BOOK REVIEWS

Ono, Hirotsugu. 1988. A Revisional Study of the Spider Family Thomisidae (Arachnida, Araneae) of Japan. National Science Museum, Ueno Park 7-20, Tokyo 110, Japan (Unpriced).

This is a coherent and critical treatment of the Thomisidae found in Japan. Based on a solid background of painstaking genus-by-genus revisionary work extending over the past nine years, the book provides workers with the taxonomic knowledge needed to identify 22 genera and 53 species of Japanese crab spiders. It is noteworthy that Ono has studied material and literature from regions beyond the confines of his own country, thus presenting a broad treatment that will interest arachnologists the world over.

On opening the book the reader is greeted by three strikingly beautiful color photographs. One shows *Xysticus croceus* with its fangs buried in the thorax of a lycaenid butterfly, another a pair of *Oxytate striatipes* suspended *in copula* on a thread. The body of the book is illustrated with high-quality line and stipple drawings showing the habitus, the male palpus in two views, and the epigynum in external and internal views. These are supplemented by a table of anatomical terms which Ono uses in a sense different from that of other workers. The range maps show only collection localities within the country itself, though range statements give the world distribution. There is no attempt to illustrate intraspecific variation. For illustrations of eight of the species the reader is referred to earlier papers by Ono.

The descriptions and synonymies are quite full. The inclusion of *nomina nuda* is a dubious practice, however, and there are no references to the world catalogues of Bonnet, Roewer, Brignoli, or Platnick. There are many new synonyms based on examination of types or of presumably reliable publications. Ono gives leg setal placement in great detail, though based on single specimens, and no use is made of these in keys or diagnoses. Measurements are given as simple ranges of values with no indication of sample size; a mean and standard deviation are preferable, as these enable users of the book to make decisions about size differences. The biological notes on each species are useful.

The approach to the problem of intergrading genera is interesting. For example, the assemblages known under the names *Xysticus* (with 350 described world species) and *Coriarachne* (with only six) if distinguished in the usual way leave some species that do not fit very well. Ono's solution is to interpose a third genus, *Bassaniana*, for some of the intermediates, based on relative degree of body flattening and relative lengths of the third and fourth pairs of legs. Thus the East Asiatic *Coriarachne decorata* sits uneasily with the North American *C. versicolor, C. utahensis*, and *C. floridana* in *Bassaniana*, and the European *C. depressa* with some *Xysticus* spp. in *Coriarachne*. As expected, it becomes more difficult to distinguish the three genera than the two. The characters are subject to exceptions, and for some species the character has never been made known. Such a classification needs more work to make it endure.

Ono proposes the Clubionoidea, or part thereof, as sister group of the Thomisidae. He recognizes the heterogeneity of the clubionoids. The most primitive subfamily of thomisids is thought to be the Stephanopinae, and the most specialized the ant mimics of the subfamily Aphantochilinae. The synapomorphy for Thomisidae is the ambush type of prey capture, which arose with the exaggerated development of the first two pairs of legs as a powerful grappling device. Members of the family also share an unusual development of the anterior lateral eyes and diurnal hunting behavior. The most speciose subfamily in Japan, as in the world, is the Thomisinae, with 17 genera and 44 species. Ono provides an arrangement of the world thomisine genera into 13 tribes, but without characters to distinguish them.

The island chain forming Japan extends approximately from latitude 25° to 45° north, and experiences climates from the humid subtropics to the cold temperate. In an interesting section at the end of the book, the author speculates on the origins of the Japanese thomisids. The majority of species are thought to represent the Old World tropics, several of which have spawned Japanese endemics. *Xysticus daisetsuzanus* is quite unique, being found only on Mt. Daisetsu-zan in central Hokkaido and having its closest relatives in the circumpolar region; it is evidently a postglacial relict. Interesting also are species like *Xysticus saganus*, whose closest relatives are found in North America, much as in *Antrodiaetus* and certain Opiliones. Only two (not three as stated) are Holarctic, namely, *Misumena vatia* and *Ozyptila sincera*.

All in all, the work is valuable, and the author is to be congratulated.

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Hammen, L. van der 1989. An Introduction to Comparative Arachnology. SPB Academic Publishing, The Hague. 576 pp. 302 figs. (Price $150.00).

Progress in comparative arachnology suffers from the absence of an authoritative and accessible introductory text that outlines our current understanding of arachnid evolution, explains important controversies and suggests profitable avenues for research. Despite the promise of its title, van der Hammen's book is not an attempt to fill this vacuum. In fact, the author informs us at the outset that it is "not a handbook but a general survey of personal insights." It is primarily a review of van der Hammen's descriptive studies, and the author makes no real effort to summarize discoveries or opinions of other workers. Arachnologists familiar with van der Hammen's research will find little new information, but the book may serve as a reference for those requiring access to a summary of van der Hammen's contributions to arachnology.

The book is divided into two sections, a 70-page "general part" and a 500-page "systematic part". There is a list of references that includes most of the important work in comparative arachnology.

The general part summarizes basic aspects of arachnid biology, concentrating on areas of particular interest to systematists (external morphology, reproduction, postembryonic development and phylogeny), but there are no discussions of paleontology or biogeography. Van der Hammen gives little attention to internal