Robert Hutchison 1938–2007

Fellow and Gold Medalist of the RAS; leader in meteorite collection, research and curation.

Robert Hutchison, who has died aged 68 from complications following a collapsed lung, spent the greater part of his scientific career at the Natural History Museum in London. He was Head of the Cosmic Mineralogy Research Programme and responsible for the national meteorite collection, one of the most significant meteorite collections in the world.

He joined (as it was then called) the British Museum (Natural History) in 1969, to work in the Department of Mineralogy. In later years, he would joke that 1969 was the most significant year in the history of research into extraterrestrial materials, because not only was that the year Neil Armstrong returned the first Apollo samples to Earth, two unusual meteorites were observed to fall and the first group of Antarctic meteorites discovered, it was the year in which he became involved with study of meteorites. Although Bob would laugh while he related this fact, and expect his audience to laugh with him, his arrival at the museum was indeed the start of a rich period of meteorite research.

Bob Hutchison was active in several fields within meteoritics. Among his most significant contributions were recognizing the young age of the Nakhla meteorite (which led to the whole concept of meteorites from Mars), and then going on to detect hydrated minerals in martian and asteroidal meteorites, allowing deductions to be made concerning water flow on planetary bodies. His main interest, though, was the detailed study of the composition of one particular component of stony meteorites: chondrules. These are millimetre-sized, generally spherical objects made mainly from iron–magnesium silicates, with an age that implies they were one of the earliest objects formed as the Sun and planets grew. The origin and evolution of chondrules is an issue that has been hotly debated ever since meteorites became a subject of serious study, and Bob was at the forefront of the party that argued for production of the materials in a planetary, rather than a nebular setting. For much of his career, Bob's conclusions on this issue were not accepted, but over the past few years the tide of opinion began to change, and the value of Bob's excellent and painstaking research on this subject was widely recognized. Almost as a sideline to that branch of research, Bob discovered a large igneous clast inside one particular meteorite that had an age a few million years older than expected. This might not sound important, but the existence of this once-molten clast inside an unmelted meteorite is a significant piece of evidence used to infer the timing of processes that built and shaped the solar system.

In addition to his own work, Bob (or Hutch, as he was often known) facilitated 30 years of amazingly diverse investigations by aspiring meteoriticists, not just from the UK but on a worldwide scale, as well as building up a small but excellent research group within the Natural History Museum (NHM). With his encyclopaedic recall of material in the NHM collection and in others around the world, Bob played a major part in helping many investigators to reach their goals. Often a researcher had come to him with half a plan and gone away with a set of materials from the NHM collection, as well as a carefully assembled list of what to request from the other major meteorite collections of Paris, Vienna or Washington to complete the project. Many members of the community received prompts from him regarding features he had seen in a meteorite that might be of interest.

Bob was not a laboratory man; although he was a superb microscopist, both optical and electron, he was at heart a field geologist. Before he came to the museum, he qualified in geology at the University of Glasgow, and then had appointments at the University of Leeds and the Geological Survey of Nigeria. Once established in meteoritics, he led expeditions to China and Australia to search for meteorites, and was one of the instigators of a European Antarctic meteorite collection initiative. He authored almost 100 peer-reviewed papers and two popular books on meteorites. Part of Bob's motivation for writing the popular books was his commitment to having the subject made available to the interested public. He felt that they, as taxpayers, footed the bill for his work and had a right to access it. He also edited the "Catalogue of Meteorites", the international database of all recorded meteorite recoveries.

Bob officially retired from the NHM in 1997, but he did not stop work. He took early retirement so that he could devote his time to completing the definitive textbook on meteorites. This was published by CUP in 2004 and is currently – and will be for at least the next decade – the standard text on meteoritics for students. When it comes to revision of the book, it is difficult to imagine a single author who will have Bob's breadth of knowledge and insight.

Bob was a Fellow of the RAS, the Meteoritical Society and the Mineralogical Society, all international societies of professional scientists. He was awarded the Gold Medal of the RAS in 2002, in acknowledgment of his own research on meteorites, for the unstinting assistance he gave to others and for his undoubted achievements in promoting his science internationally. The International Astronomical Union also recognized his contributions to science by naming asteroid 5308 "Hutchison" in his honour. The field of meteoritics is poorer for the untimely loss of this distinguished, helpful and irreplaceable friend and colleague.

Robert Hutchison is survived by his wife of 45 years, Marie, his daughter Marie-Anne and grandchildren Katherine and Thomas.

Monica M Grady. (This obituary has previously appeared in The Independent)