GROWTH, MORTALITY, RECRUITMENT AND OTHER FISHERY PARAMETERS OF THE NAILON SHELL *PAPHIA TEXTILE* (GMELIN 1791) IN LEYTE

Senona Cesar[1], Bernardita Germano[2], Jenny Lynn Melgo[3] and Julissah Evangelio[4]

[1,2,4] Marine Laboratory-Institute of Tropical Ecology, Leyte State University
Baybay, Leyte, Philippines, 6521-A
E-mail: mubiana@yahoo.com

[3] Ecological Marine Management, Vrije Universitiet Brussel
Pleinlaan 2, 1050, Brussel, Belgium

Paphia textile (Gmelin 1791) locally known as 'barinday' is valued for its meat and shell with local and export markets. In the region alone, its meat is valued $60,465,600 – $398,640,000 annually. The fishery is a major source of livelihood around Biliran Strait, Philippines as well as in other regions in South East Asia. This study determines the growth, maturity, recruitment, spawning months, size at first capture and yield per recruit as well as to assess the effects of exploitation rates on the dynamics of the various populations, and to provide indicators for efficient sustainable exploitation. Fishery parameters were estimated from at least 300 specimens within one year fishery monitoring of *P. textile* fishers in Barangay Kawayan and Tinukdugan, Leyte, Leyte. The FISAT II (FAO-ICLARM Stock Assessment Tool version 1.1.0) software (Gayanilo *et al.*, 2002) was used to analyze the length frequency data. To facilitate better data analyses, the length frequency data were further separated into subsets based on modal length progression (Germano *et al.*, submitted). Results of length-frequency analysis were further validated through scatterplots of daily effort against catch per unit effort CPUE (E/CPUE) fitted with a second-order polynomial. The apparent maximum sustainable effort (MSE) and maximum sustainable CPUE (MSCPUE) were determined from the resulting trendlines (Germano *et al.*, submitted). The use of values from the subset analyses appeared robust as supported by the higher number of cohorts as seen from the daily catch; higher goodness fitted index (Rn) values; and results of gonadal analyses. Total mortality (Z), natural mortality (M), fishing mortality (F) and exploitation rate (E) were higher in Kawayan. Results showed recruitment overfishing for both sites and unsustainably high effort for Kawayan. Implications of the study and specific recommendations for the management of the fishery are discussed.

References

Gayanilo F.C. and D. Pauly. 1997. FAO-ICLARM stock assessment tools: Reference manual. FAO Comp. Info. Ser. No. 8. Rome, FAO. x+262p

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