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Natural Resources Wales

A review of the scarce and threatened spiders (Araneae) of Great Britain: Species Status No.22

P. Harvey, M. Davidson, I. Dawson, A. Fowles, G. Hitchcock, P. Lee, P. Merrett, A. Russell-Smith and H. Smith.

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We work to support Wales' economy by enabling the sustainable use of natural resources to support jobs and enterprise. We help businesses and developers to understand and consider environmental limits when they make important decisions.

We work to maintain and improve the quality of the environment for everyone and we work towards making the environment and our natural resources more resilient to climate change and other pressures.

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- Having a well resourced proactive programme of evidence work;
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Contents

List of Figures

List of Tables

1. Crynodeb Gweithredol

Mae corynnod yn gydran bwysig o ecosystemau tir Prydain, felly mae'n hanfodol cael ymwybyddiaeth o'r materion cadwraeth y maen nhw'n eu hwynebu. Mae'r adolygiad hwn yn asesu'r perygl o ddifodiant, ar sail Categorïau Rhestr Goch yr Undeb Rhyngwladol dros Gadwraeth Natur (IUCN), ar gyfer rhywogaethau a gofnodwyd ym Mhrydain ac a ystyrir yn gymwys i'w hystyried o dan feini prawf yr IUCN. Y bwriad yw y bydd y rhestr hon yn gallu cael ei defnyddio fel un o'r offerynnau ar gyfer blaenoriaethu camau gweithredu cadwraeth, gan gynnwys gwaith ymchwil pan na fydd digon o ddata neu pan fydd y data'n amhendant.

Yn ogystal â hyn, mae'r adolygiad hwn, am y tro cyntaf, yn cyflwyno 'rhestr oren' ar gyfer rhywogaethau o gorynnod sydd wedi dirywio'n sylweddol ond sy'n parhau i fod yn gymharol gyffredin. Ni chredir bod ansawdd y data sydd ar gael ar gyfer corynnod yn ddigonol i gyfiawnhau statws bygythiad yr IUCN i'r rhywogaethau hyn, ond mae'r rhestr yn ddefnyddiol o ran amlygu'r rhywogaethau mewn perygl o fod yn gymwys i gael statws bygythiad os bydd y tueddiadau presennol yn parhau, a'r angen am waith ymchwil ac arolygon wedi'u targedu. Mae'r adolygiad hefyd yn dyrannu corynnod i'r categorïau penodol yn y DU, Prinder Cenedlaethol ac Anfynych yn Genedlaethol, sy'n seiliedig ar ddosbarthiad cyfyngedig yn hytrach nag ar asesiad o risg. Mae'r asesiadau yn defnyddio data o'r Cynllun Cofnodi Corynnod Cenedlaethol ar gyfer Cymru, Lloegr a'r Alban sy'n cynnwys y cyfnod hyd at ddiwedd 2013. Maent yn seiliedig ar ddosbarthiadau, newidiadau dosbarth, bygythiadau yn y gorffennol, ac asesiad ar a yw'r bygythiadau hyn, neu rai newydd, yn debygol o gyflwyno risg yn y dyfodol.

Er nad yw'r rhan fwyaf o gorynnod angen deiet arbenigol, gallai fod angen cynefin penodol iawn arnynt, a gallent hyd yn oed fod yn gyfyngedig i ficrogynefin penodol iawn o fewn cynefinoedd ehangach cydnabyddedig. Awgryma ein gwybodaeth gynyddol am ecoleg corynnod fod ceisio darogan tueddiadau'r dyfodol gan ddefnyddio'r cynefinoedd sydd ar gael yn cyflwyno lliaws o broblemau.

Dylai'r statws IUCN a ddynodir gael ei ystyried yn arwydd o'r risg y bydd rhywogaeth yn difodi yn y dyfodol, ar sail y wybodaeth orau sydd ar gael ar y pryd. Mae'n anochel na fydd digon o ddata yn bodoli ar nifer o rywogaethau prin, yn enwedig y rheini mewn cynefinoedd na chânt eu harolygu rhyw lawer neu gynefinoedd na ellir eu cyrraedd a/neu'r rheini â dosbarthiad cyfyngedig iawn. Mae gwaith diweddar wedi'i dargedu gan Gymdeithas Arachnolegol Prydain a chyrff anllywodraethol eraill wedi darparu data o ansawdd uchel ar nifer o rywogaethau, ond mae angen gwneud rhagor o waith i egluro statws cadwraeth eraill.

Yn yr adolygiad hwn:

- Pennir bod tair rhywogaeth wedi Diflannu'n Rhanbarthol
- Mae pum rhywogaeth arall wedi'u nodi fel rhai Mewn Perygl Difrifol, ac mae'n bosibl fod y rhain hefyd wedi Diflannu'n Rhanbarthol
- Pennir bod 13 o rywogaethau Mewn Perygl Difrifol
- Pennir bod 30 o rywogaethau Mewn Perygl
- Mae 54 o rywogaethau wedi cael statws Agored i Niwed
- Mae 29 o rywogaethau eraill wedi cael statws Mewn Perygl Agos

Mae’r gyfran o gorynnod Prydain brodorol sydd mewn bodolaeth a neilltuwyd i un o'r tri chategori bygythiad mwyaf – Mewn Perygl Difrifol (gan gynnwys rhywogaethau a allai fod wedi Diflannu o Bosibl), Mewn Perygl, ac yn Agored i Niwed – bron yn 16%. Pan gynhwysir Mewn Perygl Agos, mae hyn yn cynyddu i 20%, neu un rhan o bump o'r rhywogaethau. Cafodd cadwraeth corynnod ei hesgeuluso am lawer o flynyddoedd, yn yr un modd â chadwraeth llawer o dacsonau infertebrata, ond gellir dangos eu bod yr un mor agored i niwed i ddiraddiant a cholled cynefin ag unrhyw dacson arall. Mae'r adolygiad hwn yn amlygu'r angen daer i roi mwy o sylw i gadwraeth corynnod, ac i'r gwaith ymchwil ac arolygu sydd ei angen i wneud hyn.

2. Executive Summary

Spiders form an important component of British terrestrial ecosystems and as such an awareness of the conservation issues they face is vital. This review assesses the threat of extinction, based on IUCN Red List Categories, for the species recorded in Britain and considered eligible for consideration under those IUCN criteria. The intention is that this list can be used as one of the tools for prioritising conservation action, including research where data are lacking or inconclusive.

In addition, this review introduces, for the first time, an 'Amber list' for spider species that have undergone substantial decline but that still remain relatively common. The quality of data available for spiders is not thought adequate to justify the allocation of IUCN threat status to these species but the list serves to highlight both the species at risk of qualifying for threat status if current trends continue, and the need for targeted research and surveys. The review also allocates spiders to the GB-specific categories Nationally Rare and Nationally Scarce, which are based on restricted distribution rather than on an assessment of risk.The assessments use data from the National Spider Recording Scheme for England, Scotland and Wales that covers the period up until the end of 2013. They are based on distributions, changes in distribution, past threats, and an assessment of whether these, or newly emerging threats, are likely to pose future risk.

Spiders, whilst for the most-part non-specialist with regard to their diet, may be very habitat-specific, and indeed may be restricted to a very specific microhabitat within recognised broader habitats. Our increasing knowledge of spider ecology suggests that trying to predict future trends using habitat availability is fraught with problems.

The IUCN statuses assigned should be considered an indication of the risk of a species becoming extinct in the future, based on the best information currently available. Inevitably there are a number of rare species for which data are lacking, particularly those of poorly surveyed/inaccessible habitats and/or those with a very restricted distribution. Recent targeted work by the British Arachnological Society and other NGOs has provided high quality data for a number of species, but further work is needed to clarify the conservation status of others.

In this review:

- Three species are determined to be Regionally Extinct
- A further five species are identified as Critically Endangered with a possibility that they are also Regionally Extinct
- Thirteen species are determined to be Critically Endangered
- Thirty species are determined to be Endangered
- Fifty-four species are assigned Vulnerable status
- A further 29 species are assigned Near Threatened status

The proportion of the extant native British spider fauna assigned to one of the three main threat categories (Critically Endangered (including Possibly Extinct species), Endangered, and Vulnerable) is almost 16%. Including Near Threatened, this rises to 20%, or one fifth, of species. The conservation of spiders, like that of many invertebrate taxa, was neglected for many years, but it can be demonstrated that

they are just as vulnerable to habitat degradation and loss as any other taxon. This review highlights the pressing need for greater attention to be paid to spider conservation, and to the research and survey work needed to underpin it.

3. Introduction to the Species Status Reviews

3.1. The Species Status project

The Species Status project is a recent initiative, providing up-to-date assessments of the threat status of taxa using the internationally accepted Red List guidelines developed by the International Union for Conservation of Nature (IUCN); (IUCN, 2012a; 2012b; IUCN Standards and Petitions Subcommittee, 2013, 2014). It is the successor to the Joint Nature Conservation Committee (JNCC) Species Status Assessment project (http://jncc.defra.gov.uk/page-3352) which ended in 2008. This publication is one in a series of reviews to be produced under the auspices of the new project.

Under the Species Status project, the UK's statutory nature conservation agencies, specialist societies and NGOs will initiate, resource and publish Red Lists and other status reviews of selected taxonomic groups for Great Britain which will then be submitted to JNCC for accreditation (http://jncc.defra.gov.uk/page-1773). This means that the UK's statutory nature conservation agencies and JNCC will be able to publish Red Lists. All publications will explain the rationale for the assessments made. The approved threat statuses will be entered into the JNCC spreadsheet of species conservation designations (http://jncc.defra.gov.uk/page-3408).

3.2. The status assessments

This review adopts the procedures recommended for the regional application of the IUCN threat assessment guidelines which can be viewed at IUCN (2012b). Section 4 and Appendix 1 provide further details. This is a two-step process, the first identifying the taxa threatened in the region of interest using information on the status of the taxa of interest in that region (IUCN, 2014), the second amending the assessments where necessary to take into account interaction with populations of the taxon in neighbouring regions (IUCN Standards and Petitions Subcommittee, 2014). In addition, but as a separate exercise, the standard GB system of assessing rarity, based solely on distribution, is used alongside the IUCN system.

3.3. Status assessments other than Red Lists for species in Britain

Sound decisions about the priority to attach to conservation action for any species should primarily be based upon objective assessments of the degree of threat to the survival of a species. This is conventionally done by assigning the species to one of the IUCN threat categories although the IUCN (2014) point out that a category of threat is often not sufficient to determine priorities for conservation action. However, the assessment of threats to survival should be separate and distinct from the subsequent process of deciding which species require action and what activities and resources should be allocated.

3.4. Species status and conservation action

Making good decisions to conserve species should primarily be based upon an objective process of determining the degree of threat to the survival of a species, in the present exercise by assigning the species to one of the IUCN threat categories. This assessment of threats to survival should be separate and distinct from the subsequent process of deciding which species require action and what activities and resources should be allocated.

When making decisions as to which species should be treated as priorities for conservation action, factors to be considered other than IUCN threat category include: the likely chances of recovery being achieved; the cost of achieving recovery (and whether sources of funding are available or likely to be available); the benefits to other threatened species of a recovery programme; the fit of a recovery programme with other conservation activities (including conservation actions to be taken for habitats); the likely gains for the profile of conservation; and the relationship and fit between national and international obligations. Under the UK Biodiversity Action Plan a list of priority species has been identified as a focus for conservation effort which has subsequently been used as the basis for country-level lists in England, Scotland and Wales. In addition, certain species are legally protected in Great Britain under legislation such as the Wildlife and Countryside Act 1981, and British wildlife legislation is overlaid by international directives such as the Habitats Directive (Directive 92/42/EEC). Threat assessments and rarity assessments also underlie the criteria used for protected site selection and qualifying species can then be considered as protected interest features on the site.

4. Introduction to the Spider Review

Spiders are ubiquitous terrestrial predators, having colonised all terrestrial niches from the littoral zone to mountaintops and from Arctic islands to deserts. While accurately expressing the role they play in ecosystems is nigh-on impossible, this has not stopped the more ambitious arachnologists from trying; from Turnbull's (1973) calculation of 47,500Kg of prey consumed by one hectare of spiders in one year to Bristowe's (1958) assertion that the weight of insects consumed annually by spiders in Britain exceeds that of the human inhabitants. While neither of these estimates can be considered reliable (not least because of the increase in the human population and decrease in semi-natural habitats that has been observed since Bristowe's time – see also Nyffler, 2000), there is no doubt amongst ecologists that spiders are an extremely important element in terrestrial ecosystems, perhaps only eclipsed by ants in certain tropical biotopes. The more direct economic importance of spiders has not been ignored, with some species recognised as important pest control agents. Many, more recent, studies have investigated their ability to 'balloon' into agroecosystems that traditional pest control agents have difficulty colonising (e.g. Blandenier & Fürst, 1998; Pearce *et al*., 2005).

Whilst many spider species are very common, a substantial proportion of Britain's species are under threat and even more warrant conservation concern. Major and well documented changes in land use, and particularly the loss of semi-natural habitats and intensification of agriculture, that characterised the second half of the 20th Century (Robinson & Sutherland 2002; UK NEA 2011), are likely to have had major impacts on many spider species and particularly on less mobile species and habitat specialists.

While the pace of these changes has slowed in the 21st Century and their impacts have been to some extent mitigated by improvements in environmental protection (e.g. Natural England, 2009), new threats are emerging that are less amenable to mitigation. Climate change is undoubtedly the foremost of these. Warming temperatures pose an immediate and obvious threat to high montane species, such

as *Palliduphantes antroniensis*, which risk running out of suitable habitat. Rising sea levels and an increasing frequency of storms threaten species of coastal habitats as salt marshes, cliffs and dunes are lost, and major areas of freshwater habitat in coastal areas are threatened by salinisation. More subtle effects that are difficult to detect may include competitive exclusion of some species by others as ranges shift and new colonists are able to establish.

Nutrient inputs are predicted to be one of the three major drivers of biodiversity loss this century (Sala *et al*., 2000). Anthropogenic activity has doubled global phosphorus liberation and plant-available nitrogen during the past 50 years (Tilman *et al*., 2001; Vitousek *et al.,* 1997), and in the UK there is evidence that chronic nitrogen deposition has resulted in significant and substantial reductions in plant species richness (Stevens *et al*., 2004) and diversity (Britton *et al*., 2009).These changes in the composition and resulting physical structure of plant communities are likely to have significant impacts on many spider species.

The increasing frequency of arrival in the UK of both pathogens and herbivorous insects that have the potential to devastate trees and herbaceous species (NNSS, 2008) poses a further threat to spider species that live on them or in the habitats they provide. Diseases of Juniper and Scots Pine, for example, could have devastating effects on already threatened species such as *Dismodicus elevatus* and *Robertus scoticus*.

This review uses data from the National Spider Recording Scheme to assess the threat of extinction, based on IUCN Red List Categories, for all long-term native species in this large and important taxon in England, Scotland and Wales. These species are also evaluated against other measures of conservation concern and of rarity.

4.1. Previous reviews

Conservation and threat statuses were first applied to British invertebrates in the early 1980s as an essential component of the Nature Conservancy Council's Invertebrate Site Register project. The first account of threatened British spiders was included in the *British Red Data Book* (Bratton, 1991). This listed 86 spiders, all with data sheets: 22 as Endangered, 31 as Vulnerable, 26 as Rare and seven as Insufficiently Known. The publication of *A review of the Nationally Notable spiders of Great Britain* (Merrett, 1990) also presented species accounts of spiders assigned to Nationally Notable (now termed Nationally Scarce) categories for all 625 species then on the British list.

Spiders have only started to receive the attention deserved by such a large and ecologically important taxon during the past 60 years. The publication of *British Spiders* (Locket & Millidge 1951, 1953; Locket *et al*., 1974), and the formation in 1958 of the Flatford Mill Spider Group, which became The British Spider Study Group and subsequently developed into the British Arachnological Society, provided a firm impetus for the study of arachnology in the last half of the 20th Century. The publication of a photographic field guide by Dick Jones (Jones 1983, 1989) and then the massively important modern identification work by Michael Roberts (Roberts 1985, 1987) provided arachnologists with additional tools to identify reliably most species of spider found in Britain.

Following the county lists provided by Bristowe (1939, 1941) in the *Comity of Spiders*, Dr Peter Merrett initiated the mapping of the distribution of British spiders on an administrative county basis in Locket *et al*., (1974) and has periodically published New County Record updates in the *Bulletin of the British Arachnological Society*. However, it was the formation of the Spider Recording Scheme in 1987 and the remarkable enthusiasm and energy of the late Clifford Smith that has been instrumental in encouraging the active support of arachnologists and increasing the numbers of recorders. In the first fourteen years of recording (1987-2000), over 1500 volunteers contributed more than 517,000 records. Overall coverage of Britain is good although, not surprisingly, it is patchy with a number of counties intensively recorded whilst other areas remain more poorly covered. At the end of the first phase of the scheme, provisional maps with species accounts and phenology charts were published in the *Provisional Atlas of British Spiders* (Harvey *et al*., 2002). The Spider Recording Scheme (SRS) website (http://srs.britishspiders.org.uk/) was launched in 2010 and provides maps and ecological and phenological data for all British spider species.

4.2. The new review

This review covers 645 British species in the Araneae check list published in 2000 by Merrett & Murphy, plus a further 19 species recorded in Britain since then (Merrett *et al*., 2014). Twenty-five species considered introduced or recent colonists are included in the spreadsheet but excluded from assessment (see section 5.1.1 and 7.6). Merrett *et al*. (2014) considered the native British Araneae to comprise 34 families (Agelenidae, Amaurobiidae, Anyphaenidae, Araneidae, Atypidae, Clubionidae, Corrinidae, Cybaeidae, Dictynidae, Dysderidae, Eresidae, Gnaphosidae, Hahniidae, Linyphiidae, Liocranidae, Lycosidae, Mimetidae, Nesticidae, Oonopidae, Oxyopidae, Philodromidae, Pholcidae, Pisauridae, Salticidae, Scytodidae, Segestriidae, Sparassidae, Tetragnathidae, Theridiidae, Theridiosomatidae, Thomisidae, Uloboridae, Zodariidae, Zoridae).

The data used in this status review combine the Provisional Atlas data and new data, in excess of 950,000 records. The review covers Great Britain (i.e. England, Scotland and Wales), together with the Isle of Man, but excludes the Channel Islands and Ireland (The Republic of Ireland and Northern Ireland). Records up to the end of 2013 are included; more recent records are shown on the SRS website (above). Where we were aware of records after this period they were considered when it had a bearing on the status assigned – for example, the rediscovery of *Hypsosinga heri* in 2014, after a gap of 102 years. These records were not incorporated into the hectad figures shown in the spreadsheet and appendix however. The review does not include records from sources other than the SRS owing to the difficulty of verification.

4.3. Nomenclature

Nomenclature is intended to be as up-to-date as possible, and uses the most recent Araneae check list for Britain (Merrett *et al*., 2014); users should refer to that document for nomenclatural changes since Bratton (1991) and Merrett (1990).

5. The IUCN threat categories and selection criteria as adapted for Invertebrates in Great Britain

5.1. Summary of the 2001 Threat Categories

It is necessary to have a good understanding of the rationale behind red listing and the definitions used in the red listing process. This is because these definitions may differ from standard ecological definitions e.g. 'populations' or have very specific meanings e.g. 'inferred'. Details regarding methods and terminology are contained in the Guidelines for Using the IUCN Red List Categories and Criteria IUCN 2014; http://www.iucnredlist.org/documents/RedListGuidelines.pdf). This is summarised without any detail in IUCN Red List Categories and Criteria: Version 3.1 (IUCN 2012a). The procedure for assessing taxa at a regional level differs from that at a global level and is summarised in the Guidelines for Application of IUCN Red List Criteria at Regional and National Levels IUCN (2012b).

A brief outline of the revised IUCN criteria and their application is given below. The definitions of the categories are given in Table 1 and the hierarchical relationship of the categories in Figure 1.

Table 1. Definitions of IUCN threat categories (from IUCN, 2012b with a more specific definition for regional extinction).

REGIONALLY EXTINCT (RE) A taxon is Extinct when there is no reasonable doubt that the last individual has died. In this Review the last date for a record is set at fifty years before publication. **CRITICALLY ENDANGERED (CR)** A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Appendix 2). **ENDANGERED (EN)** A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Appendix 2). **VULNERABLE (VU)** A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Appendix 2). **NEAR THREATENED (NT)** A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for, or is likely to qualify for, a threatened category in the near future. **LEAST CONCERN (LC)** A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category. **DATA DEFICIENT (DD)** A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its

biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened classification is appropriate.

NOT EVALUATED (NE)

A taxon is Not Evaluated when it is has not yet been evaluated against the criteria.

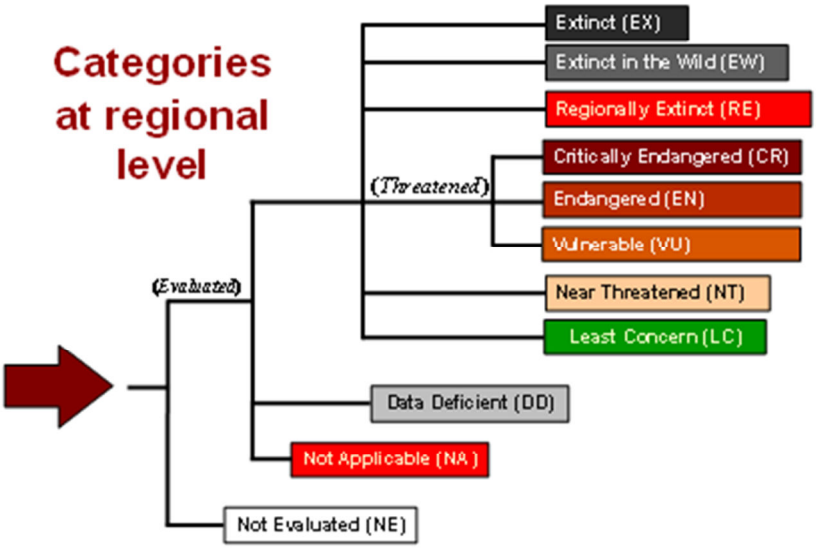

Figure 1. Hierarchical relationships of the categories (adapted from IUCN, 2012b)

Taxa listed as Critically Endangered, Endangered or Vulnerable are defined as Threatened taxa. For each of these threat categories there is a set of five main criteria A-E, that reflect varying degrees of threat of extinction, with a number of sub-criteria within A, B and C (and an additional sub-criterion in D for the Vulnerable category), any one of which qualifies a taxon for listing at that level of threat. A taxon therefore need not meet all of the criteria A-E, but must be tested against all five criteria. The taxon should then be listed against the highest threat category for one or more of the five criteria. The qualifying thresholds within the criteria A-E are detailed in Appendix 2: IUCN Criteria and Categories.

