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DENCE, ABUNDANCE AND NATURAL ENEMIES OF THE
CONUT LEAF BEETLE (*Brontispa longissima*) IN CAVITE

THESIS

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**INCIDENCE, ABUNDANCE AND NATURAL ENEMIES OF THE COCONUT
LEAF BEETLE (*Brontispa longissima*) IN CAVITE**

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ABSTRACT

MENDOZA, MA. JERLYN MENDOZA. “Incidence, Abundance And Natural Enemies Of The Coconut Leaf Beetle (*Brontispa longissima*) In Cavite”. Undergraduate Thesis. Bachelor of Science in Biology, Cavite State University, Indang, Cavite. April 2007. Adviser: Dr. Josefina R. Rint.

The study was conducted to assess the incidence, abundance and natural enemies of coconut leaf beetle (*Brontispa longissima*). Specifically, it aimed to: describe the external features of coconut leaf beetle; assess the seasonal abundance of coconut leaf beetle; document the damages caused by coconut leaf beetle; identify the natural enemies associated with coconut leaf beetle; correlate the population between coconut leaf beetle and natural enemies; and compare the level of abundance of coconut leaf beetle among the three towns of Cavite.

A descriptive survey method was used to fully describe the damage of coconut leaf beetle which was conducted at Dasmariñas, Silang and Indang, Cavite. The number of trees selected was based on abundance of the damaged plants.

Four young open and unopened leaves were observed on ten trees which were three to five-years old.

Data gathering and monitoring of pest and pest damages were done for a period of 12 months to establish the seasonal abundance and extent of damage inflicted by the coconut leaf beetle.

The organisms associated with coconut beetle were: earwig, weaver ants, spider and lizard.

The external feature of coconut leaf beetle was described, and the damages inflicted by the coconut leaf beetle on coconut were characterized. Population of coconut leaf beetle increased to its peak from February to July and declined during August to January.

The adults and larvae population of coconut leaf beetle were affected by relative humidity in Dasmariñas. Air temperature was the critical factor on the adult population fluctuation in Silang, while the larval population was significantly affected by rainfall in Indang. Pest population was inhibited by natural enemies which was more prominent in Dasmariñas and Indang. Indang gave the highest population count of weaver ants but the presence of the earwig as predator of coconut leaf beetle was also evident most of time during observation periods.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL SKETCH.....	iii
ACKNOWLEDGMENT.....	vi
ABSTRACT.....	vii
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
LIST OF APPENDIX FIGURES.....	xiv
LIST OF APPENDIX TABLES.....	xv
INTRODUCTION.....	1
Statement of the Problem.....	2
Objectives of the Study.....	3
Importance of the Study.....	3
Scope and the Limitation of the Study.....	4
Time and Place of the Study.....	4
REVIEW OF RELATED LITERATURE.....	5
Biology of <i>Brontispa longissima</i>	5
Geographical Description.....	7
Natural Enemies of <i>Brontispa longissima</i>	7
Damage symptoms.....	8
Control Strategies.....	9

METHODOLOGY.....	10
Research Design.....	10
Materials.....	10
Survey Site.....	10
Sampling and Sampling Techniques.....	10
Data collection.....	11
Statistical Analysis.....	12
RESULT AND DISCUSSION.....	13
External Features of <i>Brontispa longissima</i>	13
Seasonal abundance.....	15
Damaged caused by the Coconut leaf beetle on Young Fronds of Coconut.....	20
Natural Enemies associated with <i>Brontispa longissima</i>	24
Effect of Environmental Condition on Coconut Leaf Beetle Population.....	29
Relationship between Coconut Leaf Beetle Population and Natural Enemies.....	34
Damage Assessment.....	36
SUMMARY, CONCLUSION AND RECOMMENDATION.....	38
Summary.....	38
Conclusion.....	39
Recommendation.....	40
BIBLIOGRAPHY.....	41
APPENDICES.....	42

LIST OF TABLES

Table	Title	Page
1	Means monthly counts of <i>Brontispa longissima</i> per ten coconut trees.....	17
2	Correlation of <i>Brontispa longissima</i> and environmental conditions in Dasmariñas.....	31
3	Correlation of <i>Brontispa longissima</i> and environmental conditions in Silang.....	32
4	Correlation of <i>Brontispa longissima</i> and environmental conditions in Indang.....	33
5	Correlation between coconut leaf beetle in Dasmariñas and their natural enemies.....	34
6	Correlation between coconut leaf beetle in Silang and their natural enemies.....	35
7	Correlation between coconut leaf beetle in Indang and their natural enemies.....	36
8	The percent of damage caused by <i>Brontispa longissima</i> in four Barangay of Cavite (Tambo and Mataas na Lupa, Indang Cavite and Salaban and Loma, Amadeo, Cavite).....	37

