

is much more intense (about six times) than that given by the meta isomer.—K. Dzewonski, J. Auerbach, and J. Moszew: 1,8-Benzyl-benzoylnaphthalene and some of its derivatives.—M. Thomaschewski: The pollen analysis of the peat bogs of Sztengwald and of Zaskoczyn (Free Town of Dantzic). The results obtained are analogous with those found for southern Sweden.—S. Skowron: Researches on spermatogenesis *in vitro*.—A. Wierzejski: The freshwater sponges.—T. Marchlewski: Genetic researches on the domestic dog.

Official Publications Received.

BRITISH.

Empire Cotton Growing Corporation. Reports received from Experiment Stations, 1928-1929. Pp. xi+268. (London.) 2s. 6d.

Home Office. Welfare Pamphlet No. 7: Lighting in Factories and Workshops. Third edition. Pp. 25. (London: H.M. Stationery Office.) 4d. net.

The Scientific Proceedings of the Royal Dublin Society. Vol. 19 (N.S.), No. 29: Studies on Peat. Part 3: Low Temperature Carbonization of Peat. By James T. Donnelly and Joseph Reilly. Pp. 365-376. 1s. Vol. 19 (N.S.), No. 30: The Nitration of substituted Phenylbenzylamine Derivatives. By J. Reilly, T. V. Creedon and P. J. Drumm. Pp. 377-379. 6d. Vol. 19 (N.S.), No. 31: A Study of Two New Species of Bacteria belonging to the Genus *Chromobacterium*. By Dr. M. Grimes. Pp. 381-384. 6d. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.)

City and County of Bristol: The Bristol Museum and Art Gallery. Report of the Museum and Art Gallery Committee for the Year ending 30th September 1929. Pp. 24+4 plates. (Bristol.)

National Joint Industrial Council for the Flour-Milling Industry. Technical Education Series, Pamphlet No. 5: Pests in Wheat and its Products. By Sebort Humphries. Pp. 36. (London.) 6d. net.

The Imperial College of Tropical Agriculture. Prospectus for 1930-31, also Principal's Report for 1928-29 and Register. Pp. 47+3 plates. (St. Augustine, Trinidad; London.)

The Carnegie Trust for the Universities of Scotland. Twenty-eighth Annual Report (for the Year 1928-29) submitted by the Executive Committee to the Trustees on 12th February 1930. Pp. iv+78. (Dunfermline.)

John Murray, 50 Albemarle Street, 1768-1930. Pp. 14. (London.)

Journal of the Indian Institute of Science. Vol. 12A, Part 17: i. Contributions to the Study of Spike-Disease of Sandal (*Santalum album*, Linn.). Part 7: Factors influencing Diastatic Activity, by B. N. Sastri and N. Sreenivasaya; ii. Part 8: Chemical Composition of Tissue Fluids from the Leaf, by M. Sreenivasaya and B. N. Sastri; iii. Part 9: Chemical Composition of Tissue Fluids from the Stem, by M. Sreenivasaya and B. N. Sastri; iv. Note on the Starch-Liquefying Action of Sandal Leaf Extracts, by B. N. Sastri. Pp. 233-252. 1.4 rupees. Vol. 12A, Part 18: Studies on Soil *Actinomyces*. Part 3: Standardisation of a Plate Method of counting Soil *Actinomyces*. By M. Ganesh Rao and V. Subrahmanyam. Pp. 253-273. 1.4 rupees. Vol. 12A, Part 19: i. Biological Oxidation of Sulphur. Part 2: Effect on the Microflora of Activated Sludge. By C. V. Ramaswami Ayyar and Roland V. Norris. Pp. 275-294. 1.4 rupees. Vol. 12A, Part 20: Contributions to the Study of Spike-Disease of Sandal (*Santalum album*, Linn.). Part 10: Seasonal Studies on Healthy and partially Spiked Trees. By A. V. Varaduraja Iyengar. Pp. 295-305. 12 annas. (Bangalore.)

Melbourne Astrogographic Catalogue, 1900-0. Vol. 3: Zones -09° and -70°. Rectangular Co-ordinates and Diameters of Star Images, from Photographs taken and measured under the direction of R. L. J. Ellery and Pietro Baracci. Revised and prepared for publication under the supervision of Dr. J. M. Baldwin. Pp. xi+254. (Melbourne: H. J. Green.)

The Journal of the Institution of Electrical Engineers. Edited by P. F. Rowell. Vol. 68, No. 398, February. Pp. 205-316+xxxvi. (London: E. and F. N. Spon, Ltd.) 10s. 6d.

