

up to 1450° C. There was a rapid increase in the elastic limit, resistance and hardness, as the temperature rose.—E. E. Blaise: Syntheses by means of the mixed  $\alpha$ -ketone zinc derivatives.—Marcel Godchot: The oxidation of 1,3,4-dimethylcyclohexanone and the synthesis of cyclopentane diketones. The oxidation of the above ketone with potassium permanganate gives a good yield of  $\gamma$ -methyl- $\delta$ -acetyl-valeric acid. The ethyl ester of this acid, treated with powdered sodium ethylate in ether solution gives  $\alpha$ -acetyl- $\beta$ -methylcyclopentanone. The latter, being a  $\beta$ -diketone, forms a sodium derivative capable of reacting with alkyl iodides.—Raymond Delaby: The action of mixed organomagnesium compounds on the epibromhydrin of ethylglycerol.—M. Caille and E. Viel: A new reagent for alkaloids and the preparation of the iodostibinates of these substances in the crystallised state. The reagent consists of a slightly acid solution of antimony chloride with potassium iodide. One part of quinine in 100,000 can be detected; it forms a yellow precipitate. The method appears to be equally sensitive with other alkaloids. By a suitable treatment the alkaloid can be recovered from the precipitate unchanged.—A. Mailhe: The decomposition of the formamides of the fatty amines. Isoamylformamide vapour, passed over nickel at 360° C. gives a mixture of isoamylamine and isoamyl nitrile.—M. E. Denaeyer: The rocks of Adrar des Iforass and Ahaggar. Two salient facts are shown by the study of the rocks from the central Sahara, their crushing, related to the existence of the Saharan folds, and the existence of alkaline amphibole granites. These rocks mark a new extension towards the west of the limits of the alkaline petrographical province of the Tchad.—E. Chaput and L. Perriaux: The existence of Albian sands and calcareous pudding stones on the high plateaux of the Côte-d'Or.—Léon Bertrand: The Provençal sheets to the east of the lower valley of the Var.—L. Barrabé: The transported origin of the Lias massif situated to the west of Narbonne.—Paul Corbin and Nicolas Oulianoff: The Mesozoic of Prarion (Arve valley).—A. Allemand-Martin: The Pliocene of the Cap Bon peninsula (Tunis).—Henri Coupin: The morphological nature of the head of the cauliflower. The head of the cauliflower is not formed by flowers, but by stems arrested in their development. This arrest is of tetratological, not parasitic, origin.—R. Chavastelon: A method for the preservation of wood. A solution of copper bichromate is recommended and instructions for its preparation are given. Wood thus treated is very resistant to the attack of moulds.—Fred Vlès, Mlle. G. Achard, and Dj. Prikelmaier: Some physico-chemical properties of the constituents of the egg of the sea urchin.—E. Leblanc: Experimental acerebellation in lizards.—J. Gautrelet: Shock and parasympathic reactions.—A. Policard: The histochemical detection of total iron in tissues by the method of incineration. The section is ashed and the iron detected by the colour of its oxide under the microscope.—C. Levaditi and S. Nicolau: The mode of action of bismuth in trypanosomiasis and spirillosis.

### Official Publications Received.

U.S. Department of Agriculture. Department Circular 187: List of Serials currently received in the Library of the U.S. Department of Agriculture; exclusive of the U.S. Government Publications and Publications of the State Agricultural Colleges and Experiment Stations. Arranged by Title, by Subject, and by Region. January 1, 1922. Pp. iii+358. (Washington: Government Printing Office.)

