

1 *On The Origin of Species*

Or the Descent of Understanding

Academia and the media usually depict Darwin's theory of evolution as a concept so thoroughly established as to be beyond serious challenge. Yet when two good friends began their biology class at Yale, the professor asked the class, "How many people here believe that God created man?" Just a few hands went up, six or so, out of about one hundred and fifty students. The professor then said, "I have to admit that it takes as much faith to believe in evolution as it does to believe that God created man."

That professor made an intriguing admission. In November 2007, *The New York Times* ran an article entitled "Taking Science on Faith." The article pointed out that both religion and science require faith:

All science proceeds on the assumption that nature is ordered in a rational and intelligible way.... The most refined expression of the rational intelligibility of the cosmos is found in the

laws of physics, the fundamental rules on which nature runs.... But where do these rules come from? And why do they have the form that they do?¹

Before getting into evolution, consider the meaning of the word “science.” *Webster’s New Universal Unabridged Dictionary* defines science as, “systematized knowledge derived from observation, study, and experimentation carried on in order to determine the nature or principles of what is being studied.”²

Within its realm—inferring theories from observable facts—science is marvelous. However, the greatest *scientific* problem with investigating the origin of life and the universe is that none of us were there. We cannot go back in time nor accurately reproduce the conditions under which life began, let alone how it developed thereafter. If archaeology is forced to draw its conclusions based on a fraction of the original evidence, how much more must the study of origins make educated guesses based on trace evidence left behind over the ages?

The process of estimating the unknown *and unobserved* from known behavior is called extrapolation. In teaching Advanced Placement Statistics, I warned my students that it can lead to highly misleading and unreliable conclusions. Consequently, most academic fields handle conclusions derived in this way with caution—except, it seems, when it comes

to the study of origins. Because we can only estimate what happened in the development of life with a large margin of error, a measure of humility is required of any person, believer, agnostic, or atheist, investigating such matters. As the Lord said to Job in chapter 38, verse 4: “Where were you when I laid the earth’s foundation?”

It is worth noting at the outset that there are actually two very different types or levels of evolution: *micro-evolution* and *macro-evolution*. Micro-evolution is hardly controversial at all. It simply describes that built in capacity of all living organisms to adapt to their environment, and to accumulate favorable but relatively minor changes over time. It happens to individual organisms within a species, or among species within the same genus.

By contrast, macro-evolution *as it has been traditionally understood* involves the claim that accumulated small change—what Darwin described as “numerous, successive, slight modifications”—over sufficient time can entirely explain the development of every living organism on earth. In Prof. Michael Behe’s words,

In its full-throated, biological sense, *evolution* means a process whereby life arose from non-living matter and subsequently developed *entirely by natural means*. That is the sense that Darwin gave to the word, and the meaning that