Influence of Religious Temple Environments on Mosquito Species Abundance and key Breeding sites : A Comparative Study of Thai and Chinese Temples in Trang,Thailand

Presentation by

Group 1

23-28 FEB - 2025

Hi!

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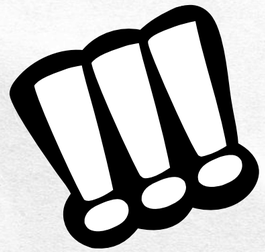

SCIENTISTS :

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Introduction

Thai temples

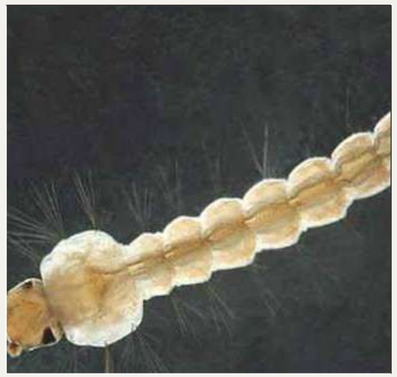
Chinese temples

Introduction

Ae. aegypti spp.

Culex spp.

Armigeres spp.



Ae.albopictus

Mansonia spp.

Anopheles spp.

Objectives

* Compare mosquito species abundance and key breeding sites in Thai and Chinese temple environments

* Examine the impact of cleaning practices on mosquito abundance and breeding sites within these temple settings

