

tions. The relations between the viscosity of binary liquid mixtures and the polarity of the molecules of the constituents. The following conclusions are drawn from available data: when one of the components is dipolar and the other non-polar, the viscosity curve, if not a straight line, is always concave. When this curve is convex, the two components are always dipolar.—A. Turpain and de Bony de Lavergne: The magnetic field and Brownian movement.—Maurice Curie and Adolphe Lepape: The dielectric cohesion of the rare gases. Bouty's experiments with helium, neon, and argon were repeated with purer material, and krypton and xenon were also examined. In the series neon, argon, krypton, and xenon, the dielectric cohesion increases with the atomic number.—L. Goldstein: Some difficulties in the spontaneous emission of radiation.—J. Cayrel: The effect of a magnetic field on the electrical resistance of a contact.—G. A. Beauvais: Very short waves. The short waves described had a wave-length of 16-20 cm. They were reflected by parabolic and plane mirrors according to the laws of optics.—Henri Belliot: The development of inverted or solarised photographic plates after fixing.—E. Carrière and P. Castel: The experimental study of the transformation of chromates into bichromates.—J. Orcel and S. Pavlovitch: The microscopic characters of the oxides of manganese and of the natural manganites.—P. Sédallian, A. Leulier, and Mme. Clavel: The distribution and stability of the antigen properties of the diphtheric toxin. The rôle of the non-specific colloids.

Official Publications Received.

BRITISH.

Department of Scientific and Industrial Research. Report of the Building Research Board, with the Report of the Director of Building Research, for the Year 1927. Pp. viii+132+10 plates. (London: H.M. Stationery Office.) 3s. net.

Indian Central Cotton Committee: Technological Laboratory. Bulletin No. 17: A Note on the Early History of Cotton. By A. N. Gulati and Arthur James Turner. (Technological Series, No. 12.) Pp. 10. (Bombay.) 8 annas.

The Scottish Forestry Journal: being the Transactions of the Royal Scottish Arboricultural Society. Vol. 42, Part 2, October. Pp. 35-110+28-38. (Edinburgh.) 7s. 6d.

Ollscoil Na h-Eireann (The National University of Ireland). Calendar for the Year 1928. Pp. viii+327+465. (Dublin.)

Ministry of Health. Circular 939: Circular as to the Contents and Arrangement of the Annual Reports of Medical Officers of Health for 1928. Pp. 11. (London: Ministry of Health.)

The Journal of the Institution of Electrical Engineers. Edited by P. F. Rowell. Vol. 67, No. 384, December. Pp. 124+xxxviii. (London: E. and F. N. Spon, Ltd.) 10s. 6d.

Transactions of the Royal Society of Edinburgh. Vol. 56, Part 1, No. 5: On some points in the Anatomy and Habits of the Lophogastrid Crustacea. By Dr. S. M. Manton. Pp. 102-119+3 plates. (Edinburgh: Robert Grant and Son; London: Williams and Norgate, Ltd.) 3s.

Air Ministry: Meteorological Office, London. Southport Auxiliary Observatory (The Fernley Observatory of the Corporation of Southport). Annual Report, and Results of Meteorological Observations, for the Year 1927. By Joseph Baxendell. Pp. 28. (Southport: The Fernley Observatory; London: Meteorological Office.)

Scottish Marine Biological Association. Annual Report 1927-28. Pp. 23. (Glasgow.)

Nyasaland Protectorate. Report on some Diseases of Tea and Tobacco in Nyasaland. By Dr. E. J. Butler. Pp. 30+4 plates. (Zomba: Department of Agriculture; London: Colonial Office.)

Memoirs of the Indian Meteorological Department. Vol. 25, Part 2: Summary of Indian Rainfall for the Fifty Years 1875-1924. Pp. iii+15-108. (Calcutta: Government of India Central Publication Branch.) 8 rupees; 13s. 6d.

The Deeside Field. Issued under the Auspices of the Deeside Field Club. Fourth Number. Edited by J. B. Philip. Pp. vi+88+28 plates. (Aberdeen.) 3s. 6d.

