

Bad Philosophy Meets Bad Biology

For the most part, worthwhile books about biological science are written not by professors of literature or philosophy, but by scientists. There are, of course, exceptions to this: the works of David Sepkoski, for example, often bring fresh perspectives to the history of biological ideas and to the empirical underpinnings of those ideas. But it is fair to say that when a philosopher, like Sepkoski, succeeds in such a work, the foundation of that success lies in his thoroughly understanding the scientific work that is his subject.

Without an understanding of the underlying science, a work on the philosophy of science will be largely useless and likely to miss the mark in a thousand ways, even if it is internally well reasoned and coherently written. If it is not well reasoned or coherent, it will be even less useful than that. And that brings us to this book by Neil Thomas.

Thomas is a retired professor whose principal work seems to have been with literature, with some dabbling in philosophy but never, it appears, with the philosophy of science. His writing style is a bit stilted at times, and there are passages where it seems that he will not use a single-syllable Anglo-Saxon word when something more extravagant is available. But that style would be endurable were it not for the fact that his ability to focus upon any particular topic is extremely limited. This book often seems to skitter chaotically from one subject to another, with no evident linkage between where it's been and where it's going.

Like many anti-evolution writers, Thomas directs his attention almost exclusively to Charles Darwin's writings and upon his influences, known or presumed, rather than writing about current evolutionary theory. Darwin, of course, wrote without the benefit of the last century and a half of empirical research, and without the benefit of improvements not just to the data but to our understanding of biological function, development and heredity. Any biologist today can identify points on which Darwin was simply wrong, but few will deny the importance of his key insights. To critique evolutionary theory, one must understand it; and to understand it, one must not just read Darwin and stop there, frozen in time more than a century ago. This, it seems, is a point Thomas does not appreciate.

A good deal, consequently, of his writing about Darwin runs along the line of resurrecting various of his nineteenth-century detractors – surely a long way from evolution's leading edge. But just as he is finishing up with those old holdouts, and the reader might suppose he's ready to start moving at least into the mid-twentieth century, Thomas shifts – not forward, but backward, in time. He begins discussing how Darwin's views might be analogized to those of certain philosophers and poets of the ancient world. And so, in a book which proposes to tell us that modern biological science has it all wrong, we are treated to a good deal of discussion of Lucretius. It is fair to say that this approach is a bit wide of the mark. Are modern biological hypotheses supported by good data and inferences? That's a realm to which Thomas – perhaps wisely – does not dare to go, but it is the only place worth going. Without that, why even try to address such a topic?

When he's done with Lucretius, he skitters over to the topic of abiogenesis. Never mind, of course, that this is a topic on which Darwin did little more than speculate broadly, and never mind that it has nothing

to do with evolutionary theory in the proper sense. If you've been keeping company with creationists, as Thomas plainly has, it's easy to confuse abiogenesis with evolution.

On abiogenesis, however, he once again is in a time warp. He talks about the Miller-Urey experiment in the 1950s, then barely mentions anything at all about subsequent research, and declares the whole field a failure. There's not a mention of, for example, the RNA World hypothesis and the intriguing investigations being done on that score. Once again, it's a shift back in time to something not terribly helpful: the Shelleys (and, alas, not even the Cambrian "small shellies," who were at least a bit closer to the abiogenesis event than we are). He lets us know how Percy and Mary differed in THEIR approaches to abiogenesis. It's not Lucretius, fortunately, but it's no more relevant. Whether one falls upon the thorns of life and bleeds like Percy's Skylark, or whether one engages in a chase across the tundra with one's creator like Mary's monster, these sorts of references are not terribly helpful.

So, after purportedly attacking evolutionary theory and instead just repeating nineteenth-century objections and quoting Lucretius, and after purportedly attacking abiogenesis and instead just dismissing Miller-Urey and citing the works of both Shelleys, one might think that the disorganized skittering about would slow down. Even the small hoofed animal that can't get its footing on a slick sheet of ice eventually tires of its struggle and takes a rest. But, no; the skittering continues.

The next chapter, if we are to judge by its title, is meant to be about "Intelligent Design" Creationism (IDC). Where classic creationism tends to rest upon a slew of different arguments in various areas, ID Creationism instead focuses on a particular classic creationist argument: the contention that certain features of living things must have their origins in purposeful design. But here, too, Thomas simply cannot focus. He begins by returning to Darwin's early detractors, makes a rather incoherent argument to the effect that the human capacity for language cannot be the product of evolution, and brushes up lightly against IDC by citing Michael Denton. He then starts making a variety of strange claims about the fossil record, ranting about "missing links," and expressing astonishment at how wonderful the human brain is.

