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Life cycle of a benthic harpacticoid, *Amphiascoides neglectus* Lang, 1965 in laboratory condition and effect of some environmental factors on the population growth

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Copepods are recently reported as a potential live feed to be used to replace our dependency on *Artemia* and rotifers in larviculture activity. Nonetheless, the number of the identified copepod species which potentially been use for mass production is still very limited. This study was carried out to determine the development time and sizes of the different stage of a marine harpacticoid copepod, *Amphiascoides neglectus* cultured in laboratory condition. Their population growth when cultured in the different temperature, pH and salinity were also monitored. The culture was started with 50 adults in the sex ratio of 1:1 and the gravid females were observed until the end of egg-hatching period. Total development time between NI and CI stage is 63.67±1.15 hours (2.66±0.05 days) while between CI and adult stage is 89.97±3.06 hours (3.74±0.13days). The size of naupliar stages varies from 53.86 µm to 112.12 µm (width) and 97.52 µm to 178.24 µm (length) and copepodite stages from 226.25 µm to 492.12 µm. The size of adult for male and female is 579.58 µm and 593.98 µm respectively. The highest population density is found in the combination of 28°C, pH 9 and 25 ppt culture condition (45.34±5.54 individual/ml). Naupliar production is highest in the treatment of 25°C, pH 9 and 25 ppt (15.00±2.00 individual/ml). The highest copepodites and gravid females density is found in 28°C, pH 9 and 25 ppt which is 15.67±1.53 individual/ml and 3.67±0.58 individual/ml respectively. The maximum specific growth rate, K is 0.1472±0.0012. This study suggests that the optimum condition for the population growth of *A. neglectus* could possibly at temperature 28°C, pH 9 and salinity 25 ppt.

Biography

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