

# British Arachnological Society



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## **SPIDER RECORDING SCHEME**

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### **NEWSLETTER NUMBER 39** **March 2001**

Many thanks to those who have contributed articles, notes and information for this issue. Newsletter No. 40 will be published in July 2001. There are plans to see if it is feasible to incorporate the SRS Newsletter into the BAS Newsletter for BAS members. It would therefore be very helpful indeed to have contributions in good time.

Please send contributions for the next newsletter, by the beginning of June at the latest, to Peter Harvey, SRS National Organiser, 32 Lodge Lane, Grays, Essex, RM16 2YP email: [grays@peterharvey.freemove.co.uk](mailto:grays@peterharvey.freemove.co.uk)

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### **Progress towards the provisional atlas – data entry, checking and draft accounts almost complete!**

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All records on cards have been entered by BRC, a total of over 285,000. A process of checking and validation follows, involving punching checking, the editing of punching corrections, loading to a holding table, running automatic validations, resolving auto-validation problems and final loading to the main database. All cards have been coded and punching checking is almost finished. An enormous thank you to those people who have helped in this arduous but very important task.

In addition over 150,000 records in electronic format have been submitted through Stan Dobson, some of which still have some validation work remaining. An enormous thank you again to Stan for the huge amount of effort involved in sorting out data received into the correct format for BRC and in resolving the many errors which turn up in the datasets.

Draft accounts are now virtually completed thanks to the volunteer authors who have beavered away to come up with the goods. This text should be available to arachnologists who register on the NBN Gateway by the end of the first week of March, with a facility to provide feedback on each species account. We can only improve the accuracy and usefulness of the accounts if you respond with critical and useful additional information. Jon Cooper has worked hard to get the accounts and SRS web pages ready on the NBN Gateway. The provision of draft text and maps in this way is a first, and it should be an important experiment in helping to validate data and improve species accounts. For those of you who are not able to access the internet, I can provide draft text on paper, but since there will be about 200 A4 pages involved, I would appreciate help to cover the cost of post & packaging.

Draft maps for each species will not become available on the NBN Gateway ([www.searchnbn.net](http://www.searchnbn.net)) until all the data has been punching checked and validated at BRC. In the meantime, incomplete maps for two species of spider will soon be provided to trial the process and allow those of you with access to the internet to get a feel for what will be there in the future. Apologies to those people who have previously tried and failed to access the SRS pages on the NBN Gateway.

Plenty of work will remain to be done even after the provisional atlas is produced – as well as providing much-needed information (albeit provisional) on the modern status of each species to help in the conservation and management of spider biodiversity, it should provide the focus on where most recording effort remains to be done. To this end I have included some experimental analyses of county data summarised by Michael Kilner in 1997 to indicate how we might be able to use the atlas dataset to help target under-recorded parts of the country and to investigate the reasons for different species diversity in different counties.

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## New to Britain: *Megalephyphantes collinus occidentalis* (Machado, 1949)?

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Peter Harvey, 32 Lodge Lane, Grays, Essex RM16 2YP

One male and two females of an unfamiliar linyphiid were found by the author on the Isle of Sheppey at Minster in Kent on the 2<sup>nd</sup> November 1999 in the company of Eric Philp during a trip to increase the number of spider records from under-recorded 10km squares. The closest initial match I was able to come to was *Lepthyphantes collinus* in *Spinnen Mitteleuropas* by Heimer & Nentwig, but the tibial apophysis was not as shown for this species in *Tierwelt Deutschlands*. Needless to say the situation turned out to be more complex, and after seeing the specimens Peter Merrett agreed that although the spiders were close to *collinus*, further specimens were required! Despite intensive searching a further visit to the same spot on the 12<sup>th</sup> November 1999 failed to find any more. However another trip to the site with David Carr, Eric Philp and Tony Russell-Smith on the 8<sup>th</sup> October 2000 did result in one more female, collected by Tony Russell-Smith.

The spider is closely related to, but distinct from, typical *M. collinus* (L. Koch, 1872), and probably best treated as a subspecies at present, contrary to Saaristo (1997) who regarded it as a synonym of *M. collinus*. The British male resembles the type material of *occidentalis* in having a truncated tibial apophysis, but shows some differences, and may represent another subspecies (Merrett & Murphy, 2000).

