

# Spider Recording Scheme News

## July 2008, No. 61

Editor: Peter Harvey; srs@britishspiders.org.uk

My thanks to those who have contributed to this issue. S.R.S. News No. 62 will be published in November 2008. Please send contributions by the end of September at the latest to Peter Harvey, 32 Lodge Lane, GRAYS, Essex, RM16 2YP; e-mail: grays@peterharvey.freeserve.co.uk

### Editorial

As reported in the March issue we hope that the UK status review of spiders will be published before the end of the year. You have an opportunity to provide feedback on the draft statuses given in the article in this issue.

Information and guidance on the identification of difficult species is still making slow progress and we will start by making these available through the BAS website. We are very grateful indeed to Dr Geoff Oxford for completing the identification guide to *Tegenaria gigantea* and *T. saeva*.

New species continue to be discovered, with Simon Warmingham finding *Theridion hannoniae* in South Wales during 2007 (see article in this issue) and a new *Diplocephalus* being found recently near Deal (more in a later issue). There is always plenty to provide interest!

Many thanks go to Mike Davidson for the large number of atlas records he has provided, updated to include male/female information. I would urge all active recorders to regularly provide their records to the recording scheme, since without these data we cannot continue to improve our knowledge on the distribution and autecology of species and on changes in distribution and status of species.

### Finding elusive grid reference points

by Stan Dobson

If you are involved with data recording, from time to time, casual records may be made or sent to you where the exact grid reference is not known and the relevant map or GPS data may not be available or inadequate. Alternatively, someone may give you a record from an address without knowing the grid reference, but knowing the post code. These can be problems, but, if internet access is available and particularly if the place is in England, there is a simple way of resolving them.

If you have not already done so, download the latest version of Google Earth (see 'Setting up' below); this is a very impressive program which gives a fairly detailed view of all the country. At the time of writing, this is version 4.2, but earlier versions may behave similarly. (Sadly, the detailed views only appear to cover mainland England, and the immediate adjoining areas of Wales and Scotland; hopefully this will be rectified in later versions). Type in the name of the required location such as a village or landmark, or a postcode, and the picture will zoom in to give a large aerial view of the relevant area. Zoom in

further and move the map until you are above the point of interest. Keep moving in until you can identify the exact location, which will be accurate to a few metres or less, then set the pointer immediately over the spot. At the bottom of the screen, you will see the coordinates of the point in terms of latitude and longitude. Make a note of these (I find that working with decimal latitude and longitude is easier).

Unfortunately, Google Earth doesn't recognise grid references (although it recognises British post codes), so it is necessary to do a conversion and a very convenient website for this is given below. This has five parameters: Post Code, OS Grid, Landranger Grid, Lat/Long and MGrid. Post Code and Lat/Long are obvious; OS Grid is the grid reference expressed as digital eastings and northings, each to six digits; Landranger Grid is the grid reference expressed as two letters followed by six digits (the format we are most familiar with); and I am not sure about MGrid (but I think it is something to do with references on a magnetic grid). To use it, click on the Lat/Long button, enter the latitude and longitude, click on 'Convert', and all the other values will be displayed. If you are working in Landranger format and want a grid reference to more than six digits, the extra digits can be read from the OS Grid values. If you are given a record with only the post code, Google Earth can be bypassed and the grid reference obtained directly from the conversion website.

This process can be used in reverse if you have a record, together with the grid reference, and you are interested in knowing what the habitat is like; simply enter the grid reference into Google Earth, zoom in and take a look.

Apart from recording data, this combination of Google Earth and the conversion website is also useful if you need a post code, provided that you know exactly where the address is situated. Simply find the latitude and longitude and proceed as above.

#### A few points to watch.

Many of the photographs on which Google Earth is based seem to have been taken in bright sunshine early in the morning so that tall objects such as buildings and trees cast long dark shadows. This can be a problem if, for example, you are trying to find a location on a path or a road in a wood.

Longitude values to the west of the Greenwich meridian are negative, so don't forget the minus sign or you will probably find that the grid reference is shown as being in the North Sea!

Latitude/longitude coordinates are given latitude first which is the opposite way round to grid references where eastings come before northings.

#### Setting up.

To download Google Earth go to <http://earth.google.com/download-earth.html>, change 'Select location' to 'Other', click on 'Agree and Download', then when you are invited to download the installation file, click on 'Save File'. The execution file will be downloaded to your desktop; double-click on this and Google Earth will be installed.

When Google Earth is running, to change from degrees, minutes, seconds to decimal, click on 'Tools', then 'Options', select the '3D View' tab, then click on the 'Decimal Degrees' button in the 'Show Lat/Long section'.

The conversion website is [www.streetmap.co.uk/streetmap.dll?GridConvert](http://www.streetmap.co.uk/streetmap.dll?GridConvert)

Moor Edge, Birch Vale, HIGH PEAK, SK22 1BX

## ***Lessertia dentichelis* in Cumbria**

by Dave Holloway

On 5<sup>th</sup> April 2008 I was delighted to find a subadult *Nesticus cellulanus* under a drain cover in my yard at home in Workington and paid little attention to several small shiny pale brown spiders in the same location. Subsequent realisation that *Lessertia* was a possibility led to an adult male being collected on 29<sup>th</sup> April. On this occasion no *Nesticus* was seen. There were however two other pale spiders on white circular egg sacs and a further two adults (one of each sex) nearby. The drain was checked for a third time on 31<sup>st</sup> May and (in addition to a superb adult *Nesticus* female with egg sac) there were 2 adult females, an adult male and two subadults on the drain cover itself, all presumed to be the same pale species. There were also some sheetwebs in the corners of the drain as it dropped vertically, one of which contained a spider of the pale species. There were several more small white circular egg sacs on the walls of the drain and two actually plastered to webs.

The collected male was identified as *Lessertia dentichelis* under microscopic examination. It was passed to Dave Blackledge the following day who confirmed the identification and further clarification of the species identity was later obtained from Ian Dawson.

This is only the second record for Cumbria, the previous being in 1910 at Anthorn. Sadly the exact details of the Anthorn site are unknown. These are the two most northerly British records for the species. Both Anthorn and Workington are coastal locations which may be significant if low temperatures are a factor in limiting the distribution of *L. dentichelis*.

Drains are not a habitat that has received much arachnological attention in the county! I took the opportunity to steal a quick look at a couple of other drain covers during local roadworks but no egg sacs or spiders

were noted. The domestic location of the drain may be significant because humidity is known to be important for *L. dentichelis* (Harvey *et al.* 2002). A domestic site guarantees a frequent supply of fresh household waste products including warm, steamy bath water!

#### **Acknowledgements**

Many thanks to Dave Blackledge, whose encouragement has been invaluable as my "spidering" has developed. Further thanks to Dave and to Ian Dawson for confirming the identification of the spider.

#### **References**

Harvey, P.R., Nellist, D.R. & Telfer, M.G. 2002. *The Provisional atlas of British spiders (Arachnida, Araneae), Vols. 1 & 2.* Huntingdon: Biological Records Centre.

Dave Holloway, 3 Hall Brow, WORKINGTON, Cumbria CA14 4AF; e-mail: dave.holloway@telinco.co.uk

## ***Theridion hannoniae* – new to the British Isles**

by Simon Warmingham

After arachnid collecting in many of Glamorgan's hectads, I felt that a 'square-bash' for SS89 was in order. Mynydd Bach (Welsh for small mountain) looked a promising site on the map, so that was my destination on 30<sup>th</sup> July 2007. Many usual suspects associated with gorse bushes and *Nesticus cellulanus* under large stones were taken. But it was at SS856930 on a west-facing slope at 202m that I collected a male *Theridion* amongst stones from a discarded damaged gabion.

