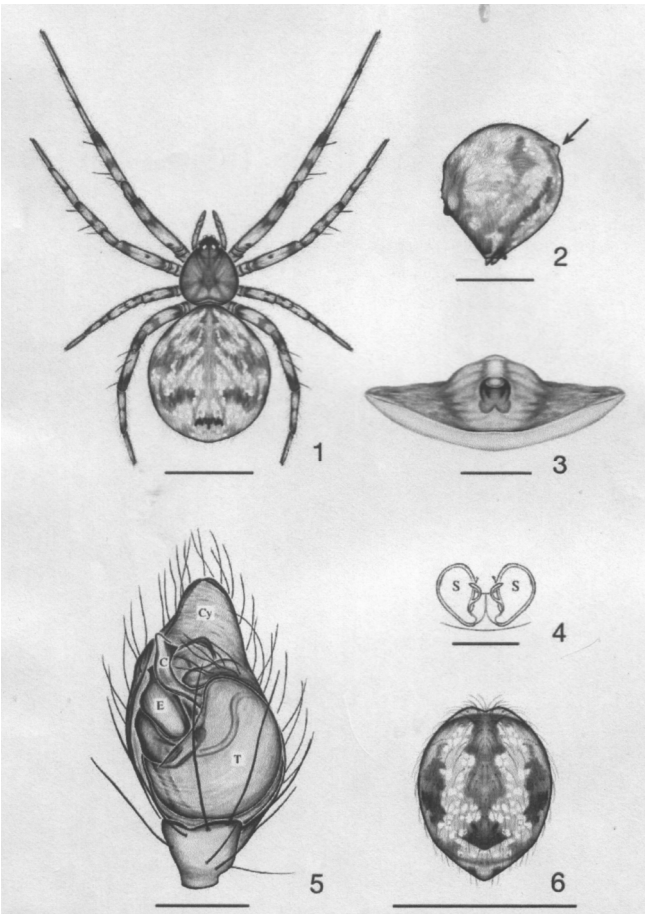

FIGURES 1–6. *Cryptachaea blattea* (Urquhart 1886). 1. Habitus of female, dorsal view; 2. Female abdomen, lateral view, small tubercle arrowed; 3. Epigynum, ventral view; 4. Internal genitalia, dorsal view; 5. Male pedipalp, ventral view; 6. Male abdomen, dorsal view. Scale bars for figures 1, 2, 6 = 1.0 mm, 3–5 = 0.1 mm. Abbreviations used: E, embolus; C, conductor; T, tegulum; Cy, cymbium; S, spermathecae.

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This perhaps is the reason for it being found on the southwest coast of the Isle of Wight. The owner of the garden is a regular exhibitor at the Chelsea Flower Show so it has quite possibly been imported via Chelsea or on new material acquired for the show, although the plants I swept seemed to be long established in the garden. I am including with this note drawings of the genitalia etc., kindly made available to me by Dr Cor Vink and Nadine Duperre, co-authors of the paper in *Zootaxa*. My thanks to Barbara Knoflach for identifying the specimen, also for the help and advice from Tony Russell-Smith and David Nellist.

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ERIC DUFFEY AT 90

I don't know whether readers of the Newsletter will be interested to know that Eric is 90 on 2nd January 2012. As he started working on spiders in 1951 he will have had

over 60 years of activity in the field. He's still working on another ecology paper, but has sadly been hospitalised over Christmas. He's trying to get himself discharged in time for his birthday and a party with ex-colleagues and other ecologically minded friends on Wednesday 4th, but it seems the medics are having difficulty in finding what's wrong [Ed. Rita informs me that Eric has been discharged and is anxious to get back to his microscope].

Rita Duffey

An American Jumper in Leeds, West Yorkshire and an Update on Non-Native Taxa Recorded in the UK

by Richard Wilson

Introduction

In Wilson (2011), I described a brief foray for spiders in Tropical World, Roundhay Park, Leeds which yielded four species. The article also provided a list of non-native taxa recorded in the UK, based on a literature search undertaken to place the foray in some context. This literature search identified 39 non-native taxa recorded in the UK from various situations dating back to the turn of the 20th Century (Pickard-Cambridge, 1906), which was the earliest written record to my knowledge of any non-native species recorded in the UK.

Since this review, a number of correspondents have contacted me to raise my awareness of additional species that I missed, or have commented on certain species being included on the list. Furthermore, I have located additional records myself and in one instance, received a specimen for identification. This article describes the occurrence of the specimen that I received for identification, updates the list presented in Table 1 of Wilson (2011) and reiterates the need to record non-native species in the UK.

