

that scenes from them have been recorded for various dialect surveys. Many of us, whether chemists or not, will recall his discovery of a group of epigrams written in Latin elegiac couplets embodying alchemical doctrines and set to music by Count Maier, alchemist to Rudolf II. These set in modern musical notation by F. W. Sawyer were sung by a choir from St. Andrews University at the Royal Institution by invitation of Sir William Bragg.

It is not altogether surprising therefore to learn that the first British recipient of the American Chemical Society's Dexter Award for distinguished contributions to the history of chemistry was John Read, who received it in 1959. The citation for the award aptly sums up much of his achievement in that it commemorates "the meritorious services over a long period of time" of "one of the most versatile of Scientists as well known for his literary accomplishment as for his researches in organic chemistry".

In 1916 Prof. Read married Ida Suddards, who survives him with one of their two sons, the other son having lost his life tragically in a mountaineering accident just over a year ago.

E. L. HIRST

Prof. G. A. Clark, C.B.

GEORGE CLARK, who died on February 9, was professor of physiology and dean of the Faculty of Medicine in the University of Sheffield from 1933 until 1946, when he left to join the staff of the Ministry of Health.

He graduated at the University of Durham during the First World War, and his studies were interrupted by two years' service as surgeon-probationer in the Royal Naval Volunteer Reserve. He was released from service to complete his degree course and graduated with honours in 1917. He then rejoined the Royal Navy for two years as surgeon-lieutenant. He never lost his love for the Senior Service and after the First World War he served with the Royal Naval Volunteer Reserve for many years.

In 1919 Clark was appointed lecturer in physiology in the University of Durham, where he remained until 1924. He then joined the Department of Physiology in Sheffield under the late Prof. J. B. Leathes, for whom he had the greatest admiration and affection. When Leathes retired in 1933, Clark succeeded him to the chair. Leathes had given much thought to the revision of the medical curriculum, with the view of attaining a much closer relationship between the pre-clinical and clinical subjects. Therein he was enthusiastically supported by George Clark, whose talents for organization were soon recognized. As a result he was elected dean of the Faculty of Medicine soon after his appointment to the chair of physiology, and he served as dean until he left in 1946.

Clark had a very clear and penetrating mind, and initiated a number of schemes for the better welfare and teaching of students. The clinical professorial chairs were held on a part-time basis, and teaching was often subservient to the demands of private practice, and relations between the clinical departments and the University were often tenuous. In order to provide better organized teaching, Clark pressed for the establishment of full-time chairs in the major clinical subjects. He also supported the plan for building a University Teaching Hospital, a single building providing complete facilities for undergraduates, and replacing the four separate hospitals where clinical teaching is still provided. At the time, these revolutionary ideas aroused anger and opposition among some clinicians and led to quarrels. Nevertheless, it is now recognized that Clark's ideas were right and a number of full-time chairs have been created, and their advantage in organizing teaching and advancing research is apparent.

Clark was also instrumental in setting up a University Student Health Service, which provides medical care for undergraduates and has served as a model for other universities. He also played a large part in the formation of the School of Nursing.

During his time in Sheffield, George Clark served on a great many committees, including the General Medical Council, and took an active part in them all. So much was he preoccupied that he had less and less time to devote to physiology. In 1946 he resigned and joined the Ministry of Health as a principal medical officer. There his experience and capabilities were available for the integration of medical education with the Health Service. He continued to serve on the General Medical Council and completed twenty-four years in 1962. His loyal services were recognized by the C.B. in 1954.

George Clark made firm and lasting friendships, which he greatly valued. Although he visited Sheffield only rarely after he left, he kept in touch with many of us, and his friends were always welcome to call on him at the Ministry.

George will long be remembered by his many friends, and his former students will remember him with gratitude and pleasure.

J. WILKIE

Dr. S. E. Jacobs

DR. STANLEY E. JACOBS died on January 27, following a short stay in hospital necessitated by a chest infection. Although he had not been particularly robust in health for a number of years, it is certain that the extremely bad London smog in December did not help his condition. He will probably be best remembered as editor of the *Journal of Applied Bacteriology*.

