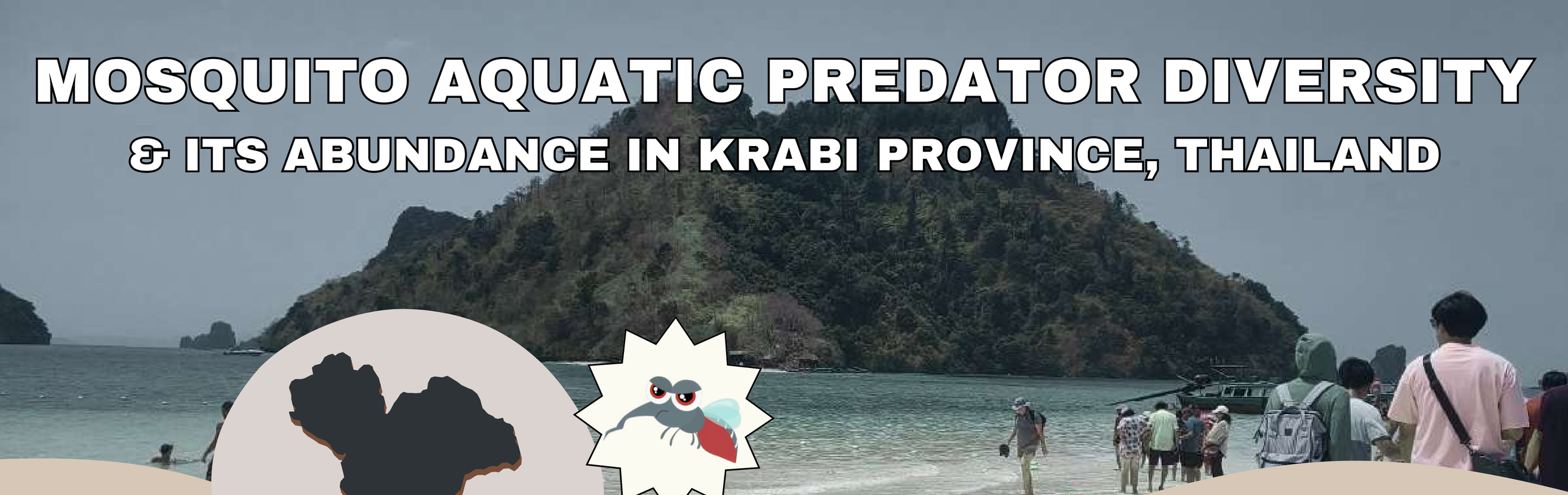
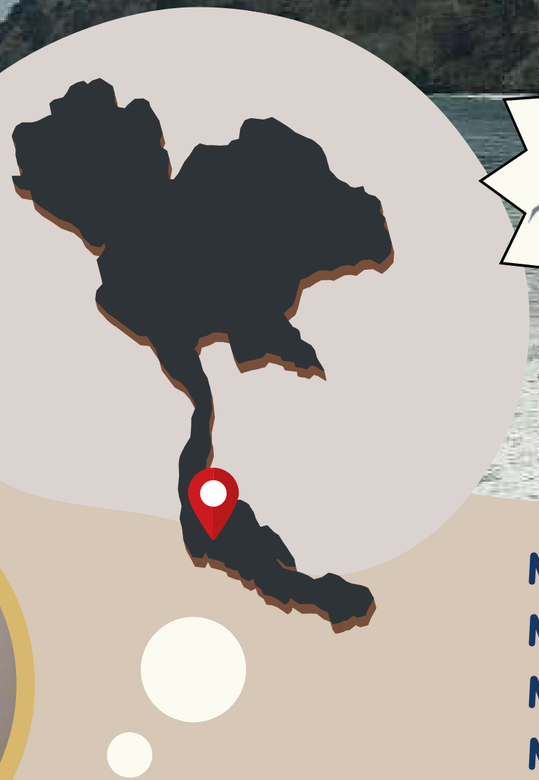
MOSQUITO AQUATIC PREDATOR DIVERSITY

& ITS ABUNDANCE IN KRABI PROVINCE, THAILAND





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1

2

3

4

INTRODUCTION

fig. 1 Dengue hemorrhagic fever

(Aedes aegypi)

fig. 2 Malaria (Anopheles)

fig. 3 Zika fever (Aedes aegypi)

fig. 4 Lymphatic Filariasis (Culex spp.)

