

# Spider Recording Scheme News

## March 2006, No. 54

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My thanks to those who have contributed to this issue. S.R.S. News No. 55 will be published in July 2006. Please send contributions by the end of May at the latest to Peter Harvey, 32, Lodge Lane, GRAYS, Essex, RM16 2YP; e-mail: srs@britishspiders.org.uk

### Editorial

#### *Progress towards an update of spider distribution maps*

Thank you very much indeed to everyone who has been sending in their data. We now have a considerable amount of new data with which to update the maps and undertake a national status review using the IUCN criteria. We will be able to provide the new maps on the internet via the BAS website as a downloadable PDF file and via the NBN Gateway. However the maps will only be as good as the data provided! At the time of writing we know that there are at least two post-atlas datasets out there that have not yet been submitted. If you have not sent in records, then they will not be able to appear on the maps, but it is still worthwhile sending them in – we may be able to update the maps on a regular basis, especially if data are provided in computerised format, preferably in MapMate.

The post-atlas card total now stands at 1881, of which 1314 are the old RA65 cards, 165 GEN7/13/14 cards, and 433 new RA65 cards. BRC computerised 1232 old RA65 and 185 GEN cards into their summer 2005 schedule. This has resulted in a total of 9204 records. I have also managed to computerise a good proportion of the new RA65 cards and all the old style cards that have come in since.

The cards and BRC print-outs of the data entry have been checked or validated by volunteers on the BAS Council and I am very grateful indeed to Rod Allison, Lawrence Bee, Ian Dawson, Stan Dobson, Tony Russell-Smith, John Stanney and Emma Shaw for this incredibly important task. It hopefully means that we have reduced data entry errors to a very low level. I am also very grateful indeed to John and Emma for taking a large set of paper hand-written records and computerising these into Excel, and to Ian Dawson who has entered a substantial number of RA65 cards into MapMate.

I am also very grateful indeed to Henry Arnold at Monks Wood for his rapid responses and patience in resolving a seemingly endless number of issues concerning records in both the new and old datasets.

A large backlog of data that have been provided by a number of recorders in spreadsheet or tabular form has been put into consistent format and imported into MapMate. This was a major task not only because of the number of files, but also because a great deal of effort has to be put into making the data consistent in format and

suitable for import. It is quite remarkable how many ways the name for the same taxon, recorder, site etc can be entered.

I have continued to receive computerised data from various recorders via MapMate and currently hold 235,750 spider records in MapMate, with an additional 20,586 records waiting to be put into a format suitable for input into the software, but which have already been combined with all the other data for the national status review.

Getting the Excel and similar files into MapMate and entering records from the new RA65 cards has raised a number of very important issues about the interpretation of habitats and various phase 2 features. There have been quite a few instances where site descriptions and habitats have not appeared to match, or there has clearly been a substantially different interpretation of habitats from the ones I would have expected. I think there will be a need to produce some fairly comprehensive guidance in the newsletter on how we want these features to be interpreted and how we can be consistent.

#### *UK Status review*

The status review of spiders using the IUCN criteria is scheduled to be completed by the end of June 2006. Getting all the new data into shape and into one database has taken considerably longer than expected. However analyses on the combined atlas dataset and new data have now been undertaken and a preliminary assessment of IUCN status will have been considered by the BAS subgroup by the time this newsletter is published. Unfortunately due to the late arrival of many records it has not been possible to produce a draft list in time for the March newsletter.

#### *Updating the maps*

Including the provisional atlas dataset, we now have a total of nearly 830,000 records. In addition at the time of writing there are several sets of computerised records still known to be out there somewhere! It will now be comparatively easy to generate an updated set of maps for all the British spiders, which will then be combined into a single pdf file that can be made available on the BAS website. The data will also be provided to BRC so that it can be archived and made available as a dataset on the NBN Gateway.

Essentially the maps will represent the results of the spider recording scheme since 1987, in particular of the considerable efforts by recorders over many years. This remains an incredible legacy to the late Clifford Smith, the National Organiser of the Spider Recording Scheme from 1987 until 1993, who encouraged, cajoled and generally inspired people to get out there recording spiders, as well

as to David Nellist who took the reins when Clifford stepped down due to ill-health. Gaps or 'missing' dots on maps will almost certainly be due to arachnologists failing to provide their data – the maps are only as good as the records received!

