

Contents

- List of contributors* page ix
Preface xi
- 1 Morphology and classification of the Marchantiophyta
BARBARA CRANDALL-STOTLER, RAYMOND E. STOTLER AND
DAVID G. LONG 1
 - 2 Morphology, anatomy, and classification of the Bryophyta
BERNARD GOFFINET, WILLIAM R. BUCK AND A. JONATHAN SHAW 55
 - 3 New insights into morphology, anatomy, and systematics of
hornworts
KAREN S. RENZAGLIA, JUAN C. VILLARREAL AND R. JOEL DUFF 139
 - 4 Phylogenomics and early land plant evolution
BRENT D. MISHLER AND DEAN G. KELCH 173
 - 5 Mosses as model organisms for developmental, cellular,
and molecular biology
ANDREW C. CUMING 199
 - 6 Physiological ecology
MICHAEL C. F. PROCTOR 237
 - 7 Biochemical and molecular mechanisms of desiccation
tolerance in bryophytes
MELVIN J. OLIVER 269
 - 8 Mineral nutrition and substratum ecology
JEFF W. BATES 299

viii Contents

- 9 The structure and function of bryophyte-dominated peatlands
DALE H. VITT AND R. KELMAN WIEDER 357
- 10 Population and community ecology of bryophytes
HAKAN RYDIN 393
- 11 Bryophyte species and speciation
A. JONATHAN SHAW 445
- 12 Conservation biology of bryophytes
ALAIN VANDERPOORTEN AND TOMAS HALLINGBÄCK 487
- Index* 535