

## Book Review

**An Introduction to Mycology (Author: K R Aneja and R S Mehrotra), New Age International Publishers, Ansari Road, Daryaganj, New Delhi 110 002, India [www.newagepublishers.com; online@newagepublishers.com], pp xvii+696, Price Rs. 399.00; ISBN: 978-81-224-3796-9.**

Mycology means the study of fungi. About 1,00,000 fungal species are known to world and they are cosmopolitan. They play an integral role in the functions of ecosystem, especially in nutrient recycling and maintaining the balance of ecosystem through decomposition and pathogenesis. Many of them are also directly or indirectly used as food and medicine, and in industry and agriculture.

'An Introduction to Mycology' is a conceptual book mainly targeted to students. It is written in simple language with many self-explanatory figures and covers all most all the traditional and modern areas of the mycology. This book is the reflection of four decades of teaching and research experience of Drs K R Aneja and R S Mehrotra in Mycology.

The present volume is divided into two independent parts dealing with: (i) morphology and relationships of fungi, and (ii) ecological and economic importance. The part I is divided into 26 chapters beginning with 'Introduction and Classification'. The authors have followed Anisworth and Bisby's systems of classification and placed the fungi into 3 kingdoms: Fungi, Chromista/Straminipila and Protozoa. Further, kingdom fungi is divided into 4 phyla (Chytridiomycota, Zygomycota, Ascomycota & Basidiomycota), kingdom Chromista/Straminipila into 3 phyla (Oomycetes, Hyphochytriomycota & Labyrinthulomycetes) and kingdom Protozoa into 4 phyla (Plasmodiophoromycota, Dictyosteliomycota, Acrasiomycota and Myxomycota). Apart from description, keys have also been provided to the relevant class, families and genera.

Chapter 2 deals with historical background of mycology in India and abroad and also provides excellent chronology from 1590 to 2005 in tabular form highlighting main milestones that fostered the development of mycology. Chapters 3 to 24 contain information related to morphology, taxonomy, ecology, evolution, hormones, life cycle, symptoms, disease cycle,

and control measures of various fungal pathogens responsible for causing disease of national and international importance. Here, chapter 17 is specifically devoted to Lichens, discussing their structure, classification, synthesis, reproduction and economic importance; mycorrhizal fungi and insect symbionts are also in this chapter. Chapter 25 discusses the concept of heterothallism, heterkaryosis and parasexual cycle with evolutionary significance in detail. The last chapter (in Part I) is devoted to fungal hormone, physiological specialization and phylogeny of fungi.

Part II deals with the ecological and economic significance of fungi. Chapters 27 to 29 cover the role of fungi as saprotrophs, fungi in pathological relationship with other organisms, and industrial and biochemical applications of fungi, respectively.

Chemical structures of major fungal toxins, pheromones and hormones are given at relevant places. At the end of each chapter, review questions and selected references are provided. The questions are highly focused and will not only help in better understanding of the subject but also provide aid in preparation of various examinations. Line drawings of life cycle and summarized complex reproductive stages of fungi are provided in a careful and organized fashion. For all these special features, the authors deserve appreciation.

Classification of fungi and fungal-like Protists are provided in appendix. In the end, an exhaustive and very useful index is given including all most all the keywords. Further, the editing and production of this book were done with lots of care and almost no typological mistakes are visible. The text is accompanied by many line drawing, black and white photographs, figures and tables. All in all, the book is authentic, very well written and a treatise on mycology. The present volume will be very helpful to undergraduate and postgraduate students, teachers and researchers and can be recommended to those in need of complete coverage of fungi and plant pathology.

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