Later examination of a palp under the microscope had me scratching my head; it didn't match up with anything in 'big Roberts' so I sent it, along with troublesome *Lepthyphantes* spp. to Peter Harvey for his verdict. It was close to drawings Peter had available of *Theridion hannoniae* in Roberts' Spinnengids and *T. petraeum* in Tierwelt Deutschlands. Mindful of the Wiltshire *Theridion* that was included in the 2000 Merrett & Murphy checklist as an unidentified *Theridion* sp. until it proved to be an abnormal *T. varians* male, Peter sent it to Peter Merrett for his opinion. Peter Merrett identified it as *T. hannoniae* but advised sending it to Dr Barbara Knoflach-Thaler in Innsbruck for examination, since there are several closely similar European species. Dr Barbara Knoflach-Thaler compared the specimen with material in their collection and duly confirmed the identification of *T. hannoniae*.

I was greeted with hail and heavy rain on a return visit to the site on 30<sup>th</sup> April 2008, but a few motionless young and an adult female were present. I will follow Peter Merrett's advice and seek out more specimens, but not decimate this possibly isolated population in the process!

Identical gabions had been used along part of the bank of the water channel alongside the cement trackway adjacent to the *Theridion* site. The nearest known *T. hannoniae* populations to this site are in the Netherlands,

Belgium and France (Bosmans *et al.*, 1994). If the Welsh population has been introduced with the stones, where had the stones come from?

My thanks go to Peter Harvey, Peter Merrett and Dr Barbara Knoflach-Thaler for their efforts in identifying the mystery *Theridion*, figures of which are included in Roberts' *Spinnengids*, a European version of the Collins Field Guide.

#### References

- Bosmans, R., Vanuytven, H. & Van Keer, J. 1994. On two poorly known *Theridion* species, recently collected in Belgium for the first time (Araneae: Theridiidae). *Bull. Br. arachnol. Soc.* **9** (7): 236-240.
- Merrett, P. & Murphy, J.A. 2000. Check list of British spiders. *Bull. Br. arachnol. Soc.* **11** (9): 345-358.
- Roberts, M.J. 1998. *Spinnengids*. Baarn, the Netherlands: Tirion Uitgevers BV.
- Dahl, F., Dahl, M. & Bischoff, H. 1937. *Die Tierwelt Deutschlands und der angrenzenden Meeressteile* Vol. 33. Jena.

9 Maerdy Park, PENCOED CF35 5HJ



*Theridion hannoniae* female provided by Simon Warmingham. Photograph © Peter Harvey



Mynydd Bach with discarded gabion. Photograph © Simon Warmingham



Discarded gabion at Mynydd Bach with Nantylfyllon village in background. Photograph © Simon Warmingham

### More records of *Macaroeris nidicolens* in Essex and a comparison with *Zodarion italicum*

by Peter Harvey

On 27<sup>th</sup> September 2007 an adult female *Macaroeris nidicolens* was beaten from Wild Privet, Hawthorn and scrambling Travellor's Joy scrub on a south-facing bank at a site near Lakeside Shopping Centre in South Essex. Earlier in the year this same scrub had provided an adult female *Ero aphana*, first recorded in Essex in 2003 (Harvey & Hopkin, 2003) and another species clearly expanding its range and being recorded in a variety of habitats. The site near Lakeside is about 2km from the locality where several adults and juvenile *Macaroeris nidicolens* were beaten off gorse bushes at a brownfield site next to the Thames, the first record for the county (Harvey, 2006).

On 23<sup>rd</sup> May 2008 a subadult female *M. nidicolens* was beaten from gorse at a north-western extension of Grays Chalk Pit, in a compartment that represents just about all that is left of the former Wouldhams Quarry, a large chalk pit destroyed in the late 1980s as part of a massive housing development between Grays and Lakeside known as Chafford Hundred. This particular compartment was the site of the first discovery in Britain in 1985 of the spider *Zodarion italicum* (Harvey & Murphy, 1985).

The jumping spider *Macaroeris nidicolens* was first recorded in Britain in 2002 on pines in Mile End Park in Middlesex (Milner, 2002) and subsequently found in 2004 Brooklands, Surrey also on pines, by Jonty Denton. In



*Macaroeris nidicolens* male (top) and female (bottom) on gorse. Photographs © Peter Harvey

Europe the species occurs mainly in southern and central Europe, but occurs as far north as Belgium. *M. nidicolens* has almost certainly recently colonised Britain (or possibly been imported into the country) and is in the process of spreading into sites that provide a suitable microclimate. It is well worth looking out for on gorse, other scrub and pines anywhere in south-eastern England. It also has a long season, with records of adults to date between 12<sup>th</sup> May and 27<sup>th</sup> September.

After its first discovery *Zodarion italicum* was soon found to be widespread in suitable habitat along the Thames estuary, including old coastal grazing marsh grasslands with high densities of old ant hills where it was very difficult to find except through the use of pitfall traps. Until the early 1980s South Essex in particular had been very poorly recorded for spiders, with little or no work done except in the Epping Forest area with old records made by the Rev. O. Pickard-Cambridge in 1882, by F.O. Pickard-Cambridge in 1900 and the work of Frank P. Smith which he published in the *Essex Naturalist* between 1901-4 as several notes and as an unfinished series of papers 'The Spiders of Epping Forest' (see references). In contrast to *Macaroeris nidicolens* there is therefore no reason to suppose that the *Zodarion italicum* metapopulation had not been present in suitable habitat in the region for a long time prior to its discovery.

#### References

- Denton, J. 2004. *Macaroeris nidicolens* (Walckenaer, 1802) (Salticidae) in Surrey. SRS News No. 49 in *Newsl. Br. Arachnol. Soc.* 100: 10.
- Harvey, P. & Murphy, J. 1985. *Zodarion italicum* (Araneae: Zodariidae), a species newly recorded in Britain. *Newsl. Br. arachnol. Soc.* 44: 4.

- Harvey, P.R. 2006. *Macaroeris nidicolens* (Walckenaer, 1802) in South Essex. SRS News. No. 56. In *Newsl. Br. arachnol. Soc.* 107: 20.
- Harvey, P. & Hopkin, S. 2003. New Records of *Ero aphana* (Walckenaer, 1802). SRS News No 46 In *Newsl. Br. arachnol. Soc.* 97:14.
- Milner, E. 2002. *Macaroeris nidicolens* (Simon, 1914), a jumping spider new to Britain. *Spider Recording Scheme Newsletter* 43: 3.
- Pickard-Cambridge, O. 1883-86. A Contribution towards the Knowledge of the Arachnida of Epping Forest. *Transactions of the Essex Field Club*, 4: 41-49.
- Pickard-Cambridge, F. O. 1899-1900. Further Contributions towards the Knowledge of the Arachnida of Epping Forest. *Essex Naturalist*, 11: 315-318.
- Smith, F.P. 1901-2. Notes: Arachnida, Epping Forest Spiders. *Essex Naturalist*, 12: 70.
- Smith, F.P. 1901-2. The Spiders of Epping Forest, part 1. *Essex Naturalist*, 12: 181-201.
- Smith, F.P. 1903-4. The Spiders of Epping Forest, part 2. *Essex Naturalist*, 13: 49-60.
- Smith, F.P. 1903-4. The Spiders of Epping Forest, part 3. *Essex Naturalist*, 13: 209-218.
- Smith, F.P. 1903-4. Notes on the Spiders observed at the meeting in Epping Forest, July 26th, 1902. *Essex Naturalist*, 13: 22-23.