The specimens have been found in tall open herbage growing on stabilized shingle at the foot of London Clay undercliffs, and dense tall grass close to the beach. The area of vegetated shingle is very small and vulnerable to disturbance and change. An extensive length of undercliff near Minster has previously been graded and the natural habitat destroyed. The whole area of remaining undercliff looks to be of considerable interest, and needs to be more thoroughly investigated for its spider fauna, especially at other times of year.

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## Millennium Atlas - Spiders of Leicestershire and Rutland

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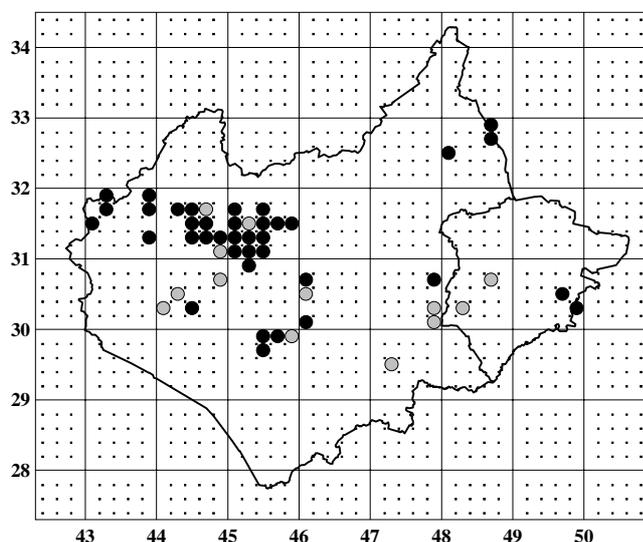
by John Crocker and Jonathan Daws.

Publication late April 2001, 120 pages A4.

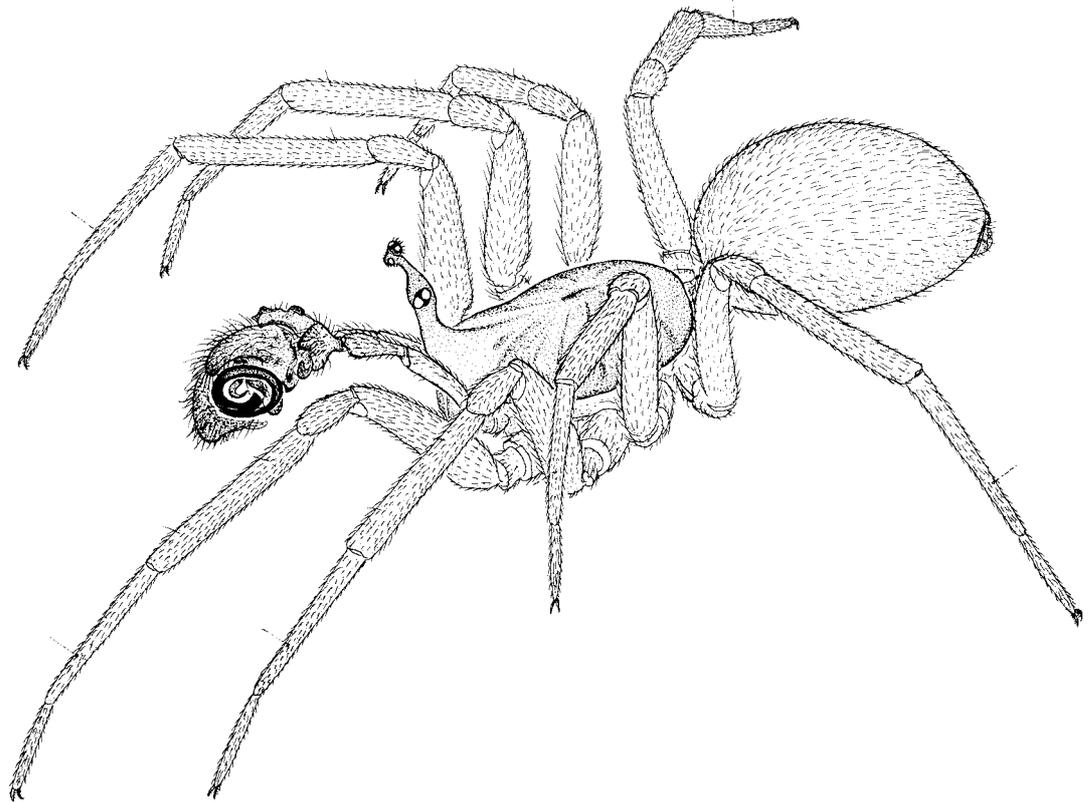
Loughborough Naturalists' Club in Association with Kairos Press.