Status evaluation procedure relies on an objective assessment of the available evidence. Understanding data uncertainty and data quality is essential when applying the criteria. However, it is not always possible to have detailed and relevant data for every taxon. For this reason, the Red List Criteria are designed to incorporate the use of inference and projection, to allow taxa to be assessed in the absence of complete data. Although the criteria are quantitative in nature, the absence of high-quality data should not deter attempts at applying the criteria. In addition to the

quality and completeness of the data (or lack of), there may be uncertainty in the data itself, which needs to be considered in a Red List assessment (data uncertainty is discussed in section 7.2; IUCN, 2014). The IUCN criteria use the terms Observed, Estimated, Projected, Inferred, and Suspected to refer to the quality of the information for specific criteria and the specific IUCN red list definitions of these terms was used (see section 7.2; IUCN, 2014).

The guidelines stipulate/advise that a precautionary approach should be adopted when assigning a taxon to a threat category and this should be the arbiter in borderline cases. The threat assessment should be made on the basis of reasonable judgement, and it should be particularly noted that it is not the worst-case scenario that will determine the threat category to which the taxon will be assigned.

5.1.1. The use of the Not Applicable category

A taxon may be Not Applicable (NA) when it occurs in a region but is not included in the regional assessment. A taxon may be NA because it is not a wild population or not within its natural range in the region, or because it is a vagrant to the region. This category is used for species where the evidence suggests that the species concerned are not long-term natives, either as a result of accidental importation through trade and travel, or of recent colonisation (or attempted colonisation) in response to the changing conditions available in Britain as a result of human activity and/or climate change.

5.1.2. The use of the Near Threatened category

The IUCN guidelines recognise a Near Threatened category to identify taxa that need to be kept under review to ensure that they do not further decline to become Threatened. This category would be best considered for those taxa that come close to qualifying as CR, EN or VU but not quite; i.e. meets many but not all of the criteria and sub-criteria and there is ongoing threat. For those criteria that are not quite met, there should be sufficient evidence to show that the taxon is close to the relevant threatened thresholds.

5.1.3. The two-stage process in relation to developing a Red List

The IUCN regional guidelines (IUCN, 2012b) indicate taxa should be assessed using a two-stage approach. Populations in the region under review should firstly be assessed using the global guidelines. That status should then be reassigned a higher or a lower category if their status within the region is likely to be affected by emigration or immigration (IUCN, 2012b).

5.2. Application of the Guidelines to Spiders

5.2.1. Use of criteria in this review

The IUCN process requires that each species is evaluated against all five criteria.

Criterion A:

British invertebrate data have usually been collected since the 19th century in a presence-absence form. Often there is only enough information to identify the median point in the numbers of records gathered and compare these two periods (pre- and post median). Sometimes the data are more comprehensive and can be grouped into several 10 year periods e.g. 1985 – 1996 and so forth). Few species

have sufficient data required for the use of Criterion A, Population Size Reduction, based on population estimates but this Criterion is usually applied with respect to invertebrates in Britain on the basis of inferred, estimated, or suspected declines in range or habitat extent. Criterion A has not been used in this review.

Criterion B:
The Invertebrate Inter Agency Working Group has defined the following for the use of B2bii which is commonly used in reviews. Continuing decline has to be demonstrated and proven that it is not an artefact of under-recording. If decline is demonstrated then the reviewer needs to consider whether or not B2a (and B2c if the data are present) is met:

- If 10 or less current localities then Critically Endangered, Endangered, or Vulnerable is applicable;
- If 11 or 12 current localities then Near Threatened applies;
- If 13-15 and the taxon can be shown to be vulnerable to a specific and realistic threat, then Near Threatened applies;
- If more than 15 locations then Least Concern applies.

Criterion C:
Very few spiders have been sufficiently well-studied in Britain to be confident about their population dynamics. It is certainly feasible that some of the rare species are represented by fewer mature adults than the upper threshold of 10,000 individuals, but where this information exists (*Eresus sandaliatus*, for instance) the taxa do not qualify under the rate of decline. Criterion C has only been used once.

Criterion D:
As with Criterion C, the lack of population data for most British spiders precludes the use of Criterion D. This has been applied to a single taxon, *Orchestina* sp. which may now be Extinct, as very few individuals were known from the very limited extent of habitat it was known to occupy. However, 32 species have been evaluated under Criterion D2 as they occur in five or less locations that face plausible threats to their populations.

Criterion E:
It was not possible to use Criterion E, Quantitative Analysis, as the current data do not allow for determining the probability of extinction using population modelling.

5.2.2 Scale for calculating decline and area

The IUCN have recommended a scale of 4km^2 (a tetrad) as the reference scale (IUCN, 2014). This needs to be applied with caution and there will be instances where a different scaling may be more applicable, or where attempting to apply any scale is extremely difficult. It should be noted that, historically, invertebrate datasets, used hectads (10km^2) as the default scale. Old records (e.g. pre-1950) have only been recorded at this scale. This means that, for some taxa, including spiders (see Section 7.3), comparative declines can only be made at this scale. Hectads are also used to determine the Great Britain Rarity Status, and are therefore still usefully recorded. For rarer, more restricted, taxa the tetrad is more applicable, in particular those taxa which may occur on a few fragmented sites within the UK and/or which are often restricted to certain, well-defined habitat types that are easily identified.

Future reviews should make efforts to record all taxa at both the hectad and tetrad scale.

Rate of Decline is used in Criteria A, B & C to assess Threat Status. For Criterion A and C1 a decline threshold is related to a specific number of years. For Criterion A it is precisely ten years, and for Criterion C1 precisely 3, or 5 or 10 years (exceptionally up to 100 years for long-lived species such as the Freshwater pearl mussel *Margaritifera margaritifera*).

5.2.3 Taxa applicable to this review

Taxa with wild populations within their natural range in Britain were considered for review. All other taxa deemed to be ineligible for assessment at a regional level, e.g. non-natives, were placed in the category of 'Not Applicable (NA)' and included recent colonists (or attempted colonists) responding to the changing conditions available in Britain as a result of human activity and/or climate change.

5.2.4 Knowledge about immigration and emigration effects for this group

Spiders can disperse by several mechanisms although propensity to disperse varies considerably between species and between age-groups. The first, and most frequent mechanism, involves 'ballooning' in wind currents on the end of silk threads. Ballooning behaviour is encountered in most groups of spiders although it is commoner in some than in others. It is most frequent amongst small spiderlings but also encountered in small adults of some species, as well as in some larger spiders. Ballooning spiders may travel considerable distances but only a tiny minority cover distances measured in kilometres while most travel only a few hundred metres (Suter 1999; Thomas *et al.*, 2003).

A second potential dispersal mechanism is by inadvertent transport by humans. The scale of transport of goods and people between the UK and continental Europe makes this an increasing possibility. The most likely candidates for this are synanthropic species which are normally found in or close to buildings and the probability of such species establishing successfully following importation is likely to increase as a result of climate change. Finally, spiders can occasionally disperse by 'rafting' across sea barriers from one land mass to another. However, the distribution of sea currents around our coasts makes this is a highly improbable method for the introduction of species to Britain.

Our nearest potential source population in Europe is France. Le Peru's (2007) catalogue shows that the wolf spider *Aulonia albimana*, for example, is widespread and relatively frequent throughout France, yet despite being of reasonable size and conspicuously different to all other British lycosids only two populations of this species have ever been found in Britain. One of these is now extinct and the second has not been recorded since 1985. This example suggests that the likelihood of threatened spider species recolonising from the near-continent is low. It should also be noted that the much of the near-continent is under intensive arable agriculture, a habitat which is unfavourable to all but a tiny minority of spiders listed as threatened in this review.

6. GB Rarity Status categories and criteria

At the national level, countries are permitted under the IUCN guidelines to refine the definitions for the non-threatened categories and to define additional ones of their own. The Nationally Rare and Nationally Scarce categories are unique to Britain. Broadly speaking, the Nationally Rare category is equivalent to the Red Data Book categories used by Bratton (1991), namely: Endangered (RDB1), Vulnerable (RDB2), Rare (RDB3), Insufficiently Known (RDBK) and Extinct. These are not used in this review. The Nationally Scarce category is directly equivalent to the combined Nationally Notable A (Na) and Nationally Notable B (Nb) categories used in the assessment of various taxonomic groups (e.g. by Hyman and Parsons (1992) in assessing the status of beetles). For the purposes of this review, the following definitions of Nationally Rare and Nationally Scarce have been applied:

Table 2: Great Britain Rarity Status

Nationally Rare	A native species recorded from between 1- 15 hectads of the Ordnance Survey national grid in Great Britain since 1993 and: • There is reasonable confidence that exhaustive recording would not find them in more than 15 hectads. • Where it is believed to occur as a breeding species within each of these hectads (e.g. discounting those that are known to contain only casual immigrants). • This category includes species that are possibly extinct, such as those in the CR(PE) category, but not those where there is confidence that they are regionally extinct (RE).
Nationally Scarce	A native species recorded from between 16 - 100 hectads of the Ordnance Survey national grid in Great Britain since 1993 and: • There is reasonable confidence that exhaustive recording would not find them in more than 100 hectads. • Where it is believed to occur as a breeding species within each of these hectads (e.g. discounting those that are known to contain only casual immigrants).

The choice of the date class as the start of the modern recording period for spiders is discussed in Section 7.2. This national set of definitions is referred to as the GB Rarity Status within this document. Importantly, Nationally Rare and Nationally Scarce are not categories of threat.

6.1. The development of an Amber List for Spiders

A number of variables and probabilities are involved in assessing species' risk of extinction. This risk is a continuum, rather than a discreet categorisation, and indeed

some variation between species of the same status is inevitable. It is therefore unsurprising that there is the potential for extra status categories to enable further discrimination. While proliferation of statuses is undesirable for practical reasons, a non-IUCN status sitting somewhere between Least Concern and Near Threatened was thought useful. To this end, an *Amber List* has been created, consisting of 43 species that are apparently declining but which are still relatively widely distributed. Species on this list do not come close enough to qualifying for an IUCN category to be considered Near Threatened, but have the potential to qualify for Near Threatened in the future if their decline is not understood and/or ameliorated. They are comparable to the list of 'Research Only' Lepidoptera highlighted on the 2007 Review of UK Biodiversity Action Plan Priority Species (JNCC, 2007). The Amber List as presented here can therefore be considered a more pro-active approach to species conservation – prevention rather than cure – than the current IUCN categories. These species deserve attention both through specific monitoring to improve understanding of their status, and the development of more robust analytical methods for the existing data.

7. Methods and sources of information

7.1. The Data

The data used for this review include all those submitted to the Spider Recording Scheme (http://srs.britishspiders.org.uk/) up to the end of 2013. They have been gathered since 1987 and include older records and data gained from literature sources, principally through the work of the late Clifford Smith. Some important modern data for certain species that have not yet been submitted to the recording scheme have been used to help assess status where their extent and relevance is known.

7.2. Assessing Threat

Assessment of decline

Half of the records submitted to the Spider Recording Scheme (SRS) dataset by 2013 were collected before 1993. We use this 50 percentile year as a point of measurement between old and recent data to assess decline in area of occupancy. The numbers of hectads occupied were compared for records up to 1993 with those from 1993 onwards. This comparison was made using only those hectads surveyed both prior to and after 1993 (see Figure 2) to improve comparability of the data in the pre- and post-1993 periods. The IUCN criteria recommend assessment of declines based on data from the last ten years (IUCN, 2013), but this is clearly not feasible for most invertebrate groups and species. The lack of adequately developed statistical methods for assessing decline in data of this sort means that we have had to judge whether reductions in area of occupancy are likely to represent real declines or reflect deficiencies in the data. The most common cause of data-deficiency is likely to be the under-recording of a species. This is most often seen in species that are found in comparatively under-surveyed habitats (uplands, for example) or species that are hard to sample by virtue of their microhabitat preferences, or a combination of these factors. In some cases this decline may be a result of historical surveys of habitats that had not been repeated in the recent period. This is explored in more detail in section 7.4. For a number of species that fall into this category, the status assigned has been based on expert opinion, taking into account the autecology of the species

and known survey effort. This latter consideration proved to be the most problematical, as spider recording is largely undertaken by amateur arachnologists acting independently, and negative survey results are not captured in the SRS dataset. Allocation of criteria based on decline is therefore accompanied in the rationale by explanation of our confidence in the extent of decline, where uncertainty may exist. Where sample sizes were small, as is the case for most of our rarest species, decline data were either not used, or were used in combination with other available information on distributional and habitat changes.

7.3. Assessment of geographic range

In this Review, **Extent of Occurrence** (EOO) has not been used to assess threat categories because there is no agreed methodology for its measurement using the data currently available for spiders. The IUCN recommend calculating EOO by the minimum convex polygon method but its appropriateness is in doubt where distributions and recording effort are patchy, as is the case for spiders and many other invertebrates.

Most of our threat category assessments are based on area of **Area of Occupancy** (AOO), defined as 'the area within the extent of occurrence' which is occupied by the taxon, excluding cases of vagrancy' (IUCN 2001, 2012a). The IUCN recommends the use of a 2 x 2 km grid (tetrad) to estimate AOO. However, for invertebrates recording schemes are usually based on a 10 x 10 km grid (hectad) resolution and the proportion of records at greater resolution varies greatly between recording schemes. Fieldwork for the *Provisional Atlas of British Spiders* (Harvey *et al*., 2002) ensured data collection in a high proportion of Ordnance Survey national grid hectads (Figure 2).

Many records on the SRS database are held at six-figure grid reference resolution and around 98% records are available at tetrad resolution or better. However, systematic field work has not been targeted at tetrad level and national coverage at this level is inevitably poor compared with that at hectad level. Systematic tetrad level data collection is currently only feasible for easily identified taxa with high detectability. For many invertebrate taxa, fieldwork designed in this way would still be unlikely to give reliable presence/absence data, particularly for less common species, because of the many difficulties of detectability.

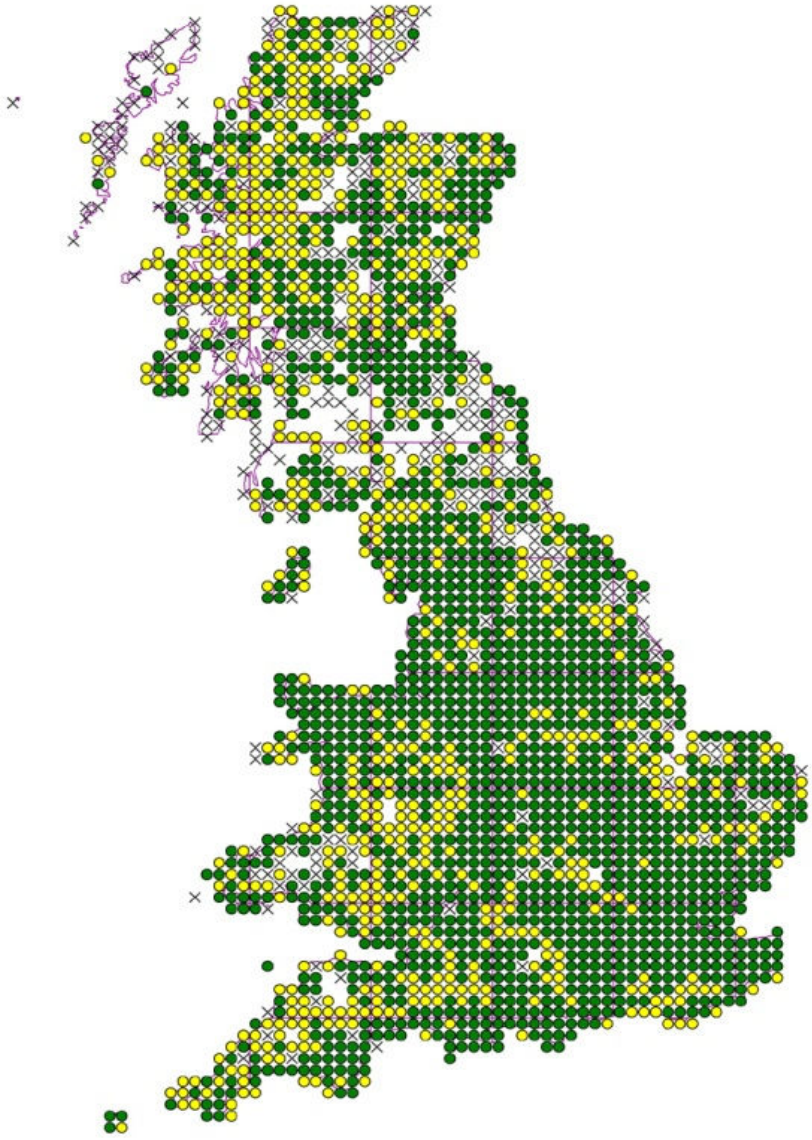

Figure 2. Hectads (10x10km squares) with spider records
x = hectads with records only pre-1993; yellow circles, records only 1993-onwards; green circles, records from both periods

7.4. Allocation of threat status

Each species included in the review has been evaluated against all appropriate IUCN criteria and usually allocated to the highest category supported by the data. Threat categories have not been allocated on the basis of population size reduction or actual numbers of individuals (IUCN criteria A and D1 respectively) because of the obvious difficulty of assessing these for almost all invertebrates. There are no appropriate data for any British spider that allow the use of Criterion E - the quantitative analysis of extinction probability.

For some species, categories have been allocated that are not directly supported by the data alone. Where the data are thought likely to give a misleading picture of a species status, expert opinion has been used to allocate the category and the

reasons for this explained. Moderating judgements of this kind may be based on a range of considerations including:

- temporal variation in survey effort targeted at species or in their habitats. This is particularly a problem when change in status is assessed between two recording periods in which recording effort is known to differ significantly. For example, in the 1960s, a large scale survey of spiders of southern English heathlands was carried out, covering 124 sites from Cornwall to East Sussex. Although targeted surveys have been carried out on southern heathlands post-1993, and particularly between 2010 and 2014, none has been on this scale or intensity.
- species appearance - extremely small species (i.e.< 2.0 mm total length) and pale coloured species, such as *Maro minutus* or *Saloca diceros*, are potentially under-recorded wherever specialised sampling techniques, such as pitfall trapping, have not been employed.
- knowledge of a species' phenology – because spiders can only be identified as adults, species that are adult in the winter months, when recording effort tends to be low, are likely to be under-recorded.
- habitat preferences – species of less accessible habitats, such as bogs and caves, are likely to be under-recorded. This also applies to species with specific micro-habitat preferences, such as rock crevice and ant-hill specialists.
- geographical range – species restricted to remote areas are likely to be under-recorded.
- taxonomic confusion – this may, in a very small number of cases, have resulted in under-recording, for example in closely related species pairs, particularly in cases where there has been a recent taxonomic split, such as *Walckenaeria antica* and *W. alticeps* and *Neon reticulatus* and *N. robustus*.
- application of the precautionary principle, as recommended by the IUCN guidelines (IUCN, 2013).

7.5. Species not allocated to Threat categories

Some of those species close to qualifying for threat categories, but which otherwise might be seen as being of **Least Concern** (LC), have been assigned *Near Threatened* status (Section 2.3: IUCN, 2001, 2012a).

GB Rarity Status – *Nationally Rare and Nationally Scarce* - has been allocated to appropriate species of Least Concern, as well as to species in the Threat categories, on the basis of number of hectads occupied. Exceptions to this have been made where there is good reason to believe that the hectad count is likely to give a misleading impression of rarity because of problems with biases in recording effort and/or detectability.

While strict criteria for inclusion in an *Amber List* have not been standardised between taxa or agreed otherwise, this status has been allocated to species that have undergone substantial declines between the pre- and post-1993 periods but which remain widespread (see also Section 6.1). Species have been included in this

list where biases in recording effort are thought unlikely to be the only cause of the perceived decline, or where the cause of the decline may be unknown. It can also be considered a 'watch list' for species where further survey work is required to confirm under-recording bias or otherwise.

7.6. Species excluded from the review

The IUCN categorization process should only be applied to wild populations inside their natural range (IUCN, 2001, 2012). Taxa deemed to be ineligible for assessment at a regional level are placed in the category of **Not Applicable** (NA) (IUCN, 2012b).

