

# THE VERTICAL DISPERSAL OF *Aedes aegypti*: A SURVEY AT SELECTED CONSTRUCTION SITES IN KUALA LUMPUR

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## INTRODUCTION

- *Aedes aegypti* is well known as the main dengue vector in Malaysia. The species with a remarkable survival and spread widely serves as the primary dengue vector.
- Construction sites have been identified as contributing to a substantial increase in mosquitoes' breeding sites. The suitable environment at the construction sites will facilitate the female mosquitoes to obtain blood sources from exposed construction workers.
- This makes the construction sites a frequent target of accusations for the spread of dengue outbreaks in the surrounding localities.

## OBJECTIVE

- In this study, we aimed to investigate the vertical dispersal of *Ae. aegypti* and its preferred breeding sites in selected construction sites in Kuala Lumpur.

## METHODOLOGY

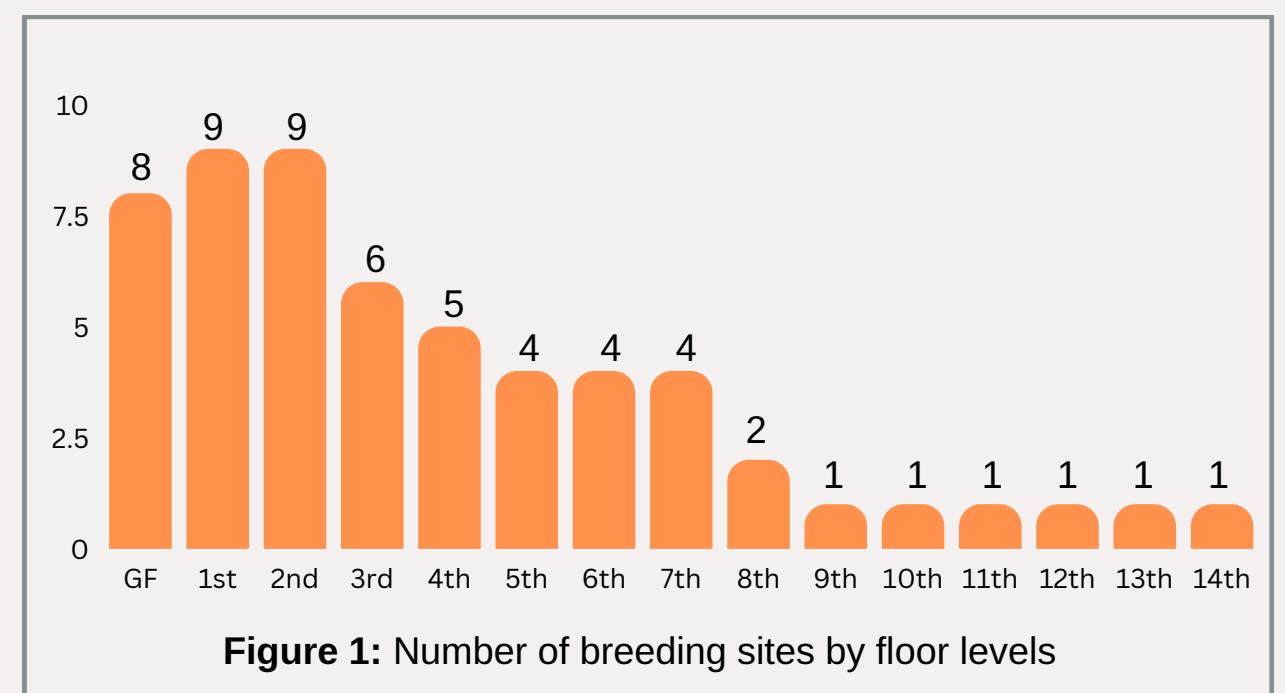
- Nineteen construction sites were surveyed in 2018 for the presence of mosquito larvae. All floor levels, from the ground floor to the fourteenth floor, were inspected for mosquito breeding sites.
- We examined all water-holding containers, recorded their type, and counted them. Mosquito larvae from each positive container were transferred to the laboratory for species identification, and the location and type of container were specifically recorded.
- Data entry and statistical analyses were conducted using Microsoft Excel and SPSS Version 26.0.

