

Smoky Mountain Bible Institute

Biology Introduction 101

Welcome to the Biology wing of the institute. Here we are in the biology lab with our lab coats on and our Bunsen burners blazing. We are going to talk about biology, and in order to do this, I will need to speak with scientific jargon. I am not a professional scientist or biologist, but I do love science, and have been a student of science since introduced to it in grammar school. So please have patience as I get into my scientific geek mode. And if I cause more questions than answers, please feel free to send your questions in and I will do my best to answer them, or we can seek the answers together.

Let's see how Biology proclaims the Creator. But let's first briefly discuss the type of science that biology is. It is one of the historical sciences: like archeology; geology; paleontology; astronomy; cosmology; philology; and history. We will explore some of those other "ologies" in later lessons. The aim of these sciences is to describe phenomena of the past and reconstruct their causes. They therefore differ from experimental science based on repeatable empirical evidence. Much of biology functions in the empirical area as well, but biology is primarily a historical science. This type of science has three main elements: description of a phenomenon; developing a general theory about its cause; and applying this theory to specific observable facts.

On that list above was paleontology: the study of prehistoric life. Paleontology is very interesting and valuable when it speaks of things that have taken place in the past 6000 years. When we think of paleontology, we often think fossils. However, the study of ancient life spends most of its time and effort on the identity, origin, environment, and evolution of life and, because of this, expends most of its energy on "millions of years" and eras like Cenozoic, Mesozoic, Paleozoic, Precambrian or Proterozoic. The issues of time and the fossil record are issues that I will address in future articles. I feel it very important for anyone who studies any of these sciences to be well educated in the theories and hypotheses and all of the accepted rules for collecting and categorizing specimens for this field of study which should be followed. I will also point out that speaking of evolution and millions of years as fact is a position of faith that I choose not to hold. Whatever else I have to say about paleontology is either covered in other sciences, or is, in my humble estimation, fictitious speculation about a nonexistent ancient past that is, as I said, a position of faith. The evidence can also be evaluated through a biblical worldview that holds to a divine 6-day creation that took place a little over 6000 years ago. This too is a position of faith but we, unlike those who hold to scientism, acknowledge our bias.

Now that I have said all I plan to say about paleontology, let's jump to biology. The concept of biology as a single coherent field arose in the early 1800's when the term biology in its modern sense started to appear in numerous scientific publications. The word was coined in 1800 by Karl Friedrich Burdach. The biological sciences emerged from traditions of medicine and natural history. We could go as far back as 50 AD when Pliny the Elder published his 37 volume "Historia Naturalis." We could also point to the work of many early philosophers like Alcmaeon of Croton who in 520 BC distinguished veins from arteries and discovered the optic nerve, or to ancient Egyptian medicine which included dentistry, and to the works of Aristotle of the Greeks, and Galen in the ancient Greco-Roman world. This ancient work was further developed in the Middle Ages by Muslim physicians and scholars such as Avicenna 980-1037 AD.

So what is modern day biology? Simply put, it is the study of life. From the smallest microbe to the largest whale, life is a miraculous thing. In order to study life, we must define what is living and what is not. Life can respond; life is organized; it works, it grows, it reproduces, it responds to stimuli and adapts. These characteristics form the basis of the study of biology. The study of the miracle of life, in both plant and animal forms, reveals an astounding amount of genetic information that point not to a common ancestor, but to a common Creator. As we discuss biology, we will need to touch on the topics of cosmology (the origin of life), time and dating methods, mathematics and chemistry, as well as genetics, botany, zoology, and anthropology.

OK...cool your test tubes. I realize this may be a bit more than you bargained for. Don't worry, I will try to keep the jargon to a minimum and will do my best to explain words when I use them.