

FUNGAL ECOLOGY

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Springer-Science+Business Media, B.V.

First edition 1995

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Originally published by Springer-Science+Business Media, B.V. in 1995

Typeset in Times by Falcon Graphic Art Ltd, Wallington, Surrey

ISBN 978-94-010-4299-4 ISBN 978-94-011-0693-1 (eBook)

DOI 10.1007/978-94-011-0693-1


0 412 64130 5 (PB)

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A catalogue record for this book is available from the British Library

Library of Congress Catalog Card Number 94-72667

 Printed on permanent acid-free text paper, manufactured in accordance with ANSI/NISO Z39 48-1992 and ANSI/NISO Z39 48-1984 (Permanence of Paper)

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

CONTENTS

Preface	ix
1 Introduction	1
1.1 Life strategies of fungi	5
2 The mycelium and substrates for growth	12
2.1 The mycelium	12
2.2 Spores and other mycelial-derived structures	17
2.3 Substrata and substrates for saprotrophs	26
3 Structure of fungal communities	39
3.1 Introduction	39
3.2 Development of fungal communities	45
3.3 Successions	80
4 Colonization and decomposition of leaves	85
4.1 Deposition	85
4.2 Colonization of living leaves	88
4.3 Factors affecting the development of fungal communities on leaf surfaces	99
4.4 Fungal successions in leaf litter	114
4.5 Decomposition of leaf litter	122
5 Development of fungal communities on herbaceous stems and grasses	128
5.1 Distribution of fungal populations on <i>Dactylis glomerata</i>	129
5.2 Interpretation of distribution patterns	135
5.3 Distribution patterns on other plants	140
6 Colonization and decay of wood	145
6.1 Wood as a resource	145
6.2 Colonization of woody tissues	150
6.3 Types of wood rot	161
6.4 Water relations	169

7 Fungi of soil and rhizosphere	172
7.1 Techniques for studying fungi of soil and roots	172
7.2 Fungal distribution in soil	175
7.3 Fungal activity in soil	179
7.4 The rhizosphere and root colonization	183
8 Coprophilous fungi	203
8.1 Succession of coprophilous fungi	207
8.2 Comparison of the fungal flora of different animal dungs	222
8.3 Autecological studies	224
9 Aquatic fungi	225
9.1 Introduction	225
9.2 Freshwater fungi	227
9.3 Marine fungi	265
10 Nematophagous fungi	284
10.1 Techniques for studying nematophagous fungi	290
10.2 Distribution and abundance	291
10.3 Ecological characteristics	294
10.4 Biological control of pathogenic nematodes	300
11 Phoenicoid fungi	302
11.1 Chemical, physical and biological changes in soil after burning	303
11.2 Ecological characteristics and phenology	305
11.3 Experimental studies	313
11.4 Fruiting of phoenicoid fungi following volcanic eruptions	319
12 Fungi of extreme environments	322
12.1 Thermotolerant and psychrotolerant fungi	322
12.2 Xerotolerant and osmotolerant fungi	332
13 Terrestrial macrofungi	341
13.1 Introduction	341
13.2 Wood-decay macrofungi	345
13.3 Litter decomposers	365
13.4 Mycorrhizal macrofungi	376
References	398
Index	499

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.

We are indebted to numerous publishers, colleagues and friends who have allowed us to make use of their published and unpublished figures. These are individually acknowledged. We are extremely grateful to Pat Brown, Khlayre Mullin and Joan Vaughan for competent typing. We also thank our wives for their continued patience and understanding.

Exeter and Stirling
September 1994.