

TABLE OF CONTENTS

	Page
Acknowledgment	i
บทคัดย่อ	iii
Abstract	v
List of Tables	ix
List of Illustrations	x
Chapter I. Introduction	1
Chapter II. Review of Literature	5
Chapter III. Sites Descriptions	23
Chapter IV. Materials and Methods	34
Chapter V. Results	44
Chapter VI. Discussion	74
Chapter VII. Conclusions	91
References	93
Appendix	105
Curriculum Vitae	122

LIST OF TABLES

Table Number		Page
1	Physico-Chemical Properties of Different Running Waters in Dry Season.....	46
2	Physico-Chemical Properties of Different Running Waters in Rainy Season.....	47
3	Number of Macroinvertebrates Families Found/Area in Different Running Waters.....	51
4	The Score of Habitat Assessment of Stream Sites based on the Habitat Parameters in the Dry and Rainy Season..	57
5	The Column Total Score of Habitat Assessment.....	57
6	Number of Families Found/Area at Stream Sites in the Dry and Rainy Season.....	67
7	Biological Condition (% Reference).....	71
8	Habitat Quality (% Reference).....	71

LIST OF ILLUSTRATIONS

Number		Page
1	The Stream Site S1.....	29
2	The Stream Site S2.....	29
3	The Stream Site S3.....	30
4	The Ping River Site P1.....	30
5	The Irrigation Canal Site IC1.....	31
6	The Irrigation Canal Site IC2.....	31
7	The Sewage Canal Site SC1.....	32
8	The Sewage Canal Site SC2.....	32
9	Map of Running Waters Study Sites in Chiang Mai City.....	33
10	The Similarity of Different Running Waters Based on Physico-Chemical Properties in the Dry Season.....	48

11	The Similarity of Different Running Waters Based on Number of Families Found/Area in Rainy Season.....	48
12	The Similarity of Families Found/Area Based on the Different Running Waters in the Dry Season.....	52
13	The Similarity of Different Running Waters Based on Number of Families Found/Area in Dry Season.....	53
14	The Similarity of All Families Found/Area Based on the Different Running Waters in Rainy Season.....	54
15	The Similarity of Different Running Waters Based on Number of Families Found/Area in Rainy Season.....	55
16	The Average Stream Depth (cm).....	59
17	The Average Stream Width (m).....	59
18	The Average Stream Velocity (m/s).....	59
19	The Inorganic Substrate Components at Stream Sites in the Dry Season.....	60
20	The Inorganic Substrate Components at Stream Sites in the Rainy Season.....	61

21	The Organic Substrate Components at Stream Sites in the Dry Season.....	62
22	The Organic Substrate Components at Stream Sites in the Rainy Season.....	63
23	The Stream Width of Transects (w1-w10) at Stream Sites in the Dry Season (left) and Rainy Season (right).....	64
24	The Distribution of Inorganic Substrate at Stream Sites in the Dry Season (left) and Rainy Season (right).....	65
25	The Riparian Vegetation at Stream sites in the Dry Season (left) and Rainy Season (right).....	66
26	Cross Section of a Stream (S2), with Diagrammatic Examples of Habitat Orientation Among Aquatic Insects in the Dry Season.....	69
27	Cross Section of a Stream (S2) , with Diagrammatic Examples of Habitat Orientation Among Aquatic Insects in the Rainy Season.....	70
28	The Relationship Between Habitat Quality and Biological Condition.....	72
29	Relationship of Habitat Quality and Biological Condition in the Context of Water Quality.....	90