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Ecology and life history of penaeid shrimps

H. Motoh, N. Solis and E. Caligdong

Fourteen species of penaeid shrimps with commercial value in Batan Bay and Tigbauan-Guimbal waters were identified as follows: *Penaeus monodon*, *P. semisulcatus*, *P. merguensis*, *P. indicus*, *P. latisulcatus*, *P. japonicus*, *Metapenaeus ensis*, *M. burkenroadi*, *M. endeavouri*, *Metapenaeus palmensis*, *Mp. stridulans*, *Trachypenaeus fulvus*, *T. curvirostris*, and *Parapenaeus longipes*.

Among the 14 penaeids, *P. semisulcatus*, *M. ensis* and *Mp. palmensis* were found to be the dominant species within each genus.

There are seven existing fishing gears for shrimping in the Batan Bay and Tigbauan-Guimbal waters: fish corrals, lift net, filter net, gill net, skimming net, baby trawler and commercial trawler.

In general, female penaeids are larger than the males (Fig. 1). The largest *P. monodon* female measured was 81 mm in carapace length with 23 g in body weight. The largest male measuring 59 mm in carapace length with 119 g of body weight was caught in Batan Bay.

Judging from spermatozoa occurrence on both sexes of *P. monodon*, the biological minimum size for male is 37 mm in carapace length and 49 mm for female (Fig. 2).

A total of 133 *Penaeus* postlarvae obtained from the offshore were identified by comparison with those reared in the laboratory. The postlarvae of *P. japonicus-latisulcatus* complex were quite dominant (60.2%), followed by *P. semisulcatus* (18.0%), and *P. merguensis-indicus* complex (17.3%). The number of *P. monodon* postlarvae was relatively small (4.5%).

The modal carapace length of *P. monodon* postlarvae from the offshore was 1.3 mm with three or four dorsal and no ventral spines on the rostrum, while *P. monodon* fry from the shoreline had 2.3 mm with five or six dorsal and one or two ventral spines (Fig. 3).

Fig. 1. Frequency distribution of *Penaeus monodon* caught at area D (mouth of Batan Bay) and fluctuations in water temperature and salinity during the period January through June 1977.