8. The assessments

The key outcome of this Review is a table which lists all spider species recorded in Britain, with naturalised, introduced and vagrant species designated NA. The full table has been produced as a spreadsheet which accompanies this text. Appendix 1 provides an extract of the key data. The columns completed in the full accompanying Excel table are as follows:

A. Species name
B. NBN taxon number
C. Presence in England
D. Presence in Scotland
E. Presence in Wales
F. BAP/S41/S42 status
G. Total number of hectads occupied <1993
H. Total number of hectads occupied 1993-2013
I. Hectads in both periods (dual hectads)
J. Tetrads 1993-2013
K. Numbers of hectads surveyed before and after 1993 in which the species was recorded pre-1993
L. Numbers of hectads surveyed before and after 1993 in which the species was recorded 1993-2013
M. % Change*
N. % Decline*
O. Total hectads all time
P. Proposed GB IUCN Status
Q. Qualifying Criteria
R. Rationale for proposed Status
S. GB Rarity Status
T. Global IUCN status (2010)
U. Amber List
V. Status in Bratton 1991
W. Status in Merrett 1990
X. Concise ecological account
Y. Threats

*Based on K and L

8.1. Species listed by IUCN status category

Regionally Extinct	
Theridiidae	*Dipoena coracina* (C.L.Koch, 1837)
Araneidae	*Gibbaranea bituberculata* (Walckenaer, 1802)
Dictynidae	*Mastigusa arietina* (Thorell, 1871)
Critically Endangered (Possibly Extinct)	
Oonopidae	*Orchestina* sp.
Linyphiidae	*Centromerus albidus* Simon, 1929
	Palliduphantes antroniensis (Schenkel, 1933)
Dictynidae	*Altella lucida* (Simon, 1874)
Philodromidae	*Thanatus formicinus* (Clerk, 1757)
Critically Endangered	
Theridiidae	*Enoplognatha oelandica* (Thorell, 1875)
	Robertus scoticus Jackson, 1914
Linyphiidae	*Walckenaeria corniculans* (Cambridge, 1875)
	Diplocephalus connatus Bertkau, 1889
	Typhochrestus simoni de Lessert, 1907
Lycosidae	*Alopecosa fabrilis* (Clerck, 1757)
	Aulonia albimana (Walckenaer, 1805)
Dictynidae	*Dictyna major* Menge, 1869
Zoridae	*Zora armillata* Simon, 1878
	Zora silvestris Kulczynski, 1897
Thomisidae	*Pistius truncatus* (Pallas, 1772)
Salticidae	*Neon valentulus* Falconer, 1912
	Sitticus distinguendus (Simon, 1868)
Endangered	
Theridiidae	*Dipoena prona* (Menge, 1868)
	Dipoena melanogaster (C.L.Koch, 1837)
Linyphiidae	*Praestigia duffeyi* (Millidge, 1954)
	Gonatium paradoxum (L.Koch, 1869)
	Pelecopsis radicicola (L.Koch, 1872)
	Tapinocyba mitis (O.P.-Cambridge, 1882)
	Erigone welchi Jackson, 1911
	Trichopterna cito (O.P.-Cambridge, 1872)
	Semljicola caliginosus (Falconer, 1910)
	Wiehlea calcarifera (Simon, 1884)
	Maro sublestus Falconer, 1915
	Maro lepidus Casemir, 1961
	Centromerus levitarsis (Simon, 1884)
	Centromerus semiater (L.Koch, 1879)
	Centromerus brevivulvatus Dahl, 1912
	Centromerus serratus (O.P.-Cambridge, 1875)
	Nothophantes horridus Merrett and Stevens, 1995
	Midia midas (Simon, 1884)
Araneidae	*Araniella alpica* (L.Koch, 1869)
Lycosidae	*Pardosa paludicola* (Clerck, 1757)
	Hygrolycosa rubrofasciata (Ohlert, 1865)
Dictynidae	*Tuberta maerens* (O.P.-Cambridge, 1863)
Liocranidae	*Agroeca lusatica* (L.Koch, 1875)
	Scotina palliardii (L.Koch, 1881)
Clubionidae	*Cheiracanthium pennyi* O.P.-Cambridge, 1873
Gnaphosidae	*Haplodrassus soerenseni* (Strand, 1900)
Thomisidae	*Xysticus luctator* L.Koch, 1870
	Xysticus luctuosus (Blackwall, 1836)
	Xysticus robustus (Hahn, 1832)
	Ozyptila blackwalli Simon, 1875

Vulnerable

Dysderidae	*Harpactea rubicunda* (C.L.Koch, 1838)
Eresidae	*Eresus sandaliatus* (Martini and Goeze, 1778)
Theridiidae	*Dipoena erythropus* (Simon, 1881)
	Enoplognatha tecta (Keyserling, 1884)
Linyphiidae	*Walckenaeria mitrata* (Menge, 1868)
	Walckenaeria stylifrons (O.P.-Cambridge, 1875)
	Dismodicus elevatus (C.L.Koch, 1838)
	Baryphyma gowerense (Locket, 1965)
	Silometopus incurvatus (O.P.-Cambridge, 1873)
	Trichoncus saxicola (O.P.-Cambridge, 1861)
	Trichoncus hackmani Millidge, 1955
	Gongylidiellum murcidum Simon, 1884
	Glyphesis cottonae (La Touche, 1945)
	Diplocephalus protuberans (O.P.-Cambridge, 1875)
	Wabasso replicatus (Holm, 1950)
	Mecynargus paetulus (O.P.-Cambridge, 1875)
	Hilaira nubigena Hull, 1911
	Carorita limnaea (Crosby and Bishop, 1927)
	Karita paludosa Duffey, 1971
	Meioneta fuscipalpa (C.L.Koch, 1836)
Araneidae	*Hypsosinga heri* (Hahn, 1831)
Lycosidae	*Pardosa trailli* (O.P.-Cambridge, 1873)
	Trochosa robusta (Simon, 1876)
	Arctosa alpigena (Doleschall, 1852)
Pisauridae	*Dolomedes plantarius* (Clerck, 1757)
Oxyopidae	*Oxyopes heterophthalmus* Latreille, 1804
Agelenidae	*Tegenaria picta* Simon, 1870
Hahniidae	*Hahnia candida* Simon, 1875
Dictynidae	*Mastigusa macrophthalma* (Kulczynski, 1897)
	Lathys nielseni (Schenkel, 1932)
	Lathys stigmatisata (Menge, 1869)
Liocranidae	*Apostenus fuscus* Westring, 1851
Clubionidae	*Clubiona rosserae* Locket, 1953
	Clubiona caerulescens L.Koch, 1867
	Clubiona pseudoneglecta Wunderlich, 1994
Zodariidae	*Zodarion vicinum* Denis, 1935
	Zodarion fuscum (Simon, 1870)
Gnaphosidae	*Phaeocedus braccatus* (L.Koch, 1866)
	Zelotes longipes (Simon, 1878)
	Gnaphosa lugubris (C.L.Koch, 1839)
	Gnaphosa nigerrima L.Koch, 1877
	Callilepis nocturna (Linnaeus, 1758)
	Micaria albovittata (L.Koch, 1866)
	Micaria alpina L.Koch, 1872
Zoridae	*Zora nemoralis* (Blackwall, 1861)
Philodromidae	*Philodromus fallax* Sundevall, 1833
	Philodromus emarginatus (Schrank, 1803)
Thomisidae	*Ozyptila pullata* (Thorell, 1875)
Salticidae	*Heliophanus auratus* C.L.Koch, 1835
	Heliophanus dampfi Schenkel, 1923
	Marpissa radiata (Grube, 1859)
	Euophrys herbigrada (Simon, 1871)
	Talavera thorelli (Kulczynski, 1891)
	Pellenes tripunctatus (Walckenaer, 1802)

Near Threatened

Uloboridae	*Uloborus walckenaerius* Latreille, 1806
Theridiidae	*Dipoena torva* (Thorell, 1875)
Linyphiidae	*Baryphyma maritimum* (Crocker and Parker, 1970)

	Pelecopsis elongata (Wider, 1834)
	Acartauchenius scurrilis (O.P.-Cambridge, 1872)
	Glyphesis servulus (Simon, 1881)
	Erigone psychrophila Thorell, 1871
	Caviphantes saxetorum (Hull, 1916)
	Centromerus capucinus (Simon, 1884)
	Centromerus cavernarum (L.Koch, 1872)
	Improphantes complicatus (Emerton, 1882)
	Neriene radiata (Walckenaer, 1841)
	Porrhomma rosenhaueri (L.Koch, 1872)
	Meioneta mollis (O. P.-Cambridge, 1871)
Araneidae	*Araniella displicata* (Hentz, 1847)
	Stroemiellus stroemi (Thorell, 1870)
Lycosidae	*Arctosa fulvolineata* (Lucas, 1846)
Liocranidae	*Agroeca cuprea* Menge, 1873
Clubionidae	*Clubiona subsultans* Thorell, 1875
	Clubiona frisia Wunderlich and Schott, 1995
	Clubiona juvenis Simon, 1878
	Clubiona genevensis L.Koch, 1866
Gnaphosidae	*Gnaphosa occidentalis* Simon, 1878
	Micaria silesiaca L.Koch, 1875
Philodromidae	*Philodromus margaritatus* (Clerck, 1757)
Salticidae	*Sitticus floricola* (C.L.Koch, 1837)
	Talavera petrensis (C.L.Koch, 1837)
	Phlegra fasciata (Hahn, 1826)
	Neon pictus Kulczynski, 1891

8.2. Criteria used for assigning species to threatened categories (see Appendix 2 for criteria and categories)

Table 3. Threatened species and qualifying criteria, in taxonomic order.

Scientific Name	Status	Criteria Used
Dysderidae		
Harpactea rubicunda	Vulnerable	D2
Oonopidae		
Orchestina sp.	Critically Endangered (Possibly Extinct)	D
Eresidae		
Eresus sandaliatus	Vulnerable	D2
Theridiidae		
Dipoena erythropus	Vulnerable	D2
Dipoena prona	Endangered	B2ab ii
Dipoena melanogaster	Endangered	B2ab ii & iv
Enoplognatha tecta	Vulnerable	B2ab ii & iii & iv
Enoplognatha oelandica	Critically Endangered	B2ab ii
Robertus scoticus	Critically Endangered	B2ab ii & iv
Linyphiidae		
Walckenaeria mitrata	Vulnerable	D2
Walckenaeria stylifrons	Vulnerable	D2
Walckenaeria corniculans	Critically Endangered	B2ab ii & iv
Dismodicus elevatus	Vulnerable	D2

Praestigia duffeyi	Endangered	B2ab ii & iii
Baryphyma gowerense	Vulnerable	B2ab iv
Gonatium paradoxum	Endangered	B2ab ii & iii & iv
Trichopterna cito	Endangered	B2ab ii & iv
Pelecopsis radicicola	Endangered	B2ab ii & iv
Silometopus incurvatus	Vulnerable	B2ab ii & iv
Trichoncus saxicola	Vulnerable	B2ab ii & iv
Trichoncus hackmani	Vulnerable	D2
Tapinocyba mitis	Endangered	B2ab ii & iv
Gongylidiellum murcidum	Vulnerable	B2ab ii & iv
Glyphesis cottonae	Vulnerable	B2ab ii & iv
Diplocephalus connatus	Critically Endangered	B2ab ii & iv
Diplocephalus protuberans	Vulnerable	B2ab ii
Typhochrestus simoni	Critically Endangered	B2ab ii & iv
Wabasso replicatus	Vulnerable	D2
Erigone welchi	Endangered	B2ab ii & iv
Mecynargus paetulus	Vulnerable	D2
Semljicola caliginosus	Endangered	B2ab ii & iv
Hilaira nubigena	Vulnerable	B2ab ii & iv
Carorita limnaea	Vulnerable	D2
Karita paludosa	Vulnerable	D2
Wiehlea calcarifera	Endangered	B2ab ii & iv
Meioneta fuscipalpa	Vulnerable	D2
Maro sublestus	Endangered	B2ab ii & iv
Maro lepidus	Endangered	B2ab ii & iv
Centromerus levitarsis	Endangered	B2ab ii & iv
Centromerus semiater	Endangered	B2ab ii
Centromerus brevivulvatus	Endangered	B2ab iv
Centromerus serratus	Endangered	B2ab ii
Centromerus albidus	Critically Endangered (Possibly Extinct)	B2ab iv
Nothophantes horridus	Endangered	B2ab ii, ii & iv
Palliduphantes antroniensis	Critically Endangered (Possibly Extinct)	B2ab iv
Midia midas	Endangered	B2ab ii & iv
Araneidae		
Araniella alpaca	Endangered	B2ab ii
Hypsosinga heri	Vulverable	D2
Lycosidae		
Pardosa trailli	Vulnerable	B2ab ii & iv
Pardosa paludicola	Endangered	B2ab ii & iv
Hygrolycosa rubrofasciata	Endangered	B2ab ii & iv
Alopecosa fabrilis	Critically Endangered	B2ab iv
Trochosa robusta	Vulnerable	B2ab ii
Arctosa alpigena	Vulnerable	B2ab ii
Aulonia albimana	Critically Endangered	B2ab ii & iii & iv

Pisauridae		
Dolomedes plantarius	Vulnerable	D2
Oxyopidae		
Oxyopes heterophthalmus	Vulnerable	D2
Agelenidae		
Tegenaria picta	Vulnerable	D2
Hahniidae		
Hahnia candida	Vulnerable	B2ab ii & iv
Dictynidae		
Dictyna major	Critically Endangered	B2ab ii & iv
Tuberta maerens	Endangered	B2ab ii & iv
Mastigusa macrophthalma	Vulnerable	D2
Lathys nielseni	Vulnerable	D2
Lathys stigmatisata	Vulnerable	B2ab ii
Altella lucida	Critically Endangered (Possibly Extinct)	B1ab iv +2ab iv
Liocranidae		
Agroeca lusatica	Endangered	B2ab ii & iii
Apostenus fuscus	Vulnerable	D2
Scotina palliardii	Endangered	B2ab ii & iv
Clubionidae		
Clubiona rosserae	Vulnerable	D2
Clubiona caerulescens	Vulnerable	B2ab ii & iv
Clubiona pseudoneglecta	Vulnerable	D2
Cheiracanthium pennyi	Endangered	B2ab ii & iv
Zodariidae		
Zodarion vicinum	Vulnerable	D2
Zodarion fuscum	Vulnerable	D2
Gnaphosidae		
Haplodrassus soerenseni	Endangered	B2ab ii & iv
Phaeocedus braccatus	Vulnerable	B2ab ii & iv
Zelotes longipes	Vulnerable	B2ab ii
Gnaphosa lugubris	Vulnerable	B2ab ii
Gnaphosa nigerrima	Vulnerable	D2
Callilepis nocturna	Vulnerable	D2
Micaria albovittata	Vulnerable	B2ab ii & iv
Micaria alpina	Vulnerable	D2
Zoridae		
Zora armillata	Critically Endangered	B2ab ii & iv
Zora nemoralis	Vulnerable	B2ab ii & iv
Zora silvestris	Critically Endangered	B2ab ii & iv
Philodromidae		
Philodromus fallax	Vulnerable	B2ab ii & iv
Philodromus emarginatus	Vulnerable	B2ab ii & iv
Thanatus formicinus	Critically Endangered (Possibly Extinct)	B2ab iv

Thomisidae		
Pistius truncatus	Critically Endangered	B2ab ii & iv
Xysticus luctator	Endangered	B2ab ii & iv
Xysticus luctuosus	Endangered	B2ab ii & iv
Xysticus robustus	Endangered	B2ab ii & iv
Ozyptila blackwalli	Endangered	B2ab ii & iv
Ozyptila pullata	Vulnerable	D2
Salticidae		
Heliophanus auratus	Vulnerable	D2
Heliophanus dampfi	Vulnerable	D2
Marpissa radiata	Vulnerable	B2ab ii & iv
Neon valentulus	Critically Endangered	B2ab ii & iv
Euophrys herbigrada	Vulnerable	D2
Talavera thorelli	Vulnerable	D2
Sitticus distinguendus	Critically Endangered	C2a ii
Pellenes tripunctatus	Vulnerable	D2

8.3. Species listed by GB Rarity Status category. 152 species are given the status of Nationally Rare, 171 species are Nationally Scarce.

Nationally Rare

Segestriidae	*Segestria bavarica*
Dysderidae	*Harpactea rubicunda*
Oonopidae	*Orchestina* sp.
Eresidae	*Eresus sandaliatus*
Uloboridae	*Uloborus walckenaerius*
Theridiidae	*Dipoena erythropus*
	Dipoena prona
	Dipoena melanogaster
	Dipoena torva
	Steatoda albomaculata
	Rugathodes bellicosus
	Enoplognatha tecta
	Enoplognatha oelandica
	Robertus scoticus
	Robertus insignis
Linyphiidae	*Walckenaeria mitrata*
	Walckenaeria stylifrons
	Walckenaeria corniculans
	Dismodicus elevatus
	Baryphyma gowerense
	Baryphyma maritimum
	Praestigia duffeyi

Gonatium paradoxum
Minicia marginella
Trichopterna cito
Pelecopsis elongata
Pelecopsis radicicola
Silometopus incurvatus
Acartauchenius scurrilis
Trichoncus saxicola
Trichoncus hackmani
Trichoncus affinis
Ceratinopsis romana
Tapinocyba mitis
Tapinocyboides pygmaeus
Glyphesis cottonae
Glyphesis servulus
Diplocephalus connatus
Diplocephalus protuberans
Typhochrestus simoni
Wabasso replicatus
Erigone capra
Erigone welchi
Erigone psychrophila
Mecynargus paetulus
Semljicola caliginosus
Hilaira nubigena
Carorita limnaea
Karita paludosa
Wiehlea calcarifera
Mioxena blanda
Caviphantes saxetorum
Pseudomaro aenigmaticus
Porrhomma rosenhaueri
Porrhomma cambridgei
Meioneta mollis
Meioneta fuscipalpa
Maro sublestus
Maro lepidus
Centromerus levitarsis
Centromerus capucinus
Centromerus semiater
Centromerus brevivulvatus
Centromerus serratus
Centromerus albidus
Centromerus cavernarum

	Centromerus persimilis
	Centromerus minutissimus
	Nothophantes horridus
	Palliduphantes antroniensis
	Piniphantes pinicola
	Improphantes complicatus
	Midia midas
	Neriene radiata
Araneidae	*Araniella alpica*
	Araniella displicata
	Stroemiellus stroemi
	Hypsosinga heri
Lycosidae	*Pardosa trailli*
	Pardosa paludicola
	Hygrolycosa rubrofasciata
	Alopecosa fabrilis
	Trochosa robusta
	Arctosa fulvolineata
	Arctosa alpigena
	Aulonia albimana
Pisauridae	*Dolomedes plantarius*
Oxyopidae	*Oxyopes heterophthalmus*
Agelenidae	*Tegenaria picta*
Hahniidae	*Hahnia candida*
	Hahnia microphthalma
Dictynidae	*Dictyna major*
	Tuberta maerens
	Mastigusa macrophthalma
	Lathys nielseni
	Lathys stigmatisata
	Altella lucida
Liocranidae	*Agroeca lusatica*
	Agroeca cuprea
	Agroeca dentigera
	Apostenus fuscus
	Scotina palliardii
Clubionidae	*Clubiona subsultans*
	Clubiona rosserae
	Clubiona caerulescens
	Clubiona pseudoneglecta
	Clubiona frisia
	Clubiona juvenis
	Clubiona genevensis
	Cheiracanthium pennyi

Zodariidae	*Zodarion vicinum*
	Zodarion rubidum
	Zodarion fuscum
Gnaphosidae	*Haplodrassus umbratilis*
	Haplodrassus soerenseni
	Phaeocedus braccatus
	Zelotes longipes
	Zelotes petrensis
	Gnaphosa lugubris
	Gnaphosa occidentalis
	Gnaphosa nigerrima
	Callilepis nocturna
	Micaria albovittata
	Micaria alpina
	Micaria silesiaca
Zoridae	*Zora armillata*
	Zora nemoralis
	Zora silvestris
Philodromidae	*Philodromus fallax*
	Philodromus emarginatus
	Philodromus margaritatus
	Thanatus formicinus
Thomisidae	*Pistius truncatus*
	Xysticus luctator
	Xysticus luctuosus
	Xysticus acerbus
	Xysticus robustus
	Ozyptila blackwalli
	Ozyptila pullata
Salticidae	*Heliophanus auratus*
	Heliophanus dampfi
	Marpissa radiata
	Neon valentulus
	Neon pictus
	Euophrys herbigrada
	Talavera petrensis
	Talavera thorelli
	Sitticus caricis
	Sitticus floricola
	Sitticus distinguendus
	Phlegra fasciata
	Pellenes tripunctatus

Nationally Scarce

Atypidae	*Atypus affinis*
Mimetidae	*Ero aphana*
	Ero tuberculata
Uloboridae	*Hyptiotes paradoxus*
Theridiidae	*Episinus truncatus*
	Episinus maculipes
	Euryopis flavomaculata
	Dipoena inornata
	Dipoena tristis
	Crustulina sticta
	Kochiura aulica
	Achaearanea riparia
	Theridion hemerobium
	Theridion pinastri
	Theridion familiare
	Theridion blackwalli
	Rugathodes instabilis
	Enoplognatha mordax
	Robertus neglectus
Theridiosomatidae	*Theridiosoma gemmosum*
Linyphiidae	*Walckenaeria alticeps*
	Walckenaeria nodosa
	Walckenaeria capito
	Walckenaeria incisa
	Walckenaeria dysderoides
	Walckenaeria obtusa
	Walckenaeria monoceros
	Walckenaeria furcillata
	Walckenaeria kochi
	Walckenaeria clavicornis
	Entelecara congenera
	Entelecara flavipes
	Entelecara omissa
	Entelecara errata
	Moebelia penicillata
	Trematocephalus cristatus
	Tmeticus affinis
	Hypomma fulvum
	Hybocoptus decollatus
	Maso gallicus
	Hypselistes jacksoni
	Pelecopsis nemoralioides
	Silometopus ambiguus

Mecopisthes peusi
Ceratinopsis stativa
Evansia merens
Tiso aestivus
Tapinocyba insecta
Microctenonyx subitaneus
Satilatlas britteni
Thyreosthenius biovatus
Monocephalus castaneipes
Saloca diceros
Gongylidiellum latebricola
Gongylidiellum murcidum
Micrargus laudatus
Notioscopus sarcinatus
Erigonella ignobilis
Araeoncus crassiceps
Panamomops sulcifrons
Lessertia dentichelis
Scotinotylus evansi
Typhochrestus digitatus
Diplocentria bidentata
Erigone tirolensis
Mecynargus morulus
Latithorax faustus
Donacochara speciosa
Leptothrix hardyi
Hilaira pervicax
Halorates reprobus
Halorates distinctus
Halorates holmgreni
Asthenargus paganus
Jacksonella falconeri
Porrhomma convexum
Porrhomma campbelli
Porrhomma errans
Porrhomma egeria
Porrhomma oblitum
Porrhomma montanum
Agyneta cauta
Agyneta olivacea
Meioneta mossica
Meioneta simplicitarsis
Meioneta gulosa
Meioneta nigripes

	Maro minutus
	Syedra gracilis
	Centromerus incilium
	Sintula corniger
	Oreonetides vaginatus
	Saaristoa firma
	Macrargus carpenteri
	Bathyphantes setiger
	Taranucnus setosus
	Mughiphantes whymperi
	Palliduphantes insignis
	Oryphantes angulatus
	Agnyphantes expunctus
	Pityohyphantes phrygianus
	Neriene furtiva
	Allomengea vidua
Tetragnathidae	*Meta bourneti*
Araneidae	*Araneus angulatus*
	Araneus alsine
	Larinioides patagiatus
	Araniella inconspicua
	Hypsosinga albovittata
	Hypsosinga sanguinea
	Singa hamata
	Cercidia prominens
Lycosidae	*Pardosa agrestis*
	Pardosa lugubris
	Pardosa proxima
	Xerolycosa nemoralis
	Xerolycosa miniata
	Alopecosa cuneata
	Trochosa spinipalpis
	Arctosa cinerea
	Pirata tenuitarsis
	Pirata piscatorius
Pisauridae	*Dolomedes fimbriatus*
Hahniidae	*Hahnia pusilla*
Dictynidae	*Dictyna pusilla*
	Nigma puella
	Cicurina cicur
	Argenna subnigra
	Argenna patula
Amaurobiidae	*Coelotes terrestris*
Liocranidae	*Agraecina striata*

