OBITUARY NOTICES.

ARTHUR JOHN ALLMAND.*

1885—1951.

THIS biography is compiled from the personal record Allmand left with the Royal Society, from appreciations of pupils and friends, and from the recollections of the author who worked side by side with him in Liverpool and maintained a life-long friendship with him.

Allmand's favourite dictum on a professor of one of the natural sciences was that he might be a great researcher, a great administrator, or a great teacher. Sometimes he might shine in two of these categories but to do so in all three was unattainable for most people. This should be borne in mind as it was undoubtedly the pattern to which his life conformed.

Allmand's father, Frank Allmand, was a flour miller of Wrexham, a quiet pale man like his son, who attained the great age of ninety years. His mother's maiden name was Thomas and her father was a timber merchant of Wrexham. The Allmands came from the Malpas district of Cheshire. The border between England and Wales is not all that firmly drawn. Allmand may fairly be claimed as a Welsh dominant; in character and outlook he was wholly so. One of his great-grandmothers was a Frenchwoman. He had a happy childhood in and near Wrexham, was naturally very studious and an omnivorous reader with a special taste for the Celtic tradition: Geoffrey of Monmouth, the Mabinogion, Malory, and Welsh folk songs, for example.

The family were not well off during his youth: originally his father had a water-mill, and later a steam-mill; the shadows, however, were lengthening for the small millers. On top of this his father's mill was burnt down and he was reduced to becoming a corn and flour dealer. To better this he bred large white pigs very successfully from the show point of view, gaining championships at the " Bath and West " and many other prizes. The financial return, however, was not very great. He also attempted to grow mushrooms in the basement of his burnt out mill but without any great success. All this was confirmed by the impression he made as a man struggling hard against misfortune. According to Allmand, his mother's family were more prosperous and talented than his father's, but the latter's courage and persistency were undoubtedly reflected in his son. Allmand's holidays in his youth were all spent either in Welsh seaside resorts or in the depths of the country. He had some knowledge of the Welsh language but did not read it with any facility. His accent and pronunciation were, to the ear of an Englishman at any rate, racy, of the soil.

He went to a dame's school in Wrexham from an early age, till 1894, and from that year till 1898 he was at Alleyn's School at Dulwich, living with an aunt in London. In the latter year owing to his aunt's leaving London he returned to Wrexham where he went to the Grove Park school. Scholarships played no part in his early career except one that waived his fees at Dulwich, which drew down on him the displeasure of the Headmaster when he had to leave in 1898. The headmaster of the Grove School wanted all his bright boys to go to Oxford.

Allmand, by this time, had determined to become a chemist in the following circumstances. His father had shown him an article in the *Scotsman* by Professor Japp of Aberdeen, lauding the chemical industry as a career. The paper had been sent home by one of his aunts, the wife of another Aberdeen professor. This fired Allmand's imagination and made him determine on a chemical career. He also formed the opinion that he could learn chemistry better in one of the newer universities, and stuck to his guns despite the disapproval of his headmaster. Allmand was always capable of forming his own opinion and sticking to it.

He took his matriculation in 1901 (London) and was placed ninth in Honours, and in 1902 entered the University of Liverpool with three Scholarships, the Gilchrist, the Tate Scholarship in technical science, and one from the Denbighshire Education Committee.

At the time of Allmand's entry the University of Liverpool was in process of formation from the old Victoria University whose constituent colleges were at Liverpool, Manchester, and Leeds. The new University at that time had a remarkable and brilliant body of men on the staff: Sherrington, Ronald Ross, Sampson, Kuno Meyer, Pares, Elton, Augustus John, and Reid Dick, to name only a few. They were a most accessible lot. Apart from his chemistry, and particularly after his graduation, Allmand at once fell under the influence of Bernard Pares from whom he learnt Russian, Kuno Meyer who taught him some Celtic philology, and Sampson,

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naturally, with his Welsh and gipsy affiliations, also. Oliver Elton was so much impressed by his literary ability that he asked him to join his staff.

Now returning to his chemical career he took his intermediate examination in chemistry, physics, and mathematics, not doing enough of the last two, as he always admitted in later life. The professor of chemistry at this time was James Campbell Brown, who, though not a particularly effective lecturer, was a man of considerable influence, and his integrity and general outlook commanded respect. Titherley, the lecturer in organic chemistry, was already famous for his discovery of sodamide and his lectures were brilliant and most attractive. It says much for Campbell Brown that he was a devoted admirer of Willard Gibbs the great American. In those days students were not expected necessarily to know much chemistry when they arrived at the University. In any case all had to take the first-year lectures which were sometimes nearly a riot. During this period Allmand, Warrington Yorke, and Freeth always sat side by side. Allmand was the quiet member of the trio. Allmand's undergraduate career was free from any ups and downs. With his intense devotion to work, great ability, and excellent memory he sailed through everything and obtained, in 1905, a first-class honours degree in chemistry.

