

PRELIMINARY SCREENING OF THE EFFECTS OF *Impatiens caviteana* (ARAW-ARAW) FLOWER AND LEAF EXTRACTS ON *Artemia salina* (BRINE SHRIMP)

An Undergraduate Research
Presented to
The Biological Sciences Department
College of Sciences
De La Salle University-Dasmariñas

The seal of De La Salle University-Dasmariñas is a circular emblem with a scalloped border. It features a central red triangle with a white cross inside. Below the triangle is an open book with a flower on its cover, flanked by green leaves. The text "AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER" is written in a circle around the top, and "De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines" is written around the bottom.

In Partial Fulfilment
of the Requirements for the Degree
Bachelor of Science in Biology

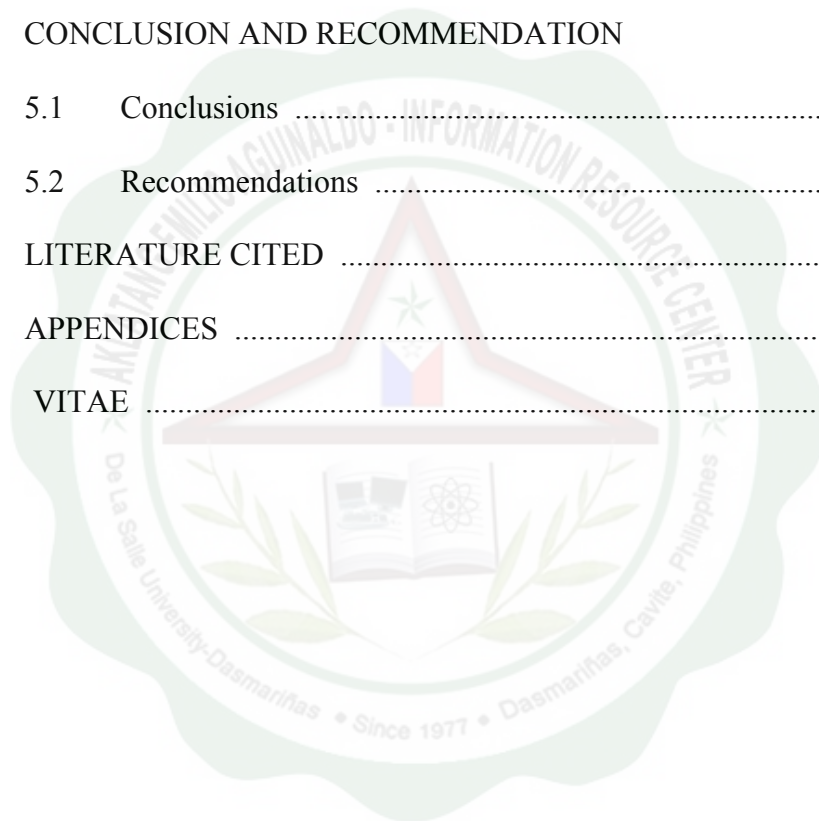
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TABLE OF CONTENTS

	Page
Title Page	i
Approval Sheet	ii
Table of Contents	iii
List of Tables	v
List of Figures	viii
List of Appendices	ix
Abstract	x
1.0 INTRODUCTION	
1.1 Background of the Study	1
1.2 Conceptual Framework	3
1.3 Statement of the Problem	5
1.4 Scope and Delimitation	5
1.5 Significance of the Study	6
1.6 Definition of Terms	6
2.0 REVIEW OF RELATED LITERATURE	9
3.0 METHODOLOGY	
3.1 Research Design	23
3.2 Research Setting	23

3.3	Research Procedure	24
3.4	Data Gathering and Statistical Treatment	28
4.0	RESULTS AND DISCUSSION	
4.1	Results	29
4.2	Discussion	35
5.0	CONCLUSION AND RECOMMENDATION	
5.1	Conclusions	39
5.2	Recommendations	42
6.0	LITERATURE CITED	44
7.0	APPENDICES	50
8.0	VITAE	70



LIST OF TABLES

		Page
Table 4.1	Percentage Mortality of Brine Shrimp in Different Concentrations of <i>Impatiens caviteana</i> Flower Extract	29
Table 4.2	Percentage Mortality of Brine Shrimp in Different Concentrations of <i>Impatiens caviteana</i> Leaf Extract	31
Table 4.3	Morphological Effects of the Different Concentrations of <i>Impatiens caviteana</i> Flower Extract on Brine Shrimp	33
Table 4.4	Morphological Effects of the Different Concentrations of <i>Impatiens caviteana</i> Leaf Extract on Brine Shrimp	34
Table 7.1	Flower Extract (Raw Data)	57
Table 7.2	Statistics for Flower Extract	57
Table 7.3	Leaf Extract (Raw Data)	58
Table 7.4	Statistics for Leaf Extract	58
Table 7.5	Time Table for Research	68
Table 7.6	Budget	69

