

But, nevertheless, the year that Rutherford died there disappeared for ever the happy days of free scientific work which gave us such delight in our youth. Science has lost her freedom. Science has become a productive

force. She has become rich but she has become enslaved and part of her is veiled in secrecy.

I do not know whether Rutherford would continue nowadays to joke and laugh as he used to do.

NEWS AND VIEWS

Biochemistry in the University of Liverpool:

Prof. R. A. Morton

PROF. R. A. MORTON will retire from the Johnston chair of biochemistry in the University of Liverpool at the end of the present session after 42 years of service on the university staff. Appointed lecturer in chemistry in 1924, he developed a keen interest in spectroscopy under the influence of Prof. E. C. Baly and became a pioneer in the application of absorption spectroscopy to the examination of complex substances of biological origin, particularly the fat-soluble vitamins. His achievement was recognized by the award of the Meldola Medal in 1930, and after a year as visiting professor in Ohio State University, he was appointed special lecturer in spectroscopy at Liverpool in 1931. In collaboration with a number of postgraduate students and visiting research Fellows he discovered vitamin A₂ and demonstrated that the retinal pigment, retinene, was the aldehyde of vitamin A. His experience in characterizing compounds by their absorption spectra was invaluable during the Second World War when he undertook a number of research projects for the Ministries of Food and Supply and participated in the Sheffield experiment organized by the Medical Research Council to determine vitamin A requirements with the aid of human volunteers. He was appointed to the Johnston chair of biochemistry in 1944, and at the end of the War quickly applied the newly developed Beckman photoelectric spectrophotometer to his researches. His valuable contributions to the chemistry and biochemistry of the fat-soluble vitamins, carotenoids and sterols were recognized by his election to a fellowship of the Royal Society in 1950. Although his interests in biological compounds had originally been chemical, he willingly served on a number of committees and panels concerned with the practical aspects of human nutrition. One of his major contributions to biochemistry, however, is evident in the number of former members of his Department who now hold senior appointments in industry and in universities throughout the world. In recent years he and his research group opened up new and widely developing fields of biochemical interests through the discovery of families of biologically active quinones and related compounds by chromatographic and spectrographic methods. These compounds have been found widely distributed in Nature and given the names ubiquinones, ubichromenols and dolichols. Investigations of their functions are still at an interesting but early stage of development.

Prof. Morton has lectured at many academic centres in Europe and the United States. In 1963, the University of Coimbra conferred on him the honorary degree of D.Sc., and recently the Biochemical Society elected him to honorary membership.

Prof. T. W. Goodwin

PROF. T. W. GOODWIN, professor of biochemistry and agricultural biochemistry at Aberystwyth, returns to Liverpool in October at the invitation of the University Council to occupy the Johnston chair of biochemistry, in succession to Prof. R. A. Morton. He was appointed to the chair of agricultural chemistry at the University College of Wales, Aberystwyth, in 1959, and he has developed a flourishing teaching and research school

in biochemistry, recently accommodated in new laboratories. He is well known for his work on the carotenoids which developed out of his interest in visible and ultra-violet spectroscopy, and for his collaboration with Prof. R. A. Morton in work on vitamin A. His interests now extend into metabolic studies on all terpenoid materials in plant tissues, particularly in relation to the regulation of their formation in plant cells. He has also made considerable contributions in the field of thiamine and riboflavin biosynthesis. Prof. Goodwin has written a number of books, including *The Comparative Biochemistry of the Carotenoids*, *The Biosynthesis of Vitamins and Related Compounds* and *Recent Advances in Biochemistry*. He has also edited two volumes on *Biological Structure and Function* (with O. Lindberg), *Structure and Activity of Enzymes* (with J. I. Harris and B. S. Hartley), *The Chemistry and Biochemistry of Plant Pigments* and *Aspects of Insect Biochemistry*. Prof. Goodwin has lectured in several European countries and in Egypt, and last session he spent 6 months at the University of California, Davis, as senior foreign scientist Fellow of the National Science Foundation. He was director of a symposium sponsored by the North Atlantic Treaty Organization on the biochemistry of chloroplasts, which was held at Aberystwyth in 1965. He is a committee member of the Biochemical Society and is its symposium organizer and chairman of its Advisory Committee on Publications; he is also vice-president of the Comité International de Photobiologie.

New Directions of Comparative Zoology

ERNST MAYR, director of the Museum of Comparative Zoology and Alexander Agassiz professor of zoology at Harvard University, emphasized the 'gratifying rejuvenation' that systematics and evolutionary biology, the two branches most actively pursued at the Museum of Comparative Zoology, have undergone in the past few years. While the basic quest is still the same—"to investigate the diversity of the living world in order to understand the causes of this diversity"—Prof. Mayr said that field work to study the living organism in relation to its environment has become a necessary part of research. In addition to his traditional task of describing and naming new organisms, the taxonomist "increasingly studies behavior, distribution, niche occupation, population structure, environmental physiology, and all aspects of evolution". To facilitate this new emphasis on living organisms, the Museum is in the process of acquiring a field research station in Concord, Massachusetts, and is planning a new wing, largely devoted to the study of living animals.

Increasing teaching commitments of the scientific staff are also changing the Museum's traditional position as a research body. To meet the demand, new teaching facilities are being installed in the Museum and will be ready for the academic year 1966-67. Staff members for the first time are offering specialized seminars under Harvard's Freshman Seminar Programme. In addition, members are giving fifteen courses in the biology and geology departments.

Prospects for Biology

THE content and organization of degree courses in the biological sciences are undergoing considerable reappraisal.