

the suggestion is made that the cause lies in changes in the mass of the atmosphere of the sun.—G. Grablovitz: Harmonic law of teleseismic propagation. Formulæ are given which express the intervals between the epicentre and the first and second preliminary tremors respectively as functions of the angular distances of the epicentre. These formulæ are not empirical but are based on the principle of free propagation of the first seismic impulse by longitudinal and transverse waves through a sphere the density of which increases gradually from the surface to the centre. The values of the coefficients of the expressions given may require modification as further data become available.

Official Publications Received.

The Indian Forest Records. Vol. 10, Part 2: Oils and Fats from the Seeds of Indian Forest Plants. Part 6: The Oil from the Seeds of *Aleurites montana*, Wils. By Richard Neville Parker, Madyar Gopal Rau, Wheatley Alex. Robertson, and John Lionel Simonsen. Part 7: The Oil from the Seeds of *Salvia plebeia*, R. Br. By Madyar Gopal Rau and John Lionel Simonsen. Pp. 16. (Delhi: Government Central Press.) 9 annas.

Memoirs of the Department of Agriculture in India. Botanical Series, Vol. 12, No. 4: Studies in Indian Oil Seeds. No. 2: Linsseed. By Gabrielle L. C. Howard and Abdur Rahman Khan. Pp. 135-183. 1.4 rupees; 2s. Botanical Series, Vol. 12, No. 5: Studies in Gujarat Cottons, Part 2. By Maganlal L. Patel. Pp. 185-262. 1.12 rupees; 3s. (Calcutta: Thacker, Spink and Co.; London: W. Thacker and Co.)

Report of the Kodaikanal Observatory for the Year 1923. Pp. 5. (Madras: Government Press.) 2 annas.

Ministry of Agriculture, Egypt. Cotton Research Board: Third Annual Report, 1922. Pp. xii+111. (Cairo: Government Publications Office.) 15 P.T.

Rocznik Astronomiczny Obserwatorium Krakowskiego. Supplemento Internationale, Nr. 2. Editio par T. Banachiewicz. Pp. iv+33. (Krakow.) Rhodessa Museum, Bulawayo. Twenty-second Annual Report, 1923. Pp. 12. (Bulawayo.)

Department of Commerce: U.S. Coast and Geodetic Survey. Results of Observations made at the U.S. Coast and Geodetic Survey Magnetic Observatory near Tucson, Ariz., in 1918 and 1920. By Daniel L. Hazard. (Serial No. 248.) Pp. 98. (Washington: Government Printing Office.)

Department of the Interior: Bureau of Education. Physical Education Series, No. 3: Suggestions for a Physical Education Program for small Secondary Schools; arranged with Special Consideration of the Problems in Physical Education which face the Local School Officials where there is no Director of Physical Education. By Walter F. Cobb and Dorothy Hutchings. Pp. vi+79. (Washington: Government Printing Office.) 10 cents.

Sixty-first Annual Report of the Secretary of the State Board of Agriculture of the State of Michigan, and Thirty-fifth Annual Report of the Experiment Station from July 1, 1921, to June 30, 1922. Pp. 672. (Lansing, Mich.)

Department of the Interior: United States Geological Survey. Water-Supply Paper 498: The Lower Gila Region, Arizona; a Geographic, Geologic, and Hydrologic Reconnaissance, with a Guide to Desert Watering Places. By Clyde P. Ross. Pp. xiv+237+23 plates. 50 cents. Water-Supply Paper 511: Surface Water Supply of the United States, 1919 and 1920. Part 11: Pacific Slope Basins in California. Pp. vii+456+2 plates. 40 cents. (Washington: Government Printing Office.)

Proceedings of the Geologists' Association. Vol. 35, Part 2. Edited by G. M. Davies. Pp. 89-167. (London: E. Stanford, Ltd.) 5s.

Ministry of Public Works, Egypt. Report on Investigations into the Improvement of River Discharge Measurements. By E. B. H. Wade. Part 5. (Physical Department Paper No. 13.) Pp. 21+11 plates. (Cairo: Government Publications Office.) 10 P.T.

Board of Education. Vacation Courses in England and Wales for Instruction in Various Subjects, 1924. Pp. 17. (London: H.M. Stationery Office.) 6d. net.

The Institute of Chemistry of Great Britain and Ireland. Register of Fellows, Associates and Students, corrected to 1st November 1923, with Supplementary Register to March 1924. Pp. 322. (London: Institute of Chemistry.)

Transactions and Proceedings of the Perthshire Society of Natural Science. Vol. 7, Part 5, 1922-23. Pp. 245-269+vi+lxix+xxxvi+8. (Perth: Perthshire Natural History Museum.)

Annual Report of the Council of the Yorkshire Philosophical Society for the Year 1923, presented to the Annual Meeting, February 11th, 1924. Pp. 55. (York.)

Diary of Societies.

MONDAY, MAY 19.

ROYAL INSTITUTE OF BRITISH ARCHITECTS, at 8.—S. Perks: London Town Planning Schemes—1666 and After.

ARISTOTELIAN SOCIETY (at University of London Club, Gower Street), at 8.—Prof. E. T. Campagnac: Make-Believe.

ROYAL GEOGRAPHICAL SOCIETY (at Aelfian Hall), at 8.30.—Ahmed Hassanein Bey: Through Kufra to Darfur.

NO. 2846, VOL. 113]

TUESDAY, MAY 20.

ROYAL SOCIETY OF MEDICINE, at 5.—General Meeting.

ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Prof. J. Barcroft: The Effect of Altitude on Man. IV. Acclimatisation to High Altitudes.

ROYAL STATISTICAL SOCIETY, at 5.15.—Dr. M. Greenwood: The Vital Statistics of Sweden and England and Wales: an Essay in International Comparison.