	Scotina celans
	Scotina gracilipes
	Liocranum rupicola
Corinnidae	*Phrurolithus minimus*
Clubionidae	*Clubiona norvegica*
	Cheiracanthium virescens
Zodariidae	*Zodarion italicum*
Gnaphosidae	*Drassodes pubescens*
	Haplodrassus dalmatensis
	Haplodrassus silvestris
	Haplodrassus minor
	Zelotes electus
	Zelotes subterraneus
	Drassyllus lutetianus
	Drassyllus praeficus
	Gnaphosa leporina
	Micaria subopaca
Sparassidae	*Micrommata virescens*
Philodromidae	*Philodromus longipalpis*
	Philodromus histrio
	Thanatus striatus
Thomisidae	*Thomisus onustus*
	Xysticus bifasciatus
	Xysticus sabulosus
	Ozyptila scabricula
	Ozyptila nigrita
Salticidae	*Salticus zebraneus*
	Marpissa muscosa
	Marpissa nivoyi
	Sibianor aurocinctus
	Ballus chalybeius
	Neon robustus
	Pseudeuophrys erratica
	Pseudeuophrys obsoleta
	Sitticus inexpectus
	Sitticus saltator
	Evarcha arcuata
	Aelurillus v-insignitus
	Synageles venator
	Myrmarachne formicaria

8.4. Taxonomic list of GB Rarity Status species, with previous statuses and IUCN status

Table 4. Taxonomic list of Red Data Book and Nationally Scarce species

Species name	Merrett 1990	Bratton 1991	This Review (GB National Rarity Status)	This Review (IUCN Status)
Atypidae				
Atypus affinis			NS	
Segestriidae				
Segestria bavarica	Na		NR	
Dysderidae				
Harpactea rubicunda			NR	Vulnerable
Oonopidae				
Orchestina sp.			NR	Critically Endangered (Possibly Extinct)
Mimetidae				
Ero aphana		RDB2	NS	
Ero tuberculata	Nb		NS	
Eresidae				
Eresus sandaliatus		RDB1	NR	Vulnerable
Uloboridae				
Uloborus walckenaerius		RDB3	NR	Near Threatened
Hyptiotes paradoxus		RDB3	NS	
Theridiidae				
Episinus truncatus	Nb		NS	
Episinus maculipes		RDB3	NS	
Euryopis flavomaculata			NS	
Dipoena erythropus		RDB2	NR	Vulnerable
Dipoena prona	Nb		NR	Endangered
Dipoena inornata	Nb		NS	
Dipoena tristis	Na		NS	
Dipoena coracina		RDB1		Regionally Extinct
Dipoena melanogaster		RDB2	NR	Endangered
Dipoena torva		RDB2	NR	Near Threatened
Crustulina sticta	Nb		NS	
Steatoda albomaculata	Nb		NR	
Kochiura aulica	Nb		NS	
Achaearanea riparia	Nb		NS	
Achaearanea simulans	Nb			
Theridion hemerobium			NS	
Theridion pinastri		RDBK	NS	
Theridion familiare	Nb		NS	
Theridion blackwalli			NS	
Rugathodes instabilis			NS	
Rugathodes bellicosus	Nb		NR	
Enoplognatha mordax	Na		NS	
Enoplognatha tecta		RDB1	NR	Vulnerable
Enoplognatha oelandica		RDB3	NR	Critically Endangered

Robertus neglectus			NS	
Robertus scoticus		RDB1	NR	Critically Endangered
Robertus insignis		RDB1	NR	Data Deficient
Theridiosomatidae				
Theridiosoma gemmosum	Nb		NS	
Linyphiidae				
Walckenaeria mitrata		RDB1	NR	Vulnerable
Walckenaeria alticeps			NS	
Walckenaeria nodosa			NS	
Walckenaeria capito			NS	
Walckenaeria incisa	Nb		NS	
Walckenaeria dysderoides			NS	
Walckenaeria stylifrons		RDB1	NR	Vulnerable
Walckenaeria obtusa			NS	
Walckenaeria monoceros			NS	
Walckenaeria corniculans	Na		NR	Critically Endangered
Walckenaeria furcillata			NS	
Walckenaeria kochi			NS	
Walckenaeria clavicornis			NS	
Entelecara congenera	Nb		NS	
Entelecara flavipes			NS	
Entelecara omissa	Na		NS	
Entelecara errata	Nb		NS	
Moebelia penicillata			NS	
Trematocephalus cristatus	Na		NS	
Tmeticus affinis			NS	
Dismodicus elevatus	Na		NR	Vulnerable
Hypomma fulvum	Na		NS	
Hybocoptus decollatus	Nb		NS	
Baryphyma gowerense		RDBK	NR	Vulnerable
Baryphyma maritimum	Nb		NR	Near Threatened
Praestigia duffeyi		RDB3	NR	Endangered
Gonatium paradoxum		RDB2	NR	Endangered
Maso gallicus	Na		NS	
Minicia marginella			NR	Data Deficient
Hypselistes jacksoni			NS	
Trichopterna cito		RDB2	NR	Endangered
Pelecopsis nemoralioides			NS	
Pelecopsis elongata		RDB2	NR	Near Threatened
Pelecopsis radicicola		RDB3	NR	Endangered
Silometopus ambiguus			NS	
Silometopus incurvatus	Na		NR	Vulnerable
Mecopisthes peusi	Nb		NS	
Acartauchenius scurrilis			NR	Near Threatened
Trichoncus saxicola	Nb		NR	Vulnerable
Trichoncus hackmani		RDB2	NR	Vulnerable
Trichoncus affinis		RDB2	NR	

Ceratinopsis romana	Nb		NR	
Ceratinopsis stativa			NS	
Evansia merens			NS	
Tiso aestivus	Nb		NS	
Tapinocyba insecta			NS	
Tapinocyba mitis	Nb		NR	Endangered
Tapinocyboides pygmaeus		RDB3	NR	Data Deficient
Microctenonyx subitaneus			NS	
Satilatlas britteni	Nb		NS	
Thyreosthenius biovatus			NS	
Monocephalus castaneipes			NS	
Saloca diceros	Nb		NS	
Gongylidiellum latebricola			NS	
Gongylidiellum murcidum	Nb		NS	Vulnerable
Micrargus laudatus	Nb		NS	
Notioscopus sarcinatus	Nb		NS	
Glyphesis cottonae	Na		NR	Vulnerable
Glyphesis servulus		RDBK	NR	Near Threatened
Erigonella ignobilis			NS	
Diplocephalus connatus		RDB2	NR	Critically Endangered
Diplocephalus protuberans	Nb		NR	Vulnerable
Araeoncus crassiceps			NS	
Panamomops sulcifrons			NS	
Lessertia dentichelis			NS	
Scotinotylus evansi			NS	
Typhochrestus digitatus			NS	
Typhochrestus simoni		RDB2	NR	Critically Endangered
Diplocentria bidentata			NS	
Wabasso replicatus			NR	Vulnerable
Erigone tirolensis	Nb		NS	
Erigone capra	Nb		NR	
Erigone welchi	Na		NR	Endangered
Erigone psychrophila	Na		NR	Near Threatened
Mecynargus morulus			NS	
Mecynargus paetulus		RDB2	NR	Vulnerable
Latithorax faustus			NS	
Semljicola caliginosus	Nb		NR	Endangered
Donacochara speciosa	Na		NS	
Leptothrix hardyi			NS	
Hilaira nubigena	Na		NR	Vulnerable
Hilaira pervicax	Nb		NS	
Halorates reprobus			NS	
Halorates distinctus			NS	
Halorates holmgreni	Nb		NS	
Carorita limnaea		RDB1	NR	Vulnerable
Karita paludosa		RDB2	NR	Vulnerable
Wiehlea calcarifera	Na		NR	Endangered

Mioxena blanda	Nb		NR	Data Deficient
Caviphantes saxetorum	Na		NR	Near Threatened
Asthenargus paganus			NS	
Jacksonella falconeri			NS	
Pseudomaro aenigmaticus		RDBK	NR	Data Deficient
Porrhomma convexum			NS	
Porrhomma rosenhaueri		RDB2	NR	Near Threatened
Porrhomma campbelli			NS	
Porrhomma errans	Nb		NS	
Porrhomma egeria			NS	
Porrhomma oblitum	Nb		NS	
Porrhomma cambridgei			NR	Data Deficient
Porrhomma montanum			NS	
Agyneta cauta			NS	
Agyneta olivacea			NS	
Meioneta mollis			NR	Near Threatened
Meioneta mossica			NS	
Meioneta simplicitarsis	Na		NS	
Meioneta fuscipalpa			NR	Vulnerable
Meioneta gulosa			NS	
Meioneta nigripes	Nb		NS	
Maro minutus			NS	
Maro sublestus	Na		NR	Endangered
Maro lepidus		RDB3	NR	Endangered
Syedra gracilis	Nb		NS	
Centromerus levitarsis		RDB2	NR	Endangered
Centromerus capucinus			NR	Near Threatened
Centromerus incilium	Nb		NS	
Centromerus semiater		RDB2	NR	Endangered
Centromerus brevivulvatus		RDB3	NR	Endangered
Centromerus serratus	Nb		NR	Endangered
Centromerus albidus		RDB2	NR	Critically Endangered (Possibly Extinct)
Centromerus cavernarum		RDB3	NR	Near Threatened
Centromerus persimilis		RDBK	NR	Data Deficient
Centromerus minutissimus			NR	Data Deficient
Sintula corniger			NS	
Oreonetides vaginatus			NS	
Saaristoa firma			NS	
Macrargus carpenteri	Na		NS	
Bathyphantes setiger			NS	
Taranucnus setosus			NS	
Nothophantes horridus			NR	Endangered
Mughiphantes whymperi	Nb		NS	
Palliduphantes insignis	Nb		NS	
Palliduphantes antroniensis		RDB1	NR	Critically Endangered (Possibly Extinct)
Piniphantes pinicola	Nb		NR	

Oryphantes angulatus			NS	
Improphantes complicatus	Nb		NR	Near Threatened
Agnyphantes expunctus			NS	
Midia midas		RDB2	NR	Endangered
Pityohyphantes phrygianus	Na		NS	
Neriene furtiva	Nb		NS	
Neriene radiata	Nb		NR	Near Threatened
Allomengea vidua			NS	
Tetragnathidae				
Tetragnatha pinicola	Nb			
Tetragnatha striata	Nb			
Meta bourneti	Nb		NS	
Araneidae				
Gibbaranea bituberculata		RDB1		Regionally Extinct
Araneus angulatus	Nb		NS	
Araneus alsine	Nb		NS	
Larinioides patagiatus			NS	
Araniella inconspicua	Nb		NS	
Araniella alpica		RDB3	NR	Endangered
Araniella displicata	Na		NR	Near Threatened
Zilla diodia	Nb			
Hypsosinga albovittata			NS	
Hypsosinga sanguinea	Nb		NS	
Hypsosinga heri		RDB1	NR	Vulnerable
Singa hamata	Nb		NS	
Cercidia prominens			NS	
Stroemiellus stroemi	Nb		NR	Near Threatened
Argiope bruennichi	Na			
Lycosidae				
Pardosa agrestis	Nb		NS	
Pardosa lugubris			NS	
Pardosa proxima			NS	
Pardosa trailli	Nb		NR	Vulnerable
Pardosa paludicola		RDB3	NR	Endangered
Hygrolycosa rubrofasciata	Na		NR	Endangered
Xerolycosa nemoralis	Nb		NS	
Xerolycosa miniata			NS	
Alopecosa cuneata			NS	
Alopecosa fabrilis		RDB1	NR	Critically Endangered
Trochosa robusta	Nb		NR	Vulnerable
Trochosa spinipalpis			NS	
Arctosa fulvolineata		RDB3	NR	Near Threatened
Arctosa cinerea	Nb		NS	
Arctosa alpigena		RDB3	NR	Vulnerable
Pirata tenuitarsis			NS	
Pirata piscatorius			NS	
Aulonia albimana		RDB1	NR	Critically Endangered

Pisauridae				
Dolomedes fimbriatus			NS	
Dolomedes plantarius		RDB1	NR	Vulnerable
Oxyopidae				
Oxyopes heterophthalmus		RDB2	NR	Vulnerable
Agelenidae				
Tegenaria picta		RDBK	NR	Vulnerable
Hahniidae				
Hahnia candida		RDB2	NR	Vulnerable
Hahnia microphthalma		RDBK	NR	Data Deficient
Hahnia pusilla			NS	
Dictynidae				
Dictyna pusilla			NS	
Dictyna major		RDB2	NR	Critically Endangered
Nigma puella	Nb		NS	
Nigma walckenaeri	Na			
Cicurina cicur			NS	
Tuberta maerens		RDB3	NR	Endangered
Mastigusa arietina		RDB2		Regionally Extinct
Mastigusa macrophthalma		RDB3	NR	Vulnerable
Lathys nielseni	Na		NR	Vulnerable
Lathys stigmatisata		RDB3	NR	Vulnerable
Argenna subnigra			NS	
Argenna patula	Nb		NS	
Altella lucida		RDB1	NR	Critically Endangered (Possibly Extinct)
Amaurobiidae				
Coelotes terrestris	Nb		NS	
Liocranidae				
Agroeca lusatica		RDB1	NR	Endangered
Agroeca cuprea	Na		NR	Near Threatened
Agroeca dentigera			NR	Data Deficient
Agraecina striata	Nb		NS	
Apostenus fuscus		RDB1	NR	Vulnerable
Scotina celans			NS	
Scotina gracilipes			NS	
Scotina palliardii	Na		NR	Endangered
Liocranum rupicola	Nb		NS	
Corinnidae				
Phrurolithus minimus	Na		NS	
Clubionidae				
Clubiona subsultans		RDB2	NR	Near Threatened
Clubiona rosserae		RDB1	NR	Vulnerable
Clubiona norvegica	Nb		NS	
Clubiona caerulescens	Nb		NR	Vulnerable
Clubiona pseudoneglecta			NR	Vulnerable
Clubiona frisia		RDB3	NR	Near Threatened

Clubiona juvenis		RDB2	NR	Near Threatened
Clubiona genevensis		RDB3	NR	Near Threatened
Cheiracanthium pennyi		RDB2	NR	Endangered
Cheiracanthium virescens			NS	
Zodariidae				
Zodarion italicum			NS	
Zodarion vicinum			NR	Vulnerable
Zodarion rubidum			NR	
Zodarion fuscum			NR	Vulnerable
Gnaphosidae				
Drassodes pubescens			NS	
Haplodrassus dalmatensis	Nb		NS	
Haplodrassus umbratilis		RDB3	NR	Data Deficient
Haplodrassus soerenseni		RDB2	NR	Endangered
Haplodrassus silvestris	Nb		NS	
Haplodrassus minor		RDB3	NS	
Phaeocedus braccatus	Nb		NR	Vulnerable
Zelotes electus			NS	
Zelotes subterraneus			NS	
Zelotes longipes	Na		NR	Vulnerable
Zelotes petrensis	Na		NR	
Trachyzelotes pedestris	Nb			
Drassyllus lutetianus	Na		NS	
Drassyllus praeficus	Nb		NS	
Gnaphosa lugubris	Na		NR	Vulnerable
Gnaphosa occidentalis		RDB1	NR	Near Threatened
Gnaphosa nigerrima			NR	Vulnerable
Gnaphosa leporina			NS	
Callilepis nocturna		RDB1	NR	Vulnerable
Micaria albovittata	Nb		NR	Vulnerable
Micaria alpina		RDB3	NR	Vulnerable
Micaria subopaca	Nb		NS	
Micaria silesiaca	Nb		NR	Near Threatened
Zoridae				
Zora armillata		RDB3	NR	Critically Endangered
Zora nemoralis	Nb		NR	Vulnerable
Zora silvestris		RDB2	NR	Critically Endangered
Sparassidae				
Micrommata virescens			NS	
Philodromidae				
Philodromus praedatus	Nb			
Philodromus longipalpis			NS	
Philodromus collinus	Nb			
Philodromus fallax	Nb		NR	Vulnerable
Philodromus histrio			NS	
Philodromus emarginatus	Nb		NR	Vulnerable
Philodromus margaritatus	Nb		NR	Near Threatened

Thanatus striatus			NS	
Thanatus formicinus		RDB2	NR	Critically Endangered (Possibly Extinct)
Thomisidae				
Thomisus onustus	Nb		NS	
Pistius truncatus		RDB1	NR	Critically Endangered
Xysticus bifasciatus			NS	
Xysticus luctator		RDB2	NR	Endangered
Xysticus sabulosus			NS	
Xysticus luctuosus	Nb		NR	Endangered
Xysticus acerbus	Na		NR	
Xysticus robustus	Na		NR	Endangered
Ozyptila blackwalli	Nb		NR	Endangered
Ozyptila scabricula	Nb		NS	
Ozyptila nigrita	Nb		NS	
Ozyptila pullata			NR	Vulnerable
Salticidae				
Salticus zebraneus	Na		NS	
Heliophanus auratus		RDB2	NR	Vulnerable
Heliophanus dampfi		RDBK	NR	Vulnerable
Marpissa muscosa	Nb		NS	
Marpissa radiata	Na		NR	Vulnerable
Marpissa nivoyi	Nb		NS	
Sibianor aurocinctus	Na		NS	
Ballus chalybeius			NS	
Neon robustus			NS	
Neon valentulus		RDB2	NR	Critically Endangered
Neon pictus			NR	Near Threatened
Euophrys herbigrada	Na		NR	Vulnerable
Pseudeuophrys erratica			NS	
Pseudeuophrys obsoleta		RDB3	NS	
Talavera petrensis	Nb		NR	Near Threatened
Talavera thorelli			NR	Vulnerable
Sitticus caricis	Nb		NR	
Sitticus floricola		RDB3	NR	Near Threatened
Sitticus inexpectus	Na		NS	
Sitticus saltator	Nb		NS	
Sitticus distinguendus			NR	Critically Endangered
Evarcha arcuata	Nb		NS	
Aelurillus v-insignitus	Nb		NS	
Phlegra fasciata		RDB3	NR	Near Threatened
Synageles venator	Na		NS	
Myrmarachne formicaria	Nb		NS	
Pellenes tripunctatus		RDB1	NR	Vulnerable

8.5. Amber List

See sections 6.1. and 7.5 for information.

Atypidae	*Atypus affinis*
Theridiidae	*Euryopis flavomaculata*
	Robertus neglectus
Linyphiidae	*Walckenaeria nodosa*
	Walckenaeria incisa
	Walckenaeria dysderoides
	Walckenaeria furcillata
	Walckenaeria kochi
	Walckenaeria clavicornis
	Walckenaeria monoceros
	Moebelia penicillata
	Hypselistes jacksoni
	Trichopternoides thorelli
	Pelecopsis nemoralioides
	Tapinocyba insecta
	Gongylidiellum latebricola
	Araeoncus humilis
	Typhochrestus digitatus
	Diplocentria bidentata
	Mecynargus morulus
	Latithorax faustus
	Drepanotylus uncatus
	Leptothrix hardyi
	Jacksonella falconeri
	Porrhomma convexum
	Agyneta subtilis
	Agyneta cauta
	Sintula corniger
	Bathyphantes setiger
	Taranucnus setosus
	Allomengea scopigera
Araneidae	*Larinioides patagiatus*
Lycosidae	*Alopecosa barbipes*
	Trochosa spinipalpis
	Pirata piscatorius
Dictynidae	*Cicurina cicur*
Clubionidae	*Clubiona norvegica*
Gnaphosidae	*Haplodrassus dalmatensis*
Philodromidae	*Thanatus striatus*
Thomisidae	*Xysticus bifasciatus*
	Xysticus sabulosus
Salticidae	*Marpissa nivoyi*
	Sitticus saltator

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The format and content of this review is based on the recent reviews of beetles (Foster, 2010; Alexander, 2014), with changes as appropriate.

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11. Appendices

11.1. Appendix 1. Listing of all species reviewed with summary of key information (full information given in accompanying spreadsheet).

