



HARROW & HILLINGDON GEOLOGICAL SOCIETY

A Local Group of the Geologists' Association *Founded 1973*

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Geology and Life Lecture Series

Wednesday 8th July 2026 at 8pm on Zoom

“All Fossils Are Rotten: The Science of Death, Decay and Preservation”

By Dr Thomas Clements (www.tgclements.com)

Fossils are a vital window into ancient life, but typically tell only part of the organism's story as only the hard parts remain. However, some exceptional fossils preserve soft tissues, including skin, muscles, internal organs and even eyes, that survive for millions of years.

My research investigates how the very process that normally destroys these structures, decay, is also, paradoxically, responsible for their preservation.

Here I will present how controlled decay experiments on modern animals are helping us unpick the paradox of fossilisation, and how my research is revealing the key role that decay-related bacteria, which normally obliterate biological information, play in driving mineralisation and capturing soft tissues in the rock record.



Dr Thomas Clements

Thomas is a palaeobiologist and taphonomist whose research seeks to understand one of palaeontology's most fundamental questions: how do soft-bodied creatures become fossils?



Through museum-based fossil analysis, advanced analytical techniques, and hypothesis-driven decay experiments, Thomas unpicks the complex processes that transform soft tissues into stone. In particular, he is interested in quantifying how decay biases soft tissue preservation; yet his experiments suggest the very same processes may, paradoxically, be what drives it.

Thomas is also an award-winning science communicator, committed to bringing ancient life and the science behind its discoveries to a wide audience.