What really killed the dinosaurs? A look at the latest developments

By François Therrien, Ph.D. Curator of Dinosaur Palaeoecology, Royal Tyrrell Museum of Palaeontology

The extinction of dinosaurs, which occurred 66 million years ago during an event called the Cretaceous-Paleogene (K-Pg) mass extinction, is one of the most talked-about topics in paleontology. Many theories have been proposed to explain the disappearance of these fantastic beasts, invoking causes ranging from the mundane to the extraterrestrial. Despite frequent claims of “ground-breaking discoveries” making the headlines in the media, the exact details of the K-Pg mass extinction remain shrouded in mystery. Although it is widely known that dinosaurs were wiped out during the K-Pg mass extinction, people often don’t realize that many other types of animals also went extinct at the same time, both in the oceans and on land, resulting in the disappearance of nearly 75% of all species on Earth. For several decades, scientists have argued over whether dinosaurs went extinct gradually, over millions of years in response to environmental changes, or suddenly in response to a catastrophic event. The debate still rages on, but there are now several lines of evidence that suggest that dinosaurs were going strong until at least 50,000-100,000 years prior to their extinction and that they went extinct suddenly. But what cause/event could have caused their extinction? In his presentation, Dr. Therrien will review what we know about the state of the world at the end of the Cretaceous, the latest scientific discoveries, the “accuracy” of the various hypotheses proposed to explain the demise of the dinosaurs, and conclude with a likely scenario for the Cretaceous-Paleogene mass extinction.