Birthdays and Research Centres.

May 31, 1845.—Col. R. E. CROMPTON, formerly president of the Institution of Electrical Engineers.

As I was born in the country eighty-six years ago, in that part of the Vale of Mowbray in Yorkshire where farming is at its best, although I have devoted most of my life to such subjects as mechanical haulage and the supply of electricity to town users and to the greatly increasing industrial districts of England, I have, during the last few years, become more and more impressed by the far greater importance of solving the problem of increasing the food production of our farmlands and gardens, by the use of electrical power. We now are all working on the somewhat difficult problem of the distribution of electrical energy at such a low cost that we should be able to persuade our farmers to substitute electrical trenching and aerification of the soil for the old-time ploughing; and we hope that in the not very distant future we may perfect the processes of obtaining nitrified products, such as nitrate of lime, direct from the nitrogen of the atmosphere, and at points close to where we desire to supply it to our fields, by utilising the electrical supply on the spot, instead of our farmers having to purchase the synthetic products at high cost. I, for one, believe it possible that by such means we shall persuade our farmers to increase the area of arable land, and produce from it crops almost, if not quite, equal to those now produced by our market gardeners, largely by manual labour.

June 1, 1866.—Dr. CHAS. B. DAVENPORT, director of the Department of Genetics, Carnegie Institution of Washington.

Since the study of heredity is really that of the internal control of development, studies on heredity in man, particularly on stature and body build, may usefully be concerned with the way individual children, of known families and races, grow, and especially with the changes in endocrine activity and other physiological factors that are associated with such growth. I am, accordingly, following in individual children, during a span of years, their physical, physiological, and mental changes, to learn how they are interrelated.

June 2, 1866.—Sir LEONARD E. HILL, F.R.S., honorary director of research at the London Light and Electrical Clinic.

Two years ago, working in co-operation with Mr. R. H. Davis, of Siebe Gorman, Ltd., I was able to show, with the help of the Admiralty, that it is possible for divers to go to depths of 300 ft. in the ordinary diving dress. The necessary decompression period can be greatly shortened by the breathing of oxygen in a submersible decompression chamber designed by Mr. R. H. Davis, and used from a depth of 70 feet upwards by the ascending diver. The chief investigation I have been engaged on is assisting the Admiralty Diving Committee in working out, on animals, safe times for decompression, so using oxygen, for divers working up to thirty minutes on the bottom at 300 ft.

I am also engaged in research on the penetration of the skin by infra-red, visible and ultra-violet rays, and the action of irradiation on the body in health and disease.

June 3, 1853.—Sir W. M. FLINDERS PETRIE, F.R.S., professor of Egyptology in the University of London.

The development of man's abilities and ideas has appeared to me the most interesting subject of research during the last fifty-five years. At present I am engaged in excavating one of the largest cities of the bronze age and the continuity into the Neolithic period. As it is useless to make collections if no place is provided for them, it is to be hoped that the scheme for a study-series of development in the great civilisations will be carried out in the new buildings of the University of London.

Societies and Academies.

LONDON.

Royal Anthropological Institute, April 28.—**A. Leslie Armstrong**: Excavations in the Pin Hole cave, Cresswell, Derbyshire. The Pin Hole excavations have been in progress since 1924. By a fortunate circumstance, this cave appears to be the only one of the Cresswell series which held the full story of the occupation of the ravine in Palæolithic times, and it was the only cave left practically intact by earlier excavators. Two layers of cave earth exist, an upper level ranging in time from Upper Aurignacian to a phase which is contemporary with the Magdalenian of France. This has yielded an important series of tools in flint, which reveal the gradual development of the upper Palæolithic industries of Britain, and also two examples of early art, one of which is the engraved outline, on bone, of a masked male figure. The lower cave earth is in three zones, in each of which early Mousterian tools are found and definite evidence of the cave's occupation by man. This lower level has also provided valuable evidence relative to fluctuations of climate during the last great ice age of Britain. Many animal remains were found.

Society of Public Analysts, May 6.—**E. J. Guild**: Demonstration of a new development in filter paper. The paper contains at least 99 per cent of alpha-cellulose, with about 0·04 per cent of ash. It is very strong when wet and offers great resistance to alkaline solution, such as caustic soda, etc. It is suitable for the rapid filtration on a large scale of coarse or gelatinous substances, and also for all but the most delicate analytical work.—**A. J. Amos** and **D. W. Kent-Jones**: The 'rope' spore content of flour and its significance. Far less importance must be attached to the rope spore content than to the technique adopted in the bakery as a factor in the production of ropy bread. The conditions tending to aggravate rope trouble in bread have been separately investigated.—**W. R. Schoeller** and **H. W. Webb**: The separation of tin from tantalum and niobium. For the separation of small amounts of tin from much earth acid, Giles's process (fusion with potassium carbonate, solution in citric acid, precipitation of tin as sulphide) is not suitable for earth-acid minerals. Schoeller and Powell's process (fusion with bisulphate, solution in tartaric acid, treatment with hydrogen sulphide, collection of insoluble residue and sulphide precipitate) is serviceable.—**N. L. Allport**: A new method for detecting decomposition products in anæsthetic chloroform. The decomposition of medicinal chloroform, resulting in phosgene formation, leads to the presence of free hydrochloric acid due to action on the alcohol which is added as a preservative. A new test capable of detecting one part of free hydrochloric acid in a million parts of chloroform is based upon the condensation of resorcinol and vanillin by the free hydrochloric acid, with the formation of a red acidic dye. By subsequent treatment with alkali, a pink aqueous layer is obtained, the intensity of the coloration varying with the quantity of impurity present.—**J. N. Rakshit**: Contaminations in morphine deposited in the British Pharmacopœia process for