

Evolution Futuyma 3rd Edition

Thoroughly updated and reorganized, Strickberger's *Evolution*, Fourth Edition, presents biology students with a basic introduction to prevailing knowledge and ideas about evolution, discussing how, why, and where the world and its organisms changed throughout history. Keeping consistent with Strickberger's engaging writing style, the authors carefully unfold a broad range of philosophical and historical topics that frame the theories of today including cosmological and geological evolution and its impact on life, the origins of life on earth, the development of molecular pathways from genetic systems to organismic morphology and function, the evolutionary history of organisms from microbes to animals, and the numerous molecular and populational concepts that explain the earth's dynamic evolution. Important Notice: The digital edition of this book is missing some of the images or content found in the physical edition.

Biological evolution is a fact—but the many conflicting theories of evolution remain controversial even today. When *Adaptation and Natural Selection* was first published in 1966, it struck a powerful blow against those who argued for the concept of group selection—the idea that evolution acts to select entire species rather than individuals. Williams's famous work in favor of simple Darwinism over group selection has become a classic of science literature, valued for its thorough and convincing argument and its relevance to many fields outside of biology. Now with a new foreword by Richard Dawkins, *Adaptation and Natural Selection* is an essential text for understanding the nature of scientific debate.

The biological sciences cover a broad array of literature types, from younger fields like molecular biology with its reliance on recent journal articles, genomic databases, and protocol manuals to classic fields such as taxonomy with its scattered literature found in monographs and journals from the past three centuries. Using the *Biological Literature: A Practical Guide*, Fourth Edition is an annotated guide to selected resources in the biological sciences, presenting a wide-ranging list of important sources. This completely revised edition contains numerous new resources and descriptions of all entries including textbooks. The guide emphasizes current materials in the English language and includes retrospective references for historical perspective and to provide access to the taxonomic literature. It covers both print and electronic resources including monographs, journals, databases, indexes and abstracting tools, websites, and associations—providing users with listings of authoritative informational resources of both classical and recently published works. With chapters devoted to each of the main fields in the basic biological sciences, this book offers a guide to the best and most up-to-date resources in biology. It is appropriate for anyone interested in searching the biological literature, from undergraduate students to faculty, researchers, and librarians. The guide includes a supplementary website dedicated to keeping URLs of electronic and web-based resources up to date, a popular feature continued from the third edition.

This book makes Moore's wisdom available to students in a lively, richly illustrated account of the history and workings of life. Employing rhetoric strategies including case histories, hypotheses and deductions, and chronological narrative, it provides both a cultural history of biology and an introduction to the procedures and values of science.

Douglas Futuyma presents an overview of current thinking on theories of evolution, aimed at an undergraduate audience.

Covers the genetic, developmental, and ecological mechanisms of evolutionary change, the major features of evolutionary history as revealed by phylogenetic and paleontological studies, and material on adaptation, molecular evolution, co-evolution, and human evolution.

Evolutionary Biologist, Douglas Emlen and *Science Writer*, Carl Zimmer continue to improve their widely-praised evolution textbook. Emlen, an award-winning evolutionary biologist at the University of Montana, has infused *Evolution: Making Sense of Life* with the technical rigor and

conceptual depth that today's biology majors require. Zimmer, an award-winning New York Times columnist, brings compelling storytelling to the book, bringing evolutionary research to life through a narrative sure to capture the attention of evolution students. With riveting stories about evolutionary biologists at work everywhere from the Arctic to tropical rainforests to hospital wards, the book is a reading adventure designed to grab the imagination of students, showing them exactly why it is that evolution makes such brilliant sense of life. The new edition of *Evolution: Making Sense of Life* is now supported in SaplingPlus. Created and supported by the author and other educators, SaplingPlus's instructional online homework drives student success and saves educators' time. Automatically graded homework problem contains hints, answer-specific feedback, and solutions to ensure that students find the help they need.

This edition provides a balanced presentation of theory and observation. It introduces the principles of genetics and statistics that are relevant to population studies, and examines the forces affecting genetic variation from the molecular to the organismic level.

The genetic variability that developed in plants during their evolution is the basic of their domestication and breeding into the crops grown today for food, fuel and other industrial uses. This third edition of *Plant Evolution and the Origin of Crop Species* brings the subject up-to-date, with more emphasis on crop origins. Beginning with a description of the processes of evolution in native and cultivated plants, the book reviews the origins of crop domestication and their subsequent development over time. All major crop species are discussed, including cereals, protein plants, starch crops, fruits and vegetables, from their origins to conservation of their genetic resources for future development.

