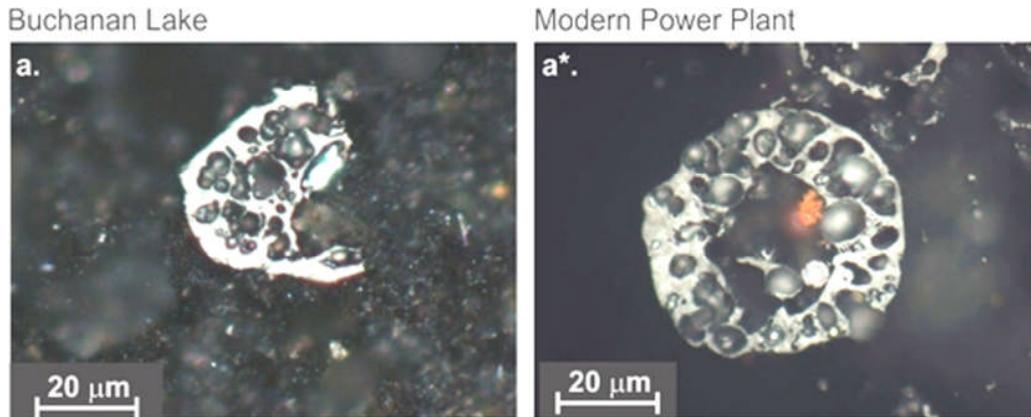


Was mass extinction fueled by coal?



Hamed Sanei, NRCan / University of Calgary

The coal-ash particle on the left is from the latest Permian extinction boundary at Buchanan Lake, Nunavut. The particle on the right is from a modern power plant.

John Roach writes: The explosive burning of coal seams in Siberia a quarter-billion years ago may have contributed to a mass extinction event that wiped out about 95 percent of marine life and 70 percent of life on land, a new study reports.

Scientists have long thought that massive volcanic eruptions in Russia's Siberian Traps were responsible for the Permian-Triassic extinction, though many have argued that such a deadly blow likely needed an extra push.

Stephen Grasby, a geochemist with the Geological Survey of Canada in Alberta, and his colleagues found charred particles in Permian-aged rocks from the Canadian Arctic that resemble modern coal fly ash, the toxic particles released when coal is burned in coal-fired power plants.

"This could literally be the smoking gun that explains the latest Permian extinction," he said in a news release.

The finding implies that magma in the Siberian Traps ignited coal deposits in the surrounding area, creating explosions that sent plumes of coal ash billowing into the skies. These clouds would have dispersed the coal ash around the world.

"It was a really bad time on Earth," Grasby said. "In addition to these volcanoes causing fires through coal, the ash it spewed was highly toxic and was released in the land and water, potentially contributing to the worst extinction event in earth history."

Many scientists believe we are in the throes of the sixth great mass extinction in earth's history, largely due to the impact of humans on the planet, including our reliance on burning coal for energy.

Findings were published Sunday in *Nature Geoscience*. For more details on the study, check out this piece in *Nature News*.