

Delicate Arrangement The Strange Case Of

Where Worlds Collide is the fascinating story of a biologist's spectacular discovery that has deeply changed the way we view the world.

It has been assumed that a gulf existed between science and the humanities and that the writings of scientists had no literary features. Locke argues that scientific language can be imaginative and expressive and shows how modes of literary criticism can be keys to the reading of scientific texts.

Darwin is credited with discovering evolution through natural selection, but Alfred Russel Wallace saw the same process at work in nature and elaborated the same theory. Dispelling misperceptions of Wallace as a secondary figure, James Costa reveals the two naturalists as equals in advancing one of the greatest scientific discoveries of all time.

Considers how the study of variation in plants has developed over the last 300 years.

As Latin American elites strove to modernize their cities at the turn of the twentieth century, they eagerly adopted the eugenic theory that improvements to the physical environment would lead to improvements in the human race. Based on Jean-Baptiste Lamarck's theory of the "inheritance of acquired characteristics," this strain of eugenics empowered a utopian project that made race, gender, class, and the built environment the critical instruments of modernity and progress. Through a transnational and interdisciplinary lens, *Eugenics in the Garden* reveals how eugenics, fueled by a fear of social degeneration in France, spread from the realms of medical science to architecture and urban planning, becoming a critical instrument in the crafting of modernity in the new Latin world. Journeying back and forth between France, Brazil, and Argentina, Fabiola López-Durán uncovers the complicity of physicians and architects on both sides of the Atlantic, who participated in a global strategy of social engineering, legitimized by the authority of science. In doing so, she reveals the ideological trajectory of one of the most celebrated architects of the twentieth century, Le Corbusier, who deployed architecture in what he saw as the perfecting and whitening of man. The first in-depth interrogation of eugenics' influence on the construction of the modern built environment, *Eugenics in the Garden* convincingly demonstrates that race was the main tool in the geopolitics of space, and that racism was, and remains, an ideology of progress.

Culled from his books, articles and letters, this collection comprises Wallace's best and most important writing. *Two Centuries of Darwin* is the outgrowth of an Arthur M. Sackler Colloquium, sponsored by the National Academy of Sciences on January 16-17, 2009. In the chapters of this book, leading evolutionary biologists and science historians reflect on and commemorate the Darwinian Revolution. They canvass modern research approaches and current scientific

thought on each of the three main categories of selection (natural, artificial, and sexual) that Darwin addressed during his career. Although Darwin's legacy is associated primarily with the illumination of natural selection in *The Origin*, he also contemplated and wrote extensively about what we now term artificial selection and sexual selection. In a concluding section of this book, several science historians comment on Darwin's seminal contributions. *Two Centuries of Darwin* is the third book of the *In the Light of Evolution* series. Each installment in the series explores evolutionary perspectives on a particular biological topic that is scientifically intriguing but also has special relevance to contemporary societal issues or challenges. The ILE series aims to interpret phenomena in various areas of biology through the lens of evolution and address some of the most intellectually engaging, as well as pragmatically important societal issues of our times. A multi-disciplinary overview, by leading authorities, of the influence of the work of Charles Darwin on arts, science and society.

The contributors - who include philosophers, political scientists, feminist theorists, physicists & engineers - argue that science can broadly inspire the civic virtues of an educated & tolerant global enterprise dedicated to the common good.

This book is the first detailed biography of Ernst Mayr. He was an 'architect' of the Synthetic Theory of Evolution, and the greatest evolutionary biologist since Charles Darwin, influential historian and philosopher of biology, outstanding taxonomist and ornithologist, and naturalist. He is one of the most widely known biologists of the 20th century. Mayr used the theories of natural selection and population thinking as theoretical models within the framework of historical biological studies. He was the first to emphasize the role of biopopulations, thereby pointing out the basic difference between 'population thinking' and typological essentialism.

A clear and concise survey of the major themes and theories embedded in the history of life science, this book covers the development and significance of scientific methodologies, the relationship between science and society, and the diverse ideologies and current paradigms affecting the evolution and progression of biological studies. The author discusses cell theory, embryology, physiology, microbiology, evolution, genetics, and molecular biology; the Human Genome Project; and genomics and proteomics. Covering the philosophies of ancient civilizations to modern advances in genomics and molecular biology, the book is a unique and comprehensive resource.

