

opacity of the earth's atmosphere are regarded as probably the cause of the differences.—L. Royer: Mesomorph states and magnetic double refraction. The mechanism of the phenomenon would appear to be the same in both cases: magnetic double refraction is due to the orientation of anisotropic molecules by the external magnetic field; the mesomorphic state is due to a spontaneous mutual orientation of the molecules by a molecular field.—Georges Déjardin: The production of the spectra of argon, krypton, and xenon. The spectra were obtained by the action of electrons in a tube of three or four electrodes, the source of the electrons being a wire of incandescent tungsten. The first spectrum (ionisation potentials 15.2, 12.7, 10.9 volts) is that emitted by the neutral atom, the arc spectrum. The second spectrum is made up of three groups, which can be identified with the three spectra given by the method of oscillating discharge in a tube without electrodes.—Mlle. M. Hanot: The width of the lines in the spark spectrum of hydrogen.—Louis G. Stokvis: The decomposition of triphase systems not satisfying the condition that the sum of the representative vectors is zero.—L. J. Simon: The viscosity of mixtures, taken in pairs, of sulphuric acid, potash, and soda. The neutralisation of sulphuric acid in aqueous solution by alkalis can be followed in the viscosimeter: sodium stands apart from the other alkali metals in the form of the curves obtained.—A. Marcelin: Superficial solutions and the law of gases.—V. Auger: A new method for the volumetric estimation of ammonium salts.—V. Agafanoff and W. Vernadsky: The product of the dehydration of kaolin. After losing water below 550° C., kaolin gives a homogeneous product $Al_2Si_2O_7$, and not a mixture of Al_2O_3 and SiO_2 . This conclusion is drawn from the results of comparative experiments with the mixture $Al_2O_3 + 2SiO_2$ and anhydrous kaolin, including behaviour with bromoform, microscopic appearance, and absorption of methylene blue.—Louis Dangeard: The presence of the lower Nummulitic in the region of Gâvre (Morbihan).—Jacques Bourcart: Observations on the nature of recent movements in Western Albania.—Albert Baldit: Some cases of transformation of clouds into parallel waves.—A. Lebediantzeff: Increase in fertility by desiccation of the soil in air under natural conditions.—M. Lemoigne: The mechanism of the production of β -oxybutyric acid by the biochemical method. Bacteria of the *Bacillus subtilis* group have been found to contain 10 per cent. of a crystalline insoluble substance; this on alkaline hydrolysis gives salts of α -crotonic and β -oxybutyric acids.—E. Roubaud: The physiological equivalence of anhydrobiose and athermobiore in the reactivation of heterodynamite organisms.—Georges Mouriquand, Paul Michel, and M. Bernheim: The sensitising of the organism towards defective diets. Scurvy was set up in guinea-pigs by a defective diet, and then cured by administration of a full regime and lime juice. These animals were then again put on a scorbutic diet along with control animals not previously attacked by scurvy. The latter developed scurvy about the fifteenth day, the former from the second to the fifth day. The first attack of scurvy would thus appear to increase the sensibility to a second attack.—P. Lasareff: The physico-chemical cause of the absence of fatigue in the nerve centres in the course of their action.—Albert Nodon: Researches on the radioactivity of living cells. Positive results were given by an insect (*Pœcicoloris*) and a green leaf by the photographic method.—P. Lecomte du Noüy: The dimensions of the molecules of certain colloidal substances.—Odon de Buen: The migra-

tions of the tunny fish (*Orcynus thynnus*) on the Atlantic coasts on the south of Spain.—André Lwoff: Experimental infection with *Glaucocystis piriformis* in *Galleria mellonella*.

Official Publications Received.