### MapMate

A note was included in the Autumn Newsletter asking for people to register an interest in a bulk purchase of MapMate and a 'BAS MapMate Licence Group'. I have had a good response to this, with 31 recorders so far who wish to be in the licence support group, involving 36 copies of the software and 5 recorders who have purchased the software at a 25x bulk price of £15 a copy. **If anyone else is interested in taking up an offer of reduced cost for software or the group licence, please let me know.**

### Some recent records which appear to be new for VC60 (N. Lancashire).

by Jennifer Newton

Winmarleigh Moss SSSI, centered on SD4447, is the largest lowland raised bog in Lancashire which still retains a reasonable flora and invertebrate fauna, including Large Heath butterfly *Coenonympha tullia* and Bog Bush Cricket, *Metrioptera brachyptera*. Pitfall traps set by Jeremy Steeden in 2004 and 2005 produced an interesting set of spiders including *Euryopis flavomaculata* (2m), *Walckenaeria atrotibialis* (4m 4f), *Hypselistes jacksoni* (7f 1m), *Scotina gracilipes* (13m), all species with no documented previous records for VC60. A second VC60 record for *Hypselistes jacksoni* (1f) resulted from sweeping bracken and rushes on moorland at 180m in NE Lancashire, Leck Fell, SD6578 in November 2005.

*Centromerus arcanus*. One female was found in a species-rich basin mire SD5876 near Whittington, close to the Cumbrian border, at the relatively low altitude of 130m, August 2005.

*Tetragnatha striata*. Specimens were found by bird-ringers on the *Phragmites* at Leighton Moss RSPB reserve, SD4874 in 2003. In 2004 I was surprised to find a specimen on *Phragmites* at the edge of a small industrial reservoir just south of Heysham, SD4159. This is a post industrial site, with a great deal of disturbance. The steep-sided reservoir now supports a reasonable flora around the edge and is excellent for a range of dragonflies. Specimens from both sites were immature and identified by the distinctive eye pattern. I am grateful to Chris Felton for confirming the identification.

*Alopecosa cuneata*. An adult male was taken by Jeremy Steeden in a pitfall trap under heather on an old golf course at Lytham, SD3130 in May 2004.

*Pirata piscatorius*. One immature male was seen by Laura Cotton on the surface of sphagnum on Lord's Lot bog in

August 2004 and was reared through to maturity in the following spring. Lord's Lot bog is an artificial schwingmire, a floating raft of sphagnum, cranberry, bilberry and heathers over a dammed lake in the middle of a conifer plantation. Pitfall traps have caught large numbers of *Pirata piraticus* and *P. uliginosus*, *Trochosa terricola*, *Alopecosa pulverulenta*, but this is the first specimen of *P. piscatorius*. It is also the first documented record for Lancashire.

*Hahnia pusilla*. One adult female was found in April 2005 under a stone in an old gritstone quarry in moorland in Forest of Bowland AONB, SD6661. There have been 2 recent records of the species in VC69, very close to the border with Lancashire.

*Drassodes lapidosus*. One female was collected in a pitfall trap set by Jeremy Steeden in June 2005 on an old industrial site on the coast at Lytham, SD3727. A month later a female of *Drassodes cupreus* turned up on the same site. *D. cupreus* is common throughout the vice county, from coastal wasteland and limestone grassland to high moorland, under stones and debris and in gorse and heather. In spite of careful searching this is the first specimen of *D. lapidosus* I have come across, and I think many of the older records from the general area must refer to *D. cupreus*.

*Talavera aequipes*. I was very pleased to find two males of this tiny jumping spider in sparse grassland at Heysham Nature Reserve, SD4059 in May 2005. The reserve has developed over spoil from the construction of Heysham Power Station in the 1980s and has attracted an interesting invertebrate fauna (including a fine population of *Agelena labyrinthica*)



*Talavera aequipes* male. © Peter Harvey.

*Uloborus plumipes*. One immature specimen was discovered in the Lancaster Butterfly House in June 2005, after unsuccessful searches in 2004. Derek Bunn reported its presence in some numbers in a garden centre at Forton, SD4851, in 2005.

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## A new site for *Agroeca lusatica* (L. Koch, 1875) in Kent.

by A. Russell-Smith

*Agroeca lusatica* has been known from only a single site in Britain, Sandwich Bay NNR, Kent where it has been found on many occasions on sand dunes. A second supposed record from Ynyslas Dunes, Cardiganshire (Harvey *et al.*, 2002) was subsequently shown to be for a related species, *Agroeca dentigera* (Felton *et al.*, 2004).

The author collected on the small area of sand dunes at Greatstone-on-Sea, Kent on the 16<sup>th</sup> March 2005 where a number of female *Agroeca* were taken amongst dense marram grass. Under the microscope most proved to be *A. inopina* and *A. proxima* but a single female had an epigyne that corresponded to that of *A. lusatica*. The specimen was sent to Peter Merrett who kindly confirmed the identification. It is good to know that this RDB1 listed species occurs in at least one other site in Britain (currently a local nature reserve) and lends hope that it might occur in other sand dune sites on the south coast. The Greatstone site is remarkable for having all the British species of *Agroeca* other than *A. brunnea* and, of course, the newly discovered *A. dentigera*.