Dengue fever in Thailand
2014 - 2023

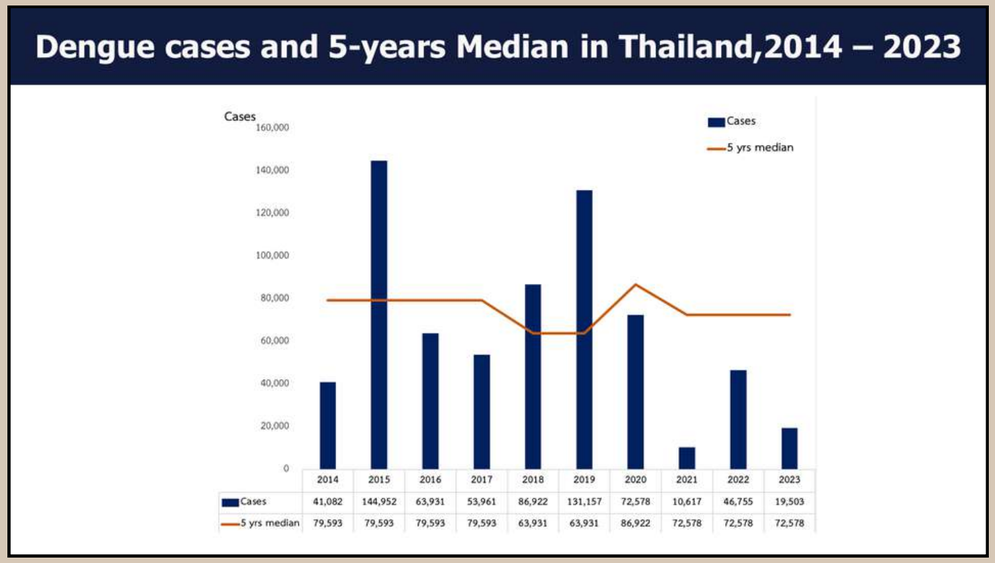


Fig.5 Dengue cases and 5-years Median in Thailand, 2014-2023

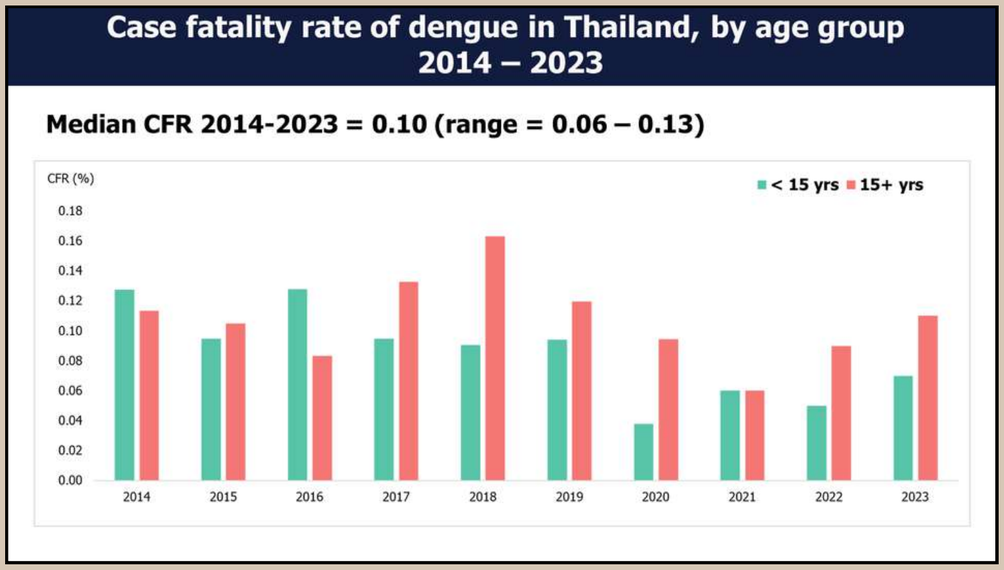


Fig.6 Death rate for dengue, 2014-2023

Credits : https://www.who.int/thailand/news/detail/30-06-2023-combating-dengue-outbreak-and-addressing-overlapping-challenges-with-covid-19

Objectives

To study mosquito diversity and abundance between rural area and urban area at Krabi province, Thailand

To study mosquito into 2 areas rural area and urban area and examine these <u>factors</u> :

- Natural / Man made Containers
- Metal / Plastic / Earthen Containers
- Containers with Lid / Without Lid
- Water Levels (0%, 25%, 50%, 75%)
- Water Temperature
- Mosquito species

Fig.7

Materials and Methods

Study Sites

3 Study sites in Krabi

- Boon Siam Hotel area
- Panurat Prachasan Temple
- Kaew Korawaram Temple

Fig.8 World map

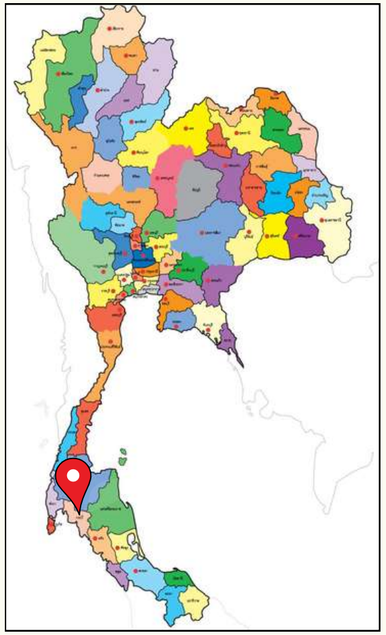


Fig.9 Thailand map

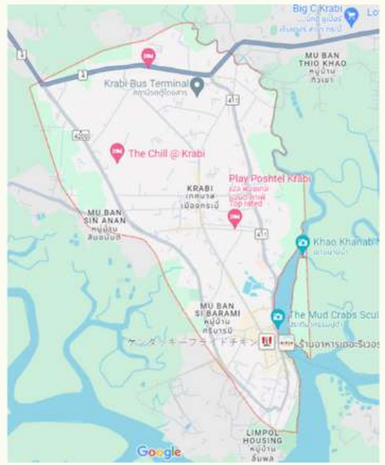


Fig.10 Krabi province, Thailand

Fig.11 Boon Siam Hotel area

Fig.12 Wat Panurat Prachasan area

Fig.13 Wat Kaew Korawaram area

Study Sites

Fig.14
Boonsiam Hotel

Fig.15 Wat Kaew
Korawaram

Fig.16 Wat Panurat
Prachasan

Methods

1. Prepare all equipment for catching mosquito larvae.

• Plastic bag. • Fish net • 70% alcohol • plastic spoons • clip on lens 60x • rubber band and pen





2. Survey areas around the Boonsiam Hotel, Wat Panurat Prachasan and Wat Kaew Korawaram.

Measure the amount of water found in the container.

→ Scoop the larvae

→ Put the scooped larvae in a plastic bag. → MHM app to find latitude and longitude coordinates in the area where mosquito larvae are found.

Methods

3. GLOBE Observer: mosquito habitat mapper app

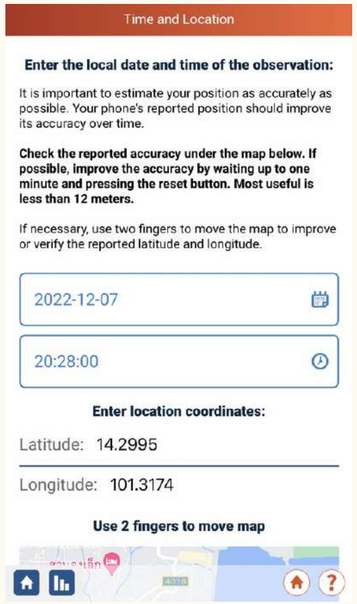
1

1. Choose mosquito item

2

2. Select the New Mosquito of observation habitat.

3



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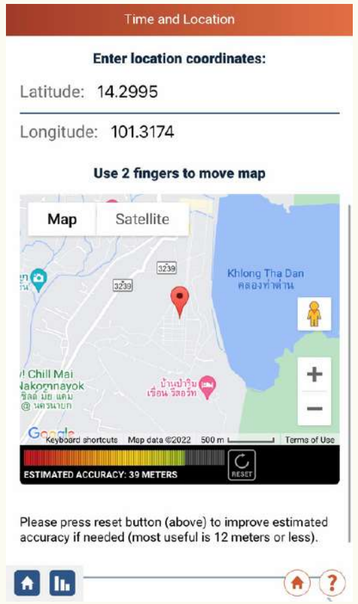
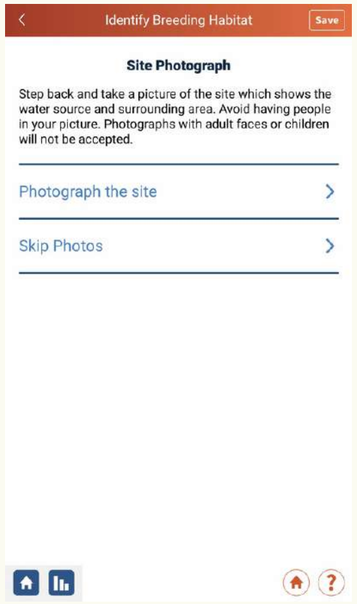


3–4 Observe the date and time and the latitude and longitude coordinates of the place where the mosquitoes were found.

