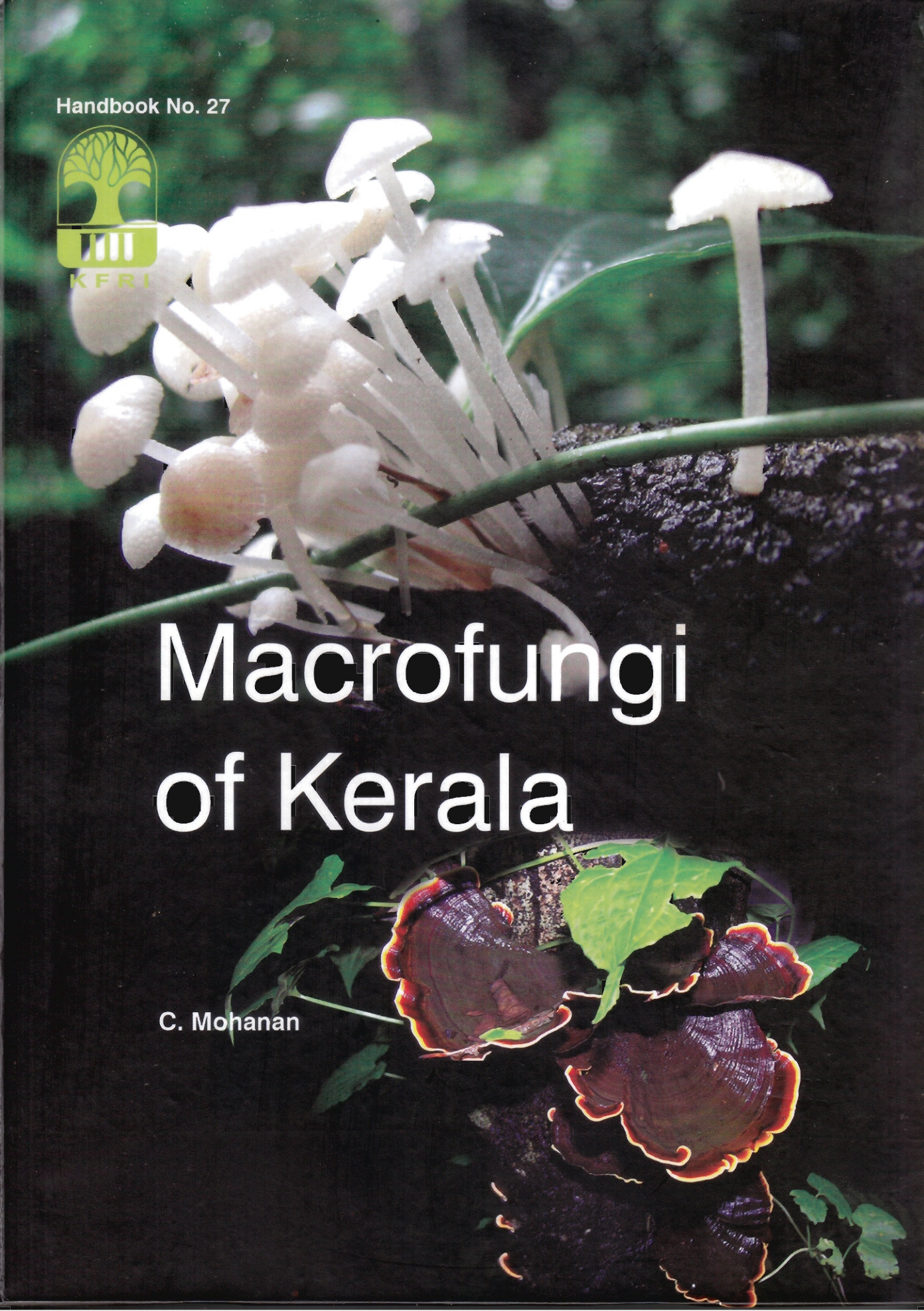
Handbook No. 27

KFRI

# Macrofungi of Kerala



C. Mohanan

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# MACROFUNGI OF KERALA

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# Preface

This Handbook is intended to provide a systematic account of the macrofungi in different forest ecosystems of the Kerala part of the Western Ghats. The Kerala State represents an epitome of the Western Ghats in many respects and the diverse types of forest ecosystems support unique assemblage of biological communities including macrofungi. High rainfall, immense litter load on forest floor together with tropical humid climate provide a conducive environment for the growth and development of macrofungi on different substrata. However, information on macrofungi of the State is very meagre and limited to certain groups of Agaricales. Though, I have worked on polypores of the Western Ghats during 1980s, most of the time in my research career has been devoted to plant pathogenic microfungi. At the fag-end of my career, an ambitious project on macrofungi of this region was undertaken to bring out a systematic account of the same. Representative forest areas in different forest ecosystems were systematically surveyed and more than 4000 macrofungal specimens were collected and processed. Altogether 550 macrofungal species belonging to 166 genera under 51 families were identified and described. Of these, a large number of genera and species are reported for the first time from India; more than 360 species are new records from the State and 15 new taxa are described. The recent taxonomic concept based on the emerging information on molecular phylogenetic data has been followed and taxa have been rearranged and described. More than 800 colour photographs of macrofungi taken by me were included in this treatise; more than 400 microscope-phototube drawings inked by me were also included. Information generated through research projects entitled "Biodiversity of Terricolous and Lignicolous Macrofungi of the Kerala part of the Western Ghats" sponsored by Ministry of Environment and Forests, Government of India and "Macrofungi of Kerala: Biodiversity and Biosystematics" sponsored through KFRI Plan Fund, granted to the author has been used for the preparation of this manual. The author wishes to acknowledge with gratitude to the MoEF, Govt. of India and to Dr. K.V. Sankaran, Director, KFRI for encouragement and support. Research support rendered by Sri. P.M. Sumesh, Research Fellow, especially on Polypores and excellent technical supports rendered by Mr. P. Rajeshkumar, Mrs. K.B. Anila, Mr. Bijubal, and Mrs. Salini are gratefully acknowledged. Thanks are also due to Mrs. Rugmini for word processing the manuscript. I hope this volume will be useful to students, teachers and researchers in mycology and fungal biodiversity.

With immense pleasure and gratitude I wish to dedicate this volume to Dr. K.M. Leelavathy, Emeritus Professor, Department of Botany, Calicut University, my teacher who did pioneering work on Agaricales of the State.

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Dr. C. Mohanan, M.Sc. (Calicut University), Ph.D. (Cochin University of Science & Technology) has worked extensively on fungi of the Western Ghats, Kerala. More recently, he has carried out biodiversity studies on macrofungi and microfungi including vesicular arbuscular mycorrhizal fungi of the Western Ghats. Dr. Mohanan is Senior Scientist and Head of Forest Pathology Department of Kerala Forest Research Institute, where he spent more than 32 years. Dr. Mohanan has published more than 150 research papers in national and international journals, edited and authored several books, handbooks and information bulletins. The recently published books include:

- Rust Fungi of Kerala (published by KFRI)
- Mushrooms of Kerala (published by Kerala State Biodiversity Board)
- Biodiversity of Plant Pathogenic Fungi of the Western Ghats (MoEF, New Delhi)
- Diseases of Bamboos in Asia: An Illustrated Manual (published by INBAR, Beijing, Eindhoven)