A FINALIST FOR THE PULITZER PRIZE NAMED A BEST BOOK OF THE YEAR BY THE NEW YORK TIMES BOOK REVIEW, SMITHSONIAN, AND WALL STREET JOURNAL A major reimagining of how evolutionary forces work, revealing how mating preferences—what Darwin termed "the taste for the beautiful"—create the extraordinary range of ornament in the animal world. In the great halls of science, dogma holds that Darwin's theory of natural selection explains every branch on the tree of life: which species thrive, which wither away to extinction, and what features each evolves. But can adaptation by natural selection really account for everything we see in nature? Yale University ornithologist Richard Prum—reviving Darwin's own views—thinks not. Deep in tropical jungles around the world are birds with a dizzying array of appearances and mating displays: Club-winged Manakins who sing with their wings, Great Argus Pheasants who dazzle prospective mates with a four-foot-wide cone of feathers covered in golden 3D spheres, Red-capped Manakins who moonwalk. In thirty years of fieldwork, Prum has seen numerous display traits that seem disconnected from, if not outright contrary to, selection for individual survival. To explain this, he dusts off Darwin's long-neglected theory of sexual selection in which the act of choosing a mate for purely aesthetic reasons—for the mere pleasure of it—is an independent engine of evolutionary change. Mate choice can drive ornamental traits from the constraints of adaptive evolution, allowing them to grow ever more elaborate. It also sets the stakes for sexual conflict, in which the sexual autonomy of the female evolves in response to male sexual control. Most crucially, this framework provides important insights into the evolution of human sexuality, particularly the ways in which female preferences have changed male bodies, and even maleness itself, through evolutionary time. *The Evolution of Beauty* presents a unique scientific vision for how nature's splendor contributes to a more complete understanding of evolution and of ourselves. *Human Evolutionary Genetics* is a groundbreaking text which for the first time brings together molecular genetics and genomics to the study of the origins and movements of human populations. Starting with an overview of molecular genomics for the non-specialist (which can be a useful review for those with a more genetic background), the book shows h
A definitive guide to the depth and breadth of the ecological sciences, revised and updated
The revised and updated fifth edition of *Ecology: From Individuals to Ecosystems* – now in full

colour – offers students and practitioners a review of the ecological sciences. The previous editions of this book earned the authors the prestigious ‘Exceptional Life-time Achievement Award’ of the British Ecological Society – the aim for the fifth edition is not only to maintain standards but indeed to enhance its coverage of Ecology. In the first edition, 34 years ago, it seemed acceptable for ecologists to hold a comfortable, objective, not to say aloof position, from which the ecological communities around us were simply material for which we sought a scientific understanding. Now, we must accept the immediacy of the many environmental problems that threaten us and the responsibility of ecologists to play their full part in addressing these problems. This fifth edition addresses this challenge, with several chapters devoted entirely to applied topics, and examples of how ecological principles have been applied to problems facing us highlighted throughout the remaining nineteen chapters. Nonetheless, the authors remain wedded to the belief that environmental action can only ever be as sound as the ecological principles on which it is based. Hence, while trying harder than ever to help improve preparedness for addressing the environmental problems of the years ahead, the book remains, in its essence, an exposition of the science of ecology. This new edition incorporates the results from more than a thousand recent studies into a fully up-to-date text. Written for students of ecology, researchers and practitioners, the fifth edition of *Ecology: From Individuals to Ecosystems* is an essential reference to all aspects of ecology and addresses environmental problems of the future.

Molecular Ecology provides a comprehensive introduction to the many diverse aspects of this subject. The book unites theory with examples from a wide range of taxa in a logical and progressive manner, and its accessible writing style makes subjects such as population genetics and phylogenetics highly comprehensible to its readers. The first part of the book introduces the essential underpinnings of molecular ecology, starting with a review of genetics and a discussion of the molecular markers that are most frequently used in ecological research. This leads into an overview of population genetics in ecology. The second half of the book then moves on to specific applications of molecular ecology, covering phylogeography, behavioural ecology and conservation genetics. The final chapter looks at molecular ecology in a wider context by using a number of case studies that are relevant to various economic and social concerns, including wildlife forensics, agriculture, and overfishing * comprehensive overview of the different aspects of molecular ecology * attention to both theoretical and applied concerns * accessible writing style and logical structure * numerous up-to-date examples and references This will be an invaluable reference for those studying molecular ecology, population genetics, evolutionary biology, conservation genetics and behavioural ecology, as well as researchers working in these fields.

