Figure 5. Several *Atypus* webs surrounded by *Brachypodium pinnatum*. © Joyce Simmons.

There was one group of webs which did not match the pattern. It was low down on a steep limestone crag with small patches of soil which appeared unsuitable for underground web construction.

The searches so far are not exhaustive, and we have failed to find webs in another area which we thought suitable, but it is 750 m from the sites described and separated from it by woodland.

A Dutch study (Pétillon *et al.*, 2012) concluded that the *Atypus* spiderlings, which occupy the maternal webs until the 3rd instar, disperse by ballooning. This could explain the local pattern of distribution, although the passage eastwards over the woodland would be serendipitous. It is more difficult to imagine them ballooning over 100 km from the nearest known site.

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Staffordshire Invertebrate Science Fair

The B.A.S. was represented at the annual Staffordshire Invertebrate Science Fair, held at Staffordshire University in Stoke-on-Trent on Saturday, 3rd March 2018, by Nigel Cane-Honeysett and myself. This was the fourth such fair that we have attended, and it continues to grow each year. Aimed primarily at families with young children, it is amazing to see how excited and enthralled such youngsters can get when presented with a live spider. However, this year, coming on the tail-end of the "beast from the east", only a single *Pholcus phalangioides* could be found sheltering in my garage, but it still fascinated visitors; most mothers complaining they had them around the house. With such a lack of specimens it was great that Nigel had devised a little picture quiz which had children queuing up to complete (one even insisted on noting the scientific names). A very busy but enjoyable day, Nigel (*alias* spider man) was mentioned in despatches (see Staffordshire Invertebrate Group Facebook) and it was very encouraging to see the potential number of future arachnologists.

Figure 1. Nigel manning the B.A.S. stand. © John Stanney.

John D Stanney

Eric Duffey's Spider Collection in the Manchester Museum – an Update

by Rainer Breitling

The spider collection of Eric Duffey (Fig. 1), pioneering spider ecologist and former President of the British Arachnological Society, has been housed in the Manchester Museum since July 2011 (Logunov, 2011). The 138 jars of identified spiders, representing around 560 British species and an additional 110 species from the European continent, were quickly re-curated by the staff of the Museum's Entomology Department and integrated within the main spider collection of the Museum.

In addition to this identified material, Manchester Museum also acquired about 70 jars of Duffey's unsorted and unidentified specimens, both from continental Europe (a dozen jars) and from Britain (particularly from Royston, North Hertfordshire, the type locality of *Hahnia microphthalma* Snazell & Duffey, 1980; 58 jars). Since 2014, I have been sorting out the continental material, transcribing the labels and identifying the species where possible. In total, this part of the collection contains some 300 samples, representing well over 350 species.

Five groups of samples contribute the largest fraction of the newly sorted material:

Spiders from Chez Gouillard (Haute Vienne, France)
Duffey had moved to rural France in 1998 and collected spiders in various habitats around his house for several years. He published his initial findings in a brief report in the B.A.S. Newsletter (Duffey, 2000), concluding that the local spider fauna "does not have as many surprises as [he] originally expected". The unidentified collection contains mostly material collected in 2000 to 2002, after this initial summary, and largely confirms this impression. It includes mostly specimens beaten from various hedgerows (*Ebrechtella tricuspidata* and *Anelosimus vittatus* being the most numerous species), as well as

Figure 1. Eric and Rita Duffey at the Seventh International Congress of Arachnology in Exeter in 1977. Rita accompanied Eric on all his field trips throughout Europe, and the Duffey collection contains many samples hand-collected by Rita. © Torbjörn Kronestedt.

many pitfall trap samples which support Duffey's original observation that *Pardosa proxima* is strikingly common around Chez Gouillard.

Spiders from various coastal areas of France

Duffey visited the coastal dunes of the Vendée together with Jacques Denis in 1964 and had expressed the hope that it would be possible to visit this "rich and interesting area" again (Duffey, 1964). This he did in subsequent years, and the spiders collected in various places along the Atlantic and Mediterranean coast of France, as well as from various National Parks throughout the country, are very diverse (e.g. Figs. 2F, 2G, 2N, 2O and 2S).

