

## Contemporary Birthdays.

- September 4, 1845. Sir Thomas Barlow, Bart., K.C.V.O., F.R.S.  
 September 6, 1870. Prof. Frederick G. Donnan, C.B.E., F.R.S.  
 September 6, 1876. Prof. J. J. R. MacLeod, F.R.S.  
 September 7, 1877. Sir John Cadman, K.C.M.G.  
 September 9, 1867. Mr. Robert Ludwig Mond.  
 September 10, 1859. Prof. J. Norman Collie, F.R.S.  
 September 11, 1877. Dr. J. H. Jeans, Sec. R.S.

Sir THOMAS BARLOW, to whom congratulations are due on the anniversary of his eighty-first birthday, is Physician Extraordinary to H.M. the King. President of the Royal College of Physicians, 1910-15, he was also president of the International Medical Congress of 1913.

Prof. DONNAN, occupant of the chair of general chemistry in the University of London, was educated at Queen's University, Belfast, and at Leipzig and Berlin. From 1904 until 1913 he was professor (the first to be elected) of physical chemistry in the Muspratt Laboratory of the University of Liverpool. Prof. Donnan is a Longstaff medallist of the Chemical Society.

Prof. MACLEOD, Nobel laureate in physiology and medicine in 1923 (jointly with Dr. F. G. Banting), was born at Cluny, Perthshire. He was educated at the Grammar School of Aberdeen and the University there. Six and twenty years ago he was demonstrator in physiology, and afterwards lecturer in bio-chemistry, at the London Hospital, and for a time he was working with Dr. Leonard Hill on the physiological effects produced on animals by compressed air. From 1901 until 1903 he was Mackinnon research student under the Royal Society, taking up afterwards the chair of physiology in the Western Reserve University, Cleveland, Ohio. In 1918 he was elected to a similar post in the University of Toronto. The Nobel prize was awarded for the discovery of insulin.

Sir JOHN CADMAN was born at Silverdale, Staffordshire. He was educated at the High School, Newcastle-under-Lyme, and Armstrong College. Formerly a mining engineer and colliery manager, he established a practical acquaintance with all branches of the mining industry. Sir John is professor of mining and petroleum technology in the University of Birmingham, and technical adviser to the Anglo-Persian Oil Company. He is an Officer of the Legion of Honour.

Mr. ROBERT L. MOND was born at Farnworth, Lancashire, and educated at Cheltenham and Peterhouse, Cambridge. He is honorary secretary of the Davy-Faraday Laboratory. In recent years Mr. Mond has rendered signal service as a student of Egyptology and conductor of excavations.

Dr. NORMAN COLLIE has been, since 1902, professor of organic chemistry in the University of London. A past president of the Alpine Club, he is an ardent mountaineer.

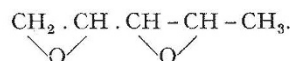
Dr. JEANS, one of the secretaries of the Royal Society, was educated at Merchant Taylors' School and Trinity College, Cambridge. Second wrangler in 1898, he was Smith's prizeman in 1900, and sometime Isaac Newton student. From 1905 until 1909 he was professor of applied mathematics in the University of Princeton. In 1919 the Royal Society allotted him a Royal medal for researches in applied mathematics; in 1922 the Royal Astronomical Society awarded him its medal for his contributions to the theories of cosmogony.

NO. 2966, VOL. 118]

## Societies and Academies.

PARIS.

