

LITERATURE REVIEWS

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THE RECORD OF LIFE: HOW EXPLAIN?

THE BOOK OF LIFE — AN ILLUSTRATED HISTORY OF THE EVOLUTION OF LIFE ON EARTH. S. J. Gould (general editor). 1993. NY: W.W. Norton. 256 p. Cloth, \$40.00.

Reviewed by John Hadd

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The Book of Life — An Illustrated History of the Evolution of Life on Earth is a luxuriant treatment of a topic of incalculable importance. General editor Stephen Jay Gould has marshaled the talents of a select group of American, Canadian and British scientists and illustrators to present this volume, heralded as a fusion of artistic excellence and accurate, state-of-the-art scientific knowledge.

CONTENTS AND REVIEWER RECEPTION

The work begins with an overview essay explaining limitations in past attempts at panoramic portrayal of Earth's life forms. In the second chapter the reader is given solid grounding in evolutionist conceptions of geologic time and for the basic structure of the fossil record. The third chapter is devoted to "foundations" for Earth life and its initial appearance in primordial oceans. Coverage of the remaining five chapters is largely indicated by their titles: "The Rise of the Fishes," "Four Feet on the Ground" (the emergence of amphibians), "Dinosaur Summer," "Victors by Default" (mammalian succession of the dinosaur dynasties), and "The Primates' Progress" (from hominoid primates to

Homo sapiens). The reviewer for *Booklist* characterized the effort as “marvelous.... The modesty of this first-rank team of scientists and illustrators makes all the more trustworthy their seven-chapter telling of the evolution story.”

The text and art are blended in stimulating fashion. The chapters are illuminated by more than 300 superb paintings, drawings and computer-designed illustrations. The informational graphics cover a vast range of subject matter, from skeletal evolution to continental drift, resulting, in the judgment of *The Washington Post*, in “a volume with the visual impact of an art book, the conceptual density of a college text and the narrative pounce of a novel.”

The Book of Life is intended to give representation to naturalistic evolutionary theory, neo-Darwinism, and is entirely consistent with other recent statements by the American scientific establishment, such as *Science and Creationism: A View from the National Academy of Sciences*¹ and *Project 2061: Science for All Americans*.² These publications, in turn, provide the foundation for the evolution component of the *Science Framework for California Public Schools*, a prospective guide to national curriculum standards for public schools.³

So far as I know, *The Book of Life* has been accorded unanimously favorable review. Of the accolades and endorsements which I have seen, the emphasis of The History Book Club, which featured the work, is presently most important. HBC emphasized the criticality of truth-telling, concluding its synopsis: “the emphasis today is on the true story, which is the *raison d’etre* for this book.” I will next explain why I believe *The Book of Life* falls far short of the unexceptionable standard of telling the truth — the scientific truth pertaining to Earth’s record of life.

FAULTS

The Book of Life is a superior *depiction* of the evidence from the fossil record for dramatic change in Earth’s life forms. However, three huge, related omissions or misrepresentations fatally impact its plausibility to *explain* the stupendous fossil record.

First: Treatment of the Origin of Life. In the second chapter (“Foundations: Life in the Oceans”), it is acknowledged that no one “has created life in a test tube, and there is much we do not understand about how organic molecules assembled into primitive life forms 4 billion years ago” (p 42). Despite that disclaimer, the clearly intended

impression is that life began in the depths of the oceans when purely chemical reactions spawned the first fossil-recorded prokaryotic cells. The origin of life is proposed as an entirely natural transaction. “Modern bacteria ... hold the key. Many versatile species of these tiny organisms find sources of chemical energy completely separate from the oxygen we [humans] require” (p 42).

This claim on behalf of an abiogenetic explanation for the origin of life is, without exaggeration, an enormous scientific travesty.⁴ Unimpeachable scientific criticisms of the concept of abiogenesis are myriad. Were the authors of *The Book of Life* not aware of them? If so, theirs can hardly qualify as a state-of-the-art presentation of scientific knowledge. Or did they choose simply to disregard them, thereby revealing dogmatic disdain for “nonconforming” data? Whatever accounts for it, *The Book of Life* is anything but truthful in reporting on contemporary knowledge regarding the origin of life.

Second: Treatment of Genetic Information/Intelligence.

Darwin’s theory for explaining the record of life involved a heterogeneous set of components, as explained by Ernst Mayr:

*[O]rganic evolution consists of two essentially independent processes, transformations in time and diversification in (ecological and geographical) space. The two processes require a minimum of two entirely independent and very different theories.*⁵

The fossil record documents distinct transformations in time for Earth’s life forms. Every instance of such documentation implies directly that living things either acquired new genetic information, or their stored information underwent significant alteration. Such transactions must be assessed not only in terms of biology and genetic mutations, but also at least two basic principles of communications science. One: *Information does not and cannot arise spontaneously.* To attribute the production of new information to undirected chance, as neo-Darwinians are prone to do, is to commit heresy in the school of contemporary communications science. Two: *Random change in genetic information (DNA symbol sequences) would relentlessly destroy meaning.* “No currently existing formal language can tolerate random changes in the symbol sequences which express its sentences. Meaning is almost invariably destroyed. Any changes must be syntactically lawful ones.”⁶

All Darwinists assume increasing complexity in life forms and the record of life, yet they have no explanation for the assumptions congruent with the principles of communications science.⁷ The Index to *The Book of Life* contains an entry for “genetic blueprints,” but that reference alludes only to a brief comment in the text. Along with less than a half-dozen similar terms scattered throughout the book, that is all the volume contains that can be conceivably related to genetically formative “transformations in time.” In this regard *The Book of Life* fits perfectly with the genre of naturalistic evolutionary tomes which are grossly deficient — if not totally silent — in relation to the nonmaterial information/intelligence factor so enormously involved in the makeup of the fossil record of life.⁸

Third: The Appearance of New, Distinct Life. Darwin could “see no limit” to the extent of natural change in life forms. Neither, it appears, can the authors of *The Book of Life* discern (or admit to) a limit. This “analytic” treatment shows most prominently with respect to the dinosaurs.

