



Postgraduate Institute of Science
University of Peradeniya



Volume 11

PROCEEDINGS

PGIS RESCON

RESEARCH CONGRESS

2024

**MORPHO-MOLECULAR CONFIRMATION OF *Ganoderma sichuanense*
(GANODERMATACEAE, BASIDIOMYCOTA) FROM SRI LANKA**

**B.M. Premarathne^{1,2}, M.K. Wimalasena³, S.C. Karunarathna^{1,2,4*},
H.M.S.P. Madawala^{1,5}, C. Bamunuarachchige³, N.N. Wijayawardene^{3,4,6}
and S. Wijesundara²**

¹Postgraduate Institute of Science, University of Peradeniya, Sri Lanka

²National Institute of Fundamental Studies, Kandy, Sri Lanka

³Department of Bioprocess Technology, Faculty of Technology,
Rajarata University of Sri Lanka, Mihinthale, Sri Lanka

⁴Center for Yunnan Plateau Biological Resources Protection and Utilization, College of Biological
Resource and Food Engineering, Qujing Normal University, China

⁵Department of Botany, Faculty of Science, University of Peradeniya, Sri Lanka

⁶Tropical Microbiology Research Foundation, Pannipitiya, Sri Lanka
*samanthakarunarathna@gmail.com

Ganoderma, a globally distributed genus of wood-decaying fungi, is a significant contributor to the global economy. Known as bracket or shelf fungi, *Ganoderma* species belong to the family Ganodermataceae and order Polyporales. It has been used medicinally in Asia for over 2,000 years and is now industrially cultivated, making a substantial economic impact primarily due to its medicinal benefits rather than its nutritional value. They are not classified as edible mushrooms due to their thick, corky, and rigid fruiting bodies. Despite the rich biodiversity of Sri Lanka, the diversity of *Ganoderma* species has yet to be comprehensively recognized. Accurate identification of wild mushrooms is crucial for understanding their biodiversity and ecological functions. This study aimed to bridge this gap by identifying and recording new *Ganoderma* species in Sri Lanka. Field surveys were conducted in Kandy District to collect specimens, which were then subjected to detailed macroscopic and microscopic examinations. The molecular phylogenetic analysis of the internal transcribed spacer (ITS) gene sequence of *Ganoderma* species was employed to ensure accurate species identification. The results of the phylogenetic analysis confirmed the presence of *G. sichuanense* in Sri Lanka, a species known for its medicinal properties. Although several publications have mentioned the presence of *G. sichuanense* in Sri Lanka, this is the first report with a complete description and phylogenetic analysis of the species. Identifying the *Ganoderma* species enhances the understanding of the fungal biodiversity of Sri Lanka. This finding underscores the rich fungal biodiversity on the island and provides the foundation for future studies on their ecological roles and medicinal potentials.

Financial assistance from the Tropical Microbiology Research Foundation is acknowledged

Keywords: *Ganoderma sichuanense*, Macrofungi, Medicinal value, Polyporales, Wood decaying fungi