

bring into the scheme, extends to 100 square miles and has now been earmarked as a national park to be used for campers, the youth movement body, and so forth. Funds have been obtained to provide camping sites, alpine huts and for the acquisition of Ardgartan House and policies.

A record is being prepared of the exceptional May frosts of the year 1935, which did a serious amount of damage in different parts of the country. The chief frosts occurred between May 13 and 19. The record of the susceptibility of the numerous species, conifer and broad-leaved, given in the report corresponds with previous statistics in this matter.

During 1935, the question arose as to whether afforestation could be of use in assisting the Special Areas. As a result of investigations, it has been found that a certain amount of land could be purchased for forestry purposes within fifteen miles of certain Special Areas, and that, as a preliminary, 1,000 forest workers holdings could be established and a certain amount of work provided. Grants have been made by Government both to speed up the afforestation programme and to assist the schemes in connexion with the Special Areas.

The information on the 1934 seed crops is of interest. During that year, the Sitka spruce crop was only moderate in Canada and the United States, and therefore the Commissioners (and others) were unable to obtain their full requirements. Douglas fir was good and Japanese larch seed abundant in Japan. In Europe, Norway spruce, European larch and Corsican pine were not too plentiful. Oak seed was in fair quantities, but beech was scarce. Of home-collected seed, the supplies of the chief forest species were sufficient to abundant.

Of the net total area of land acquired by lease, feu and purchase in Great Britain to September 30, 498,146 acres were classified at the time of acquisition as plantable, and of this area 301,133 acres (60 per cent) were in England and Wales and 197,013 acres (40 per cent) in Scotland. In addition to the above-mentioned areas, Crown woodlands extending to about 120,000 acres (of which some 60,000 acres are plantable) have been transferred to the Forestry Commissioners. The total area of land in the Commissioners' control thus approximated to 929,000 acres.

The Commissioners' seventeenth report for the year ending September 30, 1936 (London: H.M. Stationery Office, 1937) recently issued, shows the progress made. The Argyll National Park was inaugurated and a camping ground, car park and buildings for the use of campers were formally opened at Ardgartan. The question of instituting a similar park in Wales is now under consideration. The Special Area afforestation scheme received the sanction of Government and the Commissioners were authorized, as a first instalment covering three years and largely as an experiment, to acquire and begin to plant 100,000 acres and to establish 500 holdings. These plans were made public in February 1936 and the remaining months of the year under report were concerned with the preparatory work—acquisition of land and staff and provision of the necessary trees for planting purposes. Steps were being taken to cultivate a larger area of nursery ground. By May 1937, says the report, some progress had been made.

Owing to the wet year there were fewer fires. The total area of land under the Commission amounted to 954,500 acres and the area planted to 296,452 acres.

Science News a Century Ago

The Franklin Institute

THE fifty-fifth quarterly meeting of the Franklin Institute, Philadelphia, was held on October 19, 1837, when the usual quarterly report of the managers was read. Although the period covered by the report had not been marked by any new undertakings, the several sub-divisions of scientific and practical subjects had been encouraged with all the means at the disposal of the Society.

The interesting investigations on the cause of explosions of steam boilers had been concluded and the Government and the community had been put in possession of the results of the experiments and of ample directions tending to prevent the occurrence of accidents. The final report of the committee on the value of water as a moving power was expected to be ready shortly. The experiments made under the authority of the Institute were of the most perfectly practical character, and the application of a sound theory, deduced from practical results, would be put at the command of those interested.

The committees on science and the arts had sedulously prosecuted inquiries desired by inventors and others; the department of instruction had arranged for regular courses in chemistry, natural philosophy and mechanics. In addition to the usual augmentation to the library, "about one hundred volumes have been received from our esteemed member, Professor Bache, President of the Girard College, now in Europe. These books have been purchased out of a fund placed in the hands of Dr. Bache by the subscriptions of the members, and have been selected by a mind distinguished by its discrimination and devoted to practical science. . . ."

Launch of S.S. *Liverpool*

ON October 18, 1837, the wooden paddle-wheel steamship *Liverpool* was launched in the Mersey. The largest vessel built at Liverpool up to that time, she was constructed for Sir John Tobin, but became the property of the Transatlantic Steam Ship Company. She was built by Humble and Milcrest, and was 235 ft. long, 35 ft. beam and about 1,150 tons. Her engine, made by Forrester and Co. at the Vauxhall Foundry, had two cylinders, 75 in. diameter and 7 ft. stroke, and was of 468 horse-power. She is said to have cost £45,000. The *Liverpool* was the fourth of the steam vessels by which, in 1838, regular steam communication was maintained with America. The *Sirius* and *Great Western* made their first passages in April 1838, and the *Royal William* first crossed in July 1838. The *Liverpool* sailed from Liverpool on October 22, 1838, had to put into Queenstown, and finally reached New York on November 23. Her return voyage began on December 6 and ended on December 21.

Civilization and Insanity

THE *Gazette medicale de Paris* of October 21, 1837, contains the following information: At a meeting of the Academy of Sciences on October 10, M. Brière de Boismont dealt with the different countries in which he had been able to obtain information as to the figures of insanity. "What we have shown," he said, "gives us the right to regard insanity as a product of civilization. We have seen it reach its greatest development in the most enlightened nations, diminish as we penetrate into despotic governments

or into recently emancipated countries and disappear almost entirely when our researches have taken in any savage people." M. Brière de Boismont then submitted tables showing the number of the insane in the principal European capitals with the population of each capital and the population of the different European countries and New York State, with the number of insane interned in each country.