LIST OF FIGURES

Figure	Title	Page
1	Adult Coconut leaf beetle (<i>Brontisपालongissima</i>).....	13
2	Pupal stage of coconut leaf beetle (<i>Brontisपालongissima</i>).....	13
3	Larval stage of coconut leaf beetle.....	14
4	Egg stage of coconut leaf beetle.....	14
5	Year round monthly counts of adult <i>Brontisपालongissima</i> on fronds of ten trees in three towns of Cavite.....	15
6	Year round monthly counts of <i>Brontisपालongissima</i> pupae on fronds of ten trees in three towns of Cavite.....	18
7	Year round mean monthly counts of <i>Brontisपालongissima</i> larvae on fronds of ten trees in three towns of Cavite.....	19
8	Year round mean monthly counts of <i>Brontisपालongissima</i> egg beetles on fronds of ten trees in three towns of Cavite.....	20
9	Adult and larvae on a young unopened leaf.....	21
10	The four larvae of <i>Brontisपालongissima</i> in the opened leaf of the coconut tree and the damage they cause.....	22
11	Scars and beetle fecal material observed on the opened young fronds.....	22
12	Irregular, brown blotches in the newly opened fronds.....	23
13	Brown areas shrivel and curl, giving the leaf a characteristics scorched, ragged appearance.....	23
14	Total monthly counts of organisms associated with <i>Brontisपालongissima</i> in Dasmariñas, Cavite.....	25
15	Black weaver ant on the branch of the coconut.....	25
16	Monthly total counts of organisms associated with <i>Brontisपालongissima</i> in Silang.....	26

17	Group of Black ants carrying their eggs. Often seen either on opened and unopened young fronds.....	27
18	Earwig on opened young fronds.....	27
19	Lizard scouting for a prey.....	28
20	Monthly total counts of organisms associated with <i>Brontispa longissima</i> in Indang.....	29

LIST OF APPENDICES FIGURES

Appendix Figure	Title	Page
1	Coconut plantation in Dasmariñas.....	44
2	Coconut plantation in Silang.....	45
3	Coconut plantation in Indang.....	46

LIST OF APPENDICES TABLES

Appendix Table	Title	Page
1	Analysis of variance of adult coconut leaf beetle.....	47
2	Analysis of variance of pupae coconut leaf beetle.....	47
3	Analysis of variance of larvae coconut leaf beetle.....	48
4	Analysis of variance of egg coconut leaf beetle.....	48
5	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and minimum temperature.....	49
6	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and maximum temperature.....	49
7	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and air temperature (dry bulb).....	49
8	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and air temperature (wet bulb).....	50
9	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and rainfall.....	50
10	Correlation of adult <i>Brontispa longissima</i> in Dasmaríñas, Cavite and relative humidity.....	50
11	Correlation of pupae <i>Brontispa longissima</i> in Dasmaríñas, Cavite and minimum temperature.....	51
12	Correlation of pupae <i>Brontispa longissima</i> in Dasmaríñas, Cavite and maximum temperature.....	51
13	Correlation of pupae <i>Brontispa longissima</i> in Dasmaríñas, Cavite and air temperature (dry bulb).....	51
14	Correlation of pupae <i>Brontispa longissima</i> in Dasmaríñas, Cavite and air temperature (wet bulb).....	52

15	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and rainfall.....	52
16	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and relative humidity.....	52
17	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and minimum temperature.....	53
18	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and maximum temperature.....	53
19	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and air temperature (dry bulb).....	53
20	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and air temperature (wet bulb).....	54
21	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and rainfall.....	54
22	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and relative humidity.....	54
23	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and minimum temperature.....	54
24	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and maximum temperature.....	55
25	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and air temperature (dry bulb).....	55
26	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and air temperature (wet bulb).....	55
27	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and rainfall.....	55
28	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and relative humidity.....	56
29	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and minimum temperature.....	56
30	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and maximum temperature.....	56

31	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and air temperature (dry bulb).....	56
32	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and air temperature (wet bulb).....	57
33	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and rainfall.....	57
34	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and relative humidity.....	57
35	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and minimum temperature.....	57
36	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and maximum temperature.....	58
37	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and air temperature (Dry bulb).....	58
38	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and air temperature.(wet bulb).....	58
39	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and rainfall.....	58
40	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and relative humidity.....	59
41	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and minimum temperature.....	59
42	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and maximum temperature.....	59
43	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and air temperature (dry bulb).....	59
44	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and air temperature (wet bulb).....	60

45	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and rainfall.....	60
46	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and relative humidity.....	60
47	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and minimum temperature.....	60
48	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and maximum temperature.....	61
49	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and air temperature (dry bulb).....	61
50	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and air temperature (wet bulb).....	61
51	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and rainfall.....	61
52	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and relative humidity.....	62
53	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and minimum temperature.....	62
54	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and maximum temperature.....	62
55	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and air temperature (dry bulb).....	63
56	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and air temperature (wet bulb).....	63
57	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and rainfall.....	63
58	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and relative humidity.....	64
59	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and minimum temperature.....	64

