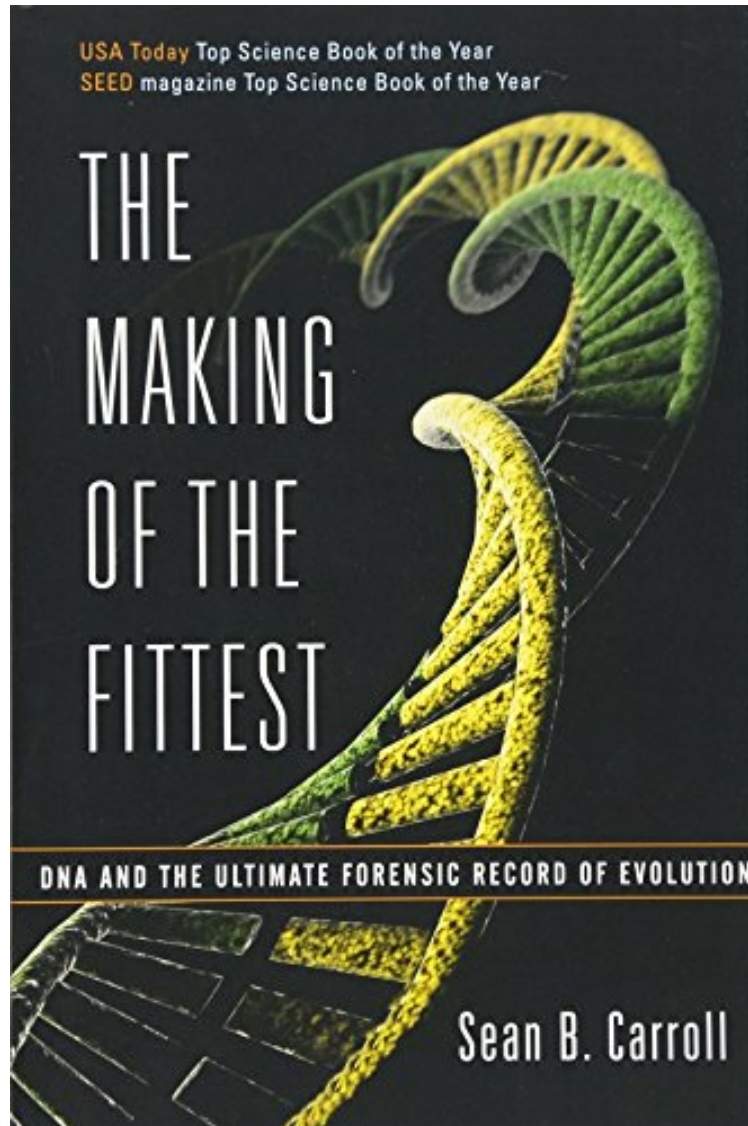


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The Making of the Fittest: DNA and the Ultimate Forensic Record of Evolution

Sean B. Carroll

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#151079 in Books Sean B Carroll 2007-09-17 Original language: English PDF # 1 8.30 x .90 x 5.50l, .58 #File Name: 0393330516304 pages The Making of the Fittest DNA and the Ultimate Forensic Record of Evolution | File size: 24.Mb

Sean B. Carroll : The Making of the Fittest: DNA and the Ultimate Forensic Record of Evolution before purchasing it in order to gage whether or not it would be worth my time, and all praised The Making of the Fittest: DNA and the Ultimate Forensic Record of Evolution:

0 of 0 people found the following review helpful. Great read, filled with examples of real "proofs" from nature (as if