5

5. Choose a container or source where mosquitoes are found.

6



6. Take a photo of the mosquito larvae found in the container.

Fig.17

Types of Container

Fig.18 Natural Containers

Fig.19 Man made

Fig.20 Earthen Containers

Fig.21 Plastic

Fig.22 Lid

Fig.23 Without Lid Containers

Species of Mosquitoes

Fig.24 Identifying different types of mosquitoes

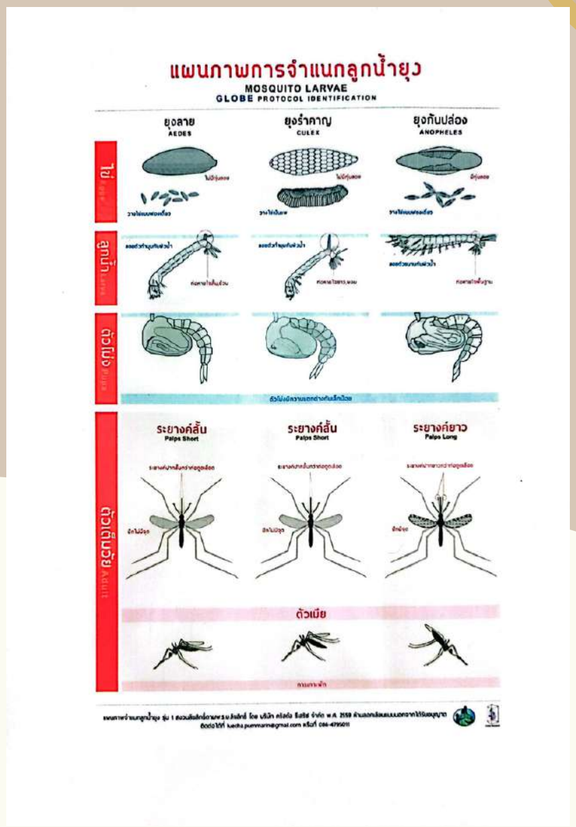
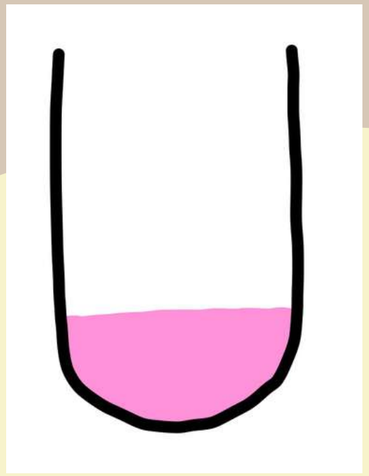


Fig.25 Identifying different types of mosquitoes

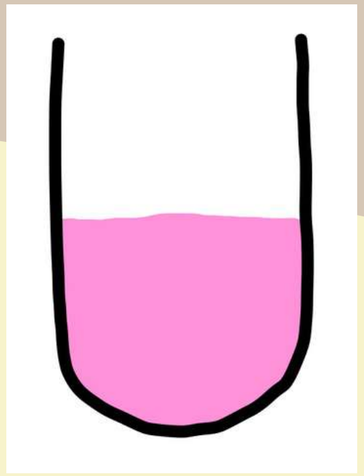
Method

Collecting Data

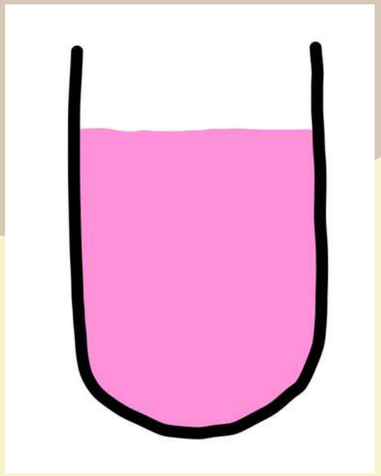
Water Levels (0-25%, 26-50%, 51-75%, 76-100%)



