

The Air Spora

The Air Spora

A manual for catching and identifying
airborne biological particles

Maureen E. Lacey and Jonathan S. West

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Dedicated to
Pauline, Michael and Peter
Oliver, Jonathan and Sophia
and George

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Preface

The Air Spora has been studied under this name for over fifty years, providing important scientific advancements particularly in understanding the dispersal, distribution and impact of human, animal and plant pathogens and allergens. One of the most important methods used in studying microscopic particles caught from the air - the Air Spora - is traditional light microscopy, which is the emphasis of this book and a fascinating occupation. Microscopic biological particles commonly found in air include bacteria, spores of fungi and lower plants, pollen, minute animals and debris from life forms. In his book, *The Microbiology of the Atmosphere* Philip Gregory had three colour plates of paintings showing a range of these particles. More than 30 years later, this book revisits the subject and contains 9 plates of paintings showing common and important airborne particles, all to the same scale, to help further in identifying biological particles that may be trapped from the air. It also contains a short history of aerobiology and shows how the subject has developed, particularly in plant pathology, over the last sixty years.

Catching, identifying and quantifying airborne biological particles are important parts of aerobiology. This manual includes a step-by-step guide to key techniques and provides many practical hints for trapping these particles and calculating their concentrations in air. We are indebted to the British Aerobiology Federation (BAF) for giving permission to reproduce many diagrams and instructions from its publication: *Pollens and Spores, A guide to trapping and counting*.

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Taxonomy and Nomenclature

Although the authors have attempted to use currently accepted Latin names and classification of organisms, there is generally a great deal of renaming and reclassification of organisms taking place due largely to the use of recently developed molecular biological techniques. As a result, names are subject to change and the authors would welcome any suggestions to correct the taxonomy or nomenclature of organisms mentioned in this book.

Information about any mistakes, omissions, criticisms and suggestions for future improvements would be welcome by contacting the authors at the following address or email and quoting 'The Air Spora':

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