

## INTRODUCTION

In the forest, dead wood is an important stabilizing component because it serves as the substrate for plants and also fungi, facilitates nutrient cycling and energy flow preserves hydrology and soil retention in most forest ecosystem. Deadwood characteristics such as position and size of dead wood influence macrofungal diversity in the natural forest and some fragmented forests. Information on the dead wood characteristic that is suitable to grow certain types of macrofungal is scarce. This study will help the relevant authorities including the Forestry Department of Peninsular Malaysia to have better knowledge and understanding of the nation's fungi resources and its effect to forest conservation

## OBJECTIVES

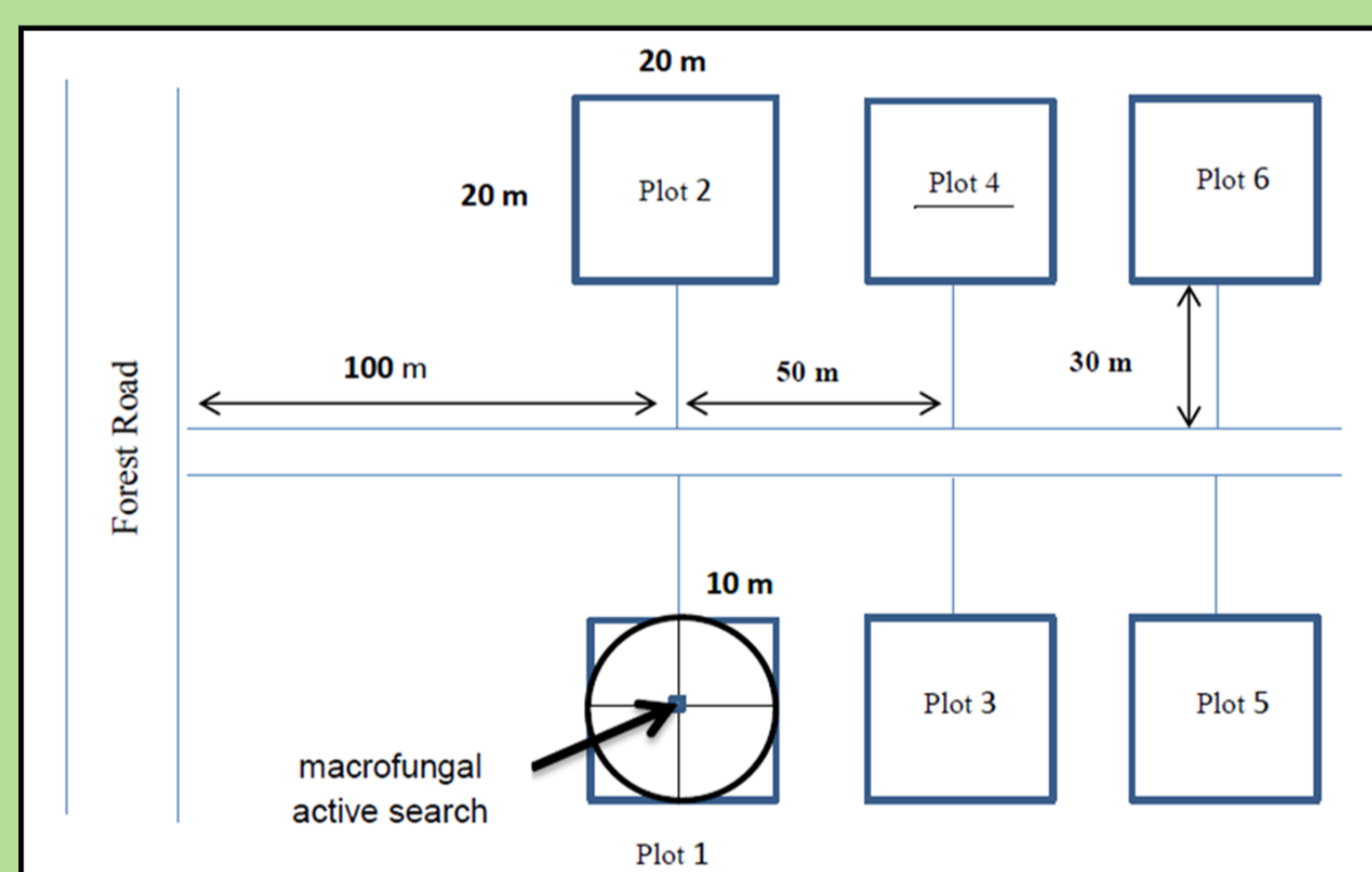
- To contrast the macrofungal abundance, morphospecies richness and type of substrate in Sg. Menyala Forest Reserve (HSSM) and Kenaboi Forest Reserve (HSK).
- To determine the dead wood characteristics such as log or wood position, size, and decay stages that was colonized by macrofungal in Sg. Menyala Forest Reserve (HSSM) and Kenaboi Forest Reserve (HSK).

