

TABLE OF CONTENTS

	Page
TABLES OF CONTENTS.....	i
LIST OF TABLES.....	ii
LIST OF FIGURES.....	iv
INTRODUCTION.....	1
Objective.....	2
LITERATURE REVIEW.....	3
MATERIALS AND METHODS.....	12
RESULTS.....	14
DISCUSSION.....	85
CONCLUSION.....	96
LITERATURE CITED.....	97
APPENDIX.....	106

LIST OF TABLES

Table	Page
1	Enzyme systems used in electrophoretic studies on adult <i>Aedes aegypti</i>15
2	Allele frequencies and sample sizes (<i>n</i>) at 24 population sites from five provinces in Thailand.....16
3	Loci departing from the Hardy-Weinberg equilibrium of 24 populations of <i>Aedes aegypti</i> from 5 provinces in Thailand.....51
4	Genetic variability at 31 loci of 24 populations of <i>Aedes aegypti</i> from 5 provinces in Thailand.....55
5	<i>F</i> -statistic analysis of polymorphic loci in 24 populations of <i>Aedes aegypti</i> in Thailand.....58
6	<i>F</i> -statistic analysis of polymorphic loci in 5 populations of <i>Aedes aegypti</i> within Bangkok.....59
7	<i>F</i> -statistic analysis of polymorphic loci in 4 populations of <i>Aedes aegypti</i> within Chon Buri.....60
8	<i>F</i> -statistic analysis of polymorphic loci in 5 populations of <i>Aedes aegypti</i> within Surat Thani.....61
9	<i>F</i> -statistic analysis of polymorphic loci in 5 populations of <i>Aedes aegypti</i> within Nakhon Sawan.....62
10	<i>F</i> -statistic analysis of polymorphic loci in 5 populations of <i>Aedes aegypti</i> within Nakhon Ratchasima.....64
11	Pairwise <i>F</i> -statistics at all loci within 5 populations of <i>Aedes aegypti</i> from Bangkok.....65
12	Pairwise <i>F</i> -statistics at all loci within 4 populations of <i>Aedes aegypti</i> from Chon Buri.....66
13	Pairwise <i>F</i> -statistics at all loci within 5 populations of <i>Aedes aegypti</i> from in Surat Thani.....68

LIST OF TABLES (CONTINUED)

Table	Page
14	Pairwise <i>F</i> -statistics at all loci within 5 populations of <i>Aedes aegypti</i> from Nakhon Sawan.....69
15	Pairwise <i>F</i> -statistics at all loci within 5 populations of <i>Aedes aegypti</i> from Nakhon Ratchasima.....70
16	Matrix of genetic distance between 24 <i>Aedes aegypti</i> populations in Thailand.....72
17	Genetic variability at 31 loci of pooled populations of <i>Aedes aegypti</i> from 5 provinces in Thailand.....79
18	<i>F</i> -statistic analysis of polymorphic loci in 5 populations of <i>Aedes aegypti</i> in Thailand.....80
19	Pairwise <i>F</i> -statistics at all loci among 5 populations of <i>Aedes aegypti</i> from Thailand.....81
20	Matrix of genetic distance between 5 <i>Aedes aegypti</i> populations from 5 provinces in Thailand.....83
Appendix Table	
1	Mortality and case rates of dengue and dengue haemorrhagic fever situation in Thailand from 2002 to 2004.....107
2	Populations of <i>Aedes aegypti</i> used in the study.....108

LIST OF FIGURES

Figure	Page
1	Unweighted pair group method averaging phenogram from Cavalli-Sforza & Edwards (1967) chord distance matrix among 24 populations of <i>Aedes aegypti</i> from 5 provinces in Thailand.....77
2	Unweighted pair group method averaging phenogram from modified Rogers distance (Wright, 1978) matrix among pooled populations of <i>Aedes aegypti</i> from 5 provinces in Thailand.....84
Appendix Figure	
1	Map of Thailand showing the collecting sites for <i>Aedes aegypti</i> in 5 provinces.....109
2	Map of Bangkok showing the collecting sites for <i>Aedes aegypti</i> in 5 districts.....110
3	Map of Chon Buri province showing the collecting sites for <i>Aedes aegypti</i> in 4 districts.....111
4	Map of Surat Thani province showing the collecting sites for <i>Aedes aegypti</i> in 5 districts.....112
5	Map of Nakhon Sawan province showing the collecting sites for <i>Aedes aegypti</i> in 5 districts.....113
6	Map of Nakhon Ratchasima province showing the collecting sites for <i>Aedes aegypti</i> in 5 districts.....114
7	Example of electrophoretic patterns of malate dehydrogenase (MDH) from <i>MDH-1</i> and <i>MDH-2</i> loci.....115