

Eviscerating Eldredge

A review of
*The Triumph of Evolution and
 the Failure of Creationism*
 by Niles Eldredge
 WH Freeman and Company,
 New York, 2000

John Woodmorappe

There is a plethora of anti-creationist books on the market, most of which are so inaccurate that they are hardly worth dignifying with a review. This book is little better. To begin with, the book is largely outdated, consisting mostly of the same material published by the same author in an anti-creationist book almost twenty years ago.¹ Despite being ably refuted by Dr Duane Gish,² the old erroneous material has found its way, without comment, into this new tome. And, with the exception of some light sprinkling of new information (such as the Intelligent Design movement), this book is almost completely silent on developments within scientific creationism in the past 20 years. For instance, not one mention is made of the four International Conferences on Creationism, the AiG ministries, or the RATE project.³

One is astonished to learn that Eldredge supports the long-discredited embryonic-recapitulation theory of Haeckel (p. 126). And this book is replete with the most egregious of factual errors. For instance, in his seemingly-obligatory remarks about evolution being 'only a theory' as the spherical Earth is 'only a theory' to some, Eldredge (p. 23) repeats the old canard about sailors of Columbus' time fearing that they would sail off a flat Earth. Fact is, the sphericity of the Earth had been generally accepted long before Columbus' time.⁴

But perhaps we can overlook Eldredge's blunder here, as he is

repeating a commonly-heard myth. His other errors, however, are much less excusable. He actually says that, 'Creationists have been uncharacteristically silent so far on the notion of plate tectonics' (p. 111). Let him try to tell that to Dr John Baumgardner who has become widely known in creationist circles, for many years now, for his catastrophic plate-tectonics theory as well as being highly regarded in secular circles for his super-computer model. Not to mention Baumgardner's creationist predecessors, who have also written on plate tectonics.

Further evidence of Eldredge's superficial understanding of creationism is his remark about the need for 10 million species being on the Ark (p. 200), a commonly-repeated anti-creationist canard shown to be false decades ago, and also more recently.⁵ Considering the fact that Eldredge commonly chides creationists for inaccurate statements and quotations, it would seem that Eldredge would do well to first look himself in the mirror.

Eldredge identifies himself as a 'lapsed Baptist', and an agnostic (p. 17). Elsewhere in the book, he chides those evolutionists (e.g. Richard Dawkins) who agree with creationists that evolution is inherently atheistic. But elsewhere, Eldredge's rationalistic biases come through. He informs us that if God created life, it would be impossible to know this fact scientifically (pp. 13, 141), and that only naturalistic explanations can be tested (p. 95) by scientific methods.

In adhering to these radical-empiricist preconceptions, Eldredge completely ignores the fact that, while supernatural processes themselves cannot be tested, the consequences of supernatural events can be tested, and that is precisely what creationist scientists do. And, in berating creationists for their statements about no one being there to observe what actually happened in the distant past, Eldredge is also ignoring the fact that

Niles Eldredge knows how to make science exciting.
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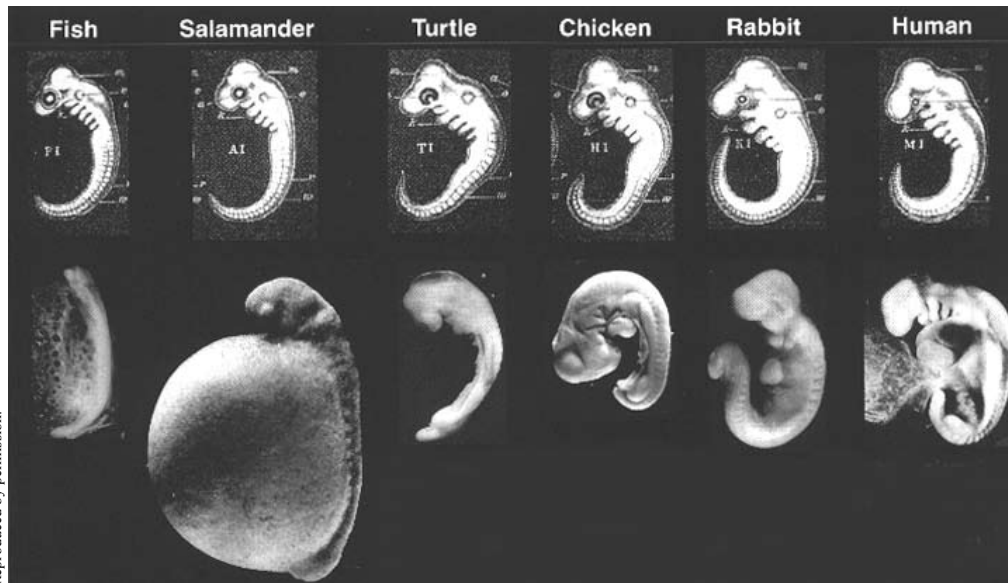
even naturalistic origin processes cannot be directly tested: only their consequences can be.