Material and methods

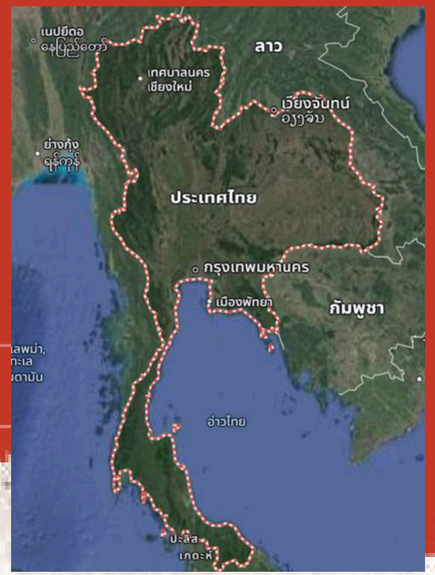
Fish net

Plastic bag

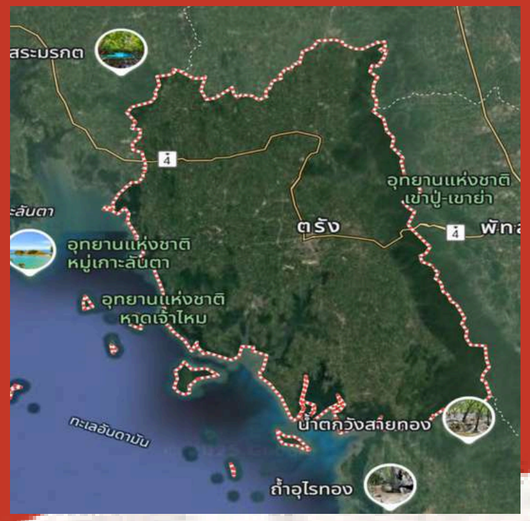
Cup

Plastic spoon

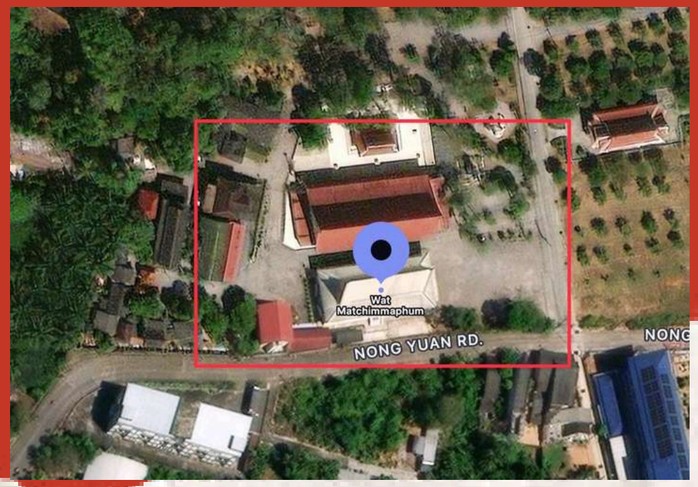
Study sites



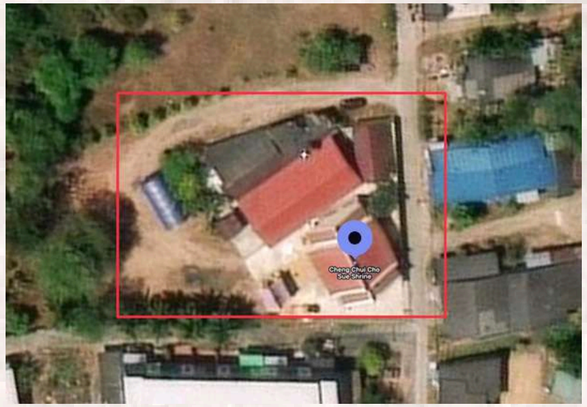
(a) Map of Thailand



(b) Map of Trang



(c) Map of Matchimmaphum Temple



(d) Map of Chang Chui Cho Sue Shrine Temple

(e) Map of Tantiya Phirom

(f) Map of San Chao Kew Ong Aia Temple.

Sites Observed

Data collection

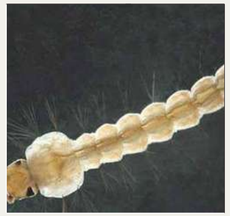
Identification

Species Variation

wow

Ae. aegypti spp.

69



Ae.albopictus

209

Mansonia spp.

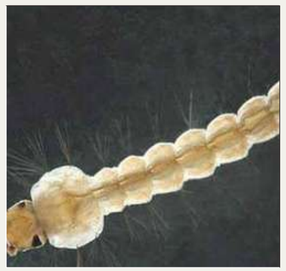
209

Culex spp.

20

Ae. aegypti spp.