An American Jumper

On the 6th December 2011, I received an e-mail forwarded from Dr Stephen Compton (Faculty of Biological Sciences, University of Leeds) that contained a message enquiring about a spider with a 'red abdomen' that had been removed from a bag of grapes purchased from Leeds city centre Morrisons supermarket that day (SE300341; vice-county 64). Attached to the e-mail was a photograph of the spider, which despite being out of focus, was clearly discernible from its body shape as being a member of the Salticidae (jumping-spiders). The abdomen was scarlet red with a black central stripe; the cephalothorax was black, or at least very dark. The palps appeared swollen, suggesting it was a male. My immediate thought without knowing the grapes' country of origin, was that it was *Philaeus chrysops* (Poda, 1761), a European species not recorded as a native species on the British list. I responded by stating that without the

Figure 1. *Phidippus johnsoni*. © Richard Wilson.

specimen, it wouldn't be possible to confirm the species, but it seemed to me that it was *P. chrysops*. At this stage, I was more concerned as to whether it could be another *Philaeus* species; there being four additional species within Europe (Platnick, 2011), which is where I assumed the grapes originated.

Fortunately, the specimen had been retained so I was hopeful that I could confirm its identity. In confirming the arrangements to pick it up, I established that the grapes originated from the USA. Checking Platnick (2011), *P. chrysops* has not been recorded in North America (at least not in the wild), thus raising some doubt as to whether it was this species.

By the time I received the specimen, it had died. Checking under the microscope, it became readily apparent that the spider was an immature female. Female *P. chrysops* are not scarlet red! As the spider was likely to be an American species, I checked out the Salticidae website (www.salticidae.org) and also undertook a search on Google. This soon revealed a potential candidate, *Phidippus johnsoni* (Peckham and Peckham, 1883). The male has an entirely bright red abdomen, whereas the female has a black central stripe. I confirmed the species through cross-checking on other websites (e.g. Wikipedia [http://bit.ly/Phidippus_Wiki and http://bit.ly/Phidippus_johnsoni; both last accessed on the 31st December 2011]). Photographs of the specimen are illustrated in Figures 1 and 2.

Having confirmed the species and informed Dr Compton and the collector (Paul Boulton), I checked with various individuals (Dr Dmitri Logunov (University of Manchester); Joe Ostoja-Starzewski (Food & Environmental Research Agency (FERA), York) to see if they were aware of this species being captured in the UK. To date, I've received three records. The first is from Normanton, South Yorkshire (VC 63 [South-west Yorkshire]), an immature female taken from red grapes from the USA on the 12th December 2007 and bred to maturity (Logunov, pers. comm.). The second relates to a specimen from Truro, Cornwall (VC 1 [West Cornwall]) in 1998 and the third relates to a female collected in December 2011 from Morrison's store in Newcastle (VC 67 [Northumberland]) (Ostoja-Starzewski, pers. comm.). Thus, the record of *P. johnsoni* is only a new record for VC 64.

Phidippus johnsoni is a native salticid from western North America, predominantly the USA, but extending east as far as the Great Plain (e.g. South Dakota). It has also been recorded in western Canada (Edwards, 2004). Records are widespread in California, Oregon Utah and Idaho. It is frequently recorded in dry habitats from coastal areas (e.g. sand dunes) to woodland, but it is not known from desert areas (Jackson, 1978). According to Vetter (2007), it is capable of biting humans but such events are not usually serious.

Update on Non-native Taxa Recored in the UK

Since my original article (Wilson, 2011), a number of individuals have corresponded providing me with additional details of non-native taxa recorded in the UK. I have also added some additional species as a result of further research. However, whilst an attempt has been made to be comprehensive, further work as time permits may yield additional species. Table 1 has therefore been updated with the new species. The new species are prefixed with a symbol, relating to the reference from which I obtained the information. Details are summarised in the paragraphs below.

Paul Selden made me aware of an article he wrote on the discovery of the Mediterreanean spider *Uroctea durandi* (Latreille, 1809) which was collected from the Royal Botanic Gardens, Kew (London) in November 2002 (Selden, 2003).

Other modern published records have come to light whilst preparing this article. Shardlow (2004) reported the presence of the jumping spider *Philaeus chrysops* in south-east England, with three records; one from 1992 and two from the early 2000s. Irwin (2003) reported the presence of the crab-spider *Synema globosum* (Fabricius, 1775) from his Norwich garden, taken in July 2003 (specimen deposited at Norwich Museum). Oxford (2011) subsequently reported this species from a garden centre in York. Both these species, whilst having been recorded in the wild state, are still considered to have been introduced. Harvey (2008) reported the discovery of *Mermessus trilobatus* (Emerton, 1882) (as *Eperigone trilobata*) from mown grassland, near Tilbury, Essex. Whilst this was collected outside, he considered that this species was introduced.

