BOOK REVIEWS

S.-T. Chang & P.G. Mills. *Mushrooms. Cultivation, Nutritional Value, Medicinal Effect, and Environmental Impact. Second Edition.* (CRC Press, 2000 N.W. Corporate Blvd., Boca Raton, Florida 33431, USA; www.crcpres.com, 2004.) ISBN 0-8493-1043-1. Pp. 646, numerous figures and black-and-white photographs. In English. Price: USD 159.95.

Since the publication of the first edition of this book, important developments in biotechnology and mushroom production made a new, revised version necessary. As it is written for the mushroom industry, it emphasizes on nutritional, medical, and cultivating aspects of edible and medicinal fungi. A short introduction deals with a definition of fungi and the world of fungi, including edible and poisonous species, and the relation between fungi and man. Two chapters deal with edible and medicinal fungi respectively. And an overview is given of the biology of fungi. Chapters 5–11 deal with the various aspects of cultivation of fungi: substrate and mycelial growth, sexuality and genetics, mushroom formation in culture and the effects of genetic factors and breeding, pests, culture preservation and world production of edible mushrooms. Chapters 12–21 deal with the various important cultivated mushrooms, such as *Agaricus bisporus*, *Lentinula edodes*, *Volvariella*, *Pleurotus*, *Tremella*, and others. The final chapter gives an overview of technology and mushrooms. As such it forms a comprehensive and up-to-date source of information for all interested in edible and medicinal mushrooms and their cultivation.

J.F. White Jr., Ch.W. Bacon, N.L. Hywel-Jones & J.W. Spatafora (eds.). *Clavicipitalean Fungi. Evolutionary Biology, Chemistry, Biocontrol, and Cultural Impacts.* (Marcel Dekker Ag, P.O. Box 812, CH-4001 Basel, 2003.) ISBN 0-8247-4255-9. In English. Pp. 575, many text-figs. Price: USD 195.00.

The Clavicipitalean fungi form a well-defined group of pyrenomycetous ascomycetes, including important pathogens for plants, animals and humans with a great impact on host and their ecology. It includes among others the ergot fungus, *Claviceps purpurea*, the source of the psychedelic drug ergotamine, as well as mutualistic endosymbionts of higher plants. The book contains contributions of as many of 30 authors, experts in various aspects of the taxonomy, diversity, ecology, evolution, molecular genetics and physiology of the group concerned. The first chapter deals with historical perspectives of human interactions with Clavicipitalean fungi, followed by a series of taxonomic contributions of various clavicipitaceous fungi, including their anamorphs. The section on ecology and evolution focuses on *Claviceps*, pointing to its evolutionary strategy and host shift, and species evolution in the endophytic *Epichloe/Neotyphodium* complex. The part on molecular genetics and physiology deals with secondary metabolites and their biosynthesis, genetic manipulation, and the molecular aspects of host-pathogen interactions. The final chapters give an overview of the impacts and applications of alkaloid toxicity, and their applications in commerce and as biological agents to control pests.