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Identifying shrimp fry

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IDENTIFYING SHRIMP FRY

The fry of penaeid shrimps are the postlarval or early juvenile stages of the life cycle. There are four groups of shrimp fry that occur in shore waters in considerable abundance. These may be quickly identified by their general pigmentation patterns (Fig. 1). The number of pigment cells on the sixth abdominal segment (here called PSAS) is an important and easily ascertained character for identification.

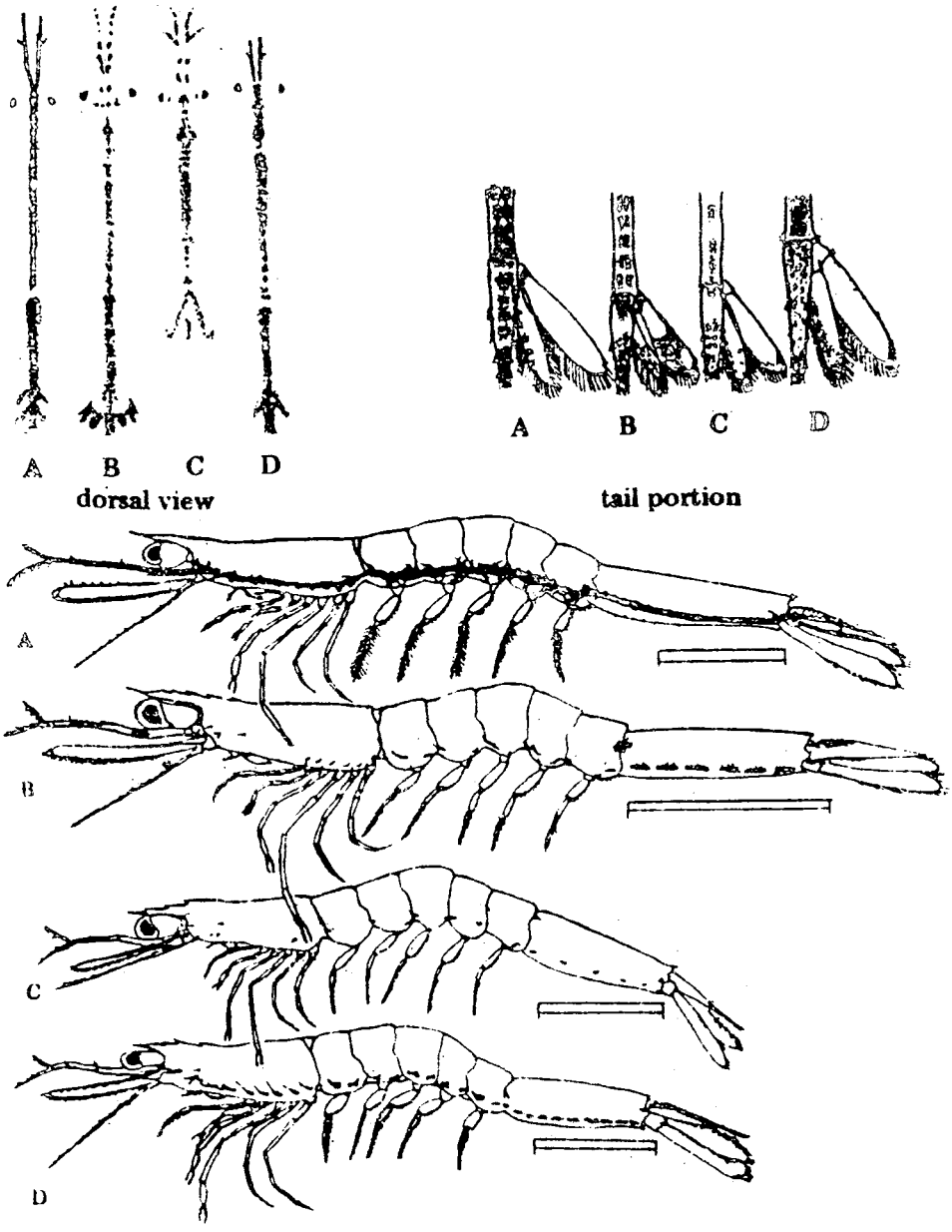


Fig. 1. Fry of different species of penaeid shrimps. A. **P. monodon;** B. **P. semisulcatus;** C. **P. indicus/merguiensis;** D. **P. japonicus** group. Note pigmentation patterns on body and tail. Scales are 2 mm.

