

การวิเคราะห์ความหลากหลายทางพันธุกรรมของผึ้งโพรง
(*Apis cerana* Fabricius) ในประเทศไทยด้วยดีเอ็นเอ



นางสาวชุตตา ประมวล

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**DNA ANALYSIS OF GENETIC DIVERSITY OF *Apis cerana* Fabricius
IN THAILAND**



Miss Chuta Pramual

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By Miss Chuta Pramual

Department Biology

Thesis Advisor Professor Siriwat Wongsiri, Ph.D.

Thesis Co-Advisor Associate Professor Siriporn Sittipraneed, Ph.D.



Accepted by the Graduate School, Chulalongkorn University
in Partial Fulfillment of the Requirements for the master's Degree.

Thavorn Vajrabhaya

..... Dean of Graduate School

(Professor Thavorn Vajrabhaya, Ph.D.)

Thesis Committee

Vitaya Yodyingyuad

..... Chairman

(Associate Professor Vitaya Yodyingyuad, Ph.D.)

Siriwat Wongsiri

..... Thesis Advisor

(Professor Siriwat Wongsiri, Ph.D.)

Siriporn Sittipraneed

..... Thesis Co-Advisor

(Associate Professor Siriporn Sittipraneed, Ph.D.)

Wichai Cherdshewasart

..... Member

(Associate Professor Wichai Cherdshewasart, Ph.D.)

พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

ชื่อบทคัดย่อ : การวิเคราะห์ความหลากหลายทางพันธุกรรมของผึ้งโพรง (*Apis cerana* Fabricius) ในประเทศไทยด้วยดีเอ็นเอ (DNA ANALYSIS OF GENETIC DIVERSITY OF *Apis cerana* Fabricius IN THAILAND) อ. ที่ปรึกษา : ศ. ดร. สิริวัฒน์ วงษ์ศิริ อ. ที่ปรึกษาร่วม : รศ. ดร. ศิวิพร สิทธิประณีต, 129 หน้า ISBN 974-584-598-1

ผึ้งโพรงเป็นผึ้งพื้นเมืองชนิดหนึ่งที่พบในทุกภาคของประเทศไทย เนื่องด้วยการศึกษาเกี่ยวกับผึ้งโพรงมีน้อยทำให้การคัดเลือกและปรับปรุงพันธุ์ทำได้ยาก ในการศึกษาความหลากหลายทางพันธุกรรมของผึ้งโพรงในประเทศไทยโดยใช้เรสทริกชัน แพทเทิร์น และเรสทริกชัน แพรกเมนต์ เลนธ์ โพลีมอร์ฟิซึม (RFLP) พบว่า ผลการวิเคราะห์เรสทริกชัน แพทเทิร์น ด้วยการใช้เรสทริกชันเอนไซม์ *Bgl*II, *Cla*I, *Eco*RI, *Hae*III, และ *Nde*I เมื่อใช้ *Eco*RI สามารถจำแนกผึ้งโพรงในภาคเหนือ ภาคตะวันออกเฉียงเหนือ ภาคกลาง ภาคใต้ และเกาะสมุย ได้เป็น 3, 1, 1, 2 และ 3 กลุ่มตามลำดับ แต่ผลการวิเคราะห์ RFLP ระหว่างชิ้นดีเอ็นเอที่ตัดด้วย *Eco*RI กับโพรงผึ้งโพรง #3035 สามารถจำแนกผึ้งโพรงในภาคเหนือ ภาคตะวันออกเฉียงเหนือ ภาคกลาง ภาคใต้ และเกาะสมุย ได้เป็น 5, 1, 3, 1, และ 3 กลุ่มตามลำดับ โดยผึ้งโพรงในเกาะสมุยมี RFLP ที่แตกต่างอย่างชัดเจนกับผึ้งโพรงที่พบในภาคอื่น ๆ ของประเทศไทย

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชา.....ชีววิทยา
สาขาวิชา.....สัตววิทยา
ปีการศึกษา.....2536

ลายมือชื่อนิสิต.....
ลายมือชื่ออาจารย์ที่ปรึกษา.....
ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....

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Apis cerana is a native honey bee of Thailand. Due to some limitation, study of this honey bee is selective and breeding become difficulty. The genetic diversity of Apis cerana in Thailand was studied by using restriction pattern and restriction fragment length polymorphism (RFLP) analysis. The restriction pattern was studied using restriction enzymes; BglII, ClaI, EcoRI, HaeIII and NdeI. The results when using EcoRI showed that A. cerana of the Northern, the North-Eastern, the Central part, the Southern and the Samui Island can be divided into 3, 1, 1, 2 and 3 groups respectively. But the RFLP analysis using between EcoRI digested honey bee DNA and A. cerana probe # 3035 showed that A. cerana from the Northern, the North-Eastern, the Central part, the Southern and the Samui Island can divided into 5, 1, 3, 1 and 3 groups respectively. The Samui Island RFLP is completely differ from the other part of Thailand.

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

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ลายมือชื่อผู้คิด Chuta Pramual

ลายมือชื่ออาจารย์ที่ปรึกษา Siriwat Wongsiri

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม Siriporn Sittipraneed



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ABBREVIATION

Ap	Ampicillin
bp	Base pair
cm	Centimetre
°C	Degree celsius
dUTP	Deoxyuridine 5' triphosphate
DNA	Deoxyribonucleic acid
EDTA	Ethylene diamine tetraacetic acid
g	Gram
h	Hour
kb	Kilobase
l	Litre
µg	Microgram
µl	Microlitre
mg	Milligram
ml	Millilitre
mm	Millimetre
mM	Millimolar
min	Minute
M	Molar
ng	Nanogram
NaCl	Sodium chloride
NaOH	Sodium hydroxide

OD	Optical density
RNase A	Ribonuclease A
SDS	Sodium dodecyl sulfate
Tc	Tetracycline
V	Volume



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