

Short notes and reviews

On slipper lobsters

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Review of: **The Biology and Fisheries of the Slipper Lobster**, edited by K.L. Lavalli and E. Spanier. CRC Press, Boca Raton, Florida, USA, 2007, 400 pp. ISBN 0-8493-3398-9.

I believe it necessary to declare right at the beginning, I love slipper lobsters; but then, does not everyone? There is something endearing about these chubby crustaceans with their broad shovel-like antennae, their beady little eyes, and their shy cryptic habits. Maybe it is their common name; who does not treasure their own slippers – sources of comfort since childhood? Yet, for all their attractive qualities, the slipper lobsters, or Scyllaridae, are one of the more poorly understood groups of decapod crustaceans, as the editors of this book, Lavalli and Spanier, tell us in their Introduction chapter. Certainly our knowledge about them pales in comparison to the much more voluminous data on their cousins, the spiny lobsters. Lavalli and Spanier attempt to illustrate much of this variation in their chapter, but one immediately regrets that the photographs here are not large enough or of sufficient resolution, let alone in color, to be able to truly appreciate their biodiversity.

This rest of the volume is divided into two parts: the first dealing with basic biology, the second with matters related to scyllarid fisheries. This first section is full of all sorts of interesting information. What surprised me at first is how many species are in this group, some 85 living species in 20 genera. By comparison, the much better known spiny lobsters constitute only 47 species in 8 genera. If taxon diversity is a mark of success, then slipper lobsters would appear to have it over their spiny cousins. A chapter by Webber and Booth provides an effective tabular key down to the level of genera that conveniently fits on a single page. A series of nice, albeit little, maps provides summary overviews into distributions, and in the discussion these authors summarize various aspects of scyllarid evolution. However, application of more detailed comparative studies along

side molecular systematics will someday provide testable hypotheses about relationships. Our understanding of the taxonomy and evolution of scyllarid lobsters is only in its infancy.

There follow short chapters on genetics, early life history, and factors important to larval biology, but the size of these is an indication of the limited state of our knowledge on these subjects. However, the chapter on feeding and the digestive system by Johnston illustrates again a problem with the volume. The text is quite informative and includes observations relevant to both larval and adult forms. However, the photo illustrations, including both SEMs and TEMs, have a certain fuzziness to them. This is not the fault of the author or the editors, but these figures do not compare well to similar illustrations to be found in earlier volumes of the *Crustacean Issues* series.

The chapter on behavior by Lavalli, Spanier, and Grasso is amongst the longest in the book and contains a great deal of information. Fortunately, much of this information is summarized in two large tables: one matching life history stages to various aspects of environment and habitat, and the other outlining the functions attributed to the various appendages along with specific citations for each proposition. Two smaller chapters dealing with exoskeleton mechanics and growth studies in the genus *Scyllarides* follow this compendium.

Spanier and Lavalli close off this section of the book with an overview of the state of knowledge of these animals. What I like here is that they suggest specific research areas that need attention, and they also indicate what techniques should be employed in these investigations. For example, there are astounding gaps in our knowledge of the life cycle of slipper lobsters, and the reproductive biology is still little understood. If the research programs outlined in this chapter are followed, the next volume on slipper lobster biology should be considerably thicker.

The second part of the book deals with various scyllarid fisheries and includes a series of chapters that take up specific species and specific areas. One can find information on: the fishery of *Scyllarides* and *Parribaculus* in Florida; the slipper lobster fishery in the north-western Hawaiian Islands; scyllarids in the Mediterranean; the Galapagos Islands; two chapters on the fisheries associated with *Thenus*; and the Australian fishery for *Ibacus*. Fortunately, the cryptic habits of slipper lobsters have up to now precluded their becoming the focus of any extensive fishery. While several places in the world do sustain some harvesting of scyllarids, one can easily foresee a time when populations of slipper

lobsters will be put under serious pressure as the need to harvest the sea becomes more intense. Without the kind of knowledge of basic biology of these animals that this book documents, such attempts to increase yields could put the scyllarids under serious threat. Spanier and Lavalli in fact tell us that already some scyllarid stocks have been seriously depleted.

This book should be welcome by students of lobster biology. One can only hope that it will help trigger a blossoming of interest in Scyllaridae. However, one also hopes that the publisher will take better care in the future with the quality of reproduction for the illustrations in this series.

