

potassium bisulphate, extracted with water and filtered. The precipitate on the filter is treated with dilute hydrofluoric acid. The insoluble portion containing the radium is boiled with sodium carbonate, to convert the barium and radium into carbonates, and the latter dissolved in dilute hydrochloric acid. After concentration to ice, the emanation is removed by a current of air and estimated in the usual manner.—Mlle. Suzanne Veil: The evolution of the hydrate of nickel sesquioxide in the presence of water.—André Charriou: The use, in catalysis, of alumina which has absorbed various other substances. The decomposition of ether at 250° C. in the presence of alumina was studied. With one exception, the blue oxide of tungsten, the presence of foreign substances (SO₃, P₂O₅, CuO, CaO, CoO) reduced the catalytic power of the alumina in this reaction.—G. Dubar: The formations of the Lias and the upper Jurassic in Asturia.—L. Eblé and J. Itié: The values of the magnetic elements at the station of Val-Joyeux (Seine-et-Oise) on January 1, 1925.—L. Blaringhem: The production of new hybrids between the wild species of Triticum and the principal cultivated wheats. Analysis of their affinities.—A. Guilliermond: The instability of forms and the permanence of the mitochondria.—P. Delauney: The glucosides of several species of native orchids.—Émile F. Terroine and Jean Roche: Heat production and respiration of the tissues *in vitro* in the homeotherms.—A. F. Roffo: The action of the Röntgen rays on cholesterol. Cholesterol, in solution, is destroyed by the action of the X-rays, but the crystallised alcohol is unchanged by this treatment.—Edouard Chatton and André Lwoff: The etiology and structure of the Spirophyra. Their relationship with the Fœttingeria. The origin and evolution of the parasitism of these infusoria.

VIENNA.

Academy of Sciences, December 11.—H. Pettersson: Communication from the Radium Institute, No. 173. On the reflection of α -particles from atomic nuclei, α -particles were scattered through nearly 180° by five different elements. With three of these elements, which are known to be disintegrated, no reflected α -particles were observed, even at ranges considerably smaller than those calculated by the collision-theory. With two heavier elements α -rays were observed, but with much smaller ranges than would correspond to an elastic collision. Possible explanations are given on the assumption that the α -particle penetrates into the nucleus. H-particles were detected after bombarding nickel and copper with α -particles.—H. Handel-Mazzetti: New Chinese plants (30th communication). An index list of some 100 descriptions published during 1924 is given.—J. Albrecht: Palæontological and stratigraphical results of the journey of Dr. Ampferer and Dr. Hammer in Western Serbia in the year 1918.—M. Kohn and S. Strassmann: Ninth communication on bromophenols, bromo- and bromo-nitro-phenols.—M. Kohn and R. Marberger: Tenth communication on bromophenols: On chloro-nitro-ether and bromo-nitro-ether of hydroquinone and of tolu-hydroquinone and the mobility of the halogen atom in the same.—M. Kohn and S. Grim: Eleventh communication on bromophenols. Bromination of hydroquinone-monomethyl-ether and of nitro-hydroquinone-dimethyl-ether.

Official Publications Received.

New South Wales. Department of Mines: Geological Survey. Mineral Resources, No. 32: The Coal Resources of the Douglas Park Area, and Tabulated List of Coal Bores, Counties of Cumberland and Camden. By L. F. Harper. Pp. 22. (Sydney: Alfred James Kent.) 1s.

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Department of Commerce: U.S. Coast and Geodetic Survey. Serial No. 277: Radio Acoustic Method of Position Finding in Hydrographic Surveys. By Comdr. N. H. Heck and E. A. Eckhardt and M. Keiser. (Special Publication No. 107.) Pp. iv+23. Serial No. 278: Velocity of Sound in Sea Water. By Comdr. N. H. Heck and Ensign Jerry H. Service. (Special Publication No. 108.) Pp. iii+27. (Washington: Government Printing Office.) 10 cents each.

Agricultural Progress: the Journal of the Agricultural Education Association. Vol. 2, 1925. Pp. 122. (London: Ernest Benn, Ltd.) 5s. net.

British Association for the Advancement of Science. Report of the Conference of Delegates of Corresponding Societies, 1924: including List of Papers bearing upon the Zoology, Botany and Prehistoric Archaeology of the British Isles. By T. Sheppard. Pp. 489-554. (London: British Association, Burlington House, W.1.)

The Carnegie Trust for the Universities of Scotland. Twenty-third Annual Report (for the Year 1923-24) submitted by the Executive Committee to the Trustees on 11th February 1925. Pp. iv+77. (Edinburgh: The Merchants' Hall.)

Bulletin of the American Museum of Natural History. Vol. 47, Art. 7: Primates collected by the American Museum Congo Expedition. By J. A. Allen. Pp. 283-499+plates 79-167. (New York City.)

