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Survey on the distribution of subterranean entomopathogenic fungi in Southern part of Sri Lanka

The soil is a excellent habitat for microorganism and Arthropods. The majority of arthropods live exclusively in the soil, but such as many pterygote insects spend only a part of their life cycle in the soil, usually the larval stage or the pupal stage. The interactions between the soil micro flora and athropods are numerous and greatly influenced by the physicochemical parameters of the soil.

During the present study, distribution pattern of possible soil mycopathogens of insects in the southern part of Sri Lanka was studied. Soil samples were collected from four major sampling sites along the southern coastal belt. Entomopathogenic fungi (EPF) were extracted using the bait insect, *Galleria mellonella* (Greater wax moth) larvae. The physicochemical parameter of the soil was also measured using the standard soil analysis methods. Pathogenicity of the extracted fungi was confirmed by the reinfection of *G. melloneella* larvae using the extracted fungal spores.

Abundance of Entomopathogenic fungi was higher in the wet zone compared to that of the dry zone. Soil temperature and organic contents were negatively related to the abundance of EPF. High salinity favours the abundance of these mycopathogens and the samples collected from coastal zone had more EPF than in samples collected from the inner sites.