



Aeromycoflora of Gilani College Library

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Abstract

Present paper deals with the study of aeromycoflora(indoor and outdoor) environment of Gilani college Library. Study period of three months beginning from sept 2016 to Nov. 2016 was the period of present study of library. During this period humidity with temperature ranging 25-35°C .

Air samples was collected with interval of two weeks by gravitational setting method using petri dishes with Potato Dextrose Agar (PDA) media. Fungal colonies were developed after 4-5 days incubation period at 25-27°C. Fungal species were identified on the basis of morphological characters. Total 17 fungal spores were identified from indoor environment. In case of outdoor environment total 23 spore types were reported.. deuteromycetes showed dominance in atmosphere.

Keywords : Library, Indoor and outdoor environment, Aeromycoflora.

Introduction

Aeromycoflora means airborne fungal and alide spores .A large number of airborne microfungi were found in door & outdoor environments. Such fungal species are potentially allergic and food spoiling so also books, papers journals etc are affected . To maintain library a control our aeromycoflora is essential. (Sterflinger K, et al 2012 Ghosh et al 2011 Kalbande et al 2012) Environmental factors such as temperature, relative humidity and rainfall play vital role in the occurrence of fungal spores in indoor air of Library (Mirochisio and Airaudi 2001)

The aims of this study was to determine the aeromycoflora and their diversity in indoor as well as outdoor environment of college Library.

Materials and Methods.

A nutritional medium was required for our study. It is possible to fulfil the necessary conditions in vitro to support the optimal growth of a fungal species, for this purpose Potato Dextrose Agar medium (PDA) was prepared aseptically. The Liquid media was poured into sterile petridishes following aseptic techniques. The media was allowed to solidify and then the junctures of the petridishes were sealed by selotape. The cool Petri dishes were wrapped. with brown paper and taken to the site of investigation. The peridishes were taken to the selective site for fungal isolation. One petridish was used for each sample. The samples were collected at fifteen days intervals. Samples were taken in the afternoon (12.30 pm to 1.30 pm) .The petriplate Gravitational method was used for fungal isolation (Singh et al 1995) peridish have exposed to the air for 5 min and the covered by the lid and again sealed by selotape. These petriplate were brought into laboratory within 2 hours and

incubated for 3-5 days in room temperature. (25°C-30°C). The metrological factors affect the air borne mycoflora quantitatively and qualitatively. The fungal colonies were counted on the basis morphological characters. The compound microscope was used to determine the morphological structures of fungi after mounting in lactophenol and cotton blue covered with cover slip on slides. Identification of fungi was carried by using various literature. (Barnet 1990, Ellis, 1976)

Result & Discussion

Various worker worked on fungal species and its corellation with environment (Vittal 2005, Sharma et al 2011). The aim of this study was to collect the exact information about the fengal spores in a site. Under study.

A total 17 types of fungal spores were identified from indoor environment. In cse of outdoor environment total no. of species counted 23. *A. riger* *A.flavus*, *Penicillium* sp. *fusarium* sp. *Alternaria* sp. *Curvularia*, *Stachybotrys* sp. *Mucor* sp. *Cladosporium* sp. *Nigrospra* sp were reported for a high percentage indoor environment where as outdoor environment showed dominance of *Aspergillus niger*, *A.flavus*, *mucor*, *curvalania*, *clodosporium*, *Alternania* sp. Our study showed significant occurrence of cosmopolitan mycoflora in door and outdoor environment of the Library.

Conclusion :

The dominant fungal contribution of the library exhibits a clear picture that it is appalling if the maintenances are inefficient and dismast further studies with longer monitoring period on their occurrence in door & outdoor bring about better understanding of their potential. Our finding of different harmful fungal type in this communication related that they could not only

deteriorate the cultural of library but also invite various diseases by the accumulation.

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