

Eguia, M.R.R., Dejarne, H.E., Rosario, W.R., Roxas, E.C. and Woror, D. 2009. Philippine Freshwater Prawns (*Macrobrachium* spp.). Aquaculture Extension Manual No. 43. Aquaculture Department, Southeast Asian Fisheries Development Center (SEAFDEC), Tigbauan, Iloilo, Philippines. ISBN 978-971-8511-91-6. Paperback, 50 pages. US\$6.

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One of the important mandates of the Aquaculture Department of the Southeast Asian Fisheries Development Center (SEAFDEC) based in Iloilo is the dissemination of relevant technologies useful for aquaculture in and around Southeast Asia. It partially fulfills this mandate with the publication of a series of Aquaculture Extension Manuals (AEM) a set of State-of-the-Art manuals on topics ranging from grow-out cultures, hatchery management and fish health. The volume under review, although a part of the AEM series, is an exception. It is in reality a taxonomic monograph or a field guide designed to allow its users to tell species apart easily. By producing this groundbreaking work documenting the rich biodiversity of Philippine freshwater prawns, the publisher has sent an important message that highlights the important link between good taxonomy and sound resource management and sustainability.

Twenty-two species of the genus *Macrobrachium* (Crustacea, Decapoda, Palaemonidae) are documented to occur in freshwater habitats around the Philippines, with one species *M. rosenbergii* (De Man) forming the backbone of the struggling freshwater prawn farming industry in the country. Historical records have shown that the first major collecting effort of freshwater prawns in the Philippines was done during the USS Albatross Philippine Expedition between 1907 and 1910, but the collected samples would only be studied and published more than eight decades later by Chace and Bruce (1993). However, the earliest work on the Philippine species of this group of prawns, recognized at that time as belonging under the genus *Palaemon*, was published by Cowles (1914) accounting for nine species and one subspecies, although the earliest and possibly the first new species described from the Philippines, *M. lanceifrons* (Dana), was described based on a sample collected in Manila in 1852 also under the genus *Palaemon*. It is recognized as the only endemic Philippine species of *Macrobrachium* known locally as *hipon tagunton*. The current work under review therefore compiles all known records dating back from the 1914 paper up to the year of publication (2009) including results from field surveys conducted by some of the authors (MRRE, HED and ECR) and which are referred to repeatedly throughout the footnotes as Eguia, Dejarne & Roxas 2005-2007.

The volume opens with a short historical review of the taxonomy of freshwater prawns in the Philippines, a brief history of freshwater prawn farming efforts including the dilemma of confused identity of farmed species. Fourteen species of *Macrobrachium* were encountered by the three abovenamed authors during their field surveys conducted between 2005 and 2007. Unfortunately, some major Philippine islands with large river systems such as Samar, Mindoro, Negros, Bohol and Palawan were not sampled by them (as revealed on the map on page 4) and therefore representing missed additional discoveries. The accrued total of 22 species documented in this volume is based on their actual collections supplemented with published records gleaned from the literature.

The bulk of this manual is therefore devoted to the taxonomic treatment of these 22 Philippine species, the first time all local species of *Macrobrachium* have been accounted for in a single volume. A taxonomic classification opens the chapter, followed by useful information on general external morphology supplemented by color illustrations that are both instructive and interesting, each one clearly labelled for specific anatomical parts useful for taxonomic discrimination. Each species is provided with its complete Latin scientific name, English common name (if known), a set of distinguishing features and some biological information, notes on habitat and natural distribution in the Philippines and elsewhere, and information about economic importance and aquaculture potentials. Color photos of close-ups and habit shots, some of which are of inferior quality, as well as clearly executed line drawings accompany each species description. Each detailed photo is provided with clear labels and scale bars that are reminiscent of general zoology laboratory manuals or dissection guides. The section on natural distribution, as mentioned earlier, is based on the authors' own collection and data from the literature, which are listed as footnotes. One frequently listed footnote and apparently an important reference consulted by the authors is the paper of Cai and Shokita (2006). This is unfortunately missed out in the References list found at the end of this volume. A quick Internet search points to a seminal paper on Philippine

caridean freshwater shrimps published by these authors and whose complete bibliographic details are appended below.

Notwithstanding the seemingly comprehensive coverage seen in this work, a quick perusal will reveal many information gaps. It is obvious that much more research is needed to come up with species biology information for many species. More than half of the species included in this treatment do not have any biological or socio-economic data. On the other hand, a number of species reported in the past have not been encountered in later surveys such as *M. gracilirostre* (Miers) collected from Malaga River in Leyte in 1909 and *M. bariense* (De Man) from Malabang River in Mindanao in 1908, both species never collected again anywhere in the Philippines. Likewise, the authors noted that the once rich *Macrobrachium* faunal assemblage noted in the 1950s in Laguna de Bay is now represented only by the endemic species *M. lanceifrons*, which is likely to follow the path to extinction if timely conservation interventions are not put into place.

The volume is made more user-friendly for the layperson by providing a glossary of technical terms at the end section of this book. The References list, while missing an important bibliographic entry mentioned above, contains a few minor errors such as duplicated listing (New et al. 2000) and the commonly encountered confusion of citing and listing Chinese and Japanese names using their given names instead of their family names (e.g., entry mistakenly listed as Akane et al. 2006, instead of Ito et al. 2006).

Notwithstanding many of the glitches cited above, the work represents an important contribution, if not a stimulus, to the taxonomy of economically-important Philippine invertebrates. The team of writers, including Daisy Woror, the Indonesian taxonomist regarded as one of the world's foremost authority on *Macrobrachium*, should be congratulated for this effort. This book is recommended for students and researchers of taxonomy as well as for aquaculturists and fishers for whom this book was initially written. Sold at a very reasonable price, this is definitely one of the most affordable authoritative taxonomic works around

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Lawrence M. Liao
Graduate School of Biosphere Science
Hiroshima University