1/6 NEWS and VIEWS

Physical Chemistry at Manchester :

Prof. M. G. Evans, F.R.S.

PROF. M. G. EVANS goes from Leeds to Manchester this month to succeed his former teacher and collaborator, Prof. M. Polanyi, in the chair of physical chemistry. In 1939 he was appointed to the chair of physical chemistry in the University of Leeds, made vacant by the death of Prof. H. M. Dawson, and in 1945, when Prof. R. W. Whytlaw-Gray retired and the Departments of Inorganic and Physical Chemistry were fused, he became the senior professor in the combined department (see *Nature*, 156, 386; 1945). Immediately on appointment to Leeds, Prof. Evans found himself confronted with all the problems of adapting the work of an important teaching and research school to war-time conditions; but not content merely to keep an efficient department going, he laid the foundations for the great developments which have since taken place. His infectious enthusiasm for his subject has been as effective in teaching as in research, and the inspiring originality which he brought to bear on the organisation and conduct of the teaching of inorganic and physical chemistry in Leeds will long continue to exert its influence there.

Prof. Evans' researches in many fields of physical chemistry were recognized by his election to the Royal Society in 1946. While in Leeds he has contributed largely to the knowledge of the reactions of free radicals in aqueous solution, with special reference to polymerization reactions. His work has been characterized by a particularly happy combination of experiment and theory, and his theoretical work on the energetics and kinetics of free radical and polymerization reactions has been especially noteworthy. He has also made important contributions to the study of oxidation-reduction reactions and of diffusion problems. During the War Prof. Evans played a leading part in planning and carrying out investigations on chemical defence problems. His activities ranged over a wide field, and whether in committee work, in theoretical discussions or in practical breathing tests in toxic clouds, he did not spare himself. During the past nine years, Prof. Evans has given unstinting service to the University of Leeds as a whole. His transference to Manchester will be felt not only in the Council, Senate and lesser bodies at Leeds, but also by many of his colleagues who have been accustomed to rely on his wisdom, good judgment and human sympathy for help in a variety of matters often very remote from chemistry.

Mining at Birmingham :

Prof. S. G. Ward

PROF. STACY G. WARD has accepted the invitation of the Council of the University of Birmingham to the chair of Mining and to become director of the Mining Department; he is relinquishing the chair of chemical engineering which he has held since 1946. Prof. Ward obtained his fundamental scientific and engineering education in the Imperial College of Science and Technology, London, and carried out research in pure chemistry before transferring to research on coal. He has been intimately connected with the mining industry since 1930, when he joined the Powell Duffryn Company. For three years prior to appointment in 1937 to the staff of the Mining Department at the University of Birmingham, he was field research and liaison officer to the British

Iron and Steel Federation. He was acting professor of mining from 1943 until the appointment of Prof. T. David Jones in 1947, and, at the request of the Faculty of Science, became acting head of the Department after Prof. Jones' death in that year.

It is intended to expand the Department of Mining at Birmingham, which includes coal mining, coal preparation and treatment, metalliferous mining and mineral dressing, not only on the teaching side but also, and particularly, in connexion with research. Special attention will be paid to teaching fundamental subjects and principles involved in mining, and it is hoped to reserve time in the course for liberal studies. The research work will be expanded, in the first place, on that now in progress on fundamental problems of ventilation, drilling, mine lighting, mineral dressing, coal constitution, spontaneous combustion and coal cleaning (on which Prof. Ward has had a team working for some time). Special post-graduate courses for those who have had industrial experience will be introduced. The reorganised Department will eventually be accommodated in new buildings and laboratories which have already been planned but for which building permits cannot yet be obtained.

Physiology at Liverpool :

Prof. R. A. Gregory

DR. R. A. GREGORY, who has recently been appointed to the Holt chair of physiology in the University of Liverpool, is an honours graduate in physiology of the University of London (University College). While at University College he held the Bayliss-Stalling Memorial and Sharpey Scholarships, and received College and University awards. His work up to that time had been on biochemical problems of carbohydrate metabolism, the circulation, with particular reference to the metabolism of the heart, and the resistance of the body to hot environments. In 1939 he was awarded a Rockefeller Foundation Fellowship, spending most of his time in A. C. Ivy's laboratory in Chicago, where he became interested in problems of the gastro-intestinal tract. On his return to Great Britain, the surgical technique he had acquired enabled him to make valuable contributions to one of the war-time research projects fostered by the Ministry of Supply. After the War, during which he held the post of lecturer at University College, he was appointed senior lecturer in the University of Liverpool and resumed his work on the fundamental physiology of digestion. In addition to numerous papers in physiological journals, he has contributed chapters to Wright's "Veterinary Anaesthesia" and Winton and Bayliss' "Human Physiology". Prof. Gregory succeeds Prof. W. H. Newton, who has been appointed to the chair of physiology at Edinburgh.

Wellcome Chemical Research Laboratories :

Dr. S. Smith

DR. SYDNEY SMITH, who recently retired from his appointment as director of the Wellcome Chemical Research Laboratories, will retain a connexion with the Wellcome Foundation, Ltd., as consultant. Dr. Smith joined the staff of the Wellcome Chemical Works at Dartford in 1914 and served for many years as head of the experimental laboratories. He initiated and developed many important technical processes, and in pure research became well known for his discovery of digoxin. He became works manager in 1936, and in the following year was appointed a director of the Wellcome Foundation,

Ltd. In 1941 he left the works in order to establish the new Wellcome Chemical Research Laboratories at Beckenham. Here, after setting up temporary laboratories, he was responsible for the planning and development of the extensive permanent laboratories opened in 1946.

