Dr. Curtis died while on a brief vacation at Chatham on Cape Cod, Massachusetts. He is survived by his wife, two sons and a daughter, six grandchildren, and two sisters. The elder son, Dr. Otis Freeman Curtis, jun., followed his father into the field of plant physiology and is now on the staff of the New York Experiment Station, Geneva, N.Y., as an assistant professor of pomology. The younger son, Dr. Edgar Curtis, is an assistant professor of zoology in St. Lawrence University, Canton, New York.

The name of Dr. Curtis will be most immediately associated with the subject of translocation of solutes in plants, and this subject gave him prominence in a field which has attracted the attention of many British investigators from the time of Stephen Hales, but notably of Prof. H. H. Dixon, and Dr. T. G. Mason and Dr. E. J. Maskell, during the period of Prof. Curtis's active interest in the subject. Many British botanists will also recall that Prof. Curtis and his family spent the year 1926–27 in the University of Leeds under an arrangement by which he and Dr. W. H. Pearsall served as exchange professors from their respective institutions. During this year, Dr. Curtis participated fully and with zest in the academic life of the University and the Botany Department, taking, as he always did, the keenest interest in the work of undergraduates and stimulating them to further inquiry rather by intimate, analytical and critical discussions than solely through the medium of the more formal university lectures. In this, Curtis excelled, and for many who came under his influence both in England and through many years at Cornell, he will be best remembered for his patient, searching, critical, penetrating analyses of the basic principles of plant physiology. He loved to do this with a knot of students around him, often arousing their interest and argumentative discussion by a challenging exposure of a fallacy or by the discriminating weighing of the evidence to support any given hypothesis.

Dr. Curtis was born in Sendai, Japan, on February 12, 1888, where his father, a minister of the Congregational Church, was active in missionary work. He left Japan at the age of seven and received his education in various parts of the United States, finally entering Oberlin College in 1907 and receiving from Oberlin the A.B. degree in 1911. He entered Cornell in 1912 to read for his degree in what was then the Department of Plant Physiology and which in 1913 became a part of the newly created Department of Botany in the College of Agriculture at Cornell. He obtained the Ph.D. degree from Cornell in 1916.

In 1913, while still a graduate student, Curtis became an instructor in plant physiology. He continued in this position until July 1917 when he was made assistant professor, becoming professor of botany in 1922, a position which he held until his death. Thirty-six years of his life were thus devoted to the service of science at Cornell.

At Cornell, teaching occupied a large share of Curtis's time. Nevertheless, he published about thirty papers dealing chiefly with vegetative reproduction, translocation, temperature and water relations of plants. His work and monograph on translocation redirected research into this important field of work. He pioneered also in emphasizing the importance of re-radiation from the leaf and the relative unimportance of transpiration, in comparison with other factors, in controlling the temperature of plants. In this research, his constant practice was to challenge accepted concepts and re-interpret results in the light of new evidence.

While his contributions to the advancement of knowledge in plant physiology were numerous and important, it is probable that his greater contributions were in teaching and the stimulation he gave to a large group of men who came under his influence, even though their major field of work was in some other branch of plant science. Alternating for many years with Dr. Lewis Knudson in giving an advanced course in plant physiology which ran throughout the year, he influenced in any one year between thirty and sixty graduate students who were preparing themselves for advanced degrees in the plant sciences and in soil technology. Many of these men, now scattered throughout the United States, and indeed throughout the world, hold responsible positions in the field of science and recall with pride their association with Dr. Curtis. At the time of his death he had completed a text-book on plant physiology which will be published with Prof. D. G. Clark as junior author.

In addition to serving on important committees of the Agricultural College and of the University, Dr. Curtis was particularly interested in the Graduate School. He also held offices at various times in his career in the American Society of Plant Physiologists and in the Botanical Society of America.

NEWS and VIEWS

J. Lawrence Smith Medal for Research on Meteors: Dr. F. L. Whipple

THE National Academy of Sciences of the United States has awarded the J. Lawrence Smith Medal to Dr. Fred Lawrence Whipple, chairman of the Department of Astronomy, Harvard Observatory. Dr. L. H. Adams, director of the Geophysical Laboratory of the Carnegie Institution of Washington, in making the presentation address, said that the J. Lawrence Smith Fund was established in 1884 for the purpose of encouraging research on meteors by making appropriate grants from time to time and, upon occasion, by awarding a Gold Medal to any person in the United States who, in the opinion of the Academy, makes an original investigation of outstanding merit on meteoric bodies. In the past the Medal has been awarded three times, namely, in 1888 to H. A. Newton for his investigations of the origin of meteors; in 1922 to G. P. Merrill for his contributions on the character of meteorites; and in 1945 to Stuart H. Perry in recognition of his work on the metallography of meteoric iron.

Dr. Whipple has been on the staff of Harvard Observatory since 1931 and is president of the International Commission on Meteors of the International Astronomical Union. His work on meteors began in 1936 at Harvard when he developed the double-station photography of meteor trails which led to his success in obtaining precise velocities and deceleration of meteors. The award has been made to Dr. Whipple in recognition of his acknowledged leadership in the

field of motions and nature of meteoric particles in the earth's atmospheres, and especially for his derivation of the variations of air temperature with altitude based on his studies of meteors and for his investigation of other phenomena of the upper atmosphere, the results of which correspond closely to the values obtained up to heights of 65 km. by V2 rockets. Dr. Whipple has calculated the orbits of several important meteor streams, and is well known for his work on the Taurid meteors and for his analysis of velocities and orbits which led to the identification of the Taurid stream with Encke's Comet. He has put forward a new comet model which has for one of its results the association of comets and meteor streams physically as well as genetically.

