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**Isolation and molecular identification of endolichenic fungi inhabiting in the lichen
Pseudocypherllaria sp. available in Sri Lanka**

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Lichens formed by the symbiotic association of fungi and algae, are recently known as hosts for endolichenic fungi that live asymptotically within the lichen thalli, similar to plant endophytes. Even though their diversity, composition and distribution within and between the host lichens were not comprehensively studied, their role is believed to be important for the succession and evolution of the host. *Pseudocypherllaria sp.* is one of the common foliose lichens found in tropical mountain forests in Sri Lanka. A preliminary investigation of the taxonomy of the endolichenic fungal community, that occur within the particular lichen, was carried out in a recent project. Thalli samples of *Pseudocypherllaria sp.* were collected from the Hakgala strict natural reserve. Endolichenic fungi were isolated from the segments of healthy thallus, according to the surface sterilization technique. Fungal DNA from pure cultures were extracted and the Internal Transcribed Spacer (ITS) region of rDNA was selectively amplified by polymerase chain reaction (PCR). Sequences of amplified DNA were aligned with already existing sequences in Genbank using Basic local alignment search tool (BLAST) algorithm of the National Center for Biotechnology Information (NCBI). The total number of fungal strains isolated from *Pseudocypherllaria sp.* was 18 and the identity of 14 were confirmed by molecular taxonomy. Pure cultures of these identified fungi were vouchered in sterile water, and deposited at the collection maintained by the Department of Chemistry, University of Kelaniya. The presence of endolichenic fungi within the particular lichen and their ability to succeed independently on synthetic growth media, were confirmed by this study. According to the study *Daldinia*, *Hypoxyton* and *Xylaria* species were the dominants, with two *Daldinia* species, three *Hypoxyton* species and two *Xylaria* species. In addition, *Sordariomycetes*, *Fusarium*, *Graphium*, *Penicillium*, *Giberella*, *Aspergillus* and *Paecilomyces* species were also identified. As reflected by this result the endolichenic fungal community that occurs within the *Pseudocypherllaria sp.* shows comparatively high diversity at the genus and species levels. The abundance of such diverse fungal populations within the same lichen species suggests that they may have a defined important ecological role that affects the successful colonization of the lichen.

Keywords: Endolichenic fungi, molecular taxonomy, *Pseudocypherllaria sp.*

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