

which have endowed them with an accuracy comparable with the corresponding optical instruments. It is amazing to look back over the last twenty years to the experiments with which this work began, and to compare their crudity, which nevertheless could not hide their obvious importance or the magnificence of their promise, with the finish of to-day. It is largely to Prof. Siegbahn that we owe the modern precision, and the fulfilment of that promise. His extremely accurate measurements of the lengths of the waves which the various atoms emit, serve as definite indications of their internal structure, and every improvement has brought new and valuable information. Not often has refinement of instrumental design and use brought such a plentiful and immediate harvest. It is interesting to note that it was Ångström, also a Swede, who first realised the accuracy in optical measurements which necessitated the choice of a special unit of length for their description. Ångström himself measured the lengths of waves of light and found them to be a few thousand of his units: the wave-lengths of X-rays are of the order of a single unit.

#### Dr. Michael Polanyi

DR. MICHAEL POLANYI has accepted a chair of physical chemistry in the University of Manchester, and will take up the post at the beginning of the next session. Dr. Polanyi, who is a Hungarian by birth, studied medicine in the University of Budapest and chemistry in the Technical High School of Karlsruhe. After service as surgeon with the Austrian forces during the War, he became assistant to Prof. Hevesy, professor of theoretical chemistry at the University of Budapest. In 1919 he returned to Karlsruhe, since when he has held posts in the Kaiser-Wilhelm Institute for Textile Chemistry, the Technical High School in Berlin, and the Kaiser-Wilhelm Institute for Physical and Electro-chemistry. Dr. Polanyi is a well-known physical chemist. His first notable research was a theory of adsorption, published in 1917; he has also made discoveries in connexion with the structure of cellulose and the mechanical properties of metals and other solids. His present investigations relate to the theoretical and experimental study of reaction kinetics and the mechanism of chemical reactions. It is this line of research which, it is anticipated, he will pursue in Manchester.

#### Johann Jacob Scheuchzer, 1672-1733

THOUGH as a science, the birth of geology dates only from the latter part of the eighteenth century, prior to that many men had been interested in the study of rocks and fossils and had recorded valuable observations. Among these men was the Swiss doctor, Johann Jacob Scheuchzer, the bicentenary of whose death occurs on June 25. Born at Zurich on August 4, 1672, Scheuchzer qualified as a doctor at Utrecht and paid some attention to mathematics. For many years he held a professorship in his native city. His main interest, however, was in natural history and especially in fossils and minerals. He translated Woodward's "Natural History of the

Earth" into Latin and published several works of his own. Included in these was his "Itinera per Helvetiæ Alpinas Regiones" (1702-11), in which for the first time glaciers are mentioned as a subject for scientific investigation. He gave careful descriptions of several glaciers he had visited and explained their movement as a result of the infiltration and freezing of water in cracks and other spaces. He was thus the founder of the theory of dilatation, afterwards advocated by Charpentier and Agassiz. His natural history of Switzerland contains a special chapter dealing with what Scheuchzer thought were fossils left by the Great Deluge, and towards the close of his life he thought he had discovered in the beds at Oeningen, between Constance and Schaffhausen, the skeleton of one of the "infamous men whose sins brought upon the world the dire misfortune". But the supposed *Homo diluvii* was afterwards shown by Cuvier to be a reptile and it was called *Andrias Scheuchzeri* in honour of its discoverer. The specimen was presented to the Teyler Museum at Haarlem.

#### Vivisection of Criminals

THE BISHOP OF DURHAM set the ball of controversy rolling when he delivered the eighth Fison memorial lecture on June 15 at Guy's Hospital on "Ethical Conditions of Scientific Method". After discussing the case for and against vivisection of animals, he submitted the question whether in no case might man be subjected to vivisection in the interest of science. Dr. Henson asked if there was any objection to the vivisection of criminals who, by the law of their country, had been condemned to death. In their case, the issue of inherent rights could not be raised, for these had already been cancelled, and they were dealt with penally on this hypothesis. Why should not the punishment of a criminal take a form which was serviceable to the community? Why should he not at least be given the opportunity of making in this way some atonement for his sins against society? At present, deductions drawn from the responses of the anthropoid apes or even dogs have to suffice, where direct experiment on man would present a speedier route to knowledge. This applies to human physiology, especially of the nervous and digestive systems and in a lesser degree to pathology as regards infectivity and immunity. There is, of course, the possible difficulty to be encountered in finding an experimenter, at any rate in England, who would impose conditions which might not meet with the penal requirements. In any event, the subject bristles with difficulties the discussion of which would take up more space than is available in these columns.

