

Evolution and fractionation. The case of Jupiter and Saturn.—P. Hebronner: The twenty-first and twenty-second campaigns of the detailed geometrical description of the French Alps.—Th. Vautier: The increase of intensity and the duration of extinction of sound.—Léon Bouthillon: Radiogoniometers and radiophares with accentuated maximum.—L. Longchambon: The rotary power of tartaric acid. Discussion of a recent note on the same subject by E. Vellinger. Details are given of the changes in the rotary power of tartaric acid produced by dilution down to a concentration 0.00625. A tube 10 metres long was used in these measurements.—J. Galibourg and F. Ryziger: Contribution to the study of the Röntgen spectrography of pearls. A discussion of a Röntgen spectrograph as a means of distinguishing natural from cultivated pearls.—P. Mercier: The particles of long path emitted by the active B+C deposit of actinium.—Neda Marinesco: Some properties of large molecules in solution.—Charles Dufraisse and Paul Gailliot: Peculiarities of the fractures of acrolein gels: rhythmic production of ridges. Fractured surfaces of acrolein gels, examined under the microscope, show remarkable regularities, the surface being covered with parallel, equidistant straight lines resembling a ploughed field. These surfaces form a diffraction grating (about 120 lines to the millimetre) and give spectra both by transmission and by reflection. A spectrograph of mercury vapour obtained with such a grating is reproduced.—Tiffeneau and Mlle. J. Levy: The desamination of some phenyl-amino-alcohols,  $C_6H_5 \cdot CH(OH) \cdot CH(NH_2)R$ . Preparation of acylophenones without transposition.—Pierre Jolibois: The constitution of the organo-magnesium compounds. In an earlier communication (*C. R.*, 1912, p. 353) the author has given reasons for preferring the formula  $Mg(C_2H_5)_2 \cdot MgI_2$  to the more generally admitted  $Mg \cdot C_2H_5 \cdot I$ . Work for and against this view published since 1912 is summarised, and the work of Job and Dubien, which supports the formula  $Mg \cdot C_2H_5 \cdot I$ , is adversely criticised.—V. Ipatief and N. Orlof: The hydrogenation of xanthone and xanthene.—Y. Altchidjian: The utilisation of liquid fuels containing a high proportion of organic sulphur compounds as a source of an antidetonating combustible. It is suggested that from the work of Midgley and Boyd, organic sulphur compounds might be expected to act as antidetonants in internal combustion motors: this conclusion has been confirmed by experiments with mixtures of petrol and heavy oils containing sulphur obtained by carbonisation of bituminous limestones.—N. Menchikoff: Primary strata to the south of Oued Drâa.—Const. A. Kténas: The chemico-mineralogical nature of the enclosure of Fouqué-Kaméni (Santorin).—Pierre Allorge: The benthos with desmids of the lakes in the west and centre of France.—Pierre Dangeard: The variation of the plates (carapace) in Peridinium.—J. Magrou: The anatomy of plant cancer or crown-gall.—Raoul M. May: The reaction velocity of *Calliactis effoeta* in the presence of alkaloids and of gland extracts.—P. Delauney: The biochemical synthesis of a chlorinated glucoside,  $\beta$ -5 chlorosalicyl glucoside.

### Official Publications Received.

#### BRITISH AND COLONIAL.

The Manchester Museum. Museum Publication 92: The 'Behrens Collection of Sumerian Tablets in the Manchester Museum. By T. Fish. (Notes from the Manchester Museum, No. 20.) Pp. 6+12 plates. 1s. 6d. Museum Publication 93: Report of the Museum Committee for the Year 1925-26. Pp. 20. 6d. (Manchester: At the University Press; London: Longmans, Green and Co., Ltd.)

Third Annual Report of the Research Association of British Flour-Millers, 1925-1926 (July 1st to June 30th). Pp. 24. (St. Albans, Herts; London: 40 Trinity Square, E.C.3.)

No. 2984, VOL. 119]

Journal of the Indian Institute of Science. Vol. 9B, Part 3: Aerial Testing. By J. K. Catterton-Smith. Pp. 21-28+11 plates. 1.8 rupees. Vol. 9B, Part 4: Circulating Currents in Wave-wound Armatures. By F. N. Mowdawalla and G. K. Pradhan. Pp. 29-35+18 plates. 1.8 rupees. Vol. 9B, Part 5: Madras (Fort) Radio Field Intensity Measurements at Bangalore. By K. Sreenivasan. Pp. 37-60+12 plates. 3 rupees. (Bangalore.)

Union of South Africa: Department of Agriculture. Science Bulletin No. 50: Some Physical and Chemical Changes occurring during the Ripening of Grapes (Second paper). By P. R. v. d. R. Copeman and G. Frater. (Division of Chemistry Series No. 67.) Pp. 54. 9d. Science Bulletin No. 51: Factors Influencing Overrun. By D. J. Retief. Pp. 24. 3d. (Pretoria: Government Printing and Stationery Office.)

Aeronautical Research Committee: Reports and Memoranda. No. 1081 (M. 42): The Torsion of Circular and Elliptical Cylinders of Homogeneous Anisotropic Materials. By S. J. Wright. Work performed for the Engineering Research Board of the Department of Scientific and Industrial Research. (E.F. 176.) Pp. 5. 4d. net. No. 1085 (M. 44): Report on the 'Burning' of Aluminium. By J. D. Grogan. Work performed at the National Physical Laboratory for the Engineering Research Board of the Department of Scientific and Industrial Research. (B.I.a. Metals, Strength and Properties, 53.—T. 2298.) Pp. 12+3 plates. 1s. net. (London: H.M. Stationery Office.)