Researching the World Spider Catalogue (Platnick, 2011) has proved useful as it has identified a number of additional species. By cross-referencing via the Biodiversity Heritage Library

Figure 2. *Phidippus johnsoni*. © Richard Wilson.

Table 2. Non-Native Spiders Recorded in Great Britain.

Family	Species	Notes	Reference	Country/ Region of Origin
Cyrtaucheniidae	?*Ancyclotrypa* sp.	Pickard-Cambridge (1911) described a juvenile imported with soil from Uganda as *Bolostomus suspectus*. However, Platnick (2011) considers it more likely to be a member of the genus *Ancyclotrypa* Simon 1889.	Pickard-Cambridge, 1911	Uganda
Theraphosidae	*Cyriocosmus elegans* (Simon, 1899)			Caribbean
Pholcidae	*Artema atlanta* Walckenaer, 1837			Africa
	Holocnemus caudatus (Dufour, 1820)			Spain, Sicily
	Holocnemus pluchei (Scopoli, 1763)			Mediterranean
	Pholcus phalangioides (Fuesslin, 1775)			Asia
	Spermophora kerinci Huber, 2005			Indonesia
Oonopidae	*Diblemma donisthorpei* O. P. –Cambridge, 1908			Asia
	Ischnothyreus velox Jackson, 1908			Asia
	?*Orchestrina dubia* O. P-Cambridge, 1911	Pickard-Cambridge (1911) described this species from a '*...single example* [female]*...and that one much mutilated.*'. Platnick (2011) still includes this as a genuine species and lists it as introduced to Britain.	Pickard-Cambridge, 1911	Britain (introduced)
	Triaeris stenaspis Simon, 1891			New World
Oecobiidae	*Oecobius navus* Blackwall, 1859		Pickard-Cambridge, 1909	Cosmopolitan
	Uroctea durandi (Latreille, 1809)		Selden, 2003	Mediterranean
Uloboridae	*Uloborus plumipes* Lucas 1846			Old World
Nesticidae	*Nesticella mogera* (Yaginuma, 1972)			Asia
Theridiidae	*Achaearanea tepidariorum* (C.L. Koch, 1841)			South America
	Achaearanea veruculata (Urquhart, 1885)			Australia
	Coleosoma floridanum Banks, 1900			Asia
	Dipoena lugens (O. P-Cambridge, 1909)	As *Laseola lugens* sp. nov. in Pickard-Cambridge (1909).	Pickard-Cambridge, 1909	Iberia
	Nesticodes rufipes (Lucas, 1846)			Pantropical
	Steatoda grossa (C. L. Koch, 1838)			Cosmopolitan
	Steatoda nobilis (Thorell, 1875)	Pickard-Cambridge (1879) described this as *Steatoda clarkii* sp. nov. from a specimen collected from Torquay many years previously by Reverend Hamlet Clark (but see comments in main text).	Pickard-Cambridge, 1879	Madeira & Canary Islands
	Steatoda triangulosa (Walckenaer, 1802)			Cosmopolitan
Anapidae	*Pseudanapis aloha* Forster, 1959			Pantropical
Linyphiidae	*Mermessus trilobatus* (Emerton, 1882)	As *Eperigone trilobata* (Emerton, 1882) by Harvey (2008).	van Helsdingen, 2009	Holarctic
	Erigone aletris Crosby & Bishop, 1928			North America

Table 2 continued.