#### International Ornithological Congress

THE eighth International Ornithological Congress is to be held at the University of Oxford in July 1934, under the presidency of Dr. E. Stresemann, of Berlin. The International Ornithological Congress was originally held every five years, but at the last Congress, at Amsterdam in 1930, when the president was Dr. E. Lönnberg of Sweden, it was decided to hold it

every four years. The last meeting of the Ornithological Congress in England was at the Imperial Institute, London, in 1905, with Dr. R. B. Sharpe as president. In 1910 it was held in Berlin, and it was proposed to hold the 1915 Congress at Sarajevo, Yugoslavia, but in the meantime the War broke out and no further Congress was held until 1926, when, mainly through the efforts of Dr. Ernst Hartet, keeper at Tring Museum, it was resumed at Copenhagen. Preliminary arrangements have already been made for the 1934 Congress at Oxford, and the Rev. F. C. R. Jourdain, of the British Ornithologists' Union, has been elected honorary secretary. Dr. P. R. Lowe, of the British Museum, has been elected chairman of the executive committee, which includes Lord Rothschild, Lord Scone, Dr. C. B. Ticehurst, Dr. Sclater, and Messrs. Stuart-Baker and H. F. Witherby, president of the British Ornithologists' Union.

DELEGATES to the Congress will include the leading ornithologists from all parts of the world, particularly Australia, New Zealand, Argentina, Brazil, Japan, India, the United States, Canada, and all European countries. The problem of oil pollution of the sea, whereby hundreds of sea-birds, including many rare species, are annually being destroyed especially on the North Atlantic shores, will be a prominent feature of the section on bird protection, while the practice of 'ringing' as a means of tracing bird migrations will also be discussed. One of the most important items, however, is the project for founding an Institute of Ornithology at the University of Oxford, which it is hoped to develop out of the existing scheme of research in economic ornithology at Oxford, the grant for which expires in September, 1933. The new institute is intended to be a national centre for field ornithologists as the British Museum is for systematists. £8,000 is needed to run the Institute for a preliminary five years while steps are being taken to put it on a more permanent basis. An appeal will be made not only for funds but also for gifts of books, field notes and photographs, etc., for equipping it. It is also proposed to arrange at least one long excursion to study British bird life, and South Wales will probably be chosen as the area to visit though several shorter excursions are to be made. The lectures and papers are to be given in English, French, German and Italian.

#### New Buildings of the University of London

UNDER the title "The New Buildings for the University of London" (The Dryden Press) Mr. T. Ll. Humberstone has published a 'symposium', in which a contribution to *NATURE* (July 9, 1932, p. 49) is reprinted, followed by an explanation of the plan of the proposed buildings by the architect (illustrated), and expressions of opinion from architects and laymen and a supplementary note by Mr. Humberstone himself. It will be remembered that Mr. Humberstone in his original article, after a brief summary of past difficulties and controversy connected with the accommodation of the University, expressed certain

misgivings in regard to the suitability of the proposed buildings, especially in relation to the provision for scientific research. These views are now supplemented by critical comments from others. Prof. S. D. Adshead, professor of town planning in the University, for example, remarks that "if only on account of its rigidity—the system must fail". In his supplementary note, Mr. Humberstone reverts to his previous contention that the University buildings should make provision for an institute for scientific research, pointing out the unsuitability of the scheme, as well as the unnecessary expense involved, for the purpose, and discusses the bearing of the conception of the University as a federation upon the development of facilities for research as part of the equipment and organisation of the University, as distinct from its constituent colleges.

#### San Diego Museum

LOCAL patriotism flourishes perennially in the United States. As part of a campaign "Know your San Diego", Mr. Malcom J. Rogers, curator in anthropology in the Museum of San Diego, has recently broadcast a lecture, in which he gave an account of the origin and growth of the collections. The nucleus of the museum was an exhibit at the Panama-California Exposition of 1915-16. The organisers of the exhibition, in consultation with officials of the U.S. National Museum, spent some three years in getting together a collection to illustrate the origin, racial types and culture of man. Expeditions were sent to Asia, Africa, South America, the Pacific and the Arctic for material and the collections then made were housed in the only permanent building in the exhibition, the California Quadrangle, which is still its name, as it had been intended from the first that what, it was hoped, would be a unique educational exhibit, should "not be a thing for the moment, but an enduring institution for the benefit of the people of San Diego and its visitors". At the close of the exhibition the collections were transferred to a permanent Museum Association in trust for the people of San Diego. Dr. Edgar L. Hewett, of the Archaeological Institute of America, who had been responsible for this department during the exhibition, was made the first director of the Museum. Constant additions have been made to the collections, which are now so extensive that it is possible only to show the exhibits in rotation. They are arranged departmentally, to illustrate man's origin (by casts), physical types, and culture in the past and present. The archaeology of Central America and the Mayas is abundantly illustrated, the most striking and best-known buildings and monuments being represented by replicas. The pride of the Museum, however, is the collection from the south-western States and, more particularly, that from Southern California, the latter being unique and beyond question the most complete in existence.

#### Bird Life on Ailsa Craig

A REPORT on bird life on Ailsa Craig was submitted to Ayr County Council on May 30, the Earl of Glasgow presiding, following a communication from the