On the Origin of Species, published in 1858, transformed our view of the world and made Charles Darwin one of the most controversial figures in science. This biography begins much earlier with his long search for a profession, his five-year voyage around the world on the *Beagle*, and the decades-long intellectual journey he made in his study and garden. But it is for his theory about the origin of man and natural selection that he is remembered. His book threw the scientific community into a heated debate that continues today, and has made evolutionary biology one of the liveliest areas of science. This new biography looks at the person behind the controversy whose earth-shaking discoveries and ideas remain as exciting and interesting as today's headlines. *Oxford Profiles in Science* is an on-going series of scientific biographies for young adults. Written by top scholars and writers, each biography examines the personality of its subject as well as the thought process leading to his or her discoveries. These illustrated biographies combine accessible technical information with compelling personal stories to portray the scientists whose work has shaped our understanding of the natural world.

With one volume each year, this series keeps scientists and advanced students informed of the latest developments and results in all areas

of the plant sciences. The present volume includes reviews on physiology, ecology and vegetation science.

A term with myriad associations, revolution is commonly understood in its intellectual, historical, and sociopolitical contexts. Until now, almost no attention has been paid to revolution and questions of geography. *Geography and Revolution* examines the ways that place and space matter in a variety of revolutionary situations. David N. Livingstone and Charles W. J. Withers assemble a set of essays that are themselves revolutionary in uncovering not only the geography of revolutions but the role of geography in revolutions. Here, scientific revolutions—Copernican, Newtonian, and Darwinian—ordinarily thought of as placeless, are revealed to be rooted in specific sites and spaces. Technical revolutions—the advent of print, time-keeping, and photography—emerge as inventions that transformed the world's order without homogenizing it. Political revolutions—in France, England, Germany, and the United States—are notable for their debates on the nature of political institutions and national identity. Gathering insight from geographers, historians, and historians of science, *Geography and Revolution* is an invitation to take the where as seriously as the who and the when in examining the nature, shape, and location of revolutions.

Traces the life of the great British scientist, describes his travels as a naturalist, and traces the development of his theories.

AIDS in Asia provides a thorough introduction to the social and economic issues surrounding the AIDS epidemic in Asia including: *

Geographic obstacles to health care * Gender inequality and human trafficking * Political turmoil and poor leadership * Asia's role in the sex and drug trade * Economic conditions and exploitation At the crucial moment when the spread of AIDS in this region is beginning to gain worldwide recognition, distinguished expert Susan Hunter makes clear the catastrophic threat AIDS poses to Asia and the world, and draws on her experience to discuss the potential policy implications.

A Delicate Arrangement The Strange Case of Charles Darwin and Alfred Russel Wallace Crown

What makes a genius different? Is a genius born or made? In this exploration of creativity, the author reveals that there is no special trait of genius. Rather than being gifted above ordinary people, a genius will give expression to subtle nuances, and perceptions that others ignore.

This book shows how Victorian naturalists transformed their encounters with South America into influential accounts of biological change.

Suggests a theory concerning the origin of life from inorganic matter, that includes the interplay between chance and natural law, and the role of information theory

At a time when theories of evolution are undergoing renewed controversy, the study of the Eonic Effect can break the deadlock, by looking at world history in the light of 'evolution'. The assumption that evolution occurs at random is the crux of the dispute, and one confused with issues of religion and secularism. We can detect a non-random pattern in the record of civilization itself, to see 'evolution in action' on a stupendous scale. We live in the first generations with enough data to detect this phenomenon. In the confusion of evolutionary theories, the unexpected discovery of deep level structure can allow us to deconstruct 'flat history', and assess claims of directionality in evolution. In the process the

theory of natural selection applied to human evolution is seen to fail a photo finish test. The book provides a new model for the study of the overlap of history and evolution, and a critique of current views of the descent of man.

"Sparkling...an extraordinary true-adventure story, complete with trials, tribulations and moments of exultation." —Kirkus Reviews, starred review Award-winning cultural historian Iain McCalman tells the stories of Charles Darwin and his staunchest supporters: Joseph Hooker, Thomas Huxley, and Alfred Wallace. Beginning with the somber morning of April 26, 1882—the day of Darwin's funeral—Darwin's Armada steps back and recounts the lives and scientific discoveries of each of these explorers, who campaigned passionately in the war of ideas over evolution and advanced the scope of Darwin's work.

The facts of variability, of the struggle for existence, of adaptation to conditions, were notorious enough; but none of us had suspected that the road to the heart of the species problem lay through them, until Darwin and Wallace dispelled the darkness. T H Huxley (1887). Darwin is one of the most famous scientists in history. But he was not alone. Comparatively forgotten, Wallace independently discovered evolution by natural selection in Southeast Asia. This book is based on the most thorough research ever conducted on Wallace's voyage. Closely connected, but worlds apart, Darwin and Wallace's stories hold many surprises. Did Darwin really keep his theory a secret for twenty years? Did he plagiarise Wallace? Were their theories really the same? How did Wallace hit on the solution, and on which island? This book reveals for the first time the true story of Darwin, Wallace and the discovery that would change our understanding of life on Earth forever.