"Words are our tools, and, as a minimum, we should use clean tools. We should know what we mean and what we do not, and we must forearm ourselves against the traps that language sets us." -- The Need for Precise Terminology, Austin (1957, 7–8) It follows that, for effective and efficient communication, people should have, or at least understand, the same precise terminology. Such terminology is crucial for the advancement of basic, theoretical, and applied science, yet too often there is ambiguity between scientific and common definitions and even discrepancies in the scientific literature. Providing a common ground and platform for precise scientific communication in animal behavior, ecology, evolution, and related branches of biology, *Animal Behavior Desk Reference, A Dictionary of Behavior, Ecology, and Evolution, Third Edition* contains more than 800 new terms and definitions, 48 new figures, and thousands of additions and improvements. Using a dictionary format to present definitions in a standard, easily accessible manner, the book's main body emphasizes conceptual terms, rather than anatomical parts or taxonomic terms, and focuses on nouns, rather than verbs or adjectives. Term hierarchies are handled with bulleted entries and terms with multiple definitions are included as superscripted entries. All sources are cited and most are

paraphrased to conform to uniform style and length. The dictionary also includes nontechnical and obsolete terms, synonyms, pronunciations, and notes and comments, as well as etymologies, term originators, and related facts. Appendices address organism names, organizations, and databases. Devoted to the precise and correct use of scientific language, this third edition of a bestselling standard enables students and scientists alike to communicate their findings and promote the efficient advancement of science.

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging.

This volume presents some of the most recent dramatic results of molecular, genomic, and organismal evolutionary processes. It represents analyses, experiments, observations, reviews, discussions and forecasts of evolutionary theory comprising both novel methods and results, reanalyzed and reviewed data sets based on comparative, experimental, and theoretical studies utilizing model organisms across phylogeny, including bacteria, fungi, plants, animals and humans. It elucidates the revolution in molecular biology that ushered in our understanding of the evolutionary process over time and space. The topics discussed include major problems of evolutionary theory concerning origins, phylogeny, relative importance of evolutionary forces, structure and function, adaptation and speciation in space and time in changing and stressful environments. A major emerging generalization is the nonrandomness of genome structure highlighting the importance of natural selection as a major organizing evolutionary force not only at the phenotypic level, but most importantly at the interlinked genotypic molecular level. The integration between the molecular

The Analysis of Biological Data provides students with a practical foundation of statistics for biology students. Every chapter has several biological or medical examples of key concepts, and each example is prefaced by a substantial description of the biological setting. The emphasis on real and interesting examples carries into the problem sets where students have dozens of practice problems based on real data. The third edition features over 200 new examples and problems. These include new calculation practice problems, which guide the student step by step through the methods, and a greater number of examples and topics come from medical and human health research. Every chapter has been carefully edited for even greater clarity and ease of use. All the data sets, R scripts for all worked examples in the book, as well as many other teaching resources, are available to qualified instructors (see below).

The author of Darwin's Black Box draws on new findings in genetics to pose an argument for intelligent design that refutes Darwinian beliefs about evolution while offering alternative analyses of such factors as disease, random mutations, and the human struggle for survival. Reprint. 40,000 first printing.

Published by Sinauer Associates, an imprint of Oxford University Press.

Extensively rewritten and reorganized, this new edition of Evolution--featuring a new coauthor: Mark Kirkpatrick (The University of Texas at Austin)--offers

additional expertise in evolutionary genetics and genomics, the fastest-developing area of evolutionary biology. Directed toward an undergraduate audience, the text emphasizes the interplay between theory and empirical tests of hypotheses, thus acquainting students with the process of science. It addresses major themes—including the history of evolution, evolutionary processes, adaptation, and evolution as an explanatory framework—at levels of biological organization ranging from genomes to ecological communities. This new edition of *Evolution* features a new coauthor: Mark Kirkpatrick (The University of Texas at Austin) offers additional expertise in evolutionary genetics and genomics, the fastest-developing area of evolutionary biology. Directed toward an undergraduate audience, the text emphasizes the interplay between theory and empirical tests of hypotheses, thus acquainting students with the process of science.

