

The Classification and Importance of Macrofungi Species in UCS Forest, UiTM Puncak Alam

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Structured Abstract

Background: Fungi represent a diverse organism and are mainly distributed on the earth. Malaysia is well-known for its abundant biodiversity, which is home to a diverse collection of fungi especially macrofungi species. A study on the diversity of macrofungi species has been conducted in University Campus Selangor (UCS) Forest, UiTM Puncak Alam from March to May 2024. The purpose of this study is to identify the macrofungi diversity and to access the potential contribution to the development of food industry, medical applications, or ecosystem that can be found in UCS Forest.

Methods: This study used Google Lens, a mobile image recognition application, and guidance of mycologist to accomplish its objectives. Hence, transect method was used to determine the diversity and distribution of macrofungi species which involves walking a straight path while conducting observation and gathering data of the species found by taking photograph at certain intervals along the path. Macrofungi found was identified and classified into their order, family and species.

Results: Commonly found species belonged to the order Polyporales, Russulales, Agaricales and Boletales. A total of 472 individual macrofungi from 16 species such as *Amauroderma rugosum*, *Amauroderma rude*, *Microporus xanthopus*, *Stereum fasciatum*, *Trametes versicolor*, *Pleurotus ostreatus*, *Ganoderma applanatum*, *Hexagonia tenuis*, *Collybia cirrhata*, *Rhodofomes cajanderi*, *Clitopilus prunulus*, *Leucocoprinus fragilissimus*, *xanthoconium affine*, *Rusulla heterophylla*, *Marasmiellus candidus*, and *Trametes betulina* were found at the study area. Besides, macrofungi species that have importance in the food industry, medical application or ecosystem are discovered. *Amauroderma rugosum*, *Amauroderma rude*, *Ganoderma applanatum*, *Microporus xanthopus*, *Trametes versicolor*, *Hexagonia tenuis*, *Trametes betulina*, *Clitopilus prunulus*, *Pleurotus ostreatus*, and *Rhodofomes cajanderi* were macrofungi that have medicinal properties which importance to medicinal industry. Meanwhile, species like *Pleurotus ostreatus*, *Xanthoconium affine*, *Rusulla heterophylla*, and *Clitopilus prunulus* which edible can be used as replacement of food which contains several nutrients thus can be develop in food industry. Every macrofungi species discovered was important for maintaining the health of the ecosystem.

Conclusion: In conclusion, the macrofungi diversity in UCS Forest were found from 16 species and underscore the significance of conserving these often-overlooked organisms, which are essential for the development of food industry, medical applications, and ecosystem functioning.

Keywords: Macrofungi, UCS Forest, Transect method, Macrofungi importance

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