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Identification of Two *Ganoderma* (Ganodermataceae, Polyporales) Species Collected in Central Province, Sri Lanka

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Ganoderma (Ganodermataceae, Polyporales) is a wood-decaying mushroom genus, known for its rigid, woody fruiting bodies. With over 300 species distributed worldwide, only a few, such as *G. lucidum*, are widely recognized for their ethnomedicinal value and are in high demand in the food and supplement industries due to their bioactive properties. However, the full diversity of *Ganoderma* remains understudied, particularly in Sri Lanka. This study collected ten putative *Ganoderma* specimens from the University of Peradeniya and surrounding areas. Field photographs and notes were further analysed at the laboratory. Among the ten collected samples, two were selected for detailed study based on their high abundance in the area, assuming they may be dominant species in this specific habitat. Mycelial cultures were established from inner tissues of fruiting bodies on potato dextrose agar (PDA) under aseptic conditions and incubated in the dark at room temperature for 2–3 weeks. Macro- and micro-morphological characteristics of the basidiocarps and cultures were documented. DNA was extracted from fresh fruiting bodies using a modified CTAB-based method optimized for fungal DNA extraction. PCR optimization included a temperature gradient (51–59 °C), the use of bovine serum albumin (BSA) to counteract polyphenolic inhibitors, and adjustments to the $MgCl_2$ concentration. The internal transcribed spacer (ITS) region was amplified using ITS5 and ITS4 primers, followed by DNA sequencing. BLAST analysis of the resulting sequences revealed 99–100% identity (E-value < 0) with *G. australe* (LC084733.1) and *G. applanatum* (OR062403.1). Although it has been mentioned in several publications that both species have been previously recorded in Sri Lanka, no reliable visual or morphological descriptions of them exist in the local or international scientific publications or image repositories. This study, therefore, provides the first detailed morphological and molecular documentation of these two species from Sri Lanka. It highlights the abundance and taxonomic significance of *Ganoderma* species in the Peradeniya region, contributing foundational data for future taxonomic and phylogenetic research on this genus in the country.

Keywords: *Ganoderma*, ITS region, molecular identification, morphological analysis