32 Lodge Lane, GRAYS, Essex RM16 2YP



*Zodarion italicum* and Inset, igloo made by spider under stones, but very hard to find in soil on grasslands. Photographs © Peter Harvey

## A National Status Review – the draft results

Ian Dawson<sup>1</sup>, Peter Harvey<sup>2</sup> and Tony Russell-Smith<sup>3</sup>

The background to the proposed review of UKBAP spiders was described in Newsletter 103 (SRS News 52, July 2005), with details of the final list of accepted species in Newsletter 111 (SRS News 60, March 2008). Running more or less in parallel with this review Ian Dawson, Deborah Procter, Tony Russell-Smith and myself have been working on a new review of the national status of all British spider species to supersede the original Red Data Book for invertebrates other than insects (Bratton, 1991) and review of nationally notable spiders (Merrett, 1990). The background to this new review was set out in Newsletter 106 (SRS News 55, July 2006).

Like all recent reviews the status revisions are applied against the revised IUCN guidelines (IUCN, 1994; IUCN, 2001), which are substantially different from the old Red Data Book criteria and the results of this exercise cannot be compared directly with those from earlier work in Bratton and Merrett. The results may give arachnologists some surprises, as has been the case in some reviews in other groups, but provide an important baseline for future studies.

The main categories that can be applied to spiders are EXTINCT (EX), CRITICALLY ENDANGERED (CR), ENDANGERED (EN), VULNERABLE (VU), NEAR THREATENED (NT), LEAST CONCERN (LC), DATA DEFICIENT (DD) and NOT EVALUATED (NE).

Other recent status reviews have continued to use the nationally scarce (Notable or Scarce) category for appropriate species in the Least Concern category, e.g. Falk & Crossley (2005). Least Concern (Nationally Scarce) refers to species which are not included within the IUCN threat categories but are estimated to occur in fewer than 100 hectads (10-kilometre squares) of the Ordnance Survey national grid in Great Britain (formerly termed “Nationally Notable” by Falk 1991). As in many other groups we think it useful to continue with the subdivision of this category into Scarce A and Scarce B, i.e. LC(Na) or **Scarce A** refers to species estimated to occur in 30 or fewer 10-kilometre squares. LC(Nb) or **Scarce B** refers to species estimated to occur within the range 31 to 100 10-kilometre squares.

Use of IUCN criteria for CR, EN and VU is more or less completely dependent on evidence of decline in the recent past or projected into the future (Criterion A: marked decline over last ten years regardless of current range or abundance; Criterion B: declining species with extremely restricted distribution; Criterion C: declining species with extremely small population size; Criterion D: very small or restricted populations). Thus the only criterion which does not directly depend on evidence of decline is D2, where the number of known extant locations (typically 5 or fewer) is such that the species is classified as VU (Vulnerable), i.e. it is prone to the effects of human activities or stochastic events in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period. For a full explanation of the criteria see the IUCN (2001) document, available at <http://intranet.iucn.org/webfiles/doc/SSC/RedList/redlistcatsenglish.pdf>

The Spider Recording Scheme has been running in its present form since 1987 and the majority of records are

from between 1987 and the present (see fig. 1 in SRS News 55, July 2006). As explained in Newsletter 106 (SRS News 55, July 2006) this review is based on data consisting of 723,384 records in total, using not only total numbers of 10km squares from which each species is recorded in different time periods, but also comparing records only for squares where records exist in both time periods. The Spider Recording Scheme dataset is certainly very good for an invertebrate group – of 2538 squares with spider records, 1830 (72%) have been recorded both before and after the 50 percentile year of the dataset (1992); 355 squares have records only in the period before 1992, and 353 only from 1992 or later. In addition the vast majority of these data are available at 1km square resolution. While recognising the imperfections in the data, they have provided the essential starting point for our decisions. We have also had at our disposal the results of analyses run on these data for us by Stuart Ball at JNCC.

During the process we came across a number of species where the data (based on squares recorded only in both time periods in question) suggest major decline in relatively widespread species. Rather than give these threatened status, we have assigned these a ‘Watching brief’, with the aim that we should keep a close eye on whether the apparent decline continues in these species.

It could be argued that with most invertebrates the quality and quantity of data available are not sufficient to allow certain categorisation of any taxon! We have struggled with assigning statuses to every species for some considerable time now, but hope that the draft results presented here will be seen as a reasonable attempt to combine the apparent results of these analyses with the application of common sense. Although the raw data are based on uncontrolled survey, the analyses were applied consistently across all species and statuses were only modified if we had evidence that there were differences in monitoring effort in the two survey periods. It is also worth repeating that the data on change are derived by comparing records ONLY from hectads recorded in both time periods before and after the 50 percentile year. However, we have also taken into account data available from all squares and what we know about areas in the country that have obviously been under-recorded since 1980.

The results may therefore be questionable, but at least they are consistent. It is also important to realise that the statuses assigned here are not set in stone, and will change in the future as more data become available. It is worth remembering that vast areas of our countryside have suffered massive degradation both during and after WW2 and this change has continued apace with modern agricultural practices, intensification of land-use and reliance on chemical fertilisers and pesticides. It is hardly surprising that many invertebrates should be suffering a major decline in the modern landscape. It should be remembered that if you normally record on nature reserves and parts of the country less affected by agricultural changes, then you may be seeing an unrealistically optimistic picture of what is actually happening to our fauna in the country as a whole.

We are publishing this current draft list of statuses to provide an opportunity for arachnologists to provide feedback prior to publication. The timescale for this has to be short, with any feedback needed by early September if it is to affect the final list. Unfortunately to understand the full reasons for each status, it is necessary not only to

spend time absorbing the implications and detail of the IUCN criteria, but also to apply these to the data available from analyses on the dataset. This is far more than can be provided here, but it would be possible to provide this information on request.

Please send any feedback to Peter Harvey.

