

quantum theory in its initial stage; so much so that when Schrödinger first wanted to test the powers of his wave-mechanics, he quite naturally took up that very problem for comparison. But a still more decisive advance was Kramers's reformulation of the theory of optical dispersion, which paved the way to Heisenberg's great discovery.

After his return to Holland, the task he accomplished, though of a different character from his work in Bohr's circle, was no less honourable and no less exacting. If the old Dutch tradition of theoretical research in physics has been so brilliantly upheld and continued along the lines of quantum theory, it is due in no small part to the powerful influence of Kramers's personality. By his versatile activity he contributed much himself to the development of the methods of quantum mechanics and to their application to many fundamental problems of atomic physics. But who will tell how much he stimulated his fellow-workers by his example, his experimental colleagues by his advice, his pupils by his guidance, his students by his teaching? Besides all this, there was Kramers the man, to whom nothing human was foreign. His friends would never seek in vain his wise counsel in affairs of public import, or his warm sympathy in their private worries. His help often came unsought, and sometimes a hint, unobtrusively preferred, would make you realize that, unknown to you, he had given

long and careful thought to your problems. His name will live in the annals of science; his gentle image in the hearts of his friends. L. ROSENFELD

Prof. Louis Guillaume

THE death, following an accident at Strasbourg on May 29, is reported of Prof. Louis Guillaume, Ingénieur en chef at the Bureau de Recherches Géologiques et Géophysiques in Paris, and well known and respected among British geologists.

Guillaume, who was born in 1894, held academic posts at both Caen and Strasbourg, and in 1941 helped to found the Bureau des Recherches Géologiques et Géophysiques, the object of which was to co-ordinate, facilitate, and if need arose, to initiate, the search for useful economic materials in France. He was the author of numerous scientific articles in the fields of palaeontology and stratigraphical geology, and his premature death deprives his colleagues of his collaboration in a number of important works, particularly on hydrogeology, for which he had assembled an extensive and valuable documentation.

Guillaume was a fervent anglophile and had made many friends in Great Britain; they will mourn the passing of a generous and dynamic personality.

A. C. TOWNSEND

NEWS and VIEWS

Medical Protozoology in the University of London : Prof. H. E. Shortt, C.I.E., F.R.S.

PROF. H. E. SHORTT, who has held the chair of medical protozoology in the University of London at the London School of Hygiene and Tropical Medicine since 1947, is to retire in October. Prof. Shortt was formerly in the Indian Medical Service, and has made discoveries of fundamental importance in the field of tropical medicine. During his work in India on the etiology of kala-azar, carried out over a period of twenty-five years, he proved that the transmitting agent was *Phlebotomus* and contributed profoundly to the knowledge of this disease and its causal organism. In recent years he has carried out brilliant researches on the life-cycle of the malaria parasites, in which Dr. P. C. C. Garnham collaborated, and for which they were jointly awarded in 1951 the Darling Medal and Prize given by the World Health Organization.

Dr. P. C. C. Garnham

DR. P. C. C. GARNHAM, who is to succeed Prof. Shortt, was in the Colonial Medical Service during 1925-47 and was director of the Division of Insect-borne Diseases in Kenya during the last four years of his service. He has published numerous original articles, many of which are concerned with malariology, a subject in which he has specialized and achieved distinction. In Kenya he carried out important research not only on malaria but also on relapsing fever, plague, onchocerciasis and jungle yellow fever. The epidemiology of these diseases and the bionomics and control of their insect vectors were his special concern. An outstanding success in this field was his discovery of the use of DDT in destroying the larval stages of *Simulium neavei*, the vector of

onchocerciasis in Kenya and other parts of East Africa. This method of control has resulted in the complete eradication of the insects in certain endemic foci. On joining the staff of the London School of Hygiene and Tropical Medicine as reader in medical parasitology in 1947, he participated in the experimental work which led to the first discovery of a pre-erythrocytic stage in the life-cycle of mammalian malaria parasites. His collaboration in this work and in the subsequent researches which established the presence of this long sought-for missing link in the life-cycle of the human malaria parasites, *Plasmodium vivax* and *P. falciparum*, has earned for Dr. Garnham an enduring name in the history of tropical medicine research.

Institution of Mining Engineers: President for 1953-54

MR. J. CECIL MITCHESON has been elected president of the Institution of Mining Engineers for the year 1953-54, and will succeed Mr. R. J. Weeks at the annual general meeting to be held next January. Mr. Mitcheson comes of an old mining family, his great-grandfather having worked with George Stephenson at the Old Killingworth Colliery; both his grandfather and father were also associated with the industry. Mr. J. C. Mitcheson was educated at Bootham School, the Royal Military Academy, Woolwich, and the University of Birmingham, where he graduated B.Sc. in mining. After obtaining his colliery manager's certificate, he was appointed lecturer in coal mining and demonstrator in mine rescue in the University of Birmingham under the late Prof. K. Neville Moss. In 1924 he returned to the mining industry to assist his father in his consulting practice