### References

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

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## *Ero aphana* a new spider for Nottinghamshire in 2005

by Annette Binding

Every year my husband, Allan, and I spend a week doing voluntary work for the National Trust at Clumber Park in Nottinghamshire carrying out invertebrate surveys within the park, covering most orders including spiders.

On 30<sup>th</sup> June 2005 Allan and I had spent several hours surveying a strip of broad set-aside land between a pine plantation and agricultural land. The land was formerly heathland. The edge of the pine plantation contains some gorse and broom scrub. In recent years this strip of set-aside land has been extended which has allowed many wild flower species to re-appear together with invertebrates associated with heathland and grassland habitats.

On our return to the Base Camp for lunch, Allan brushed a tiny spider from his hair. It landed on the table so I quickly potted it thinking it was probably another of the many small *Theridion* species we had encountered during our surveys. A quick look at it through the microscope later showed it to be a male *Ero* species but at that time I did not take the identification any further. It

was not until November that I started to identify the specimens from Clumber Park. When I came to the *Ero* specimen I expected it to be *Ero cambridgei* as I had already recorded that species at Clumber Park. That expectation proved to be very wrong as the spider turned out to be *Ero aphana*, a RDB2 species. On looking at the national distribution maps on the NBN Gateway I saw that there were no records near Nottinghamshire.

I telephoned Peter Harvey to ask him if he would look at the spider to confirm my identification and he agreed to do so. Within a couple of days the spider was returned to me, Peter having confirmed the identification. Peter also confirmed that this is the most northerly known record for this species and that it is a long way from the currently known range.

Although the spider was collected in the Base Camp, we believe it is more likely that it came from the area of set-aside land where we had spent the morning.

I am grateful to Peter Harvey for his help in confirming the identification of the spider and for information regarding its current distribution.

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## New Welsh record for *Crustulina guttata* (Wider, 1834)

by Simon Warmingham

On 28<sup>th</sup> June 2005 I decided that the seafront at East Aberthaw (ST0366) merited a visit. Although various habitats are found at the site, my preference is the shallow layer of stones on sandy substrate, interspersed with small grass tussocks immediately south of the seawall.

Nothing of eye-catching quality was taken until mid-afternoon; approaching dark cloud and claps of thunder dictated that I turn over one last stone. Previous poring over Michael Robert's colour plates meant that I knew instantly that this was *Crustulina* underneath. It looked tiny, especially compared to *Dysdera* sp. also found here. The observation was subsequently mentioned to Mike Kilner (Area Organiser for South Wales) on a S.W.A.G. field trip; he thought it was a first for Glamorgan VC41.

I paid a second visit to the site on a fairer 5<sup>th</sup> October, whereupon two adult females and two adult males of *Crustulina* were taken; plenty of juveniles of the species were also present. This was the most numerous spider seen under stones that day. I was pleased to take and later identify a male of the linyphiid *Ceratinopsis romana* from marram nearby. Mike later informed me that this is a new site for the spider. Perhaps I had better get a copy of the spider atlas!

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## More on *Meta menardi*

by Simon Warmingham

Following on from Richard Price's strange location for *Meta menardi* (SRS News 53), how about a garden shed? My father's small, long established, east-facing stone and slate-roofed shed backs onto a sandstone cliff face (an old quarry) in Wetheral, Cumbria (NY4654). The door of the shed is shut when not in use, so the interior is kept very dark. I hadn't been into spiders for very long, but on entering the shed on 27 December 2002, eight tell-tale "light bulb" egg sacs were hanging from the dark roof lining. Although I had a hunch as to what the species was, I didn't have a microscope at that time, so a female specimen was sent off to Peter Harvey, who duly determined the animal. As there are no cave systems in the immediate vicinity of the site, one wonders if they previously led a subterranean existence. What other non-troglodytic places might they be lurking in?

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## Is *Theridion tinctum* increasing and spreading north?

by Jennifer Newton

The Provisional Atlas (Harvey *et al.* 2002) map of *Theridion tinctum* shows an unusually clear distribution pattern, with numerous records from Yorkshire south (excluding Wales and the SW) but only 2, recent, records in Scotland. Unusually there are few old records, only 5 pre-1950 records without more recent updates. An *Atlas of Yorkshire Spiders*, (Smith 1982), with a good historical base, shows 6 records, first record 1953, and there are another 5 later records in the Provisional Atlas. As a distinctive spider, although small it is relatively easy to identify, and not hard to find if trees and shrubs are beaten, and it is not uncommon as a garden resident. It will not readily be sampled by pitfall trapping.