It was the arrival of F. G. Donnan in 1904 in the new chair of physical chemistry which influenced his career so profoundly. Donnan, an Ulsterman of the highest ability, charm, and capacity for friendliness, fresh from working with van t'Hoff and Ostwald, immediately captured us all, and we became ardent physical chemists on the spot. In these days, there were only six candidates for honours in chemistry, Allmand, Barker, Batey, Freeth, Hicks, and Purser. Our contacts with our professors were of a frequency and character which would be impossible nowadays on account of sheer numbers. Donnan's method of inducting young men into research (there was no Ph.D. degree) was to get them to repeat some paper recently published by one of the best known men of the day. He introduced us to all the new techniques till then quite unknown to us : thermostats, capillary electrometers, the phase rule techniques, and so forth. Besides all this, he gave us a broad European outlook which stayed with most of us for the rest of our lives.

Allmand was immediately attracted by electrochemistry. It was his major scientific predilection though he had numerous and successful incursions into photochemistry and adsorption.

Returning to our chronology : after taking his Honours degree in 1905, Allmand began research under the aegis of Donnan. The latter, for the next few years, in addition to his ordinary duties, had to play a substantial part in the design and equipment of the Muspratt Laboratory of Physical Chemistry. In this he was ably and devotedly assisted by Allmand who thereby gained an experience which was always useful to him. His progress was marked by an M.Sc. degree in 1906, and a D.Sc. in 1910. In the latter year he was awarded an 1851 Exhibition which took him to Karlsruhe under Haber in 1910—1911 and to Dresden under Luther in 1911—1912. Commenting on his experience in Germany, Allmand said that, while he liked both Haber and Luther well enough and had the greatest respect for their work, they had little personal influence on him. Neither of the researches in which he was engaged came off and as he quite over-modestly suggested " a better experimenter would have learned more than I did from the failures." Parenthetically surely, this was due to his eyesight; as a child his eyes were normal, but as an aftermath of scarlet fever he had to wear very thick glasses which were a great handicap to any manipulation or the playing of games.

In 1912 and 1913 Allmand was Donnan's research assistant in Liverpool and accompanied him to London when the latter followed Sir William Ramsay in the Chair of Chemistry in University College. From 1913 to 1919 Allmand was assistant lecturer and demonstrator in the University of Liverpool. In the summer of 1914 Allmand and Donnan travelling in Germany were only able to escape by the skin of their teeth by way of Poland, Russia, and Sweden.

In October 1914 Allmand sent a telegram to Freeth, who was serving in the 5th (E. of C.) Battalion the 22nd (Cheshire) Regiment, T.A., " Can you assist me to obtain a commission in the Cheshire Regiment." To which the reply came, " Yes, if you will shave off your beard." He was commissioned in January, 1915, and took to soldiering in that quiet, conscientious, tolerant, efficient way in which he did everything else. In the spring of 1915 he joined the 5th Battalion near Ypres; they subsequently went to the Somme. After the beginning of chemical warfare every officer with any chemical knowledge was roped in to assist in overcoming it. Allmand was seconded from Regimental duty to " Gas " Services, R.E., as Assistant Chemical Adviser to the Third Army. He was awarded a Military Cross in 1916. In that year he was made Chemical Adviser to the Fourth Army; in 1918 he held the same appointment with the

Second Army, was in the Army of Occupation and in 1919 was demobilized with the rank of Major.

In 1919 he became Professor of Chemistry at King's College, London, later becoming Dean of the Faculty and senior professor till his retirement in 1950.

In 1920 Allmand married Mlle M. M. S. Malicorne at St. Mandé (Seine). His parents-in-law were Normans from the St. Lo district; small landowners, professional and service people well describes them. There were three children of the marriage: a daughter named Marguerite, who is married to a Civil Servant named John Murphy; a son Michael, who at the age of 20, was killed in the last war, serving in a Ghurka Battalion with the Chindits, being awarded a posthumous V.C.; and a younger son, Christopher, who is still being educated.