In 1858, Alfred Russel Wallace, aged thirty-five, weak with malaria, isolated in the Spice Islands, wrote to Charles Darwin: he had, he said excitedly, worked out a theory of natural selection. Darwin was aghast--his work of decades was about to be scooped. Within two weeks, his outline and Wallace's paper were presented jointly in London. A year later, with Wallace still on the opposite side of the globe, Darwin published *On the Origin of Species*. This new biography of Wallace traces the development of one of the most remarkable scientific travelers, naturalists, and thinkers of the nineteenth century. With vigor and sensitivity, Peter Raby reveals his subject as a courageous, unconventional explorer and a man of exceptional humanity. He draws more extensively on Wallace's correspondence than has any previous biographer and offers a revealing yet balanced account of the relationship between Wallace and Darwin. Wallace lacked Darwin's advantages. A largely self-educated native of Wales, he spent four years in the Amazon in his mid-twenties collecting specimens for museums and wealthy patrons, only to lose his finds in a shipboard fire in the mid-Atlantic. He vowed never to travel again. Yet two years later he was off to the East Indies on a vast eight-year trek; here he discovered countless species and identified the point of divide between Asian and Australian fauna, 'Wallace's Line.' After

his return, he plunged into numerous controversies and published regularly until his death at the age of ninety, in 1913. He penned a classic volume on his travels, founded the discipline of biogeography, promoted natural selection, and produced a distinctive account of mind and consciousness in man. Sensitive and self-effacing, he was an ardent socialist--and spiritualist. Wallace is one of the neglected giants of the history of science and ideas. This stirring biography--the first for many years--puts him back at center stage, where he belongs.

This is the epic, true and long overdue story of the young explorer who put the first ever case for the creation of a new species, providing what Charles Darwin called the "beautiful proof" for Natural Selection. The major discovery of Batesian Mimicry was developed from Bates's fascinating 11-year journey and study of butterflies in the Amazon rainforest. He noted how certain animals adopt the look of others to deceive predators and gain an advantage to survive. Little known to the public, Bates made other crucial contributions to biology: he collected over 14,000 specimens, of which over 8,000 were at the time new to science. He went on to become the administrator for the Royal Geographical Society and transformed it into an institution which combined exploration with academic research and was responsible for placing geography on the school curriculum. This important book reassesses Bates's life and finally places both the man and his work in their rightful place alongside the other greats.

Voted one of Christianity Today's 1997 Books of the Year! Creation versus evolution. The debate is growing louder and hotter--whether in lecture halls or in between the pages of bestselling books. But neither side seems to be winning. Why? In *The Battle of Beginnings* Del Ratzsch examines the history of the debate and critiques the entrenched positions that he argues merely impede progress toward the truth. Dissatisfied with both creationist fallacies and materialist misconstruals, he seeks to lay the groundwork for more fruitful dialogue. In considerable detail Ratzsch looks at the history and development of Darwin's theory and common creationist misunderstandings of evolution. He then moves on to examine the history and development of creationist theory and pervasive evolutionist misunderstandings of it. He also discusses the nature of science and common creationist and evolutionist abuses as a prelude to showing why both sides have remained critical of theistic evolution. Above all, Ratzsch argues that until philosophical confusion, logical missteps and various other snarls have been untangled, little real progress can be made in sorting out competing theories of life and its origin. With this book he challenges and equips all of us to think more clearly.

From the 19th-century discoveries of Alfred Russell Wallace to the fate of forests and reefs in the 21st century, examine the beauty and grace of Indonesian Islands. 211 color illustrations. Maps, photos & line drawings.

"Explore[s] the extraordinary range of Wallace's interests, which encompassed ecology, evolution, spiritualism, and socialism." -- Science Investigations of how the understanding of heredity developed in scientific, medical, agro-industrial, and political contexts of the late nineteenth and early twentieth centuries. This book examines the wide range of scientific and social arenas in which the concept of inheritance gained relevance in the late nineteenth and early twentieth centuries. Although genetics emerged as a scientific discipline during this period, the idea of inheritance also played a role in a variety of medical, agricultural, industrial, and political contexts. The book, which follows an earlier collection, *Heredity Produced* (covering the period 1500 to 1870), addresses heredity in national debates over identity, kinship, and reproduction; biopolitical conceptions of heredity, degeneration, and gender; agro-industrial contexts for newly emerging genetic rationality; heredity and medical research; and the genealogical constructs and experimental systems of genetics that turned heredity into a