**Table 1. Draft statuses of relevant species**

Taxon	IUCN	Criteria	Old status
<i>Aculepeira ceropegia</i>	EX		
<i>Dipoena coracina</i>	EX		RDB1
<i>Gibbaranea bituberculata</i>	EX		RDB1
<i>Hypsosinga heri</i>	EX		RDB1
<i>Mastigusa arietina</i>	EX		RDB2
<i>Zodarion rubidum</i>	CR/EX		
<i>Agroeca dentigera</i>	CR	B1ab(iii),B2ab(iii)	
<i>Alopecosa fabrilis</i>	CR	B2ab(iv)	RDB1
<i>Altella lucida</i>	CR	B2ab(iv)	RDB1
<i>Araniella alpica</i>	CR	B2ab(iv)	RDB3
<i>Aulonia albimana</i>	CR	B2ab(iv)	RDB1
<i>Carorita paludosa</i>	CR	B2ab(iv)	RDB2
<i>Centromerus albidus</i>	CR	B2ab(iv)	RDB2
<i>Centromerus persimilis</i>	CR	B2ab(iv)	RDBK
<i>Centromerus semiater</i>	CR	B2ab(iv)	RDB2
<i>Dictyna major</i>	CR	B2ab(iv)	RDB2
<i>Diplocephalus connatus</i>	CR	B2ab(iv)	RDB2
<i>Enoplognatha tecta</i>	CR	B2ab(iv)	RDB1
<i>Lepthyphantes antroniensis</i>	CR	B2ab(iv)	RDB1
<i>Minicia marginella</i>	CR	B2ab(iv)	
<i>Nothopantes horridus</i>	CR	B1ab(iii); B2ab(ii), B2ab(iv)	
<i>Orchestina sp.</i>	CR	A2c, D2	
<i>Ozyptila blackwalli</i>	CR	B2ab(iv)	Nb
<i>Robertus insignis</i>	CR	B2ab(iv)	RDB1
<i>Sitticus distinguendus</i>	CR	A3c, A4c	
<i>Thanatus formicinus</i>	CR	B2ab(iv)	RDB2
<i>Typhochrestus simoni</i>	CR	B2ab(iv)	RDB2
<i>Walckenaeria corniculans</i>	CR	B2ab(iv)	Na
<i>Xysticus luctator</i>	CR	B2ab(iv)	RDB2
<i>Xysticus luctuosus</i>	CR	A2c	Nb
<i>Zora armillata</i>	CR	B2ab(iv)	RDB3
<i>Zora silvestris</i>	CR	B2ab(iv)	RDB2
<i>Agroeca cuprea</i>	EN	A2c,B2ab(ii)	Na
<i>Baryphyma duffeyi</i>	EN	A2c,B2ab(ii)	RDB3
<i>Baryphyma gowerense</i>	EN	B2ab(iv)	RDBK
<i>Caviphantes saxetorum</i>	EN	A2c,B2ab(ii)	Na
<i>Centromerus brevivulvatus</i>	EN	B2ab(iv)	RDB3
<i>Centromerus levitarsis</i>	EN	A2c,B2ab(ii)	RDB2
<i>Centromerus serratus</i>	EN	A2c,B2ab(ii)	Nb
<i>Clubiona caeruleascens</i>	EN	A2c,B2ab(ii)	Nb
<i>Clubiona genevensis</i>	EN	A2c,B2ab(ii)	RDB3
<i>Clubiona pseudoneglecta</i>	EN	A2c,B2ab(ii)	
<i>Clubiona rosserae</i>	EN	B2ab(iv)	RDB1
<i>Dipoena melanogaster</i>	EN	B2ab(iv)	RDB2
<i>Dipoena prona</i>	EN	A2c,B2ab(ii)	Nb
<i>Enoplognatha oelandica</i>	EN	B2ab(iv)	RDB3
<i>Erigone welchi</i>	EN	B2ab(iv)	Na
<i>Hahnna candida</i>	EN	B2ab(iv)	RDB2
<i>Hilaira nubigena</i>	EN	B2ab(iv)	Na
<i>Hygrolycosa rubrofasciata</i>	EN	B2ab(iv)	Na
<i>Jacksonella falconeri</i>	EN	B2ab(iv)	
<i>Lepthyphantes pinicola</i>	EN	B2ab(iv)	Nb
<i>Maro lepidus</i>	EN	B2ab(iv)	RDB3
<i>Maro sublestus</i>	EN	B2ab(iv)	Na
<i>Meioneta mollis</i>	EN	B2ab(iv)	
<i>Micaria alpina</i>	EN	B2ab(iv)	RDB3
<i>Midia midas</i>	EN	B2ab(iv)	RDB2
<i>Mioxena blanda</i>	EN	B2ab(iv)	Nb
<i>Neon valentulus</i>	EN	B2ab(iv)	RDB2
<i>Ozyptila scabricula</i>	EN	A2c; B2ab(iv)	Nb
<i>Pardosa paludicola</i>	EN	A2c; B2ab(iv)	RDB3
<i>Pelecopsis radicolata</i>	EN	B2ab(iv)	RDB3
<i>Philodromus emarginatus</i>	EN	A2c; B2ab(iv)	Nb
<i>Philodromus fallax</i>	EN	A2c	Nb
<i>Philodromus margaritatus</i>	EN	A2c; B2ab(iv)	Nb
<i>Pistius truncatus</i>	EN	B2ab(iv)	RDB1
<i>Porrhomma egeria</i>	EN	A2c	
<i>Porrhomma rosenhaueri</i>	EN	B2ab(iv)	RDB2
<i>Scotina palliardii</i>	EN	B2ab(iv)	Na
<i>Semljicola caliginosus</i>	EN	A2c, B2ab(iv)	Nb
<i>Silometopus incurvatus</i>	EN	B2ab(iv)	Na
<i>Talavera thorelli</i>	EN	B2ab(iv)	
<i>Tapinocyba mitis</i>	EN	B1ab(iii)	Nb
<i>Trichoncus saxicola</i>	EN	B2ab(iv)	Nb
<i>Tuberta maerens</i>	EN	B2ab(iv)	RDB3
<i>Wiehlea calcarifera</i>	EN	B2ab(iv)	Na
<i>Xysticus robustus</i>	EN	B2ab(iv)	Na
<i>Xysticus sabulosus</i>	EN	B2ab(iv)	
<i>Acartauchenius scurrilis</i>	VU	B2ab(iv)	Na
<i>Achaeearanea riparia</i>	VU	A2c,B2ab(ii)	Nb
<i>Agroeca lusatica</i>	VU	D2	RDB1
<i>Agyneta subtilis</i>	VU	A2c	
<i>Allomengea scopigera</i>	VU	A2c	
<i>Allomengea vidua</i>	VU	A2c	
<i>Alopecosa barbipes</i>	VU	B2ab(iv)	
<i>Apostenus fuscus</i>	VU	D2	RDB1
<i>Araeoncus crassiceps</i>	VU	A2c	
<i>Araeoncus humilis</i>	VU	A2c	
<i>Arctosa alpigena</i>	VU	B2ab(ii)	RDB3
<i>Atypus affinis</i>	VU	A2c	
<i>Bathypantes setiger</i>	VU	A2c	
<i>Callilepis nocturna</i>	VU	D2	RDB1
<i>Carorita limnaea</i>	VU	D2	RDB1
<i>Centromerus incilium</i>	VU	A2c	Nb
<i>Ceratinopsis romana</i>	VU	A2c,B2ab(ii)	Nb
<i>Cercidia prominens</i>	VU	A2c	
<i>Cheiracanthium pennyi</i>	VU	B2ab(iv)/D2	RDB2
<i>Clubiona frisia</i>	VU	B2ab(iv)	RDB3
<i>Dictyna pusilla</i>	VU	A2c,B2ab(ii)	
<i>Diplocephalus protuberans</i>	VU	A2c,B2ab(ii)	Nb
<i>Dipoena erythropus</i>	VU	A2c,B2ab(ii)	RDB2
<i>Dipoena inornata</i>	VU	A2c	Nb
<i>Dismodicus elevatus</i>	VU	A2c,B2ab(ii)	Na
<i>Dolomedes plantarius</i>	VU	D2	RDB1
<i>Drepanotylus uncatus</i>	VU	B2ab(iv)	
<i>Eresus sandaliatus</i>	VU	D1, D2	RDB1
<i>Erigonella ignobilis</i>	VU	B2ab(iv)	
<i>Ero tuberculata</i>	VU	B2ab(iv)	Nb
<i>Euophrys herbigrada</i>	VU	B2ab(iv)	Na
<i>Evansia merens</i>	VU	B2ab(iv)	
<i>Glyphesis cottonae</i>	VU	B2ab(iv)	Na