About the time of his marriage he joined what one of the orators at his memorial service termed the "Roman Obedience." This to Allmand was simply "the Catholic Church." It was a landmark and turning point in his career. It did not surprise the writer at all. Allmand was naturally a religious man, and had found the Church and the creed which claimed and held his devotion for the rest of his life.

Allmand was a Vice-President of the Chemical Society. He was most appropriately President of the Faraday Society, 1947—1948. He was an Honorary Fellow of the Polish Chemical Society. He was elected into the Royal Society in 1929. He was a Fellow of the Royal Institute of Chemistry, belonged to the Electroplaters Technical Society, and was for many years a member of the American Chemical Society and the Deutsche Bunsen Gesellschaft. As already stated he retired from the Chair at King's College and only survived for one year, dying after an operation on August 4th, 1951.

The heroic death of his son in 1944 was a blow from which he never really recovered. The Pope made him a Knight of the Order of Saint Gregory in 1950.

He altered very little in appearance throughout his life. He was a grave youth and much shyer than many people realized. Physically he was not really strong and kept going largely by his will power. The writer has a vivid recollection of a long walk with him in North Wales in the spring of 1903 or 1904. Intending to go about twenty-five miles, owing to a mistake in direction we found ourselves at tea-time with twenty or more miles to go. In all we walked fifty miles in the day. During the last ten miles he became exhausted and characteristically refused any help until about the last few miles. He just drove himself along. All information received from his friends, pupils, and associates points in the same direction, Allmand working himself again and again to the verge of breakdown in doing what he regarded as his duty to the college and above all to his students. He was a great teacher, his lectures were a model of clarity, and the pains he took were beyond belief. He never sought the limelight at all. His researches were devised to educate his students, many of whom have attained great distinction in academic and technical life. To quote from one of them in a great industrial research laboratory: "As an administrator he was actively concerned with the most minute details particularly where they concerned the well-being of an individual. He was indeed meticulous in all he undertook. As a lecturer his subject matter was excellent, but he had a very quiet voice which did not carry well, and he talked at an extremely fast rate. As a teacher of research he was outstanding. He would come into each research laboratory several times each week and ask each worker how things were going. You would tell him and he would often say, 'what do you think is the mechanism.' As young men full of enthusiasm we propounded our theories, which often were obviously absurd if we could have realized it. He never told us that our ideas were impossible, but instead he gradually turned the conversation until in a quarter of an hour's time the student said his views were hopeless. He developed his students' reasoning powers and made them think and talk. Truly a very great attribute. He had a phenomenal memory and would quote author, journal, year, and page number of quite abstruse papers on a wide variety of subjects embraced by physical chemistry. He was indeed a glutton for work and toiled on till the early hours of the morning, so much so that he had several breakdowns or near-breakdowns and was forced to take life more easily."

The director of research in one of our great chemical companies says of him: "Before 1914 Allmand's main interest had been electrochemistry. After the war he added to this a growing interest in photochemistry and by 1924 had several researches in both these branches of physical chemistry. Debye and Hückel had just made their great contributions to the theory of solutions of electrolytes, but thereafter, for a time, the subject became somewhat arid, progress with the theory of concentrated solutions, which Allmand would have liked to advance, became very slow and work on the subject leaned heavily in the direction of thermodynamic treatment and development. Photochemistry, on the other hand, was still at an early stage, for its development had waited for the development of the quantum theory and for improved instruments and

techniques. It afforded unlimited scope for careful and precise measurements and was constantly throwing up new problems. I remember that in those days much work was being done by Allmand on the hydrogen–chlorine reaction, then a most baffling problem. Photochemistry brought its connexions with spectroscopy, kinetic theory, and reaction kinetics that added greatly to the breadth of Allmand's learning and the interest of his school."

Allmand soon came to be regarded as a leading photochemist. He maintained his interest in electrolytes and usually had students working on this subject and kept up a remarkable knowledge of its literature by a prodigious amount of reading.