Species name	Proposed GB IUCN Category	Qualifying Criteria	Rationale for proposed category	GB National Rarity Status	Presence in England	Presence in Scotland	Presence in Wales	AOO(hectads) <1993	AOO(hectads) 1993-2013 (figures in brackets indicate the potential number of hectads accounting for under-recording)	Numbers of hectads surveyed before and after 1993 in which the species was recorded pre-1993	Numbers of hectads surveyed before and after 1993 in which the species was recorded 1993-2013	Trend
Acartauchenius scurrilis	NT	B2a	Known from only a handful of locations, but any decline exhibited is uncertain. It remains vulnerable to loss of habitat through inappropriate, or lack of, management of its heaths and coastal grassland habitats.	NR	E			6	5	6	5	-17%

Achaearanea lunata	LC			E		W	144	239	144	228	
Achaearanea riparia	LC		NS	E		W	26	18	25	16	-36%
Achaearanea simulans	LC			E			53	164	53	157	
Achaearanea tepidariorum	LC			E	S	W	33	83	31	81	
Aelurillus v-insignitus	LC		NS	E	S	W	29	26	29	26	-10%
Agalenatea redii	LC			E	S	W	172	311	169	293	
Agelena labyrinthica	LC			E		W	282	407	280	383	

Agnyphantes expunctus	LC			NS	E	S		69	65	59	55	-7%
Agraecina striata	LC			NS	E	S	W	31	27	31	26	-16%
Agroeca brunnea	LC				E	S	W	139	117	135	114	-16%
Agroeca cuprea	NT	B2a	Recent data suggests no or little decline, and so there is no evidence of significant threat of extinction at the present time.	NR	E	S		10	8	10	8	-20%

Agroeca dentigera	DD	Known from a single site in Wales where it appears to occur in very low numbers. Just five individuals were found in 75 man-hours of searching in 2002, and only in an area close to the original location where a single individual had been found in 1989. The small area from which it has been recorded suggests it has very specific habitat requirements, which are likely to be vulnerable to change. Sea level rise may be a future threat to its coastal sand dune habitat.	NR		W	1		1	1	1	
Agroeca inopina	LC			E	W	101		75	101	75	-26%

Agroeca lusatica	EN	B2ab(ii,iii)	Recorded from two locations, where it appears to be well established although it remains at risk from leisure use of its dune habitat, the construction of coastal defences and other infrastructure development. The Sandwich dune system now has three golf courses, and their associated buildings, roads, drains and fairways have caused loss of natural dune habitat. The dunes form the sea defence for their strip of coast, and some low points have been artificially built up to reduce the risk of flooding, causing further disturbance to the habitat. Sea level rise may pose a threat in the future.	NR	E			2	1	2	1	-50%
Agroeca proxima	LC				E	S	W	413	247	383	229	-40%

Agyneta cauta	LC	Large apparent decline may be explained by many older records from the north and west referring to *A. olivacea*, and by relatively poor recent recording in Welsh wetlands, the Pennines and southern heathland, three key areas for *A. cauta.*	NS	E	S	W	166	55	146	45	-69%
Agyneta conigera	LC			E	S	W	308	172	291	155	-47%
Agyneta decora	LC			E	S	W	239	145	214	125	-42%
Agyneta olivacea	LC		NS	E	S	W	34	77	28	63	
Agyneta ramosa	LC	Woodland habitat not threatened.		E	S	W	99	61	95	56	-41%
Agyneta subtilis	LC	Recording effort believed sufficient but decline not understood because a widespread species which is not a habitat specialist.		E	S	W	216	97	198	91	-54%

Allomengea scopigera	LC		Validity of decline in northern England uncertain.		E	S	W	226	107	187	92	-51%
Allomengea vidua	LC			NS	E	S	W	144	55	133	50	-62%
Alopecosa barbipes	LC				E	S	W	182	127	174	119	-32%
Alopecosa cuneata	LC			NS	E		W	71	73	70	71	
Alopecosa fabrilis	CR	B2ab(iv)	Known historically from three sites but not recorded since 1990. In Dorset it has not been recorded at Bloxworth Heath since 1900 and Morden Heath since 1965 despite recent surveys. While it has not been found at its most recent site, Hankley Common, Surrey, survey effort since 1990 is not considered sufficient to rule out its continued presence there.	NR	E			3	0 (1)	3	0	

Alopecosa pulverulenta	LC				E	S	W	794	749	742	694	-6%
Altella lucida	*CR(PE)*	B1ab(iv)+2ab(iv)	Has not been found since 1972, despite recent searches, and may therefore be regionally extinct.	NR	E			2	0	2	0	
Amaurobius fenestralis	*LC*				E	S	W	690	699	649	639	-2%
Amaurobius ferox	*LC*				E	S	W	242	258	236	249	
Amaurobius similis	*LC*				E	S	W	492	562	470	524	
Anelosimus vittatus	*LC*				E	S	W	314	527	305	503	
Antistea elegans	*LC*				E	S	W	466	407	427	377	-12%

Anyphaena accentuata	*LC*		E	S	W	341	454	325	416	
Anyphaena sabina	*NA*	The first British record, was collected at Mile End Park, Middlesex, in 2011. A southern European species, probably imported, and thought likely to increase.				0	0	0	0	
Aphileta misera	*LC*		E	S	W	175	122	161	108	-33%

Apostenus fuscus	VU	D2		Known from a single extended site (Dungness, Kent) since 1981, where it is still found but potentially threatened by a range of human activities. Dungeness has been extensively damaged by gravel extraction, causing significant alteration to the hydrology, and thereby ecology, of the area. There are currently plans for a new nuclear power station and a large airport expansion while away from the conservation areas the extension of holiday centres and other recreational activities may lead to damage, notably by motor cycles and other vehicles crossing the shingle, vegetation and ridges. However, there is evidence that the shingle communities are capable of regenerating after superficial disturbance, hence low levels of surface disturbance may be biologically sustainable.	NR	E	1	1	1	1

Araeoncus crassiceps	LC	Lack of recording since 1993 in the Welsh peatlands, where it was formerly extensively recorded, is thought to be giving a false indication of decline.	NS	E	S	W	161	52	139	38	-73%
Araeoncus humilis	LC			E	S	W	184	95	173	92	-47%
Araneus alsine	LC		NS	E	S	W	15	23	15	19	
Araneus angulatus	LC		NS	E			17	32	17	31	
Araneus diadematus	LC			E	S	W	1014	1228	947	1104	
Araneus marmoreus	LC			E	S		93	79	93	73	-22%
Araneus quadratus	LC			E	S	W	433	577	413	533	

Araneus sturmi	LC				E	S	W	94	137	93	125	
Araneus triguttatus	LC				E	S	W	76	98	75	93	
Araniella alpica	EN	B2ab(ii)	Recorded from only a few sites in southern England. B2ab(ii) is justified because of a major decline in AOO. This is unlikely to be attributable to underrecording because, although identification of Araniella spp. requires critical microscopical examination, males at least have sufficiently distinctive coloration that they are likely to be recognised in the field by arachnologists.	NR	E			7	2	7	2	-71%
Araniella cucurbitina sens. str.	LC				E	S	W	526	603	506	558	

Araniella displicata	NT	B2a	Despite this species' apparent substantial decline in AOO, its association with pine makes it unlikely that it is currently under threat of extinction.	NR				13	7	13	7	-46%
Araniella inconspicua	LC			NS	E			23	32	23	31	
Araniella opisthographa	LC				E	S	W	223	391	220	368	
Arctosa alpigena	VU	B2ab(ii)	Although its habitat is increasingly threatened by climate change, the apparent extent of decline is not accepted because this species is hard to find and a degree of under-recording is likely; the species probably persists at a number of locations. VU proposed rather than EN.	NR		S		10	3 (6-9)	10	3	-70%
Arctosa cinerea	LC			NS	E	S	W	35	25	27	21	-22%

Arctosa fulvolineata	NT	B2b(ii,iv)	No decline apparent in recent data, but threats from habitat specialisation, confinement to small areas and vulnerability to sea level rise, could lead to qualification as VU B2ab(ii,iii,iv).	NR	E			11	12	11	12	
Arctosa leopardus	LC				E	S	W	142	117	133	107	-20%
Arctosa perita	LC				E	S	W	241	226	219	219	
Argenna patula	LC			NS	E	S	W	21	20	21	20	-5%
Argenna subnigra	LC			NS	E		W	53	62	51	61	
Argiope bruennichi	LC				E		W	29	231	29	219	
Argyroneta aquatica	LC				E	S	W	152	146	149	139	-7%

Asthenargus paganus	LC			NS	E	S	W	39	35	37	29	-22%
Atypus affinis	LC			NS	E	S	W	81	67	80	64	-20%
Aulonia albimana	CR	B2ab(ii,iii,iv)	Last recorded 1985. Although probably now extinct in one of its two former sites, the other is on military land with restricted access where it may persist.	NR	E			2	0 (1)	2	0	
Ballus chalybeius	LC			NS	E		W	48	77	48	76	
Baryphyma gowerense	VU	B2ab(iv)	Although recorded from 11 hectads, found at only two locations since 1992. The apparent 82% decline is almost certainly an over-estimate; the Welsh saltmarshes need re-survey to establish current status at previously recorded sites and check for the continued presence in the type locality. Because of this, considered VU rather than EN.	NR	E		W	11	2 (6-9)	11	2	-82%

Baryphyma maritimum	NT	B2a	No clear decline, but sea level rise is a plausible threat to the preferred habitat and hence NT is justified.	NR	E			9	8	9	8	-11%
Baryphyma pratense	LC				E	S	W	107	87	100	81	-19%
Baryphyma trifrons	LC				E	S	W	190	214	173	192	
Bathyphantes approximatus	LC				E	S	W	465	395	434	364	-16%
Bathyphantes gracilis	LC				E	S	W	969	1106	904	991	
Bathyphantes nigrinus	LC				E	S	W	556	365	517	329	-36%
Bathyphantes parvulus	LC				E	S	W	503	352	462	322	-30%

Bathyphantes setiger	LC		An apparent major decline is thought to be a result of recent under-recording in key habitats.	NS	E	S	W	66	39	62	37	-40%
Bolyphantes alticeps	LC				E	S	W	185	95	164	80	-51%
Bolyphantes luteolus	LC				E	S	W	361	184	322	155	-52%
Callilepis nocturna	VU	D2	Recorded from only three locations in Britain. Although there is no evidence of decline, the exposed sandy banks and rocks required by the spider at these sites are threatened by shading from scrub encroachment.	NR	E		W	1	3	1	3	
Carorita limnaea	VU	D2	Known from just two sites since 1992 and at one of these from a single specimen. Within this restricted AOO the extent and quality of its *Sphagnum* bog habitat has suffered decline, but is now apparently improving under conservation management.	NR	E			1	2	1	2	

Caviphantes saxetorum	NT	B2a	True level of decline uncertain, with little recent survey of its river bank sand and shingle habitats stones at former sites in Wales; requires further survey.	NR	E	S	W	14	6	12	4	-67%
Centromerita bicolor	LC				E	S	W	487	424	455	391	-14%
Centromerita concinna	LC				E	S	W	509	320	474	288	-39%
Centromerus albidus	CR(PE)	B2ab(iv)	Formerly recorded from ancient beech woods at three locations in Surrey and Hampshire, but has not been found at any of these since 1969.	NR	E			3	0	3	0	
Centromerus arcanus	LC				E	S	W	117	118	108	99	-8%

Centromerus brevivulvatus	EN	B2ab(iv)	Not found since 1993 despite almost all of its historical sites having been been subject to some degree of re-survey; decline is therefore accepted. However, the true level of decline is uncertain since the wide range of habitats and few records suggest that the true microhabitat of this species has yet to be discovered, and hence it may be under-recorded and still present at some of these sites. EN is therefore proposed.	NR	E	S		7	0 (2-5)	7	0	
Centromerus capucinus	NT	B2a	True level of decline uncertain, and possibility of under-recording suggests a status of NT.	NR	E			11	4	11	4	-64%
Centromerus cavernarum	NT	B2a	True level of decline uncertain, and the possibility of under-recording suggests a status of NT.	NR	E			8	6	8	6	-25%
Centromerus dilutus	LC				E	S	W	458	310	432	286	-34%
Centromerus incilium	LC			NS	E	S		23	16	23	16	-30%

Centromerus levitarsis	EN	B2ab(ii,iv)	Found at only three locations since 1993 and showing a decline of 75% in AOO. The main loss has been from England where there was previously site-specific evidence of physical damage to the habitat and eutrophication. Climate warming may be affecting its range.	NR	E	S		8	3	8	2	-75%
Centromerus minutissimus	DD		The spider may live in fissures below- ground.	NR	E			1	0	1	0	
Centromerus persimilis	DD		Likely to be a subterranean species and consequently underrecorded: it was last recorded in 1961.	NR	E			2	0	1	0	
Centromerus prudens	LC				E	S	W	231	108	215	98	-54%

Centromerus semiater	EN	B2ab(ii)	Restricted AOO, with records from only two hectads since 1993. Although all known sites for this species lie within SSSIs, the principal threats in the Norfolk Broads are lowering of water tables and abandonment of traditional, rotational summer cutting of sedge beds, leading to encroachment of scrub and carr woodland.	NR	E		5	2	5	2	-60%
Centromerus serratus	EN	B2ab(ii)	B2ab(ii) is justified because this species shows a major decline and is known from only five post-1993 locations. Under-recording is not considered a major factor because although adults are most frequently found in winter, they are also found in spring and early summer and their favoured habitats are also generally well surveyed. The species is threatened by the loss of old beech woods, deep litter and moss in semi-natural woodland and old grasslands.	NR	E	W	17	5	17	5	-71%

Centromerus sylvaticus	LC			E	S	W	386	259	363	240	-34%
Ceratinella brevipes	LC			E	S	W	593	435	538	382	-29%
Ceratinella brevis	LC			E	S	W	335	196	313	184	-41%
Ceratinella scabrosa	LC			E	S	W	79	99	76	95	
Ceratinopsis romana	LC	Under-recording in its sand-dune habitats, particularly in Wales, is likely to be a factor in this species' apparent decline.	NR	E		W	28	13	26	13	-50%
Ceratinopsis stativa	LC		NS	E		W	71	69	70	64	-9%
Cercidia prominens	LC		NS	E	S	W	93	69	93	68	-27%

Cheiracanthium erraticum	LC				E	S	W	233	284	228	278	
Cheiracanthium pennyi	EN	B2ab(ii,iv)	One former site, at Horton Common, Dorset, was largely converted to agriculture in 1980 but there has been little relevant survey of its other sites in recent years; while the decline may not be as great as the records suggest it still qualifies for EN.	NR	E			6	2	6	2	-67%
Cheiracanthium virescens	LC			NS	E	S	W	68	61	67	59	-12%
Cicurina cicur	LC		May be under-recorded.	NS	E	S	W	97	59	94	57	-39%
Clubiona brevipes	LC				E	S	W	240	308	235	297	

Clubiona caerulescens	VU	B2ab(ii,iv)	This rare but widespread species, often associated with the field layer under scrub and woodland, has been found at only five locations since 1993 and shown a substantial decline in AOO. However, the fact that these are all sites where it had not previously been recorded, together with a late maturation time and often relatively inaccessible habitat, give a possibility of under-recording, hence downgraded to VU from EN. The main threat appears to be from changes in management practices or increase in browsing, leading to the loss of field layer vegetation.	NR	E	S	W	13	5 (6-9)	13	5	-62%
Clubiona comta	LC				E	S	W	485	556	468	523	
Clubiona corticalis	LC				E		W	200	229	198	219	

Clubiona diversa	LC				E	S	W	444	298	415	266	-36%
Clubiona frisia	NT	B2a	Level of decline uncertain, though sea level rise is a potential threat to this coastal sand dune species.	NR	E			8	5	7	5	-29%
Clubiona genevensis	NT	B2a	Although there appears to be a decline in AOO the recent discovery of this species in north Wales suggests the potential for further locations along the west coast. Twenty-seven females or cells with egg-sacs were found on Ramsey Island in 1999 (having been first recorded on the island in 1933), and 24 again in April 2006, so it is clearly well-established there.	NR	E		W	8	4	8	4	-50%
Clubiona juvenis	NT	B2a	Known from only 10 locations but no evidence of decline.	NR	E			10	10	10	10	
Clubiona lutescens	LC				E	S	W	468	474	445	437	-2%

Clubiona neglecta sens. str.	LC			E	S	W	64	138	62	133	
Clubiona norvegica	LC	May be under-recorded in its wet, high moorland habitat.	NS	E	S	W	33	19	29	16	-45%
Clubiona pallidula	LC			E	S	W	196	234	194	221	
Clubiona phragmitis	LC			E	S	W	360	409	348	381	

Clubiona pseudoneglecta	VU	D2		Although only relatively recently recognised as a species distinct from *C. neglecta* (Wunderlich 1994), *C. pseudoneglecta* seems to be restricted to dunes in the south and so is likely to remain rare. The precise habitat in Scilly is unknown, but likely to have been either coastal grassland or dunes. Sandwich, Kent, is its only known mainland location, where it is at risk from leisure use of its sand dune habitat, the construction of coastal defences and other infrastructure development.	NR	E		2	2	2	2
Clubiona reclusa	LC					E	S	W	746	805	698	720

Clubiona rosserae	VU	D2		Known from just two sites. At Chippenham Fen, the type locality, it has been recorded on a number of occasions, most recently, in one small area, in 2010 after a 14 year interval. At its other site just one specimen has been found, in 2000. Potential threats include eutrophication of ditch habitat, and changes to management. Its highly restricted occurrence, and our lack of understanding of the reasons for this, mean that the species is capable of rapidly becoming Critically Endangered.	NR	E			1		2	1	2	
Clubiona stagnatilis	LC					E	S	W	310		216	287	206	-28%

Clubiona subsultans	NT	B2a	A rare pinewood species found in only eight hectads since 1993. However there has been some increase in AOO and evidence from bark trapping and unpublished surveys of semi-natural plantations show that this species is more widespread, and less dependent than formerly thought, on the core Caledonian pine areas. However, it remains at risk from the effects of climate change and catastrophic damage to its habitat, for example by fire and recently introduced tree diseases.	NR		S		4	8	4	6	
Clubiona subtilis	LC				E	S	W	141	110	140	108	-23%
Clubiona terrestris	LC				E	S	W	476	453	465	422	-9%
Clubiona trivialis	LC				E	S	W	293	200	266	166	-38%

Cnephalocotes obscurus	LC			E	S	W	378	276	355	259	-27%
Coelotes atropos	LC			E	S	W	359	306	342	281	-18%
Coelotes terrestris	LC		NS	E		W	62	59	62	59	-5%
Coleosoma floridanum	NA	Introduced/ synanthropic in glasshouses.		E			2	3	2	3	
Crustulina guttata	LC			E	S	W	118	98	116	96	-17%
Crustulina sticta	LC		NS	E			34	21	34	21	-38%
Cryphoeca silvicola	LC			E	S	W	323	295	286	247	-14%

Cryptachaea blattea	NA	A cosmopolitan species new to Britain.	E			0	0	0	0
Cryptachaea veruculata	NA	Introduced at the start of the 20th Century from New Zealand, where it is common. It is now naturalised on Tresco	E			1	1	1	1
Cyclosa conica	LC		E	S	W	264	372	260	350
Diaea dorsata	LC		E		W	114	241	112	229
Dictyna arundinacea	LC		E	S	W	567	673	538	616
Dictyna latens	LC		E	S	W	140	209	137	201

Dictyna major	CR	B2ab(ii,iv)	Confined to Scotland where it was last recorded in 1998 at a new but very small sand-dune site subject to significant public pressure. Despite searches at most of its historic (and other likely) sites it has not been rediscovered. It has probably been lost from its loch sites because of disturbance to the shoreline and loss of macrophytes by eutrophication (eg Loch Morlich).	NR		S		7	1	7	0	
Dictyna pusilla	LC		Apparent major decline in England but not in Scotland.	NS	E	S	W	28	19	26	18	-31%
Dictyna uncinata	LC				E	S	W	298	424	295	395	
Dicymbium brevisetosum	LC				E	S	W	111	73	104	62	-40%
Dicymbium nigrum	LC				E	S	W	446	383	407	350	-14%

Dicymbium tibiale	LC				E	S	W	250	226	230	200	-13%
Diplocentria bidentata	LC		The reasons behind the apparent decline are unclear and, with no obvious threat to the wide range of habitats it occupies, LC is considered suitable.	NS	E	S	W	82	28	70	26	-63%
Diplocephalus connatus	CR	B2ab(ii,iv)	Recorded only from two areas of riverine shingle banks in northern England. Although numerous at both sites, the last known record was in 1969. The habitat is vulnerable to river engineering work but only one of the hectads with previous records has been surveyed in recent times; it may still persist in the other locations.	NR	E			4	0(1)	1	0	
Diplocephalus cristatus	LC				E	S	W	376	230	352	217	-38%
Diplocephalus graecus	NA		Recent colonist.		E			0	2	0	2	

Diplocephalus latifrons	LC				E	S	W	495	377	457	353	-23%
Diplocephalus permixtus	LC				E	S	W	478	393	440	356	-19%
Diplocephalus picinus	LC				E	S	W	435	399	409	372	-9%
Diplocephalus protuberans	VU	B2ab(ii)	Found at only seven locations since 1993 and it has exhibited a substantial reduction in AOO. Despite its previous stronghold being in northern England, five of the recently found locations were in Wales and southern England. The main threats to this wetland and wooded valley species are likely to be land drainage and river engineering. Maintaining tree cover may be important at some locations.	NR	E	S	W	21	7	17	7	-59%
Diplostyla concolor	LC				E	S	W	648	575	613	532	-13%

Dipoena coracina	RE		Last recorded in 1913.		E			2	0	2	0	
Dipoena erythropus	VU	D2	The heathland habitat of this species is vulnerable to accidental fires and hence there is a risk to the small population currently known.	NR	E		W	3	5	3	4	
Dipoena inornata	LC			NS	E	S	W	35	20	35	20	-43%
Dipoena melanogaster	EN	B2ab(ii,iv)	Recorded from just six locations in 150 years and only two since 1993.	NR	E			5	2	5	2	-60%
Dipoena prona	EN	B2ab(ii)	Although most records are from heathland in Dorset and Surrey, where intensive recording has not taken place in recent years, the decline is considered sufficient to justify the status proposed.	NR	E		W	18	2	18	2	-89%
Dipoena torva	NT	B2a	No decline. Conservation efforts for Scottish Biodiversity List wood ants and narrow-headed ant should benefit this species.	NR		S		5	8	5	6	

Dipoena tristis	LC			NS	E			9	16	9	16	
Dismodicus bifrons	LC				E	S	W	707	620	666	553	-17%
Dismodicus elevatus	VU	D2	This species is associated with Caledonian pine forest and conifer plantations, and is normally found by beating, especially pine and juniper. Since 1993 it has been restricted to four hectads (three locations) in the western Cairngorms, with the most recent records from Abernethy Forest in 2013, where it was found to be common. It is possible that it is under-recorded at some of its former sites, hence downgraded from EN to VU, but it is of concern that its range appears to have contracted to this single area.	NR	E	S		8	4(6-7)	8	4	-50%
Dolomedes fimbriatus	LC			NS	E	S	W	36	47	35	47	

Dolomedes plantarius	VU	D2		D2 justified by three UK populations with strong likelihood that few, if any, others have been overlooked. Rarity results from loss/degradation of wetland habitat; the remaining populations are all fragmented, genetically isolated and vulnerable to stochastic events including salinisation by tidal incursion. Conservation translocations have established three new populations since 2010 but their sustainability cannot yet be assessed.	NR	E		W	3	4	3	4	
Donacochara speciosa	LC				NS	E		W	24	15	22	15	-32%
Drapetisca socialis	LC					E	S	W	374	388	351	352	
Drassodes cupreus	LC					E	S	W	427	480	401	447	

Drassodes lapidosus	LC			E	S	W	326	209	314	200	-36%
Drassodes pubescens	LC		NS	E	S	W	81	60	79	59	-25%
Drassyllus lutetianus	LC		NS	E		W	17	19	17	19	
Drassyllus praeficus	LC		NS	E		W	21	23	21	22	
Drassyllus pusillus	LC			E	S	W	131	189	129	185	
Drepanotylus uncatus	LC	Despite the substantial reduction in recorded hectads, this species is still widespread in Britain and is not considered threatened at present.		E	S	W	198	96	176	80	-55%
Dysdera crocata	LC			E	S	W	241	333	238	322	

Dysdera erythrina	LC				E	S	W	132	120	132	116	-12%
Enoplognatha latimana	LC				E		W	76	182	76	178	
Enoplognatha mordax	LC			NS	E	S	W	23	21	22	21	-5%
Enoplognatha oelandica	CR	B2ab(ii)	Historically recorded from a few localities in the mid-south and south-east of England but a number of these are known, or suspected to be, misidentifcations. Recorded from a single site since 1993.	NR	E			6	1	6	1	-83%
Enoplognatha ovata sens. str.	LC				E	S	W	1030	1128	971	1013	

Enoplognatha tecta	VU	D2	Very rare in Britain, where only three specimens have been recorded. In 1888 and 1974 it was found in Dorset in marshland, and in 2009 in Suffolk, in vegetation alongside a grazing marsh ditch. The Dorset site has changed and is considered no-longer suitable. The extreme rarity and exact ecological requirements of this species are not understood, either in this country or in Europe. Drainage and agricultural run-off are obvious threats which would result in a decline in habitat area and quality, and as a single population, it is vulnerable to stochastic events.	NR	E			1	1	1	1
Enoplognatha thoracica	LC				E	S	W	229	272	228	258
Entelecara acuminata	LC				E	S	W	148	155	144	147