Not surprisingly, Eldredge repeats the usual evolution-is-fact-and-creationism-is-not mantra—like most anti-creationists, he tries to drive a huge wedge between 'science' and 'religion'. However, to his credit, he admits that many early scientists were religious (p. 10). He conspicuously fails to mention, though, that most of the pioneering biologists were creationists to some degree (which, by implication, would force Eldredge to admit that one can be a creationist and a scientist at the same time). He also takes umbrage at the fact that some creationists present their work as scientific in contrast to those 'honest' creationists who acknowledge their religious motivations (p. 135). As if it were impossible to be both.

In pointing out that many creationists oppose evolution because they see it as evil, Eldredge fails to consider other manifestations of the same phenomenon. One of these would be opposition to racist scientific theories by those who oppose racism, particularly if these racist theories are without adequate scientific foundation.

In view of the pro-evolutionary politics that is currently going on in the United States, one is almost dumb-

Photos by Dr M. Richardson et al. 'There is no highly conserved embryonic stage in the vertebrates: implications for current theories of evolution and development'. *Anatomy and Embryology* 196(2)91-106, 1997. Copyright Springer Verlag GmbH & Co., Germany. Reproduced by permission.



Haeckel's fraudulent drawings (top row) and photographs of the actual embryos (bottom row).

founded to read the following educational recommendation by Eldredge:

'The purpose of teaching science is not to indoctrinate kids on the (secular) humanist or naturalist side of the culture war in which we are supposedly engaged, but rather to teach them what science is all about' (p. 151).

One can chant a hearty 'Amen!' to that. Only trouble is, Eldredge is preaching to the wrong crowd. He should reserve his comments for his fellow evolutionists, many of whom are intolerant of even so much as teaching children the problems of evolution (never mind the creationist alternative), 'because it may confuse them'. It is the humanists who tell us that we should teach children how to think and how to question—except of course when the content to be questioned is humanistic, such as organic evolution.

Eldredge chides creationists for having an excessively progressive view of evolution (that is, conceptualizing earlier life as primitive and more recent life as more advanced) (p. 39). However, a mere eight pages later Eldredge himself espouses this type of reasoning where he claims that the fossil record supports evolution in its grand prediction '... that simpler, more primitive forms precede their evolutionary, more complex descendants' (p. 47). Finally,

one must realize that the question of how 'progressive' the evolutionary process is supposed to be has been debated by evolutionists for over a century,⁶ with no 'correct' answer.

In focusing on the fossil record, Eldredge spends some time talking about the enigmatic Vendian fauna (pp. 42–47). He all but claims that it partly fills the gaps leading up to Cambrian life. It does no such thing. Let us quote from a very recent publication in order to verify the fact that the Cambrian explosion remains completely intact:

'Morphologically complex metazoans appear abruptly during the Cambrian explosion The Cambrian explosion records the first appearance of a wide array of bilaterian bodyplans at levels of complexity unrecorded in earlier strata.'⁷

Eldredge completely misses the point about *Archaeopteryx* (p. 126). Not only does he fail to so much as mention the recently-discovered 'early fossil birds' which confound the presumed evolutionary origins of birds: he does not even grasp the creationist objections to *Archaeopteryx*. The issue is clear: it is not why *Archaeopteryx* contains a mixture of reptilian and avian traits, but why, if reptile-to-bird evolution is true, we do not find a graded series of part-wing/part-leg creatures (successively less leglike

and successively more winglike) to gradationally bridge the two orders.

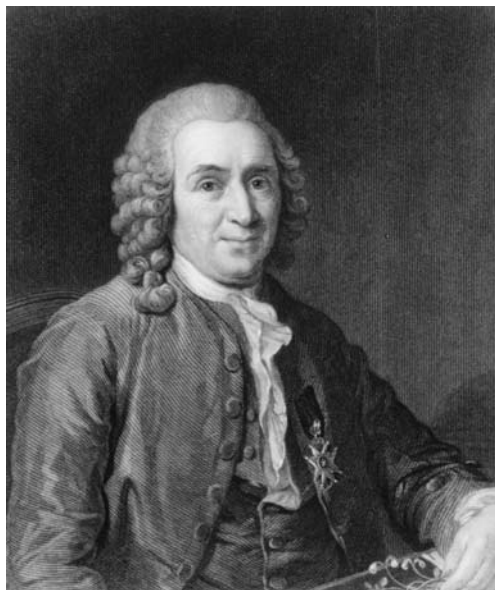
I must confess to being forced to laugh at Eldredge's treatment of human evolution. He considers the inferred progressive brain size in hominids 'creationism's worse nightmare' (p. 56). Well, Eldredge is the one engaging in dreaming. The facts are clear: when all of the major anatomical features of the hominids are simultaneously considered, it becomes obvious that each major extinct group forms a discrete morphological cluster.⁸ This is inconsistent

with a progressive evolutionary change from one group to another, but is rather indicative of the artificiality of any evolutionary scenario which attempts to portray the various extinct hominids as an evolutionary lineage culminating in modern humans.