ZOOLOGICAL SOCIETY OF LONDON, at 5.30.—Secretary: Report on the Additions to the Society's Menagerie during the month of April 1924.—Major S. S. Flower: Exhibition of a remarkable Tortoise of the genus Testudo.—Sir Sidney F. Harner: Mesoplon and other Beaked Whales.—R. I. Pocock: Some External Characters of *Orycteropus afer*.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—H. Willford: Some Methods and Results in Nature Photography.

ROYAL ANTHROPOLOGICAL INSTITUTE (at Royal Society), at 8.15.—Mrs. Scoresby Routledge: The Austral Islands and Mangareva, S.E. Pacific.

WEDNESDAY, MAY 21.

ROYAL METEOROLOGICAL SOCIETY, at 5.—J. E. Clark, I. D. Margary, and R. Marshall: Report on the Phenological Observations in the British Isles from December 1922 to November 1923.—E. K. Robinson: Note on the Unusual Order of Flowering of the Hazel in 1924.—C. E. P. Brooks: The Distribution of Rainfall over Uganda, with a Note on Kenya Colony.—S. C. Russell: Exhibition of a Diagram showing Daily Records of Well Levels at Chilgrove, Sussex, and Deiling, Kent, during 1923.

GEOLOGICAL SOCIETY OF LONDON, at 5.30.—C. A. Sussmilch: The Geological History of South-eastern Australia, with special reference to the Carboniferous and Permian Periods.

ROYAL MICROSCOPICAL SOCIETY, at 7.45.—Dr. E. W. Bowell: The Mounting and Photomicrography of Radula.—Dr. R. J. Ludford: Experiments on the Impregnation of the Golgi Apparatus by means of Osmium Tetroxide.

ROYAL SOCIETY OF ARTS, at 8.—Sir William J. Pope: The Outlook in Chemistry (Trueman Wood Lecture).

INSTITUTION OF WELDING ENGINEERS (at Institution of Electrical Engineers), at 8.—Dr. J. H. Patterson: Power Supply for Electric Welding Operations.

THURSDAY, MAY 22.

MEDICO-PSYCHOLOGICAL ASSOCIATION (at Royal Society of Medicine), at 3.—Dr. J. Carswell: Some Sociological Considerations bearing upon the Occurrence, Prevention, and Treatment of Mental Disorders (Maudsley Lecture).

ROYAL SOCIETY, at 4.30.—Prof. J. W. Gregory and C. J. Gregory: The Geology and Physical Geography of Chinese Tibet, and its Relations to the Mountain System of South-eastern Asia.—*To be read in title only*:—Madge Kaye and Dorothy Jordan Lloyd: A Histological and Chemical Investigation of the Swelling of a Fibrous Tissue.—C. H. Browning, Prof. J. E. Cohen, S. Ellingworth, and R. Gulbransen: The Antiseptic Action of Compounds of the Apocyanine, Carbo-cyanine, and Iso-cyanine Series.—H. J. Watt: Dimensions of the Labyrinth correlated.

LINNEAN SOCIETY OF LONDON (Anniversary Meeting), at 5.—Presidential Address—Presentation of the Linnean Gold Medal, etc.

ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Dr. E. V. Appleton: Atmospheric Interference in Wireless Telegraphy (II).

C.B.C. SOCIETY FOR CONSTRUCTIVE BIRTH CONTROL AND RACIAL PROGRESS (at Essex Hall, Strand), at 8.—H. Graham Cannon: Reduction in Number of Offspring of Animals as they ascend the Ladder of Evolution.

FRIDAY, MAY 23.

PHYSICAL SOCIETY OF LONDON (at Imperial College of Science), at 5.—Prof. S. W. J. Smith, A. A. Dee, and W. V. Mayneard: The Magnetism of Annealed Carbon Steels.—A. A. Dee: Some Thermo-magnetic Properties of Nearly Pure Iron, Part 1; W. V. Mayneard: Part 2.—Dr. E. A. Owen and G. D. Preston: The Atomic Structure of Two Intermetallic Compounds.—Prof. A. O. Rankine: Demonstration of an Anomaly in Frictional Electricity.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—W. L. Rea: Wanderings in Northern Italy (Lantern Lecture).

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Dr. A. Balfour: Historical Aspects of Malaria.

SATURDAY, MAY 24.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. W. G. Alcock: Musical Ornamentation: Its Origin and Development.

PUBLIC LECTURES.

TUESDAY, MAY 20.

UNIVERSITY COLLEGE (Department of Applied Statistics and Eugenics), at 5.30.—Miss M. Tildesley: Sir Thomas Browne, Author of "Religio Medici"—His Skull and Portraits.

GRESHAM COLLEGE, at 6.—A. R. Hinks: Astronomers of Four Centuries. (Succeeding Lectures on May 21, 22, and 23.)

WEDNESDAY, MAY 21.

IMPERIAL COLLEGE, ROYAL COLLEGE OF SCIENCE, at 5.15.—Prof. P. Zeeman: The Optical Effects of Motion (in English).

KING'S COLLEGE, at 5.30.—Prof. L. T. Hobhouse: Religions of the Empire.

THURSDAY, MAY 22.

INSTITUTE OF PATHOLOGY AND RESEARCH, ST. MARY'S HOSPITAL, at 5.—Dr. M. Greenwood: Is the Statistical Method of any Value in Medical Research?

UNIVERSITY COLLEGE, at 5.30.—Prof. T. P. Nunn: The Nature of Science.

FRIDAY, MAY 23.

KING'S COLLEGE, at 5.30.—Dr. E. R. Bevan: Ancient Ghost Stories and Theories about Ghosts.