

in nature which give us useful information concerning the amount of time which has passed since the creation of life upon this earth. Much of this time-indicating information comes from a recognition of the many types of sediment layers on the earth, and from the kinds of microscopic-sized particles of which sedimentary rocks are composed. Thus our knowledge of age is not actually dependent upon radiometric dating or upon any form of "circular reasoning" related to fossils, as has sometimes been asserted. Likewise, the evidences for age which we recognize are not dependent upon a "system" of uniformitarianism. Rather, each case of sedimentary evidence described in the following chapters is able to stand upon its own merits.

In the pages which follow, we will be using the terms "nature" and "science" frequently. The word "nature" refers to all of the natural world, as distinguished from things which have been built or produced by man. Nature includes not only the biological realm, but also non-biological things, such as rocks, oceans, volcanoes, and all the minerals of which the earth is composed. The word "science" refers to "the body of knowledge obtained by methods based upon observation."¹ Thus, the body of knowledge which we call "science" is obtained by the gathering of facts and drawing conclusions based on those facts. Strictly speaking, science is separate from philosophy, but it does find some of the more basic philosophic principles to be essential to its work.

Order in Nature

Any careful consideration of nature soon reveals that ours is a world of order, and that the tools of science will be useful in examining that order. The philosophers, Bible students, and theologians of ancient times took note of some aspects of the order in nature, for example, the similarities of certain kinds of animals and plants, the bilaterally symmetric structure of the legs and other parts of animal bodies, and the radial symmetry of many plants, jellyfishes, and other lower animals. Now, in recent times, science has demonstrated that there is far more order in nature than was formerly observed. Examples of this are: (a) the highly organized crystalline structure of many minerals, (b) the arrangement of the cells of the human body which allows nerve cells to control muscle cells and gland cells, (c) the functional arrangement of molecules within a cell, (d) the cooperative ecological relationship between many plants, animals, and microorganisms, and (e) the systematic relationships of the elements which make possible their arrangement into the familiar "periodic chart" which hangs on the wall of every chemistry laboratory.

Another phase of this discovery of more order in the earth has been carried out by geologists and other earth scientists, as they have studied the strata (layers) of the earth. It has turned out that there is a very meaningful order in these layers--an order which was established by events on the earth and in the earth's crust in the past. The general public usually does not realize how very useful this knowledge of the order in the rock layers has been. An understanding of the events of the past has enabled man to discover large