The Indian Forest Records. Vol. 14, Part 4: Immature Stages of Indian Coleoptera (6). By J. C. M. Gardner. Pp. 30+6 plates. (Calcutta: Government of India Central Publication Branch.) 1.2 rupees; 2s.

Journal of the Society of Glass Technology. Edited by Prof. W. E. S. Turner. Vol. 13, No. 52, December 1929. Pp. xii+79-430+x+xxviii. (Sheffield.) 10s. 6d.

Far Eastern Association of Tropical Medicine. Transactions of the Seventh Congress held in British India, December 1927. Edited by Lieut.-Col. J. Cunningham. Vol. 3. Pp. xv+761+38 plates. (Calcutta: Thacker's Press and Directories, Ltd.)

FOREIGN.

U.S. Department of Agriculture. Technical Bulletin No. 170: A Pipette Method of Mechanical Analysis of Soils based on Improved Dispersion Procedure. By L. B. Olmstead, Lyle T. Alexander and H. E. Middleton. Pp. 23. (Washington, D.C.: Government Printing Office.) 5 cents.

Smithsonian Miscellaneous Collections. Vol. 82, No. 2: The Thoracic Mechanism of a Grasshopper, and its Antecedents. By R. E. Snodgrass. (Publication 3027.) Pp. 111. (Washington, D.C.: Smithsonian Institution.)

Field Museum of Natural History. Geology Leaflet 11: Neanderthal (Mousterian) Man. By Oliver C. Farrington and Henry Field. Pp. 14+9 plates. 25 cents. Geology Leaflet 12: Cement. By Henry W. Nicholls. Pp. 15+4 plates. 25 cents. Anthropology Leaflet 28: The Field Museum-Oxford University Expedition to Kish, Mesopotamia, 1923-1929. By Henry Field. Pp. 34+14 plates. 50 cents. (Chicago.)

Conseil Permanent International pour l'Exploration de la Mer. Rapports et procès-verbaux des réunions. Vol. 64: Current Measurements, Direct and Indirect; Reports of the Proceedings of a Special Meeting held on April 13th, 1929, in London. Pp. 77. 3.75 kr. Vol. 65: Fluctuations in the Abundance of the various Year-Classes of Food Fishes; Reports of the Proceedings of a Special Meeting held on April 12th, 1929, in London. Pp. 188. 7.25 kr. (Copenhagen: Andr. Fred. Høst et fils.)

Agricultural Experiment Station, Michigan State College of Agriculture and Applied Science. Circular Bulletin No. 127: Pruning Young Fruit Trees. By Roy E. Marshall, H. A. Cardinell and H. D. Hootman. Pp. 32. Circular Bulletin No. 128: Undulant Fever in Man and Abortion Disease in Cattle; some Facts that the Consumer and Producer of Milk and the Breeder of Cattle should Know. By E. T. Hallman and E. L. Anthony. Pp. 4. (East Lansing, Mich.)

Scientific Papers of the Institute of Physical and Chemical Research. No. 220: Researches on the Cutting Force. Report 1: New Designs of Tool Dynamometer. By Makoto Okoshi. Pp. 167-192. Tōkyō: Iwanami Shoten.) 40 sen.

Field Museum of Natural History. Publication 258: i. Supplement to the Flora of Barro Colorado Island, Panama, by Leslie A. Kenoyer and Paul C. Standley; ii. Two new Species of Chara from Tropical America, by M. A. Howe. (Botanical Series, Vol. 4, No. 6.) Pp. 141-161+plates 11-16. Publication 259: Spermatophytes, mostly Peruvian. By J. Francis Macbride. (Botanical Series, Vol. 4, No. 7.) Pp. 163-198. Publication 260: The Mineral Composition of some Sands from Quebec, Labrador and Greenland. By James H. C. Martens. (Results of the Rawson-Macmillan Sub-Arctic Expedition of 1926.) (Geological Series, Vol. 5, No. 2.) Pp. 15-31+plates 7-9. Publication 261: A New Rodent from the Galapagos Islands. By Wilfred H. Osgood. (Zoological Series, Vol. 17, No. 2.) Pp. 19-24. Publication 262: Contents and Index to Volume 12, Numbers 1 to 19. (Zoological Series, Vol. 12, No. 19.) Pp. ix+508-526. Publication 263: Birds of the James Simpson-Roosevelts Asiatic Expedition. By Charles E. Hellmayr. (Zoological Series, Vol. 17, No. 3.) Pp. 25-144. Publication 264: Studies of American Plants—I, by Paul C. Standley; Studies of American Plants—II, by Paul C. Standley. (Botanical Series, Vol. 4, No. 8.) Pp. 195-345. Publication 265: The Land Mammals of Uruguay. By Colin Campbell Sanborn. (Zoological Series, Vol. 17, No. 4.) Pp. 145-165. Publication 266: Catalogue of Birds of the Americas and the Adjacent Islands in Field Museum of Natural History, including all Species and Subspecies known to occur in Northern America, Mexico, Central America, South America, the West Indies and Islands of the Caribbean Sea, the Galapagos Archipelago and other Islands which may be included on account of their Faunal Affinities. By Charles E. Hellmayr. Part 6: Oxyuridae, Pipridae, Cotingidae, Rupicolidae, Phytomidae. (Zoological Series, Vol. 13.) Pp. v+258. Publication 267: Honduran Mosses collected by Paul C. Standley. By Edwin B. Bartram. (Botanical Series, Vol. 4, No. 9.) Pp. 347-364+plates 17-19. (Chicago.)

