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## Scant search for the Maker

**Alan Linton** 

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BIOLOGICAL SCIENCE

Title: The Triumph of Evolution and the Failure of Creationism

Author: Niles Eldredge Reviewer: Alan Linton Publisher: Freeman ISBN: 0 7 167 3638 1

Pages: 223 Price: £18.99

This book was written to defend the theory of evolution against the powerful and influential anti-evolution lobby of creationists in the United States who wish to ban the teaching of evolution in science curricula in schools and colleges. It is an up-to-date examination of the evolution-creation debate and provides a useful review of arguments on both sides.

After setting the scene (religious, scientific and political), Niles Eldredge devotes three chapters to considering the evidence for evolution: that all life has descended from a single, common ancestor, that there is a record of that evolutionary history preserved in the rocks and that the driving force behind evolution is natural selection combined with dramatic ecological and physical catastrophes resulting in the extinction of large groups of animal and plant species.

Throughout, the author scathingly ridicules creationists and this intensifies in chapters five and six where he tackles their views head-on under the titles, "Scientific style and notion of time" and "The origin and history of life". In the final chapter, "Can we afford a culture war?", he adopts a more conciliatory approach, urging evolutionists and creationists to drop their antagonisms and focus on the urgent need to stem the tide of ecosystem destruction and species loss to preserve a long and fruitful existence on this earth.

Despite the conciliatory comments in the final chapter, the book's title is essentially emotive and provocative. Since most theories, if proven to be false, are rejected by scientists, Eldredge claims that, after 150 years, science has failed to disprove the theory of evolution and, therefore, "evolution has triumphed". In other words, the theory of evolution rests on the failure of science to show that it is false. Nevertheless, he believes the theory can be scientifically tested.

But where is the experimental evidence? None exists in the literature claiming that one species has been shown to evolve into another. Bacteria, the simplest form of independent life, are ideal for this kind of study, with generation times of 20 to 30 minutes, and populations achieved after 18 hours. But throughout 150 years of the science of bacteriology, there is no evidence that one species of bacteria has changed into another, in spite of the fact that populations have been exposed to potent chemical and physical mutagens and that, uniquely, bacteria possess extrachromosomal, transmissible plasmids. Since there is no evidence for species changes between the simplest forms of unicellular life, it is not surprising that there is no evidence for evolution from prokaryotic to eukaryotic cells, let alone throughout the whole array of higher multicellular organisms.

The author rejects the creationists' arguments for order and design in nature but the extreme complexity of structure and function in all living things cannot be disregarded. The biochemical complexity of cascades of enzymes required to perform a single function in the cell is mind-boggling, and for a structure or function to be selected it must be functionally complete. The formation of amino acids from ammonia and methane under extremes of pressure and temperature is quoted, but this synthesis is nothing compared with the complexity of a single protein enzyme, let alone a series of highly specialised enzymes functioning in a cascade sequence. Such irreducibly complex systems are of no selective value unless they are complete. The author naively states that "all biochemical steps leading to the formation of the first organism... have yet to be deciphered".

All creationists believe in a Creator but often hold divergent views on biblical interpretation. They include leading research scientists, past and present, who find the theory of evolution to be scientifically untenable; the natural world bears the hallmarks of order and design by a Great Intelligence. The astronomer Kepler confessed, "O God, I am thinking Thy thoughts after Thee", and over the door of the Cavendish Laboratory in Cambridge is written, "The works of the Lord are great, sought after by all them that have pleasure therein" (Psalm 111.2). The natural world is worthy of our finest investigations, and is in my view the expression of a Master Mind.

Evolutionists, creationists and educationalists planning curricula for teaching science will read this book with interest. But they should keep an open mind on whether the title is justified by the evidence provided.

Alan H. Linton is emeritus professor of bacteriology, University of Bristol.

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