

high content of sodium chloride in the cells of its uncuticularized, tomentose leaves. Wood investigated the transpiration-rates of a number of trees and shrubs growing in the region and later showed that, in addition to having a low transpiration-rate, *Atriplex* was able to take up moisture through its leaves from saturated air. This work led to the award of an 1851 Exhibition scholarship, and Wood proceeded to Cambridge (Caius College) to read for a Ph.D. On his return to Adelaide in 1927 he was appointed lecturer, soon to be in charge of the Department. He was promoted to professor in 1935.

Work on the vegetation of arid South Australia had led to the generous donation to the University of an area of some 1,000 acres and small field laboratory at Koonamore, about 200 miles north of Adelaide in 1926. Wood collaborated in the work of the Koonamore Vegetation Reserve almost from the start. It is a tribute to his abiding interest in the arid flora that the Reserve and laboratory are still in regular use by the Adelaide Department for teaching and research.

Wood's contributions to botany fall under the heads of general ecology (his work on "The Vegetation of South Australia" (1937) has long been out of print), autecological work on arid plants and nutritional studies. Recently (1957) he and one of his research students have shown that sodium chloride is an essential micronutrient for *Atriplex vesicaria*. The nutritional studies have dealt with nitrogen and sulphur metabolism and the role of such micronutrients as copper, zinc and molybdenum. These are essential for crop production over large areas of leached soils in Australia but are not needed in the same quantities by the native sclerophyllous plants.

Wood had considerable organizing abilities. The fine range of biological buildings at the University owes much to his planning. Possessed of an alert mind and known for his fairness and even temper, much of his time and energy of late years have been spent on committee work. He was a member of the Interim Council of the Australian National University during 1948-51 and a Council member during 1952-55. He served on the Advisory Committee of the Commonwealth Scientific and Industrial Research Organization during 1951-59 and was chairman of the Board of Standards, of the Australian Journals of Scientific Research, and chairman of the Board of Research Studies of his University at the time of his death.

His recreations were largely connected with his home and garden. He had a good knowledge of Australian contemporary art and he himself painted. In 1930 he married Joan Hazel, who, with their three daughters, survives him. His one-time teacher and colleague can only join his many other friends in deploring his sudden passing.

T. G. B. OSBORN

#### Prof. W. R. Fearon

WILLIAM ROBERT FEARON, professor of biochemistry in the University of Dublin, died on December 27, 1959, aged sixty-seven years. The only child of a Presbyterian clergyman who had died when his son was four years old, he entered Trinity College, Dublin, in 1911. It was an indication of the intellectual versatility which was to characterize his life

that he found some difficulty in deciding whether to read English or science. In the event he read natural science, in which he graduated B.A. with a Senior Moderatorship in 1915, securing also a Foundation Scholarship in Experimental Science two years later. He entered the Medical School during this period, but became so intensely interested in physiology and biochemistry that he interrupted his medical studies in the fourth year to do research work in nutrition in London during the First World War. Following this, he was awarded an exhibition to Emmanuel College, Cambridge, where he became one of the devoted band which Frederick Gowland Hopkins gathered around himself in the University Biochemical Laboratory. On his return to Trinity College, Dublin, in 1921, he was elected to a fellowship and thus began a period of almost forty years during which he enhanced the reputation of the College with his researches, delighted his students with the brilliance of his lecturing and entertained his colleagues by his sparkling conversation on almost any topic.

His literary bent had found recognition while he was still a student in the award of the vice-chancellor's prize in English verse, the University Philosophical Society's Gold Medal for English composition and the editorship of the College miscellany, *T.C.D.*, to which he was a frequent contributor. Throughout his career his clear, limpid style was to stamp everything he wrote whether scientific or otherwise. He was a master of the happy descriptive phrase which left an indelible impression. Always interested in motor-cars, he wrote of a visit to the Lancia show-rooms in London during the early '30's that he had been taken for a drive in a car "that was the size of a cottage and cost as much as a house".

His early work was concerned with the formation of urea from protein, in the course of which he began to exhibit that facility for developing colour reactions which was to lead to so many papers in the *Biochemical Journal*. He loved to demonstrate these reactions to his colleagues or to visitors, and he must have discovered far more than he ever published. His interest in nutrition persisted and found its most recent expression in a survey of the fluoride content of Irish drinking waters. It was typical of his alert mind that he began this work more than ten years ago, at a time when others were only commencing vaguely to realize the possible practical significance of fluoride intake in dental health. For about six years before his death he had been interested in the ureides obtained from autolysed yeast. An outstanding contribution was his book, "An Introduction to Biochemistry", first published in 1934; he was working on the fourth edition when he last became ill. It is remarkable in that it is at once "An Introduction" which unfolds the subject to the student systematically and with the utmost clarity, and a comprehensive review that can be consulted with profit by the more mature worker.

Notwithstanding a rather shy disposition, he had wide interests outside his laboratory and, indeed, outside College. In the '20's he was the friend and associate of the literary and artistic giants of the time in Dublin—W. B. Yeats, Jack Yeats, George Russell (AE), Lennox Robinson, Oliver St. John Gogarty. He held the honorary professorship of chemistry of the Royal Hibernian Academy. His play, "Parnell of Avondale", was a success when

produced at the Abbey Theatre nearly twenty years ago. He was an accomplished pianist and organist, and had an extensive knowledge of music.