## ACKNOWLEDGMENTS

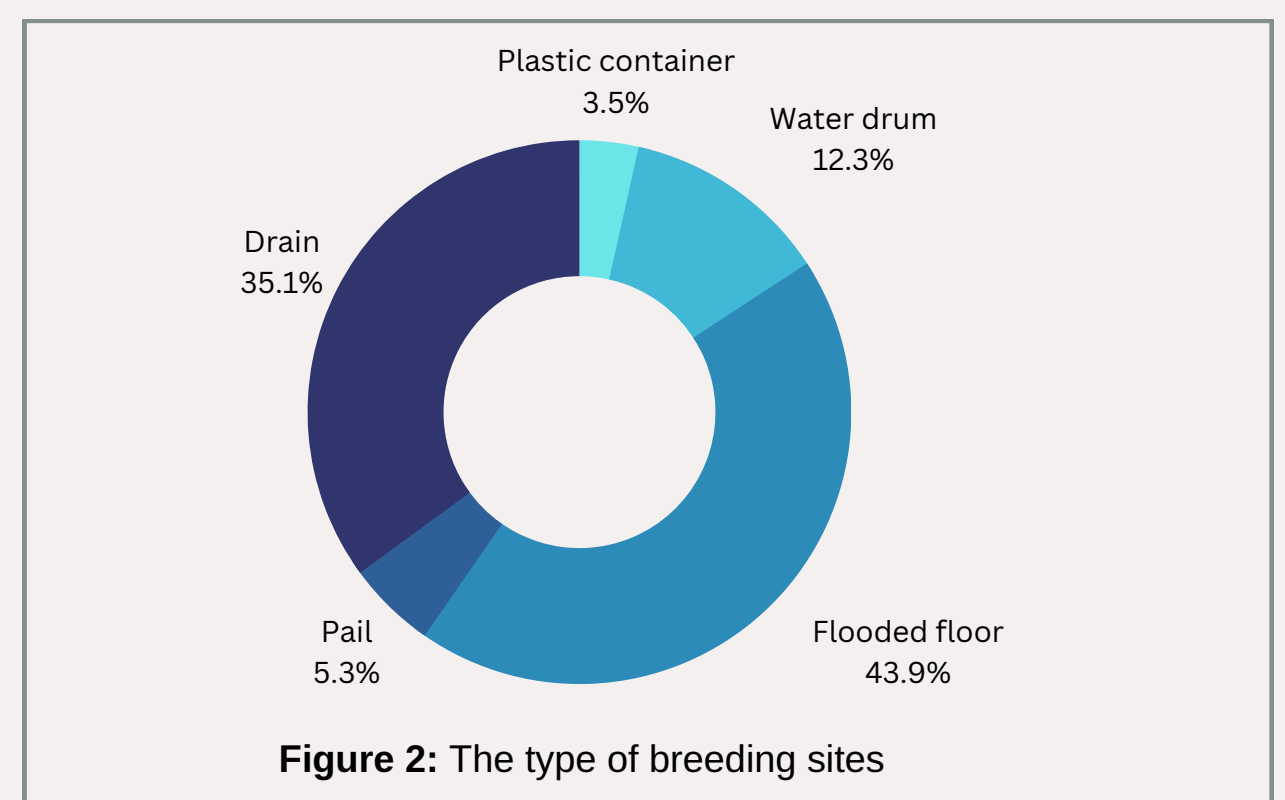
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## RESULTS

- Our results indicate that, *Ae. aegypti* breeding sites were found on all floor levels, with the highest abundance observed from the ground floor to the second floor (up to 9.0 meters high) (Figure 1).
- The results of the Kruskal-Wallis test show a significant difference in the number of breeding sites at different floor levels of the building ( $H=28.60$ ,  $df=2$ ,  $P=0.00$ ).



- The most productive breeding site were flooded floor, drain, and water drum (Figure 2).



## CONCLUSION

- We found that *Ae. aegypti* can spread to the highest floor levels, indicating the species' survival capacity.
- Moreover, all positive containers were located in common places, making them easily accessible for workers to complete the elimination process.
- This study suggests that healthcare personnel should concentrate their efforts on preventing and controlling *Ae. aegypti* in areas with lower floor levels and common breeding sites, thereby attaining more effective and efficient outcomes while conserving time and manpower.

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