## METHODS

### Macrofungal Collection

All sampling took place from January 2018 until March 2018 which is very suitable to conduct this research due to the rainy season. Macrofungal inventories were done in the sampling units for about 20 - 30 minutes. A total of 30 sampling plots with 20 m x 20 m (length and width) were opened. The distance of every plot will be 50 m apart. GPS reading was taken and recorded every 30 meters from the logging road to determine the coordinates.

### Experimental Design



## RESULTS

### Classification of Substrate in HSSM and HSK

NO	Classification of Substrates	HSKJ	HSSMPD
1	Living Tree	1	6
2	Dead Wood	118	340
3	Leaf	1	65
4	Soil	73	183
5	Others(Seed,Bamboo Culm)	17	0
	TOTAL	210	594

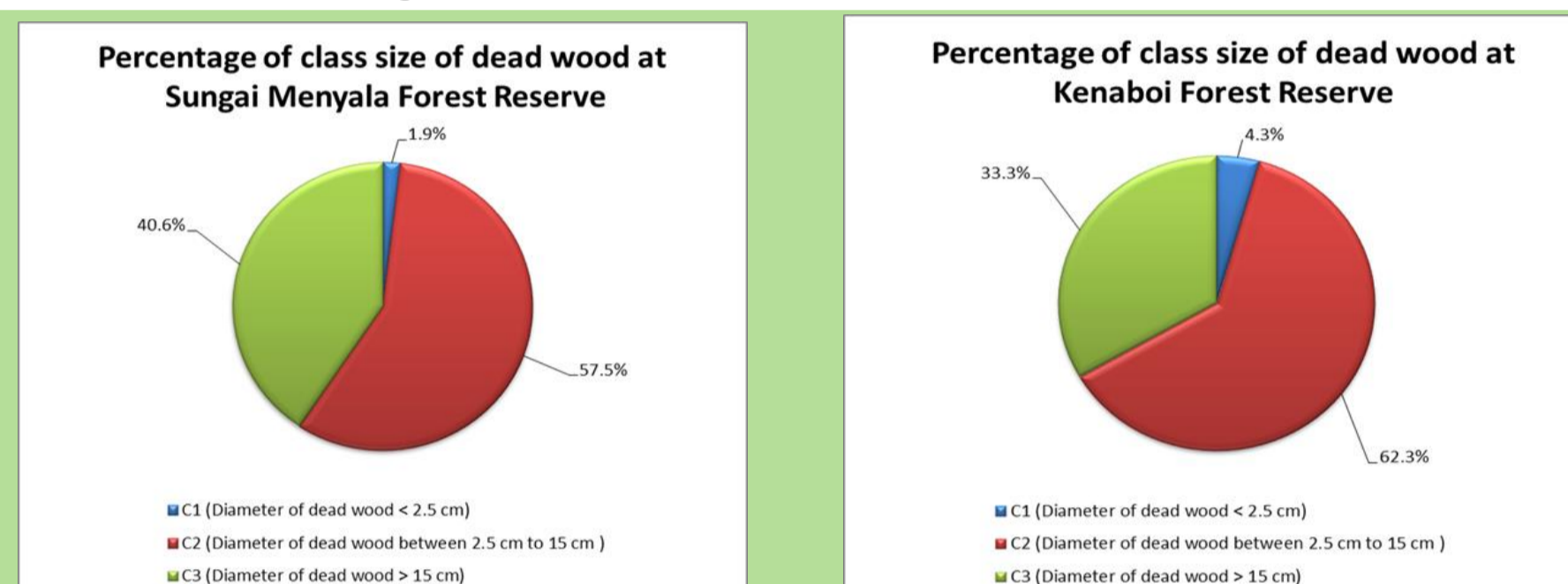
### Comparison of Macrofungal Abundance, Morphospecies Richness and Type of Substrate in HSSM and HSK