The Indian Forest Records. Vol. 10, Part 11: Burma Oak and Chestnut Tans; being the Report of an Investigation from the Tannin standpoint of the different parts of the various Oak and Chestnut Trees, principally those species growing in the Maymyo and Kalaw Areas. By J. A. Pilgrim. Pp. vi+90. (Calcutta: Government of India Central Publication Branch.) 1, 1 rupees; 1s. 6d.

Nigeria. Third Annual Bulletin of the Agricultural Department, 1st July 1924. Pp. 96. (Lagos.) 5s.

Memoirs of the Colombo Museum. Edited by Dr. Joseph Pearson. Series A, No. 3: Ceylon Coins and Currency. By H. W. Codrington. Pp. viii+290+7 plates. (Colombo.) 10 rupees.

Publikation der Sternwarte in Kiel. 13: Berechnung der Ablenkungen der Lichtstrahlen in der Atmosphäre der Erde auf rein meteorologisch-physikalischer Grundlage. Von Paul Harzer. Pp. 89. 14: Gebrauchstabellen zur Berechnung der Ablenkungen der Lichtstrahlen in der Atmosphäre der Erde für die Beobachtungen am grossen Kieler Meridiankreis. Von Paul Harzer. Pp. 23. (Kiel: C. Schmidt.)

Department of Commerce: Bureau of Standards. Scientific Papers of the Bureau of Standards, No. 495: A Radiometric Investigation of the Germicidal Action of Ultra-violet Radiation. By W. W. Coblenz and H. R. Fulton. Pp. 639-680. (Washington: Government Printing Office.) 20 cents.

Annual Report of the Director, United States Coast and Geodetic Survey, to the Secretary of Commerce, for the Year ended June 30, 1924. Pp. iv+80+21 plates. (Washington: Government Printing Office.) 10 cents.

Diary of Societies.

SATURDAY, FEBRUARY 28.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir Ernest Rutherford: The Counting of the Atoms (I).
HULL ASSOCIATION OF ENGINEERS (at Technical College, Hull), at 7.15.—E. S. Rayner: Road Passenger Transport.

MONDAY, MARCH 2.

CAMBRIDGE PHILOSOPHICAL SOCIETY, at 4.30.
ROYAL INSTITUTION OF GREAT BRITAIN, at 5.—General Meeting.
SOCIETY OF ENGINEERS (at Geological Society), at 5.30.—R. I. Money: Notes on Preparing a Tender.
ROYAL SOCIETY OF MEDICINE (Tropical Diseases and Parasitology Section), at 5.30.—Dr. H. E. Meleury: Kala Azar in China, with special reference to its Histopathology in Experimentally Infected Hamsters.
INSTITUTE OF ELECTRICAL ENGINEERS (Western Centre) (at South Wales Institute of Engineers, Cardiff), at 6.—L. Breach and H. Midgley: Drive of Power Station Auxiliaries.
INSTITUTE OF MECHANICAL ENGINEERS (Graduates' Section, London) (Annual Lecture), at 7.—W. H. Patchell: A Visit to America.
ARISTOTELIAN SOCIETY (at University of London Club), at 8.—J. H. Harley: The Theory of the State.
ROYAL SOCIETY OF ARTS, at 8.—Dr. W. Rosenbain: The Inner Structure of Alloys (III.) (Cantor Lectures).
SOCIETY OF CHEMICAL INDUSTRY (London Section, jointly with the Institute of Chemistry (London Section)) (at Chemical Society), at 8.
INSTITUTE OF THE RUBBER INDUSTRY (London Section) (at Engineers' Club, Coventry Street, W.), at 8.—F. Jones: Standardised Rubber-ware.
ROYAL SOCIETY OF MEDICINE (Epidemiology, Comparative Medicine, and Disease in Children Sections), at 8.—G. P. Male, Dr. M. J. Rowlands, Dr. Stenhouse Williams, Dr. David Nabarro, Sir Layton Blenkinsop, and others: Special Discussion: The Control of Tuberculosis and the Milk Supply.
INSTITUTE OF CHEMISTRY (Manchester Section).—Dr. A. Renshaw: Chemical Poisoning occurring amongst Industrial Workers.

TUESDAY, MARCH 3.

ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Prof. J. Barcroft: The Colour of the Animal Creation (IV). The Colour of Fish.
ZOOLOGICAL SOCIETY OF LONDON, at 5.30.—E. Banks: Variation in the Colours of European Birds in relation to the Conditions under which they live.—O. Thomas, M. A. C. Hinton, and Capt. G. C. Shortridge: On Mammals collected in 1923 by Capt. Shortridge during the Percy Sladen and Kaffrarian Expedition to South-West Africa. With Field-notes by the Collector.—Dr. C. F. Sonntag: A Monograph of *Orycteropus afer*. I. Anatomy except the Nervous System, Skin, and Skeleton.—Mary L. Hett: A New Species of Trematoda (Trematoda) from West Australia.—V. S. Vinogradov: The Structure of the External