

### Birthdays and Research Centres.

July 12, 1863.—Dr. L. CH. ALBERT CALMETTE, For.Mem.R.S., sub-director of the Pasteur Institute, Paris.

I am conducting researches on snake venoms, anti-venomous serums (1892–1900); bubonic plague and serotherapy; tuberculosis, mechanism of infection, and preventive vaccination of babies with B.C.G.

July 22, 1865.—Sir RICHARD A. S. REDMAYNE, K.C.B., consulting mining engineer, professor of mining in the University of Birmingham, 1902–8, and H.M. Chief Inspector of Mines, 1908–20.

My object of chief investigation now in progress is the freeing of coal from the seam by non-inflammable means. The importance of this is obvious when one considers the great loss of life in gassy and/or dry and dusty coal-mines from explosions initiated by the flame of explosives.

A commercially possible process for the liquefaction of coal is a subject worthy of investigation. Were it possible to liquefy coal profitably the whole outlook of the coal-mining industry of the world, and Great Britain in particular, would be transformed for the better.

The commercial production of beryllium is also a subject to which attention might usefully be given. The importance of beryllium as a valuable alloy with copper, aluminium, and other metals has emerged recently.

The devising of an economical method of extracting alumina from bauxite containing 8 per cent and more of silica; as well as the extraction of alumina from lower grade ore generally, including clays, deserve attention. The high-grade ores of aluminium (bauxite) are not very extensive, and it is in the highest degree desirable with the greatly increasing importance and output of aluminium that a practicable and profitable means of extraction of alumina from the lower grade ores and, if possible, from clays generally should be found.

July 24, 1856.—Prof. EMILE PICARD, For.Mem.R.S., member of the French Academy, and permanent secretary of the Paris Academy of Sciences.

J'ai de l'intérêt pour l'analyse mathématique, la théorie des fonctions et la théorie des nombres. J'ai publié divers ouvrages sur l'histoire et la philosophie des sciences.

### Societies and Academies.

#### LONDON

Geological Society, June 17.—Olaf Holtedahl: Some general structural features of the arctic and adjacent regions. The huge region comprising the Canadian and the Baltic Shields and the areas lying between them represents a sort of structural unit which may be more or less symmetrically divided by two lines, one north and south, the other at right angles to it, crossing each other in the central part of Greenland. Although Baffin Land and the western zone of Fennoscandia had a somewhat different history in ancient geological times, yet each may be regarded as the reflected image of the other, both consisting of mountain ranges with the highest elevation on the side bordering the adjacent deep sea area. In the northward continuation of these two zones, in Ellesmereland and Spitsbergen respectively, and at the north end of Greenland, are other zones where the distribution of the various formations tells of a some-

what similar inclination of the earth's crust; an inclination away from central Greenland, the previously mentioned structural centre. Thus there is, in a roughly ring-shaped belt, an inclined elevation of recent, probably younger Tertiary, date, and it seems a natural conclusion that this particular elevation has been of fundamental importance in the gathering of snow, which in Quaternary time developed into the modern ice-fields, the centre of which coincides with the above-mentioned structural centre.—James Archibald Douglas and William Joscelyn Arkell: The stratigraphical distribution of the cornbrash: (2) The north-eastern area. Attention has been chiefly confined to the brachiopod zones, and their distribution throughout the area is indicated by a detailed account of many typical exposures. Further readjustment of Buckman's zonal table has been found necessary in respect of the zones of *Tegulithyris bentleyi* and *Obovothyris stiltonensis*. The evidence for and against penecontemporaneous erosion is discussed.

#### PARIS.

Academy of Sciences, May 26.—Charles Nicolle and Ugo Lumbruso: The immunity following a natural attack and cure of trachoma against an experimental re-inoculation of the virus.—A. F. Holleman was elected *Correspondant* for the section of chemistry.—Long: The *W* surfaces.—Maurice Potron: A fundamental theorem of the theory of finite continued groups of transformations.—Marcel Winants: Determination of a function of functions by means of an integral equation.—Teissié-Solier: The conditions of use of a Pitot tube and the impulse of a turbulent jet on a plate.—J. Le Roux: The impossibility of a law of gravitation for an aggregate comprising only two material points.—Ch. Sadron: The ferromagnetic saturation of elements other than iron, nickel, and cobalt, and the periodic system.—L. Bull and Mile. Suzanne Veil: The optical study of the secondary Liesegang rings.—L. Bert and R. Annequin: A new method of synthesis of einnamic aldehyde and its homologues substituted in the nucleus.  $C_6H_5 \cdot CH_2 \cdot CH : CHCl$ ,  $\omega$ -chlorallylbenzene is converted into  $C_6H_5 \cdot CH_2 \cdot CHCl \cdot CHCl_2$  (or the corresponding bromine compound), and this, by heating with sodium ethylate in excess, into the diethyl acetal of cinnamic aldehyde. The reaction is general, and can be applied to the preparation of homologues of cinnamic aldehyde.—J. D. Strelnikov: The influence of the solar radiations on the temperature of the bodies of insects. The body temperature of insects is raised by exposure to the sun, and the organism of an insect is very sensitive to slight changes in the surrounding medium.—Michel Polonovski and Albert Lespagnol: Two new sugars from human milk, gyrolactose and allolactose. In the course of analyses of human milk by the ordinary polarimetric and reduction methods the divergences found suggested the presence of sugars other than lactose. Two new sugars have been isolated as the result of a long series of fractional crystallisations, and these have been named gyrolactose and allolactose. The properties of these two sugars are found to explain the abnormalities found on analysis.

#### CAPE TOWN.

Royal Society of South Africa, April 15.—B. Farrington: Vesalius on vivisection. This paper is a translation of the last chapter of the *De Humani Corporis Fabrica* of Vesalius, which bears the title "Some Observations on the Dissection of Living Things". Though Vesalius did not advance the study of physiology to anything like the same degree as he did the science of anatomy, his book is, none the less,