

SPIDER RECORDING SCHEME NEWS

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EDITORIAL

Mark Yeates of Teknica Ltd, funded by the British Arachnological Society, has worked with the S.R.S. to develop a phase 2 compatible record structure for MapMate. MapMate is an increasingly popular biological recording and mapping software package, and now allows the easy input of spider records in a format that we hope will greatly increase our understanding of the detailed ecological and management requirements of every species of British spider.

As well as its use of up-to-date checklists, one of the greatest advantages of MapMate is the ease with which records can be uploaded to and exchanged with a central MapMate database over the internet. At least initially, I can act as the Spider Recording Scheme MapMate 'hub', so that recorders using MapMate can sync their data directly to me. My MapMate centre is 2gv.

A copy of the national atlas dataset is now held by the Spider Recording Scheme in Microsoft Access. It is probable that in future this dataset will be transferred and updated in MapMate, but in any case all new data are now using MapMate. I would urge recorders to read Ian Dawson's article in this newsletter on MapMate and the Spider Recording Scheme, and consider its use if you are currently using alternative computerised software. MapMate can be ordered for £24.99 from the website at <http://www.mapmate.co.uk/>

Stan Dobson is developing a new version of SPIREC to allow easy phase 2 data input to a variety of database software, and this will be an excellent alternative for recorders who do not wish to commit themselves to one database product. Recorders will be kept informed in the newsletter on progress.

As previous issues of the S.R.S. newsletter have made clear, the Recording Scheme wants to try and find out much more about the ecology and phenology of spiders in different parts of Britain and any changes to the distribution and frequency of species in the future. Recent records of *Ero aphana* suggest we may have another species spreading in southern Britain (see the article later in this issue), and this is another example of where we can pick up and monitor changes. In any case, it would be extremely valuable to be able to look at the phenology of species across Britain. So, we are accepting and will continue to accept records, all records, with as much information as possible, especially if the data include male/female numbers and habitat structure.

The *Atlas* maps are on the NBN Gateway at <http://www.searchnbn.net/>, to registered users, and the detail and interactive layers available are quite impressive. As stated in the March newsletter, the aim is to update these maps on a yearly basis, so please keep sending in records on a regular basis. Jon Cooper has kindly provided an article in this newsletter explaining what is available, describing the spider data on the gateway, the different ways it can be viewed and what is coming in the next few months as regards changes to the speed, reliability and look of the gateway.

Adrian Fowles has drawn my attention to the availability of the spider checklist for Wales, which can now be accessed as a pdf file from CCW's website, by logging onto <http://www.ccw.gov.uk/reports> and following the link to Research & Reports.

I would like to remind recorders that past newsletters are available on the British Arachnological Society website at <http://www.britishspiders.org.uk/srs/srs.html> currently back to issue number 29 (November 1997). Craig Slawson is gradually making earlier issues available as time allows.

Thank you very much to all those who have continued to send in record cards and computerised data. We now have 1,130 cards sent in by recorders since the *Atlas*, and hope to be able to get these punched in and validated in the reasonably near future. A big thank you to Glyn Bridge, Gordon Corbet, David Haigh, Tom Thomas and Jim Stewart for sending in many cards so far this year.

Verification and sending specimens by post

It is worth remembering the difficulty that exists in correctly identifying many invertebrates, including spiders, until sufficient experience is gained. Some species can be difficult even to experienced arachnologists, and it is no shame to get specimens checked—indeed, it is important that unusual or difficult specimens are routinely verified if our data are to be scientifically valuable and viewed as reliable. The S.R.S. has a policy on verification of specimens, and the phase 2 booklet outlines the following procedures:

In the early stages of his/her involvement in the Scheme, a recorder may be asked to supply named specimens, in support of their records of some of the 'common' and 'frequent' species, until such time as their competence has been established by the Area Organiser. **Rare species or species outside their known range should in any case be checked by another competent arachnologist, and these checks reported as part of the record.**

If it is necessary to send a specimen to an Area Organiser for checking, please remember that damage can be caused if it is incorrectly packaged for posting. The following guidelines should be followed:

1. Place the specimen in a small tube with a well-fitting plastic stopper or screw top. Either fill the tube completely with liquid (to prevent mechanical damage by air bubbles during transit) or restrain movement of the specimen using a small piece of tissue, such as part of a paper handkerchief or kitchen paper. Cotton wool should not be used for this purpose, as the cotton strands become entangled with the spider.

2. Write clearly in pencil or **alcohol-proof and waterproof ink** (e.g. using a 'Rotring' or 'Pilot' water resistant drawing pen) on a label that is placed inside the tube with the specimen. **Do not label the outside of the tube.** If the tube leaks such labels are often rendered illegible, or, if the label is lost, the material becomes worthless. All tubes should contain a label giving the minimum information of location, grid reference, date, collector.

3. Indicate if the liquid in the tube is other than 70% alcohol. Avoid the use of glycerine which can stick trichobothria to the surface of the legs, making them very difficult to locate. If iso-propyl alcohol is used rather than Industrial Methylated Spirits, then 50–60% dilution is recommended to avoid the specimens becoming brittle.

4. The tube containing the specimen should be protected by using a hollowed-out block of polystyrene, a tin lined with cotton wool or paper padding, or plenty of bubble wrap inside a box or padded envelope.

