

physiologically and pathologically there is a marked resemblance between influenza and war-gas poisoning, with a marked increase in the concentration of the blood.—E. L. Nichols and D. T. Wilbur: Luminescence at high temperatures. Announcing the discovery of luminescence at temperatures which are, roughly speaking, above the beginnings of a visible red heat.—S. R. Detwiler: Functional regulations in animals with composite spinal cords. The evidence indicates that the factor which is involved in the over-production of motor cells is the stimulus afforded by the connection with the central neurones.—A. S. King: Experiments with the tube resistance furnace on the effect of potential difference. The conclusion is that the potential difference acting on the tube is not effective in modifying the spectrum in certain temperature ranges.—J. H. McDonald: An application of the porism of four tangents of a twisted cubic.—H. A. Cheplin and L. F. Rettger: Studies on the transformation of the intestinal flora, with special reference to the implantation of *Bacillus acidophilus*, II. Feeding experiments on man. Attempts to implant *Bacillus bulgaricus* failed, as in the feeding experiments on rats. It appears that *Bacillus acidophilus* milk possesses several advantages over ordinary sour and *Bacillus bulgaricus* milk.—Kilauea Volcano Observatory: A report by the committee of the National Academy of Sciences at the request of the Secretary of Agriculture with reference to desirability of the control of the observatory being assumed by the Weather Bureau.

Official Publications Received.

Legislative Document No. 39: State of New York. Thirty-second Annual Report of the New York State College of Agriculture at Cornell University and of the Agricultural Experiment Station established under the Direction of Cornell University, Ithaca, New York, 1919. Vol. 1. Pp. civ+1074+30+8+57 plates. Thirty-third Annual Report, 1920. Transmitted to the Legislature, January 15, 1921. Pp. 79+4. (Ithaca: Cornell University.)

Cornell University: Agricultural Experiment Station. Memoir 34: An Economic Study of Farm Layout. By W. T. Myers. Pp. 383-564. Memoir 35: Some Effects of Potassium Salts on Soils. By R. S. Smith. Pp. 565-606. Memoir 36: Resistance of the Roots of some Fruit Species to Low Temperature. By D. B. Carrick. Pp. 607-662. Memoir 37: A Modified Babcock Method for Determining Fat in Butter. By N. W. Hepburn. Pp. 663-690. (Ithaca: Cornell University.)

Department of Commerce; U.S. Coast and Geodetic Survey. Serial No. 113, Special Publication No. 60: A Study of Map Projections in General. By O. S. Adams. 5 cents. Serial No. 121, Special Publication No. 62: Triangulation in Rhode Island. By Earl Church. 30 cents. Serial No. 143, Special Publication No. 67: Latitude Developments Connected with Geodesy and Cartography. By O. S. Adams. 20 cents. Serial No. 146, Special Publication No. 68: Elements of Map Projection, with Applications to Map and Chart Construction. By C. H. Deetz and O. S. Adams. 50 cents. Serial No. 150, Special Publication No. 69: Modern Methods for Measuring the Intensity of Gravity. By C. H. Swick. Pp. 96. 15 cents. Serial No. 155: Results of Observations made at the U.S. Coast and Geodetic Survey Magnetic Observatory, near Tucson, Arizona. By D. L. Hazard. 20 cents. (Washington: Government Printing Office.)

Department of the Interior: United States Geological Survey. Water Supply Paper 449: Ground Water in the Meriden Area, Connecticut. By G. A. Waring. 466: Ground Water in the Southington-Granley Area, Connecticut. 468: Records of Water Levels in Wells in Southern Carolina. By F. C. Ebert. (Washington: Government Printing Office.)

Department of the Interior: United States Geological Survey. Bulletin 719: Preliminary Report on Petroleum in Alaska. By G. C. Martin. 50 cents. Bulletin 721: Geology and Petroleum Resources of North-Western Kern County, California. By W. A. English. 10 cents. Bulletin 715-M: Permian Salt Deposits of the South-Central United States. By N. H. Darton. (Washington: Government Printing Office.)

Smithsonian Miscellaneous Collections. Vol. 72, No. 8: A Review of the Interrelationships of the Cetacea. By H. Winge. Translated by G. S. Miller, Jr. (Publication 2650.) Pp. ii+97. Vol. 72, No. 11: The Echinoderms as Aberrant Arthropods. By A. H. Clark. (Publication 2653.) Pp. ii+20. (Washington: Smithsonian Institution.)

Canada. Department of Mines: Mines Branch. The Preparation, Transportation, and Combustion of Powdered Coal. By J. Blizard. Pp. 131+3 plates. (Ottawa: Department of Public Printing and Stationery.)

Tide Tables for the Eastern Coasts of Canada for the Year 1922, including the River and Gulf of St. Lawrence, the Atlantic Coast, the Bay of Fundy, Northumberland and Cabot Straits, and Information on Currents. Issued by the Tidal Current Survey in the Department of the Naval Service of the Dominion of Canada. (Twenty-sixth Year of Issue.) Pp. 68. (Ottawa: Department of Public Printing and Stationery.)

Experiment Station of the Hawaiian Sugar Planters' Association. The Improvement of Plants through Bud Selection. By A. D. Shamel. Pp. iv+28+41 plates. (Honolulu.)

Madras Agricultural Department. Year Book, 1920-21. Pp. vi+123. (Madras: Director of Agriculture.) 10 annas.