- From the study conducted, the reason for a highly significant difference result is because the substrate for both study areas per plot was almost similar.

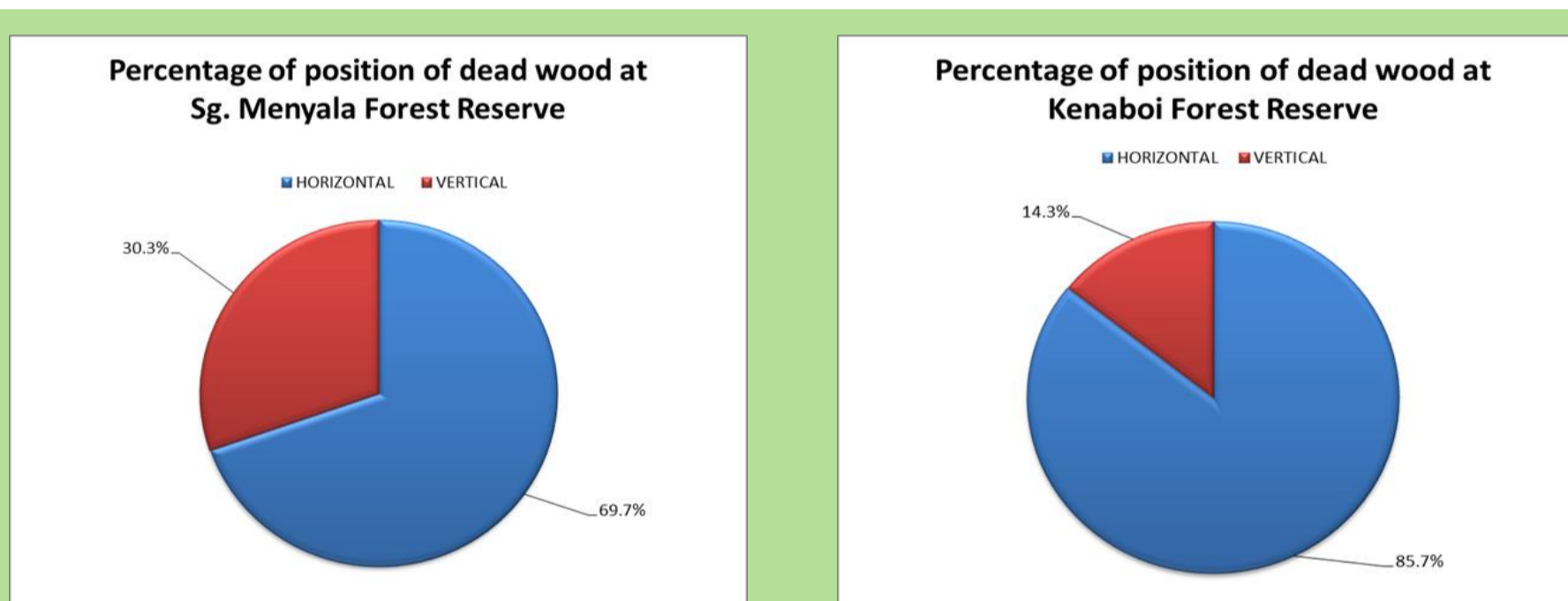
### Effect of Type of Substrate on Macrofungal Diversity

- In each study areas, when the type of substrate increase, the macrofungal abundance, and macrofungal richness also increase.

