



# Echoes of Life: What Fossil Molecules Reveal about Earth History

*Susan M. Gaines, Geoffrey Eglinton, Jurgen Rullkotter*

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In 1936 a German chemist identified certain organic molecules that he had extracted from ancient rocks and oils as the fossil remains of chlorophyll--presumably from plants that had lived and died millions of years in the past. It was another twenty-five years before this insight was developed and the term "biomarker" coined to describe fossil molecules whose molecular structures could reveal the presence of otherwise elusive organisms and processes.

*Echoes of Life* is the story of these molecules and how they are illuminating the history of the earth and its life. It is also the story of how a few maverick organic chemists and geologists defied the dictates of their disciplines and--at a time when the natural sciences were fragmenting into ever-more-specialized sub-disciplines--reunited chemistry, biology and geology in a common endeavor. The rare combination of rigorous science and literary style--woven into a historic narrative that moves naturally from the simple to the complex--make *Echoes of Life* a book to be read for pleasure and contemplation, as well as education.

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