Spiders from the Spanish Pyrenees around Jaca (prov. of Huesca)

Numerically, and in terms of species diversity, this is probably the largest part of the material. At the invitation of Enric Balcells, director of the Centro Pirenaico de Biología Experimental in Jaca, Duffey conducted an extensive survey of the spider fauna of this area in 1972 and 1973, and published preliminary results in 1983, listing 160 species from 61 localities (Duffey, 1983). In the course of this work, he had also discovered two rarely reported species, *Leptoneta paroculus* and *Oonops procerus*, which he redescribed (together with Paolo Brignoli) in a short note (Duffey & Brignoli, 1981); both of these species are also well represented among the newly sorted material, collected in subsequent years at the same locality visited in 1972 (Fig. 2H).

Of special interest is the material from systematic vacuum sampling conducted in May 1977 on several dry grassland sites around Jaca (Table 1). Suction sampling had long been an area of special interest for Duffey (Duffey, 1974), and the survey of the Spanish grassland seems to have been set up to roughly parallel a similar study conducted on British grasslands in May and August 1978 (Duffey, 1980). A total of 35 samples from 10 locations resulted in only 101 adult specimens, but these include a number of interesting uncommon species (e.g. Figs. 2C, 2I, 2J and 2P).

Additional material was collected by hand in the same area (e.g. Figs. 2D, 2L and 2R) and at other sites throughout Spain (e.g., Fig. 2Q).

Spiders from the Balkans

A camping trip through the Balkans in May and June 1983, covering Croatia, Macedonia, Serbia and Greece, yielded a small but rich sample of Eastern Mediterranean species, complementing the main focus of the Duffey collection on the Western areas of France and Spain (e.g. Figs. 2A, 2B, 2E and 2M).

A small fraction of the newly identified spiders were collected in Italy, Switzerland and Denmark, as well as from a few localities in the British Isles (including one of the last specimens of *Aulonia albimana* collected on the British mainland, a juvenile "coll. on *Aulonia* site" in Dunster, Somerset, in May 1974).

Several of the newly identified species had not been represented in the Manchester Museum collection before. Duffey had indicated previously (Duffey, 1983: 183) that his initial identifications had been biased towards a few families, and it is likely that the remaining material was enriched with specimens that he found difficult to place, for example because the species had not yet been illustrated – or even described – at the time of his collection trips. One particularly interesting specimen, a very unusual *Philodromus* male from the Spanish Pyrenees (Fig. 2K), remains unnamed to this date – although a description based on French specimens is now in preparation (P. Oger, pers. comm.).

As an experienced spider ecologist and long-time editor of the influential journal *Biological Conservation* (Sheail, 2000), Duffey made sure that his spider material was informatively labelled, not only indicating the exact date and place of collection, but also providing rather detailed habitat notes on the labels for most samples. This kind of information contributed to the extensive ecological discussions on habitat requirements in many of Duffey's faunistic contributions (e.g. Duffey, 1964; Duffey & Brignoli, 1981). It also makes the collection a much richer record of Mediterranean spider biology, which is especially useful in the case of rarely recorded species, as illustrated by the label information provided for the specimens shown in Figure 2.

In addition to contributing interesting new species to the museum collection and providing a fascinating glimpse of the diversity of Mediterranean spiders, the analysis of the unidentified material has also led to a couple of scientific publications already. A specimen of *Larinioides suspicax* from the Camargue (Fig. 2G) inspired a re-examination of the nomenclature of the European *Larinioides* species (Breitling & Bauer, 2015), and the identification of a *Cheiracanthium striolatum* specimen from a French coastal dune (Fig. 2F) triggered a closer look at its East European sister species, *Cheiracanthium rupestre* (=*C. macedonicum*) (Breitling *et al.*, 2016).

Once identified and registered, all the material from the Duffey collection will be searchable online via the Manchester Museum website (http://harbour.man.ac.uk/mmcustom/EntQuery.php) and available for further study by interested researchers.