The database for the Provisional Atlas (Harvey, per. comm.) has just over 3500 records from David Mackie, covering a wide range of species over a wide area but the majority from Cheshire, Lancashire, Yorkshire, Derbyshire and Wales in the 1950s–1970s. There is a solitary record of *Theridion tinctum*, from Lindow Common, SJ8381, in Cheshire, VC58, in 1970, the first documented Cheshire record. Since then there have been 15 records from Cheshire entered in the provisional atlas, mostly from the 1990s, including one of mine from a house in Sale, N Cheshire, SJ8091, in 1991.

A similar pattern emerges for Lancashire. There is a single record for VC59, SJ69, in 1995 in the Provisional Atlas. I know of 3 post atlas records for VC59, two by Nick Law from his canal survey, SD5307 and SD9012 in August 2004, and one by Brian Hugo in January 2006, from silver birch in Burnley, SD8533 (interestingly Mackie's Cheshire record was from silver birch).

The first known record for W Lancashire, VC60, was

made in July 2000 by Jeremy Steeden under trees at the Royal Lytham Golf Course, SD3427 followed a year later by specimens from woodlands near Blackpool, SD3336 and SD3533. In May 2003 Steeden found it near Preston, SD4933, and another specimen turned up just to the north, SD5234 in May 2005. In October 2004 several immature specimens were found by Brian Hugo in birch litter on Heysham Moss, SD4260, a small relict raised bog in north Lancashire.

In June 2000 an adult female appeared on the boot of a car parked in Cumbria, (Westmorland) VC69, under trees at Waitby Greenrigg CWT reserve, NY7508. As the car was from Heysham in Lancashire it could not be certain that this was a Cumbrian specimen. Then in August 2005 I was surprised to beat 3 specimens, 2 adult females and one subadult male from pines on Cliburn Moss in central Cumbria, NY5725, the extreme north of VC69. This is a basin mire, an NNR well known for its rich invertebrate fauna. It was heavily planted up with pines, which are now being cleared from some areas.

It seems that *Theridion tinctum* now occurs in a variety of habitats, both man-made and semi-natural, over much more of the country than in the first half of last century. I would be interested to hear if anyone else has noticed an increase in abundance of *Theridion tinctum* or its arrival at new sites. I am also intrigued by the stated association with yew, which I have not observed in this area.

### References

Harvey, P.R., Nellist, D.R., & Telfer, M.G. 2002. *Provisional Atlas of British Spiders*. Huntingdon: Biological Records Centre.

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## Update on spiders at Misson Carr NR, North Nottinghamshire

by Howard Williams

Last year I wrote an article about some of the more uncommon spiders amongst a total of 66 species, taken on this reserve in 2004. This low-lying area was formerly part of a Ministry of Defence missile site, and consists of scrub woodland and two areas of acid grassland over peat, one being slightly damper than the other and more varied in grasses and vegetation.

The 2004 spiders were taken by sweeping, beating and grubbing in the scrub woodland and its rides; so in 2005 I decided to set pitfall traps in the grass heath areas during June and July. As a result, 35 more species were added to the list for the site, bringing the total to 101. Most were from the pitfall traps, but some were swept or beaten from the grassland or scrub edges.

Of the total to date, 7 represent, to the best of my knowledge, new county records (marked **x** on the table), while 7 (marked **y**) are spiders very infrequently recorded previously in the county and considered fairly uncommon

generally.

One of the things County Organizer, Tom Faulds, and I wished to follow up was the unusual presence here in 2004 of the Notable A salticid, *Synageles venator*. On my first visit in early May 2005, I again saw two males running on the wooden gatepost of the reserve car park. In mid-June, Tom and I found five males and two females running on the gate posts and wooden post-and-rail fencing of the car park. Two others were also seen, but were too quick for sex or stage to be determined. None was found in a short grubbing session on the ground at the foot of the fencing or on the gravelly floor. On two further visits in July I saw nothing of them, but the days were cool and dull with a strong wind on one of them. There is every reason to believe, however, that *Synageles* is thriving on the post-and-rail fencing at the entrance. It seems to enjoy the warmth and light here and the refuges supplied by the numerous splits and cracks in the wood. However, they have not yet been seen on any other wooden fencing in other parts of the reserve.

The next most uncommon spider of 2005 was beaten from a clump of scrub willow and hawthorn at the edge of the grass heath – the Notable B theridiid, *Achaearanea simulans*, just one female. Later beatings in the same area failed to produce any more.

The pitfall traps, especially in the damper of the two grass areas, produced predictably large numbers of *Pardosa pullata* and *Pirata hygrophilus*; but also two much more uncommon lycosids – five male *Pirata latitans* and three male *Pirata uliginosus*. There were no females captured, even by mid-July.