**Academy of Sciences, July 12.**—Charles Moureu, Charles Dufraisse, and C. L. Butler: Rubrene peroxide: new experiments. Rubrene peroxide, when dissociated by rise of temperature, emits light. In an earlier note it was shown that light was essential to the combination of oxygen with rubrene.—Miécislas Biernacki: The theorem of Lucas and its generalisations.—J. Neyman: A property of the law of probability which obeys the coefficient of variation.—Jules Drach: The integration of partial differential equations of the second order and the explicit use of the characteristic variables of Ampère.—Decros, Rebuffet, and J. Villey: An electrometric recording dynamometer.—N. Gunther: The movement of a liquid filling a domain with multiple connexion which is displaced.—Ernest Esclançon: The asymmetry of sidereal space and the phenomenon of tides.—Marcel Laporte: The measurement of the mobility of ions in gases.—R. Forrer: The structure of the atomic magnet. Its normal position with respect to the network and residual magnetisation.—A. Bogros: The resonance of lithium vapour. The resonance line of the alkali metals is known to be the first doublet of the principal series. Direct experimental proof of this has been given for sodium and caesium (Wood): the author now gives experiments proving it for lithium.—J. Heyrovský and B. Souček: The electrolytic potential of iron amalgam. From measurement of the electrolytic potentials of iron amalgam, it is concluded that this amalgam should be metastable and decompose spontaneously, with liberation of energy, into a mixture of solid iron and mercury.—J. Consigny: The stopping power of some metals for  $\alpha$  rays.—A. Hamy: The absorption of iodine by precipitated magnesia. Studies in the amount of iodine absorbed as a function of time, concentrations of iodine and of potassium iodide.—J. Dumont: The separation of the finer particles and colloidal constituents of the soil by centrifugation. The solid matter remaining in a clay suspension in water after standing for a day can be separated into two portions by a high velocity centrifuge, the portion remaining in suspension being considered as a true colloid.—Marcel Bouis: The synthesis of allene hydrocarbons. In an earlier communication a method was given for preparing ethylallene starting from vinyl ethyl carbinol. It is now shown that the method is generally applicable, the vinylalkyl carbinol,  $\text{CH}_2 : \text{CH} . \text{CH}(\text{OH}) . \text{R}$ , leading to the allene  $\text{R} . \text{CH} = \text{C} = \text{CH}_2$ .—Charles Prévost: A new erythrite. The glycols (*cis* and *trans*)  $\text{CH}_2 . \text{OH} . \text{CH} : \text{CH} . \text{CH}(\text{OH}) . \text{CH}_3$  were converted into the ether oxides



Only from the *trans* glycol was sufficient ether oxide obtained to convert by hydration with water into the corresponding erythrite.—E. Rothé: The nature of the maxima inscribed in seismograms.—Albert Baldit: The periods of constancy of temperature at a station of medium altitude.—J. Beauverie: The modes of degeneration of the chloroplasts, particularly in parasitism.—Mlle. H. Popovici: Contribution to the cytological study of the laticifers.—A. L. Guyot: Some parasitic fungi of the roots of Phanerogams.—A. Rizzolo and A. B. Chouchard: The quantitative study of the action of morphine on the cerebral cortex.—G. A. Nadson and N. Meisl: The mechanism of the action of chloroform on the protoplasm, the nucleus and the



chondriome of the cells of *Allium cepa*. The chondriome is the most sensitive to the action of chloroform; later, modifications are seen in the protoplasm, and last of all in the nucleus. The general character of the modifications produced by chloroform in the living substance is analogous with that of the changes provoked by X-rays.—Emile André and Henri Canal: Contribution to the study of the oils of marine animals. Researches on the oil of *Todarus sagittatus*.—Robert Weill: The problem of the cleptocids. The nematocysts of *Hermæa bifida*.—André Lwoff and Mlle. Nadia Roukheldman: The variations of some forms of nitrogen in a pure culture of infusoria. From the point of view of the chemical transformations of the culture medium, and more especially from the point of view of the excretion of nitrogen in the form of ammonia and amides, *Glaucoma piriiformis* (and perhaps all Infusoria) resemble bacteria.—A. Vandel: Triploïdia and parthenogenesis in the isopod *Trichoniscus (Spiloniscus) provisorius*.—M. Lemoigne and P. L. Dopfer: The nitrogen losses caused by soil bacteria in pure cultures.—M. Javillier and H. Alliare: The existence of a nucleic phosphorus index of tissues.

July 19.—H. Deslandres: The law of distribution of terrestrial magnetic storms, and the corresponding law of distribution of the active regions of the sun. These are due to corpuscular radiation, which is subject to considerable periodic change.—G. Bigourdan: A means of improving the lunar co-ordinates deduced from the occultations of stars. The errors due to the irregularities of the edge of the moon's surface may cause an error of 1", whereas the error of observation gives the lunar longitude to about 0".1. The application of lunar photographs is suggested as a means of reducing the error caused by the surface irregularities.—Charles Moureu and Adolphe Lepape: The determination of krypton and xenon in atmospheric air. An application of the spectrophotometric method previously described. The results (by volume) are: krypton,  $1 \times 10^{-6}$ , and xenon,  $9 \times 10^{-8}$ . These are about twenty times those obtained by Ramsay in 1903, but nearly identical with the figures obtained by Ramsay and Travers in 1900.—Charles Richet and P. Lassablière: The protective effects of chloralose in chloroform anaesthesia. From experiments on dogs it is shown that the administration of chloralose (which must be free from parachloralose) by the mouth prevents cardiac syncope by the action of chloroform.—Rolin Wawvre: The reduction of domains by a substitution with  $m$  complex variables, and the existence of a single invariant point.—Luigi Fantappiè: A class of analytical functionals.—H. Mineur: Waves of discontinuity of the second order in an Einstein universe.—Henri Bénard: The limit of the laminar regime and the turbulent regime, revealed by the appearance of clear alternating vortices.—Farid Boulad Bey: The calculation of a continuous beam of any form when given vertical elastic deformations.—Da Costa Lobo: Correlation between the solar prominences and the filaments. The agitation of the surface of the faculae. Results obtained with a large spectroheliograph set up at the astronomical observatory of the University of Coimbra. This instrument is identical in dimensions and characteristics with the instrument installed by M. Deslandres at Meudon Observatory, and the results from one station will serve to fill up gaps caused by bad weather at the other.—W. H. Keesom: The curve of fusion of helium. Data are given for pressures and temperatures ranging from 77.09 cm. of mercury on the helium bath (T.  $4^{\circ}.21$ ) to 0.057 cm. (T.  $1^{\circ}.13$ ).—G. Darrieus: A relation between the gravitation constant and other fundamental constants.—Henri