<i>Gnaphosa leporina</i>	VU	B2ab(iv)		<i>Trochosa robusta</i>	VU	B2ab(iv)	Nb
<i>Gnaphosa lugubris</i>	VU	B2ab(iv)	Na	<i>Trochosa spinipalpis</i>	VU	B2ab(iv)	
<i>Gnaphosa nigerrima</i>	VU	D2		<i>Typhochrestus digitatus</i>	VU	B2ab(iv)	
<i>Gnaphosa occidentalis</i>	VU	D2	RDB1	<i>Wabasso replicatus</i>	VU	D2	
<i>Gonatium paradoxum</i>	VU	B2ab(iii)	RDB2	<i>Wacklenaeria stylifrons</i>	VU	D3	RDB1
<i>Gongyliellum latebricola</i>	VU	B2ab(iv)		<i>Walckenaeria clavicornis</i>	VU	B2ab(iv)	
<i>Gongyliellum murcidum</i>	VU	B2ab(iv)	Nb	<i>Walckenaeria dysderoides</i>	VU	B2ab(iv)	
<i>Hahnia pusilla</i>	VU	B2ab(iv)		<i>Walckenaeria furcillata</i>	VU	B2ab(iv)	
<i>Halorates distinctus</i>	VU	B2ab(iv)		<i>Walckenaeria incisa</i>	VU	B2ab(iv)	Nb
<i>Haplodrassus dalmatensis</i>	VU	B2ab(iv)	Nb	<i>Walckenaeria kochi</i>	VU	B2ab(iv)	
<i>Haplodrassus silvestris</i>	VU	B2ab(iv)	Nb	<i>Walckenaeria mitrata</i>	VU	D2	RDB1
<i>Haplodrassus soerenseni</i>	VU	B2ab(iv)	RDB2	<i>Walckenaeria monoceros</i>	VU	B2ab(iv)	
<i>Haplodrassus umbratilis</i>	VU	B2ab(iv)	RDB3	<i>Walckenaeria obtusa</i>	VU	B2ab(iv)	
<i>Harpactea rubicunda</i>	VU	D2		<i>Xysticus acerbus</i>	VU	B2ab(iv)	Na
<i>Heliophanus auratus</i>	VU	D2	RDB2	<i>Xysticus bifasciatus</i>	VU	B2ab(iv)	
<i>Heliophanus dampfi</i>	VU	D2	RDBK	<i>Zodarion fuscum</i>	VU	D2	
<i>Hypselistes jacksoni</i>	VU	B2ab(iv)		<i>Zodarion vicinum</i>	VU	D2	
<i>Larinioides patagiatus</i>	VU	B2ab(iv)		<i>Zora nemoralis</i>	VU	B2ab(iv)	Nb
<i>Lathys nielseni</i>	VU	B2ab(iv)	Na	<i>Centromerus minutissimus</i>	DD		
<i>Lathys stigmatisata</i>	VU	B2ab(iv)	RDB3	<i>Hahnia microphthalma</i>	DD		RDBK
<i>Lepthyphantes complicatus</i>	VU	B2ab(iv)	Nb	<i>Lepthyphantes beckeri</i>	DD		
<i>Leptothrix hardyi</i>	VU	B2ab(iv)		<i>Neriere emphana</i>	DD		
<i>Maro minutus</i>	VU	B2ab(iv)		<i>Pardosa lugubris sens. str.</i>	DD		
<i>Mastigusa macrophthalma</i>	VU	B2ab(iv)	RDB3	<i>Porrhomma cambridgei</i>	DD		
<i>Mecynargus paetulus</i>	VU	B2ab(iv)	RDB2	<i>Pseudomaro aenigmaticus</i>	DD		RDBK
<i>Meioneta fuscipalpa</i>	VU	D2		<i>Synema globosum</i>	DD		
<i>Micaria romana</i>	VU	A2c; B2ab(iv)	Nb	<i>Trachyzelotes fuscipes</i>	DD		
<i>Micaria silesiaca</i>	VU	A2c; B2ab(iv)	Nb	<i>Walckenaeria alticeps</i>	DD		
<i>Micaria subopaca</i>	VU	A2c; B2ab(iv)	Nb	<i>Araneus alsine</i>	NT		Nb
<i>Micrargus laudatus</i>	VU	A2c	Nb	<i>Araniella displicata</i>	NT		Na
<i>Micrommata virescens</i>	VU	A2c		<i>Arctosa fulvolineata</i>	NT		RDB3
<i>Monocephalus castaneipes</i>	VU	A2c		<i>Baryphyma maritimum</i>	NT		Nb
<i>Neon pictus</i>	VU	D2		<i>Centromerus capucinus</i>	NT		
<i>Neriere furtiva</i>	VU	A2c	Nb	<i>Centromerus cavernarum</i>	NT		RDB3
<i>Neriere radiata</i>	VU	A2c; B2ab(iv)	Nb	<i>Clubiona juvenis</i>	NT		RDB2
<i>Notioscopus sarcinatus</i>	VU	A2c	Nb	<i>Clubiona subsultans</i>	NT		RDB2
<i>Ozyptila nigrita</i>	VU	A2c	Nb	<i>Dipoena torva</i>	NT		RDB2
<i>Ozyptila pullata</i>	VU	D2		<i>Dipoena tristis</i>	NT		Na
<i>Pardosa trailli</i>	VU	B2ab(ii)	Nb	<i>Donacochara speciosa</i>	NT		Na
<i>Pellenes tripunctatus</i>	VU	D2	RDB1	<i>Erigone psychrophila</i>	NT		Na
<i>Phaeocedus braccatus</i>	VU	A2c; B2ab(iv)	Nb	<i>Megalepthyphantes sp. n.</i>	NT		
<i>Philodromus histrio</i>	VU	A2c		<i>Oxyopes heterophthalmus</i>	NT		RDB2
<i>Pirata piscatorius</i>	VU	A2c		<i>Pelecopsis elongata</i>	NT		RDB2
<i>Porrhomma convexum</i>	VU	A2c		<i>Phlegra fasciata</i>	NT		RDB3
<i>Pseudeuophrys erratica</i>	VU	A2c		<i>Porrhomma errans</i>	NT		Nb
<i>Robertus scoticus</i>	VU	D2	RDB1	<i>Rugathodes bellicosus</i>	NT		Nb
<i>Saaristoa firma</i>	VU	A2c		<i>Segestria bavarica</i>	NT		Na
<i>Scotina gracilipes</i>	VU	A2c		<i>Theridion pinastri</i>	NT		RDBK
<i>Sitticus caricis</i>	VU	A2c	Nb	<i>Trichoncus affinis</i>	NT		RDB2
<i>Sitticus floricola</i>	VU	B2ab(iv)	RDB3	<i>Uloborus walckenaerius</i>	NT		RDB3
<i>Steatoda albomaculata</i>	VU	A2c	Nb	<i>Zelotes longipes</i>	NT		Na
<i>Talavera petrensis</i>	VU	B2ab(iv)	Nb	<i>Zelotes petrensis</i>	NT		Na
<i>Tapinocyba insecta</i>	VU	B2ab(iv)		<i>Zygiella stroemi</i>	NT		Nb
<i>Tapinocyboides pygmaeus</i>	VU	B2ab(iv)	RDB3	<i>Aelurillus v-insignitus</i>	LC (Na)		Nb
<i>Taranucnus setosus</i>	VU	B2ab(iv)		<i>Agraecina striata</i>	LC (Na)		Nb
<i>Tegenaria picta</i>	VU	D2	RDBK	<i>Anelosimus aulicus</i>	LC (Na)		Nb
<i>Trichoncus hackmani</i>	VU	B2ab(iv)	RDB2	<i>Araneus angulatus</i>	LC (Na)		Nb
<i>Trichopterna cito</i>	VU	B2ab(iv)	RDB2	<i>Araniella inconspicua</i>	LC (Na)		Nb
<i>Trichopterna thorelli</i>	VU	B2ab(iv)					