5. Remember that a covering letter written in ink or ball-point may be rendered illegible if the tube leaks in transit.

6. If specimens are to be returned then stamps to the appropriate value should be enclosed.

I myself use polypropylene tubes for storing and posting specimens. These have the great advantage that they are absolutely airtight, not needing topping up even after many years, and they are also practically indestructible—an important feature when sending items by today's post! I was also recently surprised to discover that these tubes are substantially cheaper than the glass equivalents obtainable from natural history suppliers. John Murphy put me on to these tubes many years ago. They are marketed by Sarstedt (a supplier of medical and laboratory products) 68, Boston Road, LEICESTER, LE4 1AW; Telephone: 0116 235 9023. The company does not normally deal with individuals, but will certainly take orders for tubes and stoppers in 1,000s.

I am indebted to John Harper for some extra dos and don'ts regarding posting:

- Never use postage labels that could come off or may not stick well to some surfaces, or to dirty envelopes
- Preferably use virgin envelopes
- Write return address on back of envelope
- Include letter with sender and recipient addresses
- Pad tube well (e.g. with bubblewrap) but make package flat so that it will go through a letter box
- Reinforce with tape

Difficult species and a spider crib

A lot of correspondence and planning is going on in respect of supplying help, not currently easily available in the literature, in the identification of difficult species. It is hoped that something substantial to help recorders can be produced by early next year, although the exact format is to be decided. I am very grateful to those recorders who have provided me with feedback, and continue to welcome comments and contributions. This can only increase the value of what we make available to recorders in the future.

Area Organiser changes and address corrections

Mrs Jennifer Newton has taken over as Area Organiser for VC60 (Lancashire West) from Chris Felton. Please send future records for VC60 to Jennifer Newton, Holly House, 94, Main Street, Hornby, Lancaster, Lancashire, LA2 8JY. Chris Felton remains A.O. for VC59 (Lancashire South).

John Harper has taken over as Area Organiser for VC42 (Breconshire). Although he lives in modern Monmouthshire by the latest of boundary changes, he lives in Watsonian VC42. John also sees it as a challenge to equal VC35's list, an excellent aim! Please send future records for VC42 to John Harper at 4, Fairhome, Gilwern, Abergavenny, NP7 0BA.

Welsh recording is steaming ahead. Michael Kilner has set up a Welsh Recorders' forum, producing a regular newsletter with 3 issues currently available, and issue 4 in preparation. The newsletter is primarily aimed at informing people who do not know that much about arachnids, but want to learn. It is a good example of the sort of development we would welcome in other parts of the country.

Michael has agreed to take over the role of A.O. for VC44 (Carmarthenshire), as several of his group members live close to the border, and he can co-ordinate records and specimens, as well as visiting the area himself. Michael Kilner remains A.O. for VCs 35, 41, 43 and 100.

Ian Dawson has pointed out two address errors in the Members' Handbook Area Organiser list sent out with the March mailing. The RSPB Scottish HQ (Dave Beaumont's address) moved from Regent Terrace back in 1998! Although my main list was correct, I had failed to amend the Area Organiser list which was used to prepare the Handbook page.

The address should be **Dunedin House, 25, Ravelston Terrace, Edinburgh, EH4 3TP**; e-mail: dave.beaumont@rspb.org.uk .

Iain Downie, A.O. for Ayr and Renfrew, is now working for the British Trust for Ornithology at **The Nunnery, Thetford, Norfolk, IP24 2PU**; e-mail: iain.downie@bto.org. Although now a long way from his two VCs, Iain is happy to carry on as A.O., and will be actively promoting recording in these counties.

My thanks go to all those who have contributed to this issue. S.R.S. News No. 47 will be published in November 2003. Please send contributions by the end of September at the very latest to Peter Harvey at 32, Lodge Lane, GRAYS, Essex, RM16 2YP; e-mail: grays@peterharvey.freeserve.co.uk.

Provisional Atlas Data on the NBN Gateway Website

by Jonathan Cooper

The data used to create the *Provisional Atlas* are now available on the NBN Gateway website for you to explore (www.searchnbn.net). You can view not only spider distributions as 10 km dot maps, but also the original detailed records, many of which are to the nearest 100 metres.

Many of you will be familiar with the initial involvement of the Spider Recording Scheme with the NBN Gateway. We built a demonstration system that allowed you to interrogate and comment on the draft *Atlas* records through an interactive map on the web. This aided the validation work coordinated by Peter Harvey and Mark Telfer of the Biological Records Centre.

However, things have moved on, and in November 2002 we worked with Mark and Peter to load the *Atlas's* underlying validated dataset onto the website. There are over half a million records covering 651 species with almost two-thirds recorded to 100 metres. Here is a summary, giving the number of records within category of precision: 10 km 16,577; 2 km 161,265; 1 km 4,962; 100 m 328,758; Total 511,562.

So how can you access these data? To answer this I will first present some relevant areas of the website for you to visit and then describe Peter Harvey's crucial role in controlling access to the data.

The starting point is the home page (www.searchnbn.net). From here there are several ways to navigate to web pages that use spider records, but the simplest is to type your species name into the search box. A tip is to surround the name by double quotes, e.g. "Anyphaena accentuata". You can also use a thesaurus to check for synonyms. Here is the list of pages you will get for carrying out a search on *Anyphaena accentuata*, followed by a brief description of each of these.