A fascinating investigation into the miraculous world of birds and the powerful—and surprising—ways they enrich our lives and sustain the planet. Our relationship to birds is different from our relationship to any other wild creatures. They are found virtually everywhere and we love to watch them, listen to them, keep them as pets, wear their feathers, even converse with them. Birds, Jim Robbins posits, are our most vital connection to nature. They compel us to look to the skies, both literally and metaphorically; draw us out into nature to seek their beauty; and let us experience vicariously what it is like to be weightless. Birds have helped us in so many of our human endeavors: learning to fly, providing clothing and food, and helping us better understand the human brain and body. And they even have much to teach us about being human in the natural world. This book illuminates qualities unique to birds that demonstrate just how invaluable they are to humankind—both ecologically and spiritually. The wings of turkey buzzards influenced the Wright brothers' flight design; the chickadee's song is considered by scientists to be the most sophisticated language in the animal world and a "window into the evolution of our own language and our society"; and the quietly powerful presence of eagles in the disadvantaged neighborhood of Anacostia, in Washington, D.C., proved to be an effective method for rehabilitating the troubled young people placed in charge of their care. Exploring both cutting-edge scientific research and our oldest cultural beliefs, Robbins moves these astonishing creatures from the background of our lives to the foreground, from the quotidian to the miraculous, showing us that we must fight to save imperiled bird populations and the places they live, for the sake of both the planet and humankind. Praise for *The Wonder of Birds* "A must-read, conveying much necessary information in easily accessible form and awakening one's consciousness to what might otherwise be taken for granted . . . The *Wonder of Birds* reads like the story of a kid let loose in a candy store and given free rein to sample. That is one of its strengths: the convert's view gives wide appeal to those who might never have known birds well."—Bernd Heinrich, *The Wall Street Journal* "Engaging, thoughtful . . . worthy of a place alongside David

Attenborough's documentary *The Life of Birds* or Graeme Gibson's *The Bedside Book of Birds* . . . This offering will appeal to naturalists, anthropologists, linguists, and even philosophers as well as to lay readers."—Library Journal "In this deeply felt and well-supported argument for avians' value to humankind, science writer Robbins hits the full trifecta for engrossing and satisfying nature writing."—Publishers Weekly (starred review) "Using enchanting stories and rich historical references, Jim Robbins explores the role of birds on the evolution of human self-awareness."—Robert F. Kennedy, Jr. "It's one for the birds—what a wonderful book! It will give you wings."—Rita Mae Brown, *New York Times* bestselling author of *Rubyfruit Jungle* "The Wonder of Birds provides a great and well-timed gift: a portrait of the quiet miracles around us on each day of our ordinary lives."—Michael Punke, #1 *New York Times* bestselling author of *The Revenant* "Jim Robbins writes masterfully, with lucid prose and deep insight into the human psyche and natural world."—Peter Stark, author of *Astoria*

Darwin's theory of evolution is accepted by most educated Americans as simple fact. This easy acceptance, however, hides from us the many ways in which evolution—as an idea—shapes our thinking about a great many things. What if this idea is wrong? Berkeley law professor Phillip E. Johnson looks at the evidence for Darwinistic evolution the way a lawyer would—with a cold dispassionate eye for logic and proof. His discovery is that scientists have put the cart before the horse. They prematurely accepted Darwin's theory as fact and have been scrambling to find evidence for it. *Darwin on Trial* is a cogent and stunning tour de force that not only rattles the cages of conventional wisdom, but could provide the basis for a fundamental change in the way educated Americans regard themselves, their origins, and their fate.

World-renowned in the fields of population genetics, bacterial genomics, paleontology, human genetics, and developmental biology, the authors have elegantly synthesized molecular biology and evolutionary biology to produce a thoroughly integrated and current text. This new (textbook) is among the best.--"Nature." Full color.