Another surprise with the pitfall traps was the large number of male and female *Euryopsis flavomaculata* revealed to be present on this damp grassland. Previously I had just once found a single specimen in Nottinghamshire, in a mixed plantation on former sandy heathland. In both localities, however, its prey, ants, are present in large numbers. Members of the genera *Formica*, *Lasius* and *Myrmica* are abundant throughout the reserve, under the damp scrub as well as on the heath areas. They also explain the presence of *Phrurolithus festivus*, a new reserve record this year.

One more species should be added to the total number in due course. We found the salticid *Heliophanus* on the drier heath, but it was a subadult female which we released – impossible to say whether *H. cupreus* or *flavipes*.

To conclude, many commonly occurring species are still missing from the list for Misson Carr. I was surprised to realise, for instance, that *Metellina segmentata* had not been recorded, or *Philodromus aureolus*, or *Clubiona terrestris*. Still plenty to do then!

My thanks are due to Tom Faulds both for active help on the reserve and for checking the more uncommon species; and to Peter Harvey for his generous advice on and corrections of ant identification.

#### Mimetidae

*Ero cambridgei*

#### Theridiidae

*Achaearanea simulans* x [Nb]

*Anelosimus vittatus*

*Enoplognatha ovata* sens. str.

*Euryopsis flavomaculata* y

*Paidiscura pallens*

*Steatoda bipunctata*

*Theridion sisyphium*

*Theridion tinclum*

*Theridion varians*

*Neottiura bimaculata*

#### Linyphiidae

*Baryphyma trifrons* x

*Bathypantes gracilis*

*Bathypantes parvulus*

*Centromerus dilutus*

*Ceratinella scabrosa* y

*Cnephalocotes obscurus*

*Dicymbium nigrum*

*Dicymbium tibiale*

*Diplocephalus latifrons*

*Diplocephalus picinus*

*Diplostyla concolor*

*Dismodicus bifrons*

*Entelecara acuminata*

*Erigone atra*

*Erigone dentipalpis*

*Erigonella hiemalis*

*Gongylidiellum latebricola* y

*Gongylidium rufipes*

*Kaestneria dorsalis* y

*Kaestneria pullata*

*Lepthyphantes mengei*

*Lepthyphantes pallidus*

*Lepthyphantes tenuis*

*Lepthyphantes zimmermanni*

*Linyphia triangularis*

*Meioneta beata* x

*Meioneta rurestris*

*Meioneta saxatilis* sens. str.

*Micrargus herbigradus* sens. str.

*Microlinyphia pusilla*

*Microneta viaria*

*Monocephalus fuscipes*

*Neriene montana*

*Oedothorax apicatus*

*Oedothorax fuscus*

*Pocadicnemis juncea*

*Porrhomma pygmaeum*

*Robertus lividus*

*Saaristoa abnormis*

*Savignia frontata*

*Trichopterna thorelli* y

*Walckenaeria cucullata*

*Walckenaeria obtusa* y

#### Tetragnathidae

*Tetragnatha extensa*

*Tetragnatha montana*

*Tetragnatha obtusa*

*Metellina mengei*

*Pachygnatha clercki*

*Pachygnatha degeeri*

#### Araneidae

*Araneus diadematus*

*Araneus marmoreus* var. *pyramidatus* y

*Araniella cucurbitina* sens. str.

*Araniella opisthographa*

*Larinioides cornutus*

*Zygiella atrica*

*Zygiella x-notata*

*Nuctenea umbratica*

*Hypsosinga pygmaea*

#### Lycosidae

*Pardosa nigriceps*

*Pardosa palustris*

*Pardosa prativaga*

*Pardosa pullata*

*Pirata hygrophilus*

*Pirata latitans* x

*Pirata uliginosus* x

*Trochosa terricola*

*Alopecosa pulverulenta*

#### Dictynidae

*Dictyna arundinacea*

*Dictyna uncinata*

#### Liocranidae

*Phrurolithus festivus*

#### Clubionidae

*Clubiona brevipes*

*Clubiona lutescens*

*Clubiona phragmitis*

*Clubiona reclusa*

*Clubiona stagnatilis*

*Clubiona subtilis* x

#### Gnaphosidae

*Drassyllus pusillus*

*Haplodrassus signifer*

*Zelotes latreillei*

#### Zoridae

*Zora spinimana*

#### Philodromidae

*Philodromus cespitum*

#### Thomisidae

*Xysticus cristatus*

*Xysticus ulmi*

*Ozyptila atomaria*

*Ozyptila praticola*

*Ozyptila trux*

#### Salticidae

*Euophrys frontalis*

*Salticus cingulatus*

*Salticus scenicus*

*Synageles venator* x [Na]

*Heliophanus* sp.