- National 10 km distribution map
- Interactive map
- Occurrence in protected sites
- New prototype interactive map

National 10 km distribution map: provides a thumbnail national 10 km map with options to change the datasets and date range for the data displayed and show a higher resolution printable map.

Interactive map: this is soon to be replaced by the new map (right), but was our first attempt at a simple map that displayed raw records (i.e. not 10 km summary) as dots, and provided tools for panning, zooming, selecting data with

polygons and interrogating records. It is also possible to draw a polygon and request all the species data within it that you have access to.

Occurrence in protected sites: the NBN Gateway has the digitised boundaries of different administrative boundaries (such as SSSIs), which makes it possible to compare your data with them. On opening this page you are first shown what percentage of your species' records occur on each boundary type. Selecting one of the boundary types provides a full list of all the sites (e.g. the individual SSSIs) that records overlap. Finally, a single boundary can be selected to discover what other information is available for it.

New prototype interactive map: as mentioned above, this will soon replace the original interactive map. There are a number of reasons for this, but mainly to improve reliability. At present it is a prototype that is under test and has no help written, but playing with the tools soon shows you how to pan, zoom, select, etc. One important advance over the old map is that records are not shown as dots, but are squares based on the underlying grid reference. This is illustrated in Figure 1, which shows snippets of how the view changes as you zoom in on records of *Anyphaena accentuata* near Colchester. The colours grey, green, cyan and red represent 10 km, 2 km, 1 km and 100 m layers, respectively (apologies for reproduction in black and white). There are Ordnance Survey backdrops to a resolution of 1:50000 and records can be queried by selecting the appropriate tool and dragging the mouse over them.

As mentioned above, access to this dataset is controlled by Peter Harvey. In conjunction with the B.A.S., he has made the 10 km summary maps publicly available, but not the detailed data. We have tried to make the process of applying for access as simple as possible: it involves two steps from you and one from Peter:

1. Register with the Gateway by selecting 'Register' on the home page (www.searchnbn.net) and fill in your details.
2. E-mail Peter (srs@britishspiders.org.uk) asking for access to the data.
3. Peter will then moderate your request and add you to the list of users if appropriate, which gives you access to the data.

The data on the Gateway belongs to the Spider Recording Scheme and it is only they, via Peter, who can decide who has access. One further point is that access is not all or nothing, but can refer to different views of the data: for example, Peter could opt to give someone access to 10 km mapping only and no access to detailed data.

In conclusion, a few words on changes that will be taking place in the near future:

First, more map-related features will become available. These will include the reinstatement of data validation tools, habitat and other boundary mapping, coincidence mapping (so spiders can be viewed against other species), tools for drawing polygons and 'chopping out' species records for an area. Also, querying data by Vice County and 10 km grid square is in the pipeline.

Second, the NBN Gateway will become faster, more reliable and look different. This is because we are moving the entire system onto a set of dedicated machines. At the same time we are changing the site in response to the feedback we have received during the last year.

Finally, working with Peter Harvey, we will import yearly updates to the spider data, which should assist your recording through time as part of the Spider Recording Scheme.

Biological Records Centre, Abbots Ripton, Monks Wood, HUNTINGDON, Cambridgeshire, PE28 2LS

