

granular corpuscles had an important relationship to the bacilli, though he was unable to prove what that relationship might be. This was in 1878, six years before Metchnikoff discovered them to be phagocytes, and at a time when Evans himself did not know even how to fix and stain microbes in the blood for microscopic observation.

In 1880 Evans began his work on surra. He was requested to proceed to Dera Ismael Khan, where surra had been fatal to horses and camels for many years; and upon studying the reports which had already been made upon the disease he at once reached the opinion that it was due to a parasite of the blood—an opinion which had never before been formed. After much opposition, he gained permission to carry out his investigations with a free hand, to make what experiments he wished upon sick and healthy animals, and to kill the animals at any stage of the disease. His first act was to examine microscopically the blood of a surra patient: it was swarming with parasites. Though Koch had not yet made his classical postulates, and though Evans did not know the nature of the microbes revealed to him, he immediately associated them with the production of the disease. They were the parasites which, at first called *Trichomonas evansi*, are now known as *Trypanosoma evansi*.

Evans at once took steps to show his newly-discovered microbes to Dr. Timothy Lewis, the discoverer of the parasite in the blood of the brown sewer rat—now called *Trypanosoma lewisi*. Without hesitation Lewis declared that the two parasites were, with some slight difference, morphologically alike; but he emphatically denied that they were pathogenic. His rats were, in his opinion, healthy, and he did not believe that Evans's microbes were the cause of surra. Nevertheless, Evans continued his investigations eagerly, seeking to prove that a definite relationship existed between the variable number of the parasites present in the blood and the course of the symptoms. Official opinion was strongly against him. In fact, in Evans's own words, the Surgeon-General, the Chief Sanitary Officer and all the senior medical officers "sat upon me heavily", but the Government printed his reports, and he had the gratification of knowing that his statements spurred on a number of younger men to continue investigations along lines which he had laid down.

Evans returned to England in 1885, and after further work in Crookshank's laboratory, King's College, London, retired from the army in 1890. In 1917 he was awarded the Mary Kingsley Medal by the Liverpool School of Tropical Medicine, in recognition of his distinguished scientific work, and on that occasion he wrote a short autobiographical memoir, which was published in vol. 12 of the *Annals of Tropical Medicine and Parasitology*. A year later the Royal College of Veterinary Surgeons awarded him its John Steel Medal.

Dr. Griffith Evans celebrated his hundredth birthday in August last, when he was the recipient of a presentation scroll from the Royal Veterinary College and of many congratulatory messages (see NATURE, August 3, p. 173 and August 17, p. 251).

Dr. J. H. Breasted

We regret to record the death of Dr. J. H. Breasted, the well-known Egyptologist, founder and director of the Oriental Institute of the University of Chicago, which took place on December 2, in the Medical Center Hospital, New York, at the age of seventy years. Dr. Breasted, who had returned to the United States from Italy only a few days previously, was thought to be suffering from an attack of the tropical malaria to which he had been subject for some years; but his illness proved to be due to hæmolytic streptococci, and terminated fatally.

James Henry Breasted was born on August 27, 1865, and was educated at the Chicago Theological Seminary and the University of Berlin. At the latter, he devoted himself particularly to Egyptological studies; and, indeed, the abiding influence of the Berlin school of thought was apparent throughout his work. In 1894, he became assistant in Egyptology in the University of Chicago, and in 1901 was made director of the Haskell Oriental Museum. Among other university appointments, he occupied the professorial chair in Egyptology from 1905 until 1933. His more important activities outside the University included a mission to the museums of Europe in 1900 to prepare documents for the Imperial Egyptian Dictionary for a commission of the Royal Academies of Germany, and the direction in the field of the expedition of the University of Chicago to Nubia in 1905-7.

By the close of the first decade of the present century, Breasted's international reputation as an Egyptologist and an ancient historian stood high, owing in no small measure to his attractive, and at the same time scholarly, "History of Ancient Egypt" (1905), and his excerpts from original documents of the Egyptian historical records, of which he had published five volumes. His strength, however, as was proved by his later activities, was even greater in the organisation of research than in his quality as a research worker. His interests had transcended the bounds of Egyptology and at a comparatively early stage of his career he had begun to formulate plans for a scheme of research into the origins and growth of civilisation on a grand scale, the theatre for its operation—the ancient East—being determined by the fact that here the lengthy span and the continuity of man's existence as a member of organised society could be investigated on archaeological sites with a wealth of detail that was impossible in any other part of the world.

