

What Killed the Dinosaurs?

19 July 2013, by Fraser Cain



Chicxulub Crater

Dinosaurs roamed the Earth for 135 million years. Filling every ecological niche, from the oceans, forests and plains; even the skies.

Then, 66 million years ago, something terrible happened. In a geological instant, 75% of the plants and animals on Earth went extinct. And all of the land dinosaurs were wiped off the Earth forever.

What happened? What killed them off?

What could have caused that much damage in such a short amount of time?

The key to this mystery was found in a strange layer of ash sandwiched between layers of rock deposited 66 million years ago. This line, known as the Cretaceous-Paleogene boundary, is found across the world in the [geologic record](#) and it

marks the moment when everything DIED. What's interesting about this layer is that it's rich in iridium, a [rare element](#) on Earth, but abundant in asteroids.

And so, geologists found the most likely culprit: an asteroid.

This evidence matched the discovery of an enormous asteroid [impact basin](#) in the Yucatán Peninsula in Mexico, centered near the town of Chicxulub. The rock debris in this area could be dated back to approximately 66 million years old, matching the worldwide layer of ash.

We now know that an asteroid at least ten kilometres across slammed off the coast of Mexico 66 million years ago, releasing 2 million times more energy than the most powerful nuclear bomb ever detonated.

The effect of this impact is mindblowing.

Millions of tonnes of rock were ejected into space on ballistic trajectories. Reheated by atmospheric re-entry, this debris superheated the air across the entire planet, catching the world's forests on fire.

Shockwaves radiated outward from the impact site, inducing earthquakes and volcanoes along their path. Mega tsunamis thousands of meters high spread out from the impact site, pounding coastlines around the world.

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