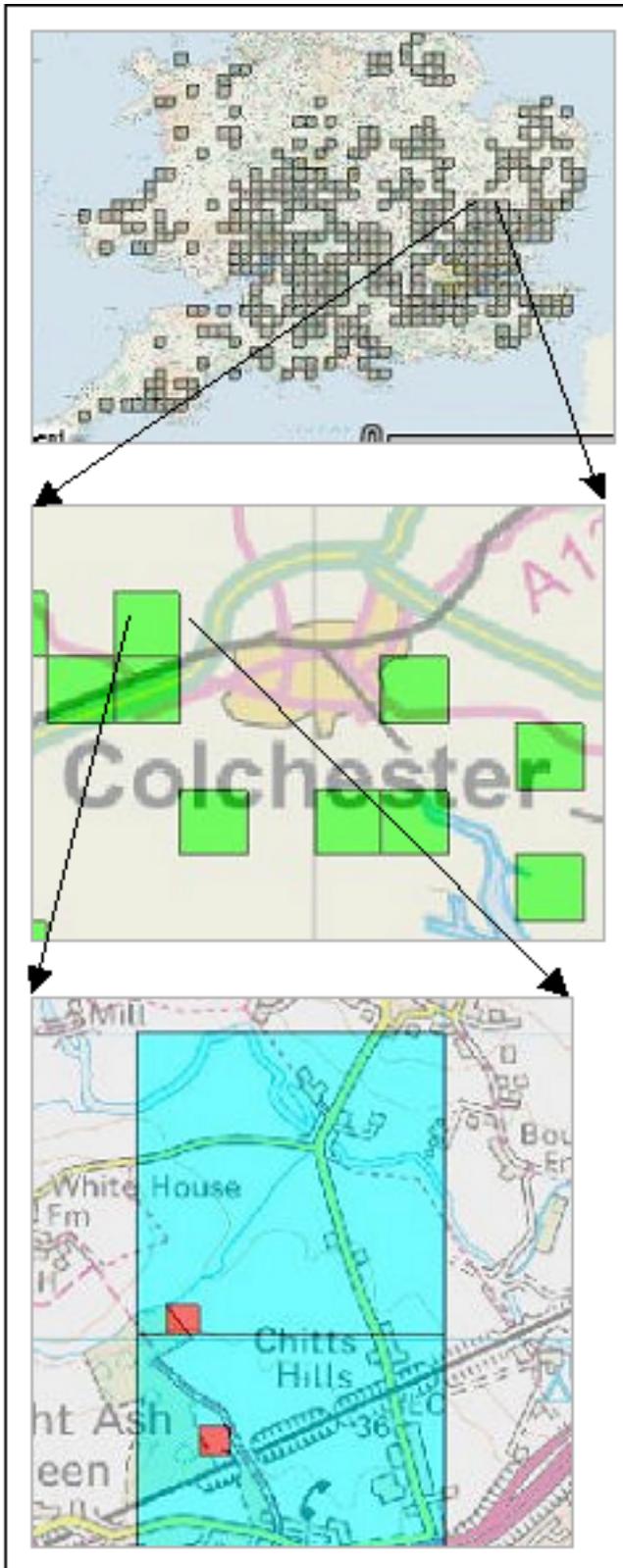


Figure 1. Zooming in on records of *Anyphaena accentuata* near Colchester. For explanation see text.

MapMate and the Spider Recording Scheme

by Ian Dawson

MapMate is one of several software programs available for biological recording in the UK. Written originally to enable members of the Somerset Moth Group to maintain and exchange their records, it has become very popular among amateur recorders of all branches of natural history, and is undergoing continuous development. Recently, the B.A.S. commissioned development of the program to enable the recording of the additional habitat information required for Phase 2 of the Spider Recording Scheme. This article highlights some of MapMate's features, and concludes with an outline of the S.R.S. customisation and some suggestions to encourage consistent data entry.

MapMate is a relational database based on Microsoft Access 97. The program is very intuitive and user-friendly and can be used at a basic level. However, it has considerable depth for those who want to explore further some of its many mapping and query possibilities. It also appears to be very robust. In two years of regular use by me it has hung just once—more than can be said for most well-known software!

There is a MapMate e-mail group where problems can be posted. Not only are you likely to get a helpful reply from an expert user, the program's author also often comments or answers queries and is open to suggestions for improvement. New patches and software updates are regularly available for free downloading from the MapMate website. However, the aim is to keep MapMate straightforward to use without adding lots of features which may be of limited interest to most users.

Data entry

MapMate comes with up-to-date checklists for most groups of British fauna and flora. Users include national experts in many groups who ensure that the checklists are current. Taxa cannot be added to or edited by users, but new species or corrections are patched in on request, usually within a couple of days.

With one exception, there is a single data entry form for each major table: sites, recorders, references (=sources), and records. Once relevant sites, recorders and references are set up by the user, entering species records is straightforward. All recurring fields, such as site, date, recorder and reference can be locked, so entering data from one collection tube is very quick with typically just species, quantity and sex to add for each record.

The exception to a single data entry form comes when entering a new site using the Spider Recording Scheme defaults. This is discussed further under the heading 'Spider Recording Scheme Phase 2' below.

When entering species records, the first two letters of the genus and the first three of the specific name will fetch either the full name of the species or, in the few cases where these are duplicated, all matching options. Thus 'padeg' will produce *Pachygnatha degeeri* or 'leten' will give the choice of *Lepthyphantes tenuis* or *Lepthyphantes tenebricola*. However, there are many ways of entering a species and almost any set of letters will pull out a limited set of possibilities. Trial and error will show which combinations of letters work best for you. I have found the quickest way to enter *Lepthyphantes tenuis* is by typing 'uis', or for *Lepthyphantes zimmermanni* 'zim'.

Other data entry shortcuts built in include entering 'me' in the Recorder field for your own name, or 'today' in the date field for the current date.

Most fields have a restricted choice from which the user selects (F2 produces a pop-up list of available options), thus ensuring consistency. For sites already set up, typing the start of the name produces a list of matching options; or a question

mark followed by a 10-km square, e.g. ?TL16, will list all sites within that 10-km square to choose from. As usual there are several ways to carry out any operation. Finally, there is a Comment field which will accept anything the user wishes to note up to several pages long. Many users are likely to want to record extra information on occasion for their own interest. Provided such information is added consistently, it can be retrieved and analysed.

Filters

Most of us have an interest in other aspects of natural history and will wish to record more than just spiders. Each user can set up his or her own recording preferences for the different taxonomic groups they record, and for their preferred recording areas. This works at two levels. First, you run through a wizard to set your configuration, choosing all the taxa groupings and geographical areas you are likely to use regularly. This creates your own personal taxa library as a subset of the entire taxa library (say flowering plants, spiders, ground beetles and birds). Secondly, for entering records you set preferences from within your configuration (e.g. spiders only). These filters further reduce the choices available when entering data, but it is very easy to change preferences—or indeed your entire configuration—at any time to enable records to be entered for different taxonomic groups or geographical areas. Once entered on MapMate your records form part of the database, irrespective of your current configuration or recording preferences.

