

obligated to accept this as an absolute statement of the fiat creation of some kind or kinds of sea monsters during the fifth creative day. But for the many items of information regarding the creation which are not definitely defined, we should be thankful that God has let us live in an age when carefully and honestly collected scientific data have cleared up many questions which greatly perplexed the Bible scholars of long ago.

For example, these early scholars often wondered how the bodies of ancient animals and plants could have been fossilized, and what processes existed for converting layers of sediment into layers of rock. Within the past forty years sedimentologists have discovered and clearly described most of these lithification processes, and also have described many examples of short-term processes which produce rapid burial resulting in fossilization, or the proper chemical conditions for fossilization. They have also been able to determine the normal rates at which various lithification and fossilization processes occur, and what limits the natural laws of chemical and physical changes put upon these rates.

Another very meaningful example is that the early Christian paleontologist Georges Cuvier (1768-1832) and his colleagues were perplexed by the fact that several distinct groups (assemblages) of unrelated vertebrate fossils are found buried in a vertically sequential series of sedimentary strata over a wide area of the European continent. For example, a large number of genera and species of fossil fishes, amphibians, and reptiles were often found in a given stratum or group of strata; but in the stratum or group of strata next above, most or all of the genera and species found below were not present. Instead, a new assemblage of genera and species was found. And so on up through the local stratigraphic column. (This kind of progression of faunal types in the sedimentary strata of the earth is now known to exist in practically all parts of the world.)

Cuvier and his colleagues saw much evidence in the strata that the worldwide Biblical flood could not have produced this kind of distribution of fossils and that there was too much difference in the maturity and apparent age of the strata for all of them to have been produced within any short time period such as that of the Biblical flood. These observations led Cuvier and his colleagues to suppose that God had allowed a whole series of natural catastrophies to occur, bringing about the extinction of the assemblage of vertebrate animals that was living (in that area of Europe at least) repeatedly.<sup>1</sup> They assumed that either a new assemblage of animals became established as a result of migrations from other areas, or from special new creations by God, after each extinction occurred.

This is not a hypothesis which we would want to adopt today, but Cuvier did not have the benefits of modern sedimentological research. He and his colleagues were continuously careful during their studies, not to violate the Genesis account of creation or to adopt evolutionary philosophy. However, the lack of techniques and research data regarding the actual methods by which the strata were deposited and lithified left them perplexed regarding many aspects of the origin of the strata and fossils. So we have much reason to be thankful for the many new and accurate methods of identifying the modes of deposition and lithification of the sedimentary rocks and fossils which Cuvier had observed. In Cuvier's time even the sciences of paleontology and oceanography were very poorly developed, so even the determination of whether the sediments and fossils had been deposited by fresh water or by salt water was impossible. This and many other principles of deposition and lithification have now been so frequently observed occurring in natural freshwater and saltwater environments that sedimentologists have a rather full understanding of these principles.<sup>2</sup> These and other geologic discoveries have done much to deliver Christians of the past few generations from the extrabiblical superstitions and unreasonable explanations regarding the origin of the earth's sedimentary strata and fossil assemblages which have been commonly held. Since Psalm 19:1-4 tells us that it is possible to understand some of the "handiwork" of God's creation as we look upon it, it is completely reasonable to study the rock strata, comparing various types with others, in order to understand their nature and origin.