

CONTENTS

Contributors	ix
Foreword	xi
Preface	xiii
1. The Aerial Motion of Seeds, Fruits, Spores and Pollen	1
F. M. BURROWS	
I. Introduction	2
II. Aerodynamic Forces and their Effects	4
III. Trajectory Analysis	13
IV. Launching and Release Mechanisms	18
V. Types of Trajectory: Solutions of Equations of Motion	24
VI. Concluding Remarks	46
References	46
2. Seed Dispersal by Water	49
DAVID R. MURRAY	
I. Introduction	49
II. Seed Dispersal by Rain, River and Flood	50
III. Evidence for Seed Dispersal by Ocean Currents	53
IV. Effective Seed Dispersal by Ocean Currents Compared to Other Vectors	74
V. The Hazards for Seeding Establishment	78
VI. Conclusions	80
Acknowledgements	81
References	82
3. Seed Dispersal Syndromes in Australian <i>Acacia</i>	87
DENNIS J. O'DOWD and A. MALCOLM GILL	
I. Introduction	87
II. Definitions and Limitations	88
III. Inference of Dispersal Syndromes	89

IV.	Principal Components Analysis	91
V.	Seed Dispersal Syndromes	101
VI.	Characteristics of Seed Dispersal Agents	108
VII.	Comparison of <i>Acacia</i> with other Ant- and Bird-dispersed species	111
VIII.	Ecological Consequences of Seed Dispersal	111
IX.	Evolutionary Derivation of Dispersal Syndromes	113
X.	Comparison with American and African <i>Acacia</i>	116
XI.	Conclusions	117
	Acknowledgements	118
	References	118
4.	Seed Dispersal by Fruit-Eating Birds and Mammals	123
	HENRY F. HOWE	
I.	Introduction	123
II.	Definitions	126
III.	Foraging for Fruits	128
IV.	Attracting Dispersal Agents	150
V.	Population Ecology of Seed Dispersal	162
VI.	Community Effects	172
VII.	Summary and Conclusions	181
	Acknowledgements	182
	References	183
5.	Rodents as Seed Consumers and Dispersers	191
	M. V. PRICE and S. H. JENKINS	
I.	Introduction	191
II.	Granivorous rodents and the Fates of Seeds	192
III.	Determinants of the Fate Path	197
IV.	Net Effect of Granivorous Rodents	221
V.	Directions for Further Research	230
	Acknowledgements	231
	References	231
6.	Seed Dispersal in Relation to Fire	237
	R. J. WHELAN	
I.	Introduction	237
II.	Fire as a Dispersal Vector	238
III.	Post-Fire Conditions	239
IV.	Long-Distance Dispersal	244
V.	Local Dispersal	245
VI.	General Theories	258
VII.	Summary	264
	Acknowledgements	265
	References	265

7. Evolution of Seed Dispersal Syndromes According to the Fossil Record	273
B. H. TIFFNEY	
I. Introduction	274
II. <i>Materials and Methods</i>	275
III. The Fossil Record — Data	281
IV. Discussion	289
V. Summary	298
Acknowledgements	300
Text References	301
Data References	303
 Species Index	 307
 Subject Index	 318