

**Effect of background tank color in combination with sand substrate and shelters on survival and growth of *Scylla tranquebarica* instar**

**ABSTRACT**

Effect of tank color in combination with substrate-shelters on the survival and growth of the instar of purple mud crab, *Scylla tranquebarica* (initial body weight of  $28.7 \pm 2$  mg) was investigated. Ten treatments were tested in triplicate with black (B) and white (W) tanks were set as the control, while other tanks were provided with a combination of sand substrate (S), and/or polyvinyl chloride pipes (P) as horizontal and nets (N) as vertical shelter, referred as B, BS, BSP, BSN, BSPN, W, WS, WSP, WSN and WSPN, respectively. Survival of the instar in black tanks (26.7 to 60.0%) was higher than in white tanks (20.0 to 46.7%) ( $P = 0.052$ ). Survival in the horizontal shelter treatments (46.7 and 63.3%) exceeded that in the vertical shelter groups (30.0 and 50.0%) ( $P = 0.068$ ). The final body weight of the instar in black tank (2.4 to 3.8 g) was significantly lower than white tank (2.6 to 4.8 g) ( $P = 0.02$ ). Specific growth rate was significantly greater in sand substrate treatments (8.4 to 9.1%/day) than in controls (7.9 and 8.0%/day) ( $P = 0.015$ ). In conclusion, horizontal shelter was better than vertical type, and black tank with substrate and horizontal shelter was more suitable for culture of purple mud crab instar.