EVOLUTION AND EDUCATION RESOURCES

Print Reference Sources about Evolution

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Introduction

The expanded selection of high-quality digital information resources about evolution on the World Wide Web should not eclipse the continued availability of high quality works in print. Of course, until the recent past, print was the dominant medium for information resources about evolution, the digital medium not being well enough developed. Print resources cannot be distributed as widely as digital resources; nonetheless, they are available to many people who live near enough to a library to use the books on site or to request them for delivery by inter-library loan. Moreover, printed books can play an important role in the research process that digital resources cannot: a well-designed book is readable in a way that digital resources generally are not, providing visual and spatial cues about a reader's place in the exposition or argument of the text, and they can be physically manipulated in a way that can help a researcher frame and develop his or her ideas.

In the first section of this essay, the benefits of print resources are explained; the second section lists some print reference sources about evolution. The selection of these reference sources is particularly authoritative: they form a central part of the reference collection in the main reading room of the American Museum of Natural History.

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What Use Print?

The New York Public Library's collection includes one of 48 surviving copies of Gutenberg's *Bible*, which is on view in the Library's Salomon Gallery. Notes accompanying the *Bible* exhibit explain that James Lenox brought the book to the United States in 1847, the first of its kind to enter the nation. "Lenox's European agent issued instructions for New York that the officers at the Customs House were to remove their hats on seeing it: the privilege of viewing a Gutenberg Bible is vouch-safed to few." As "the first substantial printed book in the West," the *Bible* is a product of Gutenberg's development of printing with movable type, "arguably the greatest achievement of the second millennium" (NYPL Rare Book Division 2009).

Digital production of professional-quality texts and the increasingly sophisticated use of the Internet as a means of disseminating and discovering them may perhaps be described by historians a thousand years from now as "arguably the greatest achievement of the third millennium." Nonetheless, unless there is a sea change of unprecedented proportions in our experience of reading, digital publishing will not eclipse the second millenium's advances. Before considering why this is so, consider some of the new kinds of reading experiences possible only with the advent of digital publishing.

Into the Third Millennium ...

Hand-held devices such as the Apple iPhone have quite literally transformed the shape of layout design for readability. *The New York Times* provides an application for reading the "newspaper" on the iPhone's small screen. For many commuters and travelers, the small-

screen format is preferable. The *Times* information architects did not attempt to reproduce the broadsheet format on the small device; rather, they designed a scheme for organizing and navigating the *Times*' sections and stories, which makes reading and navigation easy. The "paper" can be read on a crowded subway; several days' worth of stories are easy to carry. The needs of the newspaper audience are well served by this new technology. Newspaper stories are short, the writing telegraphic in style, and their tone neutral. They can be read three or four sentences at a time without loss of continuity. Moreover, the photographs and sketches of the digital *Times* are more vivid than those in the print version.

Reading digital texts often does not create a sense of forward motion of the kind experienced by a reader of a book or magazine. Suppose someone wants to make a quick study of a topic with which he or she is not familiar-say, evolution. The reader might begin by locating the section of a web site in which the topic is addressed directly. Perhaps the discussion of evolution is too advanced, or uses terms with which he or she is not familiar. The researcher might then skip to different sections of the web page or site, picking out only those needed to fill in the gaps in his or her knowledge. Of course, the researcher need not limit him- or herself to just one site or just one page. Between hyperlinks and Internet searches, the reading experience becomes multi-dimensional, shooting-or meandering, as the case may be-off in many different directions, and not necessarily ending up at its starting point. This strategy is impossible to duplicate with print media. Attempting to do so would require scanning the tables of contents, indexes, and the body of the text itself of a wide array of books, periodicals, whatever might be the print analog of a blog, government reports from many nations, and vast reference works containing the information of online databases, for instance, the names of biological taxa or geographic locations.