In several places in the book, Eldredge speaks of evolution successfully making predictions. Apart from questioning the relevance and genuineness of these predictions in terms of evolutionary theory, we must also point out, as Eldredge certainly does not, the numerous **failed** predictions of evolutionary theory. One of these failed predictions relates to the sizes of metazoan genomes:

'At one time it seemed possible that the amount of DNA would be a good measure of complexity (Sneath, 1964), but as genome sizes became known, little correlation was found with perceived morphological complexity.'⁹

Eldredge makes much of the alleged nested hierarchy of living things as presumed evidence for evolution (pp. 26–29, 145–146). To the contrary, as pointed out by Gish,² the classification of things according to nested hierarchy was first performed, in recent pre-Darwinian times, by Linnaeus, a creationist, so it can hardly be considered a prediction of evolutionary



Courtesy of TFE graphics

Carl Linnaeus (1707–1778) developed the biological classification system that was a forerunner to the one that is used today. Originally it consisted of the Kingdom, Class, Order, Genus and Species categories. Phylum (Sub-phylum), Sub-Class and Family were all added later as the need arose. Linnaeus was a staunch believer in the Bible and Creation.

theory. Second, to the extent that a nested hierarchy of living things exists, Eldredge presumes to know what a Creator would do in asserting that God would not create life according to a nested hierarchy (pp. 145–146). Finally, when granting the possibility that God might want to use the same design ideas over and over, Eldredge suggests that God would not do it in such a pattern that would lead one to want to infer the existence of hierarchical divisions of lineages (p. 146). Apart from presuming on God again, Eldredge is promoting a seriously flawed premise. Fact is, as more and more morphological detail is considered, it becomes harder and harder for evolutionists to decide which feature is the result of presumed shared ancestry (*homology*), and which is ostensibly independently derived (*analogy* or *homoplasy*). There are numerous morphological traits which do **not** fit the pattern of a nested set of bifurcating lineages of evolutionary descent. The same trait often appears in living things which are not believed to be closely related by evolution, and this occurs often enough to vitiate Eldredge's premise about nested hierarchies:

'Disagreements about the probable

homologous or homoplastic nature of shared derived similarities between taxa lie at the core of most conflicting phylogenetic hypotheses.'¹⁰

This means that, whereas a nested hierarchy may well characterize living things when viewed in terms of general similarities and differences, it does not exist when large numbers of detailed morphological similarities and differences are simultaneously considered. Furthermore, earlier-believed nested hierarchies are often overturned as more evidence is accumulated. For instance, mesonychians and cetaceans were long believed to be sister groups based on a closely-knit series of shared similarities, but this pattern is no longer believed to indicate close evolutionary kinship:

'The total evidence results suggest that skeletal similarities between mesonychians and cetaceans are homoplasies.'¹¹

Although, throughout the book, Eldredge predictably treats evolution as solid scientific fact, there are times when he frankly lets his guard down, and shows that acceptance of evolution is nothing but a leap of blind faith. He excuses our understanding

of the presumed abiotic origin of life by informing us that (his imagined) 'simplest of molecules capable of self-replication' are not known because they have been subsequently replaced by far more advanced unicellular life (p. 36). Later, he tells us that the abrupt appearance of certain fossils is '... a fascinating example of the phenomenal speed at which evolution can work'. One wonders what sort of omniscience allows him to know **that**. And, as co-originator of the punctuated-equilibrium concept, he reassures the doubting (regarding the admitted pattern of discontinuities among fossils) that it only tells us that evolution occurs too fast for the fossil record to show it in detail (p. 85). Once again, the faith of the evolutionist in action is an amazing thing to behold!

At the same time, Eldredge hardly ever considers creationist alternative explanations for seemingly pro-evolutionary data. For example, he mentions the (crudely stratigraphic) progressive appearance of ammonoids with goniatitic, ceratitic and ammonitic sutures as a conclusive manifestation of evolution (pp. 50–52) without so much as hinting at the fact that this can be explained ecologically without any evolution.¹²

Eldredge's treatment of geology is no better than his treatment of biology. He excoriates creationists for charging that evolutionists ignore fossils found in the 'wrong' strata—calling it a 'vicious lie' (P. 104). However, the fact that evolutionists at least sometimes do this can be documented. I cite two instances¹³ (belemnites, and then labyrinthodonts) whose anomalous stratigraphic occurrences had been ignored for the longest time because they did not fit the then-current evolutionistic preconceptions about the 'proper' time of their appearance in the fossil record. And, for the two different cases admitted in print, and which I happened to come across, I can only wonder how many others there are which have never been mentioned in print.

