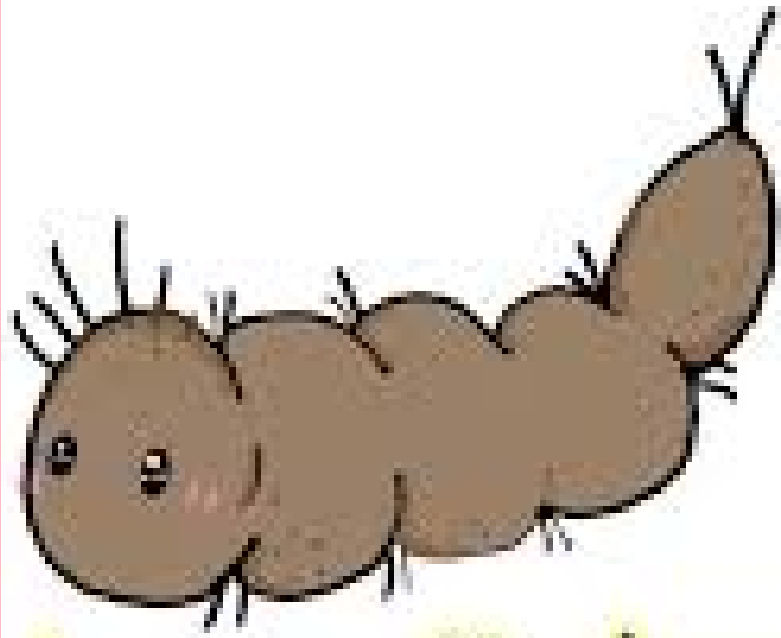


A research project on the study and survey of mosquitoes Larvae in the closed sewer area. And an open drain





Larva ตัวอ่อน

Origin and importance

In today's global scenario, climate change and waterlogged areas create larvae that carry infectious agents, resulting in disease such as Dengue fever Elephant Filariasis. Thailand is one of the people who suffer from the disease and die a lot, and Bueng Kan Province is one of Thailand from our group of people in Ban Don Klang community, Bueng Khong Long District Bueng Kan Province We noticed that there are many larvae in sewers, so our group is interested in exploring the types of larvae in closed drains and open drains. That resulted in vectors and various diseases that followed



Research question

01 Are mosquitoes different in open and closed drains?

02 Mosquitoes in open and closed drains grow best in any pH of water?

03 Are people in the community that disease consistent with the type of mosquito found or not?



Research objectives



- 01 To study the species of mosquitoes in closed drains and open drains.
- 02 To study the pH value that affects the growth of mosquito species.
- 03 To study mosquito-borne diseases in closed sewer systems and open drains.



Terminology definition



Open drain

Surface drains transfer water from one house to another. So as not to have too much water



The drain is closed.

Surface drains transfer water from one household to another. So as not to have Too much water
By this pipe will have a cover



Mosquito larvae

The mosquito larvae that live in water

Expected benefits of the research

01

To know the types of mosquitoes that live along closed drains and open drains.

02

To know the pH that is suitable for the growth of mosquitoes.

03

To know the diseases that arise from the type of mosquitoes.





Related research



In this study, the researchers conducted research studies from various research papers. Relevant by the study to be used as a guide in the study. And accompanying this study Achara Janpetch and Waraporn Siwamrongphong (2006, pp. 48-60) study on “Knowledge, Perception and Social Support on Dengue Prevention Behaviors of People in Dengue. Nakhon Si Thammarat Municipality Yala, found that the prevention behavior of dengue fever at the Moderate for anti-shock behavior. In the study of self-defense behaviors from dengue

fever, a study of mosquito netting was studied in the middle. Using mosquito repellent, mosquito repellent and repellent But did not specify the details of each method Pimlada Anansirikasem (2013) Study of Factors Influencing the Identification of *Aedes aegypti* in Households of Nakornchaisri District. Nakhon Pathom Province This study aims to study

Methods of conducting research

4.1 Measure the pH of the water

4.1.1 Measure the pH of the water in the closed and open drains 3 times.

4.1.2 Measure the pH of the water at each point using a pH meter.

4.2 Study and examine the type of mosquitoes.

2.1.1 Prepare equipment for scooping mosquitoes.

4.2.1 Scooping mosquitoes in sewers

4.2.2 Travel to the sewer to scoop the mosquitoes.

4.2.3 Take the mosquitoes that were acquired to study the type of mosquitoes.

4.2.4 Prepare equipment to be used to study the type of mosquitoes, such as alcohol mosquito mat tray. A spoon for scooping mosquitoes Microscope camera

4.2.5. Use a spoon to scoop the mosquitoes out of the container that holds the mosquitoes and put them on the mosquito tray.