<i>Arctosa cinerea</i>	LC (Na)	Nb	<i>Ceratinopsis stativa</i>	LC (Nb)	
<i>Argenna patula</i>	LC (Na)	Nb	<i>Cheiracanthium virescens</i>	LC (Nb)	
<i>Asthenargus paganus</i>	LC (Na)		<i>Cicurina cicur</i>	LC (Nb)	
<i>Clubiona norvegica</i>	LC (Na)	Nb	<i>Coelotes terrestris</i>	LC (Nb)	Nb
<i>Crustulina sticta</i>	LC (Na)	Nb	<i>Diplocentria bidentata</i>	LC (Nb)	
<i>Drassyllus lutetianus</i>	LC (Na)	Na	<i>Dolomedes fimbriatus</i>	LC (Nb)	
<i>Drassyllus praeficus</i>	LC (Na)	Nb	<i>Drassodes pubescens</i>	LC (Nb)	Watching brief
<i>Enoplognatha mordax</i>	LC (Na)	Na	<i>Entelecara congenera</i>	LC (Nb)	Nb
<i>Entelecara omissa</i>	LC (Na)	Na	<i>Entelecara errata</i>	LC (Nb)	Nb
<i>Episinus maculipes</i>	LC (Na)	RDB3	<i>Entelecara flavipes</i>	LC (Nb)	
<i>Episinus truncatus</i>	LC (Na)	Nb	<i>Erigone tirolensis</i>	LC (Nb)	Nb
<i>Erigone capra</i>	LC (Na)	Nb	<i>Ero aphana</i>	LC (Nb)	RDB2
<i>Glyphesis servulus</i>	LC (Na)		<i>Euryopsis flavomaculata</i>	LC (Nb)	Watching brief
<i>Halorates holmgreni</i>	LC (Na)	Nb	<i>Evarcha arcuata</i>	LC (Nb)	Nb
<i>Haplodrassus minor</i>	LC (Na)	RDB3	<i>Halorates reprobus</i>	LC (Nb)	Watching brief
<i>Hybocoptus decollatus</i>	LC (Na)	Nb	<i>Hilaira frigida</i>	LC (Nb)	
<i>Hypsosinga sanguinea</i>	LC (Na)	Nb	<i>Hilaira pervicax</i>	LC (Nb)	Nb
<i>Hyptiotes paradoxus</i>	LC (Na)	RDB3	<i>Hypomma fulvum</i>	LC (Nb)	Na
<i>Lessertia dentichelis</i>	LC (Na)		<i>Hypsosinga albovittata</i>	LC (Nb)	
<i>Liocranum rupicola</i>	LC (Na)	Nb	<i>Latithorax faustus</i>	LC (Nb)	Watching brief
<i>Macaroeis nidicolens</i>	LC (Na)		<i>Lepthyphantes angulatus</i>	LC (Nb)	
<i>Macrargus carpenteri</i>	LC (Na)	Na	<i>Lepthyphantes expunctus</i>	LC (Nb)	
<i>Marpissa nivoyi</i>	LC (Na)	Nb	<i>Lepthyphantes insignis</i>	LC (Nb)	Watching brief Nb
<i>Marpissa radiata</i>	LC (Na)	Na	<i>Lepthyphantes whymperi</i>	LC (Nb)	Nb
<i>Maso gallicus</i>	LC (Na)	Na	<i>Mangora acalypha</i>	LC (Nb)	
<i>Mecopisthes peusi</i>	LC (Na)	Nb	<i>Marpissa muscosa</i>	LC (Nb)	Nb
<i>Meioneta mossica</i>	LC (Na)		<i>Mecynargus morulus</i>	LC (Nb)	Watching brief
<i>Meioneta simplicatarsis</i>	LC (Na)	Na	<i>Meioneta gulosa</i>	LC (Nb)	
<i>Meta bourneti</i>	LC (Na)	Nb	<i>Meioneta nigripes</i>	LC (Nb)	Nb
<i>Myrmarachne formicaria</i>	LC (Na)	Nb	<i>Microctenonyx subitaneus</i>	LC (Nb)	
<i>Neon robustus</i>	LC (Na)		<i>Moebelia penicillata</i>	LC (Nb)	Watching brief
<i>Philodromus longipalpis</i>	LC (Na)		<i>Nigma puella</i>	LC (Nb)	Nb
<i>Phrurolithus minimus</i>	LC (Na)	Na	<i>Nigma walckenaeri</i>	LC (Nb)	Na
<i>Porrhomma oblitum</i>	LC (Na)	Nb	<i>Oreonetides vaginatus</i>	LC (Nb)	
<i>Pseudeuophrys obsoleta</i>	LC (Na)	RDB3	<i>Ozyptila brevipes</i>	LC (Nb)	
<i>Saloca dicerus</i>	LC (Na)	Nb	<i>Ozyptila sanctuaria</i>	LC (Nb)	
<i>Salticus zebraneus</i>	LC (Na)	Na	<i>Ozyptila simplex</i>	LC (Nb)	
<i>Satilatlas britteni</i>	LC (Na)	Nb	<i>Panamomops sulcifrons</i>	LC (Nb)	
<i>Singa hamata</i>	LC (Na)	Nb	<i>Pardosa agrestis</i>	LC (Nb)	Nb
<i>Sitticus inexpectus</i>	LC (Na)	Na	<i>Pardosa hortensis</i>	LC (Nb)	
<i>Sitticus saltator</i>	LC (Na)	Nb	<i>Pardosa proxima</i>	LC (Nb)	
<i>Syedra gracilis</i>	LC (Na)	Nb	<i>Pelecopsis nemoralioides</i>	LC (Nb)	Watching brief
<i>Synageles venator</i>	LC (Na)	Na	<i>Philodromus collinus</i>	LC (Nb)	Nb
<i>Theridion familiare</i>	LC (Na)	Nb	<i>Pirata tenuitarsis</i>	LC (Nb)	
<i>Thomisus onustus</i>	LC (Na)	Nb	<i>Pityohyphantes phrygianus</i>	LC (Nb)	Na
<i>Thyreosthenius biovatus</i>	LC (Na)		<i>Porrhomma campbelli</i>	LC (Nb)	
<i>Trematocephalus cristatus</i>	LC (Na)	Na	<i>Porrhomma montanum</i>	LC (Nb)	
<i>Zelotes subterraneus</i>	LC (Na)		<i>Robertus neglectus</i>	LC (Nb)	Watching brief
<i>Zodarion italicum</i>	LC (Na)		<i>Rugathodes instabilis</i>	LC (Nb)	
<i>Agroeca inopina</i>	LC (Nb)		<i>Scotina celans</i>	LC (Nb)	
<i>Agyneta cauta</i>	LC (Nb)	Watching brief	<i>Scotinotylus evansi</i>	LC (Nb)	
<i>Agyneta olivacea</i>	LC (Nb)		<i>Silometopus ambiguus</i>	LC (Nb)	
<i>Agyneta ramosa</i>	LC (Nb)		<i>Sintula corniger</i>	LC (Nb)	Watching brief
<i>Alopecosa cuneata</i>	LC (Nb)		<i>Thanatus striatus</i>	LC (Nb)	
<i>Araneus marmoreus</i>	LC (Nb)		<i>Theridion blackwalli</i>	LC (Nb)	
<i>Araneus triguttatus</i>	LC (Nb)		<i>Theridion hemerobium</i>	LC (Nb)	
<i>Argenna subnigra</i>	LC (Nb)		<i>Theridiosoma gemmosum</i>	LC (Nb)	Nb
<i>Ballus chalybeius</i>	LC (Nb)		<i>Tiso aestivus</i>	LC (Nb)	Nb
<i>Bianor aurocinctus</i>	LC (Nb)	Na	<i>Tmeticus affinis</i>	LC (Nb)	
<i>Ceratinella scabrosa</i>	LC (Nb)				