This new Atlas brings the recording of the spider fauna in Leicestershire and Rutland up to date (August 2000), and is an essential companion to the earlier publication (Crocker & Daws, 1996) which covered the topography of the two counties and traced the history of arachnology in the Vice-county. Style and format have been maintained such that the two parts, 1996 volume and the Atlas, complement each other, but each is complete in itself. This extension to the main volume stands on its own as a point of reference at the turn of the millennium, and the layout makes detailed information easily accessible. It will be the first publication to present a county fauna in the new revised international systematic order and incorporates all recent changes in nomenclature. The authors have therefore provided a convenient comparison between the old and new checklists which many readers will find useful.

### Walckenaeria acuminata Blackwall, 1833



Leicestershire and Rutland are together one of the best studied Vice-counties in Britain and this beautifully produced publication covers over 30,000 records, including 12,000 new records (which include 14 new county records) and plots the distribution of 341 species, representing over half of the British list (645). Detailed commentaries are given of all the new county records and of some of the rarest species where additional records have been obtained, with a wealth of other supporting detail directed at the present emphasis on biodiversity. The maps are plotted on a 2km square basis (tetrad) and are enhanced by specially commissioned drawings of actual local specimens by Michael J. Roberts, author of the highly acclaimed Collins Field Guide to the Spiders of Britain and Northern Europe.



This detailed report will be of great value to those in adjoining counties as a comparison with their own spider faunas. As George Crabbe (Nichols, 1798) declared when writing about spiders and other obscure non-insect arthropods “ nothing particular need be mentioned of these genera, the same species which are found in other counties will be met with here”. We have come a long way since 1798, and whereas Crabbe may have had some justification for his dismissive statement, there is an element of truth in it. What is both interesting from a geographical point of view and important from an ecological standpoint is also of great value in the current focus on biodiversity monitoring in this and other counties.

The book has been heavily subsidised and is offered at a substantial pre-publication discount price of £8 + £2 postage & packing, from Kairos Press, 552 Bradgate Road, Newtown Linford, Leicestershire LE6 0HB.

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### ***Erigone aletris* Crosby & Bishop, 1928 an addition to the English list**

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**Richard Gallon**, 23A Roumania Crescent, Llandudno, North Wales, LL30 1UP

On the 23 December 2000 my father and I made an excursion to the Devil’s Causeway near Whitton (SE 892242), North Lincolnshire (VC. 54). This site backs onto the south side of the Humber Estuary and on the day in question was bitterly cold. A poor choice of footwear meant I had to walk along a defensive sea walk composed of clinker. Grubbing within the moss and grass at the edge of this wall produced nothing of interest except very cold hands! Fortunately I noticed that several linyphiids were in the process of ballooning off dead nettle, dock and umbellifer stems, these were duly consigned to the collecting pot. Most of the catch consisted of common species like *Lepthyphantes tenuis*, *Oedothorax fuscus*, *Diplostyla concolor* and *Erigone atra*, however a single pair of *Erigone aletris* made the day (kindly verified by Peter Merrett).

Stewart (BAS Newsletter, 1997 (78): 4) mapped the British distribution of *E. aletris* and showed this to be focused around the Firth of Forth on the east coast of Scotland. The discovery of this species in Lincolnshire, some 300 km south, apparently represents the first English record for the species. It would be interesting to know whether this Humber Estuary find represents a southwards spread from the Firth of Forth population or a separate introduction point of this North American species.

