

Seasonal Changes in Dry Weight of the Soft Tissues of Clam *Meretrix casta* in Rekawa Lagoon, Sri Lanka

U.S.P.K. Liyanage¹ and W.M.T.B. Wanninayake²

¹Inland Aquatic Resources Division, National Aquatic Resources Research and Development Agency (NARA), Colombo-15, Sri Lanka

²Department of Aquaculture and Fisheries, Wayamba University of Sri Lanka,

Abstract

Seasonal changes in total soft tissue weight of the veneridae bivalve, *Meretrix casta* from a bed in Rekawa Lagoon, Southern part of Sri Lanka were studied. Analysis was made of total dry tissue weight (gonads, abductor muscle, mantle and gills and digestive gland) from sexually mature animals throughout the year during the study period. Monthly samples of bivalves (50 numbers in sample, shell length 11 to 12 mm) were collected for a period of twelve months and were separated into total soft tissues and shells. Soft tissues were dried for 24 hours at 80 °C and cooled and constant weights were measured.

The peak of total tissue dry weight was observed in January and April (0.12g) and a moderate gain (0.10g) was observed in July to August. The small growth again observed in October and November (0.08g). These peaks are mainly due to weight increase in gonadal tissues of both males and females coincide with the period where sufficient food (phytoplankton and detritus) materials and optimum environmental condition are available. The lowest total tissue weight was observed in May to June (0.05g). Also a minor reduction of tissue weight was recorded in September and December (0.065g). These results indicate that spawning occurs during three times per annum with a major spawning period in April to May. Results of the study show that major harvesting of *M. casta* could be carried out in January to April and minor harvesting could be carried out in July and November. Best season for collection of spat is May- June followed by September and December.