Entelecara congenera	LC		NS	E			22	27	22	27	
Entelecara errata	LC		NS	E	S	W	28	38	24	32	
Entelecara erythropus	LC			E	S	W	196	113	192	111	-42%
Entelecara flavipes	LC		NS	E	S	W	41	47	40	43	
Entelecara omissa	LC		NS	E			35	17	34	17	-50%
Episinus angulatus	LC			E	S	W	216	272	213	259	
Episinus maculipes	LC		NS	E			5	16	5	16	

Episinus truncatus	LC			NS	E		W	44	38	44	37	-16%
Eresus sandaliatus	VU	D2	Recent and ongoing translocation work has resulted in an increase in the number of sites where this species is found (for the purposes of this assessment, four locations are accepted as established up to 2013). However, these new populations are small, and in close enough proximity that AOO remains largely unchanged, and it remains vulnerable.	NR	E			1	1	1	1	
Erigone aletris	LC		First recorded in 1976, this species seems to be a very successful immigrant and can be expected to continue to spread out from its now rather wide base.		E	S		7	32	7	31	
Erigone arctica	LC				E	S	W	184	102	158	91	-42%
Erigone atra	LC				E	S	W	1000	1058	904	972	

Erigone capra	LC			NR	E	S	W	17	9	16	5	-69%
Erigone dentipalpis	LC				E	S	W	803	844	745	778	
Erigone longipalpis	LC				E	S	W	155	114	148	108	-27%
Erigone promiscua	LC				E	S	W	232	161	204	145	-29%
Erigone psychrophila	NT	B2a	Apparent substantial decline probably a result of under-recording of its specialised habitat on the margins of montane pools; it may be more widespread than records indicate.	NR	E	S		12	1 ()	12	1	-92%
Erigone tirolensis	LC			NS		S		27	28	26	27	

Erigone welchi	EN	B2ab(ii,iv)	Recorded at only two locations since 1993, most recently in 2008, and its AOO has apparently declined substantially.The spider's specialised habitat, with webs spun just above water level in *Sphagnum* bogs, suggests under-recording may be an issue. However the spider's habitat is vulnerable to changes in the surrounding land management, including drainage, which is known to have negatively affected some of the known locations. Thus, while more surveys are required ihabitat degradation is thought likely to be the major factor in this species' decline.	NR	E	S	W	9	2 (3-5)	8	2	-75%
Erigonella hiemalis	LC				E	S	W	361	316	328	279	-15%
Erigonella ignobilis	LC		Observed decline at least in part attributable to lack of recent surveys of Welsh peatland sites.	NS	E	S	W	57	30	53	27	-49%

Ero aphana	LC		NS	E			3	38	3	36	
Ero cambridgei	LC			E	S	W	434	412	409	376	-8%
Ero furcata	LC			E	S	W	363	250	351	235	-33%
Ero tuberculata	LC	A mature heathland species that would qualify as VU on the basis of the scale of decline but under-recording of the southern heathlands in recent years is believed to have inflated the rate of decline.	NS	E			35	17	35	17	-51%
Euophrys frontalis	LC			E	S	W	453	558	443	531	

Euophrys herbigrada	VU	D2		Recorded from a scattering of sites along the south coasts of Cornwall, Devon and Dorset. It shows an apparent substantial decline AOO since 1993, with records from only four locations. However, since it may be under-recorded in the south west of England, it is considered VU rather than EN.	NR	E			10	4 (6-8)	9	4	-56%
Euryopis flavomaculata	LC			Decline assumed to result at least in part from known under-recording of its heathland and moorland habitats in recent years.	NS	E	S	W	91	53	90	49	-46%
Evansia merens	LC				NS	E	S	W	63	30	56	29	-48%
Evarcha arcuata	LC				NS	E		W	39	42	39	42	
Evarcha falcata	LC					E	S	W	203	191	198	182	-8%

Floronia bucculenta	LC		E	S	W	224	140	219	133	-39%
Frontinellina frutetorum	NA	A single record from a garden in 2003 but probably imported with shrubs from Italy. It could potentially become established in Britain.	E			0	1	0	1	
Gibbaranea bituberculata	RE	No records of this distinctive spider since 1950 and its habitat was destroyed in 1954.	E			1	0	1	0	
Gibbaranea gibbosa	LC		E	S	W	159	219	155	212	

Glyphesis cottonae	VU	B2ab(ii,iv)	Detection of this very small species requires the specialised technique of taking and searching *Sphagnum* samples. This means it is likely to be under-recorded and is therefore downgraded from EN. However B2ab(ii,iv) is justified because, in common with other wet heathland and bog species, it is threatened by habitat loss, and changes to the water table as a result of agricultural activities, afforestation and development.	NR	E			11	4 (6-9)	11	4	-64%
Glyphesis servulus	NT	B2a	Uncertain decline because of lack of recent intensive surveys in its Welsh stronghold, so downgraded from VU to NT.	NR	E		W	12	8	12	8	-33%
Gnaphosa leporina	LC		Apparent decline on southern heathland likely to result, at least in part, from under-recording.	NS	E	S	W	55	20	54	19	-65%
Gnaphosa lugubris	VU	D2	Level of decline uncertain because of relative lack of recording on southern heathland in recent years, hence downgraded from EN to VU.	NR	E			8	3	8	3	-63%

Gnaphosa nigerrima	VU	D2		Known from a single but well-managed wet peatland location. Any changes to management, including those which would result in scrub encroachment, are a threat to this species.	NR	E			0		1	0	1	
Gnaphosa occidentalis	NT	B2a		This species was not found between 1935 and its discovery at two locations in 2004. Found under stones in its cliff-top, maritime grassland habitat, difficulty of detection may, to some extent, limit our knowledge of its distribution.	NR	E			2		1	2	1	-50%
Gnathonarium dentatum	LC					E	S	W	453		547	434	508	

Gonatium paradoxum	EN	B2ab(ii,iii,iv)	The species appears to be restricted to a small area of south-east England. It has been recorded from just one location since 1993 and the AOO has apparently declined very substantially. The spider occurs mainly on mature dry heathland and amongst moss and grass in chalk grassland. It is unlikely that enough suitable habitat remains to maintain viable populations where it occurred at Limpsfield and Crookhamhill Commons in Surrey, but it is thought likely to still be present at Box Hill, Surrey, and in the Ashdown Forest, East Sussex.	NR	E			5	1 (2)	5	1	-80%
Gonatium rubellum	LC				E	S	W	309	204	287	184	-36%
Gonatium rubens	LC				E	S	W	799	570	745	511	-31%

Gongylidiellum latebricola	LC			NS	E	S	W	72	40	66	36	-45%
Gongylidiellum murcidum	VU	B2ab(ii,iv)	This wetland species has been recorded at 10 locations since 1993, most recently, in 2011. It has exhibited a substantial decline in AOO. There appears to have been a contraction in range, with no records from Scotland since 1988. It is normally found in wet moss and litter in fens and wetwoodland where the main threats are drainage of fens and loss of wet, deciduous woodland through drainage or removal of trees.	NS	E	S	W	25	10	25	9	-64%
Gongylidiellum vivum	LC				E	S	W	463	393	427	346	-19%
Gongylidium rufipes	LC				E	S	W	599	553	563	514	-9%

Hahnia candida	VU	D2	This coastal cliff and shingle, potentially subterranean, species may be under-recorded because of sampling difficulties, hence VU rather than EN.	NR	E			6	3	6	3	-50%
Hahnia helveola	LC				E	S	W	167	80	158	78	-51%
Hahnia microphthalma	DD		Two specimens recorded 1975/76, but may be largely subterranean and hence overlooked.	NR	E			2	0	2	0	
Hahnia montana	LC				E	S	W	369	257	349	242	-31%
Hahnia nava	LC				E	S	W	207	225	201	221	
Hahnia pusilla	LC		Although qualifying as VU on its rate of decline, this species occurs in a wide range of habitats with no obvious threat;LC is regarded as appropriate at present.	NS	E	S	W	58	25	57	24	-58%
Halorates distinctus	LC			NS	E	S	W	42	21	38	20	-47%

Halorates holmgreni	LC		NS		S		14	12	14	11	-21%
Halorates reprobus	LC		NS	E	S	W	88	69	82	63	-23%
Haplodrassus dalmatensis	LC	The apparent rate of decline is almost certainly enhanced by under-recording of southern heathlands in recent years. It is considered likely to persist on sufficient sites not to be regarded as threatened. Discovered at Morden Bog, Dorset, in 2015.	NS	E		W	30	14	30	14	-53%
Haplodrassus minor	LC		NS	E		W	11	12	11	12	
Haplodrassus signifer	LC			E	S	W	356	274	323	254	-21%
Haplodrassus silvestris	LC	Decline accepted, with loss of open areas in woodland through neglect and the cessation of coppicing a likely cause.	NS	E	S	W	27	17	26	17	-35%

Haplodrassus soerenseni	EN	B2ab(ii,iv)	Confined to the Caledonian pinewood areas of Abernethy and the Black Wood of Rannoch. It was most recently recorded at Abernethy in 2011 but it has not been seen at the Black Wood since the 1960s. Current and future threats to this species include climate change and catastrophic damage to its habitat by such agencies as fire and recently introduced tree diseases. Dense regeneration of pine would also affect suitable habitat. Although the species is probably still present at both locations, it is of concern that there are no other known populations at seemingly suitable and well-surveyed native pinewood sites.	NR	S	3	2	3	2	-33%
Haplodrassus umbratilis	DD		Not seen since 1990 but probably under-recorded in recent years and hence likely to survive in several of its previously known heathland sites.	NR	E	6	0 (5)	6	0	

Harpactea hombergi	LC				E	S	W	446	531	426	499	
Harpactea rubicunda	VU	D2	A species with a very restricted AOO. It was found in numbers in the Tilbury area of Essex, but there were no further records until it was rediscovered at the same location in 2005. The site is under threat from natural succession and prone to damage from human activities.	NR	E			1	1	1	1	
Heliophanus auratus	VU	D2	Confined to small and vulnerable areas of sparse shingle vegetation, just below the spring tide line, that are under realistic threat from sea level rise.	NR	E			4	5	4	5	
Heliophanus cupreus	LC				E	S	W	185	222	178	215	

Heliophanus dampfi	VU	D2		Largely confined to central Scotland, an additional site at Aberfoyle, found in 2013, boosted the number of hectads for this species to six. Site condition monitoring by SNH in 2011 confirmed its continued presence in the Flanders Moss area. Despite seemingly healthy populations at the small number of known sites, it remains vulnerable to pressures such as hydrological changes, wild-fires and scrub encroachment.	NR		S	W	3	6	3	6	
Heliophanus flavipes	LC					E	S	W	247	359	241	343	
Helophora insignis	LC					E	S	W	424	272	390	244	-37%
Hilaira excisa	LC					E	S	W	246	194	213	166	-22%
Hilaira frigida	LC					E	S	W	92	129	85	102	

Hilaira nubigena	VU	B2ab(ii,iv)	This species of wet upland moors has shown a very substantial decline in AOO with only five locations since 1993. Some under - recording is likely, especially in the Pennines where it was rediscovered at at Buckden Pike in 2013 where it had last been recorded in 1948. Drainage, afforestation and fire are the most likely threats to this species, and while there is a possibility it may persist in more than 10 locations, VU is considered a sensible precautionary status.	NR	E	S		19	5 (7-12)	18	3	-83%
Hilaira pervicax	LC			NS	E	S	W	34	43	30	31	
Holocnemus pluchei	NA		A Mediterranean species that appears to be synanthropic in Britain.		E			0	2	0	2	
Hybocoptus decollatus	LC			NS	E		W	12	23	11	23	

Hygrolycosa rubrofasciata	EN	B2ab(ii,iv)	This lowland wetland species is very restricted in range and there appears to be an ongoing decline in AOO. It has been recorded from four locations since 1993.	NR	E			19	4	19	4	-79%
Hylyphantes graminicola	LC				E	S	W	153	229	149	213	
Hypomma bituberculatum	LC				E	S	W	678	674	621	610	-2%
Hypomma cornutum	LC				E	S	W	201	307	191	289	
Hypomma fulvum	LC			NS	E		W	34	34	32	34	
Hypselistes jacksoni	LC		Widely recorded on the Welsh peatlands prior to 1993, but the lack of survey there in recent years has inflated the rate of decline.	NS	E	S	W	140	65	123	58	-53%
Hypsosinga albovittata	LC			NS	E	S	W	51	48	51	44	-14%

Hypsosinga heri	VU	D2	Previously found only at Wicken Fen, where it was last recorded in 1912, it was recently (2014) discovered in Weymouth, where it appears to be well-established. Any changes in management could result in decline.		E			1	0	1	0	
Hypsosinga pygmaea	LC				E	S	W	186	206	180	199	
Hypsosinga sanguinea	LC			NS	E			27	23	27	23	-15%
Hyptiotes paradoxus	LC			NS	E		W	12	21	12	20	
Improphantes complicatus	NT	B2a	A boreo-alpine species widespread on Scottish mountains, but local and never numerous. Probably under-recorded to an extent, hence NT not VU, but its habitat is under threat from climate change.	NR		S		10	9	10	7	-30%

Islandiana falsifica	DD	A single female was collected in north Wales in 2010. Known in Europe only from Scandinavia; its status in the Britain is uncertain.					0	1	0	0	
Jacksonella falconeri	LC	Appears to have shown a steep decline but it is so small that it is unlikely to be caught except in pitfall traps, and even then it is hard to spot. It is presumably under-recorded as a result, and there are no direct threats to the wide range of habitats it occupies, such that it is not currenty regarded as threatened.	NS	E	S	W	64	19	60	16	-73%
Kaestneria dorsalis	LC			E	S	W	251	189	236	177	-25%
Kaestneria pullata	LC			E	S	W	461	352	434	319	-26%

Karita paludosa	VU	D2		Recorded from three hectads since 1993. There is an apparent decline in AOO, but the minute size of this species means that it may possibly have been overlooked in otherwise well-recorded fenland sites, hence downgraded to VU. In the Norfolk Broads, drainage of marshland and invasion of herbaceous fen communities by scrub and carr woodland as a result of abandonment of traditional mowing practices may be the principal threats. In the Somerset Levels, arable conversion of grazing with attendant drainage works has lowered the water table over much of the area. Westhay Moor has also been severely damaged by peat extraction for horticultural use.	NR	E	5	3	5	3	-40%
Kochiura aulica	LC				NS	E	18	28	18	28	

Labulla thoracica	LC				E	S	W	370	376	350	345	-1%
Larinioides cornutus	LC				E	S	W	650	907	617	824	
Larinioides patagiatus	LC			NS	E	S	W	55	38	52	36	-31%
Larinioides sclopetarius	LC				E	S	W	97	184	95	178	
Lathys humilis	LC				E	S	W	170	336	167	318	
Lathys nielseni	VU	D2	A wet heathland species which is likely to be under-recorded, as not all previous sites have been subject to recent survey work. Changes in management could result in decline.	NR	E			4	1	4	1	-75%

Lathys stigmatisata	VU	B2ab(ii)	Some continuing decline is accepted, but as this species only just qualifies as EN and there is a possibility of under-recording, it is considered that VU is more appropriate given the number of potential locations.	NR	E		W	7	4 (5-6)	7	4	-43%
Latithorax faustus	LC			NS	E	S	W	60	54	54	45	-17%
Lepthyphantes leprosus	LC				E	S	W	234	170	218	163	-25%
Lepthyphantes minutus	LC				E	S	W	439	465	421	423	
Leptorhoptrum robustum	LC				E	S	W	258	188	235	179	-24%
Leptothrix hardyi	LC		A winter-active species of heathland and moorland for which the apparent decline is almost certainly a result of under-recording. New surveys are required to establish this.	NS	E	S	W	103	22	96	18	-81%

Lessertia dentichelis	LC		NS	E		W	30	29	29	29	
Linyphia hortensis	LC			E	S	W	502	472	467	437	-6%
Linyphia triangularis	LC			E	S	W	884	873	827	794	-4%
Liocranum rupicola	LC		NS	E		W	19	18	18	17	-6%
Lophomma punctatum	LC			E	S	W	463	429	427	386	-10%
Macaroeris nidicolens	NA			E			0	5	0	5	
Macrargus carpenteri	LC		NS	E	S		14	14	14	13	-7%

Macrargus rufus	LC		The winter season of this species may result in under-recording and explain the apparent decline.		E	S	W	393	240	369	226	-39%
Mangora acalypha	LC				E		W	77	152	76	147	
Maro lepidus	EN	B2ab(ii,iv)	This peatland species has been found at five locations since 1993 and has shown a steep decline in AOO. The most recent record was from Sutherland in 2011. The main threats are peat extraction, drainage and afforestation.	NR	E	S	W	9	4	9	2	-78%
Maro minutus	LC		A northern and upland species occurring in a wide range of habitats and with no obvious threats, such that under-recording is probably the cause of the apparently high rate of decline.	NS	E	S	W	52	18	46	15	-67%

Maro sublestus	EN	B2ab(ii,iv)	This rare fen and wet woodland species has been found at only five locations since 1993, most recently from a new site in Sutherland in 2011, and has shown a substantial decline in AOO. The main threats are loss and drainage of fens and wet woodland.	NR	E	S		9	5	8	3	-63%
Marpissa muscosa	LC			NS	E	S		36	74	36	71	
Marpissa nivoyi	LC		A coastal sand dune species that may be under-recorded but is also vulnerable to habitat loss and damage from tourism and sea level change.	NS	E		W	23	14	23	14	-39%
Marpissa radiata	VU	B2ab(ii,iv)	May be under-recorded but its association with relict fens and a long continuity of habitat makes this species vulnerable to loss of open fen habitat through, lowering of water tables and scrub invasion.	NR	E		W	19	7	18	7	-61%
Maso gallicus	LC			NS	E		W	15	14	14	14	

Maso sundevalli	LC				E	S	W	584	478	546	439	-20%
Mastigusa arietina	RE		Last recorded 1926.		E			6	0	6	0	
Mastigusa macrophthalma	VU	D2	There is little recent information on the spider's occurrence at its earlier known sites in southern England, possibly because of the lack of sufficient recent targeted survey. As it is found in ants' nests, it may be under-recorded, hence the assignment of VU rather than EN.	NR	E		W	11	3 (9)	11	3	-73%
Mecopisthes peusi	LC			NS	E	S	W	28	12	27	12	-56%
Mecynargus morulus	LC			NS	E	S	W	57	23	50	16	-68%

Mecynargus paetulus	VU	D2		A rare montane species found above 900m. It has been reported from only two locations since 1993 and appears to have shown a substantial decline. However, the decline may be a result of ealier surveys of montane species in Scotland which have not been repeated since 1993. Given this, VU D2 is regarded as more appropriate than EN. Pressures from recreation (hillwalking and skiing) are probably overstated as the area affected by these activities is significantly less than the available habitat. The limited altitudinal range is of much greater concern in a rapidly changing climate, with little or no scope for adaptation or migration. Nitrogen deposition is also likely to adversely affect the vegetation structure.	NR	S		6	2 (5)	6	2	-67%
Megalepthyphantes nebulosus	LC			A synanthropic species.	E	S	W	109	18	107	18	-83%

Megalepthyphantes sp.	NA				E			0	15	0	15	
Meioneta beata	LC				E	S	W	159	111	146	106	-27%
Meioneta fuscipalpa	VU	D2	Known from a single site where several specimens were found in 1998 and 1999.	NR	E			0	1	0	1	
Meioneta gulosa	LC		Decline uncertain.	NS	E	S	W	69	40	66	37	-44%
Meioneta innotabilis	LC		Probably under-recorded because of its association with, and unpredictable occurrence on, the surface of tree bark.		E	S	W	100	69	100	67	-33%
Meioneta mollis	NT	B2b	There has been a very substantial decline in AOO for this species, but a degree of under-recording is also likely as not all previous locations have been resurveyed since 1993.	NR	E		W	54	13 (9)	54	12	-78%
Meioneta mossica	LC			NS	E	S	W	5	24	4	18	

Meioneta nigripes	LC		NS		S	W	44	41	42	34	-19%
Meioneta rurestris	LC			E	S	W	541	460	517	425	-18%
Meioneta saxatilis sens. str.	LC			E	S	W	91	188	85	175	
Meioneta simplicitarsis	LC		NS	E			27	26	27	25	-7%
Mermessus maculata	NA	A single male of this American species was found in a house in London in 2007. It could possibly spread in a similar way to *M. trilobatus.*					0	1	0	0	
Mermessus trilobatus	NA	A single male found in grassland at Tilbury (Essex) in 2007 and several other records from south-east England since then.					0	1	0	0	
Meta bourneti	LC		NS	E		W	9	38	9	37	

Meta menardi	LC				E	S	W	102	123	98	117	
Metellina mengei	LC				E	S	W	908	1078	843	957	
Metellina merianae	LC				E	S	W	664	690	611	618	
Metellina segmentata sens. str.	LC				E	S	W	998	1046	930	930	
Metopobactrus prominulus	LC				E	S	W	238	136	220	128	-42%
Micaria albovittata	VU	B2ab(ii,iv)	Apparent long-term decline is thought to result from pressures on its coastal grassland habitat.	NR	E			12	7	12	7	-42%
Micaria alpina	VU	D2	Much of the apparently substantial decline is thought likely to be a result of under-recording although, like other upland species, it remains vulnerable to climate change.	NR		S	W	6	1 (5)	6	1	-83%

Micaria pulicaria	LC				E	S	W	420	446	404	418	
Micaria silesiaca	NT	B2b(ii,iv)	Decline likely to be partly attributable to under-recording on southern heathlands in recent years.	NR	E			24	11	24	11	-54%
Micaria subopaca	LC			NS	E	S		14	20	14	19	
Micrargus apertus	LC				E	S	W	128	157	113	133	
Micrargus herbigradus sens. str.	LC				E	S	W	628	440	584	407	-30%
Micrargus laudatus	LC			NS	E		W	32	16	32	16	-50%
Micrargus subaequalis	LC				E	S	W	169	192	165	185	

Microctenonyx subitaneus	LC		NS	E	S	W	60	36	58	35	-40%
Microlinyphia impigra	LC			E	S	W	113	110	108	106	-2%
Microlinyphia pusilla	LC			E	S	W	643	639	589	586	-1%
Micrommata virescens	LC		NS	E	S	W	50	30	48	29	-40%
Microneta viaria	LC			E	S	W	596	583	560	540	-4%

