HARROW & HILLINGDON GEOLOGICAL SOCIETY

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

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Geology and Life Lecture Series

Wednesday 11th November 2026 at 8pm on Zoom

"*What triggered the Cambrian Explosion?*"

By Prof Rachel Wood (University of Edinburgh)

The Cambrian Explosion started ca. 550 million years ago, and marked the first appearance of animals and their radiation into diverse modes of life. This was terminated by the first mass extinction of the Phanerozoic. The single-celled ancestors of animals possessed similar genes to those involved in the development of animal traits, so why did it take so long for animals to appear and become ecologically dominant? I will explore the role of oxygen in creating habitable space for animals to diversify, and show that this radiation was not linear, but cyclical.



One of the oldest animal fossils known (c. 575 Million years ago) from the Avalon peninsular, Newfoundland

Professor Rachel Wood



Rachel Wood is Principal Investigator and Chair of Carbonate Geoscience at the University of Edinburgh, leading field-based research on carbonate sedimentology, ancient reef ecosystems, and the evolution of early metazoans. Her work focuses on understanding early animal evolution and mass extinctions through integrated geochemical and palaeontological approaches, with particular emphasis on major transitions in Earth's history. Current projects investigate the relationship between environmental change and biological innovation, to unravel the complex interactions between life and Earth systems through deep time.