Office scientifique et technique des Pêches Maritimes. Notes et Mémoires No. 8: Rapport sur la campagne de Pêche de l'Orvet dans les Eaux tunisiennes. Par Prof. G. Pruvot. Pp. 12+1 map. 3 francs. Notes et Mémoires No. 9: Recherches sur le Régime des Eaux Atlantiques, au large des Côtes de France et sur la Biologie du Thon Blanc ou Germon (Observations faites pendant la seconde croisière de la Tanche, Août et Septembre, 1921). Par Ed. le Danois. Pp. 16+6 plates. 4 francs. (Paris: Ed. Blondel la Rougery.)

Department of the Interior: United States Geological Survey. Professional Paper 121: Helium-bearing Natural Gas. By G. S. Rogers. Pp. 113. (Washington: Government Printing Office.)

Departement van Landbouw, Lijverheid en Handel. "S Lands Plantentuin." (Jardin Botanique de Buitenzorg.) Treubia: Recueil de Travaux Zoologiques, Hydrobiologiques et Oceanographiques. Vol. 1. Livraison 4. Pp. 139-300+plates 8-12. (Buitenzorg.) 4 francs.

The Botanical Society and Exchange Club of the British Isles. (Vol. 6, Part 1.) Report for 1920. By the Secretary, G. C. Druce. Pp. 207. (Oxford: The Secretary, Yardley Lodge.) 10s.

Fourteenth Annual Report (1920-21) presented by the Council to the Court of Governors at a Meeting held in Cardiff on October 28, 1921. Pp. 35. (Cardiff: The Museum.)

Canada. Department of Mines: Mines Branch. Bulletin No. 33: Gas Producer Trials with Alberta Coals. By J. Blizard and E. S. Malloch. (Supplementing Report No. 331.) Pp. 40. (Ottawa: Department of Public Printing and Stationery.)

Department of Scientific and Industrial Research. Building Research Board. Special Report No. 2: Experiments on Floors. An Extract from the Report of the Building Materials Research Committee. Pp. 21. 1s. 3d. net. Special Report No. 3: The Stability of Thin Walls. An Extract from the Report of the Building Materials Research Committee. Pp. 13. 6d. net. Fuel Research Board. Fuel for Motor Transport. Second Memorandum by the Fuel Research Board. Pp. iv+16. 6d. net. (London: H.M. Stationery Office.)

Mines Department: Miners' Lamps Committee. Memorandum No. 4: Record of Research on the Passage of Flame through Perforated Plates and through Tubes of Small Diameter. Pp. 19. 9d. net. Memorandum No. 5: Record of Research on the Passage of the Flame of an Explosion from within Miners' Lamps fitted with Chimneys. Pp. 13. 6d. net. (London: H.M. Stationery Office.)

Department of Commerce. Scientific Papers of the Bureau of Standards. No. 421: Wave Lengths longer than 5500Å in the Arc Spectra of Yttrium, Lanthanum, and Cerium, and the Preparation of Pure and Rare Earth Elements. By C. C. Kiess and others. Pp. 315-352. (Washington: Government Printing Office.) 5 cents.

Union of South Africa. Department of Mines and Industries: Geological Survey. Sheet 52: Johannesburg. (Pretoria: Geological Survey.)

Proceedings of the Royal Irish Academy. Vol. 36, Section A, No. 1: On Polygons to Generate Diagrams of Max. Stress on Girders due to Locomotives and Dead Loads, together with an Extension of Rankine's Conjugate Load Areas to the Design of Masonry Arches. By T. Alexander and J. T. Jackson. Pp. ii+30. (Dublin: Hodges, Figgis & Co.; London: Williams and Norgate.) 1s.

Proceedings of the Geologists' Association. Vol. 33, Part 1. Pp. 80+4 plates. (London: E. Stanford, Ltd.) 5s. net.

Agricultural Research Institute, Pusa. Bulletin No. 117: Experiments with Castor Seed conducted at Sabour. By C. S. Taylor. Pp. ii+10. 3 annas. No. 119: The Agricultural Development of Baluchistan. By A. Howard and G. L. C. Howard. Pp. iv+27. 6 annas. No. 122: Pusa 12 and Pusa 4 in the Central Circle of the United Provinces. By B. C. Burt and others. Pp. iv+34. 11 annas. No. 124: Safflower Oil. By A. Howard and J. S. Remington. Pp. ii+14. 4 annas. (Calcutta: Government Printing Office.)

Diary of Societies.

THURSDAY, JANUARY 5.

GEOGRAPHICAL ASSOCIATION (at Birkbeck College), at 11.45 a.m.—R. L. Thompson and others: Discussion: Geography and History in Schools.

ASSOCIATION OF ASSISTANT MASTERS IN SECONDARY SCHOOLS (at London Day Training College), at 2.30.—Prof. T. P. Nunn: The Purposes of Education.

GEOGRAPHICAL ASSOCIATION (at Birkbeck College), at 2.30.—Sir Halford J. Mackinder: Problems of the Pacific.

ROYAL INSTITUTION, at 3.—Prof. J. A. Fleming: Electric Waves and Wireless Telephony: Electric Oscillations.

GEOGRAPHICAL ASSOCIATION (at Birkbeck College), at 4.—E. N. Fallaize: The Anthropological Institute and the Services it can render to Geographical Students.