any needed) for Evolution! By AggiesLove this book and learned tons of stuff. Strongly recommend for those who still might have certain level of discomfort with the theory of Evolution. This provides lots of confidence and "proof" examples if you still have any doubt. Also recommend Richard Dawkins' books: *Greatest Show On Earth* and *Extended Phenotype*. Love science! 0 of 0 people found the following review helpful. Best book on evolution that I've read By andrew walter This was a great book and helped me understand mutations within the framework of evolution much more clearly. By far it's probably my favorite and most informative book on DNA that I've read. If you are wanting to learn about how evolution through natural selection works I highly recommend this book! 0 of 0 people found the following review helpful. A five carat diamond with some slight flaws By Sceptique500 This is a gem of a book - a large beautifully cut diamond, flashing many insights, clear, well structured. The logic of the arguments is persuasive, and the evidence overwhelming in its endless variety. Well done. My particular thank goes to the Editor, who (I presume) helped in structuring the arguments and found all but a few ambiguities in the text. It is pleasing, for a change, to be able to say: well written, and well edited. If I'm not giving the book the five stars it actually deserves, it is for three reasons. Chpt. 9: I find it useless and wasteful of good space. The creationist/ID crowd has not addressed DNA-based evidence, and for good reason. As staunch defenders of law and order they'd more than gladly use DNA to convict a criminal. How could they reject its value for evolution? They conceded this part of the conversation without a fight (or at least Dr. Carroll has not provided DNA-refuting arguments on their part). So, let's be magnanimous, and ignore them - that dead horse has been flogged long enough. The book's title: "Making of the fittest" harks back to Spencer Co. Would not "fit" suffice, thereby signifying distance from the social Darwinist crowd, as well as indicating that evolution does not jump to ever higher branches in the "tree of life" (sorry Dr. Darwin, you put the term in belatedly, and unwillingly), but just hops here and there as the conditions of selection change? In the same vein "forensic record" implies judicial truth. Albie SACHS, of the South African Supreme Court, argues, however: "Yet the very notion of judgment presupposes that there is no inevitable outcome. (...) Instead, it seeks to woo the consent of the reader by the persuasiveness of its argument. (p. 142) *The Strange Alchemy of Life and Law* (0). I'd soft-pedal the recurring "forensic" terminology. Chpt. 10: There is nothing wrong with the bleak picture of the condition of the sea as presented, except that it is far too rosy, and fragmentary. Ocean acidification has emerged as an (albeit limited-awareness) issue only this century, though its import may by far exceed the impact of many of the horrors that have projected to follow climate change. Gaia, to borrow Lovelock's metaphor, is a sea creature. So if one wants to raise the subject - more than welcome, but it has to be with much more muscle, breadth and depth. In fact it cries out for a whole book. So instead of these last three somewhat loosely constructed chapters I'd have a final one, tightly recapitulating the logic of arguments in order to impart on readers a well-structured, easily remembered understanding of the arguments. And - if the issue of climate change is to be raised, a student of evolution may wonder why we approach this problem by intelligent design... Chpt 8 finally I found somewhat confusing, not having read Carroll's prior evo-devo book. There is some loose wording there. So is Pax-6 a gene or a protein; and what are "tool-kit proteins"? One gets the drift, but is soon let adrift in a sea of *Drosophila* wings.

DNA evidence not only solves crimes in Sean Carroll's hands it will now end the Evolution Wars. DNA, the genetic blueprint of all creatures, is a stunningly rich and detailed record of evolution. Every change or new trait, from the gaudy colors of tropical birds to our color vision with which we admire them, is due to changes in DNA that leave a record and can be traced. Just as importantly, the DNA evidence has revealed several profound surprises about how evolution actually works. 50 black-and-white illustrations and 8 pages of color

From Publishers Weekly Picking up where scientists like Richard Dawkins have left off, Carroll, a professor of genetics at the University of Wisconsin-Madison (*Endless Forms Most Beautiful: The New Science of Evo-Devo*), has written a fast-paced look at how DNA demonstrates the evolutionary process. Natural selection eliminates harmful changes and embraces beneficial ones, and each change leaves its signature on a species' DNA codes. For example, the Antarctic ice fish today has no red blood cells; yet a fossilized gene for hemoglobin remains in its DNA, showing that the fish has adapted over 55 million years by losing the red blood cells that thicken blood and make it harder to pump in extreme cold. The fish has developed other features that allow it to absorb and circulate blood without hemoglobin. Carroll points out that by examining the DNA of these ice fish species, it's possible to map its origins as well as the history of the South Atlantic's geology. He also uses dolphins, colobus monkeys and microbes to demonstrate how deeply evolution is etched in DNA. While searches for the genetic basis for evolution are hardly new, Carroll offers some provocative and convincing evidence. 7 pages of color illus.; 50 bw illus. (Oct.) Copyright Reed Business Information, a division of Reed Elsevier Inc. All rights reserved. From Booklist Sensing that many people misunderstand evolution or don't believe it, geneticist Carroll here hopes to teach the interested and convince the doubters. He uses popular interest in animals as his lure and selects specific creatures, beginning with bloodless fishes of the Antarctic seas, as stages for his substantive points about evolution. More particularly, Carroll focuses on specific genes carried by his cast of animals to demonstrate natural selection. Carroll considers the animals' most favorable adaptations, preserved in what he calls "immortal genes"; several hundred are common to all domains of life.

Carroll then scales up to the macroscopic and considers traits such as color vision in monkeys; the vision and anatomy of fish, including the famous coelacanth; and the sickle-cell trait in humans. In each case, Carroll explains how the DNA code of the gene responsible for the trait is inferred to be the result of natural selection working on mutations, which occur at a steady rate. Here is evolution clearly explained and stoutly defended. REVWRCopyright American Library Association. All rights reserved I recommend [The Making of the Fittest] to everybody who wants to understand more [about evolution], because it is written in such simple yet detailed language.... Quite a pleasure to read. - Ira Flatow, NPR "Science Friday" The rare scientist with an easygoing writing style. - Dan Vergano, USA Today The best refutation of intelligent design. - SEED An adept and wide-ranging writer. - Steve Olson, Washington Post A fast-paced look how DNA demonstrates the evolutionary process.... Carroll offers some provocative and convincing evidence. - Publishers Weekly With fervor and clarity, Carroll amasses a glut of facts to refute the twisted logic of the anti-Darwinist camp. - Josie Glausiusz, Discover