

MOSQUITO KEY BREEDING SITES AT THE PA SAK JOLASID DAM IN SARABURI PROVINCE, THAILAND

Students (Grade 11)

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INTRODUCTION

Mosquitoes are vectors of diseases







Dengue fever Aedes mosquitoes

Zika fever Aedes mosquitoes.

Lymphatic filariasis Tiger mosquitoes





Malaria Anopheles mosquitoes



OBJECTIVES





 To study the number and types of mosquito larvae found in 2 study areas

2. To compare data from the GLOBE database with the study sites





MATERIALS AND METHODS

Study site





Thailand country



Saraburi Province

Survey of mosquito larvae was conducted at Pa Sak Jolasid Dam Saraburi Province, the Central region of Thailand.



Pa Sak Jolasid Dam





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. Explore houses around Pa Sak Jolasit Dam and collect larval samples for classification.



for scooping and put the scooped \rightarrow Classification organism in a plastic bag.





Methods 4. GLOBE Observer: mosquito habitat mapper : www.globe.gov GLOBE Data User Guide THE GLOBE PROGRA Visualize Data Advanced Data Access Tool Retrieve Data (ADAT) **GLOBE** Data Data Entry GLOBE Data User Guid LOBE API Data Entry - New Desktop Visualize Data Find and use data with GLOBE's Advanced Data Access Tool. Users can refin searches using various parameters and then choose specific sites that contain GLOBE Program's app, GLOB he relevant measurements. Specific search parameters include Observer Select Data Entry - Old Deskto Protocol Proximity to Lakes or Rivers GLOBE API Date Range School/Teacher/Partner Date Count Range Elevation Range Data Entry - Old De retrieve Data (ADAT) Science Honor Ro Site Name Latitude/Longitude Ran Forms Training Site Country/State How Honor Roll is Calculated Email Data Entry (EMDE) Honor Roll Recognitio GLOBE DataTool Once users have chosen the site th filters to narrow the data search, or download the data as a comma-sepa value (CSV) file for a detailed analysis with their software of choice. The Advanced Data Access Tool also includes the option to download a summar file that compiles the amount of available data for each site of interest. User select protocols Choose globe data Click enter the Data Access Tool ilter by Protocol Advanced Data Access Tool Guiloon Atmosphere tructions Conlact GLOB Air Temperatur Air Temperature Month Air Temperature Noon 14605 Sites Fou Select a Filter Air Temperature Mosquito Habitat Select Data Filte **Apply Filter** Barometric Pressure Clouds Noons X Mosouito Hab Water Temperatu Clouds Water Transparency Precipitation Date Rang Precipitation Mo edosphere (Soil) - Se Snow Park Data Coust Range Soil Temperature Daile Belative Humidities Noon Soil Temperature Month Site Filters Relative Humidities Monthile Soil Temperature Noon **Relative Humidities** Soil Temperature Site Name Search for sites that include Country or State/Territor Protocol Bundle: Sel

Choose Mosquito Habitat Mapper and click Add to filter.

Select Download Summary Data and Load files to drive

trica GLOBE v-Schoe

In proximity of a lak

Advanced Data Ad	ccess Tool	Sigr 🜀 เลือกภาษา 🔻
Apply Filter Clear Share	Instructio	ons Contact GLOB
Select a Filter:	Instructions	
Data Filters	This tool allows you to find and retrieve GLOBE data	· · · · · · · · · · · · · · · · · · ·
Select Protocols	using several different search parameters. You will be presented a summary of sites that have data	a section of the
Date Bange	available based on your search parameters.From those sites you can further refine your search and or	
Data Count Range	download the data into a CSV file for detailed analysis A summary CSV file is also available that summarizes the amount of data available for each	1000
Site Filters	site.	
Site Name	General guidelines:	SI STREAM
Site Name	At least 1 protocol must be selected.	
Country or State/Territory	 Multiple filters are encouraged. Each filter type can have multiple parameters. 	
In proximity of a lake. or river:	 Even into type our type our type into a list of the site list will be included in the data CSV file. The "-" must be used for southern hemisphere latitudes and western hemisphere latitudes and western hemisphere latitudes. 	
- Constant	 The "-" must be used for southern nemisphere latitudes and western hen longitudes. 	isphere