Malet: The mathematical synthesis of the laws of electrodynamics.—A. Dauvillier: The spectrography of X-rays of large wave-length.—Mlle. J. Liquier: The variation of the rotatory power of solutions of quinine salts as a function of the hydrogen-ion concentration. The rotatory power of asparagine and the salt effect.—Salomon Rosenblum: The retardation of the X-rays by matter.—Georges Fournier: The absorption of the  $\beta$ -rays by matter.—Henri Belliot: Experiments on photographic solarisation.—A. Boutaric and Mlle. G. Perreau: The existence of two zones of instability in the flocculation of certain suspensions by electrolytes with trivalent and tetravalent cations.—P. Brun: The miscibility of quaternary water-alcohol mixtures. Details of the study of miscibility of mixtures of ethyl alcohol and water with two other alcohols not miscible with water, isobutyl and isoamyl alcohols.—Pariselle: The tartrates of pyridine and quinoline.—A. P. Rollet: A new colorimetric determination of nickel. The colour reaction utilised is produced by the oxidation of nickel dimethylglyoxime and will show 0.0005 mgm. nickel in 1 c.c.—René Girard: The action of saline solutions on the ferrous metals.—Mlle. Bardou and Mme. Ramart: The action of organo-magnesium derivatives on the glycidic ethers.—Mlle. Marthe Montagne: Researches concerning the action of organo-magnesium derivatives on some fatty dialkylamides.—E. E. Blaise and Jean Miliotis: Researches on the transposition of functional groups.—Jacques Bourcart: The stratigraphy of the Bouches de Cattaro (Jugoslavia).—Paul Caubet: Eruption of the peak of La Fournaise, December 1925 to April 1926.—V. Agafonoff: The genesis of the black earth and other soils in the neighbourhood of Clermont-Ferrand.—Ch. Jacquet: Researches on the radio-active springs of the Puy-de-Dôme.—Henry Hubert: The general movements of the air in western Africa.—M. Bridel and C. Béguin: Biochemical researches on the composition of *Salix triandra*. Preparation of rutoxide, asparagine, and a new glucoside hydrolysable by emulsion, salidroside. The leaves of this plant contain glucoside, which can be hydrolysed by rhamnodiastase and a glucoside which under the action of emulsion gives an essential oil smelling of rose.—René Souèges: The embryogeny of the Liliaceæ. The development of the embryo in *Muscari comosum*.—Jules Amar: Observations on the cellular pigments.—G. Lafon: The intimate mechanism of muscular contraction.—Charles Perez: The sexual characters of the caudal fin in the Galatheideæ.—René Fabre and Henri Simonnet: Study of the photo-sensitising action of hæmatoporphyrine.—F. Vlès and A. de Coulon: The receptivity of the organism for grafts of tumours, in relation with the isoelectric points of the tissues.—L. Lutz: The soluble ferments secreted by the Hymenomycetes fungi. Reducing actions.—E. Fauré-Fremiet and Mlle. Laura Kaufman: Remarks concerning the curve of annual decrease of eggs laid by the domestic fowl.—Constantino Gorini: The stimulation of the bacterial activities in milk.—A. Paillet: The etiology and epidemiology of the *Gattine* of the silkworm, or the transparent head disease.—H. Bordier: The action of diathermic d'Arsonvalisation on synovia.

### Official Publications Received.

Bulletin of the National Research Council. Vol. 10, Part 4, No. 54: Quantum Principles and Line Spectra. By Prof. J. H. Van Vleck. Pp. 316. 3 dollars. Vol. 11, Part 1, No. 55: The Determination of the Protein Requirements of Animals and of the Protein Values of Farm Feeds and Rations. Report of the Sub-committee on Animal Nutrition. By H. H. Mitchell. Pp. 44. 75 cents. (Washington, D.C.: National Academy of Sciences.)