70



Ae.albopictus

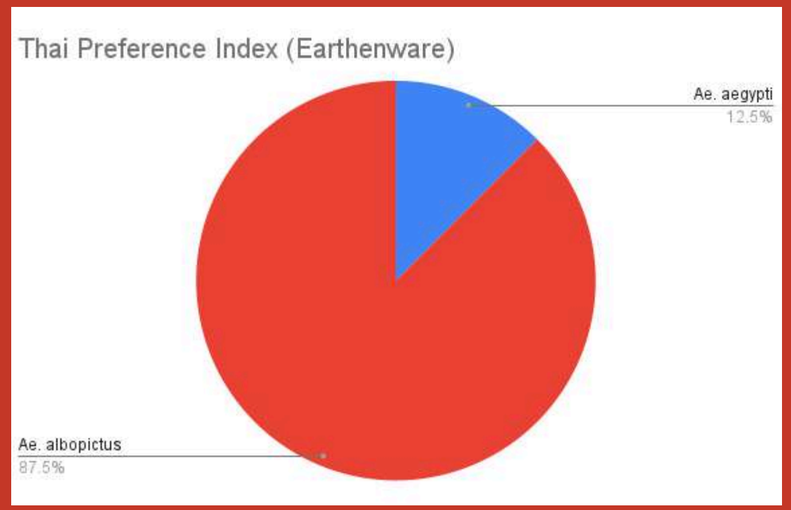
115

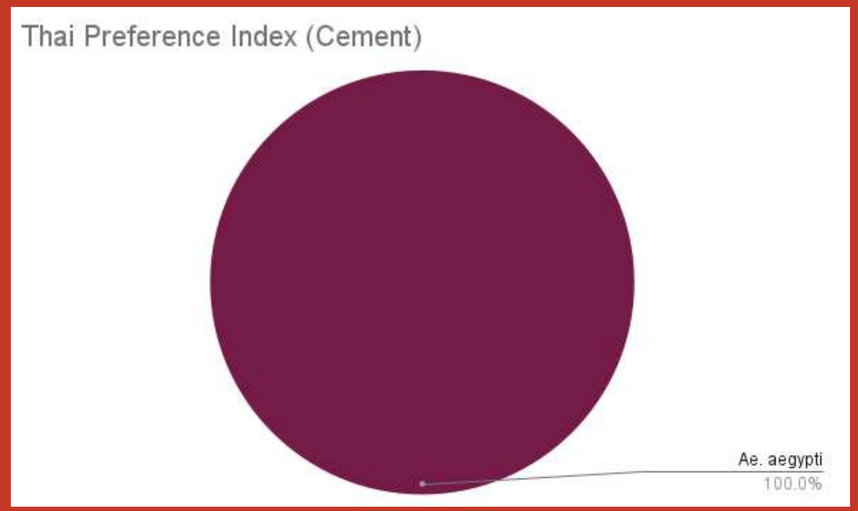
Container index

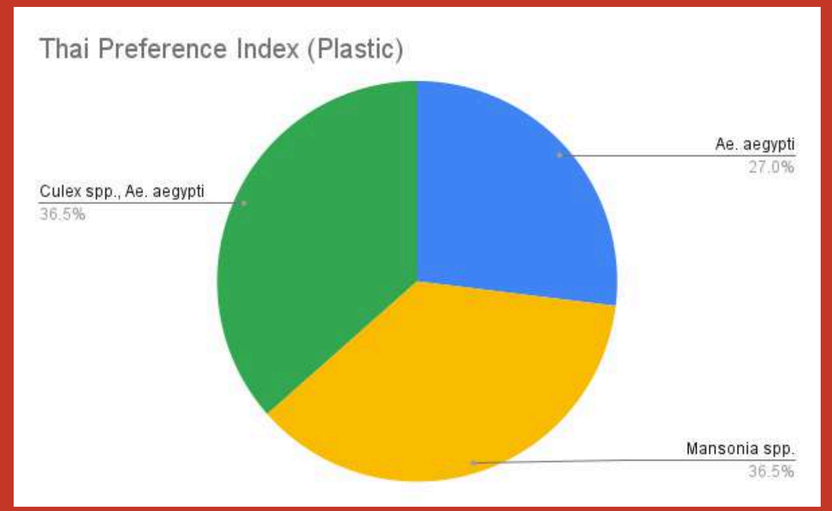
Thai Temple	Chinese Temple	Globe Data
57.9 %	100%	46.7%

1. Chinese temples had only Aedes aegypti and Aedes albopictus, while Thai temples had more species including Culex spp. and Mansonia spp..
2. Chi-Square test confirmed a significant link between mosquito species and temple types (p = 0.028).Fisher's Exact Test further supported these findings.