Machine-assisted reading is another practice made possible by digital publishing. A scholar can search the full digital text of, say, the collected works of David Hume, looking for a particular phrase. What formerly took a lifetime of study, if indeed it has ever been possible, can be performed rapidly and comprehensively. Seasoned readers may know where many instances of an important term or phrase can be found; but none will know where to find instances of a term never before believed to be important. Easy access to the location of words in a text does not free the scholar from the burden of interpretation. As in the Internet research strategy discussed above, the experience of reading passages discovered by searching full text is more like

crossing back and forth across a network or web than it is like moving from start to finish in a work that builds toward a conclusion. Machine-assisted reading may be taken one step further by indexing passages in a work with natural language processing software, which makes it possible to search for passages having a given meaning. This is indeed how many scientists read the scientific literature nowadays. Rather than view machine reading as a process absent human creativity and understanding, it may be viewed as a massively collaborative effort possible only with the assistance of database engineers and programmers, experts in the content area of the works read, and experts in the organization of information. Like the Internet itself, machine-assisted reading contributes to realizing the ideal of a community of researchers building on one another's work in the interest of advancing human learning.

... and Back to the Second

Reading is a pastime for many whose professional obligations require them to read. Most likely, when reading for pleasure, most of these people will pick up a book, a familiar, comforting ritual practiced in one form or another since childhood, and in which most will probably engage until vision fails them in old age. Some might want to argue that the importance of this ritual alone justifies continuing to use print resources as much as possible, and that there is something intrinsically valuable, perhaps even ineffable, about reading print work. Nonetheless, the fact remains that even those who believe that reading books is essential to a good life feel no sense of loss when, in their professional life, they frequently-indeed, perhaps almost exclusively-read digital texts. One would think that if there were any intrinsic importance to reading print, it would be felt strongly in these professional contexts in which digital texts are one among many digital tools that have come to replace more traditional forms of communication: email, rather than writing a letter with a pen and paper; text messaging, instead of telephoning or visiting a colleague's office; and, perhaps most telling, sending an important document attached to an email rather than producing a print copy—and so increasing the readership of digital texts. Only a few scientists view the loss of printed scientific papers and more generally printed journals with anything but satisfaction, and many scholars of the Humanities feel the same way, noting the passing of the traditional forms of publication with a melancholy sigh—but no more.

Whatever the utility and importance of digital texts, print works, particularly reference works, have a lasting



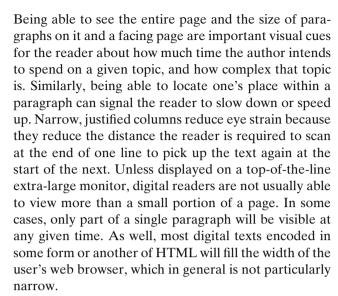
value which they are likely to maintain for a long time: they are designed for *readability and visual impact*, and because they are *physical rather than virtual*, they can be manipulated in ways eminently useful for the research process—ways in which digital texts cannot be.¹

Readability

Despite the new text layout designs for new reading devices and the advantages of hyperlinks discussed above, there is one research task for which digital texts are poorly suited: continuous reading, for an extended period of time, of prose works. Continuous reading requires that the reader proceed in something like a linear fashion from the start to the end of some stretch of text, unlike he or she might do, for instance, when branching off in new directions while reading digital texts on the World Wide Web. The amount of time at which reading a print work becomes more profitable than reading its digital counterpart depends on a variety of factors, but the key issue is that reading print is generally easier than reading a digital text if multiple sections of the text must be re-read, even in a single sitting, to fully understand some one or another passage. That is, print works are better suited than digital works if understanding the text requires that one often must look back at passages which have been read previously. This might seem counterintuitive because it might seem that devices such as scroll bars make it easy to move from one position to another in a digital text. The problem is that, while these mechanisms provide a means of moving quickly from place to place, they lack the spatial context provided by the physical dimensions of a print work.

Most people are best able to read text presented fully justified in narrow columns longer than they are wide on a page with wide margins—A design much the same as Gutenberg used for his *Bible*. There is a benefit to being able to see an entire page at once and a further benefit to being able to see facing pages both at once.

¹The arguments presented in the next two sections are based on design and functional considerations. The approach is to ask, How does the physical manifestation of the information print works contain meet the demands of the kind of reading required by print reference works? Accessible research into the cognitive importance of page layout, book design, and more generally, the presentation of text in an integral unit such as a book or document stored and displayed on a digital reading device is particularly hard to identify and obtain. Should readers of this paper be aware of such research, they are asked to please contact the author.



