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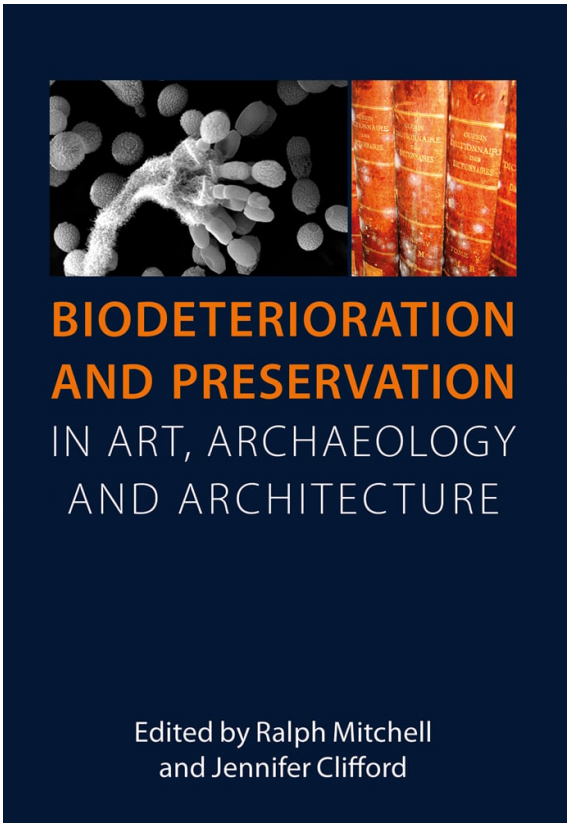

Biodeterioration and Preservation

Edited by Ralph Mitchell
Edited by Jennifer Clifford

ISBN	9781909492646
Publisher	Archetype Publications
Binding	Paperback / softback
Territory	USA & Canada
Size	6.48 in x 9.70 in
Pages	160 Pages
Price	$75.00

In this book, contributors have focused on the essential role that biodeterioration plays in both the deterioration and preservation of a wide range of materials. The volume brings together recent research by conservation microbiologists working in diverse environments. In addition papers are included on the effects of microbial biofilms and climate change on the biodeterioration process.
The world's monuments, art objects and archeology are at increasing risk of deterioration from environmental threats e.g. climate change, air pollution, and tourism.

Microorganisms play a central role in these deterioration processes. They grow both on the surface and in the interiors of many materials. Our understanding of the role that the microbial community plays in these activities has improved significantly in recent years and a deeper understanding of the mechanisms of degradation is now possible. In addition, new tools have opened the door to the use of bacteria as protective agents.

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It is hoped that this book will prove helpful to microbiologists, chemists, and other scientists working in the field of conservation. It should also be useful to practicing conservators, and individuals in public policy concerned with the protection of our world's cultural heritage treasures.

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SECTION I – THE IMPACT OF THE ENVIRONMENT ON BIODETERIORATION AND PRESERVATION OF HERITAGE MATERIALS
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Limestone Biodeterioration: Examples from Portugal – A.C. Pinheiro, N. Mesquita, and António Portugal
Reasons for Removing Biological Materials from Calcareous Stone Monuments – Margaret Breuker and Joannie Bottkol.
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Published 17th Dec 2018