TEMPORAL VARIATION OF FISH LARVAE AT MAHESHKHALI PARA, COX'S BAZAR, BANGLADESH

Roll No.: 0120/06

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A thesis submitted in the partial fulfillment of the requirements for the degree of Master of Science in Fisheries Resource Management

Department of Fisheries Resource Management

Faculty of Fisheries

Chattogram Veterinary and Animal Sciences University

Chattogram-4225, Bangladesh

August 2022

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The Author

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This is to certify that we have examined the above Master's thesis and have found that is complete and satisfactory in all respects, and that all revisions required by the thesis examination committee have been made

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The Author

CONTENTS

LIST OF ABBREVIATIONS

Acronym	Definition
M	Meter
µm	Micro meter
Mm	Millimeter
m^3	Cubic meter
Jan	January
Feb	February
Mar	March
Apr	April
May	May
Jun	June
Jul	July
Aug	August
Sep	September
Oct	October
Nov	November
Dec	December
S	Summer
W	Winter
M	Monsoon
SD	Standard deviation

LIST OF FIGURES

ABSTRACT

The temporal abundance and composition of fish larval families and their spawning season in the Maheshkhali para of Cox's Bazar coast were studied from March 2020 to February 2021 on monthly basis. Sampling was performed by a bongo net with two mouth openings. In total 1223 individuals, representing 14 larval families, with a mean abundance of 101.92 individuals per 1000m^3, were collected and identified under stereo microscope during sampling period. Larvae that were found in this area were: Clupeidae, Engraulidae, Terapontidae, Gobiidae, Tetradontidae, Scombridae, Sparidae, Siganidae, Pomacentridae, Mugilidae, Hemiramphidae, Serranidae, Ambassidae, Carangidae. Among them, Clupeidae, Engraulidae and Gobiidae contributed 52.82%, 19.22%, and 12.59% of the total catch. The month of July was found as the most diversified month, which had 356 individuals/ 1000m^3. In contrast, March had the highest number of larvae families (07). Based on the constancy of occurrence, Clupeidae was termed as "constant" as their larvae were found in six months of that year. The highest value of the Shannon-Wiener index was 1.91, observed in March. Both Margalef's and Pieulo's index were the highest in March, with 2.60 and 0.98 respectively. This study will establish the groundwork for sustainable fisheries resource management strategies in the Cox's Bazar region.

Keywords: Fish larvae, Maheshkhali para, abundance, diversity indices, spawning season.