4.2.6 Add alcohol to the mosquitoes to make it easier to see the mosquitoes.

4.2.7 The camera water goes to the chronoscope, point it down at the mosquito baby and take a picture.

4.2.8 Observe the body of the mosquito to determine the type of mosquito.



Research Finding

This research is for the purpose of value Of the water in which the mosquito larvae live to determine the type of mosquito larvae along the sewer. The implementation of the plan was in accordance with the interests of the researchers of the students of Bueng Khong Longwittayakhom School. Bueng Khong Long Subdistrict Bueng Khong Long District Bueng Kan Province To study mosquito cubs in Ban Don Klang community. To meet research objectives The researcher analyzes the data using tables



Table 1 shows the pH of the water in the drain

	PH of the water			
The place	The time1	The time 2	The time3	Mean
The drain is closed.	8.1	8.0	8.3	8.13
Open drain	7.3	7.2	7.7	7.40

From Table 1, it was found that the pH of the water in the closed drain area and the open drains had a weak base. Closed drains have an average pH of 8.13, and open drains have an average pH of 7.40.

Table 2 shows the type and number of mosquitoes found.

Sewer characteristics	The time	Types of mosquitoes found				Found number (body)
		Aedes mosquito larvea	Puffed-bottom mosquito larvea	Tiger mosquito larvea	Annoyed mosquito larvea	
Closed pipe	1				/	1
	2				/	1
	3				//	2
Open pipe	1				//	2
	2				//	2
	3				////	4

From Table 2, it was found that in the closed drain and open drain areas, all mosquitoes of the same type were nuisance mosquitoes. From both tables it was seen that the water in the open and closed drains had the pH value. The base is the same and there is only one mosquito. It is possible that these young mosquitoes tend to live in the weakly-base water and in wastewater.

Suggestion

Further research should be studied.

01

It is wise to study mosquito-borne diseases in open sewer systems and closed drains.

02

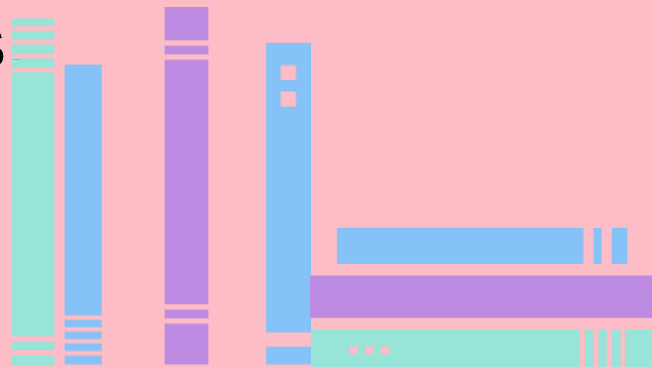
It should be studied whether the people in the surrounding communities suffer from the disease that is consistent with the type of mosquito found or not.

Conclusion and discussion

Research findings

This research is a survey research. The objective of this study was to study the types of mosquito larvae in closed drains and open drains. The survey site was a closed drain beside Ban Don Klang pharmacy, Bueng Khong Long district. Bueng Kan Province And an open drainage canal at the end of Don Klang Village, Bueng Khong Long District Bueng Kan Province

The results of the study showed that the pH was weak, the more mosquitoes were found than the medium-base pH. The mosquitoes found in closed drains and open drains are the only nuisance mosquitoes



Discussion

1. When we scooped water into the drain and took a pH measurement, it was found that the open drain had pH 7.4 and the closed drain had pH 8.13, since the drain area was the area where the drain from the dishwasher was received. The household waste water flows down the drain, causing the pH to be a weak base, a condition in which mosquitoes thrive. In water bodies where standing water is not clean

2. Species of mosquitoes found in sewers both closed and open, found that only young nuisance mosquitoes, due to nuisance mosquitoes, can grow well in sewage sources. High in organic matter They have good ventilation where Anopheles and Aedes can grow and live in clean water bodies. Without pollution, both mosquitoes were not found in the surveyed waterways.

