



www.was
darwin
wrong.com

Who is afraid of a reductionist?

Niles Eldredge and Evolution

a review by **Gert Korthof**

8 Feb 1998 (Updated: 8 Aug 1998)



"Reinventing Darwin. The Great Evolutionary Debate."

by Niles Eldredge.

Phoenix Giant Paperback.

1995.

244 pages.

Contents:

1. Setting the Table
2. The Heart of the Matter:
Adaptation and Natural Selection
3. The Great Stasis Debate
4. Evolution in Real Time
5. High Stakes at the High Table:
Macroevolution and Species
Sorting
6. Approaching Complexity:
Evolution in the Real World
7. Paradoxes in Ultra-Darwinism:
Sex, Social Systems and the
Reproductive Imperative

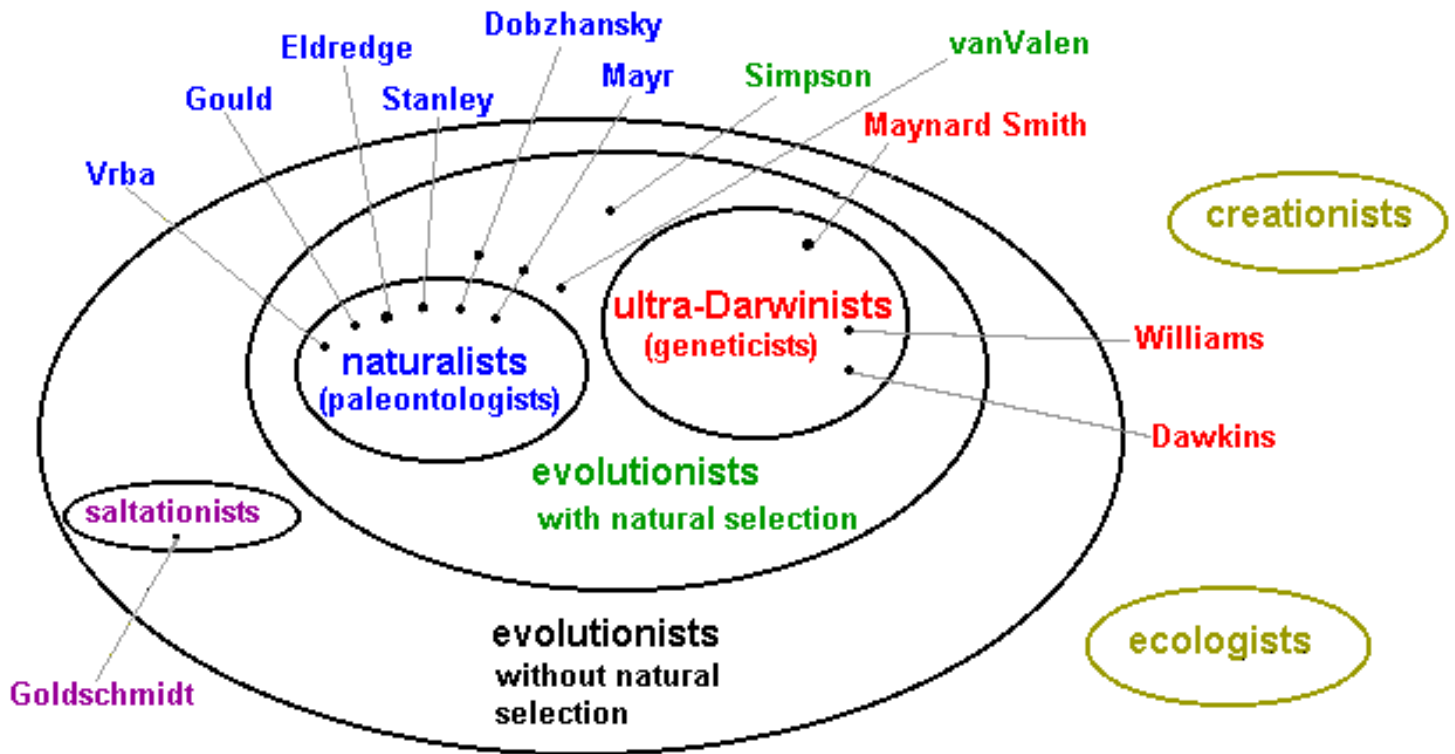
This book has refreshing ideas to offer for those who enjoyed a traditional neo-Darwinistic education and thought that *the* theory of evolution exists irrespective of who explains it. I learned from Niles Eldredge that scientists such as Maynard Smith, Williams and Dawkins (geneticists) are in fact **ultra-Darwinists**. He himself, Gould, Stanley and Vrba are presented as the **naturalists**, all being paleontologists.

