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THE DINOSAUR'S DOOM

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A picture of what could have happened to an unlucky dinosaur when the asteroid collided with Earth.

THE GREAT EXTINCTION

PEOPLE DON'T KNOW WHY THE DINOSAURS WENT EXTINCT, BUT IT MUST BE ONE OF THE GREATEST EVENTS EVER.

The Great Mystery

A small prehistoric mammal scurries through the undergrowth. It knows that something horrible is going to happen. She scurries into her hole just as an enormous explosion is heard. A enormous cloud of ash blocks out the sunlight…. This scene might have actually happened, about 65 million years ago. Humans don't know why the dinosaurs went extinct. People have several theories. Have you ever pondered about this? No matter how it happened, the extinction must have been one of the greatest and most well known events ever!

Volcanic Activity

One of the things believed to have possibly caused the dinosaurs to go extinct is volcanic activity. Plates moving could have caused the volcanic eruptions, because moving plates cause earthquakes and volcanic eruptions. According to this theory, volcanoes pumped a lot of ash and dust into the air, which

An asteroid collision could have caused the dinosaurs to go extinct.

caused Earth's temperature and climate to change. The ash, which was pumped out of the volcanoes, was spread by the wind. Besides the ash, volcanoes also pumped gases and sulfuric acid into the air. As a result, breathing would become more of a challenge. According to volcanologist Vincent Courtillot, volcanoes could have blown out an incredibly large amount of gas, at 10 times as much as a suggested asteroid collision in the Yucatan Peninsula. Gases could have gathered not only in the atmosphere, but also on the surface of Earth. Also, besides this, molten rock would cover the ground. Apparently, there was a lot of volcanic activity, stretching for a long period of time, perhaps 500,000 years. Conversely, it could have taken up to 4,000,000 years.

A lot of volcanic activity was based in what would, much, much later be India, at the Deccan Plateau. Besides this, there might have been some volcanic activity in the nearby area which would someday become Pakistan. The peak eruptions at the Deccan Plateau lasted about 500,000 years or more. Though it might seem like a long time, it is relatively short. The rate of the Deccan eruptions was immense, about 30 times the rate of volcanic eruptions in Hawaii today. Lava beds which are called the Deccan Traps were formed. These lava beds were of great size, covering a little under a million square kilometers.

People have reasons to believe this theory. Iridium is a metal that is rare on the Earth's surface. However, in some places, iridium has been found in great quantities. Volcanoes could have spewed iridium from the Earth's core to the Earth's surface. Also, crystals have been found that have been broken in a particular way, which could have been caused by volcanoes. Volcanic activity can be possibly tied to another theory: climate change.

Climate Change

Another suggested theory of why the dinosaurs went extinct is climate change. This could have been caused by volcanic eruptions or an asteroid impact. If the change was rapid, it could have been caused by an impact of an asteroid or, for instance, a comet or meteorite. But, the change could also have been gradual. Wind or ocean currents could have also caused climate change.

One of the theories is that the temperature increased. It could have increased by as much as 10 degrees Celsius! That would be a very large large amount! This could have been caused by carbon dioxide from volcanoes. This gas trapped the heat that came from the sun, it couldn't go back to space. This is called a greenhouse effect.

Conversely, there is another theory that suggests that the temperature decreased. The temperature was tropical during the Cretaceous period. It then became cooler. Furthermore, it also became dryer. Colder temperatures could have killed off many plants, which caused herbivorous dinosaurs to go extinct. This, in turn, caused carnivorous dinosaurs to go extinct. There appears to have been a decrease in the population of plankton, causing marine reptiles to go extinct. There is evidence that supports the theory that the temperature decreased. For instance, based on the fossil record, woodland plants replaced tropical plants.

Although volcanic activity can be possibly tied to this theory, there is another theory that can be tied to climate change: an asteroid impact.

Asteroid Impact

One of the most popular theories of why the dinosaurs went extinct is that an asteroid collided into Earth at the tip of a place called the Yucatan peninsula, in the Gulf of Mexico. Conversely, the asteroid may have not collided at all, but vaporized. However, it is possible that the asteroid could have collided into Earth. This theory is known by several names, including the K-T theory, the Alvarez Asteroid theory, (due to the fact that this theory became more popular because of Walter Alvarez, in 1980),and simply the asteroid theory. The asteroid collided about 65 million years ago. The asteroid was huge, and could have been 180 km., or 4-9 miles, from rim to rim, and up to 10 km. across. When the asteroid collided, it let loose an amazing amount of energy. This amount of energy was equivalent to about 5.0 X 1023 joules, or 100,000 gigatons of TNT. Additionally, the collision could have caused tsunamis, tidal waves, severe storms, and gigantic forest fires,

which could have wiped out about 25% of all plant life on Earth. Firestorms were caused when the asteroid collided, because there was a lot more oxygen. In the ocean, there was a decrease in the amount of oxygen. Also, the asteroid could have caused acid rain, and because of this, there was more acidity in the oceans. Furthermore, it sent ash into the atmosphere. This was spread by the wind. The sunlight was blocked out for a long period of time. This caused plants, which relied on photosynthesis, to become extinct. This led to herbivorous dinosaurs going extinct, which in turn led to carnivorous dinosaurs going extinct. This is called a "nuclear winter". The dinosaurs were unable to adapt. Altogether, about 70% of all the life on Earth went extinct.

According to two men called David M. Paup and J. John Sepkoski, there is a tenth planet that has not been found yet, "Nemesis", in the solar system. This planet goes through the cometary cloud Oort. This causes changes in comet's orbits, which causes them to collide with Earth, about every 26 million years. On the other hand, according to scientists at the Southwest Research Institute, in Colorado, years ago, there was a large asteroid, which was called Baptistina. Baptistina collided with an asteroid of smaller size, which caused Baptistina to shatter. Pieces of the large asteroid were sent further into the solar system. 95 million years later, the pieces of Baptistina collided with Earth, causing the dinosaurs to go extinct.

Conversely to the theory that there was only one asteroid impact, the asteroid could have been only one of many asteroids which collided with Earth at the time. There are several craters that are supposedly connected with this around the world. These craters include Silverpit in England, and Boltysh in Ukraine. Additionally, some people believe that an asteroid collided with Earth in the Indian Ocean.

There is evidence to support the asteroid theory. Although volcanoes could have caused the fractured crystals mentioned earlier, they could have also been caused by an asteroid collision. Furthermore, the metal iridium, also mentioned earlier, which has been found in about 50 locations around the world, could have come from an asteroid, in which it is common. Additionally, there is molten rock, or impact ejecta that have been moved, which shows that there was, at some point, an explosion, which was so powerful that it could move rocks great distances. These were found at the K-T boundary, which is a layer made up of clay. This layer separates the rock which is from the Cretaceous period from the rock which is from the Tertiary period. Also, there is evidence that shows that the dinosaur population was not declining before the event.

Some scavenging animals, such as birds and mammals, managed to survive, because they were able to adapt, and find food from several recourses.

What is True?

There are several different theories about why the dinosaurs went extinct. Which one do you believe in the most? The asteroid theory seems likely, and is popular. However, other theories can be responsible for why the dinosaurs went extinct. There are many other theories of why the dinosaurs went extinct. These were only some of the main ones. You can decide which one to believe in. Perhaps you can think of one of your own! In conclusion, why the dinosaurs went extinct is a very big question. But there is no question that the dinosaur extinction was a very important event.