- Department of Agriculture, Ceylon. Bulletin No. 67: A Preliminary List of the Pests of Cultivated Plants in Ceylon. (Compiled by the Staff of the Division of Entomology.) Pp. 68. Bulletin No. 68: Yield and Growth in *Hevea Brasiliensis*. By Dr. G. Bryce and C. H. Gadd. Pp. 74. (Colombo: Department of Agriculture.) 40 cents each.
- Transactions of the Royal Scottish Arboricultural Society. Vol. 38, Part 1, March. Pp. vi+68+26. (Edinburgh: Douglas and Foulis.) 3s. net.
- New South Wales: Legislative Council. Report of the Director-General of Public Health, New South Wales, for the Year 1922: including a Report on an Outbreak of Plague at Sydney, September 1921–July 1922. Pp. v+139. (Sydney: Alfred J. Kent.) 6s. 9d.
- The British Mycological Society Transactions. Vol. 9, Part 3, March 31. Edited by Carleton Rea and J. Ramsbottom. Pp. 129–188. (London: Cambridge University Press.) 15s. net.
- Fifth Annual Report of the Governors of the Imperial Mineral Resources Bureau. Pp. 24. (London: 2 Queen Anne's Gate Buildings, S. W. 1.)
- The Journal of the Royal Anthropological Institute of Great Britain and Ireland. Vol. 53, 1923, July to December. Pp. xi+263–488+16+27. (London: 50 Great Russell Street, W.C.1.) 15s. net.
- Report on the Operations of the Department of Agriculture, Madras Presidency, for the Official Year 1922–23. Pp. 30+4. (Madras: Government Press.) 8 annas.
- Madras Agricultural Department. Year Book, 1923. Pp. ii+67. (Madras: Government Press.) 8 annas.
- Department of Agriculture, Madras. Bulletin No. 86: List of the Important Insects injurious to Cultivated Crops in South India. By T. V. Ramakrishna Ayyar. Pp. 45. 6 annas. Bulletin No. 87: The Ground, Earth, or Pea-Nut (*Avachius hypogea*). Pp. ii+35. 4 annas. (Madras: Government Press.)
- Royal Asiatic Society (North China Branch). Extra Volume 3: Social Organization of the Manchus; a Study of the Manchu Clan Organization, By S. M. Shirokogoroff. Pp. vi+194. (Shanghai: 5 Museum Road.) 4 dollars.
- United States Department of Agriculture. Department Bulletin No. 1222: Growth and Feeding of Honeybee Larvae. By James A. Nelson, Arnold P. Sturtevant, and Bruce Lineburg. Pp. 138. (Washington: Government Printing Office.) 10 cents.
- Department of Commerce: Bureau of Standards. Scientific Papers of the Bureau of Standards, No. 480: A Directive Type of Radio Beacon and its Application to Navigation. By F. H. Engel and F. W. Dunmore. Pp. 281–295. (Washington: Government Printing Office.) 5 cents.
- Carnegie Institution. Annual Report of the Director of the Laboratory for Plant Physiology. (Extracted from Year Book No. 22, for the Year 1923.) Pp. 43–66. (Washington.)
- Agricultural Census of the Colony and Protectorate of Kenya for 1923. Fourth Annual Report, November 1923. Pp. 20. (Nairobi: Department of Agriculture.)
- Report on the Anophelinae of Mauritius, and on Certain Aspects of Malaria in the Colony, with Recommendations for a new Anti-Malaria Campaign. By Malcolm E. MacGregor. Pp. 48+24 plates. (London: Printed by Waterlow and Sons, Ltd.)
- Final Report on Geological Investigations in the Falkland Islands. By Dr. H. A. Baker. Pp. 38+6 plates+1 map. (London: The Crown Agents for the Colonies.)

Diary of Societies and Public Lectures.

WEDNESDAY, APRIL 23.

ROYAL MICROSCOPICAL SOCIETY (Industrial Applications Section), at 7.—J. E. Barnard: Lecture Demonstration.—Miss Annie D. Betts: The Practical Use of the Microscope in the Bee-keeping Industry.—S. R. Wycherley: Fibres, Analytical and Economic.—Exhibits by J. W. Atha and Co. and W. Watson and Sons, Ltd.

THURSDAY, APRIL 24.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—G. Semenza: Kelvin and the Economics of the Generation and Distribution of Electrical Energy (Kelvin Lecture).

FRIDAY, APRIL 25.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—F. L. Wills: The Commercial Application of Aerial Photography (Lantern Lecture). JUNIOR INSTITUTION OF ENGINEERS, at 7.30.—H. G. Williams: Aluminium Electrical Conductors for Overhead Power Transmission. INSTITUTION OF ENGINEERING INSPECTION (at Royal Society of Arts), at 8.—Dr. V. E. Pullin: Radiology in Inspection. ROYAL SOCIETY OF MEDICINE (Electro-Therapeutics Section), at 8.30.—Prof. S. Jellinek: Some new Observations and Experiments in Electricity.

PUBLIC LECTURES.

THURSDAY, APRIL 24.

KING'S COLLEGE, at 5.30.—Prof. José Castillejo: Education in Spain. (Succeeding Lectures on May 1 and 8.)—Prof. A. J. Toynbee: Outlines of Byzantine, Near Eastern, and Modern Greek History (378–1841 A.D.). (Succeeding Lectures on May 1, 8, 15, 22, 29, June 5, 12, 19, and 26.)