Filters are also used to select just those records required (taxonomic groups and geographical areas) when creating atlases, running queries, or exporting data.

Queries

Nearly 150 queries are built in to the program, e.g. 'Species list for <vice-county> in <year>' or 'Species not recorded this year by <recorder>'. Many queries allow the use of an asterisk [*] as a wild card. It is thus simple to run a query on a wider site and pull out all the records or just a species list for all sites related in some way, provided these are named consistently. I maintain a database of all spider records from RSPB reserves and, by including the string 'RSPB reserve' in the site name, can retrieve all relevant records by searching for '*RSPB reserve*'.

A number of quick queries are available from the main data entry form. Pressing F5 produces all records matching only the criteria you enter in one or more fields, and is thus an excellent way to review and check what you have input after entering records for one tube, when most fields are still locked. Adventurous users can also create their own custom queries. Most queries run against the taxa and geographical defaults currently set up by the user, so it is simple to produce a list of, say, all spider records for a vice-county, or all ground beetles for England.

Mapping

As its name implies, this is one of the best features of MapMate, enabling the user to visualise his/her records. 'Atlases' can be created at different scales, such as 1 km, 2 km, or 10 km, with different symbols or colours for a range of variables, making it simple to show records by date-band, or to highlight your own records. Records can be traced back from dots on the map which makes for easy checking of anomalous records. Special maps can be created showing, for example, the number of recorded tetrads, or which 10-km squares are the best recorded. The user can add their own picture maps to help put records directly into context. You can create as many different atlases as you wish for any combination of taxa and geographical areas. Atlases are automatically updated as new records are added, making this one of MapMate's star features.

Copying and pasting

MapMate works seamlessly with other Windows programs such as Excel and Word. One area **not** catered for within MapMate is the production of sophisticated reports. However, by copying and pasting the results of queries into a spreadsheet or text editor they can then be formatted and edited to produce a report for printing.

Exchanging data

By creating a so-called 'sync' file of records matching current defaults, users can send their relevant records seamlessly by e-mail or via the web to other MapMate users, or to a central 'hub'—Peter Harvey in the case of the S.R.S. MapMate 'remembers' what it has sent and where it has sent it, so new syncs only send new records. This is a powerful feature, and for this alone it is hoped that as many spider recorders as possible will use MapMate.

'Syncing' also makes the process of sending in non-spider records to other recording schemes very simple—records you might not otherwise have bothered submitting if you have only a few. By the same token, now that the S.R.S. is geared to handling MapMate records, we can expect some spider records, which in the past would have been lost, from recorders of other groups.

It is also possible, with a little care and patience, to import data into MapMate from a tab-delimited text file, so all those records you have in another database or spreadsheet do not need to be entered afresh. MapMate is compatible with the National Biodiversity Network standards, though records cannot be exchanged directly with Recorder 2000/2002. However, virtually all the data associated with a record (potentially almost 80 fields which the user can pick and choose to suit!) can easily be exported to a standard spreadsheet such as Excel.

Spider Recording Scheme Phase 2

In addition to adding to our knowledge of spider distribution in the UK, the main aims of Phase 2 are to obtain the data needed for a better understanding of the ecology and phenology of our spiders and the effects of different habitat management; in short to establish a profile of the ecological characteristics of each British spider species.

All options on the Phase 2 printed recording card are also available within MapMate when you set the S.R.S. preferences. When recording a new site, after entering the basic site data which all sites in MapMate require, such as name, grid reference, administrative area and vice-county, enter 'srs' in the habitat field. Now when you save the new site, a further special data entry screen appears designed for the Spider Recording Scheme which allows the recording of S.R.S. Site Detail. Most fields on this form have a fixed list of values to choose from, and are relevant to the site. Each site can only have a single 'Site Detail' associated with it. This means that you should use a naming system for different sub sites within a main site (see below).

The fields in a Site Detail, matching the options on the new RA65 S.R.S. card, are:

Habitat. Main habitat. There is some overlap of habitats to allow for compatibility with the old RA65 categories.

Sub-habitat

Substrate

Hydrology

Managed – evident or known management features.

Grazing – evident or known grazing management features.

Frequency – evident or known frequency of management

Altitude in metres

Notes – any additional information about the site, habitats and management can be entered here, though this field is optional. All other fields are required, even if unknown and entered as 'Not recorded'.

Micro-habitat details relevant to the species record, again replicating the options available on the new RA65 S.R.S. card, are entered on the individual record form. These include **Habitat structure and vegetation density** combination and **Habitat detail** for the species record. This information should help to build up information on the detailed habitat preferences of each species and whether they move to different niches at different times of year. This distinction between the macro- and micro-habitat is an important one with invertebrate recording and is fully catered for when using the S.R.S. preferences in MapMate.

MapMate Help is context-sensitive, so by selecting F1, relevant and useful help appears.

Site names

A site in MapMate is a unique combination of name and grid reference (from a 10-km square of the OS National Grid down to an 8-figure Grid Reference which represents a 10-metre square). Thus there can be several sites with the same name and different grid references, or even with the same grid reference but different names. Note also that where two main habitats adjoin, different sites need to be created to record the different S.R.S. habitat site details.