0-25%



26-50%



51-75%

76-100%

Fig.26 Water Levels

Method

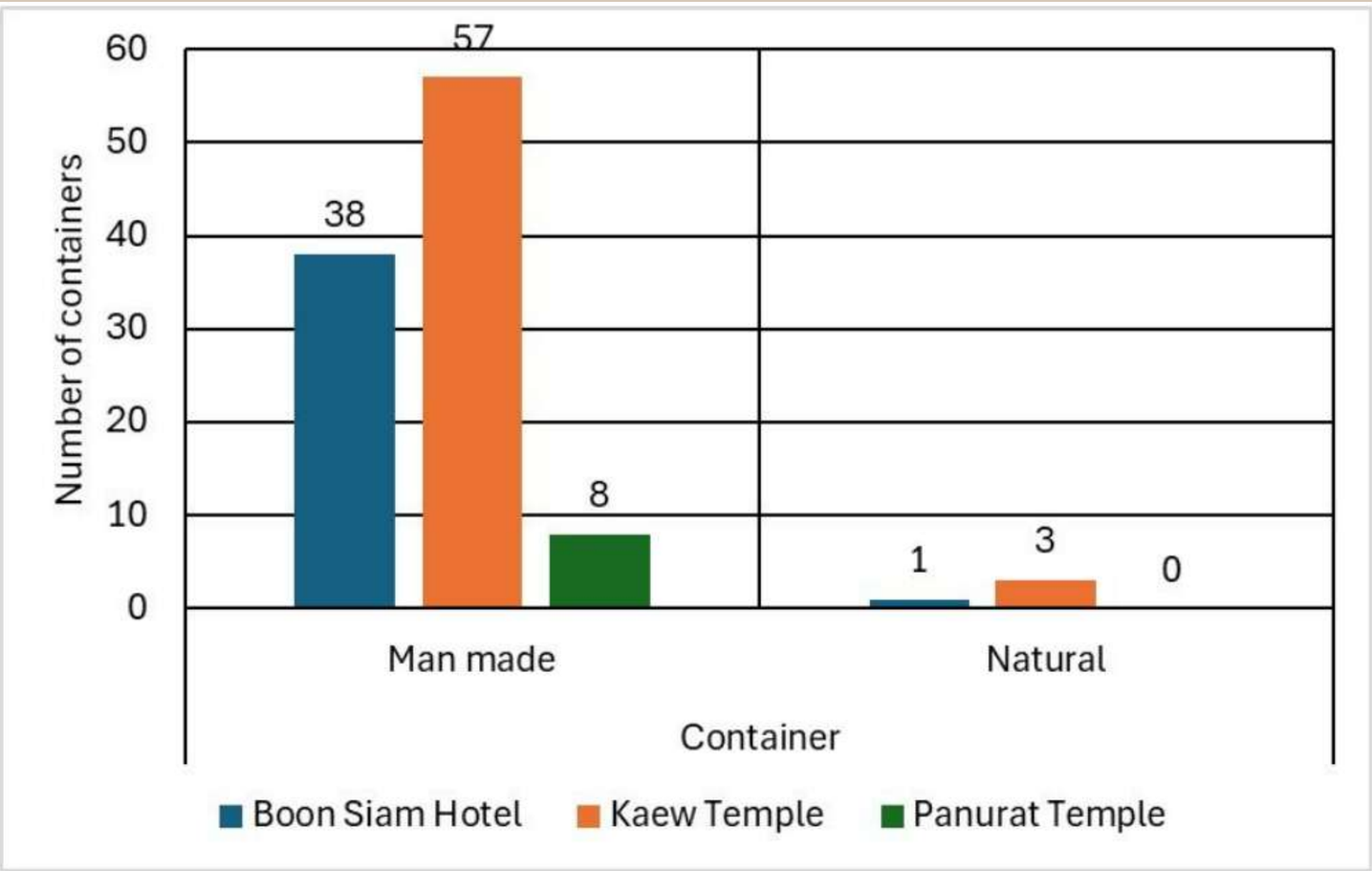
Species of larvae mosquitoes

Fig.27 Genus Culex

Fig.28 Aedes albopictus

Results and discussion

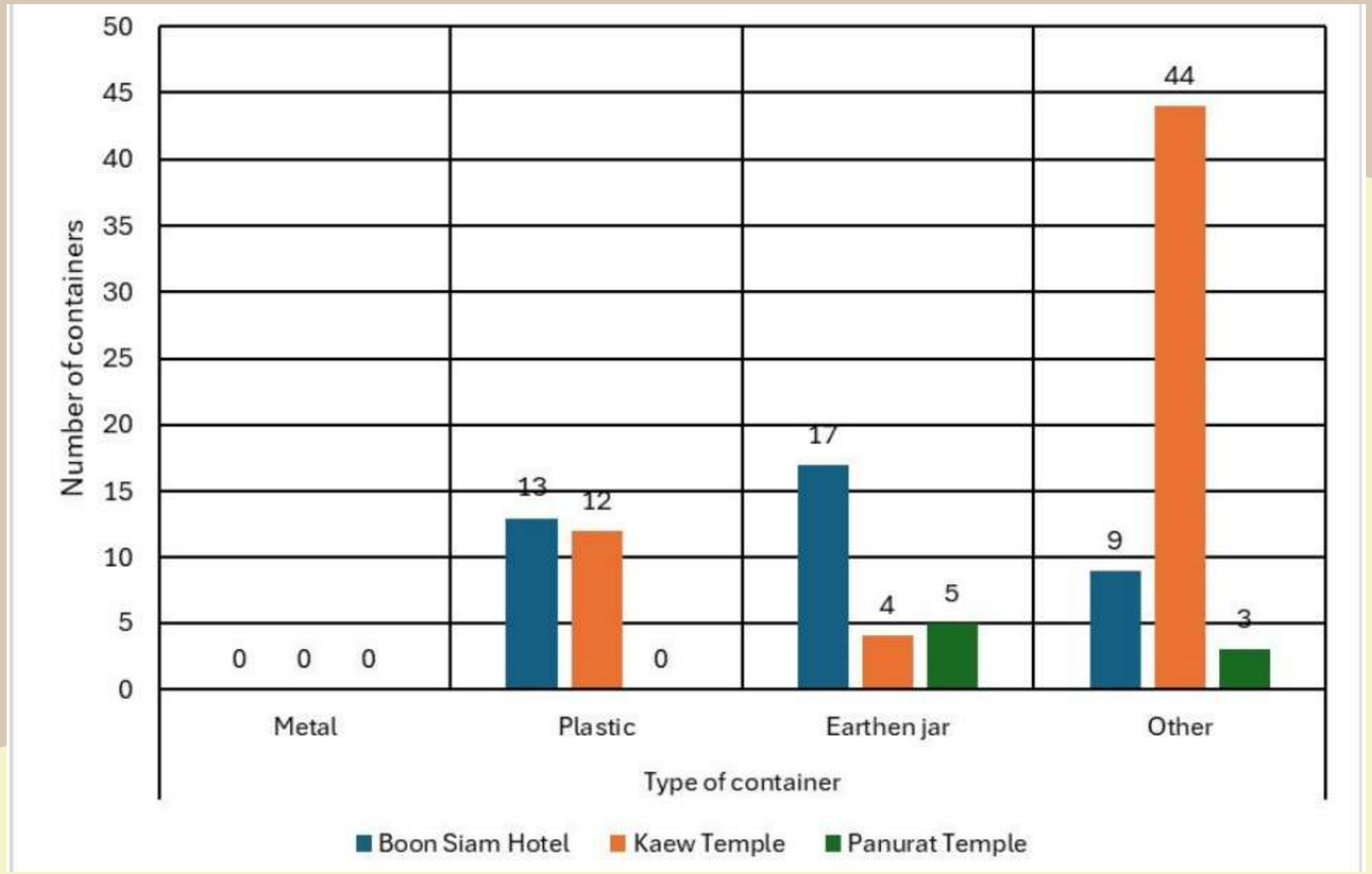
Natural / Man made Containers



Numbers of Man made and Natural containers within the 3 areas of study

Fig.29

Metal / Plastic / Earthen / Other Containers



Numbers of metal, plastic, earthen and others containers within the 3 areas of study

