CONTENTS

Contributors ix

1 Introduction 1
   Patricia G. Gensel

2 Embryophytes on Land: The Ordovician to Lochkovian (Lower Devonian) Record 3
   Dianne Edwards and Charles Wellman

3 Rustling in the Undergrowth: Animals in Early Terrestrial Ecosystems 29
   William A. Shear and Paul A. Selden

4 New Data on Nothia aphylla Lyon 1964 ex El-Saadawy et Lacey 1979, a Poorly Known Plant from the Lower Devonian Rhynie Chert 52
   Hans Kerp, Hagen Hass, and Volker Mosbrugger

5 Morphology of Above- and Below-Ground Structures in Early Devonian (Pragian–Emsian) Plants 83
   Patricia G. Gensel, Michele E. Kotyk, and James F. Basinger

6 The Posongchong Floral Assemblages of Southeastern Yunnan, China—Diversity and Disparity in Early Devonian Plant Assemblages 103
   Hao Shou-Gang and Patricia G. Gensel

7 The Middle Devonian Flora Revisited 120
   Christopher M. Berry and Muriel Fairon-Demaret

8 The Origin, Morphology, and Ecophysiology of Early Embryophytes: Neontological and Paleontological Perspectives 140
   Linda E. Graham and Jane Gray

9 Biological Roles for Phenolic Compounds in the Evolution of Early Land Plants 159
   Gillian A. Cooper-Driver

10 The Effect of the Rise of Land Plants on Atmospheric CO₂ During the Paleozoic 173
   Robert A. Berner

11 Early Terrestrial Plant Environments: An Example from the Emsian of Gaspé, Canada 179
   C. L. Hotton, F. M. Hueber, D. H. Griffig, and J. S. Bridge
Contents

12 Effects of the Middle to Late Devonian Spread of Vascular Land Plants on Weathering Regimes, Marine Biotas, and Global Climate
   Thomas J. Algeo, Stephen E. Scheckler, and J. Barry Maynard
   213

13 Diversification of Siluro-Devonian Plant Traces in Paleosols and Influence on Estimates of Paleoatmospheric CO$_2$ Levels
   Steven G. Driese and Claudia I. Mora
   237

References
   255

Index
   291