

**MORPHOLOGICAL AND GONADAL CHARACTERIZATION OF MUDFISH
(*Channa striata*) COLLECTED IN CABIAO AND PANTABANGAN,
NUEVA ECIJA, PHILIPPINES**

BY

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An undergraduate thesis submitted to the faculty of College of Fisheries in partial fulfillment of the requirements for the degree of

BACHELOR OF SCIENCE IN FISHERIES

**COLLEGE OF FISHERIES
CENTRAL LUZON STATE UNIVERSITY
SCIENCE CITY OF MUÑOZ, NUEVA ECIJA
PHILIPPINES**

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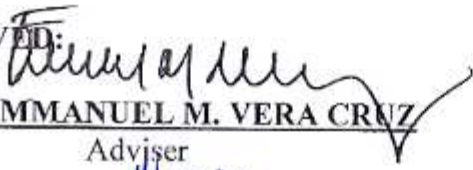
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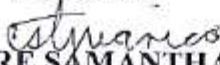
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ABSTRACT

Morphological and reproductive characteristics of *Channa striata* collected from selected municipalities in Nueva Ecija, specifically in Cabiao and Pantabangan, were examined and studied to generate baseline data on the reproductive capacity and spawning of season of said stocks. Collection and examination of fish samples was conducted from February to April, 2017. Morphometric and meristic data were computed and recorded to observe variations in between sexes and species among samples collected at different specific municipalities in Nueva Ecija. Results showed that the sex ratio of the 102 samples examined was dominated by female in Cabiao (1:1.43) and in Pantabangan (1:1.32) using the male:female sex ratio. Gonadal characterization that includes testicular and ovarian indices showed that the highest testicular index (%) and GSI(%) observed was on the month of April for Cabiao and March for Pantabangan. Ovarian index (%) on the other hand was observed to be highest at 1.09% for the month of April for both municipalities thus spawning season commenced on this particular month.

Statistical analysis on the relationship in between variables (body weight vs. standard length, body weight vs. GSI and gonad length vs. gonad weight) were interpreted using correlation analyses at $p \leq 0.01$ (2-tailed) level of significance. Data on body weight vs. standard length and gonad length vs. gonad weight showed a linear relationship thus indicates that an increase of specific variable is also an increase of the other variable. On the other hand, data on body weight vs. GSI analyzed showed an inversely relationship in between variables which showed that as the body weight (g) increases, the GSI (%) of the fish did not necessarily increases and vice versa.

Morphological characters including morphometrics and meristics analysis were generally related to growth. Morphological examination of gonads (testes and ovary) was also related to GSI (%). The increase in testicular and ovarian indices also showed an increase in GSI (%) thus indicating sexual maturation and spawning. Results generated in the current study will contribute to preliminary understanding of gonadal maturity stages and developmental cycle of *C. striata* needed in captive maturation and breeding.

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