

### B-34 Studies on soil mycoflora in disturbed and undisturbed forest soils

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Isolation, identification and enumeration of soil fungi from an undisturbed area (dry mixed evergreen forest) in Sigiriya and a disturbed area (Teak plantation) in Habarana and comparison of dilution plate method and soil plate method for isolation of fungi were carried out during dry and wet seasons.

In this study, 54 fungi species were isolated by soil dilution plate method from both sites during both seasons; 44 of them were identified to genus level. These 44 species belong to 12 genera; *Penicillium* was the most abundant genus which included 13 species. *Aspergillus*, *Verticillium*, *Mucor*, *Fusarium*, *Trichoderma*, *Saccharomyces*, *Curvularia*, *Geomyces*, *Cladosporium*, *Sporothrix* and *Paecilomyces* were the other identified genera.

The genera *Penicillium*, *Aspergillus*, *Mucor*, *Verticillium*, *Trichoderma*, *Fusarium* were also isolated by soil plate method. Most common species of the isolated strains belong to the class Deuteromycetes, the others belong to Ascomycetes and Phycomycetes. The density of fungal genera which were isolated by soil plate method was lower than the soil dilution method and there was a significant difference between the 2 sites in the dry season, when the isolations were done by dilution plate method. The fungal density of the undisturbed site was slightly higher than the disturbed site.

Eight of the most common fungal genera were tested for their growth in 3 different carbon sources i.e., sucrose, pectin and cellulose. Highest growth was seen in the presence of sucrose; and the lowest on cellulose. Four of the most common genera were further tested for cellulase activity on Carboxy Methyl Cellulose agar.