The Duffey collection is only one of many important spider collections housed in the Manchester Museum. Other examples include (part of) the collections of George H. Locket, John Crocker, Alexander A. D. La Touche, David W. Mackie, Yuri M. Marusik, Rod Allison, Sergei L. Esyunin, Anthony Russell-Smith, and many others, the most recent addition being the large collection of John A. and Frances Murphy, containing over 25,000 samples from around the world. The latter collection is currently under re-curation by the museum staff. Further donations, of any size or geographical scope, are always very welcome, especially if they are as meticulously labelled as the Duffey material. The Manchester Museum's spider

Table 1. Spider species "vacuumed from dry grassland" around Jaca in the Spanish Pyrenees, sorted by abundance. Only adult specimens are considered. Samples were collected in Ordaness nr. Ena (6 samples), Monte 'El Boalar' (5 samples), San Juan de la Peña, Linza, and Estación de la meteorologie (4 samples each), Castillo de Loarre, Los Lecherines, and Puente del Ruso (3 samples each), Belagua (2 samples), and Valle de Hecho (1 sample).

Species	Sex	Composition
Mangora acalypha	3♀9♂	12%
Tiso vagans	4♀5♂	9%
Pardosa pyrenaica	4♀4♂	8%
Metopobactrus prominulus	4♀3♂	7%
Tenuiphantes tenuis	2♀4♂	6%
Aulonia albimana	2♀3♂	5%
Heliophanus flavipes	2♀3♂	5%
Erigone dentipalpis	2♀2♂	4%
Pardosa bifasciata	2♀2♂	4%
Frontinella frutetorum	2♀1♂	3%
Pardosa monticola	1♀2♂	3%
Zora parallela	1♀2♂	3%
Agyneta rurestris	2♂	2%
Evarcha laetabunda	2♂	2%
Hypsosinga sanguinea	1♀1♂	2%
Pardosa nigriceps	1♀1♂	2%
Pelecopsis parallela	1♀1♂	2%
Tetragnatha extensa	1♀1♂	2%

Plus 20 singletons: *Alopecosa cuneata* 1♂, *Ceratinella brevis* 1♂, *Clubiona diversa* 1♀, *Drassodes pubescens* 1♀, *Euophrys frontalis* 1♀, *Evarcha arcuata* 1♂, *Micrargus laudatus* 1♀, *Monocephalus fuscipes* 1♀, *Pardosa amentata* 1♀, *Phrurolithus szilyi* 1♂, *Pisaura mirabilis* 1♂, *Sernokorba tescorum* 1♂, *Styloctetor romanus* 1♂, *Synema globosum* 1♀, *Trichoncus* cf. *varipes* 1♀, *Trichopterna cito* 1♀, *Walckenaeria antica* 1♀, *Xysticus ibex* 1♂, *Zelotes fulvopilosus* 1♀, *Zora pardalis* 1♀.

collection is fully accessible, and interested researchers are welcome to borrow any available material for their studies by request to the curator (D. V. Logunov; email: dmitri.v.logunov@manchester.ac.uk).

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Figure 2 overleaf.

