

PROF. W. A. BONE will deliver a lecture on "The late W. A. Haward's Experiments upon the Combustion of Hydrogen-Carbon Monoxide at High Pressures" before the Royal College of Science Chemical Society on Friday, November 11. The lecture is intended as a memorial to Mr. Haward, who lost his life in December last through an accident while carrying on research on the subject of the lecture.

THE MARQUESS OF CREWE will preside at the annual dinner of the Old Students' Associations of the Imperial College of Science and Technology, London, to be held on Thursday, November 24, at the Trocadero Restaurant, London, W.1. He will be supported by distinguished guests, the governors, and by past and present professors and staff of the college and its constituent colleges.

THE usual winter courses of the Ecole d'Anthropologie will begin at Paris on November 4. The ten professors all continue their teaching on the branches of anthropology with which they are concerned, and their number has been augmented by the appointment of M. Paul Boncour as professor of criminal anthropology. Conferences will be held by M. G. Courty on the petroglyphs of the region round Paris, by M. Dubreuil-Chambardel on the geography and anthropological history of the basin of the Loire, and by M. Saintyves on the origin of *contes*, and the *contes* of Perrault considered in the light of anthropology and ethnography.

THAT Battersea Polytechnic, like most other institutions for higher education, is hampered by lack of accommodation is apparent from a perusal of the Principal's report for the session 1920-21. The entries for the day courses are shown for a number of past sessions, of which it is sufficient for purposes of comparison to take the figures for the session 1913-14. An increase of, roughly, 30 per cent. is shown by the entries for the 1920-21 session, although there are now very few in training who may be regarded as students whose training was interrupted by war service. Unfortunately, a similar comparison of numbers of evening students is not possible. The figures for 1914-15 are, however, given, and an equally striking increase, in this case of nearly 55 per cent., is shown. These numbers are an ample confirmation of the Principal's plea for increased accommodation. In spite of the strain which this increase of numbers has placed on the teaching staff, a certain amount of research has been undertaken by the Principal and his colleagues, and, in addition, a few research students have been at work in the chemical and engineering departments.

THE Rhodes Trust has issued a statement for the academic year 1920-21 dealing with the scholarships it administers. From the pamphlet it appears that no less than 277 Rhodes scholars were in residence during that period, 129 from the United States, and 148 from the British Empire; 120 took up their scholarship for the first time during the year. The figures giving the distribution according to subjects show that law, with 91 scholars, claimed the greatest number, while natural science, in which medicine is included, came next with 62; mathematics had six Rhodes scholars, forestry three, agriculture and geography two each, and one took anthropology. The value of the scholarship has now been increased by 50 per annum, but the Trust warns prospective scholars that even thus the emoluments will not ordinarily cover the expenses of a full year. Appointments will be made to the 1923 scholarships during the course of next year, and further information can be obtained from the Secretary, Seymour House, Waterloo Place, S.W.1.

NO. 2714, VOL. 108]

Calendar of Scientific Pioneers.

November 3, 1643. Habakkuk Guldin died.—A convert to the Roman Catholic faith, Guldin, or Guldinus, held the chairs of mathematics in the Jesuit colleges at Rome and Gratz. His "Centrobarytica," 1635-42, contained his well-known theorems.

November 3, 1832. Sir John Leslie died.—The successor of Playfair in the chairs of mathematics and natural philosophy at Edinburgh, Leslie made researches in radiation, photometry and hygroscoy in connection with which he devised the differential thermometer. He was the first to freeze water by rapid evaporation in a vacuum.

November 4, 1698. Erasmé Bartholin died.—Bartholin, or Berthelsen, a member of a Danish scientific family, was first professor of mathematics, and then professor of medicine at Copenhagen. He is remembered for his discovery in 1669 of the double refraction in Iceland spar.

November 5, 1879. James Clerk Maxwell died.—Born in Edinburgh in 1831, Maxwell was educated at Edinburgh and Cambridge, and in 1854 was Smith's prizeman. He later held the chairs of natural philosophy at Marischal College, Aberdeen, and King's College, London, and in 1871 became the first Cavendish professor of experimental physics at Cambridge, where he died. His principal investigations referred to the kinetic theory of gases, the perception of colour, the theory of the electromagnetic field, and the electromagnetic theory of light. His great treatise on electricity and magnetism, called the Principia of the nineteenth century, appeared in 1873, and in 1879 he published the "Electrical Researches of the Hon. Henry Cavendish." Maxwell was the successor of Faraday, from whom he drew much inspiration, and his electrical work has revolutionised the whole aspect of science.

November 6, 1777. Bernard de Jussieu died.—The brother of Antoine de Jussieu (1686-1758), Bernard de Jussieu also was celebrated as a botanist, and for many years was connected with the Jardin du Roi. He was the first to prove that fresh-water polypi are animals and not plants.

November 6, 1822. Claude Louis Berthollet died.—The contemporary of Lavoisier, de Morveau, and Chaptal, Berthollet contributed greatly to the advance of chemistry, and among his discoveries was that of the bleaching power of chlorine. His "Essai de Statique Chimique," the first attempt to deal with chemical physics, appeared in 1803.

November 7, 1817. Jean Andre Deluc died.—A native of Geneva, Deluc engaged in business for some years, but in 1773 came to England and was made reader to Queen Charlotte. He made valuable observations on meteorology, and to him is due the scientific use of the word geology.

November 7, 1872. Rudolph Friedrich Alfred Clebsch died.—Professor of mathematics at Karlsruhe, Giessen, and Göttingen, Clebsch wrote on elasticity, Abelian functions, and on binary algebraical forms.

November 9, 1871. Adolph Strecker died.—Trained under Liebig at Giessen, Strecker was afterwards professor at Christiania, Tübingen, and Würzburg, and was known for his researches in organic chemistry.

November 9, 1896. Johan August Hugo Gylden died.—A distinguished Swedish astronomer, Gylden was trained by Hansen, served under Struve at Pulkowa, and in 1871 became director of the observatory at Stockholm. The theory of the motion of the planets and comets, stellar parallax, proper motions, cosmogony, and photometry are among the subjects dealt with in his numerous memoirs. E. C. S.