

wide circle of friends, both in his profession and in the quiet surroundings of his home at Southborough where he spent his later years. s.w.s.

GEORGE SLATER, who died on 27 January 1956, first made contact with the Association when he acted as Director of a Field Meeting to Claydon and Ipswich in 1907. Joining the Association in 1919, for nearly half a century, first as an amateur and later as a professional, he spared no pains in furthering its aims by addressing meetings, leading excursions and proclaiming to students and others the advantages that membership offered.

Born at Sharrow, near Ripon, he was brought up in the Brontë country, where life was fully as hard as the novelists depicted and schooling entailed much sacrifice. After being trained as a teacher (St. John's College, York) he became a schoolmaster, first in Northumberland and subsequently in East Anglia. In due course he entered the Royal College of Science (Imperial College), obtained the Diploma of Associateship in Geology, and later that of Membership of Imperial College by research. He graduated in the University of London, proceeded to M.Sc. and eventually to D.Sc. At Professor Watts's invitation he joined the staff of the Imperial College, and served for many years as Demonstrator and Lecturer, being particularly successful with junior students, generations of whom from the Royal School of Mines and the City and Guilds Engineering College remember him with gratitude and affection.

During his youth Slater had the great privilege of seeing the Officers of H.M. Geological Survey at work. These masters of field-mapping, in particular J. R. Dakyns and R. H. Tiddeman, befriended him and encouraged him to make geology his hobby; and, impressed by their meticulous work, he made accurate measurement his own watchword. He was, indeed, intolerant of slipshod ways in either teaching or research (as witness his paper in the *Geol. Mag.*, 1912, which left the supposedly Pleistocene 'Ipswich Man' without a leg to stand on).

Residence in East Anglia brought exceptional opportunities for studying glacial deposits, not only those to be seen in oft-discussed sections (as along the coast near Cromer) but also extensive exposures resulting from engineering and building operations. He was thus led to carry out original work in glaciology, in which subject he became an authority. The mode of origin of the various deposits and especially the nature of their intense disturbance had been highly controversial subjects. After plotting many of the lengthy exposures, he found that certain definite structural patterns were characteristic: and he came to the conclusion that they must have a genetic significance. In order to gain further insight into these problems, he not only studied ice-action in the Alps, but also joined the Oxford University Expedition to Spitsbergen in 1921 as glaciologist. He also

broadened his experience by investigating glacial phenomena in Denmark, Germany, Canada and South Africa. Observations made during his travels abroad enabled him to produce papers on the relation between air temperature and rate of melting of ice, the composite nature of drumlins, and the Dwyka tills and pavements, among other subjects. His accounts of the Mud Buttes of Alberta, the cliffs of Möens Klint and Lönstrup in Denmark and of Rügen in Germany (illustrated by detailed drawings) were of particular importance. Many of these examples of highly disturbed deposits had hitherto been regarded as due to earth-movements, but he was convinced that, like the similar occurrences of contorted and sheared material in East Anglia, they revealed the effects of movements in ice charged with dirt bands. So closely did they conform to the patterns which he had seen in englacial and subglacial material that he spoke of them as 'Glacial pseudomorphs' and frequently used the expression 'Glacial tectonics' (our PROCEEDINGS, 1926 and 1927). His annotated drawings of the longest and best exposed of these sections—the seventeen-mile stretch of cliffs where the Norfolk coast cuts across the Cromer Moraine—proved too expensive for reproduction during the lean inter-war years. It is satisfactory to record that he presented them to the Library of the Geological Survey and Museum, where they may be consulted.

He was awarded the Murchison Fund by the Geological Society of London in 1928 and in 1950 he was the recipient of the Association's Foulerton Award.

In 1897 he married Anne, daughter of the late Archibald Irwin of Tynemouth, who survives him.

P. G. H. B.

FREDERICK SMITH, B.A., F.G.S., a former Town Clerk of Coventry, who died in April 1956, had been a member of the Association since 1926.

Starting as a boy in the service of the Coventry City Council he was attracted to the legal side and by diligence and hard work qualified as a barrister. Much later in life he decided to become a solicitor and studied to pass the necessary examinations. Mr. Smith was an outstanding personality whose gifts and qualities were recognised by his promotion to Town Clerk, a position he held for twenty-two years until his retirement in 1946.

During his service with Coventry Council he saw many changes and a great development in the city he loved so well. He had many difficulties to face and overcome, not the least being the work of restoration following the heavy enemy air attack on 14 November 1940.

In appreciation of his outstanding services he was made an Honorary Freeman in 1946, only the seventh Honorary Freeman that the city has known in its long history.

Mr. Smith was very active in the preservation of local records and wrote the book *Coventry—600 Years of Municipal History*.