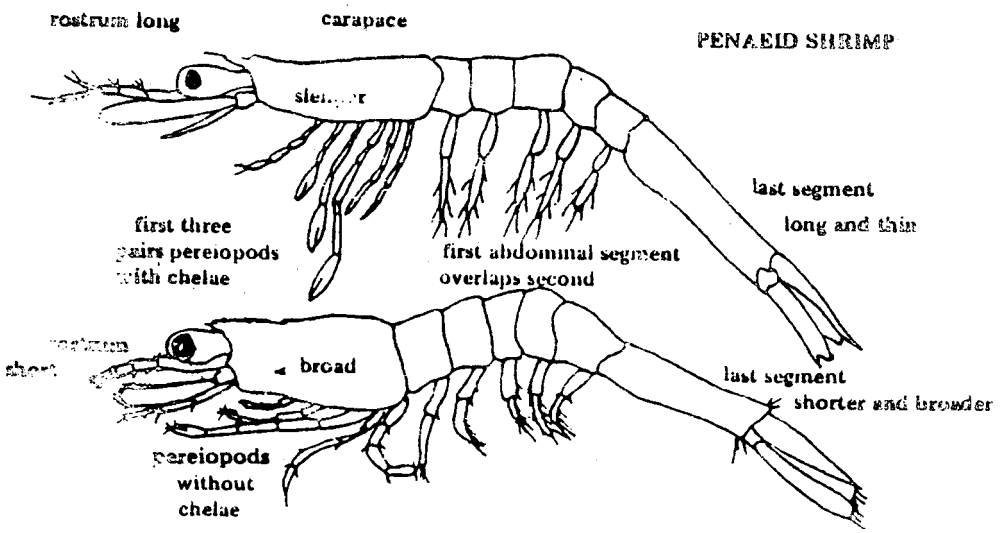
Penaeus monodon fry, while not so abundant in natural waters, is the most sought-after. They are the largest (1.4-3.1 mm in carapace length CL, average 2.6 mm) among all shrimp fry and can easily be picked out because of their dark brown-red streak along the entire body form the tip of the inner antennular flagellum to the tip of the telson. The rostrum is slender and straight or very slightly curved, 0.4-0.5 x CL in length. PSAS is greater than 13, dense and continuous.

P. semisulcatus fry are relatively smaller (1.2-3.0 mm CL, average 1.8 mm), and closely resemble **P. monodon** fry in general pigmentation, except that there is mid-way break in the pigmentation of the telson and the uropods. The rostrum is uptilted, 0.5-0.8 x CL in length. PSAS is from 6 to 12.

P. indicus/P. latisulcatus fry also resemble **P. monodon** fry in having the continuous longitudinal streak or dark-brown or dull-green chromatophores. They are relatively shorter (1.2-3.0 mm CL, average 2.0 mm) but stouter. The rostrum is short, 0.2-0.3 x CL length, not reaching the tip of the eye.

Relative abundance of these four groups in shore waters may differ in place and time. In Iloilo, Philippines the rank of abundance was found to be: **P. indicus/P. merguiensis** (65%), **P. japonicus/Platisulcatus** (18.5%), **P. semisulcatus** (11%), and **P. monodon** (5.5%).

Catches during fry collection include other crustaceans larvae that may be mistaken for penaeid shrimp larvae, such as the metapenaeid shrimps, caridean shrimps, mysids, and the sergestid shrimps (e.g. **Lucifer** and **Acetes**) (Fig. 2). Other species are easily distinguished, e.g., crab zola and megalopa, and mantis shrimp (Fig. 2).



