FOSSILS

Fossils are the preserved remains of ancient life. One type of fossil is ancient remains, the actual bodies of ancient life. These are the ideal fossils because they remain mostly unchanged from their time to ours. The best examples of ancient remains fossils are ancient insects preserved in time inside pebbles of amber. These fossils are very rare.

Body fossils are mineralized organisms. Petrified wood and fish skeletons are the best examples here. Regionally, they can be very common, but worldwide, body fossils are rare.

Trace fossils represent the behavior of ancient life without body parts being present. Dinosaur tracks are an excellent example of trace fossils.

The last kind of fossil is a chemofossil. These are the remains comprised of the organic compounds or proteins found in a body of rock. Petroleum and coal are chemofossils.

The word "fossil" comes from the Latin word *fosillis*, which means "dug up." Fossils are found in sedimentary rock because it was built up layer upon layer, often trapping and preserving animals, plants and footprints within the layers of sediment. If conditions are right, fossils are formed as the layers of sediment turn to rock.

Many fossils undergo recrystallization in groundwater. This often occurs with shells. In other plants and animals, their substance is dissolved; leaving an open space (a mold) that is refilled with minerals. If the fossil's original substance is gently and completely replaced with another mineral, the fossil is very lifelike.

Fossils are exposed when the rocks that hold them are eroded. Geologists have developed techniques for recovering fossils from the rock that has trapped them for millennia. Tools as large as pneumatic hammers and as small as toothbrushes and toothpicks are used to remove the surrounding stone and expose again the plant or animal that once flourished under the sun's light.