

Fungi Of Bombay

This book explores the developments in important aspects of fungi related to the environment, industrial mycology, microbiology, biotechnology, and agriculture. It discusses at length both basic and applied aspects of fungi and provides up-to-date laboratory-based data. Of the estimated three million species of fungi on Earth, according to Hawksworth and coworkers, more than 100,000 have been described to date. Many fungi produce toxins, organic acids, antibiotics and other secondary metabolites, and are sources of useful biocatalysts such as cellulases, xylanases, proteases and pectinases, to mention a few. They can also cause diseases in animals as well as plants and many are able to break down complex organic molecules such as lignin and pollutants like xenobiotics, petroleum and polycyclic aromatic compounds. Current research on mushrooms focuses on their hypoglycemic, anti-cancer, anti-pathogenic and immunity-enhancing activities. This ready-reference resource on various aspects of fungi is intended for graduate and post-graduate students as well as researchers in life sciences, microbiology, botany, environmental sciences and biotechnology.

Mangroves are typically tropical coastal ecosystems found in the inter-tidal zones of river deltas and back water areas. They represent highly dynamic and fragile ecosystems, yet they are the most productive and biologically diversified habitats of various life forms including plants, animals and microorganisms. Mangroves are a resource of many different products, including: microorganisms that harbor a diverse group of industrially important enzymes, antibiotics, therapeutic proteins and vaccines; timber resistant to rot and insects; and medicinal plants. Divided into three main parts, Biotechnological Utilization of Mangrove Resources first provides a broad introduction into mangrove ecology. Subsequent chapters discuss the biodiversity of mangroves, including the diverse nature of the organisms within the mangroves themselves. The final part pays special attention to biotechnological utilization of mangroves. Topics such as antimicrobial activity of mangrove-derived products, anti-oxidant activity of mangrove derived products and pharmaceutical applications, are covered in detail. Biotechnological Utilization of Mangrove Resources brings the latest research and technologies in mangrove biology into one platform, providing readers with an up-to-date view on the area. This would serve as an excellent reference book for researchers and students in the field of marine biology especially interested in mangrove ecosystems. Highlights the diversity of different life forms in the mangrove ecosystem, including the importance of mangroves and mangrove-derived products. Focuses on biotechnological utilization of mangrove resources such as antimicrobial and antioxidant properties of microorganisms, and industrial and pharmaceutical applications Discusses the different modern tools and techniques used for the study of mangrove resources

Marathwada University Journal of Science

Synchytrium

Maharashtra State Gazetteers: Botany, pt. 1. Medicinal plans, pt. 2. Timbers, pt. 3. Miscellaneous plants, pt. 4

Fungal diversity, ecology and control management

Large Print

The study of chytrids is old in india, it dates back to 1907, but unfortunately could not reach to heights attained by some advanced countries of the world, USA; Great Britain; France and Germany. However, in recent years, the group has again received considerable attention as evident by the enthusiasim at the First International Mycological Congress held in Exeter (UK) in 1971. This book is an attempt to fill that void and such a monograph on chytrids is first of its type from India. Probably this may be the first update compilations of work carried out by author in this group in the 20th century.

Synchytrium presents all data and information relevant to the identification, classification, and phylogeny of species of Synchytrium. Following a brief introduction to the genus, general descriptions and illustrations of the life cycles of the subgenera are given at the beginning of the monograph for the purpose of acquainting the reader with an over-all view of the types of development which occur in Synchytrium. Then follow chapters on the cytology, sexuality, and host reaction. The major portion of the monograph is then devoted to a description of the genus, keys to the subgenera and the fully known species in each subgenus, and descriptions of the individual species. The description of the species is followed by chapters on phylogeny, hosts, and geographical distribution of Synchytrium. Although this monograph is directed primarily to graduate and research students in mycology, and particularly in the field of chytridiology, botanists, and biologists in general will also find it useful. The discussions of host and cellular reactions to infection, host range and host specificity, as well as the extensive bibliography on the Synchytrium-wart disease to potatoes should appeal especially to parasitologists and phytopathologists.

Chytrids of India

Indian Erysiphaceae

Maharashtra State Gazetteers

Fungi

An Indian Perspective

Indian mycologists have extensively studied various groups of fungi such as soil fungi, aquatic fungi, marine fungi, endophytic fungi, fungi associated with man and animals. Though several books on various aspects of fungi are published, this is the first account of the history and developments in mycology in India. It discusses at length various stages of development of mycology including both classical and biotechnological aspects. It begins with a historical account of Indian mycology, followed by a description of research on fossil fungi. Further chapters cover the latest updates on different taxonomic groups of fungi. A dedicated section describes the roles and applications of fungal endophytes. The book also includes research in other important areas such as mushrooms and wood rotting fungi. Different chapters are written by leading mycologists. This book is useful to students, teachers and researchers in botany, microbiology, biotechnology and life sciences, agriculture and industries using fungi to produce various valuable products.

