

Author: Keyword:

Search

ADVANCED

Add to
Favorite
Articles / Citation
AlertsAdd to
Favorite
PublicationsRegister
AlertsMy J-STAGE
HELP[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1881-4212

PRINT ISSN : 0915-499X

Bulletin of the Institute of Tropical Agriculture, Kyushu University

Vol. 30 (2007) , No. 1 pp.39-45

[\[PDF \(356K\)\]](#) [\[References\]](#)

Growth, mortality, recruitment patterns and the length-weight relationships of big eye shad (*Ilisha filigera*) captured by set bag nets in the upper bay of bengal off the Bangladesh coast

H. Rashid¹⁾²⁾, M. G. Mustafa³⁾, Z. P. Sukhan⁴⁾, S. Dewan¹⁾ and M. Matsuyama²⁾

1) Department of Fisheries Management, Bangladesh Agricultural University

2) Laboratory of Marine Biology, Faculty of Agriculture, Kyushu University

3) The WorldFish Center

4) Fish Breeding and Training Center, Department of Fisheries, Govt. of Bangladesh

Abstract: Growth and mortality parameters, exploitation rates, annual recruitment patterns and length-weight relationships were estimated from monthly length-frequency and weight samples of *Ilisha filigera*, captured mainly by set bag nets (SBNs), from the upper Bay of Bengal off the Bangladesh coast using the FiSAT program. The objective of this study is to estimate growth parameters, mortality rates, and the exploitation rate and recruitment pattern of *I. filigera* for sustainable management. The von Bertalanffy growth parameters, asymptotic length L_8 (cm) and growth constant K (per year), were found to be 48.90 and 0.80, respectively. The L_8 and Z/K estimates provided by the Wetherall plot were 48.487 cm and 2.517. The annual rate of fishing mortality ($F = 0.91$) was low compared to the relatively high natural mortality ($M = 1.35$). The value of the exploitation rate ($E = 0.40$) suggested that the species was not over-exploited by SBNs operation in the region. About 53.33% of *I. filigera* were found to be recruited during the August-October period, and 46.67% during the March-May period. The growth performance index (ϕ') was 3.28. The total length and body weight relationship was found to be $W = 0.0318 L^{2.5803}$ suggesting that the growth rate displayed a negative allometric pattern ($b < 3$). The growth parameters derived in the current study were found to be comparable with previous estimates available for the same species from the Bay of Bengal and from other localities.

Keywords: Growth, Mortality, Recruitment, *Ilisha filigera*, FiSAT, Bay of Bengal

[\[PDF \(356K\)\]](#) [\[References\]](#)

To cite this article:

H. Rashid, M. G. Mustafa, Z. P. Sukhan, S. Dewan and M. Matsuyama 2007 Growth, mortality, recruitment patterns and the length-weight relationships of big eye shad (*Ilisha filigera*) captured by set bag nets in the upper bay of bengal off the Bangladesh coast . *Bull. Inst. Trop. Agr., Kyushu Univ.* **30**: 39-45 .

JOI JST.JSTAGE/bit/30.39

Copyright (c) 2008 Institute of Tropical Agriculture, Kyushu University



[Japan Science and Technology Information Aggregator, Electronic](#)