These plans did not attain fruition until after the Great War. As the result of an expedition of reconnaissance through the Near East in 1919-20, Breasted mapped out a plan of campaign for research in the field which covered all the main historical, geographical and chronological strategic points in Egypt and Western Asia, extending from the time of palæolithic man in the Nile Valley and Mesopotamia down to the days of the Persian Empire. As a necessary complement and accompaniment was an institute for the interpretation of results and further research at headquarters in Chicago, which so far as library and laboratory work were concerned was to be duplicated on a reduced scale at headquarters

in the field. Thanks to the generous assistance of Mr. J. D. Rockefeller, Jr., who accompanied Breasted on a tour of the chief pivotal sites of his scheme, it became possible to put the plan into operation; and it took material form as the Oriental Institute, which, as Breasted stated, at the time of the formal dedication of its own building in December 1931, in addition to its activities in Chicago, had no less than eleven expeditions at work in the field at one time. The placing of these expeditions in reference to the respective phases of historical and cultural research which Breasted anticipated that each would elucidate, showed a masterly grasp of the essential movements of ancient history, a quality conspicuous in what are perhaps his best known works "The Development of Religion and Thought in Ancient Egypt" (1912) and "A Survey of an Ancient World", "Ancient Times: a Survey of the Early World" (1916), and "The Dawn of Conscience" (1933).

WE regret to announce the following deaths:

Prof. J. S. Mackenzie, emeritus professor of logic and philosophy in the University College of South Wales and Monmouthshire, Cardiff, on December 6, aged seventy-five years.

Prof. Charles Richet, professor of physiology in the Faculty of Medicine, University of Paris, on December 4, aged eighty-five years.

Sir Alfred Sharpe, K.C.M.G., C.B., formerly governor of Nyasaland, who was well known as a traveller and big-game hunter, author of "The Backbone of Africa" (1921), on December 10, aged eighty-two years.

Lieutenant-Colonel E. W. White, C.B.E., emeritus professor of psychological medicine in King's College, London, on November 28, aged eighty-four years.

News and Views

The Ultimate Value of Science

IN a recent address on "Ultimate Values of Science" before the Commonwealth Club of San Francisco, Dr. J. C. Merriam, president of the Carnegie Institution of Washington, discussed the question whether, by reason of science or research, the world has been made a better place in which to live, or life has become more worth while. Referring first to the way in which better use is being made through science of natural resources, Dr. Merriam pointed out that though we have still a long way to go in learning to control the living world, the way has been marked out, and mankind may be expected to follow it. Moreover, organisation of society has made possible the transmission of knowledge from one generation to another, and science in particular has made possible the recording and continuous development of knowledge in a way which no one generation could achieve alone. The whole capacity for constructive work has been increased, and science is gradually giving us a new outlook over the universe, with ample opportunity for appreciation of life and a new attitude towards its problems. The scientific point of view and the humanistic point of view require adjustment, if the full value of science, art, philosophy and religion is to be secured for mankind.

DR. MERRIAM urged that science, by reducing the uncertainties of life, increasing the assurance of progress and broadening the possibilities of achievement, has increased the opportunity for constructive living and thus favoured the development of the individual. He insisted that the problem of leisure should be considered primarily in terms of opportunity, and that it is essential to guard against a narrow vision in facing this and other problems of

citizenship. The direct facing of the issues, the honest use of all the knowledge gained, is the surest way to recovery, and the wide acceptance of an attitude of mind illustrated by the pattern of scientific thought with its persistent search for facts upon which to base judgment and its broad vision over the world of things and events is an urgent need. The building of a better world depends upon the quality of intelligence used and upon clarity of vision, as much as upon thorough investigation and correlation of the facts.

Romanticism and the Modern World

AT the Royal Institution on December 6, Mr. F. L. Lucas, fellow and librarian of King's College, Cambridge, delivered a discourse on this subject. Romanticism, he said, may perhaps be called the literature of intoxication and dream. Freud has pictured the human ego as living a harassed life between the conflicting claims of the instinctive, animal 'id', the 'super-ego' or sense of social obligation, and the 'reality-principle' or sense of fact. Eighteenth-century classicism shows above all a too tyrannical control, by the two last, of the dreams and impulses that rise from the less conscious depths of personality. The Romantic revival was a revolt of dreamers against those twin sleepless dragons—'good sense' and 'good taste'. Though the Romantic Empire declined and fell, at its heart remains an eternal city. Romance is not dead. The science of the nineteenth century seemed to expel her with a brandished test-tube; the science of the twentieth re-opens the door to her with a bow. Yet this should not be exaggerated. The recently expressed view that poetry is independent of truth, a mere alcohol to stimulate 'emotional attitudes', is in its turn