DEPOSITION AND SWIMMING BEHAVIOUR OF *CHICOREUS RAMOSUS* L. (GASTROPODA: MURICIDAE) LARVAE AT VARYING SUBSTRATE GRAIN SIZES AND CURRENT VELOCITIES IN A LABORATORY FLUME FLOW

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ABSTRACT

In a laboratory flume at Phuket Marine Biological Center, Thailand, boundary layer profiles were described above 3 substrate grain sizes 0.5, 3.3, and 5.4 mm at the free stream current velocities 3, 8, and 13 cm sec^{-1}. Shear velocities ranged from 0.22±0.02 cm sec^{-1} to 0.99±0.24 cm sec^{-1}. Roughness Reynolds numbers were between 1.8±0.1 and 66.7±15.9. At 3 cm sec^{-1}, shear velocity was not correlated to grain size. At 8 cm sec^{-1} and 13 cm sec^{-1}, shear velocities were correlated to grain size. Roughness Reynolds numbers were correlated to grain size at all free stream velocities. At 3 cm sec^{-1}, there was no correlation between grain size and number of larvae hitting the bottom. At 8 cm sec^{-1} and 13 cm sec^{-1}, there was a positive correlation between grain size and number of larval bottom encounters. Larvae close to the bottom could be divided into two groups. One group with horizontally oriented velum and one group with tilted velum. A high fraction of larvae with tilted velum were oriented with their velar lobes behind the shell. Most larvae encountering the bottom seemed to be larvae behaving like passive particles with neutral buoyancy.