

will be introduced early in the new session. Viscount Tredegar will introduce it in the House of Lords, while Mr. Linton Thorp has consented to take charge of it when it reaches the House of Commons. Apart from the humanitarian aspect of the steel trap problem, there is another which assumes national importance, inasmuch as it has a vital bearing on agriculture. To agriculturists, the rabbit is a pest, and its extermination would be of great benefit to farmers. Paradoxical as it may seem, the steel trap is beginning to be suspect as an exterminator—and this in districts which have hitherto been wedded to its use. In certain portions of Carmarthenshire and in Pembrokeshire, traps were not used before the War, and rabbits were kept down by other means; since the introduction of the steel trap, these districts are overrun with rabbits.

New Uses for Bone Glue

THE results of the competition organised by the International Association of Bone Glue Manufacturers ("Epidos"), with the object of extending the uses of bone glue, have recently been announced, and the sum of 30,000 Swiss francs has been distributed among thirty competitors representing ten Continental countries; the fact that this is 10,000 francs in excess of the amount to be distributed under the rules of the competition may be taken as an indication of the high standard of the contributions. It is remarkable that few of the winning memoranda refer to what is usually regarded as the obvious and most common use for glue, namely, as an adhesive. They are, indeed, characterised by the diversity of their interests, and include processes in which glue is used as a stabiliser for colloids (for example, in latex preparations, polishes and ceramic products); as a source of nitrogen in the production of yeast; to enhance resistance (for example, of rubber) to oils and spirits; and as a catalyst, for example, to inhibit the action of acid pickle-liquor. There also appears to be a wide range of uses for glue as an ingredient of plastics, moulding and insulating materials and lacquers, and as a dressing for textiles. Full particulars of each process are obtainable from the General Secretariat of Epidos, 40, Rue du Colisée, Paris. International competitions of this kind suggest a novel method of obtaining technical information which doubtless will prove popular with prospective inventors. In the present instance, the experiment certainly appears to have justified itself, since it is announced that a further competition will be organised in the near future.

B.D.H. Products

THE British Drug Houses Ltd., London, N.1, have issued a handy brochure entitled "B.D.H. Injections for Parenteral Medication". It contains a list of drugs which are commonly given by injection, a brief note of their use and the range of dosage recommended, together with the packings obtainable and their cost. It is stated that the preparation of the solutions is carried out in a specially designed room, provided with double doors and supplied with filtered air at a pressure slightly in excess of atmospheric. The

ampoules and bottles used are made of standard alkali-free amber glass and are sterilised after filling by an approved method, the actual process adopted being one which exerts no deleterious action on the medicament. Where containers designed to permit the withdrawal of successive doses on different occasions are employed, a small quantity of antiseptic is added to the solution. "Glucotest Solution" B.D.H. provides a simple and rapid method for determining the amount of sugar in urine. 2 c.c. of the solution is boiled in a test tube with a small amount of Glucotest powder to prevent bumping and the urine is added drop by drop from a pipette. The addition of urine is continued until the blue colour of the liquid has completely disappeared and a white or yellow colour free from any suggestion of green remains. The amount of glucose in the urine is inversely proportional to the number of drops required, and is ascertained directly from a table supplied with the solution.

Cosmic Radiation

NO. 4 of the *Annals of the Observatory of Lund*, 1934, is devoted to a memoir in English, entitled "Cosmic Ultra-Radiation in Northern Sweden (an Academical Dissertation)" by Axel Corlin. It is an admirably printed quarto volume containing 113 pages of text and 80 pages of tables and bibliography. The author made measurements of the cosmic radiation in the far north of Sweden, using a Kolhörster apparatus in 1929-30 and a Steinke apparatus in 1932-34. A careful study is made of the relation between the radiation measured, and the air pressure, air temperature and humidity, using the method of multiple correlation. No direct influence of air temperature and humidity was found. Likewise no positive relation was established, after exhaustive investigation, between the cosmic radiation and magnetic storms and auroræ. The transition effect in iron was observed in a lake near Abisko, with results similar to those found by Steinke at Königsberg. The ionisation by cosmic radiation was measured in the Kirunavaara iron mine, and was detected down to 700 metres water-equivalent. The volume contains two chapters of great general interest, one giving a historical summary of the experimental and theoretical development of cosmic ray investigation, while the other discusses the origin of the radiation, the present situation of this problem being described as "quite desperate".

Measurement of Geological Time

IN 1931, H. V. Ellsworth analysed a specimen of uraninite from Manitoba and obtained a lead-ratio with the surprisingly high value of 0.260, corresponding to an age of about 1,750 million years. Although Ellsworth gave adequate evidence that the mineral was of first class quality, there has naturally been some hesitation in accepting this great extension of geological time. Confirmation of the most convincing kind is now, however, forthcoming. It is announced by Prof. A. C. Lane through Science Service, Washington, D.C., that Miss Edith Kroupa (working in the laboratory of Dr. F. Hecht in Vienna) has

analysed a sample of monazite which occurred with the Manitoba uraninite. The age turns out to be 1,725 million years. The significance of this high figure may be realised when it is remembered that the 'Middle' Pre-Cambrian rocks of Ontario, Norway and India have an age of about 950-1,050 million years. Clearly there was time enough before this for at least three major cycles of mountain-building and igneous intrusion, of which only one has hitherto been generally recognised.

