

Asteroid that wiped out dinosaurs probably helped produce modern rain forests

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The age of the dinosaurs ended 66 million years ago when a very large asteroid crashed into Earth. An asteroid is a rocky object that orbits, or makes a repeating path around, the sun. The asteroid wiped out all kinds of life on Earth.

It was bad news for the dinosaurs. But in the tropical rain forest, it was good news for flowers, scientists suggest.

A team of scientists from around the world studied tens of thousands of fossils. These are the remains of plants, animals and other living things that have become rock material or have left impressions in rock. The scientists wanted to see what happened to plant life after the asteroid hit Earth. They studied the region of what is now Colombia in South America.

The fossils revealed that the crash did something else, too. It helped make the modern tropical rain forests. In April 2021, the scientists published their study in a scientific journal.

The Impact And Aftermath

The fiery asteroid crash set off a heat wave and triggered massive ocean waves. It also left the sky clouded with ash and rock. Ash is small, lightweight pieces of rock and other materials. A combination of these events caused 75 percent of life on land to go extinct. This meant the permanent loss of many living things.

To figure out what the area was like before the impact, the scientists studied leaf and pollen fossils from the region. Pollen is a powdery yellow grain. Flowers release pollen to make a seed.

These fossils tell the story of two different forests. Before the crash, the region was wet and warm with many conifers and ferns. A conifer is a tree that has cones, such as a pine tree. These trees were widely spaced out. Their spacing allowed for large amounts of light to reach the ground.

Afterward, 45 percent of plants in the area became extinct. Flowering plants took over, and the canopy became thicker. The canopy is the top layer of a forest.

Soon, the rain forest became more diverse. This means it had more kinds of plants growing there. It became layered from top to bottom. In the shadier sections below, a rainbow of flowering plants grew.

Disruption Brings Change

But how was such a big change possible after such a disruptive event?

The scientists have three possible explanations for the growth of forests after the asteroid impact. One explanation is that dinosaurs played a role in keeping the forest more open before the impact. For example, their snacking habits as they moved from place to place may have affected the types and thickness of plants on the ground. So after dinosaurs disappeared, new plant life may have emerged.

A second explanation is that ash from the asteroid blast may have added nutrients to tropical soils. This might have helped flowering plants grow faster.

A third explanation has to do with the types of trees that grew before the impact. Perhaps these conifers and ferns were more likely to become extinct after the disruption of their environment. But scientists also think that the growth of forests could be the result of a combination of all three explanations.

The mass extinction was a worldwide disaster. It destroyed many plants and animals that only exist in fossils today. However, it cleared the way for a different world. In this case, it was a rich and diverse one.

<https://newsela.com/read/dinosaur-extinction-rainforests/id/2001020247/>