LIST OF FIGURES

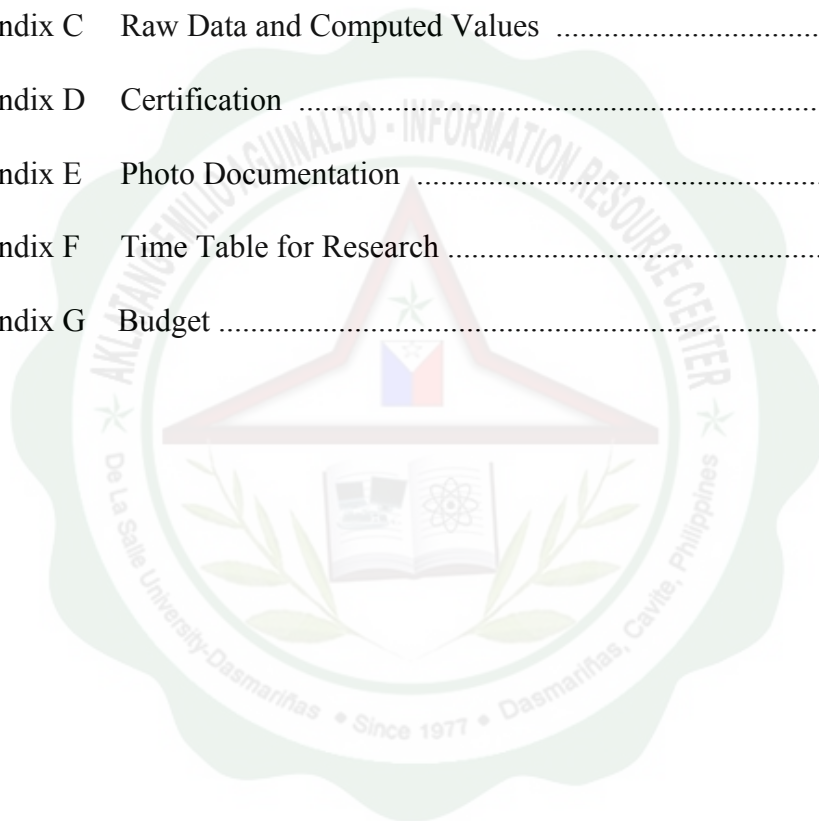
		Page
Figure 4.1	Dosage Concentration (ppm) of the Flower Extract against Percentage Mortality	30
Figure 4.2	Dosage Concentration (ppm) of the Leaf Extract against Percentage Mortality	31
Figure 7.1	Flower of <i>Impatiens caviteana</i> Araw-Araw plant	60
Figure 7.2	Leaves of <i>Impatiens caviteana</i> Araw-Araw plant	60
Figure 7.3	The site of <i>Impatiens caviteana</i> in Mts. Palay-Palay	61
Figure 7.4a	Collection of the plant samples	61
Figure 7.4b	Collection of the plant samples	62
Figure 7.5	Preparation of ASW	62
Figure 7.6	Checking of the pH of ASW	62
Figure 7.7	Drying of samples in a 100-watt bulb	63
Figure 7.8	Powdered sample	63
Figure 7.9	Preparation of plant extract	63
Figure 7.10	Flower extract	63
Figure 7.11	Brine Shrimp hatcheries with aerator and hydrometer	64
Figure 7.12	Brine Shrimps in a dropper	64
Figure 7.13	Tubes with the extract and Brine Shrimps	65
Figure 7.14	Administration of extracts	65
Figure 7.15	Viewing of Brine Shrimps using a dissecting microscope	65

Figure 7.16	Counting Brine Shrimps using forceps	65
Figure 7.17	Brine Shrimp cysts	66
Figure 7.18	Brine Shrimp nauplius anatomy.....	66
Figure 7.19	Dead nauplius with distorted antenna	67
Figure 7.20	Dead nauplii with observable color change	67



LIST OF APPENDICES

	Page
Appendix A Brine Shrimp Toxicity Test	50
Appendix B DENR Permit	55
Appendix C Raw Data and Computed Values	57
Appendix D Certification	59
Appendix E Photo Documentation	60
Appendix F Time Table for Research	68
Appendix G Budget	69



ABSTRACT

This study presented substantial observation and analysis regarding *Artemia salina*, Brine Shrimp, mortality when *Impatiens caviteana* leaf and flower extracts were applied in an invertebrate bioassay. It aimed to know the percentage mortality of *Artemia salina*, Brine Shrimp, exposed to different concentrations of *Impatiens caviteana* flower and leaf extracts, the probable causes of the mortality of *Artemia salina*, Brine Shrimp, and the effects of different concentrations of *Impatiens caviteana* flower and leaf extracts on the gross morphology of *Artemia salina* Brine Shrimp. Oxygen deprivation as a physical factor and the phytochemical contents as a chemical factor were regarded as the prime causative agent of Brine Shrimp mortality and changes in the gross morphology. The mortality was analyzed through percentage and computation of the mean number of mortality. Despite the absence of the physical and observable effects on the Brine Shrimps, the properties of the phytochemicals-Phenolics, Flavonoid and Alkaloid in altering the Brine Shrimp system could not be disregarded. Physical factors, most importantly the oxygen deprivation during the 24 hour bioassay, was considered since it was an observed factor for Brine Shrimp hatching but absent in the bioassay. Observable effect was the color change of some of the Brine Shrimps to orange for oxygen deprivation and some to yellow due possibly to Tannin. The loss or absence of appendage was mainly attributed to the carnivorous nature of the Brine Shrimp.

