

# Distribution of Medicinally Important Mushrooms of Northern Mountainous Areas of Pakistan

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Pakistan has very significant mountain ranges; the Hindukush, Karakurm, and Himalaya. Hindukush mountain ranges further extend from the northeast to the southeast to the southwest up to Koh-Safed. These mountain ranges contain some of the highest peaks in the world—i.e., K2 (9861 m), Nanga Parbat (8126 m), Rakaposhi (7788 m), Trich Mir (7690 m), and Deosai Plateau (4333–5333 m). The following important areas with natural vegetation of northern Pakistan have been surveyed during the rainy season: North Chitral, North Swat, Kaghan Valley, Gilgit, and Skardu including the Deosai Plateau. The natural lakes of these areas, such as Saif ul Maluk, Lulusar, Sadpapra, Kachura, and Shoezal, were also surveyed. The vegetation of these places of natural forests mostly consists of *Pinus wallichiana*,

*P. roxburghi*, *Abies pindrow*, *Quercus incana*, *Juglan regia*, *Juniper bushes*, *Betula utilis*, shrubs, herbs, and grasses. They grow at various altitudes and in ecozones, such as the subtropical pine zone (12 species), temperate zone (24 species), subalpine (20 species), and the alpine zone (10 species). The common genera were *Agaricus*, *Clitocybe*, *Calvatia*, *Coprinus*, *Coriolus*, *Fomes*, *Ganoderma*, *Morchella*, and *Podaxis*. The terrestrial environment under these forests was rich in organic matter, which was derived by the activity of a number of organisms (fungi, bacteria, and invertebrate, etc). More than fifty species of medicinally important mushrooms belonging to 40 genera have been recorded such as mycorrhizal, parasitic, saprophytic, and terrestrial/coprophillous in their habitat.