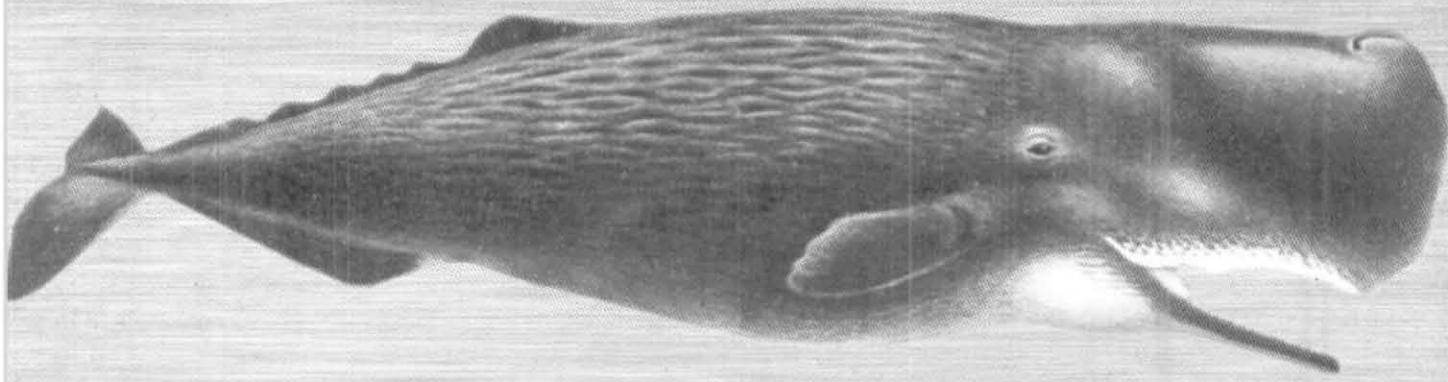




MARINE FISHERIES INFORMATION SERVICE

No.173

July, August, September 2002



TECHNICAL AND EXTENSION SERIES

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

COCHIN, INDIA

(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)

Palaemonid Prawns : Biodiversity, Taxonomy, Biology and Management
K. V. Jayachandran
ISBN 81-204-1477-2
Oxford & IBH Publishing Co. Pvt. Ltd.,
New Delhi,
Calcutta
624 pp.
Paper back

Several species of low volume, high value prawns are of great fishery potential throughout the world and hence they play vital role in the economics of those countries through the domestic and export trade. Although the decapod penaeids with their rich biodiversity are widely subjected to research and vividly described in various literatures, the super family Palaemonidae remains at the back and have not received due attention in India inspite of their academic and economic importance. Moreover all available literature on this group are highly scattered. The palaemonid prawns form an important source for capture and culture fisheries in the inland waters. The prawns under the subfamily Palaenominae are inhabitants of inland waters with potential for aquaculture, whereas

the members of the subfamily Pontominae are exclusively marine and they being brilliantly coloured, are potentially valuable as ornamental candidates for marine aquaria. Since majority of the members of palaemonidae are valuable components in the economics of Asia, America and Europe, informations on their taxonomy, distribution and biology are important prerequisites for management in capture as well as culture subsectors.

The present book under review 'Palaemonid Prawns', dealing with their biodiversity, taxonomy, biology and management by Dr. K. V. Jayachandran, an associate professor of fishery biology, Fisheries College, Kerala Agricultural University, Panangad, Kerala, is an outcome of sustained and dedicated efforts over the years. Most of the information on taxonomy, distribution and biology are culled out from highly scattered world literatures on this group.

This book, spread over 624 pages, unravelled many diverse scientific truths pertaining to palaemonid prawns of ecological and economic importance from the entire range of distribution. In the words of the author 'The major aims of the book are to encourage communication among scientists exploring different areas of related research work, to bring the important upto date scientific advancement on the subject... and to solve many unsettled

problems in taxonomy'. To a great extent his objectives are fulfilled through this endeavour. The book has seven chapters and more than 50% of the total number of pages of the book embodied the classification of Decapoda. General information dealt in the first chapter, overviews the history, status and prospect of the group. Out of 716 species, under 93 genera of the family palaemonidae reported from different parts of the world, only about 86 species have major or minor importance to fisheries. Their world production showed a general increasing trend and reached 1,71,174 t in 1997 with China and US ranking top.

The second chapter presents the detailed taxonomy of the super family Palaemonoidea. The key to the families and sub families under the super family is given here. The chapter also provides description and key to the identification of genera under the family / sub-families. The synonyms, description, distribution, remarks, etymology and habitat of each genera are vividly presented with the help of figures wherever required. Similarly the key to the species and synonyms, diagnosis, distribution of species given in this chapter are of much use to students, research workers and aquaculturists. The genera *Macrobrachium* is dealt in depth; the key to 110 species under the genera and their synonyms, description, distribution, remarks and biology are also presented with the help of suitable figures of the characteristic body parts so as to make the species identification easy.

A check list of species of the family recorded from each geographical region such as Europe, Asia, Africa, North and South America and Oceania are given in the third chapter of the book.

In chapter four, the author has listed the troglobite, subterranean inhabitant, decapods under 9 families reported from the world. Commercially important 86 palaemonid prawns of the world are listed in a Table indicating the species name, habitat, length and regions of importance.

Important biological aspects such as food and feeding habits, reproductive biology and larval development of a few important species are given in the sixth chapter of this book. This larval development of palaemonid prawns, worked out in detail from different parts of the world, is thoroughly described with the support of suitable drawings. The author has also attempted to compare the larval characters of different species belonging to a few genera. The section has great academic value besides its role and relevance in the aquaculture practices. The part on the larval development would help greatly the students and hatchery technologists.

The most important area of immediate applicability is covered in the seventh chapter on management. The species under the genus *Macrobrachium* with their advantageous characteristics make them suitable candidate for aquaculture. Their hatchery management aspects like site selection, larval rearing tanks, abiotic water quality, larval production, broodstock maintenance, larval diet and feeding, farming, supplementary feeding, diseases and prevention and harvesting are explained in this chapter. The informations provided here are of great value and importance in hatchery and farm management. An exhaustive list of upto-date references cited at the end of the book would facilitate the future students and researchers and ease their job to further pursue investigations on this group.

This major compendium on an economically important and widely distributed group of prawns attempted by a single individual deserves special compliment. The book being a special Indian edition with paperback covering is comparatively low priced and hence affordable not only to libraries but also to individuals with a taste for natural science publication. This book is recommended for fisheries research institutes and fisheries college libraries.

Reviewed by: N.G. Menon, CMFRI, Kochi