Preference index





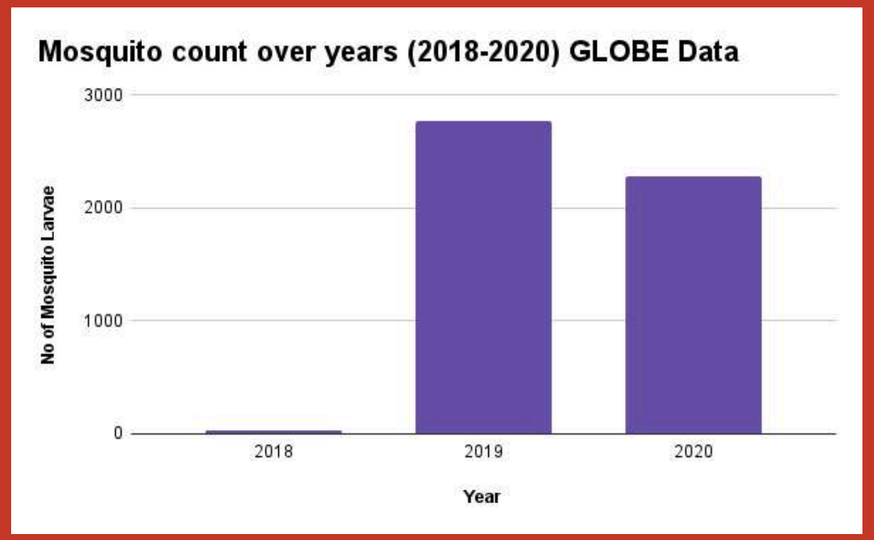


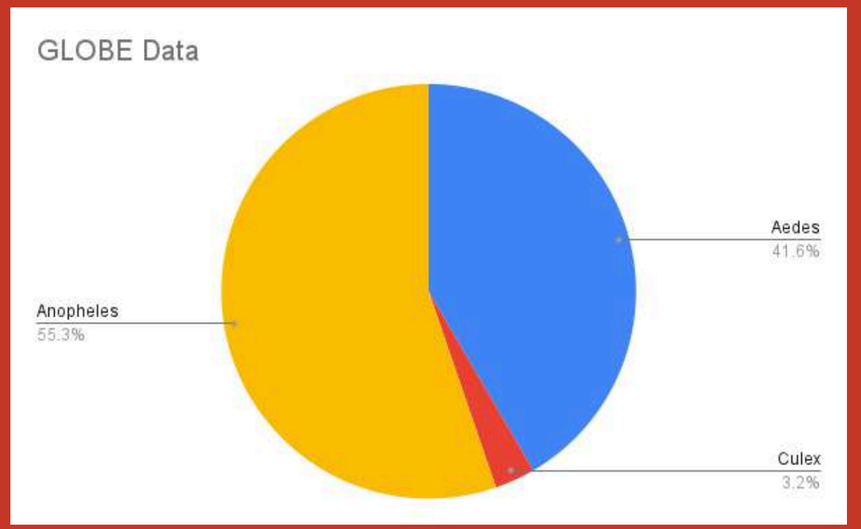
Earthenware

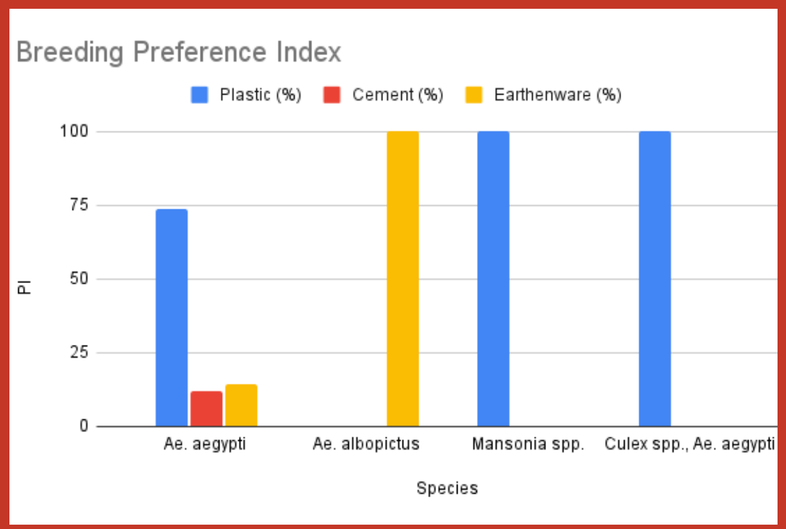
Cement

Plastic

Globe Data for Trang (2018-2020)

