Contemporary Birthdays.

December 4, 1875. Prof. George William O. Howe.
December 6, 1858. Prof. Hans Schinz.
December 7, 1865. Sir John Otto Beit, Bart., K.C.M.G., F.R.S.
December 9, 1855. Mr. W. H. Dines, F.R.S.
December 9, 1855. Dr. F. A. Dixey, F.R.S.
December 10, 1855. Mr. H. N. Ridley, C.M.G., F.R.S.
December 11, 1860. Dr. Leonard Huxley.
December 11, 1863. Sir Frank Heath, K.C.B.

After an apprenticeship with Messrs. Siemens Bros., Woolwich, Prof. HOWE was appointed lecturer at the Technical College, Hull; he then became assistant professor of electrical engineering, Imperial College of Science and Technology, South Kensington, and afterwards chief assistant, Department of Electrical Standards and Measurements, National Physical Laboratory. In 1921 he was appointed James Watt professor of electrical engineering in the University of Glasgow.

Prof. SCHINZ, born in Zürich, was educated there at the Polytechnic, and at the University of Berlin. Professor of botany in the University of Zürich, and director of its famous botanical gardens and museum, he is a foreign member of the Linnean Society of London. Prof. Schinz has conducted valuable botanical surveys in South Africa; with M. Théophile Durand, he issued the "Conspectus Floræ Africæ."

Sir OTTO BEIT's name is associated with the foundation of the Beit Fellowships for Scientific Research tenable at the Imperial College of Science and Technology, and the Beit Memorial Fellowships for Medical Research. The former fund has recently received, through Sir Otto's munificence, a further capital sum of 15,000*l.*, enabling the trustees to make awards for two years instead of one year as hitherto.

Mr. DINES, the distinguished meteorologist, was educated at Woodcote House School, Windlesham' graduating afterwards at Corpus Christi College, Cambridge. He is the author of many valuable papers in meteorological and aeronautical science.

Dr. DIXEY is a Londoner. Educated at Highgate, he graduated at Wadham College, Oxford; he is subwarden, bursar, and lecturer there. An authority on insect bionomics, and a past president of the Entomological Society, he is curator of the Hope Collections, Oxford.

Mr. H. N. RIDLEY, who was educated at Haileybury, graduated at Exeter College, Oxford. A member of the botanical staff, British Museum, he became Director of Gardens and Forests, Straits Settlements, retiring in 1911 after twenty-three years' service. Whilst in the tropics Mr. Ridley conducted numerous scientific expeditions. Last year he published the final volume of his "Flora of the Malay Peninsula."

Dr. LEONARD HUXLEY, eldest son of Thomas Henry Huxley, is the author of the well-known biography of his father, published in 1900; this was supplemented in 1918 by a biography of Sir J. D. Hooker, both works of classic interest.

Sir FRANK HEATH is a Londoner. Educated at Westminster, he graduated at the University of London, from University College. He was assistant registrar and librarian of the University from 1895 until 1901, and in 1916 became Secretary to the Department of Scientific and Industrial Research. He has recently completed a tour in Australia and New Zealand and has put forward valuable schemes, which have been adopted, for State aid in research in these countries.

Societies and Academies.

LONDON.

Geological Society, November 3.—Sydney S. **Buckman**: Jurassic chronology (iii.): Some faunal horizons in Cornbrash. Faunal dissimilarity within strata of a supposedly synchronous time-unit, the Cornbrash, were observed about seventy years ago, but were not understood. Series of faunal analyses of the brachiopod species south of the Humber disclose a series of synclines, anticlines, and various non-sequences in the strata of the South Humbrian Cornbrash. The divisions of Cornbrash time on the basis of brachiopods and of ammonoids are compared and also the Cornbrash and the inferior oolite. If the time-value of brachiopod species be the same in the Cornbrash as in the inferior oolite—and there is every reason that it should be—then the Cornbrash must have taken in deposition a time far in excess of that of the middle and upper inferior oolite, with all its numerous ammonoid hemeræ.

The Physical Society, November 12.—H. **Dewhurst**: A rapid bolometer made by sputtering on thin films. Thin films of collodion are made by drying weak solutions in ether and alcohol on the surface of clean mercury. Flexible films which withstand great distortion, and can be punctured without fracture, are made in the same way. Both types can be produced rapidly and cheaply down to a thickness of one wavelength of light. Two novel types of sputtering apparatus are described, and a table is given containing sputtering data for 25 metals, nine of which appear for the first time. The method of making the bolometers, together with holders of various types, and apparatus for blackening, are detailed. Rings were moulded for supporting the thin collodion films and providing a reliable contact for overlying sputtered metallic films. The comparative sensitivity of these new bolometers is discussed, and curves and an empirical formula given from which an estimate of the speed of the instruments can be determined. The new type of instrument is roughly 400 per cent. faster than a representative bolometer of the Lummer and Kurlbaum type.—Ezer **Griffiths** and J. H. **Awbery**: A hygrometer employing glycerine. The variation of refractive index of glycerine solutions in equilibrium with air of various humidities has been studied; the time for equilibrium to be reached, when thin films of glycerine are used, has been investigated, and this property may be used very conveniently in a hygrometer.—J. W. **Avery** and C. J. **Smithells**: The effect of working on the physical properties of tungsten. Measurements of the densities of specimens cleaned in successive stages by etching reveal the presence of low density surface layers. Variations of heat treatment likely to occur in practice have no appreciable effect upon the density of worked tungsten. The density rises rapidly during swaging to a maximum value within 0·5 per cent. of the density of the perfect tungsten crystal. Further working produces a steady fall in density, which becomes more marked in the finest sizes. The resistivity falls rapidly in the early stages of working and reaches a minimum when the density is a maximum. It then increases at a uniform rate, which is approximately an exponential function of the diameter.

Royal Meteorological Society, November 17.—E. W. **Bliss**: The Nile flood and world weather. Correlation coefficients are given with pressure, temperature, rain, ice and wind, and it is shown (*a*) that the Nile takes part in the southern oscillation as a member of the first group; (*b*) that equatorial temperatures are in inverse relation to the Nile; and (*c*) that the