**New Nottinghamshire Records = x**

**Rare Nottinghamshire Previous Records = y**

### *Philodromus histrio* saltmarsh form – a request for information

by Peter Harvey

This species is a scarce spider of heathland, but in Essex an apparently uniquely camouflaged colour form occurs on Sea Purslane and Shrubby Seablite in saltmarsh, and the heathland form is unknown (all substantial heathland areas in Essex have long gone, with only small remnants surviving in the county).

Since 1987 the Essex Spider Group has recorded the spider in saltmarsh situations at various points around the Essex coast, but as far as I know there are no reports elsewhere of the species in a similar habitat or of such a distinctive colour variety. However it seems very likely that it may also occur on the Suffolk and Norfolk coast, and the species has certainly been recorded in both the recent and more distant past in areas near the Suffolk coast - but what colour form was found?



*Philodromus histrio* saltmarsh form. © Peter Harvey.



*Philodromus histrio* normal form. © Peter Harvey.

I should be very interested indeed in any observations that other arachnologists may have on the saltmarsh form or of any other colour forms of *P. histrio*.

The Essex Spider Group, which was initiated by Kate Hawkins before she left the county at the start of 1987, consists of David Carr, Ken Hill, Ray Ruffell and myself. We have been active since 1986.

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### A garden pitfall trapping experiment: some comments

by T.J.Thomas

**Introduction:** In 2002 a Luton garden was described as “unkempt”. Since then the garden has been brought towards some control by clearing, cleaning and replanting. This has not only improved the garden’s appearance but also has altered many habitats with their cover and possibly the availability of prey. This may mean that the composition of the spider fauna has been changed and is still changing as the garden is now regularly attended. A pitfall-trapping regime had been started in April 1995 (for the reason given in Thomas 2002) so it was interesting to examine the results from nearly eleven years trapping (April 1995 – December 2005) for any changes that may have occurred in the spiders taken. Interpretation of the results needed care for the numbers of spiders in the pitfalls were few, being an average of four individuals per day. Casual collecting by sweep netting can produce more than that within a few minutes of effort. The figures have been looked at from the arbitrary point of view of “dominance” i.e. those families and species making up the majority of captures.

**Spider Families:** Seventeen spider families were represented by the spiders collected (thirty-three families are given in the check list of Merrett and Murphy 2000) with an annual average of fifteen families of which eleven had been present in every year. Of the total spiders trapped three families accounted for 86%: Linyphiidae (50%), Lycosidae (24%) and Tetragnathidae (12%). The other families ranged from <0.1% to 6% e.g. the Oonopidae was represented by one individual to members of the Thomisidae regularly caught in small numbers (see, however, below for *Ozyptila sanctuaria*).

**Species:** In the same trapping period 106 spider species were taken which, when added to those collected by other methods, meant that 129 species were listed for house and garden. The main activity of the trapped spiders was from April to August when 74% of all captures took place.

It was assumed that the “capturable” species (meaning those species that were likely to be taken in the traps because of their lifestyle i.e. those usually at ground level, hunters, and wanderers) would have been achieved within a few years of trapping. This was confirmed, for the pitfalls, after reaching a maximum by 1998, settled to taking four or five new species per year, usually represented by individuals, though only two were taken in 2005.

Of the forty-eight species found in the Linyphiidae four made up 57% of the linyphiids: *Erigone dentipalpis* (28% - for comparison, *E. atra* (6%)), *Lepthyphantes tenuis* (11%), *Stemonyphantes lineatus* (10%) and *Centromerita bicolor* (8%). There were five species - if a possible from the immatures of *Tetragnatha montana* group is included – in the Tetragnathidae, but one, *Pachygnatha degeeri*, was over 99% of these captures. Of the eight species in the Lycosidae, three made up 77% of



the lycosids: *Alopecosa pulverulenta*, including immatures (44%), *Pardosa amentata* (22%) and *P. prativaga* (11%). Therefore, out of the 106 species only eight were “dominant”.

### Changes in the “dominant” species.

Of those “dominant” species in the Linyphiidae where numbers dropped were: *C. bicolor* with a maximum of 207 in 1997 but by 2004 was down to four individuals and *S. lineatus* (a species that I associate with rabbit holes on chalk downland and amongst garden plant stems) numbers were 239 (1997 maximum) but 14 in 2004. The removal of ground cover and coarse vegetation from the garden would have altered the habitats that these two species prefer. Numbers in both species are recovering as the new replanting is beginning to provide greater cover.

