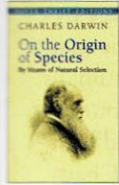


Origins of, and Updates on, *On the Origin of Species*

On the Origin of Species

By Charles Darwin (1859)



It never hurts to return to the source. While Charles Darwin first conceived of the idea of evolution by natural selection on the voyage of the now-famous HMS *Beagle*, he waited decades to publish his findings. During that time, he was gathering evidence, thinking through objections, and consulting with colleagues. The result is a work that still presents the essence of the theory, still answers the most common objections, and still celebrates the beauty of curiosity about the natural world. At the same time, it also shows how Darwin was influenced by his culture and his era.

Annotations and Updates to *Origin*

The only information that cannot be found in *Origin* is the vast amount of data and thought that has been added to evolutionary theory since 1859, without which it might be misunderstood. Therefore, it might be best to try an annotated edition. The Harvard biologist Edward O. Wilson edited a collection called *From So Simple a Beginning: Darwin's Four Great Books* (2005), which includes *Origin* as well as several of Darwin's other well-known works (*Voyage of the Beagle*, *The Descent of Man*, and *The Expression of Emotions in Man and Animals*). Wilson's introductions put each book in context, and Wilson includes an index that compares 19th-century ideas with modern biological thought.

There are several other good annotated versions of Darwin as well. *Darwin* (Norton Critical Editions: 3rd edition, 2000), edited by Philip Appleman, adds contextual works from Darwin's contemporaries as well as modern commentary from a range of perspectives: Richard Dawkins, Edward O. Wilson, Steven Pinker, Daniel Dennett, Noretta Koertge, Stephen Jay Gould, Gillian Beer, and other heavy hitters in the field all weigh in. For a different approach, try the award-winning *Darwin's Ghost: The Origin of Species Updated* (2000) by the geneticist Steve Jones. Jones appropriates the title chapters and summaries from *Origin*, but then fills his book with 21st-century language and data—from biodiversity to AIDS.

Biographies of Darwin

Other readers may prefer to supplement *Origin* with a biography of Darwin. The definitive and most up-to-date biography is Janet Browne's prize-winning two-volume work: *Charles Darwin: Voyaging* (1995), which centers on the HMS *Beagle*, and *Charles Darwin: The Power of Place* (2002), which focuses on *Origin* and its aftermath. Other books explore Darwin from specific angles. *The Reluctant Mr. Darwin: An Intimate Portrait of Charles Darwin and the Making of His Theory of Evolution* by David Quammen (★★★★ Nov/Dec 2006) tries to explain why Darwin

took so long to publish his theory. *Darwin: The Life of a Tormented Evolutionist* (1992) by Adrian Desmond explores the inner struggles that his theory engendered, religious and otherwise. Finally, Darwin's own autobiography, written for his wife and children, is also popular.

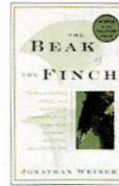
Species

The Beak of the Finch

A Story of Evolution in Our Time

By Jonathan Weiner (1994)

◆ PULITZER PRIZE



Evolution is often discussed in such abstract or argumentative terms that we lose track of its most wonderful outcome: the many plant and animal species of the world. Jonathan Weiner brings the story back to animals by exploring the creatures that inspired Darwin in the first place: the finches of the Galapagos Islands. Following the work of ornithologists Peter and Rosemary Grant, who have observed 20 generations of finches in the Galapagos, Weiner presents evolution on a human (and avian) scale. For discussion of another famous bird, see *Taking Wing: Archaeopteryx and the Evolution of Bird Flight* (1999) by Pat Shipman.

At the Water's Edge

Fish with Fingers, Whales with Legs, and How Life Came Ashore but Then Went Back to Sea

By Carl Zimmer (1999)



One of the greatest mysteries of evolution is how species evolve entirely new organs and abilities; the evidence is there, but it's hard to picture in the mind. Carl Zimmer helps us along with this story of two of biology's most exciting episodes: the transition of life from sea to land, and the evolution of land mammals into dolphins and whales.

