SHORT COMMUNICATION

On the occurrence of the Sulu Shrimp *Metapenaeus suluensis* Racek and Dall, 1965 (Crustacea: Decapoda: Penaeidae) in the Iloilo River, West Central Philippines

Annabelle del Norte-Campos*[1] and Marivene Manuel-Santos[2]

[1]Marine Biology Lab, Division of Biological Sciences, College of Arts and Sciences, University of the Philippines Visayas, Miagao, Iloilo
[2]Carcinology Section, Zoology Division, National Museum of the Philippines, Manila

This paper reports on the occurrence of the Sulu Shrimp *Metapenaeus suluensis* Racek and Dall, 1965 in the Iloilo River and nearby shallow areas. The main gears which catch the species in the river are reported. An account on its distribution and morphology is given. Comparison with the Greasy Back Shrimp *Metapenaeus ensis* De Haan, 1844, a similar species, is also discussed.

INTRODUCTION

Many previous studies in Western Visayas have documented the population and reproductive biology of different species of penaeid shrimps in western Visayas, such as the Giant Tiger Prawn *Penaeus monodon* (Tan-Fermin and Pudadera 1989) and the Green Tiger Prawn *P. semisulcatus* (Villarta et al. 2006). Studies on the reproductive biology of *P. monodon* have subsequently led to knowledge on the artificial culture of this species (Primavera 1983, Primavera and Gacutan 1989).

The Sulu shrimp *Metapenaeus suluensis* Racek and Dall, 1965 (Figure 1) has been reported to be a native of Thailand (Tangrock-Olan et al. 2007), Indonesia and the Philippines (Perez-Farfante and Kensley 1997). Motoh and Buri (1984) likewise reported the occurrence of this species in the country but have been unable to sample it in West Central Philippines. Meanwhile, the occurrence of its close relative, the more familiar Greasy Back Shrimp *Metapenaeus ensis* (Chan 1998) has been documented (del Norte-Campos et al. 2003) in northern Panay where the species dominates (38.5%) trawl catches. Other aspects of its biology (e.g.. Motoh 1980, Ronquillo and Saisho 1993), including its spatial distribution (Añasco and Babaran 2001) have also been earlier conducted already in the country, mostly in the same general locality.

Figure 1. Male specimen of *Metapenaeus suluensis* Racek and Dall 1965 sampled from the Iloilo River, west-central Philippines.

In this paper, we confirm earlier information on the local

*Corresponding author
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occurrence of *M. suluensis*, as well as cite literature which will help differentiate it from the similar-looking *M. ensis*. It is hoped that this work, together with on-going and future studies, will provide necessary knowledge for its rational and sustainable utilization.

DISTRIBUTION AND MORPHOLOGY

In a comprehensive study of the Iloilo River, del Norte-Campos and Campos (2011) were first to report the occurrence of the Sulu Shrimp, *M. suluensis*, in west central Philippines. Figure 2 shows its probable route from the Sulu Sea to the Iloilo River via the Visayan Sea. It proved to be the most dominant species in the Iloilo River caught by fish corrals and motorized push nets, comprising 59.4% and 45.0%, respectively. Of the total catches of these gears. The species likely benefits from the river's mangrove habitat serving as its nursery ground (Primavera 1995, Datoon-Subong and del Norte-Campos, in preparation).

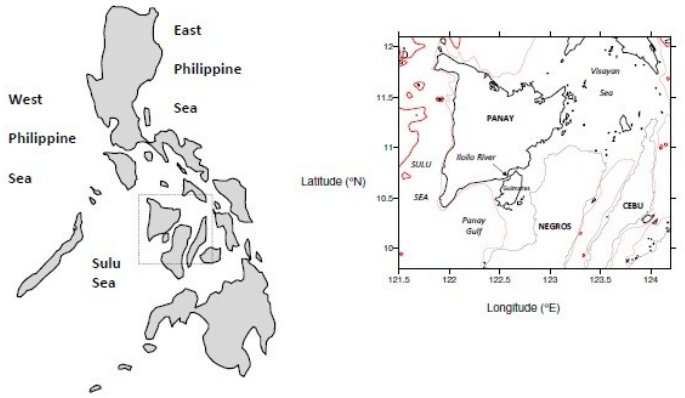

Figure 2. Location of the study site and the probable route of *Metapenaeus suluensis* Racek and Dall, 1965 from the Sulu sea to the Iloilo River, west central Philippines.

Racek and Dall (1965) gave the distribution as "Sulu Sea, Philippines" with no exact location. The Sulu Sea covers the entire sea in the southwestern area of the Philippines, bounded by northeastern Borneo on the southwest, the southwestern islands of the Philippines including Palawan on the west and northwest, Busuanga and Mindoro on the north, Panay and Negros on the east, and Mindanao and Sulu Archipelago on the southeast. The discovery of the species in Iloilo River suggests the possibility that the Visayan Sea is one of the distributional ranges of the *Metapenaeus suluensis* in the Philippines. Iloilo River is not really a river, but a tidal inlet of the sea (Iloilo Strait). It has no headwaters (i.e., water is not replenished from inside, but only from the sea). Because of this, its salinity is quite high.