Fig.30

Earthen Containers

Other Containers









Fig.31-39







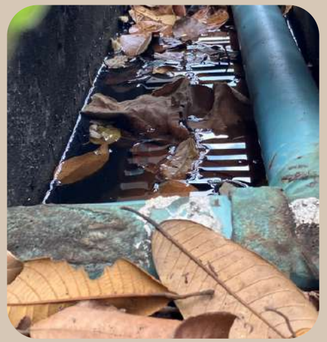
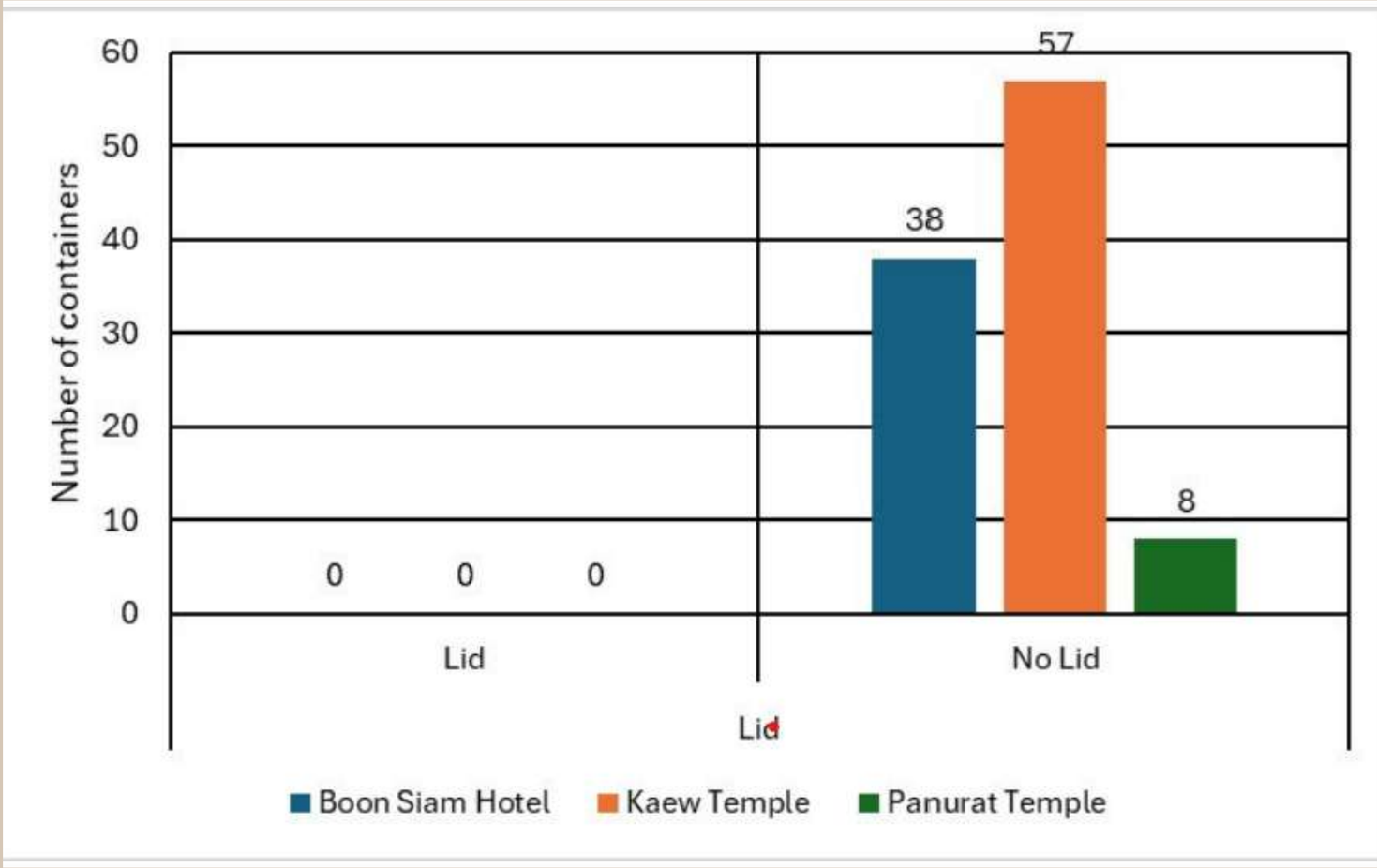




Fig.40-48

Lid / Without Lid Containers



Numbers of containers with lids and containers without lids within the 3 areas of study

Fig.49

Containers with Lid

Fig.50

Fig.51

Containers with Lids

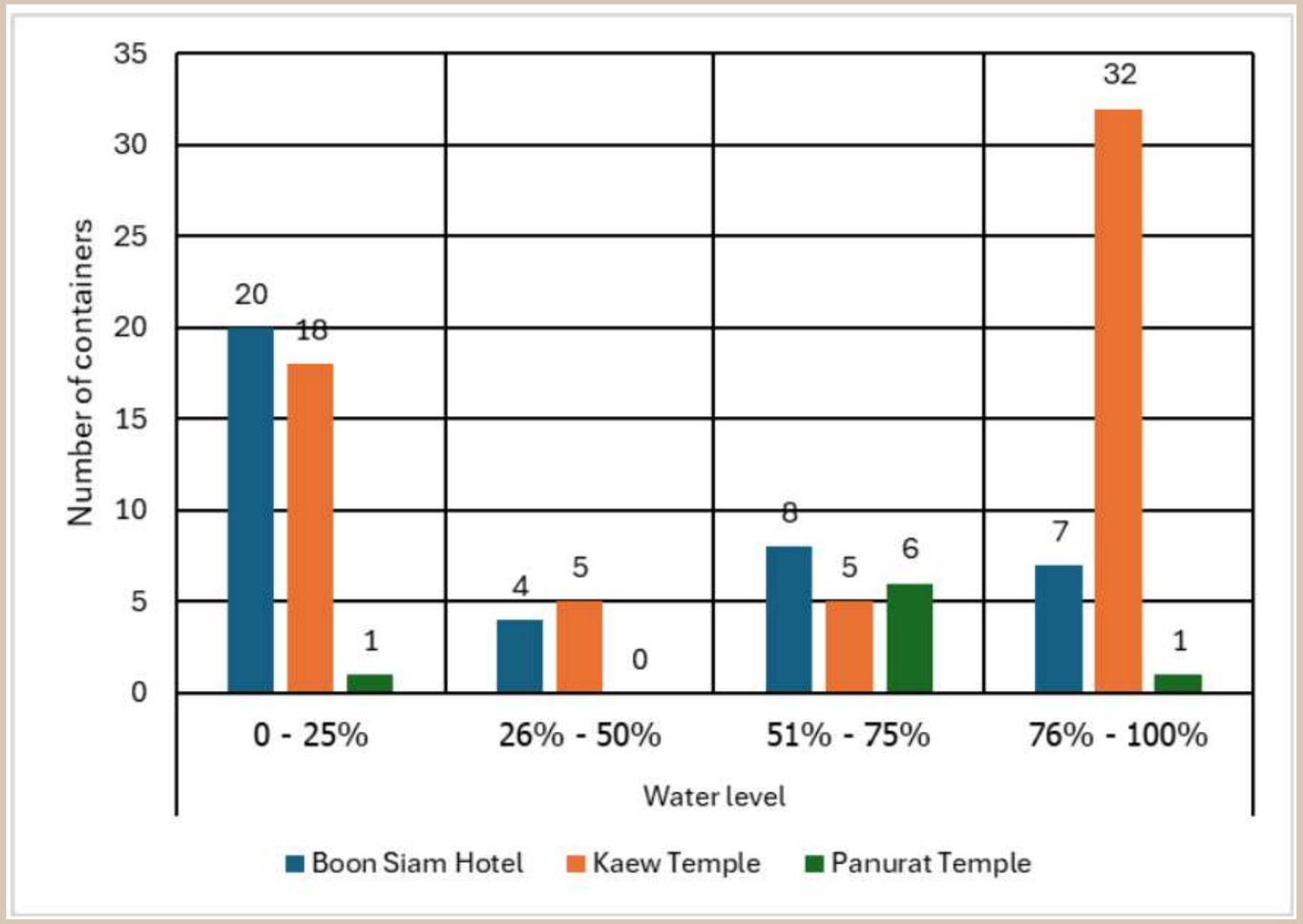
Containers without Lid

Fig.52

Fig.53

Containers without Lids

Water Levels (0–25%, 26–50%, 51–75%, 76–100%)



