

"Fossils are either actual remains of bones or other parts preserved intact in soil or rocks, or else, and more commonly, parts of animals which have been turned into stone, or of which stony casts have been made. All such remains buried by natural causes are called fossils." (Jordan and Kellogg)

Thus Fossils include

- (1) actual remains
- (2) petrifications
- (3) molds and casts
- (4) prints of leaves, etc.
- (5) tracks, trails, and burrows

Many Greek philosophers were puzzled by the presence of typical marine shells, enclosed in rocks far removed from any body of salt water. Some were of the opinion that the sea may have originally occupied these areas. More often, however, the presence of these fossils was explained as the results of supernatural agents. Aristotle believed that fish fossils had originated in the rocks. His student, Theophrastus, observed fossil bones and believed them to be the products of certain "plastic forces" at work within the earth. Strabo noted the remains of marine organisms at altitudes well above sea level and inferred that these lands had once been under the sea but had later been elevated above sea level.

Among the Roman writers, Calus Suetonius Tranquillus (ca. A.D. 72-123) mentioned a collection of bones at the villa of Emperor Augustus. These bones, which were quite large, were believed to be the remains of an extinct race of human giants -- a belief commonly associated with such fossils as late as the eighteenth century.

During the Middle Ages, the Arab scholar, Avicenna (A.D. 979-1037), was of the opinion that "plastic forces" within the earth's crust were capable of modeling all types of plants and animals. During this period fossils were usually referred to as "figured stones." Some churchmen believed fossils to be the work of the devil, placed in the rocks to confuse or mislead men. The star-like shape of certain fossils led others to believe that the stars were responsible for the origin of these forms. Still others argued that fossils were "jokes" or "freaks of nature," or that they were types of life discarded by the Creator during experimental attempts. "Perhaps God Himself, while learning the trade of creating, first made models Out of earth; those which satisfied Him were changed into living things and the rest, or sketches, became stony fossils." The theory was also propounded that vapors from within the earth produced all fossils, by acting upon the "plastic forces."

During the Renaissance the term fossil, which had once been applied to all objects dug out of the ground, gradually came to be applied exclusively to organic remains, it was customary during this period to explain fossils as remnants of the great flood of Noah's day. There were a number of nonscientific interpretations which explained fossils as the remains of dragons, giants, and monsters. Leonardo da Vinci rejected the views that fossils are the result of "plastic forces" or a result of the Biblical Flood, and reaffirmed the theory