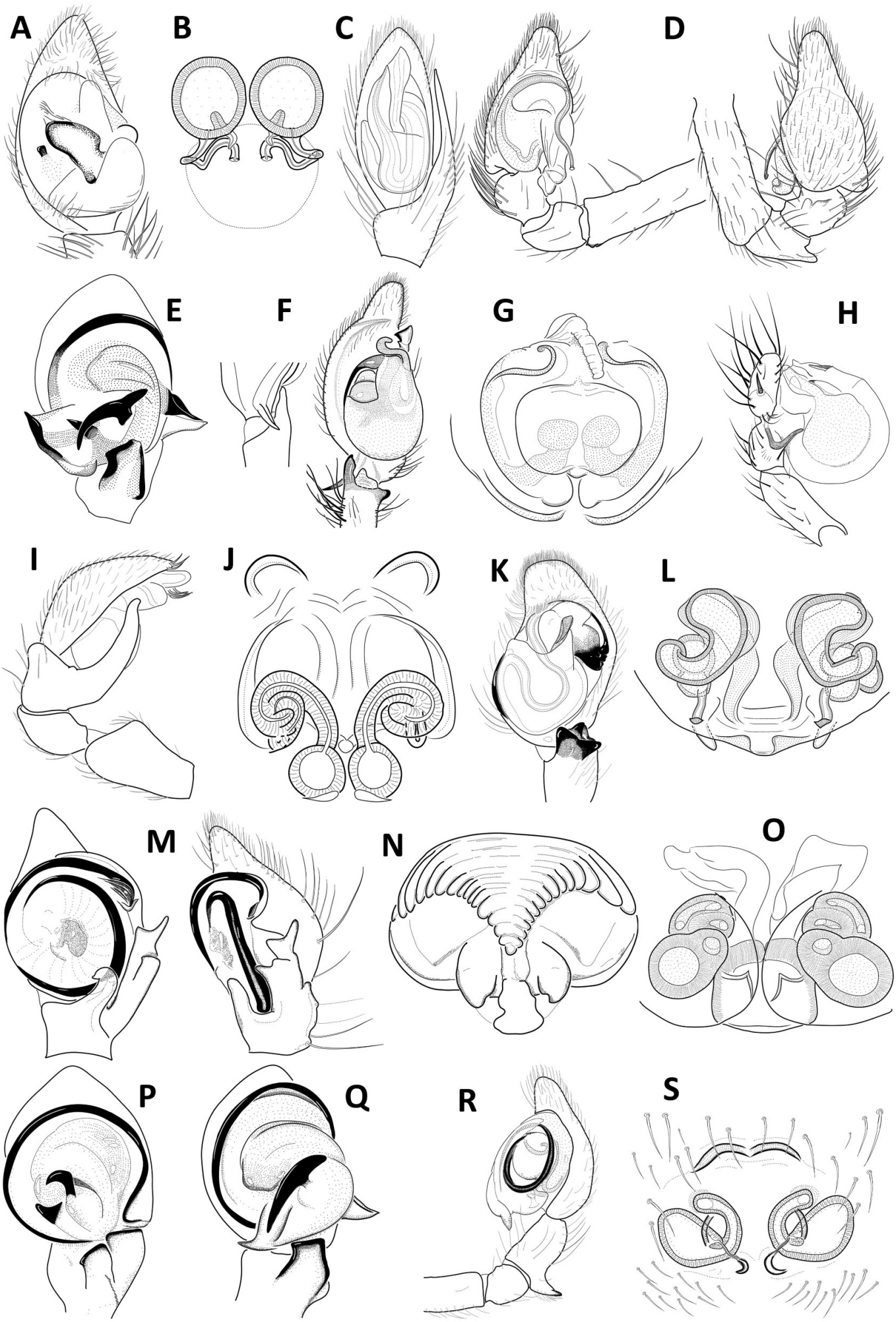
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Figure 2. Illustrations of the genitalia of selected Mediterranean spider species found among unidentified material in the Eric Duffey collection, and their original label information.
(A) *Pardosa albatula* (Lycosidae), male, pedipalp, ventral view. "22/05/1983. N[ational] P[ark] of Galičica [Macedonia], 1600 m. Swept and coll. on ground. Road."
(B) *Theridion betteni* (Theridiidae), female, epigyne, dorsal view. "21/06/1983. Plitvice, Yugoslavia [Croatia]. Coll. on rocky walls by lower lakes in [Plitvice Lakes] Nat[ional] Park."
(C) *Sernokorba tescorum* (Gnaphosidae), male, pedipalp, ventral view. "30/05/1977. Ordaness nr. Ena [Huesca, Spain]. Vacuumed from dry grassland."
(D) *Nigma gratiosa* (Dictynidae), male, pedipalp, ventral and retrolateral view. "07/06/1973. Sweeping & beating along road from Agüero to San Felices, [Huesca, Spain]."
(E) *Xysticus macedonicus* (Thomisidae), male, pedialp, ventral view. Same sample as **(A)**.
(F) *Cheiracanthium striolatum* (Eutichuridae), male, pedipalp, ventral and retrolateral view. "01/06/1966. Bonne Anse dunes, nr. Le Coubre, Charente-Maritime, France. Mainly under 'rock rose'."
(G) *Larinioides suspicax* (Araneidae), female, epigyne, posterior view. "12–18/02/1962. Camargue, S. France. Coll. in *Juncus* and grass in *Suaeda* and *Salicornia* marsh of brackish water."
(H) *Leptoneta paroculus* (Leptonetidae), male, pedipalp, retrolateral view. "10/06/1973. Anso Valley, [Huesca, Spain]. Under stones and in beech leaf litter."
(I) *Phurolithus szilyi* (Phrurolithidae), male, pedipalp, lateral view. Same sample as **(C)**.
(J) *Zelotes fulvopilosus* (Gnaphosidae), female, epigyne, dorsal view. "25/05/1977. Ordaness nr. Ena [Huesca, Spain]. Vacuumed from dry grassland."
(K) *Philodromus* undescribed species (Philodromidae), male, pedipalp, ventral view. "June 1972. Jaca (Huesca) Spain, *Philodromus* sp."
(L) *Malthonica lusitanica* (Agelenidae), female, epigyne, dorsal view. "10/06/1973. Anso Valley, [Huesca, Spain]. Under stones and in beech leaf litter."
(M) *Heriaeus simoni* (Thomisidae), male, pedipalp, ventral and retrolateral view. "03/06/1983. 1/2 way between Protokklision & Mikron Derion in N.E. Thrace, Greece. Coll. from grassy veg. with many plants by roadside."
(N) *Centromerus isaiai* (Linyphiidae), female, epigyne, ventral view. "14/04/1975. Port Cros, Var, France. Leaf litter of Holm oak and Aleppo pine forest."
(O) *Silometopus curtus* (Linyphiidae), female, epigyne, ventral view. "08/05/1975. Petit Bois de[s] Rièg[e]s, Camargue Nature Reserve, [France]. Coll[ected] in shrubby *Salicornia*, grass & *Juncus* & litter on saltmarsh & margin of sandy islands."
(P) *Xysticus ibex* (Thomisidae), male, pedipalp, ventral view. "25/05/1977. Los Lecherines [Huesca, Spain]. Vacuumed from dry grassland."
(Q) *Xysticus nubilus* (Thomisidae), male, pedipalp, ventral view. "01/02/1983. Mojácar, Almería, Spain. Catch from 4 pitfalls put out on hillside behind campsite."
(R) *Marilynia bicolor* (Dictynidae), male, pedipalp, prolateral view. "24/06/1972. Boalar, Jaca, Spain. Swept from vegetation on shingle by R[io] Aragón."
(S) *Micaria dives* (Gnaphosidae), female, epigyne, ventral view. "01/06/1966. Bonne Anse dunes, Charente-Maritime, France. From mainly grass and *Art[emisia] campestris*."