Fur-Farming in U.S.A.

ECONOMIC stringency in the United States of America threatened to put a stop to the experimental fur-farming carried on by the Bureau of Biological Survey of the Department of Agriculture, but the restoration by the committee of appropriations of a grant of 51,717 dollars which had been eliminated will enable the experiments to be continued (Science Service, Washington, D.C.). Fur-farming is perhaps the only live-stock industry which has been profitable in the United States during the past three years. In 1933, there were harvested 150,000 silver fox and 50,000 mink pelts, but the great difficulty has been found to be the over-all improvement of the quality of the skins, too many still being of inferior grade. Some thirty to thirty-five million dollars is invested in the industry.

Report of the Ordnance Survey

THE report of the progress of the Ordnance Survey for the year 1933 (H.M. Stationery Office. 3s. net) directs attention to the slow rate of revision in the field of the large-scale plans which is at present possible. During the last three years, revision has been largely confined to the area of Greater London, adjoining counties, Devon, Cornwall, parts of the West Riding and Manchester areas. But the greater part of England has not been revised for more than ten years and much is more than twenty years out of date. Wales and Scotland have been largely unrevised for at least twenty years. Progress is reported in the preparation of the new fifth or relief edition of the one-inch map, and six more sheets were published during the year. Archæological maps of the Trent Basin and the Old Sarum district were published. Other publications included the magnetic edition of the physical maps of England and Scotland.

Announcements

LORD MACMILLAN has been appointed a trustee of the Beit Memorial Fellowships for Medical Research in succession to the late Sir James Kingston Fowler. The other trustees are: Sir Alfred Beit, Mr. Wm. Ormsby Gore, Lord Onslow, Lord Rayleigh, Dr. Edwin Deller (principal of the University of London) and Sir John Rose Bradford.

PROF. A. J. CLARK, professor of materia medica in the University of Edinburgh, and Prof. J. C. G. Ledingham, director of the Lister Institute of Preventive Medicine and professor of bacteriology in the University of London, have been appointed

members of the Medical Research Council in succession to Sir Charles Sherrington and Dr. A. J. Arkwright, who retired in rotation on September 30.

THE Lord President of the Council has appointed Sir John Cadman and Sir James Jeans to be members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research. Sir Arthur Balfour, Sir William Bragg and Lord Rayleigh have retired from the Council on the completion of their terms of office.

SIR HARRY LINDSAY has been appointed director of the Imperial Institute, South Kensington, London, to succeed Sir William Furse, who retired on September 30. Sir Harry Lindsay was formerly Director-General of Commercial Intelligence, India, and since 1923 has been Indian Trade Commissioner.

A SYMPOSIUM on "Technical Aspects of Emulsions" is being arranged by the International Society of Leather Trades' Chemists (British Section) to be held at the Royal Society of Arts, John Street, Adelphi, London, W.C.2, on December 7 at 10 a.m.-6 p.m. The morning session will be devoted to papers on the making of emulsions, and the afternoon session to papers on the breaking of emulsions. The symposium is open to the public. Further information can be obtained from the Organising Secretary, International Society of Leather Trades' Chemists, 17 Market Street, London, S.E.1.

THE Irish Radium Committee has published its report for the year 1933 (*Sci. Proc. Roy. Dublin Soc.*, 21, No. 7. July, 1934. Separate Issue). Radium therapy is carried out by means of radon tubes, of which 306 batches, containing 12,996 millicuries radon, were issued during the year. Reports upon 466 cases treated at four hospitals are included, but no conclusions respecting the results obtained are given.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A principal of the Belfast Municipal College of Technology—The Director of Education, Education Offices, Victoria Street, Belfast (Oct. 12). An inspector for the purposes of the Diseases of Animals Acts, 1894-1927, in the Ministry of Agriculture and Fisheries—The Secretary, Ministry of Agriculture and Fisheries, 10 Whitehall Place, London, S.W.1 (Oct. 15). A head of the Science Department, Blackburn Municipal Technical College—The Director of Education, Education Offices, Library Street, Blackburn (Oct. 15). A professor of social science, and a lecturer in anatomy in the University of Cape Town—The Secretary to the High Commissioner for the Union of South Africa, Trafalgar Square, London, W.C.2 (Nov. 7). A teacher of domestic subjects at the Technical Institute, Tunbridge Wells—Dr. J. Lister, Technical Institute, Tunbridge Wells. A micro-analyst in the Department of Organic Chemistry, University of Manchester—Prof. I. M. Heilbron. An assistant keeper in charge of the Oceanographical Collection in the British Museum (Natural History)—The Secretary, British Museum (Natural History), London, S.W.7.