

other amphibians, the melanophores expand at very low temperatures and contract at moderately high ones; unlike those of other amphibians, they expand at relatively high temperatures.—Stanley G. Warner: Histological polarisation of lateral giant-fibres in the crayfish. Demonstrated by treating sections with Vom Rath fluid containing some 5 per cent acetic acid instead of the usual 1 per cent solution and afterwards with a 5 per cent solution of pyrogallie acid.—Tsai-Han Kiang: On the groups of orientable two-manifolds.—G. A. Miller: Inverse commutator subgroups.—Arthur E. Kennelly: The convention of equidimensional electric and magnetic units. A set of electromagnetic unit dimensions is derived, based on the hypothesis that the dimensions of permittivity  $\epsilon_0$  and permeability  $\mu_0$  for free space are the same. The dimensions obtained are in every case arithmetical means of the Maxwellian electrostatic and electromagnetic dimensions.—Richard C. Tolman: On thermodynamic equilibrium in a static Einstein universe. A discussion of the thermodynamic equilibrium between matter and radiation. It is concluded that the equilibrium concentration of matter would be exceedingly small even for masses as small as the electron and temperatures as high as 40,000,000°.—Paul S. Epstein: Answer to Prof. Størmer's remark. Comment on the fact that whereas Prof. Størmer's method of dealing with the motion of electrons in the magnetic field of the earth is based on classical mechanics, the author's method takes relativity into account.

### Official Publications Received.

#### BRITISH.

- Journal of the Royal Microscopical Society. Series 3, Vol. 51, Part 2, June. Pp. xvi+109-220. (London.) 10s. net.
- Department of Scientific and Industrial Research. Index to the Literature of Food Investigation. Vol. 3, No. 1, March. Compiled by Agnes Elisabeth Glennie. Pp. iv+167. (London: H.M. Stationery Office.) 2s. net.
- India: Meteorological Department. Meteorology of the Persian Gulf and Mekran. By Dr. B. N. Banerji. Pp. iii+65+9 plates. 3 rupees; 5s. 3d. Scientific Notes, Vol. 3, No. 24: On the Utility of Observations of Barometric Characteristics and Tendencies for Local Forecasting in North-West India. By Flight-Lieut. R. P. Batty. Pp. 61-76. 8 annas; 10d. (Calcutta: Government of India Central Publication Branch.)
- Committee on Bird Sanctuaries in Royal Parks (England). Report for 1930. Pp. 22. (London: H.M. Stationery Office.) 6d. net.
- Royal Dublin Society. Bi-Centenary Celebrations, 1931: Official Handbook and Catalogue of Museum. Pp. xxxii+116. (Dublin.)
- Abstracts of Dissertations approved for the Ph.D., M.Sc. and M.Litt. Degrees in the University of Cambridge for the Academic Year 1929-1930. Published by Authority. Pp. 128. (Cambridge: Printed at the University Press.)
- The Welsh Journal of Agriculture: the Journal of the Welsh Agricultural Education Conference. Vol. 7. Pp. 431. (Cardiff: University of Wales Press Board.) 2s. 6d.; cloth, 4s.
- Proceedings of the Royal Society. Series A, Vol. 132, No. A819, July 2. Pp. 352. (London: Harrison and Sons, Ltd.) 18s.
- South Australia: Department of Mines: Geological Survey of South Australia. Bulletin No. 15: Report on the Geology of the Region to the North and North-West of Tarcoola. By Dr. R. Lockhart Jack. Pp. 81+map. (Adelaide: Harrison Weir.)
- Quarterly Journal of the Royal Meteorological Society. Vol. 57, No. 240, July. Pp. 243-344. (London: Edward Stanford, Ltd.) 7s. 6d.
- Report on the Phenological Observations in the British Isles from December 1929 to November 1930. No. 40. (From the Quarterly Journal of the Royal Meteorological Society, Vol. 57, No. 241.) By J. Edmund Clark, Ivan D. Margary, Richard Marshall, C. J. P. Cave and I. C. W. Bonacina. Pp. 345-404. (London: Edward Stanford, Ltd.) 3s.
- The Royal Society for the Protection of Birds. Fortieth Annual Report, January 1st to December 31st, 1930; with Proceedings of Annual Meeting 1931. Pp. 54. (London.)
- Chemistry and Industry. Special Jubilee Number, July 1931. Pp. 52+272+53-110. (London: Society of Chemical Industry.) 10s.
- Annals of the (Mededelingen van het) Transvaal Museum. Vol. 14, Part 2, July 3. Pp. 49-220. (Pretoria.)
- Journal of the Indian Institute of Science. Vol. 14A, Part 1: Studies on the Chemical Composition and Physical Properties of Plant Tissue Fluids. Part 1: Effects of Age and Environment on the Tissue Fluids of French Beans (*Phaseolus vulgaris*). By C. Narasimha Acharya and B. N. Sastri. Pp. 9. (Bangalore.) 12 annas.
- Medical Research Council. Eleventh Annual Report of the Industrial Health Research Board (formerly the Industrial Fatigue Research Board) to 30th June 1931; including an Analysis of Work published during the Years 1926-30. Pp. ii+85. (London: H.M. Stationery Office.) 1s. 6d. net.