We are assured that the dinosaurs were “strikingly” new in appearance, “the most powerful and innovative newcomers in the late Triassic” (p 125). Then we are advised that their appearance was but natural; the dinosaurs self-willed themselves and their position:

Of all the animals that survived to radiate into the ecospace created by the mass extinction of the end-Carnian phase, one group seized the time. Chance made the opportunity, but the dinosaurs took it. (p 25).

Natural forces, alone, can destroy life. But nature cannot generate genetically distinct life forms, and there are real limits to life-form variability. Nature’s potency for birthing variety is both enormous — and restricted. This is a conclusive judgment, buttressed by firm, in-hand empirical scientific evidence.⁹ Such evidence confirms that claims as made in *The Book of Life* for the appearance of the dinosaurs illustrate nothing but naturalistic philosophical dogma.

CONCLUSION

The explanatory power of naturalistic evolutionary theory is tied directly to the presence of the fossil record of life.

This is the theory that the world is neither constant nor perpetually cycling but rather is steadily and perhaps

*directionally changing, and that organisms are being transformed in time.... The changes documented by the fossil record in precisely dated geologic strata are a fact that we designate as evolution.*¹⁰

I submit that naturalistic evolutionary theory in general, and neo-Darwinism specifically, embodying a principled disregard of non-material factors which must be accounted for in the intelligence/informational workings of life, is *inherently incapable* of persuasively explaining Earth's fossil record of life. Said a bit differently, naturalistic evolutionary theory cannot provide a scientifically defensible explanation of its primary justification for being! It has been very correctly I noted that Darwinism is presently in substantial control of the Western world's intellectual establishment. Yet such control, it must be underscored, involves an historically classic case of governance by an emperor without clothing, a conceptual governor naked to the challenge of relevant, contemporary scientific evidence implied in the book. By its failure to heed those evidences; by not adhering to the standard of truth, however limited, but still sure human knowledge; *The Book of Life* invites, and deserves, censure for posing as an explanation of the record of life.

ENDNOTES

1. 1984. Washington DC: National Academy Press.
2. 1989. Washington DC: American Association for the Advancement of Science.
3. (a) 1990. California Department of Education, Sacramento; (b) 1992. Developing national standards for science education. *Science* 257(28 Aug.):1286. It is presently anticipated that the standards, being developed under auspices of the National Academy of Sciences, will be promulgated early in 1995. See: (c) Culotta E. 1994. Science standards near finish line. *Science* 265:1648-1650.
4. A sampling of the scientific documentation firmly against abiogenesis includes: (a) Dose K. 1988. The origin of life: more questions than answers. *Interdisciplinary Science Review* 13(4):348-356; (b) Gibson LJ. 1993. Did life begin in an "RNA World"? *Origins* 20:45-52; (c) Kenyon DH. 1989. Going beyond the naturalistic mindset in origin-of-life research. *Origins Research* 12(1):1,5,14-16; (d) Shapiro R. 1986. *Origins: a skeptics guide to the creation of life on Earth*. NY: Summit Books; (e) Thaxton CB, Bradley WL, Olsen RL. 1984. *The mystery of life's origin: reassessing current theories*. NY: Philosophical Library, and 1992. Dallas: Lewis and Stanley; (f) Wilcox D. 1989. Of messages and molecules: what is the essence of life? *Journal of the American Scientific Affiliation* 41(4):227-231.
5. Mayr E. 1988. *Toward a new philosophy of biology: observations of an evolutionist*. Cambridge: Harvard University Press.
6. Moorhead P, Kaplan M, editors. 1967. *Mathematical challenges to the Neo-Darwinian interpretation of evolution*. Philadelphia: The Wistar Institute, p 11.

7. (a) Wilder-Smith AE. 1970. The creation of life: a cybernetic approach to evolution. San Diego: Master Books; (b) Wilder-Smith AE. 1981. The natural sciences know nothing of evolution. San Diego: Master Books; (c) Wilder-Smith AE. 1993. The time dimension: its relationship to the origin of life. Costa Mesa, CA: The Word for Today Publishers (see especially Chapter II: The nature of information).
8. A first-rate book demonstrating the interrelationship of microbiology, information theory and communications science is: Davis P, Kenyon DH. 1989, 1993. Of pandas and people: the central questions of biological origins. Dallas: Houghton Publishing Company.
9. (a) Denton M. 1986. Evolution: a theory in crisis. Bethesda, MD: Adler and Adler Publishers; (b) Lester LP, Bohlin RG. 1984. The natural limits to biological change. Grand Rapids, MI: Zondervan Publishing House.
10. Mayr (see Note 5).