On the other hand, *E. dentipalpis* increased from 17 in 1996 to 255 in 2004 (maximum of 350 in 2002). This spider is common in grassland so this increase in numbers may be due to the grooming of the lawns; perhaps this opening up of the garden allows greater chance for the capture of aeronauting spiders such as this species. *L. tenuis* remained fairly steady over the years at a mean of 53, though increases in numbers during 2002 and 2004 brought the overall mean to 74, suggesting that this is a species, not only resident, but as with *E. dentipalpis*, being positively affected by the changes. The close cropping, then regular mowing of the lawns may have helped in making available a ground structure suitable for *L. tenuis*, for many small webs seen on the lawn were occupied by this species.

The Lycosidae numbers fell steadily over the years from 656 in 1996 to 72 in 2005. *Pardosa amentata* and *P. prativaga* averaged 76 and 38 individuals per year i.e. relatively few captures yearly. Of these two species the former remained fairly steady averaging 90 until 2004/5 when only 13 and 11 individuals were taken respectively. *P. prativaga* declined steadily from 2001 bringing the overall mean from 54 to 37. As *A. pulverulenta* had accounted for almost half of all lycosids then the nearly twenty-five fold drop in its captures had the greatest effect on the lycosid numbers: 412 in 1996 to 17 in 2005 (including the immatures). Again, the regular gardening and disturbance may have had an effect on all the lycosids but especially *A. pulverulenta*.

For the tetragnathid, *P. degeeri*, captures ranged from 77(1997) to 298(2002) with a mean of 170. There were years of low numbers: 77 in 1997, 98 in 1998 and 82 in 2004. Probably these changes were due to the disturbance, perhaps natural variability and weather, particularly as the garden was being opened up. It may be that *P. degeeri*, though a hunter is like *L. tenuis*, a resident affected by the grooming of the garden, but not driven out.

The wide range of families trapped, from hunters to web-builders, show how mobile spiders really are. Some species may be residents regardless of drastic changes, whilst others are disadvantaged, with others coming in, perhaps passing through for “better” sites (Janetos 1995). An example of immigration that occurred was that of the little crab spider, *Ozyptila sanctuararia*. From 1995 to 1998 there was nothing of this species, then in 1999 two males were taken; from then on the numbers increased yearly as

follows: 2000 (17 males), 2001 (17 males), 2002 (34 males and 6 females), 2003 (26 males and 5 females), 2004 (54 males): the majority of captures were from the lawn pitfalls.

Apart from seeking new or more suitable sites some movement may be due to males seeking females for mating. Examination of the figures for 1995-2005 showed that for the mature spiders the male/female ratio ranged from 1.4 to 3.2 and for immatures 0.9 to 1.2. Thus the results show that more males are on the wander than females.

### Comments

The relatively few captures per day imply that pitfall trapping is apparently not so effective a technique as others, e.g. sweep netting. But amongst its advantages are uses as a passive technique by being in place for as long as required and examined regularly, supplementing results by other collecting procedures. Also, the technique may monitor some changes, but probably only those on a gross scale judging from the above results. One drawback is that the holes in the ground that are the pitfalls may be avoided by some creatures, and used by others, e.g. sometimes webs had been built across or inside the traps. The procedure's results are, therefore, going to be biased, not being representative of the spider fauna. There are probably other criticisms of pitfall trapping (e.g. Parker 2000). With any collecting technique there are going to be disadvantages so any results should be treated with caution.

The results of this pitfall trapping experiment, which is continuing, show that a garden, despite regular management, may hold an extensive spider fauna. Gardens these days are being recognised as refuges for wildlife regardless of the consistent and constructive disturbance in the cared-for garden and, perhaps, as corridors between the countryside. If a garden such as this one in Luton, in a built-up area and being just a mile from the town centre, has provided such a spider list then those gardens better situated, e.g. alongside woodlands (Williams 1999), may provide safe habitats for the more unusual arachnids. The problem is that the attractive and visible fauna are more likely to be noticed and recorded e.g., birds, mammals, butterflies, rather than the smaller creatures such as spiders and harvestmen.

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## List of species recorded from the Luton garden

**Amaurobiidae**

*Amaurobius fenestralis*  
*A. similis*\*  
*A. ferox*\*

**Dictynidae**

*Dictyna uncinata*

**Oonopidae**

*Oonops domesticus*  
*O. pulcher*\*

**Dysderidae**

*Dysdera crocata*\*  
*Dysdera erythrina*

**Gnaphosidae**

*Drassodes lapidosus*\*\*  
*Drassodes cupreus*\*\*  
*Scotophaeus blackwalli*\*\*  
*Micaria pulicaria*\*  
*Zelotes latreillei*\*

**Pholcidae**

*Pholcus phalangioides*

**Clubionidae**

*Clubiona comta*\*  
*Clubiona corticalis*\*  
*Clubiona lutescens*\*  
*Clubiona pallidula*  
*Clubiona reclusa*\*\*  
*Clubiona terrestris*\*\*