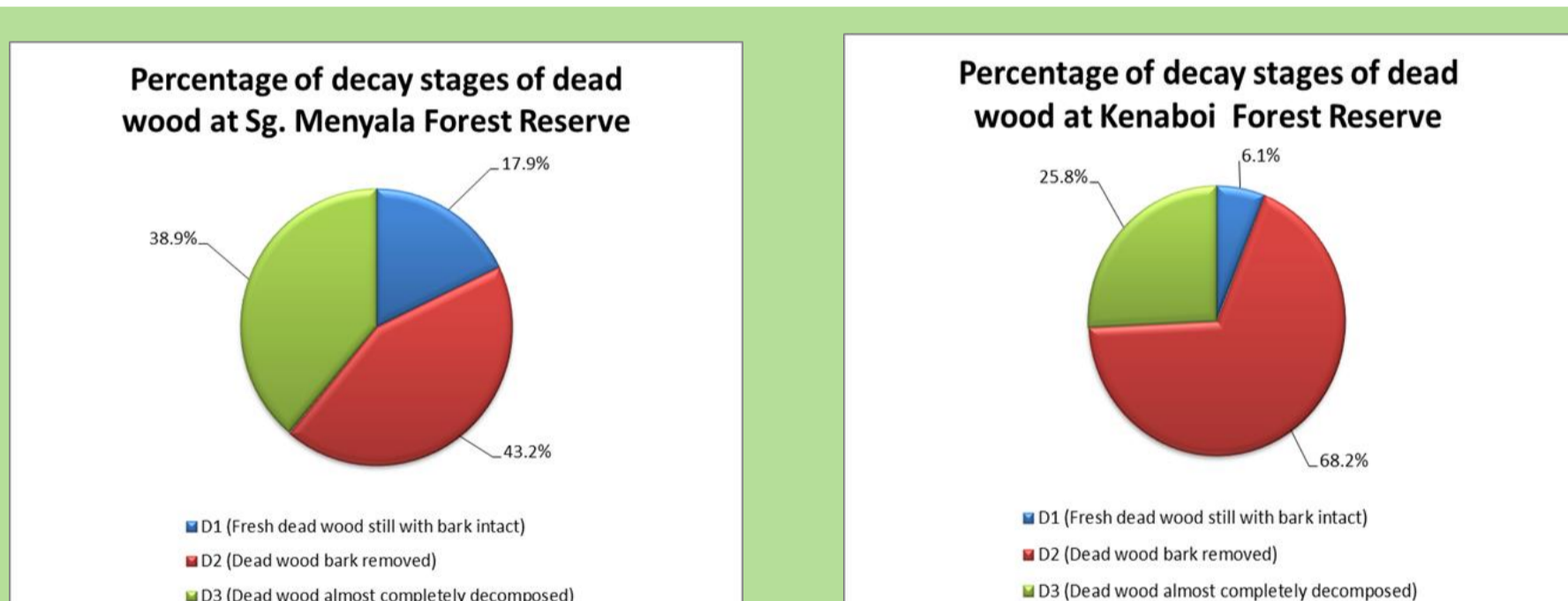
### Percentage of Class Size of Dead Wood in HSSM and HSK



### Percentage of Position of Dead Wood in HSSM and HSK



### Percentage of Decay Stages of Dead Wood in HSSM and HSK



## CONCLUSIONS

- Macrofungal abundance and macrofungal richness were higher in HSSM compared to HSK. This study shows that HSSM and HSK have significantly difference type of substrates.
- For dead wood sizes, the result shows the Class 2 (diameter of dead wood between 2.5 cm to 15 cm) is dominant in both study areas. Meanwhile, for the position of dead wood, the horizontal position has the highest percentage of macrofungal diversity compared the vertical position. Lastly, in terms of decay stages, it can be shows that Stage 2 (dead wood bark removed) is dominant in both study areas
- Therefore, efforts conserving these forests is necessary since it provides the conducive environment for macrofungal diversity.

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## ACKNOWLEDGEMENT

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