

# Assessment of settlement of spat of black clam, *Villorita cyprinoides* in Vembanad Lake based on surveys

Vidya R.\*, Mohamed K. S., Venkatesan V., Geetha Sasikumar, Jenni B., Alloydious P. S., Sajikumar K. K., Jestin Joy K. M., Sheela P. P., Kavitha M., Jasmine F. and Jeena N. S.

ICAR-Central Marine Fisheries Research Institute, Kochi-682 018, Kerala

\*E-mail: vidya.panicker@gmail.com

Among bivalves the black clam, *Villorita cyprinoides* is the most important species landed in India. The state of Kerala has been, by far, the leading producer of the species. Major proportion of the species is harvested from Vembanad Lake, followed by the Malabar Coast. Surveys were conducted in several areas of Vembanad Lake to study the spat fall, recruitment time etc. of the species. Surveys were conducted in Vaikom and Panavally area of the Vembanad Lake. In Panavally area on the northern side of the Thannermukkam barrage of the Vembanad lake, surveys were conducted twice in 2018 in April and November in a stretch of 2000m length and 1000 m width covering the lat-long 09° 49' 389" N to 09° 49' 832" N and 76° 21' 530" E to 76° 22' 565" E. Heavy settlement of black clam spat was observed in an area of 1500m length and 500m width in the month of April. The observed spats were approximately 3 months old. Measurements of Length and weight were taken for a minimum of 30 samples from each sampling Total spat biomass of *V. cyprinoides* in the survey area was estimated both in terms of numbers and weight. Total spat biomass was

estimated as 109440000 numbers/ha and 1969.92 kg/ha in weight. It is estimated that it will produce 1642 MT/ha, if the spat is not indiscriminately exploited. The same area was surveyed again in November 2018 to study the growth rate of the spat of black clam. Growth rate of the spat was calculated as 0.017 mm/day. In Vaikom area of Vembanad Lake, surveys were conducted in a stretch of 200 m length and 50 m width covering the lat-long 9° 43' 559" N, 76° 22' 980" E to 9° 44' 628" N, 76° 23' 402" E. Total spat biomass was estimated as 26920000 numbers/ha and 7066.5 kg/ha in weight. Physical and chemical characteristics of water and sediment were analysed for both areas. The values of oxygen concentration, chlorophyll concentration, Total suspended solids of water and sand percentage (>75%) in the sediment were in the ideal range in both areas.