Water levels in containers within the 3 areas of study

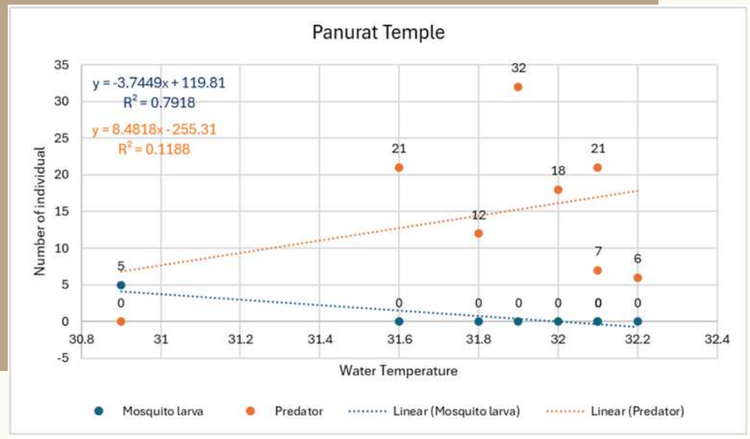
Fig.54

Water Temperature

Fig.55

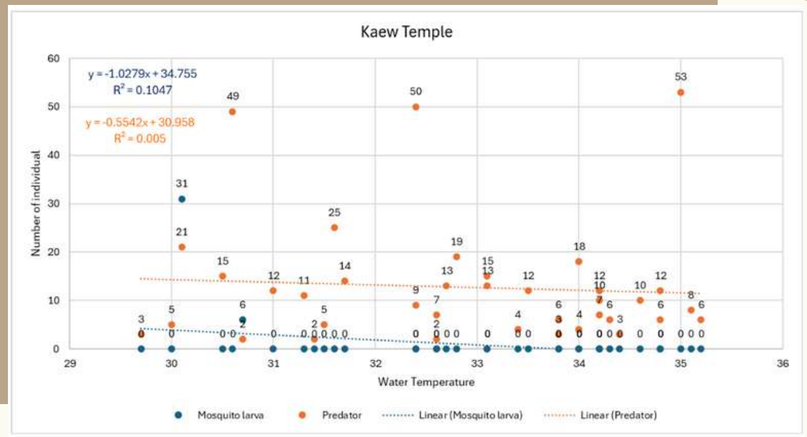
water temperature Boon Siam Hotel

Fig.56



water temperature Panurat Prachasan Temple

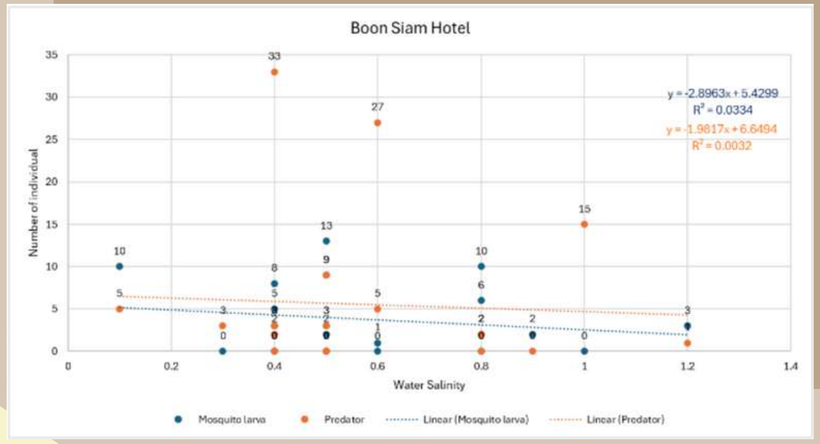
Fig.57



water temperature Kaew Korawaram Temple

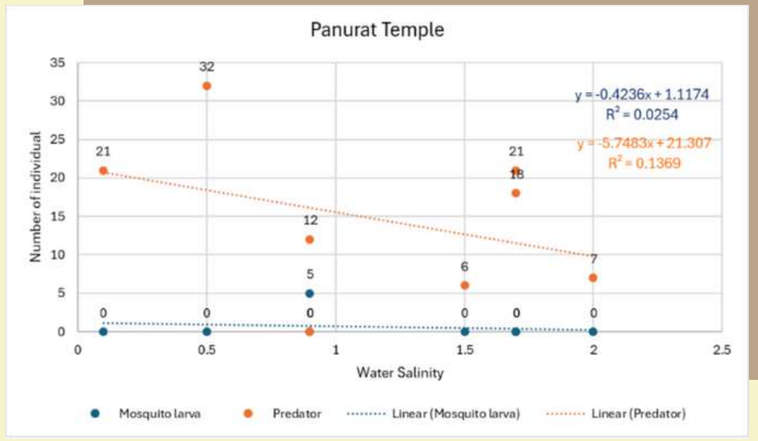
Water salinity

Fig.58



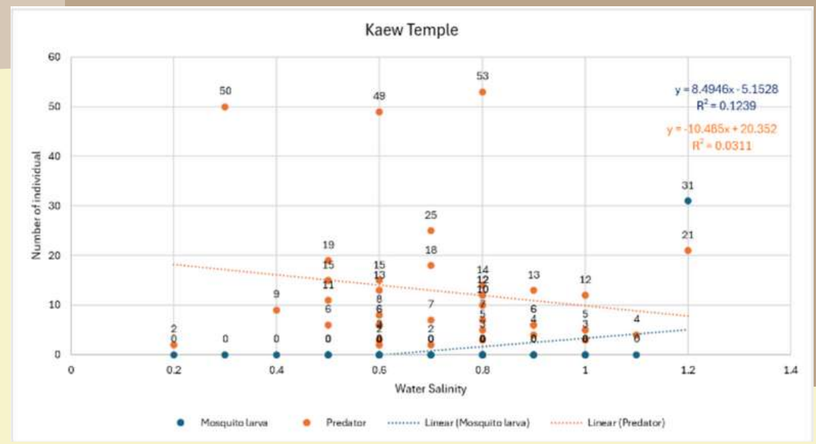
water salinity Boon Siam Hotel