" He was extremely helpful and considerate to his students. He expected hard work from them, and in return he worked extremely hard both in physical chemistry, which was his absorbing interest, and in the interest of his students. He was especially conscientious about his supervisory duties and his research students were visited by him three or four times a week. He was a familiar figure, with his fiery hair and large round, gold-framed spectacles. Usually he was dressed in a blue suit, flannel shirt, and regimental tie. He confined himself to the business in hand and though he would discuss a problem with great animation, bringing to it evidence of wide and deep knowledge, he did not linger, during the day, to discuss anything but work. He was too busy a man, through being in the best sense a slave to duty. He had an enthusiasm for army life and training, rather unusual at that time, which perhaps reflected the great influence his war-time service had had upon him. Allmand was excellent as a lecturer, clear, precise, and elegant in method, and his clarity was used to take the fullest advantage of the careful and thorough preparation he so evidently and invariably gave to his material. Allmand had all the qualities needed by a university professor to help him to fulfil, and more than fulfil, his duty to the University, the college and its members, and the many professional bodies he was connected with. A man of greater genius might have left a greater mark on the development of his subject, *but, only, I think, at the expense of the trouble which Allmand took over the teaching and training of men, for he did see that during those years at King's College physical chemistry was well taught and research was well supervised.*"

The above quotations amply prove the final conclusions of the writer, namely, that Allmand's main working life was dominated by his intense religious conviction that his duty was to serve his country, his university, and his students to the greater glory of God. This conclusion is supported by the statement of Sir Ernest Barker in his book on King's College, which was brought to the writer's notice just as this biography was completed. Speaking of King's College, London, he said, " in chemistry there was that rare spirit, saint as well as chemist whose memory is a benediction." On this note we can leave our friend Allmand secure in the affection, admiration, and respect of generations of students and of all who knew him.

F. A. Freeth.

MARSTON TAYLOR BOGERT.

1868—1954.

Marston Taylor Bogert was born in Flushing, New York, on April 18th, 1868, and died in New York City on March 21st, 1954. His long and intensely active professional life was intimately and continuously connected with Columbia University, with the development of organized activity in chemistry in the United States, and with the fostering of international co-operation in science.

Bogert attended Columbia College, as did his father and his three brothers, and he continued his studies in Columbia's School of Mines, from which he obtained the degree of Ph.B. in 1894. This was at a time when a small college was in the early stages of an expansion which led to the establishment of a great University under the leadership of Nicholas Murray Butler. Graduate instruction in chemistry had just been started, and Bogert's outstanding abilities found their opportunity in this expansion. Appointed in 1894 an assistant to Charles Colby, Adjunct Professor of Organic Chemistry, he succeeded Colby on his death three years later and from then until he retired in 1940, he was a distinguished member of the staff of the University. From the beginning brilliant young men flocked to Bogert's laboratory to be trained for careers in research, and went forth to assume positions of importance in academic life and in the rapidly expanding chemical industry. It is an interesting comment on the times that, while Bogert remained firm in his attachment to synthetic organic chemistry, his early students included men who became leaders in analytical chemistry, in physical chemistry, and in biological chemistry, as well as in organic chemistry. Bogert's own research activities

were on terpenes, essential oils, alkaloids, arsenical drugs, vitamins, and perfumes and led to over four hundred publications in the various scientific journals. Columbia recognized his accomplishments and his many services to the University by an honorary Sc.D. degree in 1929, by the Egleston Medal in 1939, and by the Charles Frederick Chandler Medal in 1949.

Bogert's professional career accompanied a phenomenal growth in chemistry in the United States and he was a most active participant in the parallel development of professional organizations. The American Chemical Society, which now numbers over 70,000 members, was founded with 133 members when Bogert was nine years old, and had grown to something like 1000 when he began to take an active part in its affairs at the start of his professional career. In 1901 he was Chairman of the New York Section of the Society, and in 1907 and 1908 he was President of the national Society. He received the Society's Nichols Medal in 1905 and the Priestley Medal in 1938. Throughout his life he was a constant attendant at meetings of the Society and of the many other professional organizations to which he belonged. He was a Founding Member of the Chemists' Club, which has played an important role in the chemical life of the Metropolitan New York area. When the First World War came he organized and became first chairman of the Division of Chemistry and Chemical Technology of the National Research Council, in 1918 he was commissioned a colonel in the newly formed Chemical Warfare Service, and he further served in countless ways as adviser to government agencies.

Bogert became a Fellow of the Chemical Society in 1898. His lifelong interest in co-operation between American chemists and those of other countries is further shown by his activity in the American sections of the Society of Chemical Industry and of the Société de Chimie Industrielle and by his appointment to give lectures at the Charles University in Prague as the first Carnegie Professor of International Relations. It culminated in his election in 1938 as the first American President of the International Union of Pure and Applied Chemistry. His devotion and tact are in large measure responsible for the successful re-establishment of the Union after the Second World War, and he himself felt that this re-establishment was one of his most valuable accomplishments.

