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978-1-107-65277-4 - Fungal Biology in the Origin and Emergence of Life

David Moore

Frontmatter

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FUNGAL BIOLOGY IN THE ORIGIN AND EMERGENCE OF LIFE

The rhythm of life on Earth includes several strong themes contributed by Kingdom Fungi. So why are fungi ignored when theorists ponder the origin of life?

Casting aside common theories that life originated in an oceanic primeval soup, in a deep, hot place, or even a warm little pond, this is a mycological perspective on the emergence of life on Earth. The author traces the crucial role played by the first biofilms – products of aerosols, storms, volcanic plumes and rainout from a turbulent atmosphere – which formed in volcanic caves 4 billion years ago. Moore describes how these biofilms contributed to the formation of the first prokaryotic cells, and later, unicellular stem eukaryotes, highlighting the role of the fungal grade of organisation in the evolution of higher organisms. Based on the latest research, this is a unique account of the origin of life and its evolutionary diversity to the present day.

DAVID MOORE is an Honorary Reader in the Faculty of Life Sciences at the University of Manchester. Having recently retired after 43 years researching and teaching genetics and mycology, his ongoing research activities include computer programs simulating fungal growth and differentiation, and genomic data mining. In recent years he has created the educational websites www.fungi4schools.org (sponsored by the British Mycological Society) and www.davidmoore.org.uk. He is co-author of *21st Century Guidebook to Fungi* (Cambridge, 2011).

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