One of the fascinations of knowing Fearon was the frequency with which, even after years of close friendship, one discovered new interests of his: a large stamp collection, to which he added regularly; his flair for cars, both vintage and modern sports—his own collection had included a Lancia, a Bentley and a Rolls; his real appreciation of the musical comedies of the early part of this century. In the same way, one learned with surprise, in 1943, that he was a candidate for a seat in the Senate of the

Irish Parliament as a representative of the University of Dublin, for one had never been aware of his interest in matters political. Yet he continued to hold his seat to the end, and his colleagues in the Upper Chamber often expressed a high regard for him as a member.

William Fearon was a man of great gentleness of character but one who did not encourage intimacy, and not many of his friends knew him really well. Nevertheless, his passing will leave many gaps. He will be missed in the College Common Room and in his clubs as in the class-room and in the Senate chamber.

W. J. E. JESSOR

## NEWS and VIEWS

### Experimental Physics at Liverpool:

Prof. J. M. Cassels, F.R.S.

PROF. J. M. CASSELS, who has retired from the chair of physics in the University of Liverpool, joined the staff as a lecturer in 1952. In 1955 he was promoted to senior lecturer and in 1956 was appointed to the professorship of experimental physics which had been instituted a few years before but had remained vacant. He had gone to the Atomic Energy Research Establishment as a research fellow in 1949 on completing his Ph.D. at Cambridge having previously done some war work there. At Harwell, he joined the research group working on the new 170-MeV. synchrocyclotron and played a leading part in the experimental programme on  $p$ - $p$  and  $n$ - $p$  interactions. He transferred to Liverpool to work with the higher energy (380 MeV.) Liverpool cyclotron, which came into full operation at the end of 1954. Largely because of Cassels's foresight, they had a full experimental programme ready to go, and this has continued at a steady pace ever since. Cassels ran a small group of his own, and his name is on many of the laboratory's papers, especially some concerned with pion interactions. But his influence went far beyond his own group, and inspired much of the high-energy work of the laboratory. His strength is both in experimental techniques and in his grasp of theory. He is also an enthusiastic teacher, and a very fine lecturer. He resigned his post to take up, in the autumn of 1959, a visiting professorship in Cornell University, where he will be able to continue his work on high-energy nuclear physics. In 1959 he was elected a Fellow of the Royal Society.

Dr. A. W. Merrison

DR. MERRISON, who has been appointed as Prof. Cassels's successor, was educated at King's College, London, and after taking a degree went to work on centimetric radar at the Signals Research Development Establishment. In 1946 he transferred to the Atomic Energy Research Establishment, Harwell, and worked on various aspects of neutron spectroscopy in the Nuclear Physics Division. He was appointed as lecturer in the University of Liverpool in 1951 and transferred to the research appointment known as the Leverhulme lectureship in 1954. He became a group leader on work with the large 380 MeV. synchrocyclotron and published several important papers on pion physics. In the spring of 1957 he was appointed to a staff post at CERN, the international high-energy laboratory at Geneva.

There he worked with the 680-MeV. synchrocyclotron which started work shortly after. One of the results of his team, the discovery of the rare mode of decay of a pion directly into an electron instead of through the normal muon, is considered as of exceptional importance in confirming the theorists' general conception of these particles. Recently, Merrison has been concerned with arranging work for the 28-GeV. proton synchrotron at CERN which has just started working. Dr. Merrison had no opportunity of taking a normal Ph.D. course in a university on account of the War, and so took his degree as a member of the University of Liverpool staff. He is expected to return to the University in the autumn of this year.

### Geological Survey and Museum:

Sir William Pugh, O.B.E., F.R.S.

SIR WILLIAM PUGH, director of the Geological Survey of Great Britain and the Museum of Practical Geology, is retiring at the end of July. Sir William, who was born on July 28, 1892, was educated at the County School, Welshpool, and at the University College of Wales, Aberystwyth. After service in the First World War, in which he was made O.B.E. (Military Division), received the French Croix de Guerre and was twice mentioned in dispatches, he was appointed in 1919 professor of geology at Aberystwyth. In 1931 he was appointed to the chair of geology in the University of Manchester, and became pro-vice-chancellor and later deputy vice-chancellor of that University. He was awarded the Murchison Medal of the Geological Society in 1952 for his researches into the stratigraphy of the Palaeozoic rocks in Central Wales. Sir William became director of the Geological Survey and Museum in 1950. He was elected a Fellow of the Royal Society in 1951, and knighted in 1956.

Dr. Cyril J. Stubblefield, F.R.S.

DR. CYRIL J. STUBBLEFIELD is to succeed Sir William Pugh as director of the Geological Survey of Great Britain and the Museum of Practical Geology. Dr. Stubblefield was educated at the Perse School, Chelsea Polytechnic and the Royal College of Science, London. In 1923 he was appointed demonstrator in geology in the Imperial College of Science and Technology, a post he occupied until 1928, when he joined the Geological Survey as a geologist. In 1929 he entered the Department of Palaeontology of the Survey; and in 1947 he was appointed chief palaeontologist. This post he held until 1953, when