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BOOK REVIEWS

***The Lives of Lichens: A Natural History*. Robert Lucking and Toby Spribille. 2024. Princeton University Press, Princeton and Oxford, 288 pp. ISBN 978-0691-24727-4.**

With the 2001 publication of Irwin Brodo's monumental *Lichens of North America*, the North American public finally had access to a subject that had long been the domain of only those with scientific training. Chock full of colour photographs, Brodo's popular level text brought the complex world of lichens into public view. Now, some twenty-four years later, *The Lives Of Lichens: a Natural History* expands the scope of our understanding of the symbiotic process that maintains life for these cryptic organisms in a visually pleasing and easy to understand volume. Published in 2024 by Princeton University Press, authors Robert Lucking and Toby Spribille have compiled a work that focuses on explaining, in a way that a thoughtful public can comprehend, the structure and function of the elements involved in lichen symbiosis as revealed by molecular research.

Cleverly and sensibly arranged into broad sections containing short chapters of one to four or five pages, including stunning full-page photos, the tone is informal on an intelligent and knowledgeable level as the section headings demonstrate: The Archetypal Symbiosis, The Players, the Biology of Lichens, Lichen Architecture, etc. In The Players section, chapter headings read: Lichen Fungi and their Relatives; Lichen Algae; Cyanobacteria: Metabolic Powerhouses; More Than One Fungus; etc.

Again, each section includes photos of lichens from all over the globe as visual support to the chapters on lichens' evolution and life processes. At the conclusion of each section, full-colour photos of some individual lichen species appear along with a page of text that continues the conversation on the subject at hand. These lichen "sub-sections" include a worldwide range map for the highlighted species, its common name, growth form, numbers of species in the genus and notable features of the species as well as incidental information of interest, such as why *Cladonia cristatella* is known as British soldiers.

Lucking and Spribille have both been at the forefront of exploration in molecular genetic research in lichens. Lucking, who is Curator of Lichens, Fungi and Bryophytes at the Berlin Botanical Garden and

Botanical Museum, has been a prolific writer of scientific publications. He has described 1,000 or more lichen species in understudied genera, and has contributed much to advancing the field of molecular phylogenetics in lichenology. Toby Spribille, Associate Professor at the University of Alberta in Biological Sciences, within the Faculty of Science, can claim to be one of those who first discovered a third symbiotic partner in many lichens, a basidiomycyte yeast. This upset the traditional view of the lichen symbiosis as consisting of the interactions between a fungus and one or more algal partners. The collaboration of these two authors has created a book that brings the latest research into lichen structure and function, beyond the confines academia, onto the book shelves of the interested public.

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