

PROVISIONAL ATLAS OF THE HARVEST-SPIDERS (ARACHNIDA: OPILIONES) OF THE BRITISH ISLES

By J. H. P. Sankey

42 pages. 15 × 21 cm. Soft covers. Biological Records Centre, Monks Wood Experimental Station, Huntingdon. 1988. £3.00, including p.+p. from I.T.E. Publications, Merlewood Research Station, GRANGE-OVER-SANDS, Cumbria, LA11 6JU.

This is a very welcome addition to the atlases of British terrestrial invertebrates produced at the Biological Records Centre. Its publication coincides with the appearance of the second edition of *Harvestmen* by Hillyard & Sankey, no. 4 in the Linnean Society's *Synopses of the British Fauna*, and together these two works will surely fulfil John Sankey's hope for a fresh upsurge of interest in these fascinating but rather neglected animals. This provisional atlas owes much to the impetus to harvestman study provided by the first edition of the Linnean Society's *Synopsis* no. 4 (new series) by Sankey & Savory (1974).

A short foreword and introduction are followed by a checklist of the 24 recognised British species (not 23 as stated in the introduction), and there is a small section giving brief details about the introduced *Boeorix manducus*, the exclusion of *Leiobunum tisciae* from the British list, and a Scottish form of *L. rotundum*. A page and table present data on which the distribution maps are based and show that a total of 11,244 records were received, ranging from over 1,400 each for *Mitopus morio*, *Paroligolophus agrestis* and *Nemastoma bimaculatum* to 52 each for *Trogulus tricarinatus* and the recently-described *Mitopus ericaeus*, and only seven for the newly-discovered *Sabacon viscayanum*. The number of records received and the number of 10km squares from which a species is recorded are closely correlated, the three most frequently recorded species each being found in about half of the available squares and *Sabacon* being known from only three. Over 200 contributors to the recording scheme are listed, and coverage of the British Isles is quite good, although the many lacunae in Scotland (except the west coast and central highlands), the northern half of Ireland, southern Wales, the West Midlands and northern half of East Anglia invite investigation. As the author observes, however, coverage is sufficient to reveal some general distributional patterns such as the northwards decline in species diversity and relative richness of the fauna of the North and South Downs.

Each of the 24 British species is allocated a page with a map illustrating its 10 km square distribution and a paragraph summarising habitat, phenology and range outside the British Isles. Symbols on the distribution maps distinguish records up to 1929, between 1930 and 1969, and from 1970 to 1985.

This very worthwhile publication will be justly rewarded if everyone who notices unreal gaps on the distribution maps is prompted to submit unrecorded data. The distribution of terrestrial invertebrates is better known in the British Isles than anywhere else in the world, but this position can be maintained only with the co-operation of all who are able. Succeeding generations could well be grateful to the arachnologists of today for providing a base-line set of data against which any effects on the distribution of our fauna from climatic and other environmental changes could be monitored.

AN INTRODUCTION TO COMPARATIVE ARACHNOLOGY

By L. van der Hammen

X + 567 pages. 17 × 24.5 cm. Hardback. SPB Academic Publishing, The Hague. 1988. U.S. \$150. ISBN 90-5103-023-1.

The method of phylogenetic systematics (cladistics), used almost universally by modern taxonomists, demands the greatest rigour in its application. Ultimately, cladograms stand or fall on decisions of polarity of descent in characters, and the observer's interpretation of such characters. Now, more than ever, comparative morphological investigations form the firm foundations upon which phylogenetic systematics needs to be based. Though traditional in its approach to comparative morphology, this book presents a wealth of information on all groups of living chelicerates, and forms an excellent reference to the morphology and relationships of these animals.

The author worked for most of his life on mites, following in the footsteps of Grandjean, at the Rijksmuseum van Natuurlijke Historie in Leiden, Holland. A strong adherent to the paraphyletic theory of the two groups of mites, Actinotrichida and Anactinotrichida, van der Hammen has long been interested in comparative morphology and what it can tell us about relationships and evolution in the Chelicerata. His later works on the other chelicerate groups naturally used the acarological terminology which he developed. Now retired, this book represents the culmination of the author's arachnological studies. Indeed, there is very little in this book which has not already been published; what is extremely useful, however, is to have all this detailed information readily accessible under one cover.

Such a book, gathering together a lifetime's work, reminds me of that by Sidnie Manton on arthropod functional morphology. Like that classic, the present work is not easy to read, until one becomes acquainted with the terminology. Nevertheless, it is worth the effort. The first part (73 pages) deals with general aspects of chelicerates, particularly comparative morphology, reproduction, and evolution, including the author's model of the evolution of the chelicerate life-cycle. The remainder of the book deals systematically with each group of chelicerates in turn, from palpigrades to xiphosurans, but excluding wholly extinct groups. Not surprisingly, the mites have a larger share of the systematic part than other groups do, which I find useful, having far less first-hand knowledge of them than other groups. The phylogeny suggested as a result of the author's studies may appear startling to some, with the opilionids tentatively allied to the Xiphosura and Scorpionida for example; nevertheless, the ideas presented are a stimulus for further work, especially on the fossil forms.

The text is sensibly organised and easy to use, and van der Hammen's diagrams (302 in all) are well known for their clarity. The book is expertly printed and well bound. The price reflects both the good quality of its production, and the limited market for such a work. It is beyond the means of most amateurs, and the subject matter is unlikely to appeal to those interested primarily in spiders. For the arachnologist whose research covers phylogeny, evolution, and systematics it is not only a useful reference work but also a book which should be read carefully for the important ideas which it contains.