60	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and maximum temperature.....	64
61	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and air temperature (dry bulb).....	64
62	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and air temperature (wet bulb).....	65
63	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and Rainfall.....	65
64	Correlation of pupae <i>Brontispa longissima</i> in Indang, Cavite and relative humidity.....	65
65	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and minimum temperature.....	65
66	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and maximum temperature.....	66
67	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and air temperature (dry bulb).....	66
68	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and air temperature (wet bulb).....	66
69	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and rainfall.....	66
70	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and relative humidity.....	67
71	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and minimum temperature.....	67
72	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and maximum temperature.....	67
73	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and air temperature (dry bulb).....	67
74	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and air temperature (wet bulb).....	68

75	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and rainfall.....	68
76	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and relative humidity.....	68
77	Correlation of adult <i>Brontispa longissima</i> in Dasmariñas, Cavite and earwig.....	68
78	Correlation of adult <i>Brontispa longissima</i> in Dasmariñas, Cavite and spider.....	69
79	Correlation of adult <i>Brontispa longissima</i> in Dasmariñas, Cavite and ants.....	69
80	Correlation of adult <i>Brontispa longissima</i> in Dasmariñas, Cavite and lizard.....	69
81	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and earwig.....	69
82	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and spider.....	70
83	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and ants.....	70
84	Correlation of pupae <i>Brontispa longissima</i> in Dasmariñas, Cavite and lizard.....	70
85	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and earwig.....	70
86	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and spider.....	71
87	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and ants.....	71
88	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and lizard.....	71
89	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and earwig.....	71

90	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and spider.....	72
91	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and ants.....	72
92	Correlation of larvae <i>Brontispa longissima</i> in Dasmariñas, Cavite and lizard.....	72
93	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and earwig.....	72
94	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and spider.....	73
95	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and ants.....	73
96	Correlation of egg <i>Brontispa longissima</i> in Dasmariñas, Cavite and lizard.....	73
97	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and earwig.....	73
98	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and spider.....	74
99	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and ants.....	74
100	Correlation of adult <i>Brontispa longissima</i> in Silang, Cavite and lizard.....	74
101	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and earwig.....	74
102	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and spider.....	75
103	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and ants.....	75
104	Correlation of pupae <i>Brontispa longissima</i> in Silang, Cavite and lizard.....	75

105	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and earwig.....	75
106	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and spider.....	76
107	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and ants.....	76
108	Correlation of larvae <i>Brontispa longissima</i> in Silang, Cavite and lizard.....	76
109	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and earwig.....	76
110	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and spider.....	77
111	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and ants.....	77
112	Correlation of egg <i>Brontispa longissima</i> in Silang, Cavite and lizard.....	77
113	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and earwig.....	77
114	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and spider.....	78
115	Correlation of adult <i>Brontispa longissima</i> in Indang, Cavite and ants.....	78
116	Correlation of pupa <i>Brontispa longissima</i> in Indang, Cavite and earwig.....	78
117	Correlation of pupa <i>Brontispa longissima</i> in Indang, Cavite and spider.....	78
118	Correlation of pupa <i>Brontispa longissima</i> in Indang, Cavite and ants.....	79
119	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and earwig.....	79

120	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and spider.....	79
121	Correlation of larvae <i>Brontispa longissima</i> in Indang, Cavite and ants.....	79
122	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and earwig.....	80
123	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and spider.....	80
124	Correlation of egg <i>Brontispa longissima</i> in Indang, Cavite and ants.....	80

INCIDENCE, ABUNDANCE AND NATURAL ENEMIES OF THE COCONUT LEAF BEETLE (*Brontispa longissima*) IN CAVITE ^{1/}

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^{1/}An undergraduate thesis manuscript presented to the faculty of the Department of Biological Sciences, College of Arts and Sciences, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree Bachelor of Sciences in Biology with Contribution No. _____. Prepared under the supervision of Dr. Josefina Rint.

INTRODUCTION

Coconut (*Cocos nucifera*) plays a major role in the economy of Asian countries and the Pacific region directly by providing food and income from the coconut products and indirectly as an important component of the landscape where tourism plays a key role in the economy.

The coconut palm, having multifarious uses, is often described as a “Tree of life” and “Nature’s Super market” and an important crop in the tropics supporting the lives of millions of people. Global production of coconut is around 61.16 billion of nuts from an area of 12.06 million hectares. It is grown in over 93 countries and India ranks first in terms of productivity (Rethinam and Singh, 2004).

One of the many introduced pests in the country is the coconut hispine beetle/ coconut leaf beetle, *Brontispa longissima* (Gestro), and is now one of the potentially serious pest’s of coconut palm in Asia (Hosang et al, 2004).