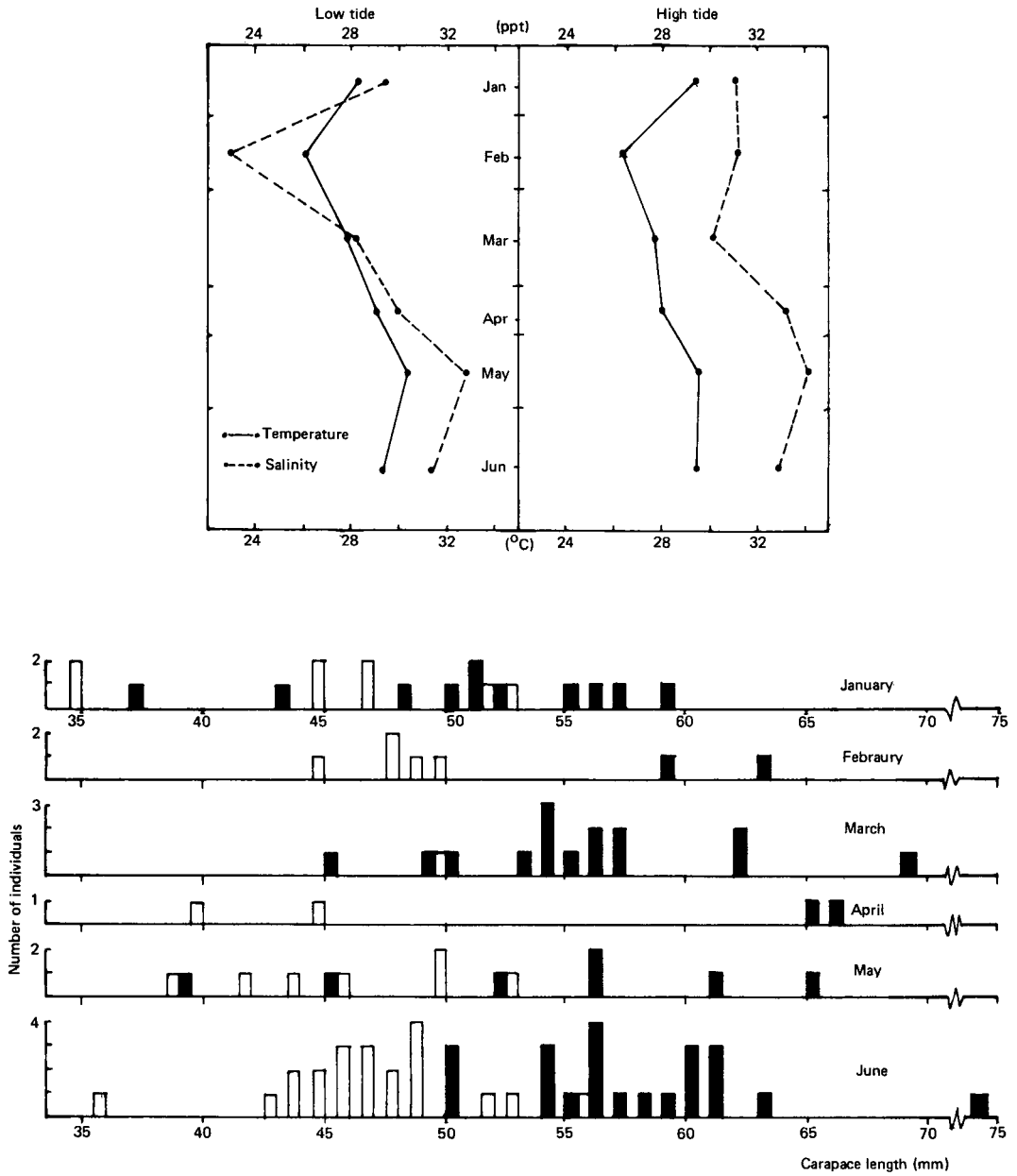
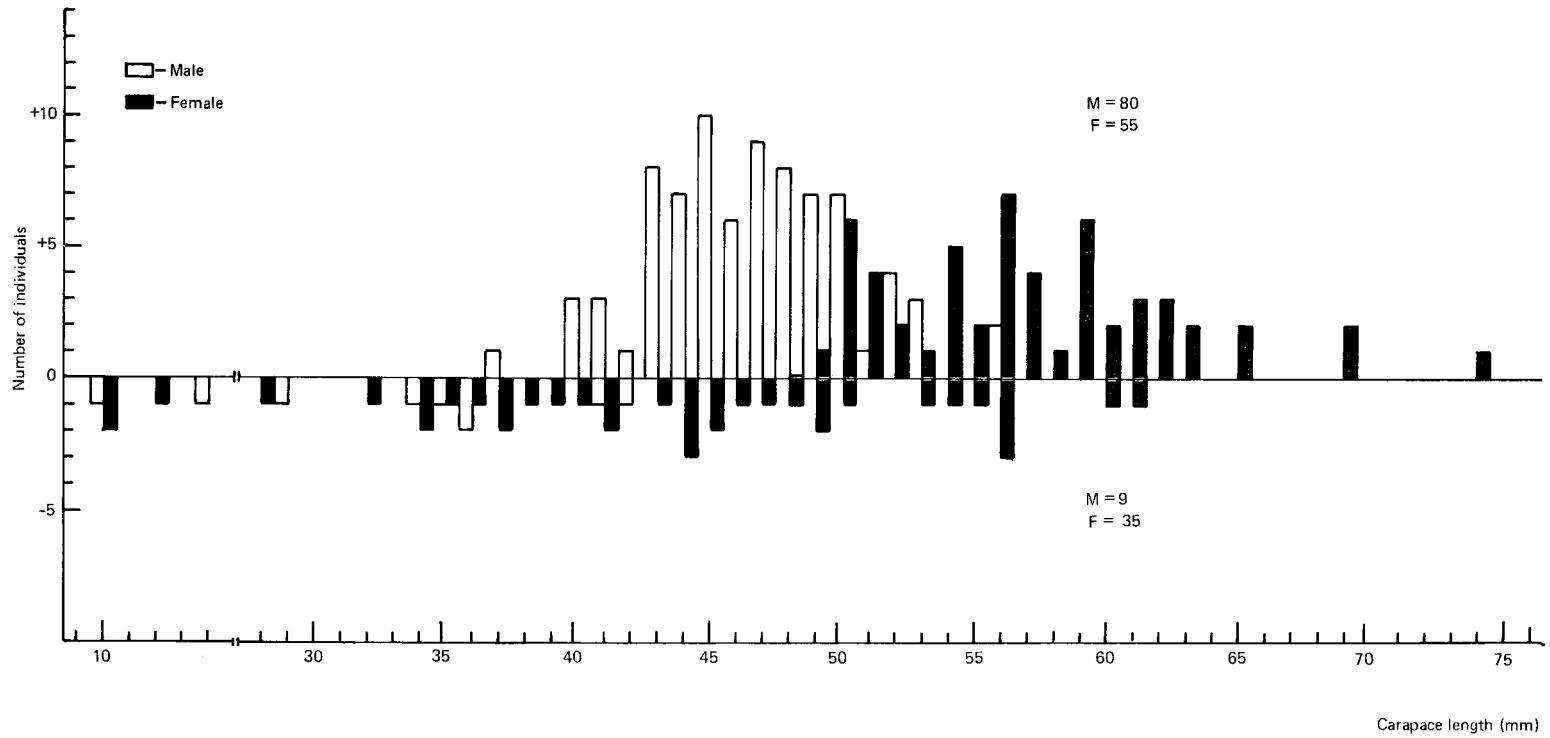


Fig. 2. Frequency distribution of spermatozoa occurrence on both sexes of *Penaeus monodon* caught in Batan Bay, from November, 1976 to June, 1977 (except February, 1977).



44 Fig. 3. Frequency distribution of *Penaeus monodon* postlarvae by their habitats.

