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Evolution and Belief

Confessions of a Religious Paleontologist

Robert J. Asher

Cambridge University Press. 2012, 300 p. ISBN 9780521193832, 16.99 GBP$

The author says in the prologue of this book: *"I want to chart a course through the false notion that evolution rules out religious belief"*. That is exactly what he does, in twelve well-documented and well-written chapters. The author's viewpoint is that science (evolutionary science in particular) and religion occupy non-overlapping domains, and are basically compatible with one another in the sense that they deal with fundamentally different questions. He also describes in detail what he means by the phrase *"materialist orientation of modern science"*.

This book recounts discoveries in molecular biology and paleontology, nevertheless it contains several useful lessons for anyone active in the earth and space sciences. For example, that long periods of equilibrium can be disrupted by what appear sudden episodes of change: this issue is a fact that is well known to variable-star observers, even more so in any research that relates to period changes. Another useful field to learn from by analogy is classification of whatever kind of phenomenon, or the non-randomness of some mechanisms (like evolution by natural selection). Not to forget that cosmology – just like evolutionary biology – took centuries to emancipate from its misappropriated religious implications.

The author describes that there are two factors that contributed to the modern revolution in the utility of molecular data for genetics: improvements in laboratory techniques, and the Open-Access DNA databases that are fed by compulsory submission of every DNA sequence that has been used for a paper in a scientific journal. Improvement of observational techniques, and free access to (virtual-)observatory databases are exactly what drives progress in astronomy, though compulsory publication of data is still wanting. Not to speak of an important lesson: since we do not know in advance which data the future will need in particular investigations, *"the process of adding more data is iterative, not circular"*. This is the best response to the endless mantra of "too many data" that I ever read.

The last chapter offers some interesting thoughts about academic freedom and the fact that science is not a democratic endeavor. Together with the author's credo acknowledging that his religious belief is non-scientific, though entirely rational: his evolutionist views as a paleontologist, and his evangelical convictions seem to be entirely reconcilable.

This book is extremely well documented (more than 580 notes covering almost 40 pages), with numerous references and internet resources that are very up to date. The illustrations (gray scale photographic reproductions) are all of good quality and of appropriate image resolution, and the data tables are rich and well formatted. Asher's language is clear and direct, nevertheless the work is at times somewhat difficult to follow for an uninitiated like myself. The book's target audience obviously is the community of evolutionary biologists and paleontologist, but it also serves the wider community of natural scientists, and very well suites the generalist history of science reader.

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