

A refinement of the Michelson-Morley experiment (*v. NATURE*, Jan. 8, p. 64).—Paul S. Epstein: (1) On the evaluation of certain integrals important in the theory of quanta. A convenient expression is obtained for the integral which determines the matrix of the hydrogen atom, considering only the simple closed Kepler motion and neglecting relativity effect and spin of the electron. (2) The new quantum theory and the Zeeman effect.—R. M. Langer: The dispersion of atomic hydrogen. (1) A measure. A powerful discharge was passed through one tube of a pair constituting an interferometer containing hydrogen through which 'white-light' fringes were being observed. The shift of fringes at a given wave-length, together with the concentration of atomic hydrogen and index of refraction of molecular hydrogen, enables the dispersion of atomic hydrogen to be calculated. At about $\lambda = 6000 \text{ \AA.U.}$, $\mu = 1.000068$. The method involves certain assumptions, but is regarded as giving results of the right order. (2) A calculation. Attempts to adjust earlier dispersion formulæ to give the proper frequencies for anomalous dispersion lead to values of the index of refraction different from that obtained above.—H. B. Goodrich: The development of Mendelian characters in *Aplocheilichthys latipes*. There are four homozygous types of this Japanese freshwater fish: wild, yellow, white, and variegated. The colours are produced by three kinds of pigment cell, melanophores and brown and yellow chromatophores, which appear to be present in similar numbers in all four types and at the earliest stages of growth. The Mendelian gene appears to function by controlling the amount of melanin elaborated in cells which are always present.

Official Publications Received.

BRITISH AND COLONIAL.

Indian Problem and its Solution: a Letter by the Head of the Ahmadiyya Community to His Excellency the Viceroy and Governor-General of India. Pp. 31. (London: The London Mosque, Southfields, S.W.18.)

Transactions of the Buteshire Natural History Society (1925). Pp. 60+43 plates. (Glasgow and London: The Mann Publishing Co., Ltd.)

Aeronautical Research Committee: Reports and Memoranda. No. 1023 (M. 39): Some further Experiments on the Behaviour of Single Crystals of Aluminium under Reversed Torsional Stresses. By H. J. Gough, S. J. Wright and Dr. D. Hanson. Work performed for the Engineering Research Board of the Department of Scientific and Industrial Research. (B.I.a. Metals, 47.—T. 2166.) Pp. 13+8 plates. 1s. 3d. net. No. 1033 (Ae. 226): On the Advantages of an Open Jet Type of Wind Tunnel for Airscrew Tests. By H. Glauret and C. N. H. Lock. Pp. 10+3 plates. 9d. net. (London: H.M. Stationery Office.)

Address on 'The Dangers of Contraception,' delivered by Frederick J. McCann at the Caxton Hall, London, on October 29th, 1926. Pp. 16. (London: League of National Life.) 6d.

The Marine Biological Station at Port Erin (Isle of Man): being the Fortieth Annual Report of the former Liverpool Marine Biology Committee, now the Oceanography Department of the University of Liverpool. Drawn up by Prof. Jas. Johnstone. Pp. 39. (Liverpool: University Press of Liverpool, Ltd.; London: Hodder and Stoughton, Ltd.) 1s. 6d. net.

The British Mycological Society. Transactions, Vol. 11, Parts 3 and 4, December. Edited by Carleton Rea and J. Ramsbottom. Pp. 169-311. (London: Cambridge University Press.) 15s. net.

New Zealand. Department of Lands and Survey: Scenery-Preservation. Report for the Year ended 31st March 1926, together with Statement of Accounts and Schedule of Lands Acquired and Reserved during the Year under the Scenery Preservation Act. Pp. 8. (Wellington, N.Z.: W. A. G. Skinner, 1926.) 6d.

Western Australia: Geological Survey. Bulletin No. 88: Palaeontological Contributions to the Geology of Western Australia. Series 7, Nos. 13, 14 and 15. By Rex W. Brettnall, F. Chapman and Ludwig Glauret. Pp. 72 (4 plates). Bulletin No. 91: The Auriferous Lodes of the Gibraltar District, Coolgardie Coalfield. By F. R. Feldtmann. Pp. 29+7 plates. (Perth: Fred. Wm. Simpson.)

Memoirs of the Department of Agriculture in India. Entomological Series, Vol. 9, No. 6: Studies on Indian Thysanoptera. By H. H. Karry. Pp. 187-239+plates 16-22. 1.8 rupees; 2s. 6d. Entomological Series, Nos. 7, 8, 9. No. 7: New Species of Indian Gall Midges (Ftonididae), by Dr. E. P. Felt; No. 8: New Indian Geometridæ, by Lewis B. Prout; No. 9: Description of *Laspeyresia stirpivora*, n.sp. (Lepidoptera), by E. Meyrick; with a Short Note on the Life-History and Status, by Rai Bahadur C. S. Misra. Pp. 241-260+plate 24. 5 annas; 6d. (Calcutta: Government of India Central Publication Branch.)

Proceedings of the Royal Society of Edinburgh, Session 1925-1926. Vol. 46, Part 3, No. 23: Researches into the Characteristic Numbers of the Mathieu Equation (Second Paper). By Dr. E. L. Ince. Pp. 316-322. 9d. Vol. 46, Part 4, No. 29: On the Cardinal Function of Interpolation-Theory. By W. L. Ferrar. Pp. 323-333. 1s. (Edinburgh: Robert Grant and Son; London: Williams and Norgate, Ltd.)

Proceedings of the Thirteenth Indian Science Congress (Bombay, 1926). Pp. xxiii+405. (Calcutta: Asiatic Society of Bengal.)

