

BOOK REVIEWS

Roberts, M. J. 1987. The Spiders of Great Britain and Ireland. Harley Books, Martins, Great Horkesley, Colchester, Essex, CO6 4AH England. Vol. 2 (Linyphiidae) (Price £45.00).

The first and third volume of this three volume work were reviewed by B. J. Kaston in this Journal (Vol. 13, no. 2, pp. 275-276) in 1985. Volume two has now been published, and includes descriptions and illustrations of 267 species of linyphiids, placed in 105 genera. There is also an addendum listing six nonlinyphiid spiders new to Great Britain, a page and half illustrating variation in *Araneus diadematus*, a glossary, a checklist of British spiders, and an index to scientific names.

The short key segregates the linyphiid species into four groups on the basis of tibial spines and metatarsal trichobothria. The key is followed by four tables, one for each group, listing genera and species and comparing the general appearance, total length of the specimens, positions of the trichobothria and tibial spines, with reference to the text figures. It is hoped that the key and tables, with the help of the illustrations, will guide the reader to a correct determination.

The volume is lavishly illustrated. For most species, one page has the species name, references to illustrations, plus a few lines of description, and the illustrations are on the facing page. A paragraph under the last species of each genus summarizes the distinguishing characters of the species included within the genus, while another paragraph summarizes distribution and habitats. There are no literature citations other than the original description of the species.

The epigynes are illustrated next to the palpi, with views of carapaces on a separate page. Unlike the previous volumes, Volume 2 has all illustrations to the same scale, genitalia 90X, carapaces 60X. Thus many illustrations are of magnificent size, while illustrations of smaller species may be barely visible. Many illustration pages show an unusual amount of blank space due to the minute size of the species and illustrations.

There are several ways to illustrate spider genitalia. In North America illustrations are prepared using reflected light at the time the genitalia are examined. Much less satisfactory are illustrations of genitalia mounted on a microscope slide and examined by transmitted light. Slide mounted palpi are difficult to place in comparable positions, they may be compressed, they deteriorate rapidly (when not dismounted), and often such slides become separated from the specimen. Unfortunately, however, this method is popular because compound microscopes are more readily available than stereoscopic dissecting microscopes. The third and most modern method for illustrating spider genitalia is by use of the scanning electron microscope (SEM). While SEMs show minute details of surface sculpturing, and may be extraordinarily interesting and valuable, it is difficult to use this method for comparison with specimens to be keyed out. Roberts has illustrated with reflected light, the best method for the

purpose. Often two or more epigyna are illustrated for the same species, showing individual differences due to variable transparency of the surface. It might have been more useful if Roberts had provided only one illustration of an unprepared epigynum and, for the second, had used a cleared epigynum, showing the underlying ducts.

This new volume should be compared with its counterpart, vol. 2 of Locket, G. H. and A. F. Millidge's *British Spiders*, Ray Soc. 1953. Millidge illustrated only 250 species, included a key to linyphiid genera (but not to species) and gave citations for species in addition to the original ones. Roberts' illustrations usually show much more detail, especially of the epigyna. However, Robert's illustrations of small species are smaller than those by Millidge. If there was criticism of Millidge's work, it was that illustrations of epigyna, palpi and carapaces of the same species were often on separate pages and that the palpi were all illustrated in retrolateral (lateral) view. While the lateral view may give most diagnostic characters for the limited fauna of the British Isles, it makes their interpretation impossible for an outsider who wants to study the palpus of a given genus; for this purpose, a ventral view would be needed in addition to the lateral. This limitation makes Millidge's illustrations frustrating to use for North American or Holarctic species that need to be placed into genera. Unfortunately Roberts illustrates the same lateral view of the palpus that Millidge used, albeit with greater detail and, in the larger illustrations, finer craftsmanship (however, some small illustrations show less detail). Millidge's treatment frequently gives a second illustration of the palpal tibia to assist the identification, but there is only one palpus illustration in Roberts' volume.

In summary: this is a superb, authoritative volume. Perhaps inevitably, it will be more useful to those working with the British fauna than to those who want to increase their understanding of linyphiid spiders of the world.

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