

De-Wei Li
Editor

Biology of Microfungi

 Springer

Contents

1 Introduction: Advances and Predicament	1
De-Wei Li	
2 Recent Changes in Fungal Nomenclature and Their Impact on Naming of Microfungi	7
Walter Gams	
3 Future Perspectives and Challenges of Fungal Systematics in the Age of Big Data	25
Zheng Wang, R. Henrik Nilsson, Timothy Y. James, Yucheng Dai, and Jeffrey P. Townsend	
4 Molecular Techniques in Mycological Studies and Sequence Data Curating: Quality Control and Challenges	47
R. Henrik Nilsson, Kessy Abarenkov, and Urmas Kõljalg	
5 Challenges and Future Perspectives in the Systematics of <i>Kickxellomycotina</i>, <i>Mortierellomycotina</i>, <i>Mucoromycotina</i>, and <i>Zoopagomycotina</i>	65
Gerald L. Benny, Matthew E. Smith, Paul M. Kirk, Eric D. Tretter, and Merlin M. White	
6 <i>Entomophthoromycota</i>: A New Overview of Some of the Oldest Terrestrial Fungi	127
Richard A. Humber	
7 Latest Developments in the Research of Rust Fungi and Their Allies (<i>Pucciniomycotina</i>)	147
Merje Toome-Heller	
8 Conidiogenesis: Its Evolutionary Aspects in the Context of a Philosophy of Opportunity (Lectics)	169
Richard C. Summerbell and James A. Scott	

9	Fungal Diversity of Central and South America	197
	Rafael F. Castañeda-Ruiz, Gabriela Heredia, Luis F.P. Gusmão, and De-Wei Li	
10	Mesofungi	219
	Bryce Kendrick	
11	Evolution of Fungi and Update on Ethnomycology	237
	De-Wei Li, R.F. Castañeda-Ruiz, and James LaMondia	
12	Phylogenetic Diversity of Fungi in the Sea including the <i>Opisthosporidia</i>	267
	Ka-Lai Pang and E.B. Gareth Jones	
13	Biology and Ecology of Freshwater Fungi	285
	Clement K.M. Tsui, Christiane Baschien, and Teik-Khiang Goh	
14	Dispersal Strategies of Microfungi	315
	Donát Magyar, Máté Vass, and De-Wei Li	
15	Microfungi in Indoor Environments: What Is Known and What Is Not	373
	Chin Yang, Sepideh Pakpour, John Klironomos, and De-Wei Li	
16	Biology of the Whiskey Fungus	413
	James A. Scott and Richard C. Summerbell	
17	Allergenic Microfungi and Human Health: A Review on Exposure, Sensitization, and Sequencing Allergenic Proteins	429
	Mercedes Amado and Charles Barnes	
18	What's Old is New: Recognition of New Fungal Pathogens in the Era of Phylogenetics and Changing Taxonomy and Implications for Medical Mycology	451
	Nathan P. Wiederhold and Deanna A. Sutton	
19	Mycotoxins in Food and Feed: A Challenge for the Twenty-First Century	469
	J. David Miller	
20	Inhalation Exposure and Toxic Effects of Mycotoxins	495
	Harriet M. Ammann	
21	Fungi in Fermentation and Biotransformation Systems	525
	Carla C.C.R. de Carvalho	
22	Microfungi in Biofuel and Bioenergy Research	543
	Richa Raghuwanshi, Shalini Singh, Mohd. Aamir, Amrita Saxena, Vijai Kumar Gupta, and R.S. Upadhyay	

23 Interactions of Microfungi and Plant-Parasitic Nematodes	573
James LaMondia and Patricia Timper	
24 Pathogenic Microfungi Associated with <i>Spartina</i> in Salt Marshes	615
Wade H. Elmer	
Index.....	631