and Outer Hebrides, Mainland; widespread and common in Scotland.

Arctocorisa carinata: Inner and Outer Hebrides, W. Ross,? Shetland; widespread and common in Scotland.
Arctocorisa germari: Inner and Outer Hebrides, Shetland; in Scotland also Fife, Lothian and Morays.
Sigara dorsalis: Inner and Outer Hebrides, Shetlands; widespread and common in Scotland.
Sigara distincta: Inner and Outer Hebrides, W. Ross, Shetlands; widespread and common in Scotland.
Sigara falleni: Eigg (1 only); widespread in Scotland.
Sigara fossarum: Inner and Outer Hebrides; widespread in Scotland.
Sigara scotti: Inner and Outer Hebrides, Mainland to N. coast, Shetland; widespread and common in Scotland.
Sigara lateralis: Gigha, N. Uist, Shetland; widespread in Scotland.
Sigara nigrolineata: throughout the area to Shetland; widespread and common in Scotland.
Sigara concinna: Outer Hebrides; only one other, old record in Scotland from Perths.
Sigara limitata: Inner Hebrides; only one other, old record in Scotland from Perths.
Sigara semistriata: Inner and Outer Hebrides, W. Sutherland; widespread and common in Scotland.
Sigara venusta: Bute to Orkney; widespread in Scotland.
(Hesperocorixa moesta: Islay; 4 other, scattered Scottish records; probably all refer to H. castanea.)

There are thus about 150 species reliably recorded from the far northern parts of Britain. Probably some dozens of additional species could be collected around Inverness, just on the southeastern border of the region, as the fauna of the N. coast of the Grampian Region is very rich in lowland forms.

Most of the species on the list are of wide distribution within the British Isles but about thirty belong to the northern or north-western element of the fauna, or are at least rarer in the southern and eastern parts of Britain. These species are:

Eremocoris abietis
Acalypta brunnea
Acalypta nigrina
Anthocoris pilosus(?)
Bothynotus pilosus
Conostethus brevis
Chlamydatus wilkinsoni
Hallodapus rufescens
Mecomma dispar
Lygus wagneri
Phytocoris pini
Teratocoris viridis
Cryptostemma alienum
Salda muelleri
Salda morio
Saldula Scotica
Saldula c-album
Saldula fucicola (=vestita)
Saldula opacula
Velia saulii
Gerris lateralis
Gerris costai
Cymatia bonsdorffi
Cymatia coleoptrata ssp. insulari
Callicorixa wollastoni
Hesperocorixa castanea
Arctocorisa carinata
Arctocorisa germari
Glaenocorisa propinqua
Sigara scotti
Sigara venusta
Sigara semistriata

A further twenty-one species are not found north of the Great Glen but belong to a northern/western/montane element. These are listed below.

Aradus betulae
Elasmucha ferrugata
Eremocoris plebejus (northern form)
Xylocoris formicetorum
Anthocoris amplicollis
Amblytylus brevicollis
Plesiodema pinetellum
Psallus mollis(=masseei)
Chlamydatus evanescens
Chlamydatus pulicarius
Globiceps woodroffei
Orthotylus fuscescens
Orthotylus virens
Lygus punctatus
Polymerus unifasciatus var. lateralis
Calocoris major
Zygimus nigriceps
Notostira erratica (Ireland)
Teratocoris caricis
Teloleuca pellucens
Sigara fallenoidea (Ireland)

W. R. Dolling - July 198

A KEY TO THE WESTERN EUROPEAN SPECIES OF ANTHOCORIS

From: Péricart J. (1972) Hémiptères Anthocoridae, Cimidae et Microphysidae de l'Ouest
- Palearctique Faune de L'Europe at du Bassin méditerranéen, 7, (Paris).
Translated by Stuart Foster and revised by J Péricart.

1 (2) Upper surface covered with shiny recumbent golden or silver pubescence. Borders of prothoracic collar almost invisible viewed from above. Male parameres toothed.
Species confined to Madeira and the Canaries (Group - A. alienus).....29

2 (1) Insects without this combination of characters 3

3 (8) Antennae almost as long as the head, pronotum and scutellum combined. Whole forewings shiny, often translucent. 4

4 (5) Pronotum and forewings with fairly dense, very fine erect pubescence, anterior angles of pronotum and the collar with longer hairs. Forewings yellowish with brown Markings, translucent and covered with dense deep punctures as in Acompocoris and Tetraphleps; legs entirely yellowish.
Male parameres bent and toothed in the middle, then curved; apex tapering to a point.