Technical Chemistry in Glasgow: Prof. W. M. Cumming, O.B.E.

PROF. W. M. CUMMING resigned from the chair of technical chemistry in the Royal Technical College, Glasgow, in August last, to take up the post of technical director of the British Dyewood Co., Ltd. Dr. Cumming graduated in chemistry at the University of Glasgow in 1914, and entered the employment of the British Dyestuffs Corporation, where he was engaged in the manufacture of explosives during the First World War and later on dye intermediates. He returned to Glasgow as lecturer in organic chemistry at the Royal Technical College in 1920, and proceeded to the degree of D.Sc. of the University of Glasgow in 1924. In 1934, following on the death of Prof. Thos. Gray, Dr. Cumming was elected to the Young memorial chair of technical chemistry. He developed rapidly the chemical engineering aspects of the Department and, under his control, a large amount of chemical plant equipment was installed. When war broke out in 1939, he collaborated with the Ministry of Supply in developing the South West Scotland Branch of the Research Department which functioned under his control until 1946. He was also senior gas advisor for Scotland under the Ministry of Home Security, and acted in this capacity until the general stand-down of Home Defence in 1945. For these war-time services he was awarded the O.B.E. in 1946. On the death of Prof. Wilson, he was elected director of the School of Chemistry of the Royal Technical College. Prof. Cumming has been active in the affairs of the Scottish Council on Industry and Development, and chairman of several committees. He was also concerned with the establishment of the Engineering Centre in Glasgow. He has been a member of the Council of the Royal Institute of Chemistry, and of the Institution of Chemical Engineers, and is chairman of the Glasgow Section of the Society of Chemical Industry.

Dr. P. D. Ritchie

DR. P. D. RITCHIE, of the Birmingham Central Technical College, has been appointed to succeed Prof. W. M. Cumming in the Young chair of technical chemistry, and he takes up his duties in January. Recently, Dr. Ritchie has been especially interested in plastics and is the author of "Chemistry of Plastics and High Polymers"; nevertheless, his experience has been very varied. His thesis for the Ph.D. degree at the University of St. Andrews in 1932 was based on stereochemical problems in his work with Prof. Alex. McKenzie. During two years with the Explosives Group of the I.C.I., he studied the pyrolytic synthesis of ethenoid monomers. As head of the Scientific Department of the Courtauld Institute of Art, he worked on the constitution of ancient glass and ceramics; and as chief and advisory chemist to A. Reyrolle and Co., of Hebburn-on-Tyne, he secured patents on gaseous and high-polymer insulating media. After two years as head of the Chemistry Department of Leeds College of Technology, he was appointed head of the Chemistry Department of the Birmingham Central Technical College as successor to Dr. J. A. Newton Friend. In Birmingham he has rendered valuable service in the development of the Plastics Laboratories, and in the scheme for merging the fuel, plastics and other technological subjects for the formation of a Department of Chemical Engineering. He strongly advocated the appointment of research assistants, and this has recently been adopted. During his term of office a strengthening of the bond between industry and the Chemistry Department of the Birmingham Central Technical College has been very evident.

Institution of Mining Engineers: Mr. A. M. Bryan

THE Council of the Institution of Mining Engineers has elected Mr. A. M. Bryan as president for the year 1950–51, in succession to Prof. J. A. S. Ritson. The president-elect will take office at the annual general meeting of the Institution, which is to be held in London on February 2, 1950. Mr. Bryan obtained his early practical mining training and experience in the Lanarkshire Coalfield, Scotland. He received his academic training in the University of Glasgow, where he obtained the degree of B.Sc. (Mining), with special distinction. In 1920 he was appointed a government junior inspector of mines in the Northern Division and was promoted to the rank of senior inspector in 1926. In 1932 he became professor of mining in the University and the Royal Technical College, Glasgow. In 1939, Mr. Bryan returned to Government service, to assist the war effort, as deputy-director of mining supplies, a post which he relinquished in 1940 to join the Shotts Iron Co. as general manager. Two years later he became managing director of the Company. During the War he was chairman of the Coal Industry Joint Fuel Efficiency Committee. He was also a group production director, under the Ministry of Fuel and Power (Scottish Region), during 1944–45. In April 1947 he was appointed chief inspector of mines. Mr. Bryan has taken a keen interest not only in the science and practice of mining, but also in matters relating to the education, training, health and safety of persons employed in coal mines, and has made numerous contributions to the literature on these subjects.

British Association: Birmingham Meeting

NEXT year the British Association for the Advancement of Science will meet in Birmingham (August 30–September 6). The Council has completed appointments to the various offices in the Association. These include: *President*, Sir Harold Hartley; *General Treasurer*, Mr. M. G. Bennett; *General Secretaries*, Dr. Edward Hindle and Sir Richard Southwell; *Presidents of Sections*, Prof. E. H. Neville (Physics and Mathematics), Prof. E. L. Hirst (Chemistry), Dr. W. Campbell Smith (Geology), Dr. V. B. Wigglesworth (Zoology), Prof. S. W. Wooldridge (Geography), Prof. G. C. Allen (Economics), Prof. Andrew Robertson (Engineering), Dr. R. N. Salaman (Anthropology and Archæology), Prof. R. J. Brocklehurst (Physiology), Dr. J. C. Flugel (Psycho-