Midia midas	EN	B2ab(ii,iv)	Despite recent surveys of historic and other suitable sites for this species, it is known from only four sites in three hectads (though one of these was in 2014 and therefore is not shown in the table), and decline appears genuine. As a species predominantly associated with veteran trees its distribution is highly restricted and sites are isolated. Lack of temporal continuity of such trees is a threat to its future.	NR	E			4	2	4	1	-50%
Milleriana inerrans	LC				E	S	W	171	226	167	213	

Minicia marginella	DD	Previously thought to be confined to a small area next to the Channel Tunnel, where it was discovered in 1987 and refound in 1991, it was discovered at Butterburn Flow SSSI, Cumbria, in 2015. Butterburn Flow is typical of this species habitat in northern Europe while the Kent chalk appears to be more typical of its habitat central and southern Europe. The species is not difficult to identify and so is unlikely to have been significantly overlooked outside of Butterburn Flow. Given its very restricted distribution it is given a precautionary VU status.	NR	E			1	0 (2)	1	0	
Minyriolus pusillus	LC			E	S	W	188	179	175	147	-16%

Mioxena blanda	DD	Although collected from a wide range of habitats, it is thought that its true habitat preference has not yet been determined. Since 1993 it has been recorded at only a single location in South Devon in 2003-4. All nine specimens caught there were females captured over four occasions using aeronaught bottle traps during the winter months. This, together with its sporadic occurrence, supports the view that it may be a subterranean species dispersing in the autumn/winter months.	NR	E	S	W	22	1	19	1	-95%
Misumena vatia	LC			E		W	181	275	177	262	
Moebelia penicillata	LC		NS	E	S	W	105	67	102	62	-39%
Monocephalus castaneipes	LC		NS	E	S	W	96	65	88	62	-30%

Monocephalus fuscipes	LC				E	S	W	766	642	706	585	-17%
Mughiphantes whymperi	LC			NS	E	S	W	35	34	33	27	-18%
Myrmarachne formicaria	LC			NS	E			19	19	19	19	
Neon pictus	NT	B2a	First recorded in 1998, this recently recognised addition to the south coast shingle fauna has a very restricted distribution.	NR	E			0	3	0	3	
Neon reticulatus	LC				E	S	W	378	305	359	276	-23%
Neon robustus	LC			NS	E	S	W	2	28	2	27	

Neon valentulus	CR	B2ab(ii,iv)	Although this species has been reported regularly in the past at Wicken and Chippenham Fens, Cambridgeshire, and at Foulden Common, West Norfolk, the only recent records are from Roydon Fen, Diss, Norfolk, in 1990 and from Wicken Fen in 1999. There appears to have been a very serious decline in AOO.	NR	E			7	1	7	1	-86%
Neoscona adianta	LC				E		W	79	142	78	139	
Neottiura bimaculata	LC				E	S	W	527	675	517	629	
Neriene clathrata	LC				E	S	W	834	803	790	731	-7%
Neriene emphana	NA		This species is probably a relatively recent arrival that has the potential to become established in Britain, although it has not been re-found since its discovery on the Isle of Wight in 2000.		E			0	1	0	1	

Neriene furtiva	LC		The decline in this species appears to be long-term, although under-recording of the southern heathlands in recent years may be a contributory factor.	NS	E		W	34	17	34	17	-50%
Neriene montana	LC				E	S	W	551	440	522	405	-22%
Neriene peltata	LC				E	S	W	675	765	628	687	
Neriene radiata	NT	B2a	Apparent decline in its Scottish locations is uncertain because of lack of targeted survey, therefore assigned NT until more survey information is available.	NR	E	S		8	5	7	5	-29%
Nesticus cellulanus	LC				E	S	W	138	171	129	161	
Nigma puella	LC			NS	E		W	30	58	30	56	
Nigma walckenaeri	LC				E			15	111	15	106	

Nothophantes horridus	EN	B2ab(ii,iii,iv)	As an endemic, this species was globally assessed in 2015 and assigned a status of CR A3c, based upon threats to the two known locations, the type location having already been lost. Since then, it has been found at an additional site, and the threat to one of the original locations appears to have significantly reduced. The remaining location is still threatened with development, so a status of EN is given, on the basis of the few locations and projected decline. This species' global status should be reassessed at the next opportunity.	NR	E			1	2	1	2	
Notioscopus sarcinatus	LC		A species of wet moss in woods, heaths and fens, for which a degree of under-recording is likely. Because of this, it is not currently regarded as threatened.	NS	E	S	W	36	18	35	16	-54%
Nuctenea umbratica	LC				E	S	W	506	752	489	698	

Obscuriphantes obscurus	LC		E	S	W	445	319	413	275	-33%
Oedothorax agrestis	LC		E	S	W	201	177	184	161	-13%
Oedothorax apicatus	LC		E	S	W	195	238	185	223	
Oedothorax fuscus	LC		E	S	W	765	765	704	695	-1%
Oedothorax gibbosus	LC		E	S	W	553	549	512	489	-4%
Oedothorax retusus	LC		E	S	W	674	629	618	572	-7%
Oonops domesticus	LC	A synanthropic species.	E	S	W	82	61	82	56	-32%

Oonops pulcher	LC				E	S	W	264	245	248	231	-7%
Orchestina sp.	CR(PE)	D	Searches at the one known site for this species produced single females on six occasions, the last in 1994. Significantly, the quality of the habitat declined at this time when the ivy habitat was cut. Despite targeted searches, the absence of further records in over ten years suggests the population size reduction may be approaching 100%. Other potential sites with similar habitat have been searched, so far without success. There is no evidence that this spider has been introduced and is anything other than an extremely rare species which may now be extinct.	NR	E			1	1	1	1	
Oreonetides vaginatus	LC			NS	E	S	W	60	69	57	57	

Oryphantes angulatus	LC			NS	E	S	W	56	49	52	42	-19%
Ostearius melanopygius	LC				E	S	W	163	220	160	210	
Oxyopes heterophthalmus	VU	D2	While this species qualifies for EN on the basis of a restricted distribution and decline, most of the heathland sites at which it remains are protected, so the decline is likely to have slowed and VU is regarded as appropriate. However, the particular stage of heather it prefers is threatened by management presciptions to reduce fire-risk (and is also vulnerable to accidental fires), and at some sites insufficient management has resulted in habitat decline.	NR	E			9	5	9	5	-44%
Ozyptila atomaria	LC				E	S	W	227	162	219	157	-28%

Ozyptila blackwalli	EN	B2ab(ii,iv)	This coastal species has undergone a very substantial decline and is now known from only two locations.	NR	E		11	2	11	2	-82%
Ozyptila brevipes	LC				E	W	78	82	76	78	
Ozyptila nigrita	LC		This species has declined significantly, but does not yet qualify for VU status.	NS	E		24	14	24	13	-46%
Ozyptila praticola	LC				E	W	127	227	124	216	
Ozyptila pullata	VU	D2	Recorded in Britain only from a single a disused chalk quarry site, first in 1997 and most recently in 2002.	NR	E		0	1	0	1	
Ozyptila sanctuaria	LC				E	W	77	116	77	110	

Ozyptila scabricula	LC		Fairly common on some Breckland heaths, but less frequent on heaths in Dorset, Hampshire and Surrey. Although its apparently substantial decline may in part be real, under-recording of heathlands in recent years is also likely to be a factor.	NS	E		W	24	9 (>15)	24	9	-63%
Ozyptila simplex	LC				E	S	W	82	86	82	84	
Ozyptila trux	LC				E	S	W	432	327	390	288	-26%
Pachygnatha clercki	LC				E	S	W	816	804	757	727	-4%
Pachygnatha degeeri	LC				E	S	W	923	969	852	882	
Pachygnatha listeri	LC				E	S	W	161	102	155	95	-39%

Paidiscura pallens	LC				E	S	W	617	804	585	738	
Palliduphantes antroniensis	CR(PE)	B2ab(iv)	The only British records of this species are two males and six females found at two sites in the Cairngorms in 1979 and 1980, at an altitude of 900-980m. Despite some targeted searches, it has not subsequently been re-discovered. It is unlikely that recreational pressures are important for this species, given the area of similar *Empetrum/Vaccinium* habitat available. The key threats are likely to be climate change, affecting the vertical zone it can occupy, with little scope for adaptation or migration, and nitrogen deposition affecting vegetation composition and structure.	NR		S		1	0	1	0	
Palliduphantes ericaeus	LC				E	S	W	869	755	798	659	-17%

Palliduphantes insignis	LC		NS	E	S	W	46	39	46	38	-17%
Palliduphantes pallidus	LC			E	S	W	420	315	399	298	-25%
Panamomops sulcifrons	LC		NS	E			64	74	63	70	
Pardosa agrestis	LC		NS	E	S	W	39	77	38	74	
Pardosa agricola	LC			E	S	W	139	141	121	127	
Pardosa amentata	LC			E	S	W	1022	978	942	878	-7%
Pardosa hortensis	LC			E	S	W	86	108	83	105	

Pardosa lugubris	LC		Apparently restricted to the north, where it is likely to be fairly widely distributed. Recent taxonomic split from *P.saltans*.	NS	E	S		0	10	0	9	
Pardosa monticola	LC				E	S	W	251	202	242	189	-22%
Pardosa nigriceps	LC				E	S	W	679	684	621	625	
Pardosa paludicola	EN	B2ab(ii,iv)	The species was apparently fairly numerous at Shapwick Heath and Plaistow, Somerset, and Woodwalton Fen, but it has undergone a significant decline in AOO, with only two post-1993 records - from Woodwalton and from Ilton, Somerset (a single female).	NR	E			6	2	6	1	-83%
Pardosa palustris	LC				E	S	W	469	538	430	505	
Pardosa prativaga	LC				E	S	W	441	526	431	491	

Pardosa proxima	LC			NS	E	S	W	71	73	69	66	-4%
Pardosa pullata	LC				E	S	W	1181	1197	1078	1063	-1%
Pardosa purbeckensis	LC				E	S	W	112	103	104	101	-3%
Pardosa saltans	LC				E	S	W	426	392	407	370	-9%
Pardosa trailli	VU	B2ab(ii,iv)	Although there have been some unsuccessful recent surveys of historical sites for this species its montane, scree habitat remains under-visited and this may account for some of the apparent, very substantial decline. Thus, EN is not considered likely to be accurate. While future surveys may find the species at several of the unsurveyed areas, VU is proposed under the precautionary principle.	NR	E	S	W	16	4 (6-10)	15	4	-73%

Pelecopsis elongata	NT	B2a	Although there is no evidence of decline in this species, it occurs in only a small number of Calrdonian pine forest sites and remains threatened by changes in woodland management.	NR		S		4	4	4	4	
Pelecopsis mengei	LC				E	S	W	151	85	135	74	-45%
Pelecopsis nemoralioides	LC			NS	E	S	W	65	35	62	35	-44%
Pelecopsis nemoralis	LC				E	S	W	95	98	85	88	
Pelecopsis parallela	LC				E	S	W	169	197	161	194	

Pelecopsis radicicola	EN	B2ab(ii,iv)	The spider was formerly found in numbers at each of its sites except Rodney Stoke, Somerset. It has not been recorded in West Sussex since 1952, Suffolk since 1972, or Dorset since 1979. It has been collected from just two locations since 1993, and exhibits a substantial decline.	NR	E			4	2	4	2	-50%
Pellenes tripunctatus	VU	D2	This species appears to be restricted to two extended coastal shingle locations where good populations apparently occur. However, shingle habitats are prone to damage by leisure and commercial activities, and exceptional tidal and wave conditions.	NR	E			3	5	3	5	
Peponocranium ludicrum	LC				E	S	W	377	300	351	262	-25%
Phaeocedus braccatus	VU	B2ab(ii,iv)	An unmistakable species, so unlikely to be overlooked, although southern heathlands have been poorly recorded in recent years.	NR	E			18	9	18	9	-50%

Philodromus albidus	LC				E		W	85	208	83	199	
Philodromus aureolus	LC				E	S	W	453	558	433	521	
Philodromus cespitum	LC				E	S	W	431	589	416	550	
Philodromus collinus	LC				E			36	110	35	105	
Philodromus dispar	LC				E	S	W	332	439	328	407	
Philodromus emarginatus	VU	B2ab(ii,iv)	B2ab(ii,iv) is justified because this species is known from only six locations since 1993. Found in association with pines, usually on heathland, it is very local and appears to have undergone major long-term decline; AOO has apparently declined steeply.	NR	E	S		20	6	20	6	-70%

Philodromus fallax	VU	B2ab(ii,iv)	The decline in this coastal sand-dune specialist appears to be real and long-term; it is now known from only a handful of sites.	NR	E		W	24	8	24	8	-67%
Philodromus histrio	LC		Although some under-recording on southern heathland is accepted, this species seems to have largely disappeared away from these and coastal habitats in Essex and Suffolk.	NS	E	S	W	62	28	59	28	-53%
Philodromus longipalpis	LC			NS	E			7	22	7	22	
Philodromus margaritatus	NT		Although this species has excellent camouflage, on lichen-covered tree trunks, its microhabitat is likely to have been be searched by arachnologists; the slight apparent decline is thefore expected to be real. Does not yet qualify for VU as known from more than ten locations.	NR	E	S		12	11	12	8	-33%
Philodromus praedatus	LC				E	S	W	82	155	82	153	

Phlegra fasciata	NT	B2ab(ii,iv)	The apparent decline on its dry, southern coastal sites islikely to be real, but specimens found at two locations on the Gower peninsula in 1994 may indicate a more widespread occurrence on limestone cliffs in that area.	NR	E		W	12	8	12	8	-33%
Pholcomma gibbum	LC				E	S	W	437	300	417	267	-36%
Pholcus phalangioides	LC				E	S	W	181	570	176	529	
Phrurolithus festivus	LC				E	S	W	203	266	200	260	
Phrurolithus minimus	LC			NS	E			13	15	13	15	
Phylloneta impressa	LC				E	S	W	159	391	157	361	

Phylloneta sisyphia	LC			E	S	W	653	728	628	672	
Piniphantes pinicola	LC	Perferring loose stony terrain on high ground, under-recording is likely to a significant contributor to the apparent decline in this species.	NR	E	S	W	24	12	22	11	-50%
Pirata hygrophilus	LC			E	S	W	364	314	351	292	-17%
Pirata latitans	LC			E	S	W	204	165	195	158	-19%
Pirata piraticus	LC			E	S	W	697	729	642	662	
Pirata piscatorius	LC	The apparent decline in this wetland specialist is likely to real, at least in eastern England where suitable habitat had been relatively well surveyed in recent years.	NS	E	S	W	92	50	87	50	-43%

Pirata tenuitarsis	LC			NS	E	S	W	38	46	37	46	
Pirata uliginosus	LC				E	S	W	134	114	129	105	-19%
Pisaura mirabilis	LC				E	S	W	677	906	662	843	
Pistius truncatus	CR	B2ab(ii,iv)	Although originally recorded from the New Forest, it now appears to be confined to a single location in Kent where populations appear to be extremely small and vulnerable.	NR	E			2	1	2	1	-50%
Pityohyphantes phrygianus	LC			NS	E	S		61	72	51	66	
Platnickina tincta	LC				E	S	W	198	410	196	396	
Pocadicnemis juncea	LC				E	S	W	294	408	286	383	

Pocadicnemis pumila sens. str.	LC			E	S	W	709	539	649	468	-28%
Poeciloneta variegata	LC			E	S	W	443	283	410	250	-39%
Porrhomma cambridgei	DD	Likely to be under-recorded due to its subterranean habit.	NR	E			3	1	3	1	-67%
Porrhomma campbelli	LC	Rarely encountered, perhaps because of its habitat preference. If, as is thought possible, it is largely subterranean, it may have been significantly under-recorded.	NS	E	S	W	40	26	39	24	-38%
Porrhomma convexum	LC	Given the apparent broad range of subterranean habitats utilised by this species, it is difficult to understand the reason for its apparent recent decline, although it is not thought to be threatened at present.	NS	E	S	W	116	49	110	46	-58%

Porrhomma egeria	LC	Apparent long-term decline especially in the eastern half of country. Elsewhere in Europe this is primarily thought to be a caverniculous species but our data do not support a strong association with caves. Its recorded association with smaller crevices in mines, cellars and stony debris may have resulted in some under-recording.	NS	E	S	W	38	15	37	14	-62%
Porrhomma errans	LC	Possibly under-recorded because its main habitat is unknown.	NS	E	S	W	25	16	23	15	-35%
Porrhomma microphthalmum	LC			E	S	W	181	183	173	168	-3%
Porrhomma montanum	LC	Decline thought to be due at least in part to recent under-recording of its upland habitat.	NS	E	S	W	53	36	48	32	-33%
Porrhomma oblitum	LC		NS	E		W	36	26	35	26	-26%

Porrhomma pallidum	LC		Apparent decline widespread across the range, but may have been seriously under-recorded in its upland and woodland habitats.		E	S	W	150	82	134	70	-48%
Porrhomma pygmaeum	LC				E	S	W	502	508	476	458	-4%
Porrhomma rosenhaueri	NT	B2a	This troglobitic species has been recorded in two subterranean systems, one of which has not been surveyed in recent years. The impact of quarrying activity on this species is uncertain.	NR			W	2	1 (2)	2	1	-50%

Praestigia duffeyi	EN	B2ab(ii);(iii)	Most of the known populations are vulnerable and in extremely localised habitats threatened by development, recreational pressures and rising sea levels. Many of the Thames Marshes have been reclaimed for industrial development, with the extensive use of concrete-capped iron pilings along the waterfront leaving very little saltmarsh, and there is now enormous pressure to develop high-value riverside housing. Sea levels around Essex are rising relative to the land by some 6 mm a year, causing erosion of saltmarshes. At the present rate most of the habitat will have been lost within a few decades.	NR	E		10	4	10	4	-60%
Prinerigone vagans	LC				E	W	68	125	67	119	

Pseudeuophrys erratica	LC	Apparent widespread long-term decline, although the north is less well recorded and the species is likely to occur more widely than current records indicate.	NS	E	S	W	69	28	63	26	-59%
Pseudeuophrys lanigera	LC			E	S	W	83	106	83	104	
Pseudeuophrys obsoleta	LC		NS	E			11	13	11	13	
Pseudomaro aenigmaticus	DD		NR	E			3	2	3	2	-33%
Psilochorus simoni	LC	A synanthropic species.		E	S	W	23	12	21	11	-48%
Robertus arundineti	LC			E	S	W	162	112	145	101	-30%
Robertus insignis	DD	Only three specimens ever recorded in Britain, the last in 1988.	NR	E			3	0	3	0	
Robertus lividus	LC			E	S	W	817	659	742	590	-20%

Robertus neglectus	LC			NS	E	S	W	91	60	89	50	-44%
Robertus scoticus	CR	B2ab(ii,iv)	Confined to the Black Wood of Rannoch. No other pinewood area appears to provide the cool, damp *Sphagnum* habitat it requires in old-growth Scots Pine forest. It is probably no longer present in the near-by Meggernie woods, its only other recorded location, where it has not been seen since 1965. Threats include climate change and catastrophic habitat damage by such agencies as fire and recently introduced tree diseases. Dense regeneration of pine would also affect suitable habitat.	NR		S		2	1	2	1	-50%
Rugathodes bellicosus	LC			NR	E	S	W	18	13	15	12	-20%
Rugathodes instabilis	LC			NS	E		W	64	67	63	67	

Rugathodes sexpunctatus	NA	First recorded from Britain in Scotland in 2012 and now known from several locations in and around Glasgow.			S		0	1	0	0	
Saaristoa abnormis	LC			E	S	W	552	360	503	328	-35%
Saaristoa firma	LC	The apparent decline in this species of damp situations in heathand, woodland and scrub on peat soils is thought to result, at least in part, from the lack of recent surveys of Welsh peatlands.	NS	E	S	W	93	61	88	50	-43%
Saloca diceros	LC		NS	E		W	30	19	30	19	-37%
Salticus cingulatus	LC			E	S	W	152	155	145	149	
Salticus scenicus	LC			E	S	W	454	614	440	582	
Salticus zebraneus	LC		NS	E			13	34	13	33	

Satilatlas britteni	LC			NS	E	S	W	41	18	32	13	-59%
Savignia frontata	LC				E	S	W	658	472	605	432	-29%
Scotina celans	LC			NS	E	S	W	65	51	63	50	-21%
Scotina gracilipes	LC		At least part of the apparently substantial decline in this species of, predominantly, mature heathands, is thought to be a result of under-recording, particularly on the southern heaths.	NS	E	S	W	98	41	96	36	-63%
Scotina palliardii	EN	B2ab(ii,iv)	Major decline accepted.	NR	E			10	4	10	4	-60%
Scotinotylus evansi	LC			NS	E	S		84	80	77	66	-14%
Scotophaeus blackwalli	LC				E	S	W	149	187	145	179	

Scotophaeus scutulatus	NA	Assumed to be introduced.		E			1	2	1	2	
Scytodes thoracica	LC	A synanthropic species.		E		W	59	70	59	67	
Segestria bavarica	LC	Any decline uncertain and no threats identified.	NR	E		W	13	11	13	11	-15%
Segestria florentina	LC	This species is steadily increasing in numbers and range.		E		W	22	54	22	52	
Segestria senoculata	LC			E	S	W	530	593	494	547	

Semljicola caliginosus	EN	B2ab(ii,iv)	This species has shown a major decline in its AOO and has been found at only three locations since 1993. Although formerly considered endemic, it is now recorded from Siberia and Norway. However the British populations are considered to be globally important. Its wetland habitats are under threat from eutrophication and both land-use and climate change.	NR	E	S		23	3	23	3	-87%
Sibianor aurocinctus	LC			NS	E	S		25	43	24	43	
Silometopus ambiguus	LC			NS	E	S	W	86	67	82	58	-29%
Silometopus elegans	LC				E	S	W	294	165	264	142	-46%

Silometopus incurvatus	VU	B2ab(ii,iv)	This species has been found at 10 locations since 1993, and appears to have declined by just over 50%, and so is only marginally VU. Its sand-dune habitat has become increasingly fragmented by development (e.g. agriculture and golf courses) and is under increasing pressure from recreation, eutrophication and coastal erosion.	NR	E	S		19	10	19	9	-53%
Silometopus reussi	LC				E	S	W	84	83	80	79	-1%
Simitidion simile	LC				E	S	W	103	141	101	134	
Singa hamata	LC			NS	E	S	W	23	20	23	19	-17%
Sintula corniger	LC		Apparent decline may result in part from under-recording, particularly in the New Forest area, but targeted surveys are needed to establish this.	NS	E	S	W	90	51	87	50	-43%

Sitticus caricis	LC	Decline may be less than it seems in East Anglia because of under-recording of this species' highly-specialised micro-habitat. However acid bog and fen habitats are under threat from succession and climate change.	NR	E	W	28	13 (>15)	28	13	-54%