Length 3.5 to 4.5mm. Central Asian sp. A.flavipes

5 (4) Upper surface semi-glabrous. Forewings yellow/fawn with black spots, without punctures. Male parameres broadened out to form a blade. (Group A. nemorum) 6

6 (7) Pronotum black or brownish-black, rarely light posteriorly. A robust species. Tips of male parameres clearly curved.
Length 3.5 to 4.5mm. Euro-Siberian sp. common. A. nemorum

7 (6) Pronotum black with yellow base. Less robust, more oval shaped. Tips of male parameres not appreciably curved.
Length 3 to 3.5mm. Euro-Siberian sp. on Salix. A.limbatus

8 (3) Antennae much shorter, always shorter than the distance between apex of clypaus and middle of scutellum, or if longer, endocorium completely dull. Male parameres never expanded into a blade..... 9

9 (12) Exocorium and external part of cuneus rugose, although shiny, contrasting sharply with the mat clavus and endocorium. Male parameres sickle shaped, without tooth (Group A. nemoralis)..... 10

10 (11) Second antennal segment shorter, never longer than head width (including eyes).
Length 3.3 to 4mm. Euro-Mediterranean, widespread. A.nemoralis

11 (10) Second antennal segment clearly much longer than width of head. Found exclusively on box. A. butleri

12 (9) Contrast low or very weak between shiny exorcorium and the endocorium, or if male parameres with tooth then size not greater than 3mm in length 13

13 (14) Upper surface covered with pale, long, fine, semi-erect pubescence. Forewings shiny, partly translucent, pale with brown spots or patches of variable size and shape. Male parameres without tooth. Length 4 to 4.5mm. Euro-Siberian, on ruderal vegetation (nettles, goosefoot, ragwort etc) on waste land **A.sibiricus**

[= A. pilosus (Yakovlev 1877) in SRL and KZH (1964)]

14 (13) Species without the above characters 15

15 (16) Projected lines from sides of pronotum meet in front of the head. Anterior angles of pronotum broadly rounded, explanate. Forewings pale basally, darkening towards the apex; mat except for external borders of exocorium and cuneus; legs and antennae generally dark. Male parameres sickle shaped without tooth. Length 3.5 to 4.5mm. Western European on Ash (Fraxinus) **A.amplicollis**

16 (15) Projected lines from sides of pronotum meet at about the base of the clypeus. Anterior angles of pronotum shortly rounded 17

17 (18) Larger species. Forewings completely shiny, except for the clavus, slightly more shiny on the external border of the cuneus.

A. gathercoali - adult

18 (17) Smaller species. Male parameres always toothed. (Group - A. confusus) 19

19 (20) Small. Clypeus very short, anterior ocular border or head only 0.35x as long as width of head (including eyes). Exocorium fairly shiny, endocorium and clavus mat, but contrast less obviously than in A. nemoralis. Colouration variable, reddish brown or darker. Length 2.75 to 3.25mm. West European, on Mistletoe (Viscum album). **A, visci**

20 (19) Species without the above characters. Clypeus longer 21

21 (24) Corium, except for forepart, and all of cuneus really shiny, the clavus dull 22

22 (23) Colouration of forewings as variable as colouration of body, yellow-brown or dark-brown, more or less uniform. Male parameres with a weak pre-epical tooth, and a long apical point perpendicular to the long axis of the paramere. Length 3.2 to 3.75mm. Western European and Mediterranean. **A.sarothamni**

23 (22) Colouration yellow to reddish-brown. Male parameres different to above. Not exceeding 3mm long. **A.minki subsp. pistaciae**

24 (21) Exocorium and external border of cuneus, slightly more shiny than rest of forewing 25

25 (26) Endocorium and internal border of cuneus mat. Male parameres with a strong sharply pointed pre-apical tooth. Length 3.5 to 4mm. Euro-Siberian — **A. confusus**

26 (25) Endocorium and internal border of cuneus almost shiny. A group of extremely close forms 27

27 (28) Body colouration yellowish fawn or reddish. Forewings yellow to light-reddish, more or less shades of brown, antennae light-reddish, with last three joints darkened apically. Male parameres with a small pre-apical tooth, the proximal side of the tooth curving smoothly into the internal face of the paramere.
Length 3 to 3.6mm, on Poplar — **A. minki**

