

Fossils Tell of Long Ago

by Aiki

Once upon a time a huge fish was swimming around when along came a smaller fish. The big fish was so hungry it swallowed the other fish whole. The big fish died and sank to the bottom of the sea.

This happened ninety million years ago. How do we know?

We know because the fish turned to stone. The fish became a fossil. A plant or animal that has turned to stone is called a fossil.

Scientists can tell how old stones are. They could tell how old the fish fossil was.

How did the fish become a fossil? Most animal and plants do not become fossils when they die. Some rot. Others dry up, crumble, and blow away. No trace of them is left. This could have happened to the big fish. We would never know it had lived.

Instead, the fish became a fossil. This is how it happened.

When the big fish died, it sank into the mud at the bottom of the sea. Slowly, the soft parts of the fish rotted away. Only its hard bones were left. The bones of the fish it had eaten were left, too. The skeleton of the fish lay buried and protected deep in the mud.

Thousands of years went by. More layers of mud covered the fish. Tons and tons of mud piled up. After a long time, the surface of the earth changed. The sea where the fish was buried dried out. The weight of the layers of mud pressed down. Slowly, the mud turned to rock.

As that happened, ground water seeped through the changing layers of mud. Minerals were dissolved in the water. The water seeped into all the tiny holes in the fish bones. The minerals in the water were left behind in the fish bones.

After a very long time the bones turned to stone. The fish was a fossil.

Some fossils, like the fish, are actual parts of plants or animals that have turned to stone. Sometimes a fossil is only an imprint of a plant or animal.

Millions of years ago, a leaf fell off a fernlike plant. It dropped onto the swampy forest soil, which is called peat. The leaf rotted away. But it left the mark of its shape in the peat. The peat, with the imprint of the leaf, hardened. It became a rock called coal. Coal is a fossil, too.

These are dinosaur tracks. They were made in fresh mud 115 million years ago.

Sand filled the dinosaur's footprints in the mud.

The sand hardened into a rock called sandstone. Millions of years later fossil hunters dug through the rock. They found the fossil tracks—exact imprints of the dinosaur's foot.

Not all fossils are found in stone. Some are found in the frozen ground of the Arctic. This ancient mammoth was a kind of elephant. It froze to death thousands of years ago. The grass it had been eating was still in its mouth!

Millions of years ago, a fly was caught in the sticky sap of a tree. The sap hardened and became a fossil called amber. Amber looks like yellow glass. The fly was perfectly preserved in the amber. Other insects have been preserved in amber, too.

We have learned many things from the fish, the fern, the fly, and the dinosaur tracks. Fossils tell us about the past.

Fossils tell us there once were forests where now there are deserts. Fossils tell us there once were seas where now there are mountains.

Many lands that are cold today were once warm. We find fossils of tropical plants in very cold places.

Fossils tell us about strange creatures that lived on earth long ago. No such creatures are alive today. They have all died out. We say they are extinct.

Some fossils are found by scientists who dig for them. Some fossils are found by accident.

You, too, might find a fossil if you look hard. When you see a stone, look at it carefully. It may be a fossil of something that once lived.

How would you like to make a fossil? Not a one-million-year-old fossil. A one-minute-old fossil.

Make a clay imprint of your hand. The imprint shows what your hand is like, the way a dinosaur's track shows us what its foot was like.

Suppose, when it dried out, you buried your clay imprint. Suppose a million years from now, someone found it. Your imprint would be as hard as stone. It would be a fossil of your hand. It would tell the finder something about you. It would tell something about life on earth, a million years earlier.

Every time someone finds a fossil, we learn more about life on earth long ago. Someday you may find a fossil—one that is millions and millions of years old. You may discover something no one knows today.