



# What Happened to the Dinosaurs, Lizards and Snakes?

What can lizards and snakes tell us about what happened at the end of the dinosaur era? That might seem like a strange question, but this topic was the focus of research involving BLM lands in Montana and the Dakotas and our rich fossil resources.

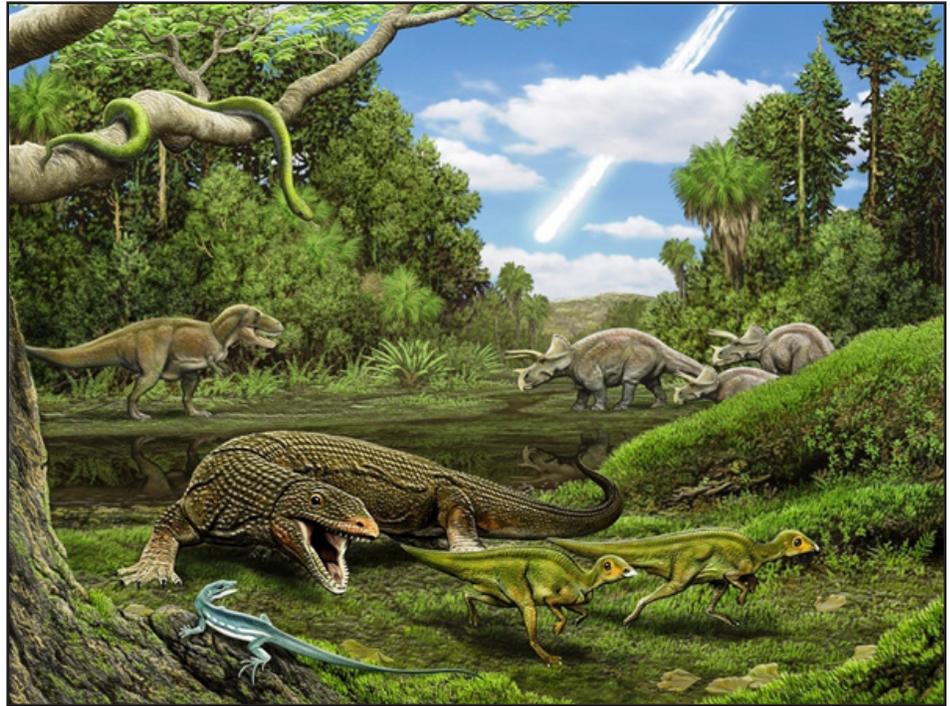
Scientists who want to understand what happened 65 million years ago, when dinosaurs and other large animals went extinct, need to find rocks of that specific age with fossils to look for patterns. Turns out that there are not a lot of rock outcrops that fit these requirements, but one of the most famous is found in Montana, North Dakota, and South Dakota.

Geologists call this rock unit the Hell Creek Formation, and it records the very end of the time of the dinosaurs. There is a “line in the rock” below which you can find dinosaur bones, and above which none have ever been found. What happened at that line has been the subject of much scientific interest. The Miles City Field Office oversees much of the exposed Hell Creek, and every year researchers from around the country head to the badlands looking for clues.

You may have heard about the large asteroid that hit the Earth right at the end of dinosaurs’ reign 65 million years ago. The question everyone wants an answer to: is the asteroid the “smoking gun” that did in the dinosaurs?

A research team looked at one group of animals that survived the event, lizards and snakes, whose fossils are found on both sides of the impact event. What was their experience with an impact?

The researchers found that many kinds of lizards and snakes were found below (before) the impact, but 83 percent of those species are not found after the event. Additionally, it seems

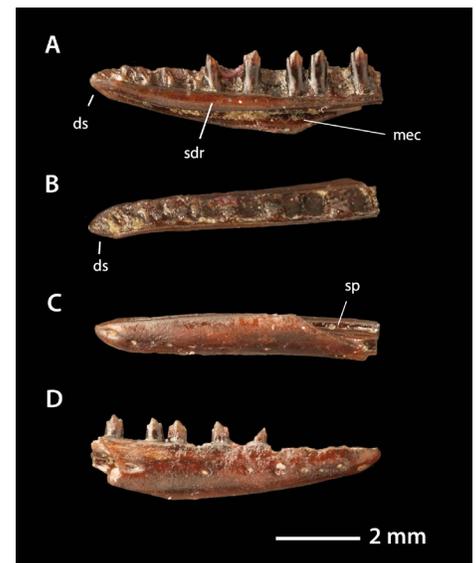


*In this artist's conception, the carnivorous lizard Palaeosaniwa stalks a pair of hatchling Edmontosaurus dinosaurs as the snake Cerberophis looks on from above, and the lizard Obamadon watches from below. Meanwhile, in the background, a Tyrannosaurus rex encounters a Triceratops troop while an asteroid streaks down to Earth. Illustration by Carl Buell*

that larger species did not survive. Below the event there was a rich diversity of lizards and snakes—above it, not so much.

The results of this study support the idea that what happened to kill off the dinosaurs also had a dramatic effect on lizards and snakes. While none of the large species of dinosaurs lived past that event, small-bodied species of lizards and snakes, and other small-bodied animals like mammals, did. It looks like being small had its advantages in this case.

On a fun note, these same researchers described a couple of new species during their work, one a new species of lizard found just off of BLM land in Montana. They named this species *Obamadon gracilis*, in reference to this lizard’s tall, straight teeth, and in their words “the manner in which Mr. Obama has acted as a role model of good oral hygiene for the world.”



*The lower jaw of the new fossil lizard found just off of BLM lands in Montana named Obamadon gracilis.*

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