There is no hierarchy of parent and child sites in MapMate as there is in some other biological recording software. At first sight this might seem like a drawback, but even where such a feature exists, one recorder's parent site might be another's child. In order to try and get some consistency in site names, it is suggested that sites be recorded as '**MainSite, SubSite: Compartment**', using comma and colon as separators. As noted above there will often be more than one main habitat at a site with the same grid reference, e.g. grassland and wetland or garden and building. Because different habitats need to be recorded as separate sites, include the basic habitat in parentheses after the site name to distinguish the sites and to save having to check the site detail every time when entering data. By entering sites consistently subsequent analysis will be made much easier.

Examples of site names using the above conventions:

Little Paxton Pits, Sailing Lake: NW (wetland)

Little Paxton Pits, Sailing Lake: NW (grassland)

Tempsford, Station Road 122a (house)

Tempsford, Station Road 122a (garden)

Another aim of Phase 2 is to obtain numerical data nationally on the collection of adult male and female spiders. The use of these samples will enable us to obtain better understanding of the adult season of each species, and to relate this to longitude, latitude and the possible effects of climate change. **It is very important when recording the sex as male or female that the stage is also recorded correctly.** 'Adult' is the default stage on the MapMate data entry form for records. Subadults and immatures of some spiders are safely identifiable to species, and subadults are usually able to be sexed. These must be recorded as 'subadult' in the stage field to avoid skewing the phenology data.

We also wish to record whether vouchers exist so that notable records may be checked if required. MapMate has a so-called 'Smart comment' feature. By entering !sv when entering the number and sex the comment 'Voucher specimen available' is added to the Comment field. Other smart comments available include !sn for 'Noted but no specimen collected', and !sm for 'Microscope identification, specimen not retained or lost'.

Finally, remember that it is better to record too much rather than too little. Data not entered are effectively data lost.

100, Hayling Avenue, Little Paxton, ST NEOTS, Cambridgeshire, PE19 6HQ

New Records of *Ero aphana* (Walckenaer, 1802)

by Peter Harvey* and Steve Hopkin[†]

The first author (P.H.) visited a site adjacent to Lakeside Retail Park (TQ591779) in VC18 (South Essex) on 26th May 2003, and beat a single female of the rare pirate spider *Ero aphana* (Walckenaer, 1802) from the lower branches of hawthorn growing at the edge of tall open grassland. Remarkably, on the same day an e-mail was received from the second author (S.H.) about a female *E. aphana* found by one of his undergraduate students attending the Reading University *Biology of Spiders* course. This specimen was found on 20th May 2003 in a horsebox full of hay at Kingsclere near Basingstoke! The horsebox contained hay taken from several fields in the vicinity of Wait's Farm (SU530611), VC12 (North Hampshire). The student returned to search elsewhere on the farm for further examples (including a male) but so far to no avail.

During a second visit to the South Essex site on 6th June, a second female *Ero aphana* was found, this time beaten from the lower branches of a gorse bush at the western edge of the site. This region of south Essex is geologically complex with a chalk outcrop north of the Thames variously overlain with sands, and so the vegetation frequently has areas containing plants normally associated with chalk grassland adjacent to or mixed with areas containing acid grassland plants. The area has been quarried over a long period of time, since at least the sixteenth century, but in modern times mineral extraction became much more extensive and the area between Purfleet and Grays contained a remarkable complex of old quarries. Unfortunately, local councillors and planners have long viewed these quarries as an eyesore and blight on the region, and most sites have already been lost to industrial and retail use, and to massive housing developments such as

'Chafford Hundred'. Thurrock intends to allow development of almost all those left.

Unfortunately, the Local Authority also plans to develop the majority of this (small) site for housing. The *Ero aphana* site, overlooking the Thames and sloping down from the top of the southern quarry edge, represents a unique green field fragment of the pre-quarry landscape and is home to many rare and scarce invertebrate species, including what may be the largest national population of a distinctive Red Data Book fly *Dorycera graminum*, the bumblebee *Bombus humilis* and the solitary wasp *Cerceris quinquefasciata*, all national BAP species on English Nature's Species Recovery Programme. The new UDP is currently at deposit stage, and it can only be hoped that the plans to develop the site for housing can be changed at a Public Inquiry in the face of the nature conservation evidence.

Ero aphana was first recorded in Britain in 1974 (Merrett & Snazell, 1975) and, until last year, all records have been from dry southern heathland, including that of Ian Dawson reported in the last SRS News (Dawson, 2003). In 2002 Clive McCarthy found the species within a garden shed in a suburban garden in Surrey (McCarthy, 2002), and it now seems there is the possibility that the range of the species is expanding. The species may have colonised Britain relatively recently (Peter Merrett, pers. comm.) and is still spreading, and/or climate change may be a factor. Whatever the reason, it would seem that *Ero aphana* could turn up in a range of warm habitats in southern England—keep a look out!

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Figure 1. *Ero aphana* (Walckenaer, 1802), female with egg cocoon. Photograph courtesy of Ian Dawson.

Further Notes on the Biology of *Homo arachnophilus*

by Tony Russell-Smith

This species was described recently by Slawson (1999) who mapped its distribution in Britain and provided brief notes on its habitats, ecology and management. The publication of the *Provisional Atlas of British Spiders* (Harvey *et al.*, 2002) provides an opportunity to examine some further aspects of its habitats and ecology. These notes apply specifically to *Homo arachnophilus* ssp. *britannicus* (ssp. nov.) and the results should not be applied uncritically to other sub-species.

