Survival and metamorphosis of the mud crab *Scylla tranquebarica* larvae fed with *Brachionus plicatilis* and *Artemia* nauplii

A special problem presented to the

Division of Biological Sciences
College of Arts and Sciences
University of the Philippines in the Visayas
Miagao, Iloilo

In partial fulfillment
of the requirements for the degree of

Bachelor of Science in Biology

by

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March 2004

Abstract of the special problem entitled:

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A feeding experiment was conducted on the larvae of *Scylla tranquebarica* to determine food preference of the larvae. Three treatments, replicated five times, were used. In treatment I, larvae were fed with *Brachionus* alone at a constant density of 10 ind/ml. In treatment II, *Artemia* nauplii alone were given on the larvae at an increasing density with increasing zoeal stage of 1-3 ind/ml on Z1 to Z3. The nauplii were then maintained at 1 ind/ml starting the 2nd day of Z3 up to Z5. Larvae on treatment III were given combined diet, which was made up of *Brachionus* and *Artemia*. Larvae were reared in 3.5 L containers filled with 3 L of seawater at a salinity of 32-34 ppt and temperature of 24-31°C. No aeration was given. There was daily transfer of larvae to other set of containers. Daily survival and metamorphosis were recorded during transfer.

High survival (98%) of the larvae was obtained on Z1 up to 2nd day of Z3 (83%) on larvae fed with *Brachionus* alone but metamorphosis was prolonged during Z3 and Z4 (7 and 8 days respectively). Only few larvae metamorphosed to megalopa (5.3%). On the other hand, larvae fed with *Artemia* alone suffered a drop in survival on the first day of feeding to 63.3%. Larvae in this treatment, however, have shorter intermoult duration (3 days) and 17% of larvae were able to reach megalopa. Highest survival to megalopa (26%) was obtained on larvae fed with combined diet. Good metamorphosis was shown by larvae with *Artemia* in their diets.

Complete development to megalopa took more intermoult days due to a low temperature (24°C). Larvae containing *Artemia* on their diets took 21 days to reach megalopa while *Brachionus*-fed larvae reached megalopa after 25 days.