Encouragement of Vaccination

AN editorial in the *Lancet* of October 21, 1837, contains the following information and suggestion: "At the last meeting of the Royal Academy of Medicine, Paris, there were distributed by order of the French Government for the encouragement of vaccination rewards of £60 to three medical men who had shown themselves most active in the propagation of that inestimable benefit during the course of the preceding year. Four gentlemen received handsome gold medals; and no less than a hundred persons were rewarded with silver medals. It would be highly desirable that our own Government should adopt some similar method of encouragement. Numerous accounts from correspondents inform us that small-pox prevails to a very great extent in some of the poorer districts, where we are sorry to say, vaccination seems to have been neglected in a deplorable manner".

University Events

BIRMINGHAM.—At its last meeting the Council of the University was informed that the vice-chancellor and principal (Sir Charles Grant Robertson) had placed his resignation in the hands of the pro-chancellor (Mr. Walter Barrow), so that in accordance with the statutes of the University it may be considered at a meeting of the Court of Governors, which will have before it also the nomination of Dr. Raymond Priestley, of Melbourne, as his successor.

OXFORD.—At Merton College Dr. G. M. B. Dobson has been elected to an official fellowship and Prof. R. Campbell Thompson, formerly research fellow, to a professorial fellowship.

At Balliol College Dr. Simon Flexner (George Eastman visiting professor) and Dr. J. A. Gunn (on appointment as director of the Nuffield Institute of Medical Research) have been elected to supernumerary fellowships. Dr. J. H. Burn has been elected to a professorial fellowship and J. St. L. Philpot, formerly tutorial fellow, to a senior research fellowship.

Dr. A. A. Bake, of the University of Utrecht, has been appointed to a senior research fellowship at Brasenose College for research on the religious songs and music of India. Dr. Bake is working under the guidance of Sir Rabindranath Tagore. He has already been engaged in research in India on the Sanskrit theory of music and the folk-music of India in 1925-29 and 1930-34.

READING.—Sir Samuel Hoare has been elected Chancellor of the University and will be installed on November 29.

ST. ANDREWS.—At a graduation ceremony on October 8 the honorary degree of LL.D. was conferred upon Dr. W. T. Calman, former president of the Linnean Society, and lately keeper of the Zoology Department of the British Museum (Natural History).

Societies and Academies

Paris

Academy of Sciences, August 9 (*C.R.*, 205, 345-380).

LOUIS DE BROGLIE: The quantification of the field in the theory of the photon.

PIERRE LEJAY: The general characters of the acceleration of gravity in the Levant. A map of the countries of the Levant under French mandate is given, showing the anomalies in the value of g .

CHARLES EDGAR WINN: Some reducibilities in the theory of charts.

LUBOMIR TCHAKALOFF: A problem of Laguerre and its generalizations.

RAYMOND JACQUESSON: The variations of the internal friction of solids under the influence of thermal and mechanical treatments. The influence of a traction.

SANTIAGO ANTUNEZ DE MAYOLO: The charge e of the electron and the materialization of the photon.

MME. IRENE MIHUL and CONSTANTIN MIHUL: The ionization of the lower part of the ionosphere. A theory is proposed based on the ionizing action of the sun varying with the latitude: this is regarded as explaining all the known facts.

JULES FARNEAU: The spectrographic study of the conductivity electrons in the alloys of magnesium and aluminium.

JEAN BERNAMONT and MICHEL MAGAT: A new method for separating isotopes.

ANDRÉ DEBIERNE and LADISLAS GOLDSTEIN: The new transformations produced at low temperatures (*frigidreactions*). Correction of an error of printing in note of August 2.

ALFRED REIS: The measurement of the angular domain of reflection of the X-rays in polycrystalline substances by a new statistical method.

JACQUES GILBERT: The indirect experimental verification of the logarithmic increase of wind velocity starting from the ground. The method is based on the quantity of hoar frost deposited on a vertical rod exposed to the wind.

MARCEL AVEL: Experiments on the role of the complex digestive tube plus non cutaneous mesodermic tissues, in the regeneration of the head in worms.

LOUIS GALLIEN: The masculinizing action of testosterone propionate in the differentiation of sex in *Rana temporaria*.

ALBERT PEYRON, BERNARD LAFAY and GUY POUMEAU-DELILLE: The regression of the papillo-epithelioma of the rabbit (Shope's tumour) under the action of colchicine.

August 18 (*C.R.*, 205, 381-396).

MARTIN FERBER: The structure of the order of statistical series of the exponential type.

AUGUSTE GOSSERIES: Study of the hydrolysis of solutions of cobalt chloride.

V. M. MITCHOVITCH and G. STEFANOVITCH: The reduction of glycerides by the Bouveault and Blanc method.

ROGER GUY WERNER: Cryptogamy and phyto-geography.

EMILE F. TERROINE and MME. SIMONE SYNEPHIAS: The relative participation of the proteins and lipids in meeting the energy losses in starvation.

MILLE. DIGNA VAN STOLK and ROLAND LEROY: Folliculin and dihydrofolliculin in the urine of pregnant mares.