Growth characteristics of slender silver-biddies Gerres oblongus (Pisces: Perciformes) from the Jaffna lagoon, Srilanka

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Abstract

The present study was carried out to understand the growth parameters of the slender silver biddy Gerres oblongus. Growth parameters of G. oblongus such as asymptotic length (LJ, growth coefficient (K) and age at zero length ('t_0') were estimated through the appropriate routines of the FiSAT II software from the length frequency data. The optimized values for K and L_m obtained by the ELEFAN I routine was 1.0 year $^{-1}$ and 29.4 cm. The estimated 't_0' value was -0.151. The Powell-Wether all plot gave a Z/K value of 3.851. The estimated growth performance index (0) was 2.93. The von Bertalanffy's growth equation for G. oblongus can be expressed as L_t = 29.4 [1-exp {-1.0 (t+0.159)}]. Estimated longevity for G. oblongus calculated from Pauly's equation was 2.84. The growth parameters obtained in the present study are useful fundamental indicators for the population dynamics studies of the G. oblongus.

Author keywords

Asymptotic length; Gerres oblongus; Growth coefficient; Population dynamics; Von bertalanffy's growth equation

Indexed keywords

GEOBASE Subject Index: body size; fish; growth modeling; growth rate; optimization; parameterization; population dynamics; von Bertalanffy equation

Regional Index: Jaffna Peninsula; Northern Province [Sri Lanka]; Sri Lanka

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