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## The mystery of a mouse spider

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**Ray Ruffell** 155 Halstead Road, Stanway, Colchester, Essex CO3 5 JT

On 7th October 1989 an adult female *Scotophaeus scutulatus* was found on my bedroom wall. Almost five years later, on 19th July 1994, a sub-adult male of this species was found on my stairs and kept in captivity until it matured on 2nd August 1994. In December of that year I moved home some five kilometres to an established 1930's bungalow. Almost six years later, on 11th September 2000, I found a mature male of the same species in the hallway of my new home. Meanwhile there have been no reports of the species being recorded elsewhere in Britain.

Some interesting questions arise from this discovery. Did the species get carried to the new home in my belongings? If so then the translocation must have been in the form of a) a fertilised female, b) an immature male and female, or c) an egg sac. If I did not in some form or other transport the species then a colony must either have existed in the new location before we moved in or else the species has moved in since we took up residence. If the latter then it probably exists in other nearby houses. If the species has been sharing my home for at least 11 years then the time between discovery of the three individuals, that is; five years between first and second, six years between second and third, is remarkable, because any likely looking candidate has been closely scrutinised. It would certainly indicate that it is an extremely secretive spider or has persisted in very low numbers. If the colony was here before me then what were the odds of my moving from one home to another that supported a species of spider unrecorded elsewhere in this country?

I suppose that the most likely explanation is that it moved home with me, but I just wonder if, within the Colchester area, there exists an extensive population of this obviously elusive spider. The fact that it has not been discovered by anyone else may be due to a scarcity of arachnologists in these parts rather than a scarcity of the spider and the species does look very similar outwardly to *S. blackwalli*.

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## A request for spiders

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**Rebecca Crowley**, c/o: Dr.H.Braig, School of Biological Sciences, University of Wales, Bangor, Gwynedd LL57 2UW, Wales.

I am a final year Bsc Zoology undergraduate at Bangor University, Wales currently researching the presence of the bacterium *Wolbachia* in the spiders: *Pholcus phalangioides*, *Dysdera erythrina* and *Meta merianae*. I would be extremely grateful to receive <20 of each species - alive or in alcohol - from anyone who is interested. Please send any spiders to the name and address above.

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## Some interesting websites

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**Peter Harvey**, 32 Lodge Lane, Grays, Essex RM16 2YP

Apart from our own BAS website run by Craig Slawson, I have been very impressed by some of the other arachnological websites that I have had reason to access recently. David Nellist and myself have been looking at the possibility of including in the atlas species accounts a list of European countries from which each species has been recorded, at least for Western Europe. I have been amazed at some of the checklists available on the web now for European countries, and also the distribution maps for species available for some countries. The following are a list of sites I have found especially useful.

<http://euridice.tue.nl/~ptutelae/IWG/Araneae/Hp/diashow/index.html> - slide show by Piet Tutelaers on *Hyptiotes paradoxus*

<http://www.ntnu.no/vmuseet/nathisti/norspider/index.htm> - Norwegian spiders including checklist and distribution maps

<http://www.nrm.se/en/spindlar.html> - including checklist of spiders for Sweden

<http://www.spiderling.de.vu/> - German spider distribution maps

[http://www.arages.de/checklist\\_e.html](http://www.arages.de/checklist_e.html) - check lists for Germany, Austria and Switzerland

<http://www.zmuc.dk/EntoWeb/collections-databaser/dklist/main.htm> - including checklist of spiders of Denmark

<http://www.butbn.cas.cz/klimes/arachno/> - including checklist of spiders of Czech

<http://cksr.ac.bialystok.pl/kuprzool/spiders.htm> - including checklist of spiders of Poland

<http://members.aol.com/Arachnologie/Faunenlisten.htm> - including checklist of spiders of Romania

<http://spiders.arizona.edu/salticid/CATALOG/0-TIT-PG.HTM> - an amazing lot of information on world salticids including lots of genitalia drawings

<http://entomologia.rediris.es/gia/catalogo/> - including checklist for spiders of the Iberian peninsula

<http://www.geocities.com/RainForest/Vines/5197/checklist.html> - checklist of spiders of Portugal