**Liocranidae**

*Phrurolithus festivus*\*

**Thomisidae**

*Xysticus cristatus*\*\*  
*Ozyptila sanctuaria*\*  
*O. praticola*\*  
*Ozyptila trux*\*

**Philodromidae**

*Philodromus aureolus*\*  
*Philodromus cespitum*  
*Philodromus dispar*\*\*  
*Tibellus oblongus*

**Salticidae**

*Salticus scenicus*\*\*  
*Heliophanus flavipes*\*  
*Euophrys frontalis*\*  
*Pseudeuophrys lanigera*  
*Sitticus pubescens*

**Lycosidae**

*Pardosa amentata*\*\*

*Pardosa nigriceps*\*  
*Pardosa palustris*\*\*  
*Pardosa prativaga*\*\*  
*Pardosa pullata*\*  
*Alopecosa pulverulenta*\*\*  
*Trochosa terricola*\*\*  
*Trochosa ruricola*\*

**Pisauridae**

*Pisaura mirabilis*\*\*

**Agelenidae**

*Tegenaria agrestis*\*\*  
*Tegenaria domestica*\*\*  
*Tegenaria gigantea*\*\*

**Hahniidae**

*Hahnna montana*

**Mimetidae**

*Ero cambridgei*\*  
*Ero furcata*\*\*

**Theridiidae**

*Steatoda bipunctata*\*\*  
*Anelosimus vittatus*\*\*  
*Neottiura bimaculata*\*\*  
*Theridion blackwalli*\*\*  
*Theridion melanurum*\*  
*T. mystaceum*\*  
*Theridion pallens*  
*Theridion sisypium*\*\*  
*Theridion tinctum*  
*Enoplognatha latimana*\*  
*Enoplognatha ovata*\*\*  
*Enoplognatha thoracica*\*

**Tetragnathidae**

*Tetragnatha extensa*\*  
*Pachygnatha clercki*\*  
*Pachygnatha degeeri*\*\*  
*Pachygnatha listeri*\*  
*Metellina segmentata*\*\*  
*Metellina mengei*

**Araneidae**

*Zygiella x-notata*\*\*  
*Araneus diadematus*\*\*  
*Araneus quadratus*\*\*  
*Nuctenea umbratica*  
*Araniella cucurbitina*  
*A. opisthographa*

**Linyphiidae**

*Walckenaeria acuminata*\*\*  
*Walckenaeria antica*\*  
*Walckenaeria unicornis*\*  
*Dicymbium nigrum*\*

*Entelecara acuminata*  
*Entelecara erythropus*  
*Gongylidium rufipes*\*  
*Dismodicus bifrons*\*  
*Hypomma cornutum*  
*Maso sundevalli*\*  
*Pocadicnemis pumila*\*  
*Pocadicnemis juncea*\*  
*Oedothorax fuscus*\*  
*Oedothorax retusus*\*  
*Oe. gibbosus*\*  
*Silometopus reussi*\*\*  
*Tiso vagans*\*\*  
*Monocephalus fuscipes*\*  
*Micrargus herbigradus*\*  
*Micrargus subaequalis*\*  
*Savignya frontata*\*  
*Erigonella hiemalis*\*  
*Diplocephalus cristatus*\*  
*Diplocephalus latifrons*\*  
*Diplocephalus picinus*\*  
*Araeoncus humilis*\*  
*Panamomops sulcifrons*\*  
*Lessertia dentichelis*\*  
*Milleriana inerrans*\*  
*Erigone atra*\*\*  
*Erigone dentipalpis*\*\*  
*Ostearius melanopygius*\*\*  
*Porrhomma micropthalmum*\*  
*Meioneta beata*\*  
*Meioneta rurestris*\*\*  
*Meioneta saxatilis*\*\*  
*Microneta viaria*\*  
*Centromerita bicolor*\*  
*Bathyphantes gracilis*\*\*  
*Bathyphantes parvulus*\*  
*Diplostyla concolor*\*  
*Labulla thoracica*  
*Stemonyphantes lineatus*\*\*  
*Megalephyphantes nebulosus*\*\*  
*Lepthyphantes alacris*\*\*  
*Lepthyphantes ericaeus*\*  
*Lepthyphantes flavipes*\*  
*Lepthyphantes leprosus*\*\*  
*Lepthyphantes mengei*\*  
*Lepthyphantes pallidus*\*  
*Lepthyphantes tenuis*\*\*  
*Lepthyphantes zimmermanni*  
*Helophora insignis*  
*Linyphia hortensis*\*  
*L. triangularis*\*\*  
*Neriene clathrata*\*\*  
*Neriene montana*  
*Microlinyphia pusilla*\*\*

\* = In pitfalls

\*\* = In pitfalls and by other methods.

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