Records of the Botanical Survey of India. Vol. 3, No. 5: Mosses collected in Gilgit, etc., by J. Garrett and W. Lillie. By H. N. Dixon. Pp. 803-813+1 plate. (Calcutta: Government of India Central Publication Branch.) 8 annas; 10d.

FOREIGN.

Proceedings of the United States National Museum. Vol. 69, Art. 12: New Land and Fresh-Water Mollusks from Central and South America. By William B. Marshall. (No. 2635.) Pp. 12+3 plates. (Washington, D.C.: Government Printing Office.)

Instituto Geográfico y Catastral. Anuario del Observatorio Astronómico de Madrid para 1927. Pp. 528. (Madrid.)

The Rockefeller Foundation. Annual Report, 1925. Pp. xi+521 (48 plates). (New York City.)

Department of Commerce: Bureau of Standards. Technologic Papers of the Bureau of Standards, No. 325: Recent Developments in Lamp Life-Testing Equipment and Methods. By J. F. Skogland and R. P. Teele, Jr. Pp. 681-702+5 plates. (Washington, D.C.: Government Printing Office.) 15 cents.

Smithsonian Institution: United States National Museum. Bulletin 100, Vol. 6, Part 2: Contributions to the Biology of the Philippine Archipelago and Adjacent Regions. Additions to the Polychætos Annelids collected by the United States Fisheries Steamer *Albatross*, 1907-1910, including one New Genus and three New Species. By A. L. Treadwell. Pp. 181-193. (Washington, D.C.: Government Printing Office.)

Proceedings of the United States National Museum. Vol. 69, Art. 8: Crustaceans of the Orders Euphausiacea and Mysidacea from the Western Atlantic. By Walter M. Tattersall. (No. 2634.) Pp. 31+2 plates. Vol. 69, Art. 23: Cymbidium, a New Genus of Silurian Pentameroid Brachiopods from Alaska. By Edwin Kirk. (No. 2649.) Pp. 5+1 plate. (Washington, D.C.: Government Printing Office.)

New York Academy of Sciences. Scientific Survey of Porto Rico and the Virgin Islands. Vol. 4, Part 1: Geology of the Virgin Islands, Culebra and Vieques. Introduction and Review of the Literature, by James F. Kemp; Physiography, by Howard A. Meyerhoff. Pp. 141. (New York City.)

Appendix No. 2 to the Annual Report of the Chief of the Bureau of Navigation, 1926: Annual Report of the Naval Observatory for the Fiscal Year 1926. Pp. 19. (Washington, D.C.: Government Printing Office.)

Journal of the Faculty of Science, Imperial University of Tokyo. Section 2: Geology, Mineralogy, Geography, Seismology. Vol. 2, Part 1: The Tazima Earthquake of 1925. By Dr. Hujidjirō Kotō. Pp. v+75+8 plates. (Tokyo.) 2.50 yen.

CATALOGUES.

The Book: its Authors, Printers, Illustrators and Binders; also a Selection of Memoirs and Autograph Letters of Literary Personalities. (No. 490.) Pp. 60. (London: Francis Edwards.)

Classified List of Second-hand Scientific Instruments. (No. 89.) Pp. vi+58. (London: C. Baker.)

Heat Treatment Bulletin No. 37: Theory and Practice in the Hardening Shop. Pp. 5. (London: Automatic and Electric Furnaces, Ltd.)

Diary of Societies.

SATURDAY, JANUARY 22.

BRITISH MYCOLOGICAL SOCIETY (in Botanical Department, University College), at 11 a.m.—W. Buddin and Miss E. M. Wakefield: Studies on *Rhizoctonia Crocorum* and *Helicobasidium purpureum*.—E. W. Mason: On the Naming of a Dark Spored Hyphomycete.—J. Ramsbottom: Fragmenta Mycologica V.—Miss K. Sampson: Anthracnose Diseases of Red Clover.—R. C. Woodward: Studies on Apple Mildew.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. E. W. Tristram: English Medieval Wall-Painting.

PHYSIOLOGICAL SOCIETY (at National Institute for Medical Research, Hampstead), at 3.30.—Demonstrations by Prof. L. Hill: Measurement of Capillary Pressure in the 3rd day Chick-Embryo.—J. A. Campbell: Chamber for Continuous Exposure to High and Low Percentage of Oxygen.—T. Angus: Apparatus for Studying the Arc-lamp as a Source of Ultra-violet Radiations.—H. W. Dudley: Apparatus for Working up Tissue-extracts on an Intermediate Scale.—Dr. H. H. Dale and A. N. Richards: Continuous Record of Oxygen Absorption by Small Animals.—W. Feldberg: Histamine Vasodilatation in the Rabbit.—R. Bodo and H. P. Marks: Aseptic Perfusion of Isolated Heart.—Papers by Prof. H. S. Raper: Indole Derivatives from Tyrosine.—Dr. G. V. Anrep and R. Kinoshita: The Influence of Mechanical Factors of the Circulation upon the Diastolic Volume of the Ventricles.—Prof. R. J. S. McDowall: The Relation of Alkali to the Parasympathetic (Preliminary Communication).—M. A. Battie and Prof. R. J. S. McDowall: The Effect of Alkali on the Blood Sugar.—K. Furusawa and P. M. T. Kerridge: The Buffering Power of the Uterus of the Cat.—J. A. Campbell: Effects of Exposure to Low Tensions of Air and Oxygen.—C. H. Best, Dr. H. H. Dale, H. W. Dudley, and W. V. Thorpe: Histamine, the Vasodilator Principle of Extracts from the Lung.—Dr. H. H. Dale and A. N. Richards: The Vasodilator Action of Small Doses of Adrenaline.—Prof. L. Hill: The Biologically Active Rays of Sunlight.—Dr. G. A. Clark: The Immediate Effect of Vagus Section on Blood-Sugar Level.—E. M. Boock, J. H. Burn, and