[http://perso.club-internet.fr/saitis/montardi/salticidae/catalogue/catalogue\\_frame.html](http://perso.club-internet.fr/saitis/montardi/salticidae/catalogue/catalogue_frame.html) - catalogue of salticids of France

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## The relationship between numbers of species and county areas

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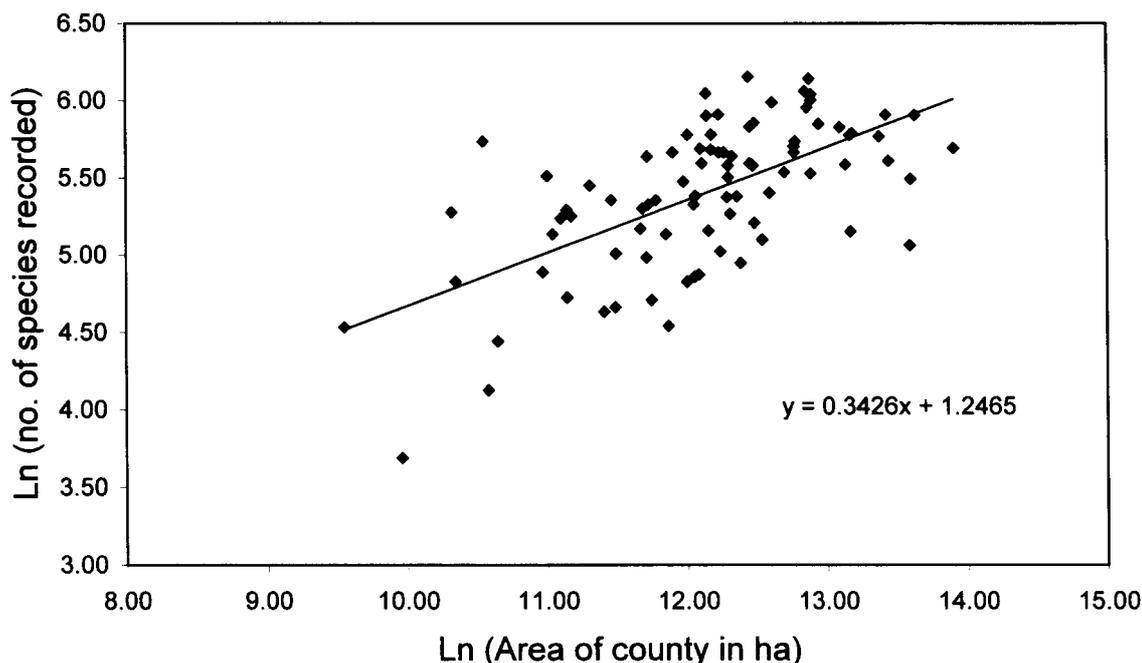
**Peter Harvey**, 32 Lodge Lane, Grays, Essex RM16 2YP

For aculeate Hymenoptera (bees, wasps and ants) Dr Michael Archer (Archer, 1995; Archer & Burn, 1995) has demonstrated that, at sites where the species list is more or less complete, there is a significant positive linear relationship between the number of species and site area (expressed as natural logarithms). It has seemed likely to me that a similar relationship may exist for other taxonomic groups (such as spiders) and for 'sites' as big as counties. I have therefore used the data on county species lists which Michael Kilner provided in SRS Newsletter No. 28 to see whether an analysis might be of use to investigate the species diversity of counties and whether or not they are likely to be significantly under-recorded. The results could be of enormous use in deciding where to target future survey and in the identification of genuine species-richness or paucity in different counties.

Now there are a number of problems with the data used here. The county areas have been obtained from information available in my local library for traditional counties. These may not equate accurately with the counties used in the maps included in Locket, Millidge & Merrett (1974) or the subsequent county updates by Peter Merrett (1975, 1982, 1989, 1995). I have also not attempted to update the lists from Michael Kilner's figures using the latest county records update by Merrett (2000). Since Rutland has not had separate county records recognised after 1974, when Rutland ceased to be a separate independent county (Crocker & Daws, 1996), Leicestershire and Rutland are taken together and the number of species includes the 14 new county records mentioned earlier in this issue.