The thickness of a book also provides subtle clues to the reader about his or her position in the work as a whole—the greater the number of pages accumulate to the left of the book's spine, the closer the reader is to the end of the book. Finding a given location in a book takes seconds, at most, even if the reader is unassisted by an index or table of contents. The reader can estimate, by eye, the best place to open the book, judging from the proximity to the end of the book of the passage being sought. Moving to the approximate location is a matter of opening the book as near or as far from the front cover as is needed. The position of the vertical scroll bar is the closest analog to this method of accessing text on an online digital text. Some digital texts can be navigated by page number, although there is no uniformly adopted mechanism for doing so.²

Bringing the ideas outlined in the previous two paragraphs together, consider the way in which physical size of the book itself and the visual cues provided by the page layout of a well-designed print work facilitate continuous reading of difficult material, that is, reading which moves slowly along the intellectual path established by the text's content, and which requires frequently returning to previous points in the text, the index, or the table of contents. The author of a well-written text breaks his or her ideas into manageable parts, or at least, signals to the reader just how



²A pull-down menu is particularly egregious and unfortunately common example of design for page navigation. Some online publications provide a single pull-down menu listing every page in a digital text. This results in hundreds of items on the menu, generating a list many times the height of the screen when the user activates it.

manageable those ideas are, by sizing paragraphs appropriately. When the reader comes across a passage which can only be understood in terms of material explained previously in the book, he or she can take advantage of the visual and spatial points of reference provided by the book's thickness. "This term was defined a little ways back:" the reader's intuitive sense of how far back in the argument or exposition together with his or her sense of the pace of the exposition relative to the length of the book supplies the reader with a sense of how many pages to turn back in order to reach the needed information. Similarly, the index or table of contents is easily accessible. Reading devices for digital texts do not provide any such mechanisms for working through a text or navigating it, leaving the reader to struggle with any one of a range of unfamiliar user interfaces to the text, unassisted by spatial or visual cues about his or her position.

A recent exchange about Amazon.com Inc.'s Kindle in the online edition of The Atlantic Monthly (Battles 2009; Birkerts 2009) reflects the sense that many people have that at some point in the near future, printed books will become obsolete. The Kindle is marketed as a "wireless reading device"—apparently those who invented this description did not believe that it is in any way remarkable that the world's libraries of print works are filled with millions upon millions of wireless reading devices, that is, printed books. "Wireless digital reading device" would have been more accurate. Perhaps the creators of "wireless reading device" believed that the phrase is sufficiently unlike "book" or "paperback" that it would be understood that it is an entirely new and different means of transporting and displaying reading material. Indeed, the Kindle's web site (Amazon.com 2009) advertises books that one can store and read on the Kindle. The Atlantic Monthly exchange concerns the role of print texts, libraries, and digital texts in the larger cultural and technological context in which information is produced, distributed, and consumed. What the antagonists in the exchange fail to mention, and indeed, what seems to have gone largely unnoticed more generally, is that the page layout and typography of the printed book remain among the most effective mechanisms invented by human beings for communicating sustained arguments and explanations of a sort that require careful consideration and study. Indeed, the Kindle is designed to duplicate the experience of reading a printed book so much as is possible: buttons on the left and right of the device take the reader from one page to the next, "turning pages," which appear on a "paper-like display" which "reads like real paper" and "now boasts 16 shades of gray for clear text and even crisper images" (Amazon.com 2009).

Creating a Physical Work Space

A digital text is contained, so to speak, in the reading device used to display it—a computer screen, one of the reading devices mentioned above, or perhaps a large screen shown with an overhead projector. Print texts are similarly contained in the "devices" used to display them as well. The important difference is that these "devices"—printed books—can be arranged and rearranged on a large surface such as a desk or floor space. As in the case of the design of a book, which provides visual and spatial information useful for navigating content, a reader's ability to manipulate the volumes themselves makes them more useful. This can be crucially important for a researcher trying to organize his or her thoughts or explore ideas. My Ph.D. advisor would sit at her computer surrounded by a large fan-like arrangement of books and papers, herself at the central point. When she needed a particular work, she would swivel around in her chair and pick it up from its place in the "fan." Books and papers shifted in proximity to the center as they were used at different levels of intensity, open to the most important or most frequently used pages. In this way, there is an important sense in which her own written work was physically constructed. In the case of the works on evolution reviewed below, someone might open up five or six of the reference books to an entry or chapter on the same topic so as to quickly move from book to book in order to compare each source with the others, or to be able to refer to any one of the books quickly while editing a paper on the topic, organizing notes, or crosschecking with information already obtained from other sources. It may be possible to mimic this kind of spatial arrangement of texts by opening a separate window on one's computer for each digital text, but most people will probably find it difficult to navigate among them to quickly find a particular text. The physical arrangement of books in a work space is so useful because the organization of the works is so easy to grasp at a glance. The abstraction of windows on a computer's desktop will probably have the opposite effect.