Family	Species	Notes	Reference	Country/ Region of Origin
	Meioneta affinis (Kulczynski, 1898)	As *Bathyphantes explicatus* sp. nov. in Pickard-Cambridge (1911).	Pickard-Cambridge, 1911	Palearctic
	Ostearius melanopygius (O. P. –Cambridge, 1879)			Australia
	Pityohyphantes phrygianus (C.L. Koch, 1836)			Not known
Agelenidae	*Agelena longipes* Carpenter, 1900		Carpenter, 1900	England (introduced)
	Malthonica ferruginea (Panzer, 1804)	Listed as *Tegenaria ferruginea* (Panzer, 1804) in Wilson (2011)..		Mainland Europe
	Tegenaria duellica Simon, 1875	Listed as *Tegenaria gigantea* Chamberlin & Ivie, 1935 in Wilson (2011).		Mainland Europe (France & Spain)
	Tegenaria saeva Blackwall, 1844			Mainland Europe (France & Spain)
	Tegenaria atrica C. L. Koch, 1843			Ireland/ Mainland Europe
	Tegenaria agrestis (Walckenaer, 1802)			Mainland Europe
	Tegenaria domestica (Clerck, 1757)			Mainland Europe
Dictynidae	*Nigma walckenaeri* (Roewer, 1951)			Southern Europe
	Lathys lepida O. P-Cambridge, 1909		Pickard-Cambridge, 1909	Spain
Amaurobiidae	*Amaurobius similis* (Blackwall, 1861)			North America
Clubionidae	*Clubiona facilis* O.P. –Cambridge, 1910			Australia
Corinnidae	*Creugas gulosus* Thorell, 1878	As *Corinna praestans* sp. nov. in Pickard-Cambridge (1911).	Pickard-Cambridge, 1911	Cosmopolitan
Gnaphosidae	*Urozelotes rusticus* (L. Koch, 1872)			Cosmopolitan
Salticidae	*Hasarius adansoni* (Audouin, 1826)			Cosmopolitan
	Menemerus bivittatus (Dufour, 1831)			Africa
	Panysinus nicholsoni (O.P. –Cambridge, 1899)			Java (Indonesia)
	Phidippus johnsoni (Peckham & Peckham, 1883)			Western North America
	Philaeus chrysops (Poda 1761)		Shardlow, 2004	Europe
	Plexippus paykulli (Audouin, 1826)			Asia
Sparassidae	*Barylestis variatus* (Pocock, 1899)			Africa
	Heteropoda venatoria (Linnaeus, 1767)			Pantropical
	Olios sanctivincentii (Simon, 1897)			Asia
Thomisidae	*Synema globosum* (Fabricius, 1775)		Irwin, 2003 Oxford, 2011	Palearctic

(www.biodiversitylibrary.org.uk), I have been able to access old journals to read the original article and where there has been synonymy, cross-reference back to Platnick (2011). This has revealed records of non-native species collected as much as *c*. 140 years ago.

Pickard-Cambridge (1879) described a number of new species to Britain, including a theridiid which he named *Steatoda clarkii*. Cross-referencing with Platnick (2011),

this is now accepted as a synonym with *Steatoda nobilis* (Thorell, 1875). In a review of the species in England (Snazell and Jones, 1993), considered that the species, whilst historically associated with imported fruit from the Canary Islands, was now an established species in southern England. Pickard-Cambridge (1879) stated that this specimen had been collected in Torquay many years previously, by a Reverend Hamlet Clark, giving no indication as to its provenance. However, Clark was an avid traveller and collected widely, including Spain (Clark, 1868). It is not inconceivable that the specimen originated from one of his foreign travels, which if so, supports the theory that this species was introduced.

Carpenter (1900) documents and describes a new species of *Agelena* to science; captured from Stockport (now VC. 58 [Cheshire]). Here, he describes how the female specimen was collected from a garden within a bunch of flowers. Whilst acknowledging that it could be an exotic species, he could find no other comparable species from descriptions available to him at the time. Platnick (2011) retains this as a valid species, but considers it introduced to England. Only the female is known (Platnick, 2011).

As mentioned in Wilson (2011), Octavius Pickard-Cambridge identified specimens collected from the Royal Botanic Gardens (Kew), London in 1906. He subsequently published additional records from specimens sent to him and these are included in the amended Table 1 (Pickard-Cambridge, 1909 & 1911).

Perhaps the most notorious of species that have been recorded in Britain are the red-backed or black-widow spiders (*Latrodectus* spp.) of which *L. mactans* (Fabricius, 1775) from the USA is likely to be the most frequently reported. However, other than in the general media (e.g. BBC News: http://bbc.in/black-widow), there don't seem to be any formally reported records.

These additions have increased the list of non-native species recorded in Britain to 52, if you include the species of uncertain status. It is highly probable that additional species are present, in literature yet to be discovered by me, or as specimens awaiting capture and/ or formal identification.