Reinventing Darwin is well written and centres on the conflicting views on evolutionary theory of those naturalists and ultra-Darwinists. There is indeed debate in the book. Niles Eldredge does not recognise 'Normal Darwinists', but probably he would classify evolutionists as Dobzhansky, Mayr and Simpson in that group. Anyway they are neither in the ultra-Darwinist group nor in the naturalist group.

Eldredge is a critic of neo-Darwinism. Neo-Darwinism is a '**gene-centered** and essentially **reductionist** approach to evolutionary explanation' and a 'distortedly oversimplified view of the natural world' (page 4). Next we encounter a criticism well-known to creationists: the unjustified extrapolation from generation-by-generation change to change on a geological time-scale. Neo-Darwinism is OK in its proper domain, but when extrapolated outside its proper domain things go wrong. Ultra-Darwinians transform natural selection from a filter to a creative force that shapes organic form. Naturalists however take the existence of large-scale ecosystems seriously. They can't be reduced to changes in gene-frequency.

'Ultra-Darwinians are strangely silent about why adaptive change occurs when it does and why adaptive change does not seem to occur' (p6). If evolutionary change is inevitable, why do 'living fossils', like *Limulus*, stay unchanged for 200 million years? Naturalists suggest as a possible explanation in some of such cases 'habitat tracking', that is species move to a suitable environment, instead of changing their anatomy.

I placed Eldredge in the category 'Non-religious critics of orthodox neo-Darwinism' (in fact: 'anti-ultra-Darwinism') and 'pro-evolution', because he does not doubt evolution (common descent). ■

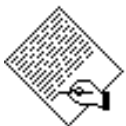


1998 GK

Overview of participants in the great evolutionary debate.

Further Reading

- Niles Eldredge (1985) "Unfinished Synthesis : Biological Hierarchies and Modern Evolutionary Thought".
- Niles Eldredge (1999) "The pattern of Evolution". W.H. Freeman, 1999. 250 pages. Reviewed by Mark Pagel in *Nature*, **397**, 664-665, 25 Feb 1999.
- Niles Eldredge (2000) "The Triumph of Evolution and the failure of creationism". Freeman and Company, 2000. hardback, 223 pages.
- Niles Eldredge (2004) "Why We Do It: Rethinking Sex and the Selfish Gene". W W Norton & Company. Hardcover, 224 pages.
reviewed by Robert J. Richards (2004) [Sex and the Single Cell](#), The New York Times Book reviews, June 20, 2004.
Reviewed by Robert Foley "Sex under pressure" in *Nature*, **430**, 613-614 (5 Aug 2004): I completely agree with this clear review.
- [Hierarchy versus Reductionism](#). A review of "Reinventing Darwin" by Richard Gordon, University of Manitoba.
- [Species, Speciation and the Environment](#) by Niles Eldredge, Ph.D. (October 2000). An actionbioscience.org original article. [Added: 11 Dec 2002]



- Email from actionbioscience.org
- [A book review by Danny Yee, 1996.](#) [Added: 27 Aug 04]

korthof@wasdarwinwrong.com	home: www.wasdarwinwrong.com	http://home.planet.nl/~gkorthof/kortho10.htm
Copyright © 1998 G.Korthof	First published: 8 Feb 1998	Update: 8 Aug 1998 Further Reading: 27 Aug 04