

Life and Death by Impact: Drilling for clues

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Public most welcome

The most recent of Earth's five largest mass extinction events occurred 66 Ma, coeval with the impact of a ~12 km asteroid, striking at ~60 degrees into what is today the Yucatán Peninsula, México, producing the ~200 km-wide Chicxulub crater.

This impact, by some estimations, drove the extinction of 75% of life on Earth at the genus level including all non-avian dinosaurs. The mass extinction event marks the boundary between the Cretaceous and Paleogene.

The International Ocean Discovery Programme have successfully cored into the Chicxulub impact crater with nearly 100% recovery. These cores

include the first-ever samples of the transition from an intact peak ring (a discontinuous ring of mountains observed within the central basin of all large impact craters on rocky planets) through post-impact sediments. The full recovery of life within the crater spans from immediately after impact through millions of years allowing for a first-order assessment of the environmental consequences of the impact ("kill mechanisms").

In this presentation, Professor Gulick will present findings, going some way to help solve the mystery of what took place so long ago.