

presided, the premier honours were accorded to the Abbe H. Breuil, who was present to receive the Petrie Medal awarded him in recognition of his services to archæology. The study of the origin and growth of civilisation from its earliest beginnings down to historic times is fortunate at the present day in having in its service a number of brilliant exponents in practice and in theory of archæological methods of investigation, whose authority receives world-wide recognition. Among these, the Abbe Breuil is a commanding figure. For a generation he has stood in the front rank of French archæologists. His investigations in the caves and occupation sites of palæolithic man in France, Spain and North Africa have added a mass of facts to the sum total of our knowledge of the history of man's early development, while his personal examination of all the more important archæological sites, and the archæological and palæontological material derived from them, throughout the world has given breadth and vision to that innate aptitude for the analysis of evidence and the logical classification of scientific data, which has won acceptance of his verdict in all questions relating to prehistoric archæology as a final court of appeal. The ovation given the Abbe Breuil at the close of the more formal proceedings of the assembly on Foundation Day was no more than an endorsement of an award, which in the fullest sense of the term was deserved.

#### Rudolph Fittig (1835-1910)

THE centenary of the birth of Rudolph Fittig, who made important contributions to the development of organic chemistry, falls on December 6. His early scientific work was carried out at Gottingen where he was assistant to Wöhler, and became *Privatdocent* in 1860 and professor in 1866. Whilst at Gottingen, Fittig was the late Sir William Ramsay's tutor (1871). From 1876 until his death, he was professor of organic chemistry at Strassburg. He is best remembered for his synthesis of the higher hydrocarbons, particularly the benzene homologues, by the action of sodium upon alkyl or aryl halides or on mixtures of both. It is not so generally realised that Fittig also studied the action of sodium on aldehydes and other series of organic compounds and carried out extensive researches on unsaturated acids. In the course of this work he prepared a number of sets of isomeric (active and inactive) acids and showed their relationships. He suggested a 'ketone' formula for benzoquinone in 1873 and this was afterwards adopted under the title of 'quinonoid structure' for this type of compound.

#### Johann Faulhaber (1580-1635)

AMONG the victims of the plague which ravaged Central Europe during the middle years of the Thirty Years' War was Johann Faulhaber. The exact date of his death, which occurred at Ulm in 1635, is unknown. Like Schickard (see NATURE of October 19, p. 636), Faulhaber was a mathematician of distinction. He dabbled in alchemy, announcing in 1621 that he would produce from one measure of gold two

measures of the same metal of the finest quality. In spite of this unsubstantiated claim, he enjoyed a wide reputation as an able mathematician and as a constructor of ramparts and fortifications. He was visited in 1620 by Descartes, who was then serving in the French army in Germany.

#### A New Blue Pigment

THE introduction of a new insoluble blue pigment by Imperial Chemical Industries, Ltd., is of much more than passing interest. Monastral Fast Blue BS has none of the various drawbacks of the long-known Prussian blue and ultramarine or the more recently discovered blue lakes derived from coal tar colours, and will inevitably replace them in paints, distempers, varnishes, enamels, in textile printing and in the pigmentation of rubber, plastics and cements. As it is a very close approximation to a true 'minus red', the new pigment allows much brighter greens and purples to be obtained by admixture. The remarkable stability and inertness of the pigment are manifest in its exceptional fastness to light, heat, acid or alkali, and its complete insolubility in water, oil, spirit and nitrocellulose solvents. This new pigment belongs to a class of coloured substances to which the name 'phthalocyanine' was applied by Linstead, who first made clear their chemical nature (1934). The first phthalocyanine was obtained fortuitously as a by-product during the production of phthalimide at the Grangemouth Works of Scottish Dyes in 1928. It was a compound containing iron united with four molecules of phthalonitrile. Monastral Fast Blue BS is the corresponding copper derivative. Structurally, it is an aggregation of four *isoindole* units linked in a 16-membered ring of alternate carbon and nitrogen atoms around a central copper atom. The metal is held by two covalent and two co-ordinate bonds to four nitrogen atoms. The phthalocyanines are closely related to the porphyrins, which form the basis of some naturally-occurring colouring matters such as chlorophyll. Apart, therefore, from the value of the pigment in the arts, its chemical nature confers upon it a considerable scientific interest.

#### Darwiniana for Down House

THE British Association has recently received from Prof. Van Dyck a holograph letter of Charles Darwin's which must be one of the last from his pen, since it is dated April 2, 1882, only seventeen days before his death. The letter typifies the care and courtesy with which Darwin considered work sent to him by fellow-inquirers. He tells the young Dr. Van Dyck that "After much deliberation I have thought it best to send your very interesting paper to the Zoological Society in hope that it will be published in the Journal". He has preferred this journal to NATURE, which "has a wider circulation but is ephemeral". The journal, however, is "much addicted to more systematic work", so that if the paper be rejected by the Society it is to be offered to NATURE, as "I am very anxious that it should be published and perused". The Association has also