

Abridged Contents

Prologue

1

16 Development of Higher Plants

336

17 Nutrition, Growth, and Regulation
in Plants

354

PART ONE

THE MECHANICS OF LIFE

1 The Chemistry of Life

15

2 Energy for Life

39

PART SIX

THE PHYSIOLOGY OF ANIMALS

18 Animal Hormones and the
Endocrine System

375

19 The Action of Nerve Cells

394

20 The Nervous System

405

21 The Skeletal and Muscular Systems

431

22 Nutrition and the Digestive System

445

23 The Excretory System and Temperature
Regulation

462

24 The Respiratory and Circulatory
Systems

475

PART TWO

THE LIFE OF CELLS

3 Cells and Cell Structure

49

4 Photosynthesis: Trapping and
Storing Energy

73

5 Cellular Respiration: The Release
of Energy

85

6 The Importance of DNA

98

7 The Genetic Code and Protein Synthesis

110

8 Cellular Growth, Reproduction, and
Specialization

129

PART SEVEN

EVOLUTION, ECOLOGY, AND ANIMAL BEHAVIOR

25 Darwinian Evolution

505

26 The Mechanisms of Evolution

521

27 The Ecology of Populations

540

28 The Ecology of Communities

566

29 The Patterns of Animal Behavior

604

30 Animal Societies

620

PART THREE

THE DIVERSITY OF LIFE

9 The Living Kingdoms: The Lower Groups
and Plants

155

10 The Living Kingdoms: The Animals

186

PART FOUR

GENETICS AND ANIMAL DEVELOPMENT

11 Mendelian Genetics

233

12 Genetics and Chromosomes

245

13 Human Reproduction

266

14 Human Development

289

31 The Origin and Development of
Life on Earth

634

Metric Conversion Factors

645

Glossary

G-1

Photo Acknowledgments

P-1

Index

I-1

PART FIVE

THE LIFE OF PLANTS

15 Reproduction in Plants

309