Smithsonian Miscellaneous Collections. Vol. 82, No. 4: The Characters of the Genus *Geocapromys* Chapman. By Gerrit S. Miller, Jr. (Publication 3029.) Pp. 3+1 plate. Vol. 82, No. 5: Mammals eaten by Indians, Owls and Sparniards in the Coast Region of the Dominican Republic. By Gerrit S. Miller, Jr. (Publication 3030.) Pp. 16+2 plates. (Washington, D.C.: Smithsonian Institution.)

CATALOGUES.

A Catalogue of Miscellaneous Books. (No. 449.) Pp. 40. (Cambridge: Bowes and Bowes.)

S.U.P. 36 in the Treatment of Influenza. Pp. 8. (London: The British Drug Houses, Ltd.)

Diary of Societies.

FRIDAY, MARCH 21.

- ASSOCIATION OF ECONOMIC BIOLOGISTS (in Botany Lecture Room, Imperial College of Science and Technology), at 2.30.—The Nutrition of Fruit Trees.—T. Wallace: Some Effects of Deficiencies of Essential Elements on Fruit Trees.—R. G. Hatton: Response of Apple Trees on known Rootstocks to Applications of a Complete Fertiliser.—N. H. Grubb: The Reaction to Potash Fertilisers of Apple Trees in the Field.—Dr. T. Swarbrick: Some Observations upon the Growth and Seasonal Cycle of Food Reserves in Apple Trees.
- DIESEL ENGINE USERS' ASSOCIATION (at Caxton Hall), at 3.30.—H. R. Ricardo: The High-Speed Diesel Engine.
- IMPERIAL COLLEGE CHEMICAL SOCIETY (at Royal College of Science), at 5.—Prof. I. M. Heilbron: The Fat Soluble Vitamins A and D (Lecture).
- LONDON SOCIETY (at Royal Society of Arts), at 5.—Dr. R. Unwin: The Decentralisation of Industry.
- ROYAL SOCIETY OF MEDICINE (Balneology and Climatology Section), at 5.—Dr. C. W. Buckley and others: Discussion on The Influence of Sunlight and other Climatic Factors in Health and Rheumatic Diseases.
- BRITISH INSTITUTE OF RADIOLOGY (Medical Section), at 5.—Discussion on Radiology in Chest Diseases.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir Frank Colyer: Demonstration of Specimens illustrating Dento-alveolar Abscess and Dental Cyst.
- INSTITUTE OF MECHANICAL ENGINEERS, at 6.—W. Nithsdale: The Design and Results of a 600 lb. per sq. in. Boiler Installation.
- NORTH-EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS (at Mining Institute, Newcastle-upon-Tyne), at 6.—Sir Westcott Abell: Direct Flooding Calculations.
- INSTITUTE OF MARINE ENGINEERS, at 6.30.—Annual General Meeting.
- SOCIETY OF CHEMICAL INDUSTRY (South Wales Section) (at St. Thomas' Café, Swansea), at 7.—Annual General Meeting.
- SOCIETY OF DYERS AND COLOURISTS (Manchester Section) (at 36 George Street, Manchester), at 7.—A. J. Hall: The Effect of Swelling Agents on the Creasing of Artificial Silks.—J. R. Hannay: The Preparation of Artificial Silk and Cotton Unions for Printing.—Eva Hibbert: On the Action of Certain Acids on Cellulose.—J. H. Preston: The Mounting of Textile Fibre Sections.