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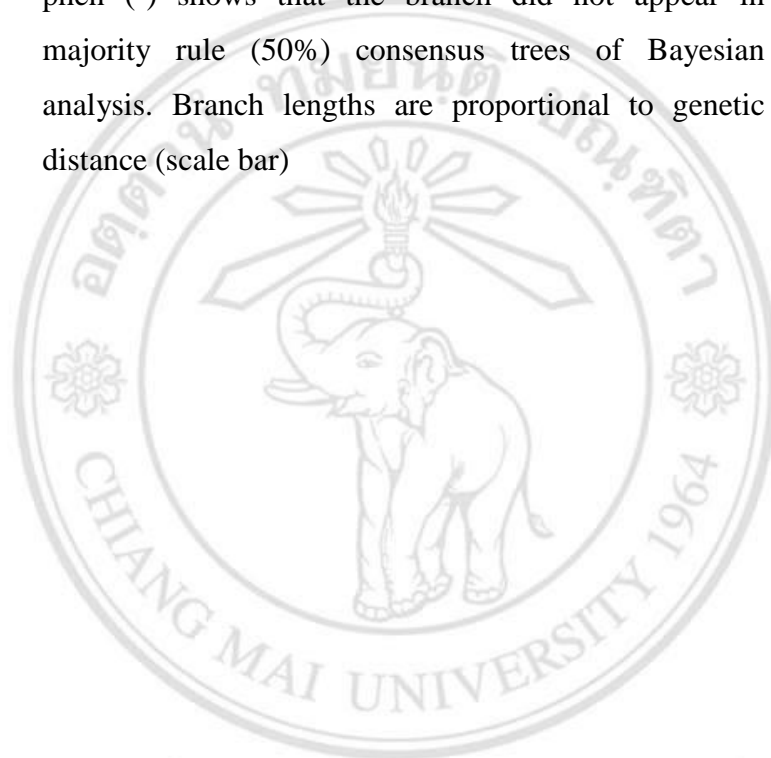
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Neighbor-joining (NJ) trees inferred from sequences of three loci. A: second internal transcribed spacer; B: cytochrome *c* oxidase subunit I (COI); C: COII of *An. paraliae*, *An. lesteri*, *An. sinensis* and *An. peditaeniatus*. Numbers on branches are bootstrap values (%) of NJ analysis and Bayesian posterior probabilities (%). A hyphen (-) shows that the branch did not appear in majority rule (50%) consensus trees of Bayesian analysis. Branch lengths are proportional to genetic distance (scale bar)



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LIST OF ABBREVIATIONS AND SYMBOLS

%	Percentage
°C	Degree Celsius
μl	Microliter
μM	Micromolar
bp	Base pair
C	Centromere
cm	Centimeter
COI	Cytochrome <i>c</i> oxidase subunit I
COII	Cytochrome <i>c</i> oxidase subunit II
DNA	Deoxyribonucleic acid
dNTPs	Deoxynucleotide triphosphates
e.g.	Exempli gratia
et al	And others
etc.	Etcetera
i.e.	Id est
ITS2	Second internal transcribed spacer
L	Left arm
min	Minute
ml	Milliliter
mM	Millimolar
mtDNA	mitochondrial DNA
PCR	Polymerase chain reaction
pH	Potential of hydrogen
R	Right arms
rDNA	ribosomal DNA
sec	Second
U	Unit

ข้อความแห่งการริเริ่ม

1. วิทยานิพนธ์นี้เป็นการศึกษาแรกที่รายงานรูปแบบเมตาเฟสคาริโอไทป์ของยุงก้นปล่อง *Anopheles paraliae*
2. วิทยานิพนธ์นี้ได้แสดงให้เห็นว่าความหลากหลายทางพันธุกรรมในระดับโครโมโซมของยุงก้นปล่อง *Anopheles paraliae* นั้น ไม่มีผลต่อการเกิดการวิวัฒนาการเป็นยุงก้นปล่องกลุ่มชนิดซับซ้อน
3. วิทยานิพนธ์นี้เป็นการศึกษาแรกที่เปรียบเทียบความสัมพันธ์ทางพันธุกรรมระหว่างยุงก้นปล่อง *Anopheles lesteri* (สายพันธุ์ประเทศเกาหลี) และยุงก้นปล่อง *Anopheles paraliae* (สายพันธุ์ประเทศไทย) ด้วยวิธีสหวิทยาการ และแสดงถึงสถานะที่แท้จริงของยุงก้นปล่อง *An. paraliae* ว่าเป็นยุงชนิดเดียวกับยุงก้นปล่อง *An. lesteri*

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STATEMENT OF ORIGINALITY

1. This thesis is the first study to report the metaphase karyotypes of *Anopheles paraliae*.
2. This thesis demonstrates that genetic diversity at the chromosomal level of *Anopheles paraliae* does not result in the evolution of species complex.
3. This thesis is the first study to compare the genetic proximity between *Anopheles lesteri* (Korean strain) and *Anopheles paraliae* (Thailand strain) by using multidisciplinary approaches, and demonstrating the true species status in that *An. paraliae* and *An. lesteri* are synonymous.



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