

which can be learned by a study of the fossils and of the many distinct layers which are revealed by earth-moving operations and drillings. These and other methods of study enable us to learn a great many specific facts about types of life which were present on the earth long before God placed man on this planet as an observer.

Extinct Fossil Species

Another time-indicating characteristic found in the drilling cores of local stratigraphic columns is that the cores from the deeper layers usually contain fossilized species which are now completely extinct. Furthermore, there is often a gradual fading away of a species as one proceeds upward in the column. For example, within a family or order of mollusks, bryozoans, or other marine animals, certain species very often appear in abundance in the deeper layers, then gradually become fewer in the higher layers, and are finally extinct in all the more recent strata. This is true even though the extinct kinds often differ from their modern relatives only in small details of structure, and have shells of the same shape and density.⁴ So, here is a meaningful record of how some species of a presently-living family of mollusks or other marine animals once thrived, and then gradually disappeared from the earth.

This and related principles are used extensively by paleontologists and geologists for identifying and correlating strata in various geographic locations, and for determining the relative age category to which a particular set of sedimentary strata belong. For example, William Smith, in the early 19th century, in his detailed study of the strata of England, Wales, and Scotland, recognized that many of the kinds of fossils present in one set of layers were absent from those found in the set next above. That is, one geologic formation had a different "fossil assemblage" from that next above it, and beneath it. By using this principle he was able to relate one outcrop of sedimentary rock layers in a particular location to other outcrops in other parts of the British Isles, and to determine which were formed at approximately the same time.

Evidence of the genuineness of the "fossil assemblages" which geologists recognize is found in abundance on every continent. That these assemblages of kinds of fossils are very frequently the same natural groups which lived together is evident from the fact that many differing kinds of fossils are frequently found mixed together in the same rock layer. The types of fossils found in such a rock layer are usually completely independent of the density, structure, size, and shape of the original animals. Thus one regularly finds the highly contrasting kinds of organisms which usually grow together in a given environment, fossilized together in rock layers. For example, in the Ordovician and Silurian deposits of northern Kentucky and Indiana, one finds an abundance of heavy-shelled brachiopods and mollusks, from almost fist-size down to those of very tiny dimensions, mixed together with buoyant cephalopods and delicately branched crinoids and bryozoans. All these can be found on the same bedding plane in the deposit. This of course indicates that there