In discussing the history of the development of the geologic column, Eldredge makes a giant leap from Wil-

liam ‘Strata’ Smith’s straightforward local correlation of fossil-bearing rocks (pp. 106–107) to the many assumptions and nuances involved in cross-continental and intercontinental biostratigraphic correlation. He would have us believe that they are essentially the same, which they are not. Inter-continental correlation involves, for instance, a complex assumption-driven match-up of zone fossils and index fossils, all of which are presumed to have evolved and persisted for a narrow interval of time.^{11,14}

Eldredge also tells us that Sedgwick and Murchison described the Lower Paleozoic systems strictly as a result of applying the Law of Superposition (pp. 104–106). Not quite. The *ad hoc* nature of the geologic column is proved by the fact that the Cambrian and Silurian systems had been named, based on local outcrops, **before** their respective subcontinental stratigraphic relationship had been established: had they been found overlapping, instead of superposed, the Cambrian would have been considered a facies of the Silurian.¹⁵

In common with many others, Eldredge claims that the geologic column was founded by creationists. Of course, this depends upon one’s definition of creationism. One can contend that a willingness to accept an old Earth and/or reject a global Flood nullifies one’s profession to be a creationist (i.e. the so-called old-Earth creationists, of past and present, were and are actually semi-creationists).

Eldredge would have us believe that: ‘Rocks predicted to be nearly the same age on the basis of their fossil content always turn out to be nearly the same age when radiometric dates are obtained’ (p. 108). One wonders what planet Eldredge is referring to, because it certainly cannot be planet Earth. Fact is, one can document hundreds, if not thousands, of serious discrepancies between paleontologically-inferred dates and isotopic dates.¹⁶ The latter usually take the fall, and there is available an elaborate series of rationalizations for coping with discrepant isotopic dates.

There is little point in going on with further examples in this book. It should be obvious that this book is hardly worth the paper that it is printed on. It is inaccurate, outdated, and superficial. If you are looking for a critical analysis of creationism, don’t waste your time with this book.

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2. Gish, D.T., *Creation Scientists Answer Their Critics*, Institute for Creation Research, El Cajon, 1993. Dr Gish shows (p. 243–244) how he had been completely misrepresented earlier by Eldredge on the subject of the Created Kinds. In this new book, Eldredge, without comment, trots out the same mistaken material (pp. 120–121).
3. RATE (**R**adioisotopes and the **A**ge of the **E**arth) is an inter-disciplinary group of seven creationist scientists formed to investigate the radioisotope data from a young-earth perspective.
4. Russell, J.B., *Inventing the Flat Earth*, Praeger Publishing Company, Connecticut, 1997. The myth about Columbus’ contemporaries believing in a flat earth is little more than a 19th-century rationalistic fairy tale, designed to misportray medieval religious people as foolishly ignorant.
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8. Woodmorappe, J., The non-transitions in ‘human evolution’—on evolutionists’ terms, *CEN Tech. J.* **13**(2):10–12, 1999.
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10. Luckett, W.P. and Hong, N., Phylogenetic relationships between the orders Artiodactyla and Cetacea, *J. Mammalian Evolution* **5**(2):130, 1998.
11. O’Leary, M.A., Parsimony analysis of total evidence from extinct and extant taxa and the Cetacean-Artiodactyl question (Mammalia, Ungulata), *Cladistics* **15**:327, 1999.
12. Woodmorappe, J., *Studies in Flood Geology*, 2nd Edition, Institute for Creation Research, El Cajon, 1999. Consult the reprinted article on cephalopods.
13. Woodmorappe, J., Studies in Flood Geology: clarifications related to the ‘reality’ of the geologic column, *CEN Tech. J.* **10**(2):279, 1996.

14. Woodmorappe, Ref. 13, pp. 279–290.
15. Woodmorappe, Ref. 13, p. 282.
16. Radiometric geochronology reappraised; in: Woodmorappe, Ref. 12, pp. 145–175. See also Woodmorappe, J., *The Mythology of Modern Dating Methods*, Institute for Creation Research, El Cajon, 1999.

Anything out of nothing?

It is absurd for the Evolutionist to complain that it is unthinkable for an admittedly unthinkable God to make everything out of nothing, and then pretend that it is more thinkable that nothing should turn itself into anything.

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<http://www.princeton.edu/~gcu/quotes.htm>