Bogert was distinguished in appearance, striking in personality, and gifted with wit and eloquence. He was the perfect presiding officer at all public occasions, and his absence will be deeply felt.

L. P. HAMMETT.

HUGH GRIFFITHS.

1891—1954.

MR. HUGH GRIFFITHS, who died at Bexley, Kent, on June 26th, 1954, was born at Middlesbrough on July 28th, 1891. At an impressionable age he was interested in chemistry by W. M. Hootton who later became science master at Repton. His mathematical mentor was a Dutchman, A. F. van der Heyden. Griffiths won a National Scholarship which enabled him to study Chemistry at the Royal College of Science. During the first World War he was with Nobel's and was immediately thrust into the position of having to help in the design of all the new plant required for explosives.

After the war he set up as a Chemical engineering consultant, in which sphere he was helped by his command of the German language and his many contacts on the continent.

In 1945 he was elected President of the Institution of Chemical Engineers and on March 17th, 1949, he was elected a Fellow of the Society.

His contribution to chemical engineering education was an insistence that it was only good enough if it provided an exact blend of practice and theory. He strongly supported the so-called " Home Paper " of the Institution in which the candidate has to design a plant for making a given quantity of some chemical and to calculate everything as far as possible from first principles.

His own interests were centred on crystallisation and adsorption and it was always a revelation to the listener to find out how little information existed to supply essential data for the rational design of plant to cover these two unit operations.

His other interests were the chemical engineering aspects of vacuum techniques, thermodynamics, and the teaching of the use of the gravitational system in which on the engineering side the continental practice differed greatly from our own.

It was always a great treat for his listeners to hear the masterly logical way, after a

complicated paper had been read at a meeting, in which he stripped it of its frills and laid bare the essential bones of the contribution. He was indeed at his best in demolishing the present day reprehensible practice of plotting groups of dimensionless numbers as ordinates and abscissae on log–log paper and drawing a line through the scatter of points so obtained.

We have indeed lost in him a champion against humbug in all its forms and one who was able to guide the destiny of his chosen profession with a clear and foreseeing mind at a time when it most needed his help.

M. B. DONALD.

LAWSON JOHN HUDLESTON.

LAWSON JOHN HUDLESTON was born on May 8th, 1891. He was educated at University College School, and University College, London, where he graduated in 1913. His post-graduate research was soon interrupted by the First World War; holding a Special Reserve Commission, he served with the First Middlesex Regiment through the retreat from Mons, was mentioned in dispatches, and awarded the Military Cross in 1915. He was transferred to the Ministry of Munitions in 1917 and worked on the synthesis of ammonia until the end of the War; then, as Salters Fellow, he was with Professor H. Bassett at Reading for a year.

In January 1920 he was appointed lecturer at the University College of Wales, and he settled down in Aberystwyth, marrying Miss Mabyn Thompson, of the Zoology Department, who, with one daughter, survives him. He soon attracted research students, and embarked on a study of the physical chemistry of aqueous hydrofluoric acid solutions. This involved the construction of wax apparatus, effective though sometimes of strange design, for E.M.F., transport-number, vapour-pressure and freezing-point measurements, and established the existence of the ion HF_2^-, the absence of H_2F_2, and the instability constant of the former (*J.*, 1924, 1925). He then devoted himself to the writing of " Chemical Affinity " (1928), a monograph which illuminated for many chemists of the time the practical handling of thermodynamic data.

Hudleston's later publications were mostly theoretical: Aberystwyth was a small chemistry department between the two wars, and the opportunities for directing effective research were very limited. Apart from one or two studies in kinetics they were concerned with molecular forces in liquids, and with the critical interpretation of experimental data. In 1936 he was persuaded to take command of the Aberystwyth T.A. Battery. He was in command of the Cardiganshire Field Regiment, R.A., in 1939, and again served throughout the War, during the latter half of it on the staff of the Scientific Adviser to the Army Council. Here his flair and enthusiasm for applying scientific method to novel problems was of great value, and he did important work on the control of artillery bombardments, and also in getting the scientific approach to such problems appreciated by the fighting units. He was in charge of operational research with the army during its advance through Italy.

Hudleston was deeply interested in teaching methods, and was held in the highest regard by his students and colleagues. He continued to give whole-hearted service to the community, as well as to the College, after the Second World War; he was chief technical reconnaissance officer in the Cardiganshire Civil Defence organization, and was on a Civil Defence course in London at the time of his last illness. He died in Aberystwyth on April 25th, 1954.