G. H. 'Ted' Locket: Biographical Notes and Anecdotes

by Lawrence Jones-Walters

More than 30 years ago I twice went to Stone Allerton in Somerset to visit G. H. 'Ted' Locket. I was a member of the England Field Unit of the old Nature Conservancy Council (it was the UK government nature conservation agency) based in Banbury. Among other things, I wanted to meet one of the people who had written the book that was the main reference point in my day-to-day work as an arachnologist-entomologist. I recently rediscovered the notes I made following my visits and these are summarised here. Our conversation was wide-ranging, but Locket's recollections of his own beginnings in arachnology and of some of the 'great names' he met may be of particular interest to readers.

Locket's interest in spiders had begun at an early age, when he had been confined to bed with chicken pox. One of the many books he had waded through was *British Stalk-Eyed Crustacea and Spiders: with an account of their structure, classification, and habitats* by F. A. A. Skuse (1887). He had been fascinated by the book, although its approach was very simple, and decided that spiders would be the group he studied as it was quite impossible to make the frequent trips to the seaside demanded by the study of Crustacea. So that was that, as a student at university, he had tracked down and written his first letter to A. Randall Jackson, asking him just "What it was all about?" Jackson replied, instructing him to send every spider he collected for checking, the specimen being returned, labelled, forming the basis for an excellent reference collection. Locket was started on a road that was to lead, ultimately, to the first comprehensive text on British spiders. Not to mention the founding of the British Arachnological Society.

Locket had many memories and anecdotes relating to some of the really great figures from arachnological history. The first of these was obviously Jackson, whom Locket had grown to know very well. Jackson himself had been a student of the great Octavius Pickard-Cambridge, whose generosity in giving advice, and kindness, Jackson had always tried to emulate. So it was that the two men became life-long friends until Jackson's death in 1944; his obituary was written by W. S. Bristowe, and appeared in *Nature* (Bristowe, 1944). Jackson had been a Doctor of Medicine, and continually bemoaned the fact that his patients demanded his attention when his time could be better employed searching for new spiders! Indeed, had it not been for his death, Locket told me that he would have no doubt been the author of a considerable text on British