An analysis of the data for counties in the whole of Britain is plotted in the graph below:

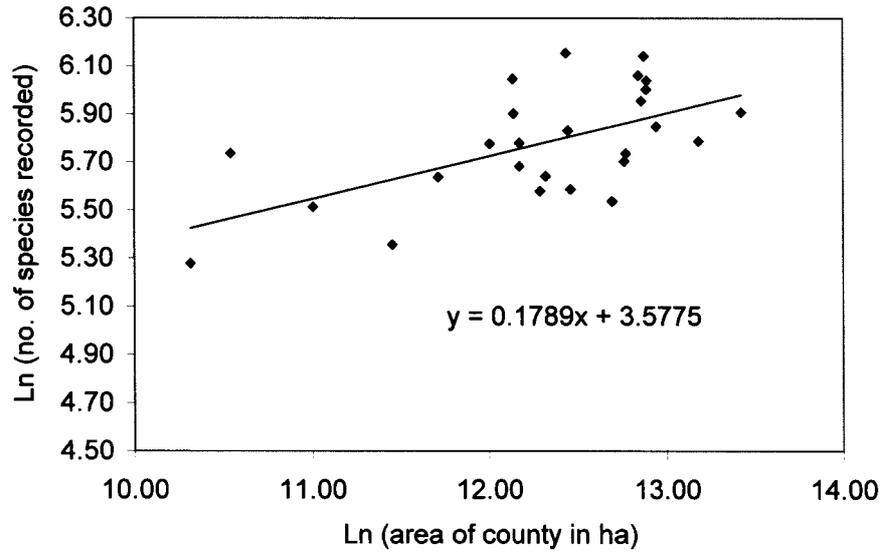
**Scatter diagram for the whole of Britain**



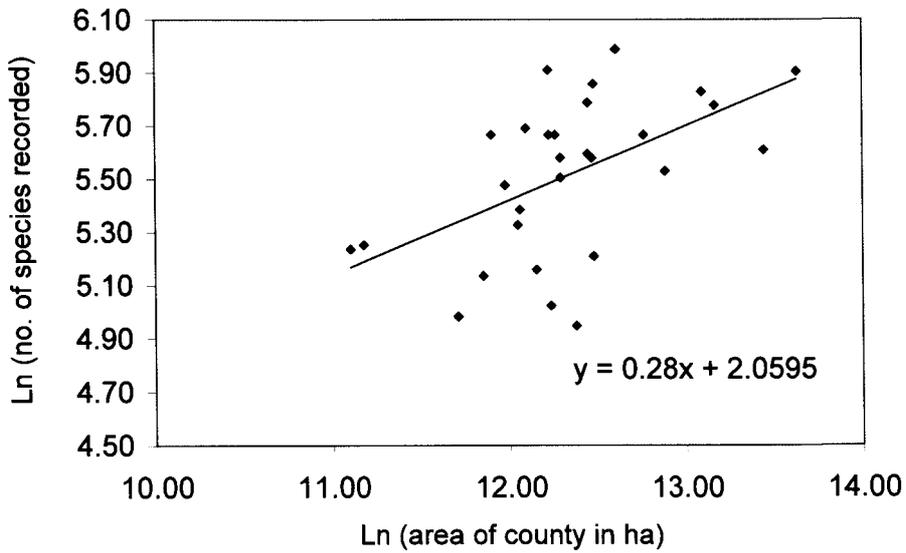
However, counties differ in the variety and amounts of habitats available, particularly in large parts of lowland England where modern agriculture has destroyed much wildlife habitat, and in regions such as the south-east where a high proportion of quality wildlife habitat has been lost to housing, industrial development and road transport improvement schemes.