C. W. DAVIES.

ANTHONY LEWIS LEVY.

1924—1954.

ANTHONY LEWIS LEVY, born on July 30th, 1924, at Romford, Essex, received his early education at Brentwood School and his scientific training at the Imperial College of Science and Technology, London. His early research was related to the possible synthesis of penicillin but his enthusiasm and imagination soon became fired by the potentialities of some of the methods then under investigation, especially in their relation to the chemistry of the amino-acids and peptides. This interest persisted so that no less than 17 out of his 18 publications, latterly as the senior author, and mostly in the *Journal*, were directly concerned with this field. From the chemistry of 5-aminothiazoles, which Levy's ingenuity made easily available, it was a short step to 2-thio-5-thiazolidones and their application under mild conditions to the controlled synthesis of peptides of diverse nature. The parent 2-thio-5-thiazolidone, itself a derivative of glycine, was moreover skilfully applied to the novel synthesis of a range of other amino-acids.

With remarkable insight Levy seized upon the key reaction in this work, namely, the interaction of α-amino-acids and carbon disulphide under selected conditions, and so adjusted the conditions that the stepwise breakdown of peptides could be brought about with a facility equal to that employed in their synthesis. This work was continued at the Carlsberg Laboratorium, Copenhagen, and still later at the University of California, U.S.A. Recently his interests had been concentrated on the purification and properties of α-corticotropin from sheep pituitary glands and his last publications arising out of this work described valuable general additions to the analytical chromatography of amino-acids on paper. One of these he himself amusingly characterised as " the poor man's ' Moore and Stein ' method."

Determination, an insatiable curiosity, and an unassuming manner were Levy's outstanding personal characteristics. He at one time suffered from a hesitancy of speech which he eventually overcame, though only those who knew him well could appreciate the unyielding resolution which enabled him to do so. Levy's love of chemistry amounted to a fascination for his chosen science. He early made himself a laboratory at home and later added to his experience at school by acting as laboratory assistant. As a preparative organic chemist he could only be described as an artist with an unfailingly high standard of execution and with an unusual flair for seeing new reactions and products when others would see no more than an uninviting tar. In addition to chemistry there seemed to be few general interests that failed at various times to receive his attention : scouting, camping, music, sports, politics, social service, and many other activities came within range of his lively intelligence. He was for many years specially attracted by mountaineering and it was while climbing on Mount Olympus, Washington, U.S.A., on 22nd August, 1954, that some of the party of which Levy was a member got into difficulties. It was reported that in aiding his companions Levy became exhausted and died before effective assistance could be brought.

There seemed little doubt that he was destined to reach a foremost position in his selected field of work, and his early and tragic death is a real loss to chemistry.

A. H. Cook.

CHARLES ROBERT SYDNEY TENNISWOOD.

1906—1954.

The death of C. R. S. Tenniswood, M.Sc., in a car accident in West Africa on May 22nd, 1954, cut short a career already rich in achievement. He was born on June 3rd, 1906; he obtained First Class honours in chemistry in Armstrong College (as it then was) in 1927, and followed it with a period of research (see *J.*, 1931, 429) during which he also did much to develop organic microanalysis, then in its infancy in the College. Later he became Head of the Chemistry Department of Wandsworth Technical College and in the war was on the staff of the Ministry of Supply.

In 1944, Tenniswood was appointed teacher of Chemistry at Makerere College in Uganda where he was faced with the task of building up a University Chemistry Department from literally nothing. The standard of education in Africa at that time was very low and the equipment and accommodation available were meagre.

To begin with he was single-handed but by 1954 the staff of the Department consisted of four lecturers in addition to Tenniswood who had been appointed Professor. Students of the Department were prepared for the external degree of London University and before his death he had the satisfaction of seeing his first batch of pupils obtain the London B.Sc.

The difficulties encountered in East Africa made the building up of such a department a truly formidable task. Despite this, however, as well as creating a teaching department, Tenniswood played a very full part in the evolution of the complex machinery of a University and at the time of his death was Dean of the Faculty of Science.

In spite of the many duties which pressed upon him he found time to do some research on the active principles in local plants and he always encouraged his staff to undertake research.

Each time he came home he was full of ideas and hope for future research but alas he has been denied the happiness of reaping what he has sown.

Professor Tenniswood's death is a tragic loss to University education in East Africa and to the economic improvement based on technical assistance so essential for good future racial relationships in that part of the dark continent.

G. R. Clemo.
