FUNGAL ECOLOGY

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To Heather, Katharine, Stephen and Eleanor,
and to Brom, Chris and Sarah.

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PREFACE

Fungi play vital roles in all ecosystems, as decomposers, symbionts of animals and plants and as parasites. Thus their ecology is of great interest. It has been estimated that there may be as many as 1.5 million species of fungi, many of which are still undescribed. These interact in various ways with their hosts, with their substrates, with their competitors (including other fungi) and with abiotic variables of their environment. They show great variation in morphology, reproduction, life cycles and modes of dispersal. They grow in almost every conceivable habitat where organic carbon is available: on rock surfaces, in soil, the sea and in fresh water, at extremes of high and low temperature, on dry substrata and in concentrated solutions. Fungal ecology is therefore an enormous subject and its literature is voluminous. In view of this we have had to be selective in the material we have included in this book. We have chosen to concentrate on subjects in which we have some personal experience through either research or teaching. We preferred to tackle a few subjects in depth instead of attempting to cover a wider range of topics superficially. We are conscious of the extensive gaps in coverage: for example on the ecology of lichens, of fungal plant pathogens and of the complex interactions between fungi and animals. It is some justification that book-length treatments of these subjects are available elsewhere. We are equally conscious that many of the subjects which we have chosen to present are also very large and could themselves be expanded into books.

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