

**New Species of Termitomyces (Lyophyllaceae, Basidiomycota) from Sabah
(Northern Borneo), Malaysia**

ABSTRACT

The genus *Termitomyces* (Lyophyllaceae, Basidiomycota) is often associated with fungus-feeding termites (Macrotermitinae) due to their strong symbiotic relationships. The genus is widely found exclusively in certain regions of Africa and Asia. They are recognized as edible mushroom within Southeast Asia as well. But it is often misidentified based on morphology by the local communities especially in Malaysia for *Chlorophyllum molybdites* which is a highly poisonous mushroom. Thus, it is necessary to study the genus for Malaysia with the synergy of using both morphological and molecular identification. In this study, we aim to describe another new species as an addition to the genus *Termitomyces* found within Sabah, Malaysia. We generated two new sequences (nrLSU and mtSSU) for the new species and a total of 28 nrLSU and mtSSU sequences were retrieved from GenBank for the phylogenetic analysis using maximum likelihood and Bayesian inferences. We identified that the new collection from Sabah province is a new species and named as *Termitomyces gilvus* based on the termites found in the mound. A phylogeny tree made from the concatenated genes of LSU and mtSSU suggests that *T. gilvus* is closely related to *T. bulborhizus* from China. According to our results, the combination of molecular and morphology proved to be a robust approach to re-evaluate the taxonomic status of *Termitomyces* species in Malaysia. Additional surveys are needed to verify the species diversity and clarify their geographic distribution