The Present Publication Attempts To Put Together The Isolated And Scattered Records Of All The Fungi Recorded From India. Presented In Systematic Groups Of Orders, The Volume Enumerates A Total Of 2350 Species Of Indian Fungi With Explanatory Notes.

Fungi and Allied Organisms

Deterioration of Fire-killed Douglas-fir

Indian Journal of Botany

A Compendium of Fungi on Legumes from India

Microbes, including fungi, constitute an important component of biodiversity. They comprise one of the biggest kingdoms in the living world. A lot of work has been done in mycology in the past several years in India and abroad. The present book comprises a collection of 26 original research articles by eminent mycologists. This book would be very useful for researchers, teachers and students in four major sections:

Indian Erysiphaceae' is a monographic work on the powdery mildew fungi based on the telomorphic stage collected on 86 different host species from various agroecological zones of Himachal Pradesh. So far, 22 genera and about 300 species of powdery mildew fungi have been described from India, but all is scattered in mycological literature. An attempt has been made to compile all the species in a separate chapter. Besides, host index, fungus index and references, the species described in the present studies and those described from India have been presented in tabular form in the end alongwith the references. Camera lucida drawings and coloured microphotographs have also been provided. This monograph will provide a base for future compilations of the work on Indian Erysiphaceae and

abroad also.

Handbook of Phytoalexin Metabolism and Action

General Series

The Plant Disease Reporter

Botany: Botany and flora of Maharashtra

Developments in Fungal Biology and Applied Mycology

We have already assumed that fungi are duly and universally admitted, as plants, into the vegetable kingdom. But of this fact some have even ventured to doubt. This doubt, however, has been confined to one order of fungi, except, perhaps, amongst the most illiterate, although now the animal nature of the Myxogastres has scarcely a serious advocate left. In this order the early condition of the plant is pulpy and gelatinous, and consists of a substance more allied to sarcode than cellulose. De Bary insinuated affinities with Amoeba, [A] whilst Tulasne [Pg 3]affirmed that the outer coat in some of these productions contained so much carbonate of lime that strong effervescence took place on the application of sulphuric acid. Dr. Henry Carter is well known as an old and experienced worker amongst amoeboid forms of animal life, and, when in Bombay, he devoted himself to the examination of the Myxogastres in their early stage, and the result of his examinations has been a firm conviction that there is no relationship whatever between the Myxogastres and the lower forms of animal life. De Bary has himself very much modified, if not wholly abandoned, the views once propounded by him on this subject. When mature, and the dusty spores, mixed with threads, sometimes spiral, are produced, the Myxogastres are so evidently close allies of the Lycoperdons, or Puffballs, as to leave no doubt of their affinities. It is scarcely necessary to remark that the presence of zoospores is no proof of animal nature, for not only do they occur in the white rust (Cystopus), and in such moulds as Peronospora, [B] but are common in algæ, the vegetable nature of which has never been disputed.

Mycology is a frontier area of research in life sciences. Fungi represent one of the three major evolutionary segments along with plants and animals. Fungal multidimensional features with basic and applied value projected their potential beyond routine systematics, diversity and environmental studies. In view of tremendous developments in the field of Mycology, the present treatise emphasizes various aspects of contemporary issues in mycology. It comprises 22 chapters with emphasis on the fungal ecology, diversity and metabolites. The topics treated include aquatic ecology, diversity and phylogeny, mutualism and interactions, potential metabolites, pathology and toxins, fungal infections and prevention, cell permeabilization and advances in monocarboxylate transporters in yeasts with an emphasis on cancer therapy. This volume is of special interest to mycologists as a valuable source of information on the frontier areas of mycology dealing with diversity, ecological amplitudes, methods of assessment, novel metabolites and bioprospecting avenues

On Mycetoma; Or, The Fungus Disease of India

Fungi of Maharashtra

Technical Bulletin

The Plant Disease Bulletin

Fungi of India

Provides the latest information on nearly all of the phytoalexins of crop plants studied worldwide over the past 50 years-describing experimental approaches to the research of specific plants and offering detailed explanations on methods of isolation and characterization. Supplies in-depth coverage of cotton, soybean, groundnut, citrus, mustard, grapevine, potato, pepper, sweet potato, yam, sesame, tea, tobacco, pea, pigeon pea, and many more.

Historically, fungi included diverse organisms. In view of the recent developments in their ultra structure, biochemistry and molecular biology, the book provides a fresh look at the status of fungi in the biological world. Unlike traditional textbooks, taxonomic groups of fungi and related organisms studied by mycologists have been reshuffled and assigned positions according to modern scheme of classification. In the light of the advent of genetic manipulation and allied technology, the role of fungi in commercial production of unusual drugs, as hormones and some proteins, is examined. Some recently developed fungal products useful in agriculture, forestry and food industry are also briefly described.

List of References

Host Range and Geographical Distribution of the Powdery Mildew Fungi

List of Indian Fungi, Chiefly of the Bombay Presidency,with Description of Two New Species

Sydowia

Indian Botanical Reporter