FOREIGN.

Bulletin of the Terrestrial Electric Observatory of Fernando Sanford, Palo Alto, California. Vol. 5: Observations on Solar and Lunar Diurnal Variations of Earth Potential due to Changes in Distribution of the Earth's Surface Charge, including Two new Methods of recording such Variations, and on the accompanying Variations in the Atmospheric Potential Gradient for the Year 1927. Pp. 26. (Palo Alto, Calif.)

Contributions from the Dudley Herbarium of Stanford University. Vol. 1, No. 2: Preliminary Report on the Flora of the Tres Marias Islands. By Roxana Stinchfield Ferris. Pp. 32+4 plates. (Stanford University, Calif.: Stanford University Press.) 1.00 dollar.

Proceedings of the United States National Museum. Vol. 73, Art. 12: A Revision of the Lizards of the Genus *Ctenosaura*. By Prof. John Wendell Bailey. (No. 2733.) Pp. 58+30 plates. (Washington, D.C.: Government Printing Office.)

Department of Commerce: U.S. Coast and Geodetic Survey. Special Publication No. 146: Radio Acoustic Position Finding. Pp. iv+62. (Washington, D.C.: Government Printing Office.) 20 cents.

Department of Commerce: Bureau of Mines. Coal in 1926. By F. G. Tryon, O. E. Kiessling and L. Mann. (Mineral Resources of the United States, Part 2.) Pp. x+419-585. (Washington, D.C.: Government Printing Office.) 30 cents.

Conseil Permanent International pour l'Exploration de la Mer. Rapports et Procès-verbaux des Réunions. Vol. 50: Whales and Whale Fisheries; Statistics of Catch and Measurements collected from the Norwegian Whalers' Association, 1922-25. By Sigurd Risting. Pp. iii+122. (Copenhague: Andr. Fred. Høst et fils.)

Department of Commerce: Bureau of Standards. Miscellaneous Publications, No. 88: Annual Report of the Director of the Bureau of Standards to the Secretary of Commerce for the Fiscal Year ended June 30, 1928. Pp. iv+46. (Washington, D.C.: Government Printing Office.) 5 cents.

Proceedings of the United States National Museum. Vol. 74, Art. 3: New Fossil Pearly Fresh-water Mussels from Deposits on the Upper Amazon of Peru. By William B. Marshall. (No. 2748.) Pp. 7+1 plate. (Washington, D.C.: Government Printing Office.)

Section de Géodésie de l'Union Géodésique et Géophysique internationale. Publication spéciale No. 2: Tables de l'ellipsoïde de référence internationale adopté par l'Assemblée générale de Madrid le 7 octobre 1924 dans le système de la Division sexagésimale de la Circonférence. Calculées sous la direction de Général G. Perrier par E. Hasse. Pp. 20+91. (Paris.)

U.S. Department of Agriculture. Farmers' Bulletin No. 1566: The Sorghum Midge, with Suggestions for Control. By C. H. Gable, W. A. Baker and L. C. Woodruff. Pp. ii+10. (Washington, D.C.: Government Printing Office.) 5 cents.

Instituts scientifiques de Buitenzorg: "s Lands Plantentuin." Treubia: recueil de travaux zoologiques, hydrobiologiques et océanographiques. Vol. 7, Suppl., Livraison 2, Novembre: Fauna Buruana; Acari. Von Dr. A. C. Oudemans. Pp. 37-100. (Buitenzorg: Archipel Drukkerij.) 2.50 f.

Obras completas y correspondencia científica de Florentino Ameghino. Volumen 7: Los mamíferos fósiles de la República Argentina. Parte 2: Ungulados. Edición oficial ordenada por El Gobierno de la Provincia de Buenos Aires. Dirigida por Alfredo J. Torcelli. Pp. 524. (La Plata: Taller de Impresiones Oficiales.)