Some Reference Works about Evolution

The Research Library at the American Museum of Natural History serves three divergent constituencies: the museum's scientific researchers, the museum's education department, and the general public. The latter two overlap, in the sense that the aim of the education department is to provide information to the general



public by way of programs such as classes, hands-on, interactive displays for children and adults, and by acting as consultants to exhibition designers. Museum researchers most often consult scholarly monographs and periodical literature. Many of these are online in the form of periodicals which no longer appear in print, publishing articles in digital form only. Print monographs and back copies of print periodicals are found in the library stacks (on shelves). Accordingly, the reference collection is composed in large part of works intended for the general public and those whose aim is to provide the general public with authoritative answers to their questions about scientific topics and to aid its members in their research pursuits.

Generally speaking, reference works are those intended to provide general information of the kind someone beginning to learn about a subject would need. Some reference works are comprehensive, providing the reader with an overview of all subtopics in the subject area of interest. Dictionaries, encyclopedias, and atlases are reference works of this kind. Others are more eclectic, giving the reader a snapshot of particularly significant or instructive examples of phenomena in the subject area. The AMNH reference collection includes works of both kinds, the general and the eclectic. Yet another class of reference works are highly specialized, serving as a synopsis of all that is known at the time of publication about the subject of the work.

Unlike many digital works, most reference works cannot be updated without releasing a new edition; the initial creation of a reference work and continued revisions require considerable labor. They are expensive and take up considerable room in a library's collection. For these reasons—they are released infrequently, and newly purchased only if a new edition represents a significant advance over the old—not all reference works are current. Readers should be aware of this. The older a reference work, the more careful the reader should be about following up with a librarian or by consulting other sources in order to take account of new discoveries. Concerns about currency notwithstanding, most reference works remain useful for many years because their primary aim is to communicate general information about fundamentals, which often remain stable even as science progresses.

The listing of reference works below is organized by topic: general works, works on Darwin, human evolution, fossils and paleontology, case studies of particular kinds of animals, and extinction. Works on the evolution of plants are notably absent, perhaps reflecting the preponderance of interest in animals at the AMNH, the absence of botanical curators and the proximity of

the New York Botanical Garden and its excellent library in the Bronx.

General Works on Evolution

Evolution of life, edited by Gamlin and Vines (1986), is organized by topic, including sections on diversity (the taxa), cellular biology, and basic life processes such as development, nutrition, movement, and sense perception. An introductory section provides a background on evolution, genetics, and taxonomy. The work contains many color illustrations and photos. Evolution, 2nd ed., by Patterson (1999), is a textbook of evolution suitable for college-level courses in evolutionary biology. Philip Whitfield's From So Simple a Beginning: the Book of Evolution (Whitfield 1993) follows the history of life and its hierarchy of organization, starting with basic biology and the origin of life and ending with the evolution of humans. Other topics include evolutionary theory and processes of evolution (variation, heredity, natural selection, speciation) and adaptation; a section with special topics discusses mass extinction, genetics, taxonomy, and rates of evolution. In addition to a step-by-step introduction to ideas about evolutionary processes, the book contains a methodological section with a general overview of scientific status of evolutionary theory and the evidence for evolution. It contains few diagrams, line drawings, and photos.

The Book of Life (Gould 2001), with a general introduction Stephen Jay Gould, and contributed essays by a variety of authors, is a book about the history of life. The essays address topics in chronological order, starting with a chapter on the nature of geological time and ending with human evolution and along the way discussing fish, quadrupeds on land, dinosaurs, and the mammalian radiation. Keywords in Evolutionary Biology, (Keller and Lloyd 1992) edited by Evelyn Fox Keller, contains short essays (generally three to five pages each in length) about important ideas and terms in evolutionary biology. It is suitable for college-level students, graduate students, and scholars across disciplines and offers ample references to related literature.

