OBITUARY NOTICES.

ALFRED CLAY ABRAHAM.

1853—1942.

ALFRED CLAY ABRAHAM died at Ormskirk after a brief illness on March 7th, 1942, aged 89. He was the son of John Abraham, one of the founders of Clay and Abraham, Ltd., Liverpool, and was actively connected with the firm for 57 years, being Managing Director from 1911 until his retirement in 1928.

He was educated at the Liverpool Institute and then spent a Winter and Summer Session at the University of Edinburgh. After a course of study at the Laboratories of the Pharmaceutical Society, he passed the " Minor " in 1876, and the " Major " in 1878, and gained the Society's Bronze Medal for distinction in chemistry and pharmacy.

He was elected a Fellow of the Society in March, 1883, and a Fellow of the Institute of Chemistry in 1888. He served for several years as a member of the council of the Pharmaceutical Society and on the British Pharmaceutical Conference Formulary Committee, from its inception in 1886 until the work was taken over by the Pharmaceutical Society. In 1881, he was Honorary Secretary of the Liverpool Chemists Association, and later served two years as President.

Abraham published over 40 papers, most of them in the *Pharmaceutical Journal*. The writer collaborated with him in an investigation on the loss of morphine during the storage of opium. The results were published in the *Pharmaceutical Journal*, 1922, 1923, and 1926.

By the passing of A. C. Abraham, pharmacy has lost one of its great men. His only recreation was golf, but he was a great reader.

His wife predeceased him in 1930, and he is survived by two sons and two daughters, 16 grandchildren, and 2 great-grandchildren.

JOHN RAE.

ARTHUR GEAKE.

1891—1941.

ARTHUR GEAKE was a scholar at the Old Merchant Venturers' College in Bristol, and graduated in 1910 from the honours school of chemistry in the then newly-founded University of Bristol. For a few quiet years before 1914 he was engaged in post-graduate research work at Bristol, for part of that time as research chemist to the Board of Agriculture and Fisheries. He was in the Territorial Army in September, 1914, and was on active service in France with the Royal Warwickshire Regiment by the spring of 1915. Like many of his generation of chemists, he was later transferred to the Special Brigade of the Royal Engineers, and still later recalled for work under the Ministry of Munitions. His subsequent career was in chemical industry—with the British Dyestuffs Corporation, the British Cyanides Company, and for the last nineteen years at the Shirley Institute with the British Cotton Industry Research Association. He served in the Home Guard in 1940, and during the course of his duties contracted a chill from the effects of which he never completely recovered. He continued working, often under conditions of severe physical strain, and some of his most interesting work was done at this time. He died on December 19th, 1941.

The course of his work can be traced in a score of communications on which his name appears in scientific and technical journals. The most remarkable feature of the record is its versatility. His first publication was " An Enquiry into Factors which affect the Texture of Cheddar Cheese," one of his last " New Forms of Electrode Equations for the Analysis of Redox Titration Curves," and of both he was the sole author. Between these appear such varied titles as " The Constitution of Tannin," " The Study of Towers for the Absorption of Nitrous Gases," " The Measurement of the Fluidity of Cotton in Cuprammonium Solution," and " Patterns produced in Stocking Fabrics by Periodic Variations in Yarns."

The practical problems of industry do not fit easily into the convenient academic divisions and subdivisions of natural science, and Geake was a very successful industrial chemist because he was no specialist. Nevertheless, he continually sought opportunities in the analysis of practical problems for the application of modern trends in scientific thought, or specialised methods of experimental technique, and he possessed in a high degree the capacity for maintaining a fresh and critical outlook whilst engaged in work that could otherwise degenerate into an empirical routine. This is well illustrated by his last series of five papers—published in the *Transactions* of the Faraday Society—which dealt with electron processes involved in the equilibrium between reduced and oxidised forms of anthraquinone derivatives.

The work was directly suggested by a study of the very practical problems involved in the bleaching of the ground fabric in shirting materials containing coloured stripes made from vat-dyed yarns.

The man himself was inspired by honesty of thought, by an acute sense of duty, and by an unswerving loyalty to those for and with whom he worked. He was a Fellow of the Society (elected on May 2nd, 1918), a member of the Society of Chemical Industry, and an associate of the Institute of Chemistry, and he assiduously supported the professional organisations by a regular attendance at local meetings, and a willingness to share in all activities contributing to the welfare and benefit of the chemical profession.

The friends and colleagues of Arthur Geake at the Shirley Institute, and in the professional circles where he was active, mourn his loss. His life was true to his principles, and his life's work is good.

D. CLIBBENS.

ANDREW McKEOWN.

Born April 12th, 1900; died September 5th, 1940.

A CAREER of great promise was cut short with tragic suddenness by the death through enemy action of Dr. Andrew McKeown.

McKeown was an Ulsterman, and after a brilliant undergraduate period at the Queen's University, Belfast, he came to England where he carried out research in physical chemistry at Liverpool and for a short period with Professor Donnan at University College, London. He was subsequently appointed on the staff of the Physical Chemistry Department of the University of Liverpool, a position which he held for nineteen years. During this period he showed himself to be a keen research worker of original and independent outlook. His work belonged largely to the field of chemical kinetics, including photokinetics, in which he collaborated with his colleague Dr. R. O. Griffith and with a series of research students. In spite of the handicap of indifferent health he pursued this work, as well as his teaching duties, with ardour and fidelity. Probably his most outstanding contribution to the field of physical chemistry was the publication, along with Dr. Griffith, of their well-known work on Photo-processes published in the Ramsay series of Textbooks.

He leaves a widow, to whom we would express our sincere sympathy.

McKeown was elected a Fellow of the Society on May 20th, 1926.

W. C. M. LEWIS.

JAMES ALEXANDER POND.

1845—1941.

JAMES ALEXANDER POND died on June 8th, 1941, at Auckland, New Zealand, at the age of 96. He left England for New Zealand in 1865. The Maori War was in progress and Pond enlisted in the Rifles. Later he established a pharmacy in Auckland and also an analytical laboratory, holding the position of Government Analyst for Auckland province, 1882—1911. His professional interests included petroleum, brewing, gold-mining and assaying, agricultural and botanical work. He was the oldest member of the New Zealand Royal Society, of which he was President over 50 years ago. He took an active interest in the development of the tung oil industry in this country. Following his retirement some years ago, he equipped a laboratory at his home for research, and his garden contained tung trees, a large-leafed variety of clover from Poland, and a special type of thin-skinned white onion. His work in New Zealand covered many fields, it was always well carried out, and he rendered great assistance to the farming community in the earlier days. He never lost his love for scientific work, and to the last was engaged on research. He was a member of the Chemical Society, the Society of Public Analysts, and the New Zealand Institute of Chemistry. He was elected a Fellow on December 4th, 1890.

ALF. J. PARKER.
