



INTRODUCTION

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Fungi are a major component of tropical ecosystems throughout the world. They are not simply an additional element to the biological variation on Earth, but are an integral part of life in the biosphere and they have a functional role in any ecosystem. They have a major role in the decomposition process, in mineral and nutrient cycling, in soil formation and structure, in causing diseases to plants and animals and also are commercially exploited in fermentation and in the production of antibiotics and secondary metabolites. In addition to these, they will also serve as indicators of the health of ecosystems and environmental pollution. According to Hawksworth (1991), fungi may be 'key stone' species and if lost would lead to major change in the ecosystem.

The tropics cover an immense area and encompass the largest range of climates and habitats on Earth. According to Moncalvo (1997) most of the fungal species remaining to be described are probably to be found in the tropics because of its vastness, number of unexplored habitats and the existence of a latitudinal biodiversity gradient with the tropics richer in taxa. According to Hawksworth (1991), only 5% of the Earth's estimated 1.5 million fungi are currently known. This has caught the attention not only of mycologists but also of industrialists, ecologists and conservationists. Therefore, study of the taxonomy, biology and distribution of tropical fungi has great relevance.

The agaric flora of several parts of the Indian subcontinent are completely unexplored still. As Watling & Gregory (1980) noted, the number of agarics known from India is less than one tenth of that for the world and much less than that of British Isles. Kerala, which is floristically the richest state in India, was mostly neglected until recently. The few attempts made to study the agarics of

this region are those of Sathe & Daniel (1980), Bhavani Devi et al (1980), Leelavathy & Little flower (1981, 1986), Heinemann & Little flower (1984), Leelavathy et al (1987), Heinemann & Leelavathy (1991) Bhavani Devi & Nair (1987), Manimohan & Leelavathy (1987a, b, c, 1988a, b, c, d, e, 1989a, b), Manimohan et al (1988, 1995), Vrinda et al (1995, 1996a, b, 1997a, b, c), Abraham et al (1995, 1996) and Pradeep et al (1996a, b) and a total of about 300 taxa from different parts of Kerala have been reported by these workers.

A perusal of literature on the Indian agarics revealed that no systematic effort was so far made to study the Pluteaceae Roze of India. There are only sporadic reports on this group and so far only 32 taxa (Table I & II) have been reported including two species from Kerala. This situation provided the background for the present study.

The present treatise is the results of a preliminary study of the family Pluteaceae Roze as it occurs in Kerala from 1993 to 1997. The author is of the opinion that this study is not the final word on Pluteaceae Roze of Kerala, as earlier studies on the agarics of this region revealed that the agaric flora is very rich and cannot be fully analysed during a period of 4 to 5 years, for which the study was intended. However, this study may instigate further studies on Pluteaceae Roze in India as well as contribute something to the understanding of the total fungal diversity of Kerala.