



Book Review

Science, Evolution and Creationism

**National Academy of Sciences
Institute of Medicine**

Despite the ever-increasing wealth of data that amply support the theory of evolution, attempts to enforce a religious interpretation of how humans and other life forms appeared on earth have become more frequent in recent years, even in “First World” countries such as the U.S.A. In good time, the National Academy of Sciences has just published the third edition of a book on evolution and creationism. Tailored to help us all respond objectively to attempts to include creationism in school science curricula, this new edition incorporates recent fossil discoveries, along with the vast genetics knowledge that has accumulated from the human genome project and other modern molecular genetics studies. Nicely organized and illustrated, this book is both simple enough for a junior high school student to understand and sufficiently informative to help college level students and the lay public understand evolution and how it relates to the modern world.

Relevant sections include “Evolution and the Nature of Science”, which demonstrates how scientific evidence supporting evolution continues to grow at a rapid pace, including news of a “missing link” 375 million-year-old fossil with features intermediate between a fish and a four-legged animal, discovered in Canada in 2004. “Evidence for Biological Evolution” shows how many areas of science are continuously providing supporting evidence for evolution, including fossils, the geographical distribution of species, and comparisons of DNA sequences, newly available for many species. Astrophysics and geology demonstrate an age of the earth that is compatible with the time scale needed for evolution to have molded extinct and current species. Physics and chemistry provide dating methods that help time evolutionary events. Comparisons between species reveal morphological and behavioral continuities among species. Anthropology continues to provide new insights into human origins, demonstrating how biology and culture have shaped human behavior and social systems.

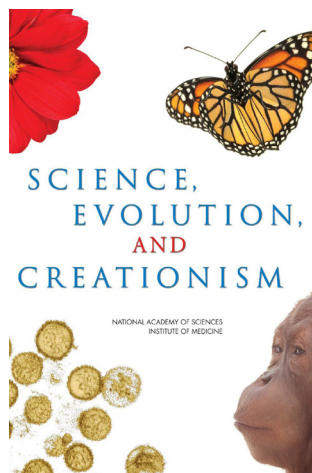
Unfortunately, much of the public is not prepared to understand and explain why creationism should not be included in school curricula. This book helps address this problem. Creationism “rejects natural scientific explanations of the known universe in favor of special creation by a supernatural entity”. Belief in religion should not be equated with disbelief in science, because many believers and religious leaders accept modern science, including evolution. This book includes quotes to this effect from Catholic Pope John Paul II, as well as from Jewish and Presbyterian leaders. The various types of creationist beliefs are also discussed. Supreme Court decisions concerning attempts to force teaching of these beliefs in schools are included. As is pointed out, creationism invokes faith, not objective facts, to explain man and his world. The first amendment of the U.S. constitution guarantees that each person has the right to pursue his (or her) own beliefs; consequently, obliging schools to teach any particular type of belief infringes on people’s rights to freely choose their own beliefs.

Science is based on hypotheses that can be tested and proven wrong. As nicely explained in this book, the theory of evolution is constantly being reinforced by supporting evidence, and has never been proven wrong. The idea of creationism cannot be tested. Belief in it is based, by definition, on faith. Supporting evidence for “intelligent design” over evolution does not exist. Would creationists live long enough to campaign against evolution if the science that they try to make us fear had not provided the means to protect mankind against diseases and other dangers? Evolution has provided the structure for many of these discoveries. Recognition of its importance for the science of human medicine is evident from the support for publishing this book that was provided by the “Institute of Medicine”.

The book concludes with well-chosen and well-explained “frequently asked questions”. These include: Aren’t evolution and religion opposing ideas? Isn’t belief in evolution also a matter of faith? How can random biological changes lead to more adapted organisms? Aren’t there many questions that still surround evolution? Don’t many famous scientists reject evolution? What evidence is there that the universe is billions of years old? What’s wrong with teaching critical thinking or “controversies” with regard to evolution? What are common ideas regarding creationism? Wouldn’t it be “fair” to teach creationism along with evolution? and Does science disprove religion?

As Science, Evolution, and Creationism makes clear, the evidence for evolution can be fully compatible with religious faith. Science and religion are different ways of understanding the world. Needlessly placing them in opposition reduces the potential of each to contribute to a better future.

The book Science, Evolution and Creationism can be found in print and pdf versions at: http://books.nap.edu/catalog.php?record_id=11876 and <http://www.nap.edu/>



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