Growth, mortality and yield-per-recruit of sergestid shrimp, Acetes intermedius omori, 1975 (Decapoda: Sergestidae) from length frequency analysis in the coastal waters of Malacca, Peninsular Malaysia

ABSTRACT

Estimates of growth, mortality and relative yield per recruit of the sergestid shrimp, A. intermedius in the coastal waters of Malacca, Peninsular Malaysia were obtained from the monthly length-frequency data. The vonBertalanffy growth function (VBGF) estimates were: L!= 34.65 mm total length; K = 1.5 yr-1 and t 0= -0.1004 years. Natural mortality rate (M) was 1.5 yr -1. Total mortality coefficient (Z) was estimated as 4.15 yr-1 and theexploitation ratio (E = F/Z) was 0.43. The recruitment pattern was continuous throughout the year with onemajor peak. The relative yield per recruit analysis predicted the maximum allowable limit of exploitation (E max)= 0.65. The current exploitation rate E is less than the predicted E max. Thus, the stock of A. intermedius was foundto be below optimum fishing pressure (E < 0.50) in the coastal waters of Malacca, Peninsular Malaysia.

Keyword: Growth; Mortality; Recruitment; Acetes intermedius; Malaysia