Climatic influences on distribution

Examination of the map in Slawson (1999) shows clearly that the vast majority of records of this species in Britain (87% of the total) are from an area south of 54° N. This corresponds almost exactly with the July mean isotherm at 15.6 °C and strongly suggests that low summer temperatures severely limit the distribution of this sub-species in Britain. Further indications that temperature may be of significance for the sub-species come from the clumping of records in and around major conurbations. The map shows the largest aggregation of records in and around London but with other aggregations around the northern cities (Liverpool, Manchester, Leeds), and in Scotland, around Edinburgh and Glasgow. It is now well

established that urban climates are 3–5 °C warmer on average than those of the surrounding areas. It is not yet known what aspect of the life cycle of this species is most affected by temperature, but the clumped distribution around conurbations suggests that it may influence aspects of reproduction as it is here that the majority of brood nests of the species are found.

Although there is evidence that temperatures significantly influence the distribution of this sub-species, rainfall may also play a role. An overlay of mean annual rainfall isohyets on Figure 1 in Slawson (1999) indicates that 77 per cent of all records come from areas of the country with less than 1000 mm mean annual rainfall. Although the preference of the sub-species for drier, warmer conditions is evident, the exact interaction between temperature and moisture in controlling its distribution has yet to be elucidated.

Foraging areas

Although this sub-species is primarily araneophagous, as the trivial name suggests, it is known that many individuals forage for a wide range of invertebrates, including other arachnids, Hymenoptera, Diptera and even myriapods. Figure 1 in Harvey *et al.* (2002) indicates the areas in which this sub-species has been found to forage. It is clear that foraging is again largely confined to southern and central Britain, with little foraging north of 54° N, in Wales or in SW England. The reasons for this are far from clear and might potentially be due to lower prey abundance in these areas or, alternatively, the effect of low temperatures at higher altitudes in reducing the foraging efficiency of *H. arachnophilus britannicus*. There may also be other influences on the selection of foraging areas. Within the general foraging range described above, there are some clear gaps that are not apparently related to climatic factors. For example, little foraging appears to have been observed in the fenland area of East Anglia around the Wash. While the reason for this is unknown, it is possible that the intensive agriculture of this region has reduced prey abundance below levels at which foraging is efficient.

Population statistics

According to the data in Slawson (1999) the total population of *H. arachnophilus britannicus* is 216 individuals. Taking the total area of Britain as 242,430 km², this gives a population density of 0.00089 individuals km⁻², lending strong support to his contention that this is a rare and possibly endangered species. Some indication of the proportion of individuals that no longer actively forage in the population can also be gained from Figure 1 in Harvey *et al.* (2002). This suggests that out of the total foraging population of 150 over the period 1987–2001, 33 became inactive, indicating that approximately 1.5 per cent per annum of the population ceased foraging altogether. While we do not have accurate figures for current recruitment to the actively foraging population, anecdotal evidence suggests this is low and possibly does not balance the rate of loss. If this situation were to continue into the future without further recruitment, we could predict total cessation of active foraging by roughly 2070 and a population of only 66 individuals remaining.

Although there is much that remains to be learned about the biology of this fascinating sub-species, it is clear that unless recruitment to the population can be stimulated, there is a real possibility that it could become extinct by the end of the twenty-first century.

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Uloborus plumipes Lucas, 1846 in Surrey

by Glyn Bridge

Having started looking at spiders relatively recently, in Spring 2002 I was searching the worldwide web when I came across an article about *Uloborus plumipes* Lucas, 1846. It was not until 12th October 2002, whilst visiting a small greenhouse selling plants at Savill Gardens in the Windsor Great Park section of Surrey, that I remembered the article. Within a couple of minutes I had found half a dozen of what I suspected were *U. plumipes*. On returning home I retrieved the article and confirmed my suspicions.

I have since concentrated on searching as many likely places as possible in Surrey, and so far have found the species at Homebase, B & Q, numerous nurseries, and even on a trolley stacked with plants for Christmas in our local Woolworths. Of the 19 places so far visited locally only two have failed to produce *Uloborus*: one a nursery which grow their own stock from seed, the other a local garden centre which only had hardier indoor plants in a greenhouse unheated during the day, when it was quite cold.

In all cases I explained what I was doing and so was able to establish that the plants had all arrived from Holland, sometimes with several deliveries a week. I have so far only found two egg sacs, in early to mid October and, judging by the small size of the majority, most of the spiders were immature.

I would like to thank Peter Harvey for encouraging me to continue my search—which I am doing with relish, finding it hard to pass a likely looking spot, much to the bemusement of the family.

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A Moving Tale

by Ian Dawson

On 13th July 2002, as part of our search for *Wabasso quaestio replicatus* at Insh Fen in the Spey Valley, Scotland, I sawed off at ground level a large tussock of *Molinia caerulea* from NH81160230 and brought it home to Little Paxton, Cambridgeshire in a strong plastic sack for sorting. I dissected the tussock carefully later that week, retaining all the spiders seen, but the results were rather disappointing producing only the following: *Pocadicnemis pumila* 1f; *Hilaira pervicax* 4ff; *Meioneta saxatilis* 1f; *Ozyptila trux* 1f 2jj

The remains of the grass tussock were returned to the plastic sack and left outside in the garden to compost down. The sack was not sealed, though was sheltered from rain under the overhang of a window.

