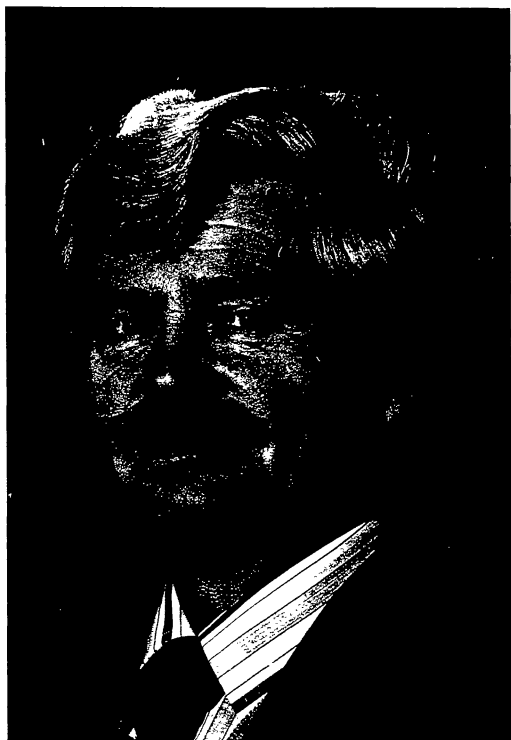


Memorial

Memorial for Howard James Axon (1924-1992)



The study of the metallurgical aspects of meteorites and lunar samples has always played an important role in extraterrestrial sample research. This year saw the loss of one of the true gurus of that subject. Howard Axon died at the age of 67 on 1992 March 21.

Howard Axon was born in Retford, Nottinghamshire in the U.K. on 1924 October 7. Upon leaving the local grammar school, he studied metallurgy at the University of Sheffield, the institution at which H. C. Sorby pioneered the use of microscopic sections almost a century earlier. Howard graduated in 1945 with a 1st Class Honours degree and was awarded the Mappin Medal. After research on phase relations in Al alloys with William Hume-Rothery at Oxford University, for which he was awarded the D.Phil. degree, Howard began an industrial research post with A.E.I., Aldermaston. In 1949, he joined the Department of Metallurgy, now the Manchester Materials Science Center, at the University of Manchester. He was initially an ICI Fellow, becoming a Lecturer in 1950 and a Reader in 1960. The Cort Silver Medal of the University of Manchester was awarded to him in 1959, and the mineral haxonite (Fe,

Ni)₂₃C₆, discovered in 1971 by Ed Scott, was named in his honor. He retired in 1982.

After nearly a decade of research on non-ferrous alloys, Howard's interests turned to extraterrestrial samples beginning with a paper in 1960 on sulphides in iron meteorites. Over the next decade or so, he (initially alone, but later with a number of research students) published a series of meticulous papers on the textures of individual iron and stony-iron meteorites, e.g., Mbosi, Nedagolla, Kodaikanal, Goose Lake, Brenham, Barranca Blanca, Gibeon, Weekeroo Station and Angra dos Reis (iron). During this period he also produced a number of review papers, which are essential reading for beginning students, and began some of his pioneering work on the effects of heat treatment on iron meteorite structures.

After the Apollo landings, and while on a sabbatical with Joe Goldstein at Lehigh University in the U.S. in the early 1970s, Howard Axon became interested in Apollo samples and the nature and abundance of meteoritic metal in lunar materials. But by the end of the decade, he had returned to meteorite studies intermingling work on the metal of chondritic meteorites with metallographic studies of iron meteorites.

Howard was a committed teacher and a man of considerable eloquence and wit. He had an engaging and uplifting way of turning discussions to the broader issues, an ability that could have only been nurtured by a deep understanding of the subject. In addition to his teaching and research interests, he was for many years a Senior Tutor to the Faculty of Science at the University and Warden of Moberly Graduate Hall of Residence. He, also, maintained a lasting interest in scientific and industrial people of the 19th Century, particularly those with a Manchester connection. He researched and wrote scholarly reviews of the work of John Dalton, J. P. Joule and many others. At the time of his death he had just completed work on the life of Richard Copley Christie, a local benefactor whose name is associated with the world famous Manchester Cancer Research hospital.

Howard is sadly missed by his wife, Hazel, and by his many friends and colleagues including former graduate students.

SELECTED PUBLICATIONS

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 AXON H. J. (1968) The metallographic structure of the iron meteorites Arltunga, Kopjes Vlei, Murnpoewie Brannau and Rancho de la Pila. *Mineral. Mag.* **36**, 1139-1142.
 AXON H. J. (1968) The metallurgy of meteorites. *Prog. Mater. Sci.* **13**, 183-228.
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