Provides an explanation of evolutionary processes, a refutation of the claims of creationists, and insight into the nature of scientific inquiry

The Logic of Chance offers a reappraisal and a new synthesis of theories, concepts, and hypotheses on the key aspects of the evolution of life on earth in light of comparative genomics and systems biology. The author presents many specific examples from systems and comparative genomic analysis to begin to build a new, much more detailed, complex, and realistic picture of evolution. The book examines a broad range of topics in evolutionary biology including the inadequacy of natural selection and adaptation as the only or even the main mode of evolution; the key role of horizontal gene transfer in evolution and the consequent overhaul of the Tree of Life concept; the central, underappreciated evolutionary importance of viruses; the origin of eukaryotes as a result of endosymbiosis; the concomitant origin of cells and viruses on the primordial earth; universal dependences between genomic and molecular-phenomic variables; and the evolving landscape of constraints that shape the evolution of

genomes and molecular phenomes. "Koonin's account of viral and pre-eukaryotic evolution is undoubtedly up-to-date. His "mega views" of evolution (given what was said above) and his cosmological musings, on the other hand, are interesting reading." Summing Up: Recommended Reprinted with permission from CHOICE, copyright by the American Library Association.

This text presents all the branches of modern animal physiology with a strong emphasis on integration among physiological disciplines, ecology, and evolutionary biology. This book is divided in two parts, the first of which shows how, beyond paleontology and systematics, macroevolutionary theories apply key insights from ecology and biogeography, developmental biology, biophysics, molecular phylogenetics and even the sociocultural sciences to explain evolution in deep time. In the second part, the phenomenon of macroevolution is examined with the help of real life-history case studies on the evolution of eukaryotic sex, the formation of anatomical form and body-plans, extinction and speciation events of marine invertebrates, hominin evolution and species conservation ethics. The book brings together leading experts, who explain pivotal concepts such as Punctuated Equilibria, Stasis, Developmental Constraints, Adaptive Radiations, Habitat Tracking, Turnovers, (Mass) Extinctions, Species Sorting, Major Transitions, Trends and Hierarchies – key premises that allow macroevolutionary epistemic frameworks to transcend microevolutionary theories that focus on genetic variation, selection, migration and fitness. Along the way, the contributing authors review ongoing debates and current scientific challenges; detail new and fascinating scientific tools and techniques that allow us to cross the classic borders between disciplines; demonstrate how their theories make it possible to extend the Modern Synthesis; present guidelines on how the macroevolutionary field could be further developed; and provide a rich view of just how it was that life evolved across time and space. In short, this book is a must-read for active scholars and because the technical aspects are fully explained, it is also accessible for non-specialists. Understanding evolution requires a solid grasp of above-population phenomena. Species are real biological individuals and abiotic factors impact the future course of evolution. Beyond observation, when the explanation of macroevolution is the goal, we need both evidence and theory that enable us to explain and interpret how life evolves at the grand scale.

Mark Ridley's Evolution has become the premier undergraduate text in the study of evolution. Readable and stimulating, yet well-balanced and in-depth, this text tells the story of evolution, from the history of the study to the most recent developments in evolutionary theory. The third edition of this successful textbook features updates and extensive new coverage. The sections on adaptation and diversity have been reorganized for improved clarity and flow, and a completely updated section on the evolution of sex and the inclusion of more plant examples have all helped to shape this new edition. Evolution also features strong, balanced coverage of population genetics, and scores of new applied plant and animal examples make this edition even more accessible and engaging. Dedicated website – provides an interactive experience of the book, with illustrations downloadable to PowerPoint, and a full supplemental package complementing the book – www.blackwellpublishing.com/ridley. Margin icons – indicate where there is relevant information included in the dedicated website. Two new chapters – one on evolutionary genomics and one on evolution and development bring