We were tidying the garden on 13th April and came across the sack. Instead of composting down, the contents had dried out and thus effectively become straw. As I have found *Microctenonyx subitaneus* in similar dry plant material in the garden in the past I thought it would be worth sieving the material again to see what if any spiders had taken up residence. This produced: *Amaurobius similis/fenestralis* 1j; *Phrurolithus festinus* 1j; *Lepthyphantes tenuis* 1f (with an ectoparasitic grub on the abdomen as large as the spider—this pupated overnight, leaving the spider dead); *Ozyptila trux* 1f; *Maro sublestus* 2ff.

The first two were clearly local colonists (*A. similis* and *P. festinus* are common species in our garden), and the third could have come from Insh or locally, but the last two species

must be presumed to have originated from Insh. I have recorded *O. trux* locally only from Monks Wood NNR and, given that there were several in the original tussock, I had no doubt overlooked a tiny immature.

However, the presence of the two specimens of *Maro sublestus*, which perhaps came as eggs, hatching and maturing over the ensuing nine months, provides a cautionary tale. It is interesting that these wetland spiders had thrived despite the tussock drying out, though, having in July removed all the spiders and other invertebrates I came across, there would have been few predators or other competition. There were good numbers of tiny springtails in the litter so food was not a problem. *M. sublestus* has been recorded from only eleven 10-km squares, including Woodwalton Fen, only 22 km to the north of Little Paxton, but also from Insh in the late 1970s and again in June 1996.

This episode highlights how easily spiders can be introduced, at least temporarily, in vegetation. Also, how should such occurrences be recorded? I have used the original Insh grid reference for *O. trux* and *M. sublestus*, but recorded the date as 13th April 2003 (as the spiders were not found until then and did not mature in captivity). However, to avoid any false bias in any analysis of maturity dates, I recorded the stage as unknown rather than adult, together with an appropriate comment on the circumstances of finding, but such records may not always be so apparently clear cut.

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House and Garden Spiders

by Ian Dawson

I read with interest, in S.R.S. newsletter No. 44, the accounts by Tony Russell-Smith and Tom Thomas of their house and garden spiders. Whilst I have not recorded quite so many species as either, nevertheless the combined total for our garden and house is 94 species in a little under 5 years. Although I endeavour to check every spider seen inside the house (one of those numerous *Scotophaeus* must one day be *scutulatus*!), most collecting in the garden has been casual, simply noting any spiders which show themselves, with occasional sweeping or beating of shrubs, or sieving litter. I ran pitfalls for the calendar year 2000, starting with four traps, but reduced to a single pitfall after March as a response to too many newt deaths. The garden is small (c. 400 m²), with a lawn, pond and



Figure 1. *Scotophaeus*: 'numerous inside the house.'



Figure 2. 'Worth checking every Teg.'

borders with shrubs and herbaceous plants, but with no trees, and flanked by similar gardens. Most of the front is a tarmac drive, though the surviving pitfall was in the border adjacent to the drive. The house is a small semi-detached bungalow about 30 years old, with a two-storey extension and integral garage, on the edge of a large modern housing estate. However, the back overlooks a disused gravel pit, now a nature reserve, fringed with willows and *Phragmites*, from which it is separated by a fence and path. The River Ouse is about 400 m away.

The garden spider total to date is 87 species, 10 of these recorded from the pitfalls only, while 44 species have appeared in the house. The influence of the adjacent water is evidenced by an abundance of *Larinioides sclopetarius* on, and often inside, the house. Two *Agelena labyrinthica* females appeared in 2002 weaving their spectacular sheet webs in the garden, while *Episinus angulatus* and *Ozyptila praticola* are found regularly, and *Phrurolithus festivus* is commonly seen running on the patio and in the compost heap. *Prinerigone vagans* turned up in a mercury vapour moth trap in April 2002 and *Microctenonyx subitaneus*, new to VC31, was sieved from an accumulation of dry leaves in October 2000. Highlights of the pitfall survey were singles of the nationally notable *Lepthyphantes insignis* (Nb), and first VC31 records of *Troxochrus scabriculus* (frequent) and the bizarre male of *Panamomops sulcifrons*, while several *Micrargus subaequalis* were also recorded. I have recorded *Oonops domesticus* outdoors (from the stiff leaves of a Yucca) as well as indoors.

Tony Russell-Smith was surprised to find *Clubiona corticalis* indoors, but this is one of our more frequent indoor visitors, with 11 records from walls and ceilings, while *Philodromus dispar* and *Dysdera crocata* both appear as frequently indoors as in the garden. The local *Tegenaria parietina* has trapped itself in the bath on a single occasion, proving the worth of checking every 'Teg'. Indoor surprises have included *Theridion pictum* and *Hahnina nava* (twice each), *Pachygnatha clercki* and, most surprising of all, *Philodromus collinus* (Notable B) running on our lounge wall in June 2002—there are virtually no conifers within several miles of the house!

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