

## BIODIVERSITY, DISTRIBUTION AND CONSERVATION OF FLESHY AND WOODY WILD MACRO FUNGI FROM GAJNI FOREST REGION OF BANGLADESH

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### Executive summary

Macro fungi played a significant role in medicine and health issues and food security of human being. A survey was carried out in Gajni forest, Jhinaigati, Sherpur from June to August of 2017 and 2018 to document the diversity, distribution and morphological characterization of wild mushrooms. Frequency and density of occurrence of the collected macro fungi were also calculated. A total of 32 mushroom samples were collected, photographed, morphologically characterized and identified to 28 species belonging to 11 genera, under 8 families. *Ganoderma* sp. was found abundantly in the survey area among the other collected species and it exhibited the maximum frequency of occurrence (75%), whereas the maximum density (20.50%) was recorded for *Agaricus bitorquis* and the dominant host was Shal tree (*Shorea robusta*). The dominant genera were *Ganoderma*, *Agaricus*, *Trametes*, *Volvariella* and *Amanita*. The dominant family of collected wild mushrooms was Ganodermataceae followed by Polyporaceae, Agaricaceae, Amanitaceae, Rusullaceae, Pluteaceae, Marasmiaceae and Strophariaceae. Among collected species, 5 species were found edible, 12 species had medicinal value and 11 species were inedible, poisonous or of unknown importance. The specimens were deposited to the Sher-e-Bangla Agricultural University Herbarium of Macro Fungi (SHMF). This is a report of wild mushrooms diversity and their distribution in the Gajni forest region of Bangladesh. Gajni forest has diverse geographical and climatic conditions that make the region a natural habitat of mushrooms. Hence timely research on the existing mushroom flora and their documentation and preservation is essential. This study thus recommends further research to explore the diversity and richness of the studied taxa in unstudied parts and in every part of the forest in different season or time. This survey helps further continuation to bring out the more findings with relevant information along with the present findings in future. This study was asserted that a wide range of mushroom plays an important role in the ecosystem of Gajni forest and might be useful in food and industry sector in future.

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