Stanley Jacobs was born in London on June 23, 1905. Before he entered the Imperial College of Science and Technology in 1923 he attended the Strand School, London. In 1925 he obtained his associateship of the Royal College of Science in chemistry, being first in the diploma list. He was also awarded the Frank Hatton Prize for proficiency in advanced chemistry. In 1926 he gained a B.Sc. degree with honours in chemistry. Three years later he was awarded a Ph.D. in bacteriology by the University of London. Prior to that time, he was appointed as a demonstrator in bacteriology for Dr. Paine in the Department of Biology under the direction of Prof. Farmer. This position he retained until 1933, when he was appointed assistant lecturer in the Department of Bacteriology under the direction of Prof. V. H. Blackman. Thereafter he was successively lecturer in the Department of Botany in 1938, senior lecturer in the Department of Botany and Plant Physiology in 1946, and in 1950 was appointed reader in bacteriology in the University of London and assistant professor of bacteriology of the Imperial College, positions which he held until his death.

The contributions Stanley Jacobs made in the world of microbiology in original research and teaching have been outstanding. In spite of recurrent poor health, he engaged in a number of outside activities. He lectured for some years in bacteriology at the Sir John Cass Technical Institution in London and also for a short time at the Chelsea Polytechnic. He was for a number of years chairman of the Special Advisory Board in Microbiology in the University of London and was a member of the Panel on Co-ordination of Research Contracts on selected topics in radiobiology under the auspices of the International Atomic Energy Agency, and he contributed to the Vienna meetings of this body in 1960 and 1961. He was consultant to the Rubber Research Institute of Malaya, and it was on a trip to Kuala Lumpur by air in 1961 that he was taken seriously ill with a spontaneous pneumothorax leading to serious damage to the lung which undoubtedly weakened his resistance against the polluted London atmosphere. He was a prime mover in initiating a postgraduate M.Sc. course in microbiology at the Imperial College. This course was much in demand and it is hoped it will not die along with its originator.

In the field of original research, Stanley Jacobs was interested in a wide variety of subjects, as was to be

expected from a tutor of research students. Nevertheless, many of the subjects in which he was interested he worked on and published on his own. Examples of this were the decomposition of naphthalene in soil by micro-organisms, sterilization by ultrasonics, nitrogen-fixing bacteria in the soil and microbial control of the flower moth *Ephestia kuehniella* Z. However, his main investigational work concerned studies in the dynamics of disinfection. His main collaborator in this work was Dr. R. C. Jordan, from the Physiology Department of the University College of South Wales and Monmouthshire. These two, with an occasional other collaborator, wrote a classical series of papers in the *Journal of Hygiene* between 1944 and 1947. In a series of fourteen papers, these investigators made a fundamental study in this field, using *Escherichia coli* and phenol. They studied the effect on rate of reaction of disinfection of concentration and temperature, pH, food supply, etc., and from the experimental data resulting were able to attack those investigators who held that death of micro-organisms by disinfection followed an exponential curve. These workers showed quite clearly, with the system set up, that disinfection curves were basically sigmoid in nature but that when the rate of disinfection was rapid, these sigmoid tendencies could not be observed; furthermore, by altering the conditions of the system, the shape of the curve could be varied so that if portions of the curve only were examined, it would appear that the death of micro-organisms in contact with the disinfectant followed a straight line on a semi-logarithmic plot. For this work, both he and Dr. Jordan were awarded the degree of D.Sc. in the University of London in 1948.

In 1960 Dr. Jacobs addressed the British Pharmaceutical Society at a symposium on "Chemical Disinfection", summarizing these theories and bringing forward new information concerning the simultaneous death and multiplication of micro-organisms in low concentration of disinfectant. So recently as 1961 he published his research on the viability of bacteria damaged by phenols, and there is little doubt that his fertile mind had planned further similar investigations for the future.

