



**PHYLOGENETIC ANALYSIS AND BARCODING OF GOBIES IN
MARAGONDON RIVER, CAVITE**

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TABLE OF CONTENTS

Title Page	1
Acknowledgement	2
Approval Sheet	4
Table of Contents	5
Abstract	7
CHAPTER 1 INTRODUCTION	
1.1 Background of the Study	8
1.2 Theoretical Framework	10
1.3 Statement of the Problem	10
1.4 Scope and Limitations	10
1.5 Significance of the Study	11
1.6 Definition of Terms	12
CHAPTER 2 LITERATURE REVIEW	
2.1 Conceptual Literature	13
2.2 Related Studies	18
CHAPTER 3 METHODOLOGY	
3.1 Research Design	22
3.2 Research Setting	22
3.3 Research Procedure	22
3.4 Data Gathering	25



CHAPTER 4 RESULTS AND DISCUSSION

4.1 Results 26

4.2 Discussions 30

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions 35

5.2 Recommendations 36

Cited References 37

Appendices

A Map of Maragondon River 44

B Morphometric Measurements of 3 Gobies
In Maragondon River, Cavite 45

C Master Mix Computation 46

D Electrophoreses 47

E Photodocumentation 49

F Curriculum Vitae 52



ABSTRACT

Gobies are small fishes chiefly recognized as the fastest growing family of freshwater fishes despite being already the largest of freshwater fishes. However, no record has been published yet for Maragondon river in Cavite, Philippines. DNA extracts from muscle tissues of three goby phenotypes were amplified using primers specific for Cytochrome Oxidase I (COI) gene; and the sequences viewed and analysed to determine identity and phylogeny of the gobies. Software processing and analyses of the sequences using BLASTN and MEGA 5.05 revealed that COI comprises 655 bp.; and are putatively indentified as follows: A1-*Amblygobius sphynx*; B2-*Glossogobius sp.*; and D4 forming a clade with genus *Oxyurichthys ophthalmonema*. Estimates of evolutionary divergence and Minimum Evolution with high bootstrap values suggest that Family Gobiidae is monophyletic. However, subfamily Gobiinae where A1 and B2 belong; and subfamily Gobionellinae where D4 nested are polyphyletic.