Mark Pagel is the editor-in-chief of the *Encyclopedia* of *Evolution* (Pagel 2002), which is comprehensive, and will be useful for anyone seeking general information about evolution. Volume 1 contains 100 pages of essays providing overviews of important topics by well-known authors. Stephen Jay Gould writes on macroevolution, David Hull on the history of evolutionary thought, and John Maynard Smith on major transitions in the history of life. Shorter entries, arranged alphabetically, continue for the remaining 1,100 pages or so of volume 1 and the entire 1,200 pages of volume 2. *Evolution: an*



Introduction (Stearns and Hoekstra 2000) by Stephen C. Stearns and Rolf F. Hoekstra offers a few technical diagrams and charts.

Cassell's Atlas of Evolution (Dixon 2001), by Dougal Dixon, Ian Jenkins, Richard Moody, and Andrey Zhuravlev, is beautifully illustrated with color charts, maps, timelines, photos, and diagrams on almost every page. Evolution (de Panafieu and Gries 2007), by Jean-Baptiste de Panafieu, with photos by Patrick Gries, contains short chapters on different phenomena of evolution, including body plans, the origin of species, natural and sexual selection, adaptation, and the nature of the organism–environment relationship, presented in case studies. Each topic is illustrated with examples of particularly interesting or important fossils or living species. Gries's striking black-and-white photos of fossils and skeletons can be found on every other page or so.

Richard Milner's *Darwin's Universe* (Milner 2009) and Ruse and Travis' *Evolution: the First Four Billion years* (Ruse and Travis 2009) are excellent reference sources; both are reviewed in this issue of *Evolution: Education & Outreach*.

Darwin

Freeman's *Darwin: Bibliographical Handlist* (Freeman 1977) is the authoritative source for information about Darwin's publications. Freeman lists all known editions of Darwin's published works, providing precise bibliographical information on each, including, for instance, information about how to distinguish different impressions of the same works from one another. Patrick H. Armstrong's *All things Darwin: an Encyclopedia of Darwin's World* (Armstrong 2007), in two volumes of approximately 300 pages each, contains short entries on all aspects of Darwin's life and works. Illustrations and photos are sparse; this book is suited for all audiences but will probably not be as useful for college students and scholars, who will need more detailed information and interpretation than the work provides.

Human Evolution

General editors of *The Human Fossil Record* (Schwartz et al. 2005) Tattersall and Schwartz have organized the production of an authoritative account of the fossil record of our species, suitable for the specialist. There are many black-and-white photos of specimen fossils. This work is both comprehensive and detailed: it is composed of four volumes, each 300–500 pages in length. *Extinct Humans* (Tattersall and Schwartz 2000), by the editors of *The Human Fossil Record*, is a single-

volume work containing many photos and illustrations, suitable for a general audience and researchers alike. *Encyclopedia of Human Evolution and Prehistory* (Delson et al. 2000), 2nd ed., edited by Eric Delson, Tattersall, John A. van Couvering, and Alison S. Brooks, contains short entries on all topics concerning our ancestry and is illustrated with many technical drawings. General in approach, it nonetheless requires a sophisticated reader. Our ancestors were not always healthy: readers can learn about the fossil record of disease in our species by consulting *The Cambridge Encyclopedia of Human Paleopathology* (Aufderheide et al. 1998), by Arthur C. Aufderheide and Condrado Rodriugéz-Martìn, which contains black and white photos of human fossils. This is a specialist monograph.