Stanley Jacobs used to love to roam the countryside of Europe in his car with his wife, Joyce, but undoubtedly his greatest hobby was editing the *Journal of Applied Bacteriology*. This occupied most of his leisure hours. He was a perfectionist here, as elsewhere, as most of the contributors to the *Journal* knew. This was, however, not merely slavishness to a certain style or format but a striving for correctness of expression and scientific detail. Furthermore, he was not a harsh editor, but one who would go to endless trouble to make suggestions to authors by way of pencilled notes on the typescript or even complete re-writing of whole sections to show them how their material could best be presented. For this he endeared himself to many a young research worker or one whose mother tongue was not English, and also brought about a chastening reaction to well-known and experienced writers. I myself had the honour to be associated with Stanley Jacobs as co-editor of the *Journal* during its formative years when it emerged as a fully fledged journal of international repute.

Stanley Jacobs was married in 1931 and is survived by his wife, Joyce, and their son, Barry, who has in some measure followed in his father's footsteps in that he obtained an honours degree in mechanical engineering in the City and Guilds College of the Imperial College of Science and Technology and is now a lecturer in that College.

L. F. L. CLEGG

NEWS and VIEWS

Scientific Attaché in British Embassies at Bonn and Vienna

Mr. R. Ashton

MR. RONALD ASHTON has been appointed scientific attaché to the British Embassies in Bonn and Vienna with residence at Bonn, and will take up his post in the autumn. He succeeds Brigadier C. F. C. Spedding, who is retiring on completion of his term of appointment. Mr. Ashton, who is fifty-one, is at present head of the Overseas Liaison Group of the Department of Scientific and Industrial Research. As scientific attaché, Mr. Ashton will advise the British Ambassadors on scientific matters, promote scientific contacts and report on scientific and technological development in the civil field in the territories to which he is accredited. He will continue to hold his present rank of Senior Principal Scientific Officer. Mr. Ashton read mathematics, physics and chemistry at King's College, London, for a year before going to the University of Oxford with a Meyricke Exhibition. After graduating with first-class honours he did research in organic chemistry at Oxford, and then joined the research staff of Imperial Chemical Industries, Ltd.

Electronics Group, Royal Radar Establishment:

Dr. G. L. Hutchinson

DR. G. L. HUTCHINSON has been promoted deputy chief scientific officer and has taken up a new appointment—head of the Electronics Group of the Physics and Electronics Department at the Royal Radar Establishment. After gaining honours in physics and his Ph.D. at King's College, London, Dr. Hutchinson was awarded a Keddey Fletcher War studentship in 1937, and for the next two years was engaged in research on properties of dielectrics

at centimetric wave-lengths under Prof. (now Sir) C. D. Ellis. In 1939 he joined the Air Ministry Research Establishment, Dundee—the forerunner of the Telecommunications Research Establishment and the Royal Radar Establishment. He was later seconded to the Royal Air Force to assist with the installation of the coastal radar chain. In 1943 he joined the staff at the Telecommunications Research Establishment, Malvern. From 1948 until 1954 Dr. Hutchinson was at the Royal Aircraft Establishment, Farnborough, and in 1954 he was posted to the British Joint Staff Mission (now Defence Research Staff) in Washington. He returned to the Royal Radar Establishment in 1957.

Engineering at the Queen's University of Belfast:

Prof. T. M. Charlton

MR. T. M. CHARLTON, who has recently been appointed to the chair of engineering at the Queen's University of Belfast, was born in 1923. He was educated at Doncaster Grammar School, Derby Technical College and University College, Nottingham, and graduated in 1943 as an external student of the University of London. After graduating, he joined the Ministry of Aircraft Production at the Telecommunications Research Establishment, Malvern, as junior scientific officer. In 1946 he became an assistant engineer of Newcastle upon Tyne, and in 1954 he was appointed a lecturer in the Department of Engineering, University of Cambridge. He was elected into a fellowship at Sidney Sussex College in 1959. Mr. Charlton's work has been mainly in the theory of structures and has included the development of energy methods, in particular the method of complementary energy and uses of