Carnegie Trust for the Universities of Scotland

THE forty-first annual report of the executive committee of the Carnegie Trust for the Universities of Scotland (Edinburgh : Carnegie Trust for the Universities of Scotland) covers the year 1941–42. The method of interim distribution begun in the academic year 1940–41 was again employed, the annual grants being subjected to a 10 per cent deduction to safeguard the position at the close of hostilities. It has now been arranged that application for grants for research may be made at any time during the year and will be considered by the Executive Committee at such times as may be found convenient. With regard to assistance to students, there was a decrease of 184 beneficiaries in 1941–42 as against 1940–41, the fall being almost wholly among male students, and the decrease was greatest in the faculty of arts ; in the faculty of medicine there has been an increase, whereas in the faculty of science the figures have remained relatively steady. The year has been noticeable for the number of repayments made by Scottish graduates now abroad. Appendixes include a report upon the work of investigators under the research scheme during the academic year 1941–42, in which reference is made to work on the synthesis of methyl-glucoses and related studies, the attempted synthesis of a bis-isoquinoline derivative with a structure related to that of emetine, to work on the chemistry of penicillin, investigations on the eel-worm disease of potatoes, the reliability of mental tests, and to Dr. A. P. Hickie's work under Dr. W. O. Kermack at the Royal College of Physicians' Laboratory, Edinburgh, on the preparation of pyridoquinoline compounds with a constitutional relation to compounds of known anti-malarial activity.

Further reference to this work is made in the report of the superintendent of the laboratory of the Royal College of Physicians for the academic year 1941–42, which is also appended. Research in the Chemical Department under Dr. Kermack's supervision has been mainly in this field of synthetic anti-malarials. The synthesis of new *m*-phenanthrolines has now been taken up by Dr. W. Tebrich, and work on *o*-phenanthroline derivatives has also been continued and the nitration of 4-chloro-2-methylquinoline has been examined. Good progress has been made in work on the synthesis of derivatives of the complex ring system pyridoacridine, and the preliminary account of Dr. Tebrich's investigations jointly with Dr. J. M. Robson on the penetration of albucid soluble into the ocular tissues of rabbits following local application has already appeared in NATURE (**148**, 167; 1941). In the Department of Histology, studies of breast cancer have been continued, as well as an intensive study of a remarkable case of generalized sarcoidosis ; and in the Bacteriological Laboratory the search for a basic medium for the cultivation of bacteria has been continued. Lists of publications by fellows, scholars and recipients of grants received since September 30, 1941, and of publications by teaching fellows are also appended to the report, with details of assistance to students and the abstract of accounts for the year ended September 30, 1942.

Sir John Floyer (1649–1734)

A PAPER on "Sir John Floyer and his Times" was read recently before the Johnson Society by Mrs. Lilian Lindsay, honorary librarian of the British Dental Association. Sir John Floyer was born in 1649 at Lichfield, the birthplace of Samuel Johnson, and was educated at Queen's College, Oxford, where he took his M.B. in 1674 and his M.D. in 1686. The course consisted in readings in the medical classics and memorizing the aphorisms of Hippocrates and the works of Galen. Theses were written and were upheld in disputation. There was no clinical teaching or opportunity for practical experience. The more serious students went abroad for this, especially to Padua. In 1686 Floyer was knighted. In 1687 appeared his first book entitled "The Touchstone of Medicines Discovering the Vertues of Vegetables, Minerals and Animals by their Tastes and Smells", which was published by Dr. Johnson's father, in the preface to which he mentions that he had visited the Garden which the Society of Apothecaries had brought in 1671 and was first called the Physic Garden in 1678. In 1697 he published an inquiry into "The Right Uses and Abuses of Hot, Cold and Temperate Baths in England", which contained a history of bathing from the earliest times and showed that Floyer had visited all the available springs, wells and watering places in Great Britain.

Floyer's chief contribution to medicine, however, was his work on "The Pulse Watch" (1707), in which he related how for many years he tested healthy pulses among his patients by pendulum clocks and common watches until he found a minute glass which he used in his experiments on cold bathing. His "Treatise on Asthma", of which the first edition was published in 1698 and the third in 1745, gave the first description of pulmonary emphysema in asthma, from which he suffered himself. In 1725 appeared his "Medicina Gerocomica, or Galenic Art of Preserving Old Men's Health", in which he advocated fresh air, exercise, regular diet and temperance in all things, especially alcohol and tobacco. Two of his contributions were read before the Royal Society, one on the dissection of a monstrous pig and the other on the sweet taste of plants. In conclusion, Mrs. Lindsay remarked that Floyer resembled John Hunter in his passion for experiment but lacked his genius in interpretation and orderly thinking.

Earthquakes Registered in New Zealand

DURING January 1943 only four distant earthquakes were registered by the seismographs at Auckland, Arapuni, Christchurch and Wellington, New Zealand, according to the provisional bulletin just received (Provisional Bulletin No. P–131, New Zealand Seis. Rep., Dominion Observatory, Wellington, N.Z., Jan. 1943). The first earthquake was on January 2. *P* waves were received at Auckland at 19h. 32m. 20s. U.T. from an epicentre 22° distant. The second, on January 9, came from an epicentre some 25° from Wellington, *P* waves arriving at this place at 02h. 20m. 01s. U.T. The third shock was on January 27, possible *P* waves arriving at Wellington at 02h. 58m. 30s. U.T. from an epicentre 95° distant, though interpretation of this record was difficult owing to the small amplitudes being confused by microseisms. The last shock of the month, the epicentre of which was at a greater distance than 10° from Wellington, occurred on January 30. *P* waves were received at Christchurch at 06h. 05m. 40s. U.T. from an epicentre some 53 km. distant. During the month there were in addition twenty-five earthquakes the epicentres of which were at a distance less than 10° from Wellington. All but four of these were felt at some place or other in New Zealand ; two were felt at Wellington, three at Masterton, and

six at Wairoa. The greatest felt, reckoned on the modified Mercalli scale, was on January 24, about Foveaux Strait, where the intensity reached scale V. Greater instrumental magnitudes occurred on January 4 and January 9, though the former only attained modified Mercalli scale III at Ohakune and Taihape, and the latter, from an epicentre some 200 km. distant, was apparently not felt in New Zealand.