What one certainly does NOT get from this chapter, oddly, is even a brief summary of the contentions or views of the Intelligent Design Creationists. But along the way Thomas illustrates, in painful detail, just how bad an idea it is to write a book about a subject on which one knows nothing. His mistakes are numerous and severe. He regurgitates a classic creationist mischaracterization of Gould and Eldredge's punctuated equilibria, turning them into saltationists. He rants about "missing links," mostly showing any educated reader that he understands neither the methods nor the results of paleontology. He makes claims about the lack of hominid fossils, but along the way, though he spends two pages on the Piltdown Man hoax, he neglects to mention any significant taxa other than the Neanderthals – two pages on Piltdown, not one mention of (for example) Australopithecines. He misrepresents the suddenness of the Cambrian explosion. All of this mindless repetition of creationist talking points could have been avoided, had Thomas decided to consult with actual biologists and learn basic facts about these subjects.

Every IDC book has its star howler, and this book is no exception. He declares: "In the last half century there has emerged a non-evolutionary mode of biological classification called cladism." Now, that's a

whopper of a misunderstanding; the entire POINT of cladistics is that it is a purely evolutionary mode of biological classification. Its departure from traditional Linnaean classification is just that: for example, where the Linnaean system does not nest tetrapods within fish (from whom all tetrapods descended), cladistics does. Cladistics aims to identify the evolutionary branching relationships among taxa – that is its *raison d'être*. His confusion seems to stem from his having read creationist authors who mix this up: because cladists are reluctant to assign ancestor/descendant relationships between fossil species, or between fossil and living species, he thinks they are somehow turning away from evolutionary interpretations, but this is exactly the opposite of the truth. How can a man purport to be able to write something worthwhile about evolutionary biology and be so fundamentally ignorant of the most basic ideas?

Now, the book comes to us from the Discovery Institute, which is the principal promoter of ID Creationism. Given that, one might suppose it would have contained at least a decent summary of the claims of ID Creationism. But it really does not. If I were an IDC proponent, I could not recommend it to anyone – a person who wanted to understand ID Creationist claims would do better to read such things as the books of Michael Behe or Stephen Meyer, which, though horrid in their own ways, do at least make the nature of these claims clear.

Next, in his efforts to critique biology, Thomas leaves the subject of biology entirely and wanders into questions about why our planet is such a lovely place for living things. That's sure gotta mean somethin', don't it? What this has to do with biology is anyone's guess, but at least he leaves Lucretius out of it.

And then, does it begin to get better? It does not. The skittering-about becomes more disorganized and frantic as he waxes philosophical, unmooring himself entirely from any actual subject matter. He flails his way through a variety of philosophical notions, ungrounded in any understanding of what the biological data actually show us about living things. If anyone needs a demonstration of Fred Hoyle's proposal that a tornado in a junkyard can assemble nothing useful, he will find it here.

At the end, what is there in this book? There is no real attempt to actually criticize current-day evolutionary theory, nor is there a clear and cogent statement of what the contentions of Intelligent Design Creationism are. The whole experience, as Thomas dances randomly through the epochs, from Lucretius to Shelley and back again, is rather like watching Billy Pilgrim in *Slaughterhouse-Five* trying to write a history of ideas based upon his own experienced sequence of things.

The puzzle is this: the Discovery Institute's publications have deteriorated in quality over the years, but this is so poor in every way – including even in its inability to cogently state the basics of what ID Creationism is about – that it's hard to understand why the DI thought it ought to be published at all. No IDC proponent could really recommend this book to anyone who wanted to understand IDC. What is it good for?

At bottom it really looks like there is one, and only one, reason for the publication of this book: the author's self-identification as an "agnostic," paraded in the book's subtitle. The DI is aware that its commitment to fundamentalist Christian apologetics has become increasingly obvious (see, e.g.,

Stephen Meyer's *The Return of the God Hypothesis* and the DI's hilariously poor contributions to the volume titled *Theistic Evolution*), and it would like to go on insisting that this really isn't what ID Creationism (which they usually shorten to "ID") is really about. But to erase the stain of fundamentalism, the DI is going to have to do more than to show that it has an agnostic friend.