South Australia. Annual Report of the Director of Mines and Government Geologist for 1925. Pp. 9. (Adelaide: R. E. E. Rogers.)

Canada. Department of Mines: Mines Branch. Investigations of Mineral Resources and the Mining Industry, 1925. (No. 689.) Pp. ii+84. Bituminous Sands of Northern Alberta: Occurrence and Economic Possibilities. Report on Investigations to the end of 1924. By S. C. Ellis. (No. 632.) Pp. vii+244+43 plates. 75 cents. Bituminous Sands of Northern Alberta. Topographical Maps (to Accompany Report No. 632). 12 maps in Case. Sodium Sulphate of Western Canada: Occurrence, Uses and Technology. By L. Heber Cole. (No. 646.) Pp. vii+160+15 plates+22 maps. 40 cents. (Ottawa: F. A. Acland.)

Dove Marine Laboratory, Cullercoats, Northumberland. Report for the Year ending June 30th, 1926. Edited by Prof. Alexander Meek. (Published by the Marine Laboratory Committee of Armstrong College.) Pp. 44+2 plates. (Cullercoats.) 5s.

British Photographic Research Association. Report for the Year 1925-26. Pp. 16. (London.)

The Journal of the Institution of Electrical Engineers. Vol. 65, No. 360, December. Pp. 96+xxviii. (London: E. and F. N. Spon, Ltd.) 10s. 6d.

#### FOREIGN.

Smithsonian Miscellaneous Collections. Vol. 73, No. 4: Opinions rendered by the International Commission on Zoological Nomenclature. Opinions 91 to 97. (Publication 2873.) Pp. 30. Vol. 78, No. 4: Solar Activity and Long-Period Weather Changes. By Henry Helm Clayton. (Publication 2875.) Pp. 62. Vol. 78, No. 5: The Distribution of Energy over the Sun's Disk. By C. G. Abbot. (Publication 2876.) Pp. 12+1 plate. (Washington, D.C.: Smithsonian Institution.)

Department of Commerce: U.S. Coast and Geodetic Survey. Serial No. 580: Coastal Currents along the Pacific Coast of the United States. By H. A. Marmor. (Special Publication No. 121.) Pp. iv+80. (Washington, D.C.: Government Printing Office.) 15 cents.

Department of the Interior: U.S. Geological Survey. Water-Supply Paper 580-A: Geology of No. 3 Reservoir Site of the Carlsbad Irrigation Project, New Mexico, with Respect to Water-Tightness. By Oscar E. Meinzer, B. Coleman Renick and Kirk Bryan. (Contributions to the Hydrology of the United States, 1926.) Pp. iv+39+2 plates. Bulletin 782: Ore Deposits of the Jerome and Bradshaw Mountains Quadrangles, Arizona. By Waldemar Lindgren, with Statistical Notes by V. C. Heikes. Pp. ix+192+23 plates. 50 cents. Professional Paper 142-A: The Molluscan Fauna of the Alum Bluff Group of Florida. By Julia Gardner. Part 1: Prionodesmacea and Anomalodesmacea. Pp. iv+79+iii+15 plates. Professional Paper 142-B: The Molluscan Fauna of the Alum Bluff Group of Florida. By Julia Gardner. Part 2: Astartacea, Carditacea, Chamacea. Pp. iv+81-99+1+plates 16-17. 10 cents. Professional Paper 142-C: The Molluscan Fauna of the Alum Bluff Group of Florida. By Julia Gardner. Part 3: Lucinae, Leptonacea, Cardiacea. Pp. iv+101-149+ii+plates 18-23. Professional Paper 142-D: The Molluscan Fauna of the Alum Bluff Group of Florida. By Julia Gardner. Part 4: Veneracea. Pp. iv+151-184+ii+plates 24-28. Professional Paper 147-A: A Comparison of the Genera *Metaplaenticeras* Spath and *Placenticeras* Meek. By John B. Reeside, Jr. (Shorter Contributions to General Geology, 1926.) Pp. ii+5+2 plates. Professional Paper 147-B: The Montana Earthquake of June 27, 1925. By J. T. Pardee. (Shorter Contributions to General Geology, 1926.) Pp. ii+7-23+plates 3-13. 20 cents. (Washington, D.C.: Government Printing Office.)

#### CATALOGUES.

Splices and Tapes for Rubber Insulated Wires. Pp. 16. (Passaic, N.J.: The Okonite Co.; London Agents: Wm. Geipel and Co.)

List No. 148: Cambridge Dissolved Oxygen Recorder for Boiler Feed Water. Pp. 4. (London: Cambridge Instrument Co., Ltd.)

### Diary of Societies.

#### FRIDAY, JANUARY 7.

GEOLOGISTS' ASSOCIATION (at University College), at 7.30.—Dr. G. Slaughter: Glacial Tectonics as reflected in Disturbed Drift Deposits: Studies in the Drift Deposits of the South-Western Part of Suffolk. Part 2 and 3.

#### SATURDAY, JANUARY 8.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. A. V. Hill: Nerves and Muscles: How we Feel and Move: (6) Speed, Strength, and Endurance.