

Contents

Preface vii

Acknowledgments ix

- 1 The Science of Plant Morphology 1
- 2 The Salient Features of Vascular Plants 16
- 3 The Vegetative Sporophyte 28
- 4 Sporangia 66
- 5 Gametangia 80
- 6 Embryogeny 93
- 7 The Early Vascular Plants: Rhyniopsida,
Zosterophylloids,
and Trimerophytopsida 104
- 8 The Psilopsida 116
- 9 The Lycopsidea 136
- 10 The Sphenopsida 206
- 11 The Filicopsida: Ferns 242
- 12 The Eusporangiate Ferns 255
- 13 The Leptosporangiate Ferns 277
- 14 General Morphology of Gymnosperms 382
- 15 The Cycadopsida 406
- 16 The Coniferopsida: *Ginkgo biloba* 444
- 17 The Coniferopsida: Coniferales 465
- 18 The Gnetopsida 519
- 19 General Morphology and Evolution
of the Angiosperms 545
- 20 The Reproductive Cycle in Angiosperms 634
- 21 Fruits, Seeds, Seedlings 714

Index 735