OCCURRENCE OF CORAL BLEACHING IN THE COASTAL AREA OF BGY. STA. ANA IN CALATAGAN, BATANGAS

An Undergraduate Research Presented to the
Faculty of the Biological Sciences Department
College of Science
De La Salle University - Dasmariñas
Dasmariñas, Cavite

In Partial Fulfillment of the Requirements
for the Degree of Bachelor of Science Major in Human Biology
And Environmental Science

Eric Justine M. Dioquino Jeremiah P. Octaviano

March 2011

ABSTRACT

Coral bleaching was investigated in the coral reefs of Sta. Ana Calatagan in Batangas and have been set the date during summer. There are three points in Calatagan bay where every point has 100 meter away from the seashore. When gathering data, there are three physical parameter to used such us temperature, salinity and pH. The method that used in this study to count the coral is the lines intercept method. Photo documentation is also need to this study in order to see the corals who intercept the line by using the field tape measure.

A total of 83 coral specimens falling under six families were counted, which translates to a live coral cover of 2.69%. Bleached live coral cover was calculated to be at 2.69%. Average values for temperature were found to be slightly above the upper limit of 30°C, while average salinity values fall slightly below the ideal range of 32% to 40%. These measurements indicate elevated temperatures and reduced salinity respectively, and we concluded to account for the occurrence of bleaching in the study site.

TABLE OF CONTENTS

Title Page	1
Approval Sheet	2
Acknowledgments	3
Abstract	4
Table of Content	5
List of Tables	7
List of Figures	8
CHAPTER 1 INTRODUCTION	
1.1 Background of the Study	09
1.2 Conceptual (or Theoretical) Framework	11
1.3 Statement of the Problem	11
1.4 Scope and Limitations	12
1.5 Significance of the Study	12
1.6 Definition of Terms	13
CHAPTER 2 LITERATURE REVIEW	
2.1 Conceptual Literature	15
2.2 Related Studies	22

CHAPTER 3 METHODOLOGY		
3.1 Research Design	24	
3.2 Research Setting (or Instruments) (if applicable)	24	
3.3 Research Procedure	25	
3.4 Physical Parameter	26	
3.5 Calculation formula	27	
CHAPTER 4 RESULTS AND DISCUSSION		
4.1 Results	28	
4.2 Discussion	37	
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS		
5.1 Conclusions	39	
5.2 Recommendations	40	
Cited References	41	
Appendices		
A. Map of Study Site	42	
B. Standard Procedure	43	
C. Raw Data	44	
Curriculum Vitae	46	

LIST OF TABLES

4.1	Summary of coral value	28
4.2	Average value for temperature, pH, and salinity	30
4.3	Summary of bleached coral	36
4.4	Intercept length of coral families	44
4.5	Total coral cover and relative cover	44
4.6	Bleached coral cover and relative cover	45
4.7	Reference Coral	45

LIST OF FIGURES

4.1 Family Portidae	31
4.2 Family Musidae	32
4.3 Family Favidae	33
4.4 Family Acroporidae	34
4.5 Family Milleporidae	35
4.6 Site Map	42