representable and manipulable object. Taken together, the essays in *Heredity Explored* show that a history of heredity includes much more than the history of genetics, and that knowledge of heredity was always more than the knowledge formulated as Mendelism. It was the broader public discourse of heredity in all its contexts that made modern genetics possible. Contributors Caroline Arni, Christophe Bonneuil, Christina Brandt, Luis Campos, Jean-Paul Gaudillière, Bernd Gausemeier, Jean Gayon, Veronika Lipphardt, Ilana Löwy, J. Andrew Mendelsohn, Staffan Müller-Wille, Diane B. Paul, Theodore M. Porter, Alain Pottage, Hans-Jörg Rheinberger, Marsha L. Richmond, Helga Satzinger, Judy Johns Schloegel, Alexander von Schwerin, Hamish G. Spencer, Ulrike Vedder

Virtually unknown today, Alfred Russel Wallace was the co-discoverer of natural selection with Charles Darwin and an eminent scientist who stood out among his Victorian peers as a man of formidable mind and equally outsized personality. Now Michael Shermer rescues Wallace from the shadow of Darwin in this landmark biography. Here we see Wallace as perhaps the greatest naturalist of his age--spending years in remote jungles, collecting astounding quantities of specimens, writing thoughtfully and with bemused detachment at his reception in places where no white man had ever gone. Here, too, is his supple and forceful intelligence at work, grappling with such arcane problems as the bright coloration of caterpillars, or shaping his 1858 paper on natural selection that prompted Darwin to publish (with Wallace) the first paper outlining the theory of evolution. Shermer also shows that Wallace's self-trained intellect, while powerful, also embraced surprisingly naive ideas, such as his deep interest in the study of spiritual manifestations and seances. Shermer shows that the same iconoclastic outlook that led him to overturn scientific orthodoxy as he worked in relative isolation also led him to embrace irrational beliefs, and thus tarnish his reputation. As author of *Why People Believe Weird Things* and founding publisher of *Skeptic* magazine, Shermer is an authority on why people embrace the irrational. Now he turns his keen judgment and incisive analysis to Wallace's life and his contradictory beliefs, restoring a leading figure in the rise of modern science to his rightful place.

Since its original publication in 1989, *Evolution: The History of an Idea* has been recognized as a comprehensive and authoritative source on the development and impact of this most controversial of scientific theories. This twentieth anniversary edition is updated with a new preface examining recent scholarship and trends within the study of evolution.

Unveils the man behind one of the greatest deceptions in history! Extensively documented and powerfully compelling, these letters and records reveal a disturbing and unpleasant course in trying to prove his pre-existing conclusions. Look beyond the public facade to the deeply troubling man within.

Includes two essays by Wallace, "On the law which has regulated the introduction of new species" and "On the tendency of varieties to depart indefinitely from the original type."

To this day Charles Darwin's evolutionary theory of the "survival of the fittest" has been visualized with the universal model of a tree of life. But early on in Darwin's thinking the coral provided a fascinating alternative to the tree as a depiction of the evolution of the species. Horst Bredekamp shows how Darwin, a coral enthusiast and collector, found in it a more adequate illustration of evolution through natural selection: It grows anarchically in all directions and no longer upholds mankind as the "crown of creation." Using this example Darwin is proving himself to be both a destroyer and consummator of traditional natural philosophy. Since antiquity the coral had been a symbol of nature as a whole. *Nineteenth-Century Science* is a science anthology which provides over 30 selections from original 19th-century scientific monographs, textbooks and articles written by such authors as Charles Darwin, Mary Somerville, J.W. Goethe, John Dalton, Charles Lyell and Hermann von Helmholtz. The volume surveys scientific discovery and thought from Jean-Baptiste Lamarck's theory of evolution of 1809 to the isolation

of radium by Marie and Pierre Curie in 1898. Each selection opens with a biographical introduction, situating each scientist and discovery within the context of history and culture of the period. Each entry is also followed by a list of further suggested reading on the topic. A broad range of technical and popular material has been included, from Mendeleev's detailed description of the periodic table to Faraday's highly accessible lecture for young people on the chemistry of a burning candle. The anthology will be of interest to the general reader who would like to explore in detail the scientific, cultural, and intellectual development of the nineteenth-century, as well as to students and teachers who specialize in the science, literature, history, or sociology of the period. The book provides examples from all the disciplines of western science—chemistry, physics, medicine, astronomy, biology, evolutionary theory, etc. The majority of the entries consist of complete, unabridged journal articles or book chapters from original 19th-century scientific texts.