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1 Sile M	School Name	Site Name	Protocol	Data Count	La	ritude	Longitude	Elevation
	Abdullrahaman bin A	400FL597112	Mosquito Habitat Ma	1	3	22,70048	58.55479	452,1
3 15302	Adonten SHS	31NBG367395	Mosquite Habitat Ma		1	5.78058	0.62245	4.9
4 6214	AEB-Escola	22365466401	Mosquito Habitat Ma	8		-25.83663	-48.53978	11
5 5214	AEB-Emola	22305466402	Mosquito Habitat Ma			-25.83573	-48.5398	
0 12704	AEBEscola	23LJC844488	Mosquito Habitat Ma	8	1	-15.81965	-47.94602	1098
7 12704	AEB-Escola	23LJC845489	Mosquite Habitat Ma		. 1	-15.81870	47.94508	1097.3
8 18549	AEB-Exola	25MBP601444	Mosquite Habitat Ma		.1	-5.92697	-35.16692	39.5
9 15310	Aek Ayomaya	47PPR692807	Mosquite Habitat Ma			14.3472	100,56901	0.8
10 15310	Aek Ayothaya	47PPR693869	Mosquite Habitat Ma			14.34901	100 56995	8.5
11 13225	Africa GLOBE v-Sch	36NVF470218	Mosquite Habitat Mi	÷	1	0.19723	32.52371	1201.5
12 13215	Africa GLOBE v-Sch	36NVF472218	Mosquito Habital Ma		. 1	0.19723	32.5255	1191
13 132254	Africa GLOBE v-Sch	36NVF477242	Mosquito Habitat Ma		1	0.21894	32.53	1154.6
14 13214	Alfica GLOBE v-Sch	36NVF488728	Mosquito Habitat Ma		1	0.20627	32.53988	1167.3
15 13602	Africa GLOBE v-Sch	36NVF498337	Mosquito Habitat Ma		2	0.30489	32.54886	1216.3
16 13245	Africa GLOBE v-Sch	36NVF504347	Mosquito Habitat Ma	(1	0.31393	32.55426	1201.9
17 13342	Africa GLOBE v-Sch	36NVF506343	Mosquito Habitat Ma		1	0.31031	32.55605	1221.2
18 13249	Africa GLOBE v-Sch	36NVF511349	Mosquito Habitat Ma		11	0.31574	32.50055	1260.5
19 16743	Africa Hope ONG	31NDG558853	Mosquite Habitat Ma	-	1	6.19973	2.60047	-106.1
20 16866	Africa Hope ONG	31N0H259089	Mosquito Habitat Ma	í	2	6.41294	2.32993	15.1
21 16887	Africa Hope ONG	31NDH259093	Mosquito Habitat Ma		.1	6.41655	2.32993	14,8
22 16887	Africa Hope ONG	31NDH259106	Mosquito Habitat Ma	é		6.42831	2.32991	17.7
23 (6887)	Africa Hope ONG	31NDH250088	Mosquite Habitat Ma		1	6.41203	2.33084	16.7
24 16887	Africa Hope ONG	31NDH262090	Mosquite Habitat Ma		. 1	6.41384	2.33264	16.7
25 16887	Africa Hope ONG	31N0H264090	Mosquito Habitat Ma		2	6.41385	2.33445	14,4
28 16886	Africa Hope ONG	31NDH269100	Mosquite Habitat Ma		1	6.4229	2.33896	13.6
27 16745	Africa Hope ONG	31N0H518248	Mosquito Habitat Ma	()	31	6.55702	2,56401	40.8
28 16897	Africa Hope ONG	31NDH555221	Monquito Habital Ma		. 1	6.53262	2.5975	15.1

Data Mosquito Habitat Mapper











Ae. aegypti, Ae. albopictus, Culex spp.Armigeres spp. and **Toxorhynchites spp.**

• Most of the larval species in Pa Sak Joalasid Dam is Aedes albopictus. Because they feed on the blood at the mammals near the dam which makes them breed fast

• Most of the larval species in Supatta Resort is *Toxorhynchites* because this species of larvae's prey on other larvae's to survive



Natural /Man made Containers



• Most of the containers found were man made containers



Metal/ Plastic /Earthen /Other Containers

- Most Other containers were found at the Supatta Resort.
- Most Plastic containers were found at the Pa sak Jolasid.



Lid / without Lid Containers



 Found that there were more containers without lids than those with lids.

 Found that the most containers at the Supatta Resort



Water Levels (0%, 25%, 50%, 75%, 100%)

- Most containers with a water content of 25% are found in Pa Sak Jolasid.
- It was found that in the Pa Sak Jolasid the container with the least water was the one with 100% water.



Conclusion

- 1. At Pa Sak Jolasid Dam, Aedes albopictus was found the most, while at Supatta Resort, Toxorhynchites was found the most.
- 2. At Pa Sak Jolasid Dam and Supatta Resort, the most common containers found were man-made.
- 3. At Pa Sak Jolasid Dam, the most common material found was plastic, while at Supatta Resort, the most common containers were other types, such as used tires.
- 4. At Pa Sak Jolasid Dam, most containers no lids were found, while at Supatta Resort, only containers no lids were found.
- 5. At Pa Sak Jolasid Dam, the highest proportion of water found was 25%, while at Supatta Resort, the highest proportion of water found was 70%.

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