Sitticus distinguendus	CR	C2aii	The population of this species is expected to decline by at least 80% within the next 10 years. The two sites where it has been recorded, on either side of the Thames, are scheduled for development. A large proportion of the habitat at the Essex site, which is thought to hold over 90% of the British population, is undergoing development and the Kent site is going through the planning process. Although the species had not been identified in this country prior to 2003, the habitat where it has been found is comparable to that of European populations and the known population is almost certainly the result of natural colonisation of suitable habitat. Suitable habitat may be hard to come by in this country and it is the opinion of the global expert that this species has not been introduced.	NR	E	0	2	0	2

Sitticus floricola	NT	B2a	Decline uncertain, but this species' peatland habitat is vulnerable to changes in water table resulting from land-use and climate change.	NR	E	S	W	8	7	8	7	-13%
Sitticus inexpectus	LC			NS	E		W	20	25	20	24	
Sitticus pubescens	LC				E	S	W	116	132	113	127	
Sitticus saltator	LC		This species sandy heath and dune habitat is vulnerable to succession, especially at inland sites, and to public pressure on dune systems,	NS	E		W	30	20	29	20	-31%
Steatoda albomaculata	LC			NR	E		W	21	13	21	13	-38%
Steatoda bipunctata	LC				E	S	W	346	405	332	388	
Steatoda grossa	LC				E	S	W	26	132	26	126	

Steatoda nobilis	LC				E		W	3	127	3	121	
Steatoda phalerata	LC				E	S	W	106	131	102	125	
Steatoda triangulosa	NA		First recorded in 1996. Introduced and likely to remain synathropic if it becomes established.		E		W	0	2	0	2	
Stemonyphantes lineatus	LC				E	S	W	501	362	483	345	-29%
Stroemiellus stroemi	NT	B2a	Specialised habitat, in deep fissures in tree bark, may mean it has been under-recorded, hence downgraded from VU.	NR	E	S		13	8	13	8	-38%
Syedra gracilis	LC			NS	E	S		20	20	19	20	
Synageles venator	LC			NS	E		W	16	14	15	13	-13%

Synema globosum	NA		Not clear if the four specimens recorded in Britain since 2003 represent casual introductions or whether the species is, or will become, established in this country.		E			0	3	0	3	
Talavera aequipes	LC				E	S	W	108	102	107	98	-8%
Talavera petrensis	NT	B2b(ii,iv)	The recent under-recording of southern heathlands suggests this species is probably still present at more than 10 locations, and does not yet justify VU status.	NR	E	S		28	10 (11-15)	28	10	-64%
Talavera thorelli	VU	D2	Known from only three locations. A single female was taken at Castle Hill, Folkestone, in 1989 and another adult male and female in 1991. Has also been found more recently in Sussex and Surrey, though details are not available. Potential threats include destruction of its grassland habitat or changes in management.	NR	E			1	0	1	0	

Tallusia experta	LC				E	S	W	321	243	300	220	-27%
Tapinocyba insecta	LC		A woodland species that still occurs widely across its range and may be under-recorded.	NS	E	S	W	66	30	64	29	-55%
Tapinocyba mitis	EN	B2ab(ii,iv)	This species appears to have declined massively and has been recorded from only one hectad since 1993. However, at least part of this decline may be because of fewer heathland surveys, and the spider may still occur in some of its former sites, so CR is not thought justified. Recent and ongoing surveys of some of these sites have only found it at one, so some decline appears genuine, and EN is proposed. Like other heathland species, it remains vulnerable to destruction of hearthland and to lack of, or inappropriate, habitat management.	NR	E			17	1 (2-5)	17	1	-94%

Tapinocyba pallens	LC			E	S	W	208	130	187	111	-41%
Tapinocyba praecox	LC			E	S	W	193	93	184	92	-50%
Tapinocyboides pygmaeus	DD	This inconspicuous species, found in soil crevices and tunnels, has been recorded at only two locations since 1993. Its apparently substantial decline is likely to result from difficulty of detection. It appears to have been regularly found at a few sites so collection method is probably important. The loss of grassland to scrub or agricultural improvement may be a threat to this species.	NR	E	S		6	2	5	2	-60%
Tapinopa longidens	LC			E	S	W	344	193	324	179	-45%
Taranucnus setosus	LC	There is evidence that this lowland wetland species may have undergone long-term decline.	NS	E	S	W	117	61	114	58	-49%

Tegenaria agrestis	LC				E	S	W	104	133	104	132	
Tegenaria atrica	LC		A synanthropic species.		E	S	W	41	5	40	5	-88%
Tegenaria domestica	LC				E	S	W	275	198	260	194	-25%
Tegenaria ferruginea	NA		An assumed introduction.		E			0	1	0	1	
Tegenaria gigantea	LC				E	S	W	258	460	252	433	
Tegenaria parietina	LC		A synanthropic species.		E			36	19	36	19	-47%
Tegenaria picta	VU	D2	No decline, but this species' association with chalk rubble, including in a former quarry, makes it vulnerable to habitat loss though site re-development.	NR	E			2	2	2	2	

Tegenaria ramblae	NA	A single male was found on a brownfield site in London in 2008. A southern European species.				0	1	0	0	
Tegenaria saeva	LC		E	S	W	124	248	121	232	
Tegenaria silvestris	LC		E	S	W	186	230	182	220	
Tenuiphantes alacris	LC		E	S	W	512	372	475	318	-33%
Tenuiphantes cristatus	LC		E	S	W	414	296	384	258	-33%
Tenuiphantes flavipes	LC		E	S	W	455	536	438	504	
Tenuiphantes mengei	LC		E	S	W	773	588	698	514	-26%

Tenuiphantes tenebricola	LC		E	S	W	325	240	304	211	-31%
Tenuiphantes tenuis	LC		E	S	W	1187	1312	1090	1173	
Tenuiphantes zimmermanni	LC		E	S	W	1111	1085	1015	954	-6%
Tetragnatha extensa	LC		E	S	W	772	981	710	887	
Tetragnatha montana	LC		E	S	W	645	816	612	747	
Tetragnatha nigrita	LC		E		W	56	133	54	129	
Tetragnatha obtusa	LC		E	S	W	169	209	167	199	

Tetragnatha pinicola	LC				E	S	W	96	121	95	116	
Tetragnatha striata	LC				E	S	W	24	111	24	106	
Textrix denticulata	LC				E	S	W	294	311	267	280	
Thanatus formicinus	CR(PE)	B2ab(iv)	Last recorded 1969 despite targeted searches in recent years.	NR	E			3	0	3	0	-100%
Thanatus striatus	LC			NS	E		W	97	80	96	77	-20%
Thanatus vulgaris	NA		Imported with commercial crickets used for feeding reptiles.		E	S		1	1	1	1	
Theonoe minutissima	LC				E	S	W	133	109	124	96	-23%

Theridion blackwalli	LC		NS	E		W	35	83	35	80
Theridion familiare	LC		NS	E	S		18	23	17	21
Theridion hannoniae	NA	The status of the only British population, discovered in south Wales in 2007, is uncertain.				W	0	1	0	0
Theridion hemerobium	NA		NS	E		W	0	74	0	74
Theridion melanurum	LC			E	S	W	164	186	158	178
Theridion mystaceum	LC			E	S	W	290	412	277	385
Theridion pictum	LC			E	S	W	107	118	104	115

Theridion pinastri	LC		NS	E			6	14	6	14	
Theridion varians	LC			E	S	W	415	528	399	494	
Theridiosoma gemmosum	LC		NS	E		W	45	82	43	78	
Thomisus onustus	LC		NS	E			17	16	17	16	-6%
Thyreosthenius biovatus	LC		NS	E	S	W	21	32	20	32	
Thyreosthenius parasiticus	LC			E	S	W	137	87	131	83	-37%
Tibellus maritimus	LC			E	S	W	158	107	144	94	-35%

Tibellus oblongus	LC			E	S	W	417	478	405	452	
Tiso aestivus	LC		NS	E	S	W	22	33	22	28	
Tiso vagans	LC			E	S	W	491	391	442	360	-19%
Tmeticus affinis	LC		NS	E	S	W	71	70	70	67	-4%
Trachyzelotes fuscipes	DD	Only recorded in Britain as a single female taken from under stones and debris at Kimmeridge Cliffs, Dorset, in 2003. Until further specimens are found its exact status in this country remains unclear.		E			0	1	0	1	
Trachyzelotes pedestris	LC			E		W	60	102	60	94	
Trematocephalus cristatus	LC		NS	E			11	33	11	31	

Trichoncus affinis	LC			NR	E		5	14	5	13	
Trichoncus hackmani	VU	D2	This species of strand lines and sparse, shingle vegetation is known from only three locations. It has been abundant wherever found, which suggests that under-recording is an unlikely explanation for its apparent decline.	NR	E		5	4	5	4	-20%
Trichoncus saxicola	VU	B2ab(ii,iv)	The most recent record for this species is from Kent in 2009. Since 1993 has been found at only seven locations and has shown a very substantial decline in AOO. However, a few of the historic sites have yet to be resurveyed and so it may be more widespread than indicated by the records. Therefore VU is proposed rather than EN.	NR	E	S	33	7 (8-9)	32	7	-78%

Trichopterna cito	EN	B2ab(ii,iv)	Recorded from only three locations since 1993, but appears to be well-established at these sites. This species' AOO appears to have halved, from six hectads before 1993 to just three since, but it may still persist at Sandwich, Kent, where it was last found in 1992. Although apparently formerly numerous at all three sites, at Colne Point, Essex, extensive fieldwork in the early 1990s and in 2004 located only males, in very small numbers, despite the use of pitfall trapping.	NR	E			6	3 (4)	6	3	-50%
Trichopternoides thorelli	LC				E	S	W	164	86	152	75	-51%
Trochosa robusta	VU	B2ab(ii)	All recent verified records (some older records are doubtful, because of confusion with *T. ruricola*) are from calcareous grassland, landslips or coastal cliffs. The species has apparently undergone substantial decline.	NR	E			13	8	13	8	-38%

Trochosa ruricola	LC				E	S	W	431	419	419	391	-7%
Trochosa spinipalpis	LC		There may have been a long-term decline in this species, but it is subject to misidentification and hence the rate of decline may be over-estimated.	NS	E	S	W	95	36	86	33	-62%
Trochosa terricola	LC				E	S	W	840	757	777	696	-10%
Troxochrus scabriculus	LC				E	S	W	136	152	130	146	
Tuberta maerens	EN	B2ab(ii,iv)	Known from eight locations prior to 1993 but from only one since that date. Though rare and local, and having apparently undergone a major decline, recent work suggests a degree of under-recording, hence CR is not thought justified.	NR	E			9	1 (3-5)	9	1	-89%
Typhochrestus digitatus	LC		A winter-active species of open grassland and heathland that may be under-recorded. It is still widespread and not thought to be threatened at present.	NS	E	S	W	120	50	107	48	-55%

Typhochrestus simoni	CR	B2ab(ii,iv)	The spider was once numerous in one area of Porton Down, Wiltshire, but there has been only one record in Britain for at least 30 years, at Portland, Dorset, in 2003.	NR	E		W	3	1	3	1	-67%
Uloborus plumipes	NA				E	S	W	1	203	1	196	
Uloborus walckenaerius	NT	B2a	The species is no longer present, or is severely reduced in numbers, at some of its former strongholds. While it qualifies for EN, it is not considered significantly threatened at its remaining, protected, sites.	NR	E			11	5	11	5	-55%
Urozelotes rusticus	NA		Appears to be associated with humans and is possibly an erratic visitor that does not seem to have become established.		E		W	8	1	8	1	-88%

Wabasso replicatus	VU	D2		D2 is justified because the species is known only from the Insh Marshes (Cairngorms) where any changes in habitat conditions could pose a threat. Although it may have been overlooked in the past, it is likely to be rare. Only known from a single site, any changes in management of Insh Marshes could pose a threat to this species.	NR		S		0	1	0	1	
Walckenaeria acuminata	LC					E	S	W	795	553	732	496	-32%
Walckenaeria alticeps	LC			This species is usually found in moist leaf litter and shaded *Sphagnum*. Its apparent substantial decline is likely, at least in part, to be attributable to lack of recent surveys of Welsh peatland sites.	NS	E	S	W	37	21	36	19	-47%
Walckenaeria antica	LC					E	S	W	460	370	434	341	-21%
Walckenaeria atrotibialis	LC					E	S	W	223	162	214	154	-28%

Walckenaeria capito	LC			NS	E	S	W	41	36	40	35	-13%
Walckenaeria clavicornis	LC		An arctic-alpine species for which an apparent substantial decline may partly be a result of under-recording.	NS	E	S	W	57	33	52	22	-58%
Walckenaeria corniculans	CR	B2ab(ii,iv)	Since 1993, this species has been recorded from just one location in Surrey and has undergone a major decrease in AOO.	NR	E			12	1	12	1	-92%
Walckenaeria cucullata	LC				E	S	W	166	93	160	87	-46%
Walckenaeria cuspidata	LC				E	S	W	415	243	389	211	-46%
Walckenaeria dysderoides	LC		Part of the apparently susbtantial decline in this species may be a result of under-recording of southern heathland in recent years; it is not currently thought to be threatened.	NS	E	S	W	127	56	124	55	-56%
Walckenaeria furcillata	LC			NS	E	S	W	57	40	55	38	-31%

Walckenaeria incisa	LC		Part of the apparent decline in this species may be a result of under-recording of southern heathlands in recent years, and so it is not currently thought to be threatened. It occurs in a wide variety of habitats and the reasons for its overall decline are unclear.	NS	E	S	W	41	19	39	18	-54%
Walckenaeria kochi	LC			NS	E	S	W	102	55	90	44	-51%
Walckenaeria mitrata	VU	D2	Fewer than 10 specimens have been recorded from two sites in Blean Woods NNR, Kent, its only British location. Three males and two females were taken from litter in an area of over-mature coppice chestnut in 1967, one female in 1971 and two males and a female from litter of a five-year-old chestnut coppice in 2004. Changes in woodland management at its known sites pose a threat.	NR	E			1	1	1	1	

Walckenaeria monoceros	LC	This species occurs infrequently throughout Britain, under stones and detritus in open, often sandy, inland habitats, including on burnt heathland. It has never been very numerous on heathland sites and has lost ground throughout its range. The loss and degradation through innappropriate management (including failure to maintain early successional stages) of its heathland subhabitat may have been one cause of decline.	NS	E	S	W	111	34	108	32	-70%
Walckenaeria nodosa	LC	Part of the apparent decline may be a result of under-recording of southern English heathlands and the Welsh peatlands in recent years. This species is not currently thought to be threatened.	NS	E	S	W	116	51	105	48	-54%
Walckenaeria nudipalpis	LC			E	S	W	539	342	497	314	-37%

Walckenaeria obtusa	LC		Too little is known of the ecology and micro-habitat requirements of this species to be sure what threats it faces and whether the size of the apparent decline is real.	NS	E	S	W	62	27	60	26	-57%
Walckenaeria stylifrons	VU	D2	This species is known from a single Breckland site where just six specimens were found between 1963 and 1994, when it was last recorded. Changes in habitat suitability owing to the the current decimation of the Breckland rabbit population by haemorrhagic disease pose a threat.	NR	E			1	1	1	1	
Walckenaeria unicornis	LC				E	S	W	469	340	448	314	-30%
Walckenaeria vigilax	LC				E	S	W	244	157	223	138	-38%

Wiehlea calcarifera	EN	B2ab(ii,iv)	This spider has never been found in abundance at any site. It has not been recorded at any location since 1993 - an apparent 100% decline. However, part of this decline may be a result of under-recording at certain locations, particularly southern heathland sites where new surveys are ongoing, so CR is not currently thought justified.	NR	E			12	0(4)	12	0	100%
Xerolycosa miniata	LC			NS	E	S	W	57	46	55	46	-16%
Xerolycosa nemoralis	LC			NS	E			45	68	45	66	
Xysticus acerbus	LC		Significance of the decline in this rare species of southern, dry grassland habitats is uncertain; further targeted survey is needed.	NR	E		W	14	11	14	11	-21%
Xysticus audax	LC				E	S	W	93	98	91	92	

Xysticus bifasciatus	LC			NS	E	S	W	43	28	41	27	-34%
Xysticus cristatus	LC				E	S	W	1046	1075	964	975	
Xysticus erraticus	LC				E	S	W	218	178	209	166	-21%
Xysticus kochi	LC				E	S	W	132	149	127	142	
Xysticus lanio	LC				E	S	W	88	98	87	95	
Xysticus luctator	EN	B2ab(ii,iv)	Recorded from three locations before 1993, but from just two since that then. Appears to be very rare and declining.	NR	E			3	2	3	2	-33%

Xysticus luctuosus	EN	B2ab(ii,iv)	Although recorded from 16 counties, there are few recent records for this species. Some of the old records from southern counties may refer to *X. acerbus* Thorell, females of which are very similar to *X. luctuosus*. B2ab(ii,iv) is justified because the spider has apparently declined precipitously in the past 20 years.	NR	E	S	W	18	4	17	4	-76%
Xysticus robustus	EN	B2ab(ii,iv)	This large, southern species has apparently suffered a very major decline in AOO the past 20 years. Despite recent fieldwork in Dorset it is now known from just one location. However, the spider is considered to be EN rather than CR because it may be under-recorded in the New Forest area, where not all of the past locations have been adequately re-surveyed.	NR	E			10	1 (4)	10	1	-90%
Xysticus sabulosus	LC		A species of heathland sands and gravels for which a significant decline is accepted. However, it remains widespread and is not considered to be at risk of extinction in the near future.	NS	E	S	W	56	21	53	19	-64%

Xysticus ulmi	LC				E	S	W	184	196	181	185	
Zelotes apricorum	LC				E	S	W	131	129	123	125	
Zelotes electus	LC			NS	E	S	W	51	57	50	57	
Zelotes latreillei	LC				E	S	W	255	294	251	284	
Zelotes longipes	VU	B2ab(ii)	A species of dry heathlands and coastal habitats. Although apparently substantial, the level of decline is uncertain because of the relative lack of recent surveys of southern heathlands. It may still persist in a few more locations than the recent records indicate, hence downgraded from EN to VU.	NR	E			17	4 (6)	17	4	-76%
Zelotes petrensis	LC		No decline.	NR	E			11	12	11	12	

Zelotes subterraneus	LC			NS	E	S	W	17	21	17	21
Zilla diodia	LC				E		W	83	172	83	168
Zodarion fuscum	VU	D2	This species is known from only three locations, one of which has been lost to development. These are believed to be wild populations within their natural range.	NR	E			0	3	0	2
Zodarion italicum	LC			NS	E			10	28	10	28
Zodarion rubidum	NA		Native status at its single, brownfield site is uncertain. It may now be extinct in Britain since the site and habitat have been destroyed by development.	NR	E			0	1	0	1
Zodarion vicinum	VU	D2	This species has been found at only two, geographically linked, locations on coastal cliffs in Kent. The population would appear stable but remains vulnerable to disturbance.	NR	E			1	1	1	1

Zora armillata	CR	B2ab(ii,iv)	CR B2ab(ii,iv) is justified because there are no records of this species since 1980. While there have been surveys CR(PE) is not considered justified, as the survey effort undertaken is insufficient to give confidence that the species has been lost. The spider is thought to have been fairly frequent in the past on wet areas of Hartland Moor and Morden Bog, Dorset. The catchment of Morden Bog was greatly modified by afforestion with conifers in the area last century. Historical records from the Cambridgeshire Fens are now in doubt. The lowering water tables, for example by drainage of adjacent land and/or water abstraction, would damage all the listed localities of this species.	NR	E			4	0(1)	4	0	
Zora nemoralis	VU	B2ab(ii,iv)	B2ab(ii,iv) is justified because this species has apparently declined by over 50% in the last 20 years and occurs in fewer than 10 post-1993 locations.	NR	E	S	W	17	7	15	7	-53%

Zora silvestris	CR	B2ab(ii,iv)	This spider has only been found in very small numbers. Several specimens were found at Hurt Wood, Surrey, and Sherwood Forest, Nottinghamshire, but it has been recorded from just one location since 1993. It shows a major decline in AOO and is currently known at only a single location.	NR	E			5	1	5	1	-80%
Zora spinimana	LC				E	S	W	485	480	468	447	-4%
Zoropsis spinimana	NA		Recent colonist; synanthropic.		E			0	0	0	0	
Zygiella atrica	LC				E	S	W	424	414	408	385	-6%
Zygiella x-notata	LC				E	S	W	483	763	461	695	

11.2. Appendix 2. Summary of IUCN Criteria

Summary of the five criteria (A–E) used to evaluate if a taxon belongs in a threatened category (Critically Endangered, Endangered or Vulnerable)

Use any of the criteria A–E	**Critically Endangered**	**Endangered**	**Vulnerable**
A. Population reduction			
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%

A1. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible **AND** understood **AND** have ceased, based on and specifying any of the following:

- **(a)** direct observation
- **(b)** an index of abundance appropriate to the taxon
- **(c)** a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality
- **(d)** actual or potential levels of exploitation
- **(e)** effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under A1.

A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under A1.

A4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased **OR** may not be understood **OR** may not be reversible, based on (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)			
B1. Extent of occurrence (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
AND at least 2 of the following:			
(a) Severely fragmented, **OR**			
Number of locations	= 1	≤ 5	≤ 10

(b) Continuing decline in any of: **(i)** extent of occurrence; **(ii)** area of occupancy; **(iii)** area, extent and/or quality of habitat; **(iv)** number of

locations or subpopulations; **(v)** number of mature individuals.

(c) Extreme fluctuations in any of: **(i)** extent of occurrence; **(ii)** area of occupancy; **(iii)** number of locations or subpopulations; **(iv)** number of mature individuals.

C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
AND either C1 or C2:			
C1. An estimated continuing decline of at least: (up to a max. of 100 years in future)	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
C2. A continuing decline **AND** (a) and/or (b):			
(a i) Number of mature individuals in each subpopulation: **or**	< 50	< 250	< 1,000
(a ii) % individuals in one subpopulation =	90–100%	95–100%	100%
(b) Extreme fluctuations in the number of mature individuals.			
D. Very small or restricted population			
Either:			
Number of mature individuals	< 50	< 250	**D1.** < 1,000
			AND/OR
VU D2. Restricted area of occupancy or number of locations with a plausible future threat that could drive the taxon to CR or EX in a very short time.			**D2.** typically: AOO < 20 km² or number of locations ≤ 5
E. Quantitative Analysis			
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 years max.)	≥ 20% in 20 years or 5 generations (100 years max.)	≥ 10% in 100 years

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