Age, growth and length-weight relationships of Pinna bicolor Gmelin (Bivalvia: Pinnidae) in the Seagrass Beds of Sungai Pulai Estuary, Johor, Peninsular Malaysia.

ABSTRACT

Age and growth of Pinna bicolor were examined in the seagrass beds of Merambong shoal (N 1°19′55.62″; E 103°35′57.75″) off the south-western coast of Johor, Peninsular Malaysia between May 2006 and April 2007. Monthly growth increment data of P. bicolor were analyzed using FiSAT software (FAO-ICLARM Stock Assessment Tools) to estimate the asymptotic length (L∞) and growth coefficient (K). Average growth rate of P. bicolor was 1.42 (±0.01) cm per month; the estimated asymptotic length (L∞) and growth coefficient (K) were 34.66 cm and 0.88 per year, respectively. In their natural habitat, P. bicolor attain shell heights of approximately 17, 25 and 30 cm at the end of their first, second and third years of growth. The length–weight relationship was estimated as Log W = −5.397 + 3.111Log L, and in exponential form the equation was W = 0.000004L3.111 (r2 = 0.99, P < 0.01). Habitat temperature and salinity ranged between 27.47 and 29.66°C and 28.66–33.00 ppt with a mean of 29.10 (±0.66) m°C and 30.52 (±1.41) ppt, respectively.

Keyword: Age and growth; Pinna bicolor; Peninsular Malaysia.