715 A Giant Meteorite

IN the issue of *L'Astronomie* for October 1948 there is an account of an enormous meteorite which, on February 12, 1947, fell in the Sihot-Alin chain of mountains in the vicinity of the Amoor River, Eastern Siberia. M. Krynov, secretary of the Commission of Meteorites of the Academy of Sciences of the U.S.S.R., who took part in the expedition which investigated the nature of the phenomenon, states that this meteorite is probably one of the largest that has ever struck the earth, and M. Fessenkov, who presides at the work conducted on meteorites, believes that the object was a minor planet. The fall was observed by the inhabitants of towns and villages over a radius of 200 kilometres around the place of impact, and those who were questioned agree that the body was moving from north to south, that its time of flight was between four and five seconds, and that it was more brilliant than the sun which was then shining on a beautiful morning in a clear sky. The noise of the fall and of a series of explosions which accompanied the flight of the object could be heard at distances of 200 km. Preliminary estimates of its mass give this as about a thousand tons.

It has been estimated that the speed of the meteorite was about 20 kilometres a second and that its surface temperature, acquired by friction with the atmosphere, was of the order of 5,000° C. It broke up into thousands of fragments of various sizes, and these lost their speed by friction with the atmosphere, falling on the earth merely by its gravitational attraction. Pieces were found over an area represented by a circle of 12 km. radius. In an oval sector of 0.75 sq. km. the members of the expedition found more than a hundred funnels in the rocks, caused by the fall of the debris, the diameters of these funnels varying from 0.5 to 28 m., and some of them attained a depth of 6 m. All around were found trees overthrown or damaged, and a number of large cedars were found split in two. On examining very carefully the neighbourhood of the fall, the expedition of 1947 discovered 257 fragments of the meteorite, varying in weight between 0.16 gm. and 1.8 tons, and about 5 tons of cosmic iron were collected, while the next expedition in 1948 collected about 4 tons more. Aerial photographs of the region were taken during 1948, and about 48 sq. km. have been declared a closed district and placed at the disposal of the Academy of Sciences of the U.S.S.R. for five years.

56 Jurassic Holosteii

THE questions of the classification of the fishes and of the interrelationships of the different groups are occupying the attention of modern zoologists. In such a study, which involves fossil forms, a consideration of the bones of the skull and their homologies must play an important part. The dermal bones, among other skeletal structures, are often quite well preserved and so have received much attention. On the other hand, the neurocrania, being partly obscured by the dermal bones and only capable of study in particularly well-preserved specimens, are nothing like so well known although quite important. Hence

the interest of a study of the neurocrania of some Jurassic Holosteii recently made by Dr. Dorothy H. Rayner (*Phil. Trans. Roy. Soc., B*, 601; 1948). A special technique involving the grinding of the specimen and the taking of a series of transfers 0.1 mm. apart was elaborated from a previous method suggested by E. C. Case in 1937. An appendix describes the technique fairly fully, and it will probably be of use in other lines of work involving the sectioning and reconstruction of fossil material. In spite of considerable variation in the neurocranial ossifications, which differ among closely related forms and apparently in the same species with difference of age, there is, save in the supraoccipital and postotic regions, sufficient similarity to allow of broad homologies being drawn. This and other evidence adduced suggests that the Jurassic Holosteii may be regarded as a natural group. Two particular points may be noted. There is sufficient similarity between the neurocrania of the Jurassic *Lepidotus* and the living *Lepidosteus* to suggest relationship between them, and in *Caturus* and *Dapedius* there is a lateral cranial canal without external opening to which, at present, no function can be assigned.

Mental Health and World Citizenship

THE World Federation for Mental Health has published as a booklet a statement produced by the International Preparatory Commission for the International Congress of Mental Health which met in London in August 1948. Although the statement will appear in the published Proceedings of the Congress, the expressed wish that it should be given a wide circulation has resulted in its production in the present form. The International Preparatory Commission sat for a fortnight prior to the Congress and was made up of twenty-four persons from ten different countries representing the points of view of sociology, psychology, psychiatry, social work, anthropology, political science, philosophy and theology. As the raw material for its deliberations, reports were available from three hundred preparatory commissions composed of about five thousand workers in the different fields who had been working during the preceding year in twenty-seven countries. The booklet is obtainable from H. K. Lewis and Co., Ltd., 136 Gower Street, London, W.C.1.

Family Health Service in South Africa

THE current issue of *Biology and Human Affairs* (14, No. 2; Autumn 1948) contains an article on the Family Health Service in South Africa, where twenty health centres have been established in various parts of the country by the Ministry of Health. A description is given of the Polela Health Centre which was set up in 1940 in a rural native reserve in south-western Natal. The family health service was first applied to a small area within the reserve and was gradually extended until, within four years, almost six thousand people were included in the scheme. This has led to a marked improvement in the health indices in that part of Polela where the family health service is in operation, and other health services have now been planned for the reserve, so extending the facilities to the entire population of the area. The article contains a detailed account of the way in which the service has been organised.

Humanitas

THE autumn number of *Humanitas*, just issued, completes the second year of publication of this