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# Diversity and Taxonomy of Fungi of Meghalaya Region

**R. Sudeep Toppo, D. Bahukhandi, Deeba Kamil and T. Prameela Devi**

*Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi – 110 012, India*
*E-mail: toppo68@gmail.com*

**Abstract—***A survey was conducted in two unexplored hill districts of Meghalaya state i.e West Khasi Hills and Jaintia Hills. More than 40 diseased plant samples and 125 soil samples were collected to investigate the possibility of diverse group of fungal associations. One hundred fifty four fungal isolates were made and were identified based on macro and microscopic characters. The morphological (Cultural and microscopic) characters revealed that these fungi belong to 25 genera and 38 species of Ascomycetes, Basidiomycetes and Zygomycetes. Majority of the fungi obtained were Ascomycetes which includes Alternaria (1 isolate), Aspergillus (11 isolates), Bipolaris (1 isolate), Cladosporium ( 17 isolates), Colletotrichum (3 isolates), Curvularia (1 isolate), Fusarium (31 isolates), Metarhizium (1 isolate), Myrothecium (1 isolate), Nigrospora (3 isolates), Paecilomyces (4 isolates), Penicillium (50 isolates), Pestalotiopsis (1 isolate), Phoma (2 isolates), Trichoderma (12 isolates) and Stachybotrys (1 isolate). The genera of zygomycetes obtained were Cunninghamella, Gongronella and Basidiobolus of one each isolate and the basidiomycetes were Trametes (4 isolates), Lenzites (2 isolates), Polyporus ( 2 isolates) and one each isolate of Daedalea, Hapalopilus, Irpex and Sterium. Out of these fungi, few were reported for the first time from this region. The identification of some fungi were confirmed through molecular analysis. The diseased specimens were deposited at Herbarium Cryptogamae Indiae Orientalis (HCIO) and identified fungal cultures at Indian Type Culture Collection (ITCC), Division of Plant Pathology, ICAR-Indian Agricultural Research Institute, New Delhi and their HCIO and ITCC accession numbers were obtained respectively.*

**Keywords***: Fungi, Survey, Fungal Diversity, Morphological Identification.*