<i>Trachyzelotes pedestris</i>	LC (Nb)	Nb
<i>Walckenaeria capito</i>	LC (Nb)	
<i>Walckenaeria nodosa</i>	LC (Nb) Watching brief	
<i>Xerolycosa miniata</i>	LC (Nb)	
<i>Xerolycosa nemoralis</i>	LC (Nb)	Nb
<i>Xysticus lanio</i>	LC (Nb)	
<i>Zelotes electus</i>	LC (Nb)	
<i>Argiope bruennichi</i>	LC	Na
<i>Achaeearanea simulans</i>	LC	Nb
<i>Philodromus albidus</i>	LC	Nb
<i>Philodromus praedatus</i>	LC	Nb
<i>Tetragnatha pinicola</i>	LC	Nb
<i>Tetragnatha striata</i>	LC	Nb
<i>Zilla diodia</i>	LC	Nb
<i>Agroeca proxima</i>	LC	Watching brief
<i>Agyneta conigera</i>	LC	Watching brief
<i>Agyneta decora</i>	LC	Watching brief
<i>Aphileta misera</i>	LC	Watching brief
<i>Bolyphantes alticeps</i>	LC	Watching brief
<i>Bolyphantes luteolus</i>	LC	Watching brief
<i>Centromerita concinna</i>	LC	Watching brief
<i>Centromerus prudens</i>	LC	Watching brief
<i>Ceratinella brevis</i>	LC	Watching brief
<i>Clubiona trivialis</i>	LC	Watching brief
<i>Dicymbium brevisetosum</i>	LC	Watching brief
<i>Entelecara erythropus</i>	LC	Watching brief
<i>Erigone arctica</i>	LC	Watching brief
<i>Erigone longipalpis</i>	LC	Watching brief
<i>Floronia bucculenta</i>	LC	Watching brief
<i>Gonatium rubellum</i>	LC	Watching brief
<i>Hahnia helveola</i>	LC	Watching brief
<i>Macrargus rufus</i>	LC	Watching brief
<i>Meioneta beata</i>	LC	Watching brief
<i>Metopobactrus prominulus</i>	LC	Watching brief
<i>Pachygnatha listeri</i>	LC	Watching brief
<i>Pelecopsis mengei</i>	LC	Watching brief
<i>Pholcomma gibbum</i>	LC	Watching brief
<i>Poecilonea variegata</i>	LC	Watching brief
<i>Porrhomma pallidum</i>	LC	Watching brief
<i>Saaristoa abnormis</i>	LC	Watching brief
<i>Silometopus elegans</i>	LC	Watching brief
<i>Tapinocyba pallens</i>	LC	Watching brief
<i>Tapinocyba praecox</i>	LC	Watching brief
<i>Tapinopa longidens</i>	LC	Watching brief
<i>Tibellus maritimus</i>	LC	Watching brief
<i>Walckenaeria cucullata</i>	LC	Watching brief
<i>Walckenaeria cuspidata</i>	LC	Watching brief
<i>Walckenaeria nudipalpis</i>	LC	Watching brief
<i>Eperigone trilobata</i>	NE	
<i>Frontinellina frutetorum</i>	NE	
<i>Theridion hannoniae</i>	NE	

All other species not listed above are categorised as LC (Least Concern). We have not assessed introduced or synanthropic species for IUCN status in this review.

We think this is probably the first time that anyone has attempted to quantify decline in spider distribution, not just in the UK but in any country in the world. Because of the data deficiencies, it is important that in future the conclusions are checked critically, at least for a representative sub-set of species. An obvious group on which to focus efforts would be those species which are still very widespread, but which have shown an apparent marked decline between the two periods i.e. our 'Watching brief' taxa.

### Species showing decline

A large number of species show apparent decline, derived by comparing records from hectads recorded in both time periods before and after the 50 percentile year. The raw data indicate over 250 taxa where there has been a population decline of over 30%. 161 of these taxa have figures indicating a decline of 50% or more, sufficient to be considered for Endangered status, and 50 of these taxa have figures indicating a decline of at least 80%, sufficient to be considered for Critically Endangered status. The way we have interpreted these figures depends on whether we believe the apparent decline can be explained by under-recording, for example because of species' specialist micro-habitat or unusual maturity period, or in other ways.

In a number of instances we have had to opt for unsatisfactory compromises, so for example although *Baryphyma gowerense* has nine post-1980 hectads mapped in the provisional atlas, there are no post-1992 records, even though the hectads have post-1992 records of other species. *Erigone psychrophila*, a montane spider of bog pools, has 9 post-1980 records but none post-1992, although all 12 hectad records for the species have been recorded in both time periods. We don't believe this decline and have opted for Near Threatened status. We have taken a similar view with many other montane species, where survey may not have occurred at sufficient levels or at the right times of year to record the species. We are also aware that much heathland in Dorset and Hampshire has not been thoroughly resurveyed using pitfall traps since the 1980s.

On the other hand spiders such as *Baryphyma duffeyi* occur in areas and a habitat where survey has continued and the apparent decline may be real. It is a spider where subadult males can be recognized by their developing head projection even in the autumn, and has been looked for in recorded sites yet not refound. The species occurs in very localised areas within its saltmarsh habitat, and developments along the Thames Gateway and south-eastern coast together with sea level rise pose very real additional threats – but perhaps managed retreat presents opportunities to favour this and other spiders?

In quite a number of species we have taken the approach that the apparent decline may not be as great as figures suggest, but to this are added factors such as habitats vulnerable to succession and inappropriate management. There is good reason to believe that many fens and heathlands have become very degraded since recording was undertaken in the earlier days of the Flatford Mill Spider Group and British Arachnological Society, often through lack of management during the last half century.

### Species showing increase

Whilst the status review is concerned with those species where there is evidence of marked decline and the Scarce species, over 200 British spiders have shown an increase in the two periods, in some cases dramatically so. Some are widespread species such as *Theridion impressum*, which is a common spider in much of lowland Britain. However the provisional atlas (Harvey *et al.*, 2002) indicates an absence or few records from areas generally well-recorded in the southeast and southwest. In Essex the spider had always been a rare spider, with a handful of records. In recent years it has been turning up in the county more frequently and in areas where it had not been found previously. It seems probable that this is in some way due to climate change. *Steatoda grossa* is another spider where the atlas shows a widespread, but scattered, distribution in southern Britain, with the species being commonest in coastal areas of southwest England. It was probably originally introduced and is usually found in synanthropic situations and was very rare in Essex, known from a single 1956 Dockland record and 1983 record from a cellar in Manor Park, both in east London (VC18). In recent years the spider has been turning up more widely and more often in the county, and is also being found outside in semi-natural situations away from buildings.

Other spiders, such as *Philodromus albidus* and *Achaeearanea simulans* (both currently Nationally Scarce (Notable B) have clearly been undergoing both a recent expansion in range and frequency, again probably due to climate change. The *Philodromus aureolus* group provides further examples of species where there has been a large increase in records. *P. praedatus*, was not recorded in Britain for a very great number of years and was considered to be very rare indeed. Males possess a characteristic tibial apophysis which is not difficult to identify, but the epigyne of females are more difficult to recognise, and dissection is required to appreciate differences between species. However diagnostic characters are now much better understood, so that it is possible for arachnologists familiar with the group to even provisionally identify *P. praedatus* females in the field. The species has turned out to be remarkably widespread in a specific habitat situation, on large oaks in open or woodland edge situations which are hardly likely to have been under-recorded in the past – yet museum collections examined have failed to reveal specimens misidentified as other taxa in the *aureolus* group (although plenty of misidentifications have been revealed!). Another *Philodromus* in the *aureolus* group, *P. longipalpis* has been relatively recently recognised in the British fauna, but there is no current evidence to suggest the species has lain misidentified in past collections. Like *P. praedatus* the much rarer *P. longipalpis* seems associated with oaks in open situations, especially where these are stressed by drought or root disturbance, sometimes even occurring on isolated oaks between arable fields. Like *P. praedatus* the spider can often be provisionally identified as being distinctly different in the field.

Other species have certainly been present in Britain for some length of time, such as *Argiope bruennichi*, first recorded at Rye in 1922, but which have shown evidence of increasing range since the 1970s (Merrett, 1979) and

have subsequently expanded dramatically since the 1990s. Other species, such as *Steatoda nobilis*, are assumed to have been introduced, and although recorded from Torquay by Pickard-Cambridge in 1879 the first established populations were only identified and described from the Dorset and Hampshire area by Snazell & Jones (1993). *S. nobilis* has now clearly spread without human aid into a number of southern counties of England and Wales. *Ero aphana* was confined to high quality southern heathland, but can now be found widely in England in all sorts of habitats, including gardens and outhouses. The spider may be spreading due to climate change or it may have become established from an original colonisation and is in the process of spreading.

