Obituary

Harry Francis West Taylor (1923–2002)

H.F.W. Taylor, energetic, forthright and an enthusiastic supporter of careers for women long before this became politically correct, was always known as 'Hal' to his colleagues and friends. His scientific career spanned over 50 years and saw great changes in crystallography, from home-made equipment and Beevers-Lipson strips to automatic diffractometers and high-powered computers.

He began his studies at the University of Nottingham, and subsequently moved to Birkbeck College, London (1948–1953), which provided a uniquely stimulating environment, in large part due to the presence of the late J.D. Bernal. While there, he worked on a range of topics using methods and equipment that were incredibly primitive by today's standards. He used to recount that his introduction to crystallography commenced by being told by Bernal to build his own film cassette for a single crystal camera (on the lines of a Unicam S25 – and how many modern crystallographers have used one of those?) from a tin can and bicycle clips.

In 1953, he was offered a permanent post in the Chemistry Department at Aberdeen University, where he remained until his formal retirement. On arrival there, his interests turned to mineralogy and the crystal structures of minerals, especially the naturally occurring calcium aluminate and silicate hydrates, as a route to elucidating the structures of the poorly crystallized cement phases. In addition to solving many crystal structures by X-ray crystallography, he quickly realized the potential of electron microscopy and diffraction. With the late Dr J.A. Gard, he solved mineral structures for which only poorly crystallized or disordered minerals or fine-grained synthetics were available.

At this time, Hal also became interested in topotactic reactions in various structures, particularly silicates; I was one of his first research students, and was privileged to work with him on

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this. The dehydration of afwillite was one of our first efforts; some unexplained features of that remain to this day. During that time we, following the string-and-sealing-wax tradition, built apparatus to study high-temperature mineral transitions; the transformation of rhodonite to wollastonite was another of our successes.

Hal was an excellent and inspiring supervisor; he never had many students at any one time but those whom he took on were intensively trained and actively encouraged to present papers at meetings. His enthusiasm for crystallography and mineralogy was unbounded and he gave unstintingly of his time and intellect to others, often without seeking acknowledgement of his contribution. He regularly attended meetings, both national and international, and I remember many stimulating discussions arising from these; the first meeting I ever attended was at the Mineralogical Society in London.

Hal served the Mineralogical Society on the Council (1967–70) and as Vice President (1970–71). He also served on the committee of the Crystallography Group of the Institute of Physics (before the days of the BCA!).

Hal contributed also to undergraduate teaching, assuming a full share of lecturing, tutorials and laboratory work, including the most difficult assignment: lecturing on chemistry to the elementary classes, including those taking chemistry as a necessary option, whose motivation presented a significant challenge. His highly successful scheme for the organization of the laboratory classes persists to this day with only slight modification.

The advent of automatic diffractometers and high-powered computers opened a new world to Hal, as it did to the rest of us. No longer was peering at spots on film to gauge their intensity followed by laborious calculations: Hal seized on the advances with gusto, and became an enthusiastic computer programmer.

Hal was a clear and careful writer, and was frequently asked to write books and articles. He edited a multi-authored two-volume book on cement chemistry, which appeared in 1964. Writing his own book on the subject had to wait until later, but the first edition (1990) and fully revised second edition (1997) have probably become the most widely read single text on cement. The book has been translated into several languages. Several pirate editions – perhaps the ultimate accolade of a successful science book – were also made!

Hal served a term as head of department, 1977–1980, conscientiously but without great enthusiasm; administration held no charms for him, and it was increasingly a time of stringency and retrenchment within the University. In 1980 he took partial, and later full, retirement from Aberdeen, to pursue research and writing. A series of honorary professorships followed, first at Imperial College, London and subsequently at Leeds. This was a happy period: he could continue to guide students while remaining largely free from administrative duties.

Formal retirement also meant more time for mountaineering – a lifelong interest that began in Wales and subsequently encompassed all the Scottish mountains and many of the European alpine peaks as well as others in the Americas, Asia and Africa. He remained in excellent physical condition until late in life when he fell ill quite suddenly, while journeying home from a meeting abroad.

Hal's career attracted many honours and distinctions. He was on the editorial boards of numerous journals, and was a fellow of many organizations including the Royal Society of Edinburgh. He received the Kroll medal and prize of The Institute of Materials and The Copeland award of The American Ceramic Society amongst many distinctions.

We shall remember him for his unbounded enthusiasm and zest for life, his inspiration of students and colleagues, generosity in sharing ideas, and, on a personal level, his wonderful down-to-earth sense of humour. We miss him greatly.

He is survived by his wife, Joan, and a son, Robin, to whom we extend our deepest sympathies.

L. GLASSER

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