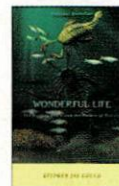
Wonderful Life

The Burgess Shale and the Nature of History

By Stephen Jay Gould (1989)

◆ PULITZER PRIZE FINALIST

◆ THE AVENTIS PRIZES FOR SCIENCE BOOKS



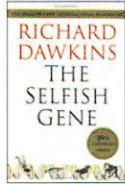
A sobering fact about the story of evolution is the number of species that have gone extinct—indeed, that *must* go extinct for natural selection to do its job. A great number of them were recorded in a famous fossil that was discovered in Canada in 1909, though only recently were they understood. Stephen Jay Gould uses these preserved fossil fauna, about 530 million years old, to think about how life on Earth could have evolved differently and to celebrate the uniqueness of our world. Gould's essay collections include dozens of additional insights into evolution. Readers in search of a challenge could try his more tech-

nical magnum opus, *The Structure of Evolutionary Theory* (★★★ Summer 2002), which weighs in at over 1,400 pages.

Genes

The Selfish Gene

By Richard Dawkins (1976)



One of the key problems Darwin faced when he was formulating his theory was that he did not know how biological information was transferred between generations. We now understand that DNA does the job. Richard Dawkins takes that argument a step further, writing that genes (rather than species) should be seen as the central units in evolution. While *The Selfish Gene* is considered a modern scientific classic, it is not without its critics; see Ernst Mayr (above) or the work of Richard Lewontin.

The Red Queen

Sex and the Evolution of Human Nature

By Matt Ridley (1994)



Many people know Matt Ridley for his book *Genome: The Autobiography of a Species in 23 Chapters* (2000), which includes plenty of insight into evolution itself as the author journeys through the human chromosomes. In *The Red Queen*, Ridley considers how sexual reproduction reshuffles our genes in the constant game of catch-up we play against diseases. Of course, Ridley's open approach to exploring human sexuality will also keep readers engaged.

Humans

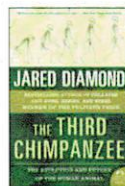
The Third Chimpanzee

The Evolution and Future of the Human Animal

By Jared Diamond (1992)

◆ ROYAL SOCIETY PRIZES FOR SCIENCE BOOKS

◆ LOS ANGELES TIMES BOOK PRIZE

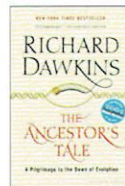


For many people, Jared Diamond's *Guns, Germs, and Steel* is the only science book they've ever read. But before trying to explain the rise and fall of societies, Diamond examined the people who built them. *The Third Chimpanzee* starts by looking at the small genetic divergences from apes that enabled human beings to expand to every part of the world. Then Diamond considers how some of those same genetic divergences enable risky, self-destructive, and immoral behaviors. Other good books on evolution and what it means to be human include *Evolution for Everyone* by David Sloan Wilson (★★★★ SELECTION July/Aug 2007) and *Your Inner Fish: A Journey into the 3.5-Billion-Year History of the Human Body* by Neil Shubin (★★★★ SELECTION Mar/Apr 2008).

The Ancestor's Tale

A Pilgrimage to the Dawn of Evolution

By Richard Dawkins (2004)



While evolution may have the fossils on its side, it's hard to match the elegance of Genesis. But Dawkins does his best in this book, which weaves a sort of evolutionary mythology by moving backwards in time through the many generations of species that preceded humans.

Besides including an engaging and up-to-date account of human evolution, each of Dawkins's "tales," told by 30 "pilgrims" and loosely modeled after Geoffrey Chaucer's *Canterbury Tales*, illustrates an aspect of evolutionary theory. (★★★★ Jan/Feb 2005)

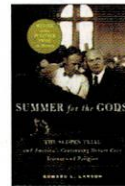
Creation

Summer for the Gods

The Scopes Trial and America's Continuing Debate Over Science and Religion

By Edward Larson (2004)

◆ PULITZER PRIZE

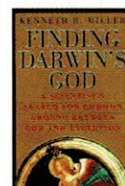


Many people think they know the story of the most famous courtroom battle over evolution, the Scopes "Monkey" Trial, because they read (or saw) Jerome Lawrence and Robert E. Lee's *Inherit the Wind* (1955). But the play romanticizes a complicated historical episode. Edward Larson separates the fact from the fiction and analyzes the continuing consequences of the trial for Americans' understanding of evolution and themselves.

Finding Darwin's God

A Scientist's Search for Common Ground Between God and Evolution

By Kenneth Miller (2007)



According to the prevailing discourse on the subject, as well as many people on both sides of the debate, evolution and organized religion are incompatible. Not so, argues Kenneth Miller, a Roman Catholic biologist working in a world where most scientists are atheists or agnostics. While rebuking creationists, Miller tries to open everyone's minds to new ideas about the role of a Creator in a world where life evolved. ■