Also varying elements of the British spider fauna are clearly present or potentially present in different geographical regions of Britain, and this will presumably affect the relationship between area and numbers of species in different regions. I have tried to address this to some extent by dealing separately with separate parts of Britain:

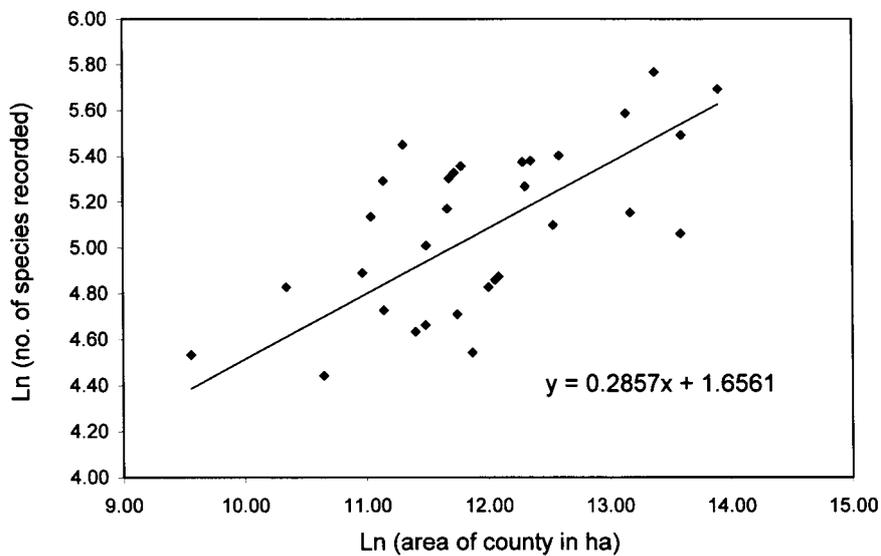
**Graph for counties in England south of a line between the Wash and the Severn**



**Graph for counties in England and Wales north of a line between the Wash and the Severn**



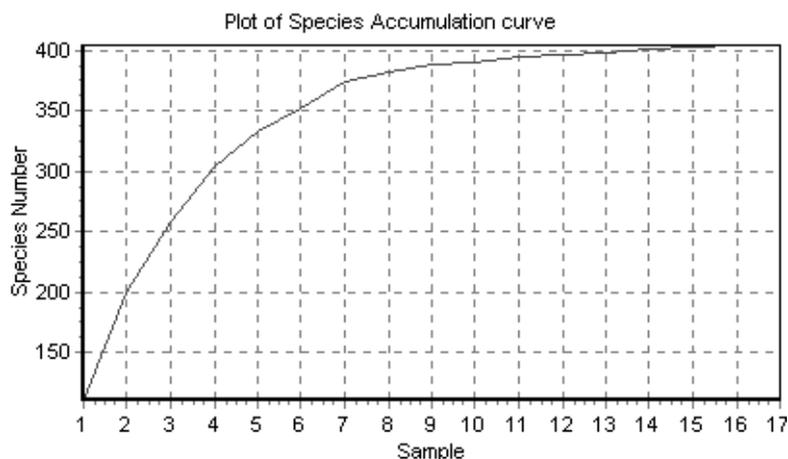
**Graph for Scotland**



## Discussion

These analyses obviously leave a lot to be desired and the use of up-to-date data would be desirable. However there do seem to be some definite relationships shown, which enable some crude conclusions to be drawn and hopefully provide some food for thought. As more counties become thoroughly surveyed for spiders, the trendline may move higher, making the average relationship between the number of species and area greater, and raising the expected number of species to be recorded in each county. Nevertheless the same overall pattern is likely to remain similar and may now then allow a better identification of where species diversity in a county is related to factors other than recording coverage, such as the latitude and its effect on the fauna of the region, the range of habitats available and the effects of modern agriculture on the landscape.

Essex has been pretty thoroughly worked in the last seventeen years or so. An accumulation graph for the county of species data of more than 43,000 records made over the years 1984 to 2000 (samples 1-17) looks like this:



The current total of species reliably recorded for the county is 423, of which there are no modern records for seventeen species. This leaves modern records for 406 species and even one of these is known from only one site which has now been destroyed, and several others are under extreme threat. It would appear that the species total for Essex may well be pretty close to complete (a dangerous and provocative statement I know!). Although it is true that Essex has coastal habitats which many other counties do not have, a very great proportion of the county is heavily affected by modern agricultural practices, with little decent wildlife habitat left apart from ancient woodlands isolated by arable fields. Even a large proportion of the coastal grasslands and seawalls have been extensively degraded over the last half century. This may therefore suggest that other southern counties should be able to compare favourably with Essex. In this respect it is of interest to examine the data for counties south of a line between the Wash and the Severn:

Traditional counties	Area (ha)	no. spider		Ln (no. spp.)	predicted no. spp.	difference between actual and predicted
		spp.	Ln (area)			
Gloucs	325700	254	12.69	5.54	347	-93
Hunts	94700	212	11.46	5.36	278	-66
Northamptonshire	258400	267	12.46	5.59	333	-66
Herefordshire	218100	265	12.29	5.58	323	-58
Norfolk	531900	326	13.18	5.79	379	-53
Wilts	348300	300	12.76	5.70	351	-51
Cambs	224600	282	12.32	5.64	325	-43
Cornwall	351400	310	12.77	5.74	352	-42
London	30300	196	10.32	5.28	227	-31
Devon	676500	368	13.42	5.91	395	-27
Oxfordshire	193900	294	12.18	5.68	316	-22
Somerset	417800	347	12.94	5.85	363	-16
Beds	122600	281	11.72	5.64	291	-10
Middx	60200	248	11.01	5.51	256	-8
Bucks	194000	324	12.18	5.78	316	8
Leics & Rutland	254900	341	12.45	5.83	332	9
Herts	163700	323	12.01	5.78	307	16
Suffolk	383800	386	12.86	5.96	357	29
Kent	394900	405	12.89	6.00	359	46
Berks	187700	366	12.14	5.90	314	52
Essex	395800	423	12.89	6.05	359	64
IOW	38100	310	10.55	5.74	236	74
Sussex	377400	429	12.84	6.06	356	73
Hampshire	389400	465	12.87	6.14	358	107
Surrey	186900	423	12.14	6.05	314	109
Dorset	252400	471	12.44	6.15	331	140

An improvement in the accuracy of an analysis might be obtained by looking not just at all species recorded in each county, but also the occurrence of certain groups of species within their geographical range. Archer (1997) has divided the aculeate Hymenoptera into six statuses based not only on the number of 10km squares from which they have been recorded, but also their geographical range in Britain. He has the following categories: **Very Rare** – found in 1-15 10km squares, 1970 onwards (similar to Red Data Book statuses). **Rare** – found in 16-30 10km squares, 1970 onwards (similar to Nationally Scarce Notable A species). **Scarce** – found in 31-70 10km squares, 1970 onwards (similar to Nationally Scarce Notable B species which are found in 31-100km squares, 1970 onwards). (Southern) **Restricted**, found in more than 70 10km squares, 1970 onwards, and in the Institute of Terrestrial Ecology (ITE) Land Classification groups 1 and 2 (Southern Lowlands, South-West and Southern Coasts). (Southern) **Widespread** – found in more than 70 10km squares, 1970 onwards, and in the Institute of Terrestrial Ecology (ITE) Land Classification groups 3 and 4 (Midland Lowlands, and Central Coasts) as well as groups 1 and 2. **Universal** – found in more than 70 10km squares, 1970 onwards and further ITE Land Classification Groups, particularly 7 and 8 (Northern Lowlands and North-Western Seaboard). Archer has not so far investigated northern restricted and northern widespread species, but these categories might be more obviously applicable to our spider fauna than the aculeate Hymenoptera.

This idea could be very usefully applied in some form to British spiders, not only as a form of quality coding for the assessment and comparison of site fauna, but also in the investigation of the numbers of species recorded in different counties and different regions of Britain.

There are some definite mismatches between traditional county areas which I could obtain by reference to the library and the counties used in Locket, Millidge and Merrett, and there are figures which I could not obtain. These are listed below. If anyone can help complete gaps I should be very grateful. Many of these problems might become solved by the use of the Watsonian vice counties and the species data which will become available in the BRC dataset.

County	Area (ha)	No. spp. recorded	County	Area (ha)	No. spp. recorded
Cumbria		326	Clyde Isles		206
E.Yorks		354	Hebrides		99
S.Yorks	156000		Islay & Jura		81
Isle of Man		218 (in 1998)	Mull		63
Buteshire	56500		Skye		176

I would welcome additional information and comments from readers.

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