

these topics were a stimulus to all those who were privileged to hear them.

Anxious to use every minute of his day, he turned the accumulated knowledge of his academic career to the problems of engineering geology, and from the age of sixty-one until his death worked during vacations as a consultant geologist on civil engineering projects in Syria, the Lebanon, Iraq, Iran, Ghana, the Sudan and on the Kariba Dam in Central Africa. His kind but rugged features were a true expression of his character. He possessed a physical toughness and endurance which were remarkable for a man of his age. Twenty miles a day on foot in the deserts of the Middle East or the bush of Africa left him undaunted; he invariably led the way. His only admission of physical discomfort was at the age of seventy, when he said that he felt somewhat sore after riding on horseback for two days through the Elburz Mountains of Iran.

Loyalty was the keynote of his personal life, and despite the failing health of his last two months he travelled to various parts of the country to fulfil lecture engagements regardless of the advice of his doctor and friends. It was his sense of loyalty supported by his great physical courage which carried him from his home at Crowborough to London to give his last lecture to his students at Northern Polytechnic ten days before he died.

D. J. SHEARMAN

Dr. August Gansser-Burckhardt

DR. AUGUST GANSSE-BURCKHARDT, who died on January 27 at his home in Basle, will be remembered by many for his achievements in fields on the borderlines of technology, and by his friends for his radiant personality. He was born in Milan in 1876. After passing the examination in chemistry at the Federal Technical College in Zurich, he obtained a doctorate at the University of Zurich in 1900. After one year's further study in London, Dr. Gansser began his life-long association with the family enterprise, the present S.A. Ledoga in Milan, manufacturers of vegetable tannins and natural dyes. It was at an opportune time, since Dr. Lepetit had just worked out his revolutionary process of making cold-water soluble quebracho extract by sulphitation. Gansser contributed substantially to the success of this venture. Since 1917, he had resided at the old home of his family, Basle, serving as the international co-ordinator for the family concern.

Along with his business activity, two major inquiries became gradually the all-absorbing interests in his life. His name will always be connected with the battle against the warble fly and with his contributions to the ancient history of leather. His fight for the eradication of the warble fly, which not only inflicts sufferings on cattle but also does a great deal of damage, resulting in much decreased value of the hides and impaired yields of milk and meat, made him well known throughout the world. His untiring efforts in this vital crusade were recognized by his Alma Mater by the award of the honorary degree of D.V.M. His second interest was archaeology, particularly the study and analysis of finds from excavations of Roman settlements on the Continent and particularly of sites in Italy. His broad humanistic knowledge and his scientific training became a most effective combination in this pioneering research. He handled the archaeological issues as well as the chemical analysis of the finds most competently.

Dr. Gansser was the founder of the Swiss Society of Leather Chemists, and he was instrumental in re-establishing international contacts after the two World Wars. At the time of the first one, he served as the president of the International Society of Leather Chemists.

Dr. Gansser was a man of wide culture, embodying the best traditions of his beloved Switzerland and Italy, and of kind and unassuming disposition. His sterling personality and his talents as a linguist and speaker—with five languages ready to his service—made him a well-known, and lately legendary, figure at international gatherings in his field of work for more than half a century.

K. H. GUSTAVSON

Mr. F. H. Edmunds

WITH the death of Francis Hereward Edmunds on April 19 at Westhumble, Surrey, British practical geology lost an exponent whose work had long been an encouragement to civil engineers and many other professional men seeking advice on geological problems. His friendly guidance will no less be missed by innumerable students, research workers, amateur geologists, naturalists and interested laymen in the south of England. Many will recall with pleasure the field excursions led by Edmunds and the lectures he was always pleased to give to promote popular understanding of the influence and application of geology. Most of all, however, he will be missed by his colleagues on the Geological Survey of Great Britain, where he served from 1922 until 1957 and was always happy to encourage the younger geologist.

Edmunds was proud to own himself a native of Wiltshire. He was born at Mere in 1893 and was educated at Gillingham Grammar School, in the neighbouring county of Dorset. After serving in France as a captain in the Tank Corps during the First World War, he went up to Emmanuel College, Cambridge, where he made many friends in the University. He obtained first-class honours in geology in Part II of the Natural Sciences Tripos in 1922.

Throughout his career on the Geological Survey, Edmunds maintained his strong interest in geological mapping. Large areas on a number of published 1 in. to the mile maps, notably in Surrey, are the result of this work, and Edmunds was part-author of the explanatory memoirs on the Reigate, Guildford and Romford districts. Among other official publications, he was author of "British Regional Geology: The Wealden District" and part-author of "The Central England District" in the same series. Edmunds compiled a memoir on "The Wells and Springs of Sussex", and published papers in the *Journal of the Institution of Water Engineers* and elsewhere. During his period in charge of a small unit formed at the Geological Survey in 1936 on the request of the Inland Water Survey Committee, Edmunds organized the systematic collection and collation of well-records and undertook many advisory duties for Government departments and the Services, particularly during the Second World War. During 1945-57 Edmunds was district geologist for South-Eastern England.

Perhaps the strongest appeal of his book, "Geology and Ourselves", lies in its treatment of aspects of civil engineering and geology in everyday life. Edmunds also wrote and lectured with authority on the geology of scenery, of soils and of building materials. He was president of the South-Eastern Union of Scientific Societies in 1949 and took an

active part in the Geology Section at the British Association meetings of 1954 and 1955.