- Southern Rhodesia Geological Survey. Short Report No. 25: The Geology of the Country around the Norah, Molly and Umboe Copper Claims, Lomagundi District. By A. M. Macgregor. Pp. 10+1 map. Short Report No. 26: A Geological Traverse down the Lower Inyanthe Valley, Wankie District. By H. B. Maufe. Pp. 10+1 map. (Salisbury.)
- Department of Health for Scotland. Second Report of the Scottish Advisory Committee on Rivers Pollution Prevention. River Esk (Midlothian). Pp. 44. (Edinburgh and London: H.M. Stationery Office.) 9d. net.
- Biological Reviews and Biological Proceedings of the Cambridge Philosophical Society. Edited by H. Munro Fox. Vol. 6, No. 3, July. Pp. 221-344. (Cambridge: At the University Press.) 12s. 6d. net.
- Empire Marketing Board, May 1930 to May 1931. (E.M.B. 41.) Pp. 75. (London: H.M. Stationery Office.) 1s. net.

#### FOREIGN.

- Publikationer og mindre Meddelelser fra Københavns Observatorium. Nr. 76: The Possible Solutions of the "Equations of Fit" on the Standard Model. By Bengt Strömberg. Pp. 8. Nr. 77: The Point-Source Model with Coefficient of Opacity  $k=k_1T^{-3.5}$ . By Bengt Strömberg. Pp. 28. (København.)
- Publications de l'Observatoire Astronomique de l'Université de Poznan. Tome 1. Pp. xi+75+5 planches. (Poznan.)
- Smithsonian Institution: Bureau of American Ethnology. Bulletin 100: The Ruins at Kiatuthlanna, Eastern Arizona. By Frank H. H. Roberts, Jr. Pp. viii+195+47 plates. (Washington, D.C.: Government Printing Office.) 65 cents.
- Statens Meteorologisk-Hydrografiska Anstalt. Årsbok, 10, 1928. iv. Meteorologiska iakttagelser i Sverige, Band 70. Pp. x+179. 7.00 kr. Årsbok, 12, 1930. i. Månadsöversikt över väderlekeoch vattentillgång jämte anstaltens årsberättelse. Pp. 98. 2.50 kr. Årsbok, 12, 1930. ii. Nederbörden i Sverige. Pp. 160. 5.00 kr. (Stockholm.)
- Journal of the Faculty of Science, Imperial University of Tokyo. Section 2: Geology, Mineralogy, Geography, 8 ismology. Vol. 3, Part 3. Pp. 181-193+10 plates. (Tokyo: Maruzen Co., Ltd.) 1.20 yen.
- Collection des travaux chimiques de Tchécoslovaquie. Rédigée et publiée par E. Votoček et J. Heyrovský. Année 3, No. 6, Juin. Pp. 285-392. (Prague: Regia Societas Scientiarum Bohemica.)
- Ministry of Finance, Egypt: Coastguards and Fisheries Service. Report on the Fisheries of Egypt for the Year 1929. By R. S. Wimpenny. Pp. iii+92. (Cairo: Government Press.) 5 P.T.
- Report of the National Research Council for the Year July 1, 1929-June 30, 1930. Pp. iv+119. (Washington, D.C.: Government Printing Office.) 15 cents.
- U.S. Department of Agriculture. Farmers' Bulletin No. 1642: Chalcid Control in Alfalfa-Seed Production. By V. L. Wildermuth. Pp. ii+14. (Washington, D.C.: Government Printing Office.) 5 cents.
- Proceedings of the United States National Museum. Vol. 79, Art. 9: A new Species of Troodont Dinosaur from the Lance Formation of Wyoming. By Charles W. Gilmore. (No. 2875.) Pp. 6+5 plates. Vol. 79, Art. 12: A new Pearl Oyster from the Hawaiian Islands. By Paul Bartsch. (No. 2878.) Pp. 2+2 plates. (Washington, D.C.: Government Printing Office.)
- The Science Reports of the Tôhoku Imperial University, Sendai, Japan. First Series (Mathematics, Physics, Chemistry), Vol. 20, No. 2, May. Pp. 197-322. (Tokyo and Sendai: Maruzen Co., Ltd.)
- Report on the Cloud Observations made at the Mera Meteorological Observatory, Mera, near Tokyo, April 1927 to March 1929. By M. Watanabe, Y. Isimaru and K. Yosinari. Pp. iii+50+72+187 plates. (Tokyo: Central Meteorological Observatory.)
- Kungl. Sjökartverket, Stockholm. Resultatet af de Beobachtungen des magnetischen Observatoriums zu Lovö (Stockholm) im Jahre 1929. Bearbeitet von Sven Aslund. Pp. 29. (Stockholm.)

#### CATALOGUES.

- Bulletin No. 3: Spectrum Analysis. Pp. 19. (London: Adam Hilger, Ltd.)
- Verlag: Publications: Livres de Fonds. Pp. 141. (Berlin: W. Junk.)

### Diary of Societies.

#### SATURDAY, JULY 25.

- INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS (South-Eastern District) (at Hastings Town Hall), at 11.30 A.M.

#### TUESDAY, JULY 28.

- QUEKETT MICROSCOPICAL CLUB (at 11 Chandos Street, W.1), at 7.

#### CONGRESSES.

##### JULY 17 to 25.

- BRITISH MEDICAL ASSOCIATION (at Eastbourne).

##### JULY 24 to 30.

- BRITISH COMMONWEALTH EDUCATION CONFERENCE (at Bedford College).—Subject: EDUCATION IN A CHANGING EMPIRE:—  
Education in India.  
Individual Education.  
Modern Psychology in Education.  
Examinations and Tests.

##### JULY 26 to 31.

- INTERNATIONAL CONGRESS ON RADIOLOGY (at Paris).