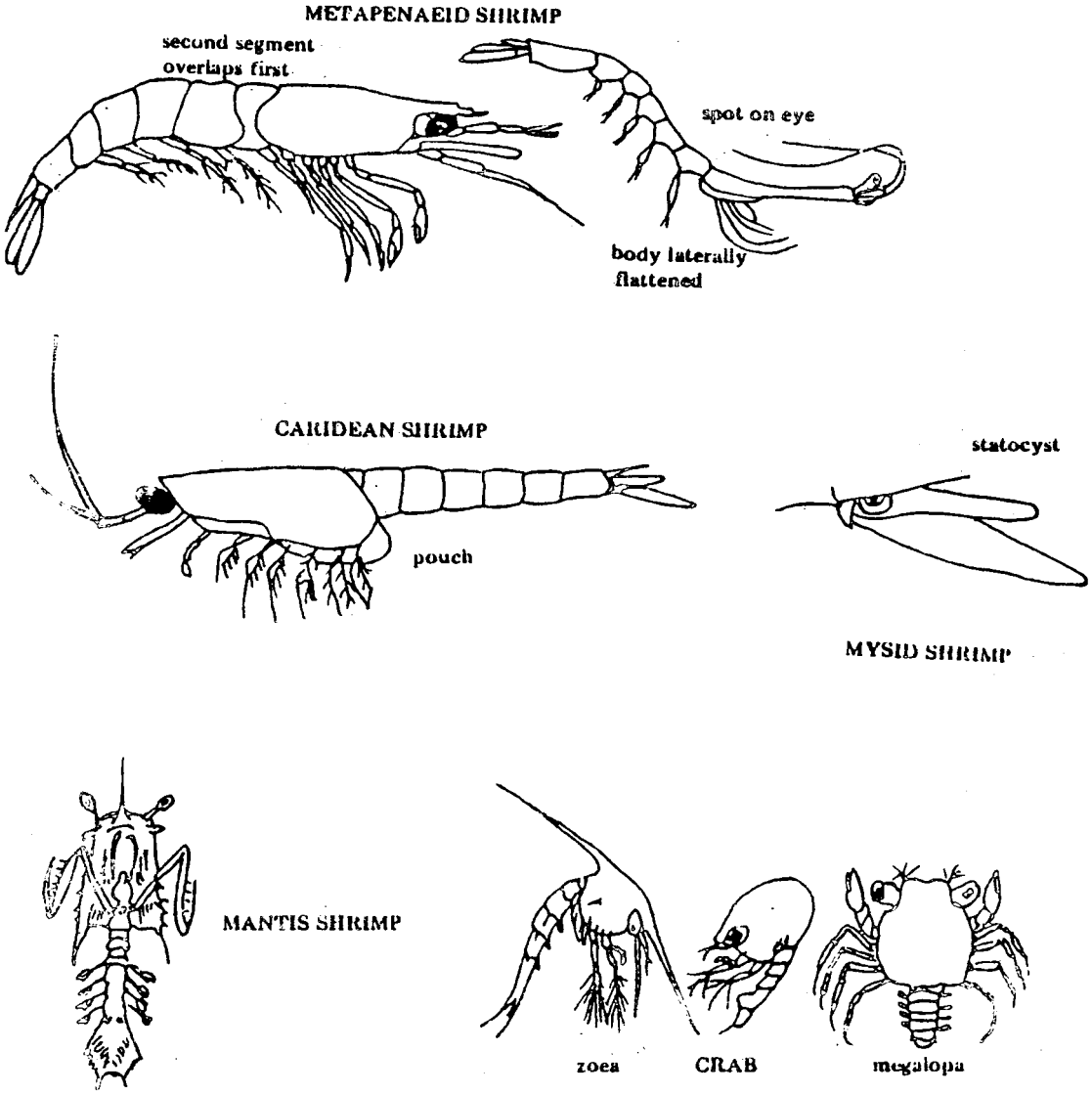


Fig. 2. Larvae of other crustaceans that co-occur and may be mistaken for penaeid shrimp fry.

Source: Bagarinao TU, Solis NB, Villaver WR, Villaluz AC. 1986. Important Fish and Shrimp Fry in Philippine Coastal Waters: Identification, Collection, and Handling. Aquaculture Extension Manual No. 10, SEAFDEC Aquaculture Department, Tigbauan, Iloilo.