R. Osservatorio Astrofisico di Catania. Catalogo Astrofotografico Internazionale 1900-0. Zona di Catania fra le declinazioni +46° e +55°. Vol. 7. Parte 2a: Declinaz. da + 52° a + 54°, ascens. retta da 3h a 6h. (Fascicolo N. 50.) Pp. viii+36. Vol. 8, Parte 2a: Declinaz. da + 53° a + 55°, ascens. retta da 3h a 6h. (Fascicolo N. 58.) Pp. viii+39. (Catania.)

Diary of Societies.

FRIDAY, JANUARY 25.

BRITISH MYCOLOGICAL SOCIETY (London Meeting) (at University College), at 11 A.M.—Miss D. M. Cayley: Some Observations on Mycetozoa of the Genus *Ditenuium*.—A. Chaston Chapman: A New Species of *Uridium*.—Miss E. H. M. Farries: An Investigation on the Metabolism of *Nematospora Gossypii* Ashby and Nowell.—M. Mitra: *Phytophthora parasitica* Dast. as a Parasite on Cotton Seedlings and Guava Fruit.—Dr. A. Smith: Observations on *Puccinia Menthae* Pers.

INSTITUTION OF ELECTRICAL ENGINEERS (Irish Centre—Dublin) (at Gaiety Theatre, Dublin), at 4.—Ll. B. Atkinson: How Electricity does Things (Faraday Lecture).

ASSOCIATION OF ECONOMIC BIOLOGISTS (Annual General Meeting) (in Botany Lecture Room, Imperial College of Science and Technology), at 5.—S. G. Tallents: The Work of the Empire Marketing Board.

PHYSICAL SOCIETY (at Imperial College of Science), at 5.—Prof. C. V. Boys: A Fused Quartz Pendulum Rod for a Clocks.—G. W. Sutton: A Method for the Determination of the Equivalent Resistance of Air-Condensers at High Frequencies.—L. Hartshorn: The Measurement of the Anode Circuit Impedances and Mutual Conductances of Thermionic Valves.

ROYAL SOCIETY OF MEDICINE (Disease in Children Section), at 5.—Dr. F. J. Poynton and Dr. A. Moncrieff: A Case of Mediastinal Teratoma in an Infant.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir Arthur Keith: The Anatomy and Evolution of the Human Brain.

INSTITUTE OF TRANSPORT (Manchester, Liverpool, and District Section) (at Liverpool), at 6.30.—C. C. Taylor: The Reasons of Development of Road Transport in Recent Years.

ENGINEERING AND SCIENTIFIC CLUB (Wolverhampton), at 7.—A. C. Baker, C. O. Silvers, and others: Debate on Trans-*versus* Buses.

SOCIETY OF CHEMICAL INDUSTRY (Birmingham and Midland Section) (at Engineers' Club, Birmingham), at 7.—Prof. W. E. S. Turner: Some Important Minor Constituents in Glass.

INSTITUTION OF LOCOMOTIVE ENGINEERS (North-Eastern Centre) (at Hotel Metropole Leeds), at 7.—J. C. Armstrong: Pulverised Fuel Locomotive.

MANCHESTER LITERARY AND PHILOSOPHICAL SOCIETY (Chemical Section), at 7.

INSTITUTION OF MECHANICAL ENGINEERS (Informal Meeting), at 7.—J. E. Lea: Measurement of Coal Supplies in Small or Large Quantities.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—F. T. Usher: Bromoil.

WEST OF SCOTLAND IRON AND STEEL INSTITUTE (at Royal Technical College, Glasgow), at 7.—J. Mitchell: The Manufacture of Iron and Steel Tubes.

INSTITUTION OF ELECTRICAL ENGINEERS (North-Eastern Students' Section) (at Armstrong College, Newcastle-upon-Tyne), at 7.15.—S. Gibson: The City of Winnipeg Hydro-electric Power Station.

BLACKBURN TEXTILE SOCIETY (at Bradford Technical College), at 7.30.—W. Wilkinson: Power Loom Pickers and Picking (Lecture).