

**Identification and Characterization of Common Mushrooms Found in  
Anuradhapura District – Sri Lanka**

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Mushrooms are a highly diverse, ecologically significant group of fungi that play different roles in the ecosystem. They have highly specific growth patterns throughout the year which can vary their morphology depending on the different geographical locations and climatic zones. This research directs a comprehensive (characterization) analysis of common mushrooms found in the Anuradhapura district during the second inter-monsoon season. Initially, samples were collected during the selected period, from the Mihinthale Sanctuary and Rajarata University premises. (At the same time, photographs were taken to visualize their different morphological characters like, cap shape, gill shape, gill attachment, stalk shape, color etc.) Then they were cultured on potato dextrose agar media to obtain their fungal cultures. Using those cultures, DNA was extracted using CTAB fungal DNA extraction methodology. For the confirmation of morphologically characterized mushrooms, their (ITS1 region was PCR amplified) and sent for sequencing. Depending on the morphological results out of 10 selected samples there were *Termitomyces* spp, *Calocybe* spp and *Calvatia* spp. The study follows a systematic approach combining field surveys, morphological observations and molecular analysis to establish a solid basis for mushroom species identification. Using molecular tools, we aim to overcome the (traditional limitations) associated with morphological classification, providing a more accurate and reliable means of distinguishing mushroom species. It is hoped that the results of this research will contribute to the growing body of knowledge surrounding the morphological characteristics and molecular characterization of fungal diversity.

**Keywords:** *Mushroom, Morphology, Characterization*