As heard on NPR's *This American Life* "Absorbing . . . Though it's non-fiction, *The Feather Thief* contains many of the elements of a classic thriller." —Maureen Corrigan, NPR's *Fresh Air* "One of the most peculiar and memorable true-crime books ever." —*Christian Science Monitor*

A rollicking true-crime adventure and a captivating journey into an underground world of fanatical fly-tiers and plume peddlers, for readers of *The Stranger in the Woods*, *The Lost City of Z*, and *The Orchid Thief*. On a cool June evening in 2009, after performing a concert at London's Royal Academy of Music, twenty-year-old American flautist Edwin Rist boarded a train for a suburban outpost of the British Museum of Natural History. Home to one of the largest ornithological collections in the world, the Tring museum was full of rare bird specimens whose gorgeous feathers were worth staggering amounts of money to the men who shared Edwin's obsession: the Victorian art of salmon fly-tying. Once inside the museum, the champion fly-tier grabbed hundreds of bird skins—some collected 150 years earlier by a contemporary of Darwin's, Alfred Russel Wallace, who'd risked everything to gather them—and escaped into the darkness. Two years later, Kirk Wallace Johnson was waist high in a river in northern New Mexico when his fly-fishing guide told him about the heist. He was soon consumed by the strange case of the feather thief. What would possess a person to steal dead birds? Had Edwin paid the price for his crime? What became of the missing skins? In his search for answers, Johnson was catapulted into a years-long, worldwide investigation. The gripping story of a bizarre and shocking crime, and one man's relentless pursuit of justice, *The Feather Thief* is also a fascinating exploration of obsession, and man's destructive instinct to harvest the beauty of nature.

In this comprehensive history of evolutionism, C. Leon Harris has combined primary source readings with clear, pertinent background information, to provide a solid basic understanding of the ways scientists have arrived at today's views of evolution. Harris describes the major contributors to the theory of evolutionism, placing each in the context of the general cultural influences to which he was exposed. Each chapter also contains an explanation of the philosophical basis of the scientific approach of the period in question. A lengthy bibliography provides direction for further reading on this important and timely subject.

Presents a collection of essays on various topics in science and personalities in science, including Carl Sagan, Sigmund Freud, and Alfred Russel Wallace.

Emergent evolution combines three separate but related claims, whose background, origin, and development I trace in this work: firstly, that evolution is a universal process of change, one which is productive of qualitative novelties; secondly, that qualitative novelty is the emergence in a system of a property not possessed by any of its parts; and thirdly, that reality can be analyzed into levels, each consisting of systems characterized by significant emergent properties. In part one I consider the background to emergence in the 19th century discussion of the philosophy of evolution among its leading exponents in England - Charles Darwin, Herbert Spencer, T. H. Huxley, Alfred Russel Wallace, and

G. J. Romanes. Unlike the scientific aspect of the debate which aimed to determine the factors and causal mechanism of biological evolution, this aspect of the debate centered on more general problems which form what I call the "philosophical framework for evolutionary theory." This considers the status of continuity and discontinuity in evolution, the role of qualitative and quantitative factors in change, the relation between the organic and the inorganic, the relation between the natural and the supernatural, the mind-body problem, and the scope of evolution, including its extension to ethics and morals.

During their lifetimes, Alfred Russel Wallace and Charles Darwin shared credit and fame for the independent and near-simultaneous discovery of natural selection. Together, the two men spearheaded one of the greatest intellectual revolutions in modern history, and their rivalry, usually amicable but occasionally acrimonious, forged modern evolutionary theory. Yet today, few people today know much about Wallace. *The Heretic in Darwin's Court* explores the controversial life and scientific contributions of Alfred Russel Wallace -- Victorian traveler, scientist, spiritualist, and co-discoverer with Charles Darwin of natural selection. After examining his early years, the biography turns to Wallace's twelve years of often harrowing travels in the western and eastern tropics, which place him in the pantheon of the greatest explorer-naturalists of the nineteenth century. Tracing step-by-step his discovery of natural selection -- a piece of scientific detective work as revolutionary in its implications as the discovery of the structure of DNA -- the book then follows the remaining fifty years of Wallace's eccentric and entertaining life. In addition to his divergence from Darwin on two fundamental issues -- sexual selection and the origin of the human mind -- he pursued topics that most scientific figures of his day conspicuously avoided, including spiritualism, phrenology, mesmerism, environmentalism, and life on Mars. Although there may be disagreement about his conclusions, Wallace's intellectual investigations into the origins of life, consciousness, and the universe itself remain some of the most inspired scientific accomplishments in history. This authoritative biography casts new light on the life and work of Alfred Russel Wallace and the importance of his twenty-five-year relationship with Charles Darwin.

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