Among his activities after retiring from the public service, Edmunds continued to put his geological knowledge at the disposal of the community on questions of planning in the County of Surrey.

It is sad that the fatal recurrence of an illness he had suffered three years previously prevented Edmunds

from enjoying longer a happy retirement in the beloved Mole valley where he had made his home since 1939. His wife and daughter will know that his memory will long be cherished in the Dorking and Mickleham district for his activities both as townsman and countryman, and the delight he took in music and musical affairs.

S. C. A. HOLMES

NEWS and VIEWS

Earth Satellite 1960c

THE heaviest satellite yet to be placed in orbit about the Earth was launched from the U.S.S.R. at about 00 hr. U.T. on May 15. Its total weight, excluding the final stage of the rocket which took it into orbit, is 4,540 kgm. (10,010 lb.), more than three times as heavy as *Sputnik 3*, which was launched two years earlier. The satellite, which has been called *Korabl'-Sputnik* or space-ship satellite, consists of a pressurized cabin weighing about 2,500 kgm., which contains a dummy astronaut and all apparatus necessary to keep a man alive in space, together with extensive instrumentation, weighing about 1,500 kgm. The satellite carries various radio transmitters, with the main one operating on a frequency of 19.995 Mc./s. The chief purpose of the satellite is to test the design of the cabin, and the first measurements made by the instruments suggested that the environment in the cabin was suitable for human survival. It is stated that the cabin is to be detached from the remainder of the satellite; it will then probably burn up in the atmosphere, since it is not designed to withstand re-entry.

The orbit of the satellite, like that of *Sputniks 1, 2 and 3*, is inclined to the equator at an angle near 65°. The initial period of revolution was 91.2 min., corresponding to a semi-major axis of 6,713 km., and the orbit was nearly circular, having an eccentricity of about 0.0048. The satellite was at perigee when going north at a latitude near 54° N., the perigee height being about 320 km. (200 miles) and the apogee height about 380 km. (235 miles). The lifetime of the satellite is uncertain, being dependent on conditions after the separation of the cabin, but does not seem likely to be more than a few months. At latitudes between 40° N. and 60° N. the satellite will be favourably placed for observation in the night sky during May and June. The final stage of the launching rocket separated from the satellite on entering orbit.

Cryptogamic Botany at Manchester :

Prof. J. Colhoun

DR. JOHN COLHOUN, reader in mycology and plant pathology in the Queen's University, Belfast, has been appointed to the chair of cryptogamic botany in succession to Prof. C. W. Wardlaw, who now occupies the George Harrison chair of botany in the University. Though his published work lies in the fields of mycology and plant pathology, of which he is a distinguished exponent, Dr. Colhoun is also a botanist of wide experience. He entered the Queen's University of Belfast in 1930, graduated in science in 1933 and in agriculture in the following year. The next four years were spent in research at the Department of Agricultural Botany in Belfast and at the Imperial College of Science and Technology, London.

He returned to Belfast in 1938 to the Department of Plant Pathology and from 1940 up to the present has held posts in the Departments of Agricultural Botany and of Mycology and Plant Pathology. Since 1939, he has held, concurrently with his University appointments, corresponding posts in the Plant Pathology Division of the Ministry of Agriculture of Northern Ireland. During 1942-49, Dr. Colhoun was warden of the Queen's Elms hall of residence for men in Belfast and has also held other University posts. During the past twenty-five years Dr. Colhoun's researches have been directly related to fundamental problems in plant pathology, particularly in relation to plant environment, the control of the diseases of economic plants, and the investigation of the physiology of various fungi. He has also co-operated with geneticists in a programme of breeding disease-resistant plants. He is the joint author of a book on "The Diseases of the Flax Plant", the author of an important monograph on "Club Root Disease of Crucifers" and of many contributions to scientific journals.

Physiology at the London Hospital Medical College:

Prof. K. W. Cross

KENNETH WILLIAM CROSS, who has been appointed to the chair of physiology in the London Hospital Medical College, in succession to Prof. J. L. D'Silva (see *Nature*, 184, 405; 1959), entered St. Mary's Hospital as a Scholar soon after the outbreak of the Second World War. After qualifying, he held a research studentship in the Wright-Fleming Institute, and having obtained the M.R.C.P. spent the remainder of the War as casualty physician at St. Mary's and as resident physician to the E.M.S. Hospital at Amersham. After the War, he worked for a year with the Friends' Ambulance Unit in China and taught at Cheeloo University. On his return in 1947 he was appointed lecturer in physiology in St. Mary's Hospital Medical School and soon afterwards also clinical assistant on the Pædiatrics Unit of the Hospital. He then settled down to study respiration and metabolism in the new-born infant, and this has remained his principal interest. He devised an accurate method for determining the infant's respiratory movements and oxygen consumption, and made a special study of the effects of lack of oxygen. The value of his investigations was soon recognized by the Sir Halley Stewart Trust and by the Medical Research Council. In 1951 he became joint organizing secretary of the symposium on anoxia of the new-born infant, arranged in London under the auspices of the International Organization of Medical Sciences. He remained at St. Mary's, being appointed reader in human physiology in 1953 and reader in physiology in 1956, and obtaining the degrees of Ph.D. and D.Sc.