state-of-the-art information to the coverage of evolutionary study. Two kinds of boxes – one featuring practical applications and the other related information, supply added depth without interrupting the flow of the text. Margin comments – paraphrase and highlight key concepts. Study and review questions – help students review their understanding at the end of each chapter, while new challenge questions prompt students to synthesize the chapter concepts to reinforce the learning at a deeper level. A comprehensive treatment of the concept of causation in evolutionary biology that makes clear its central role in both historical and contemporary debates. Most scientific explanations are causal. This is certainly the case in evolutionary biology, which seeks to explain the diversity of life and the adaptive fit between organisms and their surroundings. The nature of causation in evolutionary biology, however, is contentious. How causation is understood shapes the structure of evolutionary theory, and historical and contemporary debates in evolutionary biology have revolved around the nature of causation. Despite its centrality, and differing views on the subject, the major conceptual issues regarding the nature of causation in evolutionary biology are rarely addressed. This volume fills the gap, bringing together biologists and philosophers to offer a comprehensive, interdisciplinary treatment of evolutionary causation. Contributors first address biological motivations for rethinking evolutionary causation, considering the ways in which development, extra-genetic inheritance, and niche construction challenge notions of cause and process in evolution, and describing how alternative representations of evolutionary causation can shed light on a range of evolutionary problems. Contributors then analyze evolutionary causation from a philosophical perspective, considering such topics as causal entanglement, the commingling of organism and environment, and the relationship between causation and information. Contributors John A. Baker, Lynn Chiu, David I. Dayan, Renée A. Duckworth, Marcus W Feldman, Susan A. Foster, Melissa A. Graham, Heikki Helanterä, Kevin N. Laland, Armin P. Moczek, John Odling-Smee, Jun Otsuka, Massimo Pigliucci, Arnaud Pocheville, Arlin Stoltzfus, Karola Stotz, Sonia E. Sultan, Christoph Thies, Tobias Uller, Denis M. Walsh, Richard A. Watson

The third edition of this comprehensive book has increased its scope while emphasizing the intellectual order and molecular perspectives which have added to evolutionary studies in the 1990s.

Evolution presents foundational concepts through a contemporary framework of population genetics and phylogenetics that is enriched by current research and stunning art. In every chapter, new critical thinking questions and expanded end-of-chapter problems emphasizing data interpretation reinforce the Second Edition's focus on helping students think like evolutionary biologists.

This one-semester text is designed for an upper level botany course. Plants in our World emphasizes how people use plants; including fundamental information on morphology, anatomy, and taxonomy as a foundation of general botany. Now in full color, the fourth edition includes molecular data that has immensely altered the understanding of relationships among flowering plants and recently pinpointed the origin of numerous crops. Taxonomy of species has been updated to discuss the system of the Angiosperm Phylogeny Group.

Everything you were taught about evolution is wrong.

W.D.Hamilton was responsible for one of the major revolutions in evolutionary

thought since Darwin - that of the 'gene's eye view of life'. He was a scientific pioneer, a misunderstood genius: risk-taker, jungle explorer, and uncompromising truth-seeker. This illuminating and moving biography documents Hamilton's extraordinary life and science.

The study of evolution at the molecular level has given the subject of evolutionary biology a new significance. Phylogenetic 'trees' of gene sequences are a powerful tool for recovering evolutionary relationships among species, and can be used to answer a broad range of evolutionary and ecological questions. They are also beginning to permeate the medical sciences. In this book, the authors approach the study of molecular evolution with the phylogenetic tree as a central metaphor. This will equip students and professionals with the ability to see both the evolutionary relevance of molecular data, and the significance evolutionary theory has for molecular studies. The book is accessible yet sufficiently detailed and explicit so that the student can learn the mechanics of the procedures discussed. The book is intended for senior undergraduate and graduate students taking courses in molecular evolution/phylogenetic reconstruction. It will also be a useful supplement for students taking wider courses in evolution, as well as a valuable resource for professionals. First student textbook of phylogenetic reconstruction which uses the tree as a central metaphor of evolution. Chapter summaries and annotated suggestions for further reading. Worked examples facilitate understanding of some of the more complex issues. Emphasis on clarity and accessibility.

The Princeton Guide to Evolution is a comprehensive, concise, and authoritative reference to the major subjects and key concepts in evolutionary biology, from genes to mass extinctions. Edited by a distinguished team of evolutionary biologists, with contributions from leading researchers, the guide contains some 100 clear, accurate, and up-to-date articles on the most important topics in seven major areas: phylogenetics and the history of life; selection and adaptation; evolutionary processes; genes, genomes, and phenotypes; speciation and macroevolution; evolution of behavior, society, and humans; and evolution and modern society. Complete with more than 100 illustrations (including eight pages in color), glossaries of key terms, suggestions for further reading on each topic, and an index, this is an essential volume for undergraduate and graduate students, scientists in related fields, and anyone else with a serious interest in evolution. Explains key topics in some 100 concise and authoritative articles written by a team of leading evolutionary biologists Contains more than 100 illustrations, including eight pages in color Each article includes an outline, glossary, bibliography, and cross-references Covers phylogenetics and the history of life; selection and adaptation; evolutionary processes; genes, genomes, and phenotypes; speciation and macroevolution; evolution of behavior, society, and humans; and evolution and modern society

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