

# | Contents

*Acknowledgments* ix

*Preface to the New Paperback Edition* xi

Prologue 1

Chapter 1 In the Beginning? 6

Chapter 2 The Tree of Life 16

Chapter 3 Life's Signature in Ancient Rocks 32

Chapter 4 The Earliest Glimmers of Life 50

Chapter 5 The Emergence of Life 72

Chapter 6 The Oxygen Revolution 89

Chapter 7 The Cyanobacteria, Life's Microbial Heroes 108

Chapter 8 The Origins of Eukaryotic Cells 122

Chapter 9 Fossils of Early Eukaryotes 139

Chapter 10 Animals Take the Stage 161

Chapter 11 Cambrian Redux 179

Chapter 12 Dynamic Earth, Permissive Ecology 206

Chapter 13 Paleontology ad Astra 225

Epilogue 243

*Further Reading* 247

*Index* 269