Fig.59



water salinity Panurat Prachasan Temple

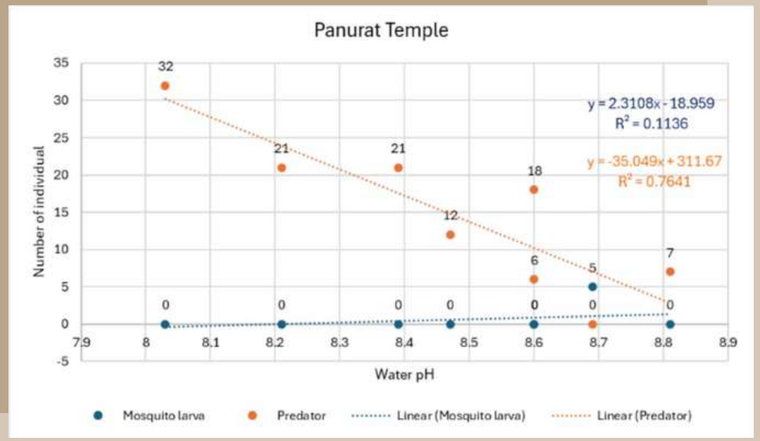
Fig.60



water salinity Kaew Korawaram Temple

Water pH

Fig.61

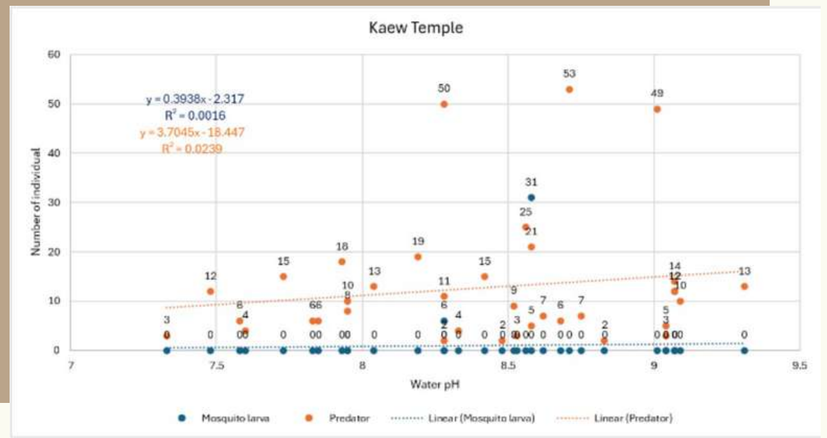


water pH Boon Siam Hotel

Fig.62

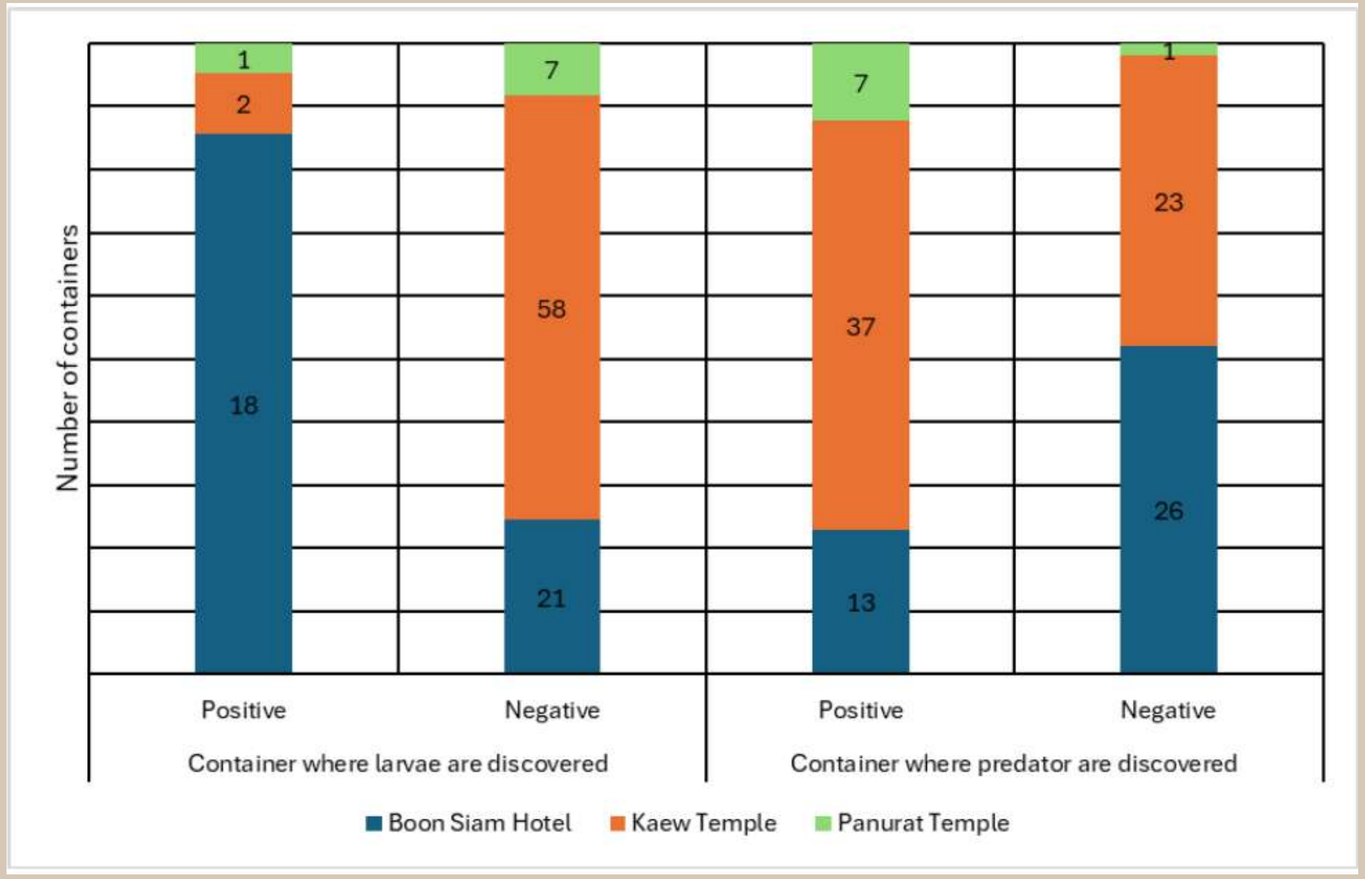
water pH Panurat Prachasan Temple

Fig.63



water pH Kaew Korawaram Temple

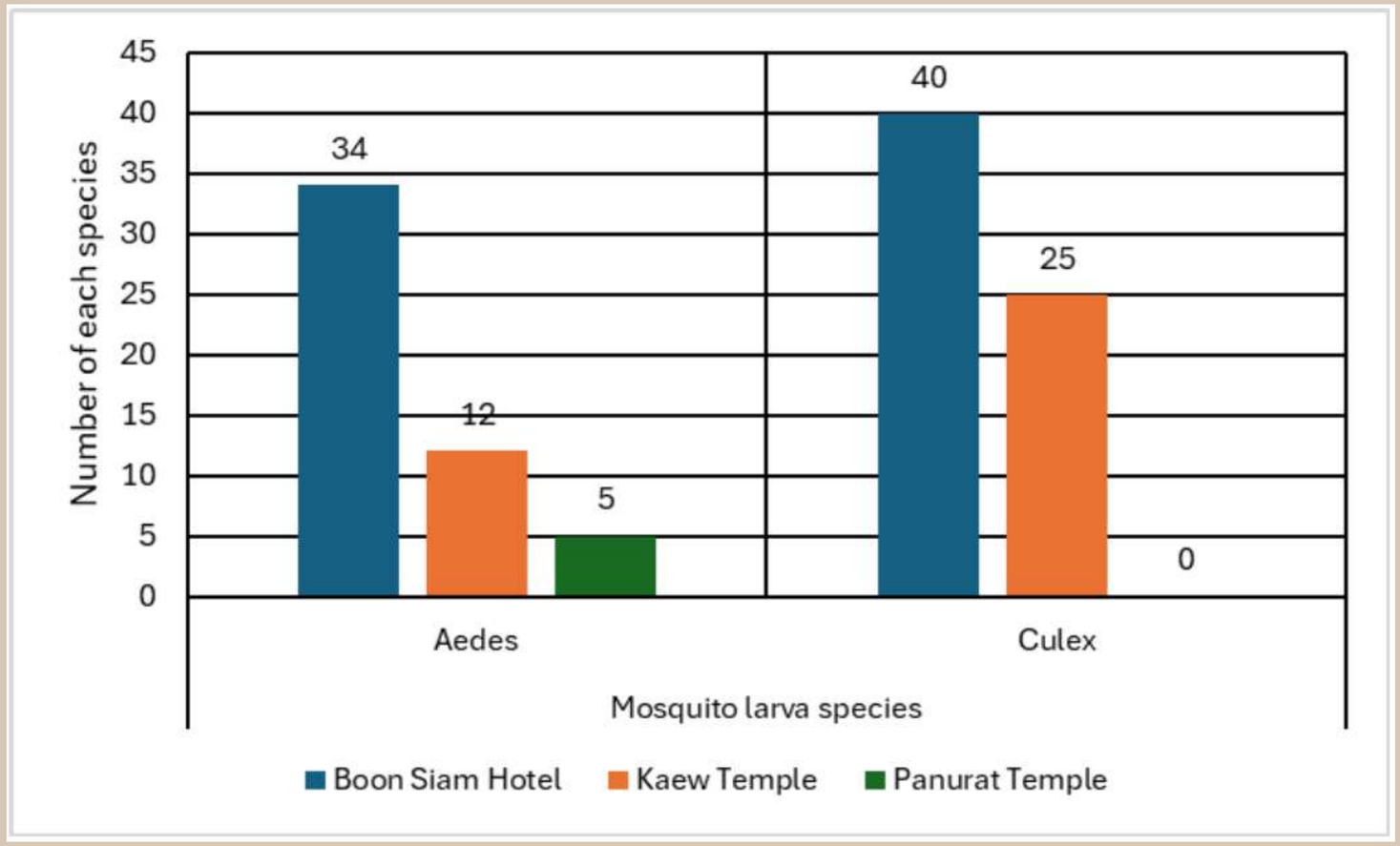
Containers , Breeding Sites



Discoveries of larvae and predators in the 3 areas of study