Then there are relatively recently recognised species in the British fauna such as *Agyneta olivacea* and *Neon robustus* where the apparent increase merely reflects their recognition and subsequent recording. Some species such as *Tetragnatha striata* and *Meta bourneti* have shown apparent increase which is probably due to increased sampling in their specific ecological niches. There are also a number of rare spiders such as *Clubiona juvenis*, *Philodromus longipalpis* and *Theridion pinastris*, which occur in well sampled habitats, but which may occur at low population levels in many areas and so may only be picked up by a sufficient level of sampling – or by pure luck, being at the right place at the right time.

Another example is provided by *Dolomedes plantarius*, where there is absolutely no reason to think that the populations that were identified in Pevensy Levels in the 1980s and South Wales in the 1990s are new, rather simply that *Dolomedes* previously seen at these sites were assumed to be *D. fimbriatus* by previous naturalists, and adults were not checked by microscopical examination – and of course it is illegal to collect *D. plantarius* without licence.

We are very grateful to Deborah Procter for her valuable input and advice on this status review and to Stuart Ball for running analyses on our dataset.

Note that this is a draft list, and publication here does not mean that these statuses are valid. This must wait until they are accepted and published by JNCC.

### References

- Bratton J. H. (Ed.) 1991. *British Red Data Book 3 Invertebrates other than Insects*. JNCC.
- Falk, S.J. & Crossley, R. 2005. A review of the scarce and threatened flies of Great Britain Part 3: Empidoidea. JNCC. <http://www.jncc.gov.uk/page-3351>
- Harvey, P.R., Nellist, D.R. & Telfer, M.G. 2002. *The Provisional atlas of British spiders (Arachnida, Araneae), Vols. 1 & 2*. Huntingdon: Biological Records Centre.
- IUCN. 1994. *IUCN Red List Categories*. Prepared by the IUCN Species Survival Commission. As approved by the 40th Meeting of the IUCN Council. Gland, Switzerland, The World Conservation Union.
- IUCN. 2001. *IUCN Red List Categories and Criteria. Version 3.1*. Prepared by the IUCN Species Survival Commission. As approved by the 51st Meeting of the

IUCN Council. Gland, Switzerland, 9 February 2000. The World Conservation Union. <http://intranet.iucn.org/webfiles/doc/SSC/RedList/redlistcatsenglish.pdf>

Merrett, P. 1979. Changes in the distribution of British spiders and recent advances in knowledge of distribution, *Bull. Br. arachnol. Soc.* **4** (8): 366-376.

Merrett, P. (1990) *A Review of the Nationally Notable Spiders of Great Britain*. NCC.

Snazell, R. & Jones, D. 1993. The theridiid spider *Steatoda nobilis* (Thorell, 1875) in Britain. *Bull. Br. arachnol. Soc.* **9** (5): 164-167.

<sup>1</sup> 100 Hayling Avenue, Little Paxton, ST NEOTS, Cambs. PE19 6HQ

<sup>2</sup> 32 Lodge Lane, GRAYS, Essex RM16 2YP Email: [grays@peterharvey.freeserve.co.uk](mailto:grays@peterharvey.freeserve.co.uk)

<sup>3</sup> 1 Bailiffs Cottage, Doddington, SITTINGBOURNE, Kent, ME9 0JU

## ***Eperigone trilobata* (Emerton, 1882), newly recorded in Britain**

by Peter Harvey

A single male of *Eperigone trilobata* was collected at a site near Tilbury in S. Essex during 2007. The spider was taken in pitfall traps set between 1-16<sup>th</sup> August in an area of mown grassland within a site containing a variety of nearby habitats, ranging from sparsely vegetated dry sandy grassland to a wetland area, relic grazing marsh and ditches. I was unable to identify the spider and sent it to Peter Merrett, who identified it as *Eperigone trilobata*, the type species in the genus and apparently well illustrated in Millidge (1987). Van Helsdingen (1982) also contains drawings of the palp and epigyne. No further specimens were collected at the site.

Peter Merrett notes that the species is widespread throughout the USA and Canada, and also recorded from Mexico. It has been recorded in Europe, and is on the checklists for Germany and Switzerland. It would seem to be an import and there is no reason why the species should not become established in Britain if a female manages to breed.

### **References**

- Millidge, A.F., 1987. The erigonine spiders of North America. Part 8. The genus *Eperigone* Crosby and Bishop (Araneae, Linyphiidae). *Am. Mus. Novit.* **2885**: 1-75.
- Van Helsdingen, P.J., 1982. *Eperigone trilobata* revealed as a trans-American species. *Bull. Br. arachnol. Soc.* **5** (9): 393-396.

32 Lodge Lane, GRAYS, Essex RM16 2YP

## ***Ero aphana* (Walckenaer, 1802) new to Hertfordshire**

by Doug Marriott

On the 19th May 2008 I revisited, for the first time for a couple of years, my local site in Croxley (VC20, TQ078950) which used to be the former London Transport engineering sidings some 40+ years ago. The old railway spoil and rubbish has gone or is covered by scrubby vegetation. Beating some gorse bushes unexpectedly produced a female *Ero aphana*. This is a first record of this species for Hertfordshire VC20 although recent reports show that it has been expanding its range northwards (Binding, 2006; Denton, 2004; Harvey & Hopkin, 2003; McCarthy, 2002). Mick Massie recorded it from Horsenden Hill in Middlesex in 2006 (Massie, 2006) and I recall a verbal report of the species in the Ruislip area also which is not too far away from here.

Since then I have made two further collecting trips locally. The first was to my son's house in Rickmansworth, which he moved into recently and whose garden is surrounded with bushes many of them yew. Beating these produced another female *Ero aphana* along with a female *Zilla diodia*. The straight line distance between the two sites is approximately 1.5 miles.

On Sunday 22nd June I attended an invertebrate meeting in Ruislip Woods in Middlesex, VC21 and proceeded to beat some gorse bushes as previously in Croxley and took another female *Ero aphana*. Again the distance between sites is about 3-4 miles. So in the space of four weeks and three local sites *Ero aphana* has turned up in each one. This species is clearly colonising new areas rapidly and would probably be found on other sites in Hertfordshire if only we had more arachnologists to look for it.

### **References**

- Binding, A. 2006. *Ero aphana* new spider for Nottinghamshire in 2005. SRS News No 54 In *Newsl. Br. arachnol. Soc.* **105**: 15.
- Denton, J. 2004. Instant Results with *Ero aphana* (Walckenaer, 1802). SRS News No 48 In *Newsl. Br. arachnol. Soc.* **99**:12.
- Harvey, P. & Hopkin, S. 2003. New Records of *Ero aphana* (Walckenaer, 1802). SRS News No 46 In *Newsl. Br. arachnol. Soc.* **97**:14.
- Massie, M. 2006. *Ero aphana* at Horsenden Hill. SRS News No 56 In *Newsl. Br. arachnol. Soc.* **107**:19-20.
- McCarthy, C. 2002. *Ero aphana* (Walckenaer, 1802) in a Surrey Suburban Garden. SRS News No 44 In *Newsl. Br. arachnol. Soc.* **95**: 9.

19 Winton Drive, Croxley Green, RICKMANSWORTH, Herts. WD3 3RF

© 2008 THE BRITISH ARACHNOLOGICAL SOCIETY. Photocopying of these publications for educational purposes is permitted, provided that the copies are not made or distributed for commercial gain, and that the title of the publication and its date appear. To copy otherwise, or to republish, needs specific permission from the Editor. Printed by Henry Ling Ltd, DORCHESTER, DT1 1HD. ISSN 0959-2261.