

Parinya Sutthinon 2007: Nursing Techniques of Babylon Snail (*Babylonia areolata* Link, 1807) from Veliger Larvae to Early Juveniles. Master of Science (Aquaculture), Major Field: Aquaculture, Department of Aquaculture. Thesis Advisor: Assistant Professor Wara Taparhudee, Ph.D. 105 pages.

The first experiment, nursing of Babylon Snail (*Babylonia areolata* Link, 1807) from veliger larvae to early juveniles was conducted for 75 days. During culture period, sand was applied as a substrate in different nursing periods with 5 treatments. These consisted of no sand substrate, sand was filled as a substrate for 5 days before the veliger larvae metamorphosed into the crawling juveniles, sand was filled as a substrate at the first day that veliger larvae metamorphosed into the crawling juveniles, sand was filled as a substrate after all veliger larvae metamorphosed into the crawling juveniles and all crawling juveniles were moved to the new tanks with sand substrate. The final average survival rates were 16.38 ± 1.05 , 20.99 ± 1.45 , 17.97 ± 0.36 , 20.63 ± 1.35 and 21.13 ± 1.14 % respectively and the final average shell lengths were 8.81 ± 0.37 , 8.12 ± 0.40 , 8.25 ± 0.36 , 8.62 ± 0.38 and 8.45 ± 0.67 mm respectively. Statistical analysis of the average survival rates of all treatments that sand was filled as a substrate were significantly higher than the treatment was not filled as a sand substrate ($p < 0.05$). But all treatments that sand was filled as a substrate except method which sand was filled as a substrate at the first day that veliger larvae metamorphosed into the crawling juveniles obtained similar high survival and not significantly different ($p > 0.05$). Statistical analysis of the average growth rates of all treatments were not significantly different ($p > 0.05$).

The second experiment, using different materials attached on the edge of the nursing tank to prevent the juveniles crawling out from the tanks was determined. Five treatments with five replications were set up for the experiment : no material, future board sheet, plastic sheet, nylon net sheet and foam rubber sheet. After nursing for 75 days, the average survival rates were 1.22 ± 0.51 , 13.38 ± 0.61 , 10.14 ± 0.60 , 21.58 ± 2.43 and 6.45 ± 1.10 % respectively and the average shell lengths were 12.16 ± 0.93 , 9.43 ± 0.35 , 9.83 ± 0.47 , 8.47 ± 0.40 and 10.99 ± 0.31 mm respectively. Statistical analysis showed that the average survival rates and the average growth rates of all treatments were significantly different ($p < 0.05$). Thus nylon net sheet, given the highest survival rate is the best material to prevent the juveniles crawling out from the nursing tank. Because nylon net sheet is a rough surface of fine netted material therefore the juveniles were not able to crawl passing it efficiently. While other materials, their surfaces are smooth, then the juveniles can crawl over them, dried and died at the surface area over the attached materials.



Student's signature



Thesis Advisor's signature

09 / 03 / 2007