Length 2.8 to 3.2mm, a little more shiny — **A.minki subsp: pistaciae**

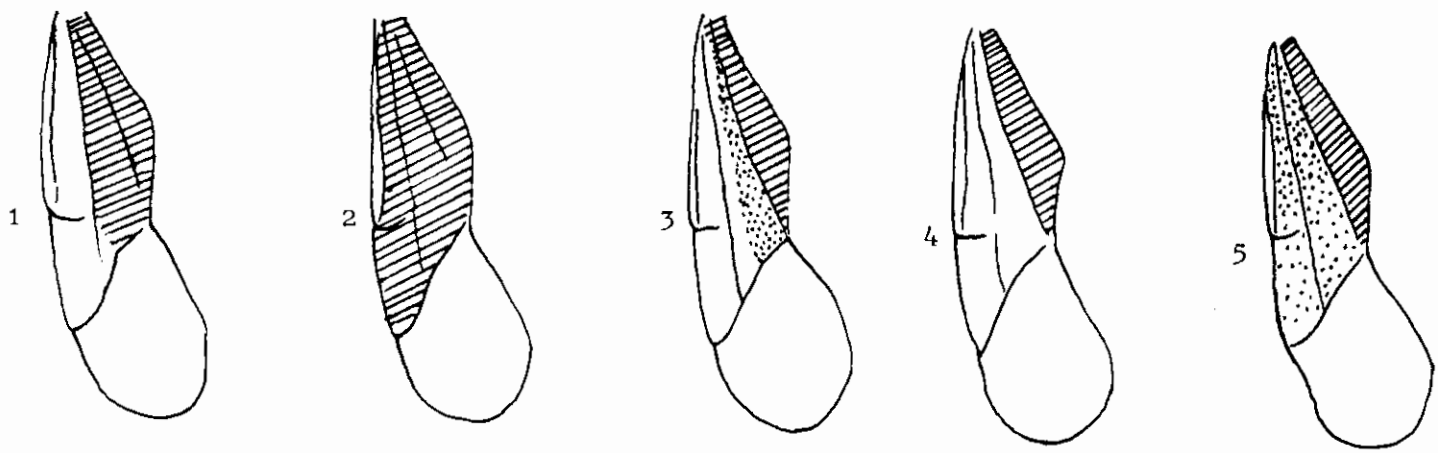
28 (27) Colouration of body light brown to dark brown. Forewings dark brown, anterior border of corium generally more pale, yellow-brown. Antennae dark, the base of 2nd segment sometimes paler. Male parameres with a strong pre-apical tooth, the proximal side of the tooth forming an angle with the internal face of the paramere.
Length 3.5 to 3.8mm. North and West European, on Ash (Fraxinus) — **A.simulans**

[= A. minki Dohrn 1860 in Stal and R+H(1964)]

29 (30) Corium and cuneus moderately shiny, with obvious punctuation, clavus semi-mat. Forewings less extended. Colouration variable.
Length 3 to 4.2mm — **A. alienus**

30 (29) Corium and cuneus smooth and very shiny; clavus semi-mat. Forewings extended, with long parallel sides.
Length 3.5 to 4mm. — **A.salicis**

Comparative glossiness of hemelytra in Anthocoris

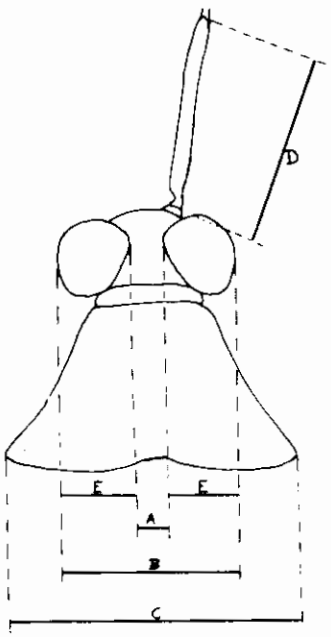


1 = A. nemoralis 2 = A. confusus 3 = A. minki
4 = A. sarothamni 5 = A. gallarum-ulmi

Cross-hatching indicates the most mat, stippling the less mat and unshaded the glossy areas of the hemelytra.

A draft key to the British Phytocoris sensu stricto

1	Male with vertex width greater than eye width. Female with vertex greater than 1.4x eye width.	2
	Male with vertex narrower than eye width. Female with vertex less than 1.4x eye width.	3
2	2nd antennal segment greater than 2x length of first segment	pini
	2nd antennal segment less than 2x length of first segment	reuteri
3	2nd antennal segment greater than 1.6x base of pronotum	longipennis
	2nd antennal segment less than 1.6x base of pronotum	4
4	1st antennal segment with two or more pale stripes	populi
	1st antennal segment never with two or more pale stripes	5
5	Face broadly pale, usually without dark markings	tiliae
	Face with elaborate pattern of dark markings	dimidiatus



A = vertex width
B = head width
C = base of pronotum
D = 1st antennal segment
E = eye width

Stuart Foster - March 1983

(A fuller key to Phytocoris, incorporating more novel colour characters, is being prepared, but to make it reliable Stuart needs feed-back from the above 'skeleton' key based on structural characters. It would be helpful if those with eye-piece graticules could run as much material as possible through the key, or alternatively, lend your series to Stuart for measuring. Material of P. insignis would be especially welcome : the final key will include all the British species.)