Relevance

As argued in Wilson (2011), collating non-native species recorded in the UK is important as they have the potential to become established components of the British fauna with positive, neutral or negative effects. In correspondence with Peter van Helsdingen, he queried when a non-native species (i.e. one recently introduced but self-sustaining) becomes a natural component of the domestic fauna; *Pholcus phalangioides* being the cited example. Whilst my previous, and this article, have been an exercise in collating information available to identify which species could be considered non-native, without drawing any 'lines in the ground', Peter raises an important question. Clearly *Pholcus* is a widespread, permanent and self-sustaining species; though it is in my experience, largely dependent on the presence of human habitation (Harvey, Nellist and Telfer, 2002) and is therefore considered to be synanthropic. The same could be said for a number of other species (e.g. *Scytodes thoracica* (Latreille, 1802); Scytodidae). However, there seems no reason to think that in certain situations where the climate is stable (e.g. caves), they could survive in the UK away from human habitation.

This correspondence led to a brief discussion as to whether it could be possible to classify a non-native spider species' status in the UK in the same way that botanists have done for plants i.e. archaeophytes ('ancient introductions') and neophytes ('recent introductions') (e.g. see Pyšek *et al*., 2004). However, unlike botanists who can refer to a preserved archaeological or palaeoenvironmental record, this is not available to arachnologists. Whilst some species (e.g. the theraphosid *Cyriocosmus elegans*) are unequivocally non-native and could never be considered a native element of the British fauna, others (e.g. the araneid *Argiope bruennichi* (Scopoli, 1772) and not included in Table 1) have a more ambiguous provenance. For instance, Locket and Millidge (1953) refer to *A. bruennichi* being locally frequent in Kent, Sussex, Hampshire and Dorset and make no reference to it being introduced; nor does Harvey, Nellist and Telfer (2002). Nevertheless, other sources (e.g. BBC Nature website: http://bbc.in/Argiope) state that it was introduced from continental Europe. For some of the *Tegenaria* and the *Malthonica* species included in Table 1, a definitive answer may be hard to come by. They are clearly part of our domestic fauna, but for some species (e.g. *T. saeva* and *T. duellica*), their association with humans may be less clear cut, in the UK at least (see Harvey, Nellist and Telfer, 2002). Thus, their inclusion in Table 1 could be considered as tenuous, but were originally included on the basis that they were listed in the UK's audit of non-native taxa (Hill *et al.*, 2005). For the moment, they are retained pending further research.

So to summarise, an additional 13 species of spider have been added to the original list published in Table 1 of Wilson (2011). Several of these, could legitimately, through further research, be removed as being considered non-native, depending of course on one's definition of native; i.e. where do you 'draw the line'?

My thoughts are that perhaps the emphasis should be placed on whether a species is:

- artificially present (e.g. recorded as singletons or low numbers that don't form a self-sustaining population in any environment in the UK).
- an obligatory commensal (i.e. it could never form a self-sustaining population in the external environment).
- synanthropic (i.e. associated with human habitation, but self-sustaining).
- native (self-sustaining in the external environment).

This classification would at first appraisal, be more useable and provide a meaningful understanding of a species' status in the UK. A comparable classification is applied to bird species recorded in the wild state within the UK (British Ornithologists' Union Records Committee (BOURC), 1998). Is there any reason why this should not be considered for those British spiders where there may be interest to do so, e.g. for conservation priorities or to identify trends in distribution?

Acknowledgements

I would like to thank Dr Stephen Compton and Paul Boulton for bringing my attention to the specimen of *P. johnsoni*, which stimulated the update to my earlier article. To Dmitiri Logunov and Joe Ostoja-Starzewski for providing me historical records on *P. johnsoni* in the UK; Paul Selden for drawing my attention to his 2003 article

and Peter van Helsdingen (European Invertebrate Survey, Netherlands) for corresponding with me on various matters referred to in the text.

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Since December 2003 many arachnologists have been waiting for an update of the Internet Key *Spiders of Central Europe*. The conversion of the system from html to php turned out, due to its complex nature, to be more time-consuming than originally intended. Now a database and internet specialist, Daniel Gloor, has joined our team and handles (not only) these technical problems. Furthermore we enlarged the geographical scope from Central Europe to the whole of Europe. In November 2010 the new "araneae" homepage went online and it is already used intensively. Currently, all spider species from Europe are covered; although in part the datasets have to be filled with published figures. Henceforth characters for the identification of more than 4,000 European species will become available – both as figures and text entries in German and English. Currently "araneae" encompasses 4,046 species (incl. subspecies), 18,995 figures and 834 quotations.

The number of supporters of this web site was also enlarged. More than 110 arachnologists and more than 20 publishing houses, associations and societies, research institutes and other institutions gave us permission to use their figures for our web page. Also financial support is, and will be, given (see the logos on the right on the title page). A novel feature is the 'wiki' mode, which makes it easy for the user (a log in is required), to communicate additional information and/or to report errors or