

elements and compounds, in which again he had to develop, test, and apply entirely new experimental methods. The results, of value in many ways, afforded strong confirmation of his basic hypothesis. In later years, Richards's interest centred chiefly upon these problems of atomic and molecular volumes and compressibilities, and, though he was active in many other fields, he undoubtedly regarded this as his most important work.

These are but a few examples of the methods and data by which he enriched the physical sciences. He made most valuable contributions to precise thermometry and calorimetry. We owe to him the proposal to use the transition points of pure compounds as fixed points in thermometry, and it was at Harvard that the methods of adiabatic calorimetry were first developed and applied. He also greatly increased the precision of determinations of surface tension and obtained the standard data for many important liquids.

This recital of Richards's achievements should be greatly extended and amplified, but enough has perhaps been said to indicate how fundamental and extensive they were. Their value was generally recognised, and the honours that fell to him are, like his works, too numerous to detail. Many American and foreign universities honoured him and themselves by the award of degrees. He was a foreign member of the Royal Society, an honorary fellow of the Chemical Society, before whom he delivered the Faraday Lecture in 1911, and he received in turn the Davy Medal, the Franklin Medal, and the Le Blanc Medal. Many other American, British, and foreign scientific societies similarly honoured him, and in 1914 he was awarded the Nobel prize for chemistry. He was an active member of numerous societies and committees, and served as president of the American Chemical Society, of the American Association for the Advancement of Science, and the American Academy of Arts and Sciences.

We mourn in Richards a great and kindly man who was a great chemist: his place is marked by the cairn of exact data he raised with his own hands.

H. V. A. BRISCOE.

DR. W. A. YOUNG.

DR. W. A. YOUNG, Director of the Medical Research Institute, Gold Coast, while engaged on investigations connected with yellow fever, contracted the disease and died on May 30 at Accra. His death is peculiarly tragic in view of his early age, and of the fact that two other investigators have died in West Africa in like circumstances within a period of a few months. It is believed that he became infected while making a post-mortem examination on his colleague, Dr. Noguchi, whose death was referred to in our issue of June 9 (p. 914).

William Alexander Young was born in 1889, graduated M.B., Ch.B. (St. Andrews) in 1911, and after holding the office of house surgeon at the Halifax Royal Infirmary and studying tropical medicine at the Liverpool School, joined the West African Medical Service in 1913. He was first

stationed in Sierra Leone, and during the War served with the Cameroon Expeditionary Force (1915-16). In 1920 he was transferred to Nigeria and appointed assistant bacteriologist. From June to December 1923 he was attached to the Nigerian Tse-tse Fly Investigation staff, and was part author of the second report prepared by that body. He was then transferred to the Gold Coast on appointment as pathologist, and in September 1924 was promoted to the directorship of the Medical Research Institute.

Young's interests in the field of tropical medicine were wide, and the subjects of his publications remarkably diverse. His papers, most of which appeared in the *Transactions of the Royal Society of Tropical Medicine and Hygiene*, the *Journal of Tropical Medicine and Hygiene*, and the *West African Medical Journal*, deal with blackwater fever, leprosy, trypanosomiasis, plague, dysentery, and yellow fever. He was equally at home in the laboratory and in the field, as instanced, on one hand, by an experimental work on the effects of emetine (carried out during a period of leave in collaboration with G. R. Tudhope), and, on the other, by a detailed survey of the tse-tse fly conditions in the Gold Coast. His aim, in view of his position as Director of Medical Research, was to maintain a good knowledge of many subjects, rather than to concentrate for a long period on one.

When it was suggested that Noguchi should come to Accra, Young, who was then giving most of his attention to yellow fever, accepted the suggestion with enthusiasm, and at once began preparations for work on a larger scale. Soon after Noguchi arrived, Young volunteered to assist him, and the two worked together until the end.

Young applied himself with zeal to administrative duties. On his initiative the staff of the Medical Research Institute at Accra was considerably increased, and an additional laboratory was opened at Sekondi. He also designed and had fitted locally a very efficient motor laboratory. In his dealing with his subordinates, both European and native, he was very considerate and tolerant, appreciative of achievement and forgetful of errors, and both European and native will miss him greatly.

WE regret to announce the following deaths:

Prof. A. A. Breneman, consulting chemist and chemical engineer, editor (1884-93) of the *Journal of the American Chemical Society*, who carried out work on explosives, water analysis, etc., aged eighty-one years.

Dr. W. M. L. Coplin, emeritus professor of pathology and bacteriology in the Jefferson Medical College, on May 29, aged sixty-three years.

Prof. E. M. Crookshank, emeritus professor of bacteriology at King's College, London, on July 1, aged sixty-nine years.

Dr. William H. Nichols, Jr., vice-president of the Allied Chemical and Dye Corporation and a past president of the American Chemical Society and of the American Society of Chemical Industry, known for his work on the metallurgy of copper, on May 28, aged seventy-six years.

Sir John Isaac Thornycroft, F.R.S., a pioneer in the design and construction of small high-speed vessels, on June 28, aged eighty-five years.