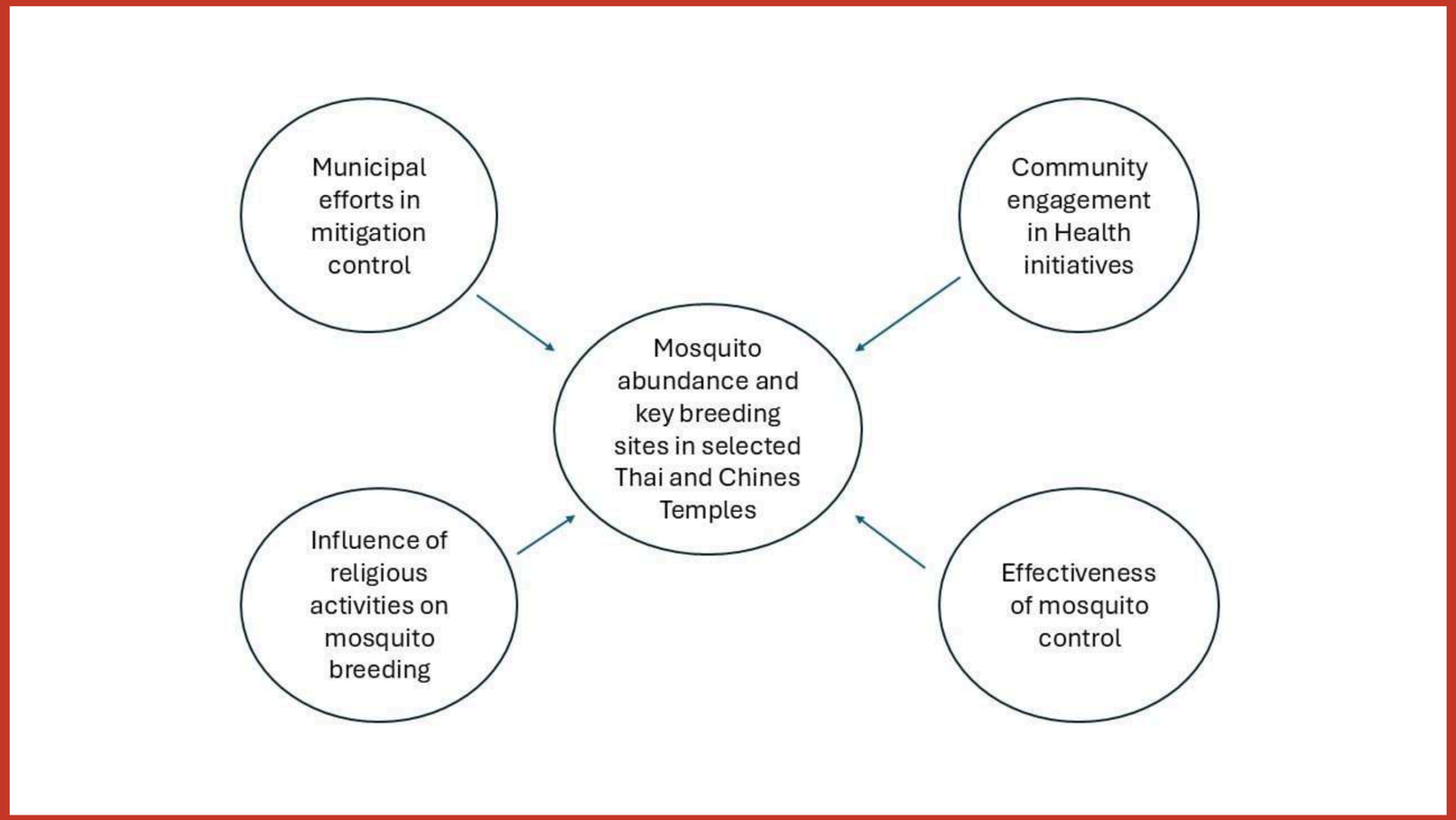






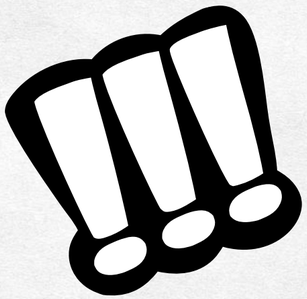
- Peak in mosquito larvae in 2019, slight decline in 2020.
- Breeding preferences confirmed across different container types.

The impact of mosquito control and mitigation practices on mosquito abundance and key breeding sites



Conclusion

- Significant differences in mosquito species distribution between Chinese and Thai temples due to environmental and structural factors.
- High Container Index (100%) in Chinese temples highlights the need for targeted mosquito control interventions.
- Short-term chemical treatments are insufficient; sustainable strategies should focus on community engagement and environmental management.
- Integrated control strategies combining biological, chemical, and environmental methods are more effective.
- Future research with larger datasets is needed to refine and enhance mosquito control measures.



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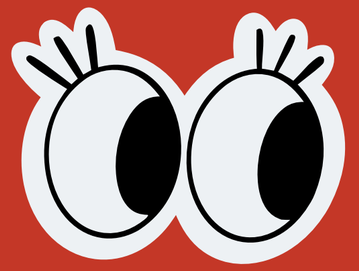

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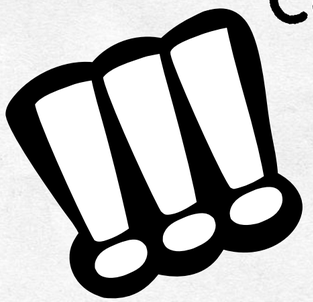

Thank You So Much!

Presentation by

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