M. suluensis, in comparison with other penaeids, is a small shrimp with females and males with total length on record (Racek and Dall 1965, Miquel 1982) of between 9.9 cm and 12 cm, respectively. Females of its relative species *M. ensis*, however, reach 18.9 cm, while males have a maximum length of 15.4 cm (Motoh 1980). However since they commonly range in size

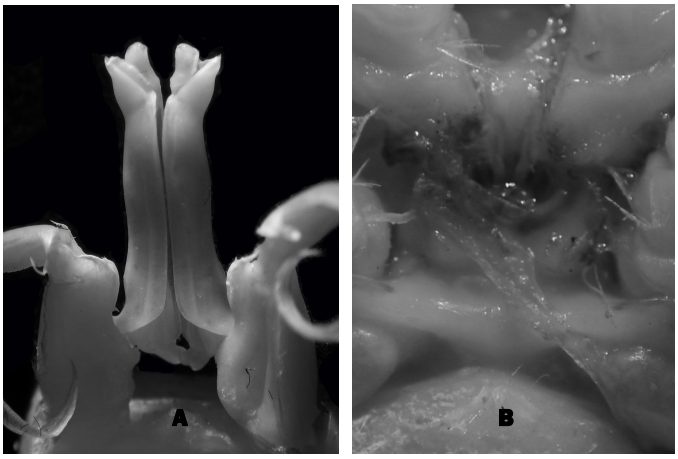

Figure 3. Young specimen of *Metapenaeus suluensis* Racek and Dall, 1965, showing not fully developed (A) petasma and (B) thelycum.

from 7 to 14 cm, confusing *M. suluensis* for *M. ensis* is highly probable (Genodepa, personal communication). However, while the two species vary in many other aspects of their morphology, e.g., rostrum, branchiocardiac sulcus, abdomen, pubescense, and tail fan, (Racek and Dall 1965, Silas and Muthu 1974, Miquel 1982) they differ most distinctly in the presence of a sharp and large spine (but slightly smaller than basial spine) on the ischium of the first pereopod, and the appearance of their thelycum and petasma (Figure 3) (Racek and Dall 1965, Miquel 1982). Given these morphological differences, distinguishing the two species may prove to be easier and future misidentifications may also be avoided. This may then serve as the starting point for the rational utilization and management of the species.

Racek and Dall (1965) described *Metapenaeus suluensis* based on a 9.9 cm male holotype, a 12.0 cm female allotype, and a male and female paratypes with total lengths of 7.2 cm and 10.9 cm, respectively. Silas and Muthu (1974) used the same description of Racek and Dall (1965) to compare the *Metapenaeus krishnatrii* with a total length range of 1.7 to 9.8 cm. Similarly, Miquel (1982) provided in his paper the Racek and Dall's (1965) description of *Metapenaeus suluensis*, pointing out the common characters of *M. suluensis* and *M. conjunctus* and *M. insolitus* in the presence of setae on the ventral surface of the lateral plates of the thelycum. Moreover, *M. suluensis* was also compared with *M. conjunctus, M. monoceros* and *M. krishnatrii* based on the parallel longitudinal edges of the plate to the anteromedial (see, Miquel 1982).

With the five specimens on hand from Iloilo River, two males had a total length range of 6.5 cm and 7.4 cm (NMCR-25999), while three females range from 5.7 cm to 6.8 cm (NMCR-25998). The Iloilo River specimens agree well with Racek and Dall's (1965) description of *Metapenaeus suluensis*, particularly the large spine on the ischium of the first pereiopod (Figure 4). These specimens are not yet mature but the distinct character of the first pereiopod in which the presence of an ischial spine is so distinct, the number and dentition of the rostrum, and the appearance of thelycum and petasma are those of *M. suluensis*.

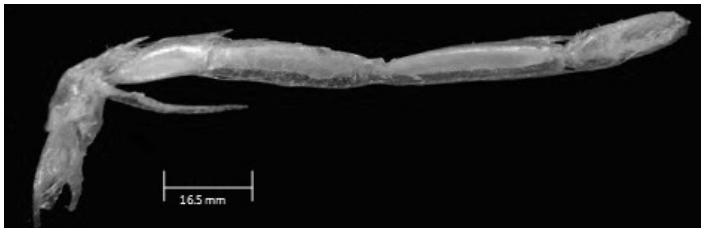

Figure 4. First pereiopod, *Metapenaeus suluensis* Racek and Dall, 1965.

Such distinct character is not solely the distinguishing feature of *M. suluensis*, but also characterizes a 'variety' *baramensis* of *M. ensis*, as discussed by Racek and Dall (1965) quoting Hall (1962) "of which the male has not yet been found". With this vague statement and the fact that a 'variety' *baramensis* specimen is not available for comparison, there is a possibility that *M. suluensis* might be a synonymy of *M. ensis baramensis*, considering that some of its characters are in close similarity with *M. suluensis*. It is unfortunate that no mature specimens of *M. suluensis* from Iloilo River have been caught, but future sampling may shed more light on this issue.

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CONFLICTS OF INTEREST

None

CONRIBUTIONS OF INDIVIDUAL AUTHORS

AGC del Norte-Campos collected the specimens, wrote the first draft of the paper, and took the pictures of the whole specimens; M Manuel-Santos refined the first draft and took the pictures of the reproductive structures

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