Earthquakes Registered in Spain

DURING the month of March 1943, thirty earthquakes were registered by the seismographs at the Observatory at Toledo (Registro de las observaciones provisionales correspondientes al mes de Marzo de 1943, Observatorio Geofisico de Toledo). Twelve of these were sufficiently strong and well registered as to have their epicentral distances determined, and two further shocks had their epicentral distances provisionally determined. The largest shock of the month to be recorded was on March 9. This began with *ePz* at 10h. 02m. 59s. from an epicentre some 11,180 km. distant and attained a maximum ground amplitude at Toledo of 74 μ at 10h. 45m. 47s. The second strongest shock of the month to be recorded was on March 21, which began with *iPz* at 20h. 55m. 09s. and attained a maximum amplitude of 29 μ at 21h. 56m. 23s. The epicentre was 16,000 km. from Toledo. Two shocks, apparently from the same epicentre 9,500 km. from Toledo, had a depth of focus of approximately 120 km. These were on March 14 and 15. The only 'near' earthquake of the month was apparently on March 26. The epicentre was 560 km. from Toledo and the focus was 25 km. deep, but as the azimuth was not determined, other observations are required before the epicentre can be accurately determined.

Invention of the Barometer

THE tercentenary of the invention of the barometer will be marked by a meeting, to be held at the University of Toronto on October 19, arranged by a committee including representatives of the Royal Meteorological Society (Canadian Branch), Royal Astronomical Society of Canada, Royal Canadian Institute and the University of Toronto. Papers will be presented by Prof. L. C. Karpinski on "Telescope, Microscope, and Barometer as a Point of Departure for the Natural Sciences"; Prof. G. S. Brett on "The Effects of the Discovery of the Barometer on Contemporary Thought"; W. E. Knowles Middleton on "Subsequent History of the Barometer"; and Prof. John Satterly on "The Applications of the Barometer in Physics and Chemistry". Correspondence should be addressed to the secretary of the Committee, A. D. Thiessen, 315 Bloor Street West, Toronto, Canada.

Epidemiology of Leprosy

ACCORDING to a paper on this subject by Dr. G. W. McCoy, medical director (retired) of the United States Public Health Service (*Public Health Rep.*, Dec. 18), leprosy tends to disappear from many parts of the world, while in other parts it tends to spread freely. At the present time in Europe the disease spreads apparently only in the countries bordering on the Mediterranean and the Baltic. As regards the United States, in Louisiana, Florida and Texas the presence of imported cases from the British West Indies, Dutch Guiana, South America, China and Chile, has resulted in the establishment of foci in which the disease shows a strong tendency to perpetuate itself, while in the central north-western States, such as Minnesota, leprosy has shown little tendency to become established. In other parts of the United States the disease is so rare as to be practically negligible from the public health aspect. Dr. McCoy concludes that in an age in which great social and economic changes are occurring, it is impossible to predict what effect they may have on leprosy or other diseases.

Deaths from Exposure to Cold

ACCORDING to an editorial in the January issue of the *Statistical Bulletin* of New York, during the eight-year period for which data are available, namely, 1933–41, the deaths in the United States from exposure to excessive cold—freezing, frostbite, etc.—were on the average 363 annually or about 3 per 1,000,000 persons. The highest figure (579) was reached in 1936 when there was exceptionally cold weather over a large part of the country, while the minimum figure of 190 in the period was in 1939. In the United States as a whole, males were the victims of exposure to excessive cold about four times as frequently as females, and two thirds of the male deaths occurred in men of fifty and more, many of whom were probably suffering from arterial diseases and therefore more susceptible to the effects of exposure. The highest rates in the country were found in the mountain States of Nevada, Montana, and Wyoming, while the district of Columbia was lowest and California came next.

Announcements

DR. W. G. OGG, director of the Macaulay Institute for Soil Research, Aberdeen, has been appointed to succeed Sir John Russell as director of the Rothamsted Experimental Station on Sir John Russell's retirement at the end of September.

SIR LAWRENCE BRAGG, Cavendish professor of experimental physics in the University of Cambridge, and Prof. C. G. Douglas, professor of general metabolism in the University of Oxford, have joined the Council of the Gas Research Board.

DR. E. W. SMITH, president-elect of the Institute of Fuel, has been awarded the Birmingham medal of the Institution of Gas Engineers, in acknowledgment of his outstanding work during the past thirty years for the gas industry. The Birmingham medal was founded some sixty years ago, and has only been presented on fourteen previous occasions during that period.

MR. R. W. PAUL, who died on March 28 (see NATURE, April 24, p. 470), has left the proceeds from the sale of his shares in Cambridge Instrument Company (to be called the R. W. Paul Instrument Fund) to be used for the design, construction and maintenance of novel or unusual instruments for investigation in physical science, and subject thereto to the Royal Institution, the Physical Society and the Royal Society; and on his wife's decease £5,000 to the research fund of the Royal Institution of Great Britain, and £500 each to the Benevolent Fund of the Institute of Physics, the Cinematograph Trade Benevolent Fund, and the Benevolent Fund of the Institution of Electrical Engineers.