Fig.64

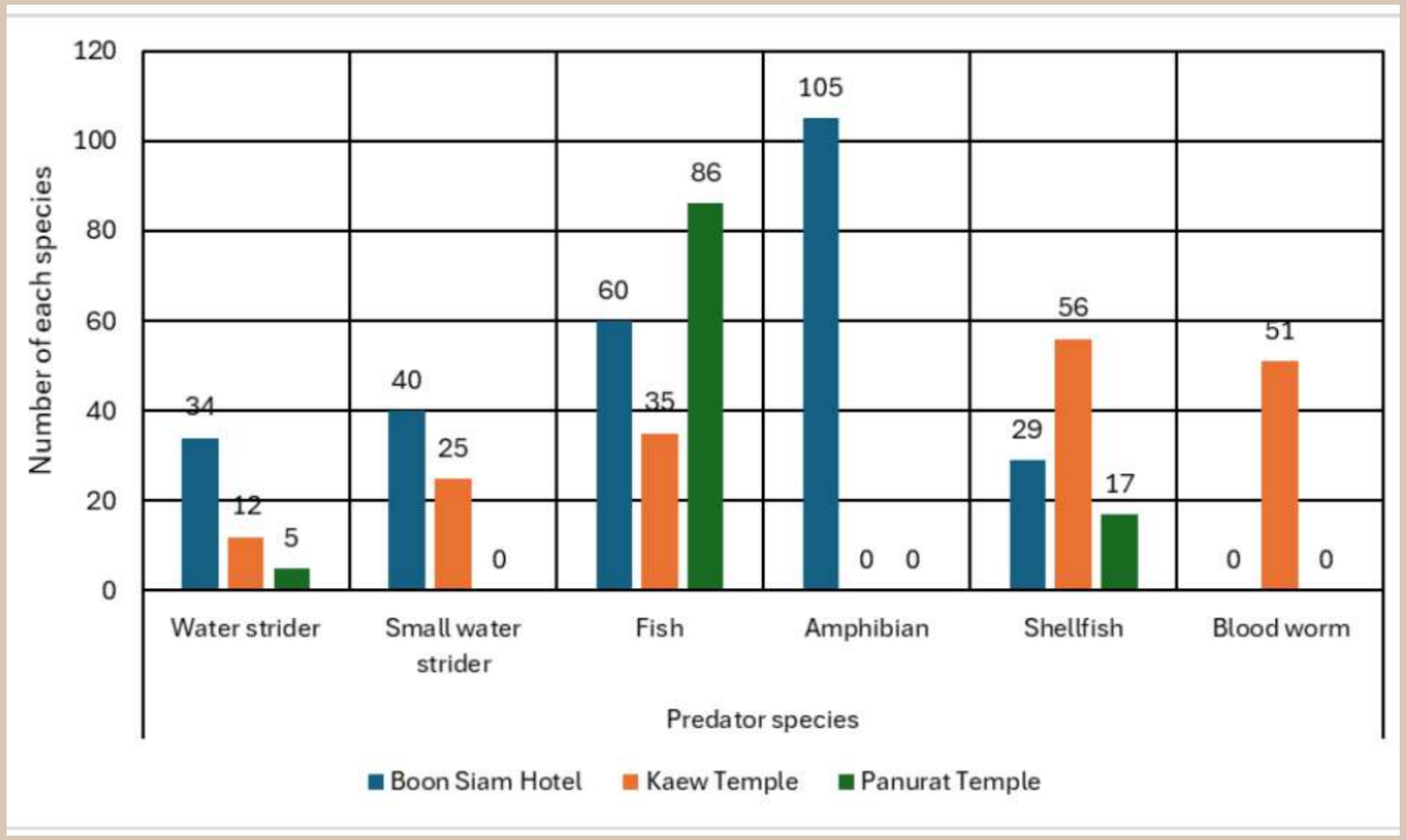
Species of mosquitoes



Species of mosquitoes (Aedes & Culex) within the 3 areas of study

Fig.65

Species of predator



The species of predator such as water strider, small water strider, fish, amphibian, shellfish and blood worm

Fig.66

Reference

Bangpakok Hospital 3. (23 august 2022) Get to know mosquitoes www.bangpakok3.com/care_blog/view/200

Acknowledgments

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