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## MARTIN BRASIER

# A journey in palaeobiology

Martin Brasier's work lay at the heart of our understanding of the biosphere at key junctures in Earth history. He may be best known for his study of the early biosphere from the origins of life itself to the Cambrian explosion of animals, but the scope of his research was vast, encompassing the entire geological timescale.

Martin's research career began in 1969, when he served as the ship's naturalist on board the Royal Navy hydrographic survey ships HMS Fawn and HMS Fox. During this time he mapped the microhabitat of foraminifera, algae, seagrasses and mangroves in the Caribbean. After the award of his PhD from University College London in 1973, this early work transitioned to the study of the evolution of symbiosis and seagrass community structure. Later, Martin made unique inroads into understanding how cells interacted in the reef communities of the early Cambrian, also revealing the sponge-like biology of archaeocyathids. By the late 1970s, he was exploring a data-based ecological and taphonomic assessment of the Cambrian explosion of skeletal fossils.

The early 1980s saw the publication of the first edition of Martin's seminal book Microfossils, used to this day as a core textbook by students around the world. Relocation to Oxford in 1988 allowed him to explore new technologies, bringing innovative techniques to the study of Ediacaran and Cambrian evolutionary radiations, the origins of the major invertebrate groups, and Snowball Earth. During this time Martin took a leading role in the International Geoscience Programme (IGCP) committees established to discuss the stratotype sections and the formal definition of the Cambrian and Ediacaran time periods.

Over the last 20 years Martin has helped to revolutionize the study of the earliest biosphere, pioneering a critical approach to the assessment of the biogenicity of the most ancient microfossils and trace fossils. Those present will never forget his clear reasoning and good humour during



the intense debate over the controversial identification of 3.5-billion-year-old microfossils in the Apex chert at the NASA Ames conference of 2002, describing his opponent's performance as 'truly hydrothermal, with more heat than light' as he took over at the podium, before convincing the majority of the audience that the 'microfossils' were no more than fortuitouslyarranged blobs of carbon. He was always open to new interpretations, quick to embrace new ideas and new technology, and remained at the very forefront of this field right up to his death.

Martin had a wonderful ability for storytelling, whether during student tutorials over the occasional glass of port, or through his notebooks, which were often works of art. He put this talent to great effect in his popular science books *Darwin's Lost World* and *Secret Chambers*, bringing the Precambrian to life for a diverse audience. Martin strongly believed in sharing good ideas and widening access to scientific education. He was rightly proud of the impact his books had; this impact will undoubtedly continue for years to come.

In early 2014 Martin's scientific contributions were formally recognized by

the award of the prestigious Lyell Medal from the Geological Society of London. On the occasion of his retirement in September 2014, the diversity of attendees showed the huge influence that Martin has had across the geological community, and the warmth with which he was regarded.

Given the huge amount of research Martin produced, and continued with renewed vigour after his retirement, it would be easy to overlook his many other talents and interests. Martin was a skilled jazz pianist, even building some of his own keyboard instruments. He could recite large passages of Monty Python's The Life of Brian (providing much entertainment when on fieldwork). He had a love of archaeology, and amassed an impressive collection of Roman seal stamps and coins. His fascination with the history of science led him to collect a variety of notable objects and books, ranging from Robert Hooke and Charles Darwin up to the NASA moon landings — all of which he delighted in showing to students and visitors.

Martin was a great family man and condolences go to his wife Cecilia and children Matthew, Alexander and Zoe at this very difficult time. Martin had a remarkable talent for reconciling family holidays with geological fieldwork, so it is no surprise to find his son Alexander following in the family tradition as a lecturer in geology at the University of Aberdeen. Martin's nurturing and kind nature extended to the hundreds of students he tutored during his time as tutorial fellow at St Edmund Hall, Oxford, as well as the many PhD students and young postdoctoral researchers he mentored. He leaves a huge scientific legacy, and Martin's intellectual spirit will live on in the research his protégés conduct, and in the students they in turn inspire.

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