Human Evolution: an Illustrated Introduction (Lewin 2005), 5th ed., contains two-color drawings, maps, charts, and diagrams; despite its title, there are few illustrations. Intended to be comprehensive, this work is suitable for high school and college students. National science museums of Britain and the USA have published general works on human evolution. London's Natural History Museum publishes The Complete World of Human Evolution (Stringer and Andrews 2005), by Chris Stringer and Peter Andrews, which contains many color and black-and-white illustrations, color and black-and-white photos, and maps. Washington D.C.'s Smithsonian publishes the Intimate Guide to Human Origins (Zimmer 2005), by the well-known science writer Carl Zimmer. Photos interspersed in the text match topics as they are discussed. Both of these works are well suited for high school and college audiences. The Cambridge Dictionary of Biology and Human Evolution (Mai et al. 2005) by Larry L. Mai, Marcus Young Owl, and Patricia M. Kersting, displays a few technical drawings illustrating human physiology and morphology and provides brief definitions of terms about human anatomy, behavior, physiology, genetics, nutrition, psychology, and general scientific method; it is authoritative and comprehensive.

Fossils and Paleontology

Fossils and the History of Life (Simpson 1983), by pioneering paleontologist George Gaylord Simpson, has a small number of photos, technical diagrams, and maps, providing chapters on various topics in paleontology relevant to understanding the history of life. It is suitable for advanced high school audiences and college students and accessible enough for a general audience. The Complete Encyclopedia of Fossils (Ivanov et al. 2002) by Martin Ivanov, Stanislava Hrdlickova, and Růžena Gregorova has short entries on a vast number



and range of fossil specimens, almost every one of which is illustrated with a color photograph. *Encyclopedia of Paleontology* (Singer 1999), ed., Ronald Singer, is a two-volume work of approximately 700 pages in length. Short entries are explained in many cases with technical drawings.

Particular Animals

Introduction to the Study of Dinosaurs (Martin 2006), by Anthony J. Martin, is a textbook that will be useful for high school and college students. Martin explains general concepts in evolutionary biology, taking dinosaurs as his central focus. The Evolution and Extinction of the Dinosaurs (Fastovsky and Weishampel 2005), 2nd ed., by David E. Fastovsky and David B. Weishampel, is intended to be a comprehensive work on the entire history of all dinosaur lineages; it is amply illustrated and includes some technical drawings and photos. Fossil Horses: Systematics, Paleobiology, and Evolution of the Family Equidae (MacFadden 1992), by Bruce J. McFadden, is a monograph on horses, intended to be comprehensive. Not heavily illustrated, but good for college audiences or those more advanced, this work is not current, and those interested in the evolution of horses are urged to look into whether knowledge in his or her area of interest about horses has advanced.

The Origin and Evolution of Birds (Feduccia 1999), 2nd ed., by Alan Feduccia, contains many black-and-white drawings and photos of the birds. Organized eclectically, it contains chapters on the origin of birds from reptiles; birds of the cretaceous, including sea birds and diving birds; the genesis of flight; birds of prey; flightlessness; and long-legged waders like the flamingo; a clear, well-written monograph that will appeal to a wide range of readers. The Evolutionary History of the Primates (Szalay and Delson 1979) by Frederick S. Szalay and Eric Delson, is organized by taxon and contains technical drawings.

Extinction

Vanished Species (Day 1981) by David Day, intended to be comprehensive, contains many color photos, drawings, and line sketches of the extinct species. A Gap in Nature: Discovering the World's Extinct Animals (Flannery and Schouten 2001), by Tim Flannery and Peter Schouten, is illustrated with stunning color drawings on roughly every other page. Entries describe particular species in order of their extinction, starting with the upland moa in 1500. Unlike Vanished Species, this

work focuses on striking examples of extinct species, rather than describing all of them.

Concluding Remarks

Print reference works have an important role to play in the evolution researcher's tool kit: the physical characteristics of print books can be exploited by the researcher, promoting continuity and creativity in his or her work. This is especially the case for the kind of reading required by reference works. The list of works here is intended to offer the researcher a starting point for learning about evolution. Many libraries will hold, in their collections, some of the works mentioned above. Those that do not can most likely order them by inter-library loan. At the very least, the works listed here might suggest the range of topics and approaches which reference works on evolution offer, pointing the researcher toward others not listed here.

References

Amazon.com. Kindle: Amazon's 6" wireless reading device (latest generation): Kindle store. 2009. http://www.amazon.com/Kindle-Amazons-Wireless-Reading-Generation/dp/B00154JDAI/ref=amb_link_84305771_1?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=left-1&pf_rd_r=1RV1JTEEAWDXTPDDDS9T&pf_rd_t=101&pf_rd_p=489668811&pf_rd_i=133141011. Accessed 20 Sept 2009.

