

ABSTRACT

For this course of research work, samples of macro fungi were collected from different localities of district Kasur. Field visits for sampling include, village Fatuhi wala, Ganda singh, Sanda chistana (along Ganda singh road), Patvi (along BRB canal), Athil pur, Khara chungi, Mushtaq Colony, Naul, (along Raiwind road), Kotla Sheikh Natha, Sheikhumad (along Kotla Sheikh Natha road), Basti Charagh shah, Rukan pura (along Charagh Shah road), Nizam pura, Sheikh bhago (along Nizam Pura road), along railway road, along Ferozpur road and near Depal pur Bypass. A total of 28 taxa of macro fungi were collected, identified and described, out of which 24 were different. Identification of collected samples were done by using morphological, anatomical and molecular methods. For phylogenetic analysis, amplification and sequencing of molecular marker i.e. ITS-rDNA was conducted. Identified taxa belonged to 6 families (which include Agaricaceae, Amanitaceae, Bolbitiaceae, Entolomataceae, Pluteaceae, Psathyrellaceae), and 10 genera of macro fungi (*Agaricus*, *Amanita*, *Bolbitius*, *Clitopilus*, *Panaeolus*, *Parasola*, *Pluteus*, *Podaxis*, *Psathyrella*). In this study, 12 macro fungal species viz., *Agaricus albovariabilis*, *A. andrewii*, *A. langei*, *Amanita eijii*, *A. macerisolum*, *A. strobiliformis*, *A. thiersii*, *A. rubescens* var. *alba*, *Bolbitius reticulatus*, *Clitopilus prunulus*, *Panaeolus antillarum* and *Psathyrella longipes* are new records for Pakistan. While other 11 species viz., *Agaricus augustus*, *A. brunneodiscus*, *A. campestris*, *A. silvicola*, *Amanita nana*, *Bolbitius titubans*, *Parasola plicatilis*, *Pluteus cervinus*, *Podaxis pistillaris*, *Volvariella pusilla*, *V. volvacea*, have been already been reported from different localities of Pakistan. One taxon was identified as *A. cf. bernardii*, which needs further work for correct identification. Among these 23 identified species, only *Agaricus campestris* has been reported from village Kotla Sheikh Natha, rest of the 22 species are new record for district Kasur.