Armstrong P. All things Darwin: an encyclopedia of Darwin's world. Westport: Greenwood; 2007.

Aufderheide AC, Rodríguez-Martín C, Langsjoen O. The Cambridge encyclopedia of human paleopathology. Cambridge: Cambridge University Press; 1998.

Battles M. In defense of the Kindle. 2009. http://www.theatlantic.com/doc/200903u/amazon-kindle-2. Accessed 20 Sept 2009.

Birkerts S. Resisting the Kindle. 2009. http://www.theatlantic.com/doc/200903u/amazon-kindle. Accessed 20 Sept 2009.

Day D, editor. Vanished species. New York: Gallery Books; 1989. (revision of the doomsday book of animals: a natural history of vanished species, 1981).

Delson E, Tattersall I, Van Couvering JA. Encyclopedia of human evolution and prehistory. 2nd ed. New York: Garland; 2000.

Dixon D. Cassell's atlas of evolution. London: Cassell; 2001.

Fastovsky DE, Weishampel DB. The evolution and extinction of the dinosaurs. 2nd ed. New York: Cambridge University Press; 2005.

Feduccia A. The origin and evolution of birds. 2nd ed. New Haven: Yale University Press; 1999.

Flannery TF, Schouten P. A gap in nature: discovering the world's extinct animals. 1st ed. New York: Atlantic Monthly Press; 2001.

Freeman RB. The works of Charles Darwin: an annotated bibliographical handlist. 2nd ed. Hamden: Archon Books; 1977. (revised and enlarged).



- Gamlin L, Vines G. The evolution of life. New York: Oxford University Press; 1986.
- Gould SJ. The book of life. New York: Norton; 2001.
- Ivanov M, Stanislava H, Růžena G. The complete encyclopedia of fossils. Dallas: Hackberry; 2002.
- Keller EF, Lloyd EA, editors. Keywords in evolutionary biology. Cambridge: Harvard University Press; 1992.
- Lewin R. Human evolution: an illustrated introduction. 5th ed. Malden: Blackwell; 2005.
- MacFadden BJ. Fossil horses: systematics, paleobiology, and evolution of the family Equidae. Cambridge: Cambridge University Press; 1992.
- Mai LL, Owl MY, Kersting MP. The Cambridge dictionary of human biology and evolution. Cambridge: Cambridge University Press; 2005.
- Martin AJ. Introduction to the study of dinosaurs. 2nd ed. Malden: Blackwell; 2006.
- Milner R. Darwin's universe: evolution from A to Z. Berkeley: University of California Press; 2009.
- NYPL Rare Book Division. "Gentlemen, please remove your hats:" The Gutenberg Bible. 2009. http://exhibitions.nypl.org/treasures/items/show/113. Accessed 6 Sept 2009.
- Pagel MD. Encyclopedia of evolution. Oxford: Oxford University Press; 2002.

- de Panafieu J-B, Gries P. Evolution. 1st ed. New York: Seven Stories; 2007.
- Patterson C. Evolution. 2nd ed. Ithaca: Comstock; 1999.
- Ruse M, Travis J, editors. Evolution: The first four billion years. Cambridge: Harvard University Press; 2009.
- Schwartz JH, Tattersall I, Holloway RL. The human fossil record. New York: Wiley-Liss; 2005.
- Simpson GG. Fossils and the history of life. New York: Scientific American Library; 1983.
- Singer R. Encyclopedia of paleontology. Chicago: Fitzroy Dearborn; 1999.
- Stearns SC, Hoekstra RF. Evolution: An introduction. Oxford: Oxford University Press: 2000.
- Stringer C, Andrews P. The complete world of human evolution. London: Thames & Hudson; 2005.
- Szalay FS, Delson E. Evolutionary history of the primates. New York: Academic; 1979.
- Tattersall I, Schwartz JH. Extinct humans. 1st ed. Boulder, Colo.: Westview; 2000.
- Whitfield P. From so simple a beginning: the book of evolution. New York: Macmillan; 1993.
- Zimmer C. Smithsonian intimate guide to human origins. 1st ed. Smithsonian Books; 2005.