Department of the Interior: Bureau of Education. Bulletin No. 6: State Policies in Public School Finance. By F. H. Swift. Pp. iv+54. 10 cents. Bulletin No. 15: A Kindergarten First-Grade Curriculum. By a Sub-Committee of the Bureau of Education Committee of the

International Kindergarten Union. Pp. vii+66. 10 cents. Bulletin No. 23: High-School Buildings and Grounds: a Report of the Commission on the Reorganization of Secondary Education, appointed by the National Education Association. Pp. xi+49. 15 cents. Bulletin No. 26: Philanthropy in the History of America: Higher Education. By J. B. Sears. Pp. vi+112. 15 cents. Bulletin No. 29: Statistics of State School Systems, 1919-20. Prepared by Florence Du Bois and H. R. Bonner. Pp. 68. 10 cents. Bulletin No. 30: Accredited Higher Institutions. By G. F. Zook. Pp. vii+106. 15 cents. Bulletin No. 34: Statistics of Land-grant Colleges, Year ended June 30, 1921. By L. E. Blanch. Pp. iii+67. 10 cents. (Washington: Government Printing Office.)

The Record of the Royal Institution of Great Britain, 1922. Pp. 122. (London: Royal Institution.)

Year-Book of the Department of Agriculture, Ceylon, 1923. Pp. 64+41 plates. (Colombo: H. W. Cave and Co.)

Statens Meteorologisk-Hydrografiska Anstalt. Årsbok 4, 1922. 1: Månadsöversikt över väderlek och vattentillgång. Pp. 139. (Stockholm.) 2.50 Kr.

The Kent Incorporated Society for Promoting Experiments in Horticulture. Annual Report, together with Notes upon the first Ten Years' Work, East Malling Research Station, 1st January 1922 to 31st December 1922. Pp. 52. (East Malling.) 1s.

### Diary of Societies.

SATURDAY, MAY 19.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—J. B. McEwen: Harmonic Evolution.

TUESDAY, MAY 22.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. W. M. Flinders Petrie: Discoveries in Egypt (1).

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Scientific and Technical Group), at 7.—A. J. Bull: The Relation of Selective Absorption of Printing Colours to the Errors occurring in Three-Colour Photography.

WEDNESDAY, MAY 23.

ROYAL MICROSCOPICAL SOCIETY, at 7.30.—Annual Pond Life Exhibition.

THURSDAY, MAY 24.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND (at Royal Society of Medicine), at 3.—Dr. C. K. Clarke: The Fourth Maudsley Lecture.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. E. G. Coker: Engineering Problems Solved by Photo-elastic Methods (2). The Testing of Materials; The Action of Cutting Tools.

LINNEAN SOCIETY OF LONDON, at 5.—Anniversary Meeting. Presentation of the Linnean Gold Medal to the High Commissioner of New Zealand for transmission to T. F. Cheeseman.

OPTICAL SOCIETY (at Imperial College of Science and Technology), at 7.30.—D. Baxandall: Telescopes from a Historical Standpoint. (Illustrated by exhibits from the collection in the Science Museum, South Kensington.)

FRIDAY, MAY 25.

ROYAL SOCIETY OF MEDICINE (Study of Disease in Children Section) (Annual General Meeting), at 5.—Discussion on Birth Injuries.

PHYSICAL SOCIETY OF LONDON (at Imperial College of Science and Technology), at 5.—Prof. C. H. Lees and J. E. Calthrop: The Effect of Torsion on the Thermal and Electrical Conductivities of Metals.—A. Rosen: The Use of the Wien Bridge for the Measurement of Dielectric Losses.—C. R. Darling: Demonstration of an Experiment on the Production of an Intermittent Pressure by Boiling Water.—Dr. N. W. McLachlan: Demonstration of a Novel Instrument for recording Wireless Signals.

ROYAL SOCIETY OF MEDICINE (Epidemiology and State Medicine Section) (Annual General Meeting), at 8.—Prof. E. L. Collis: An Inquiry into the Mortality of Coal and Metalliferous Miners in England and Wales.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Sir Aston Webb: The Development of London.

SATURDAY, MAY 26.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—J. B. McEwen: Musical Education.

### PUBLIC LECTURES.

TUESDAY, MAY 22.

GRESHAM COLLEGE, at 6.—Sir Robert Armstrong-Jones: Physic (succeeding Lectures on May 23, 24, and 25).

THURSDAY, MAY 24.

ST. MARY'S HOSPITAL (Institute of Pathology and Research), at 4.30.—Dr. B. Hart: The Development of Psychopathology as a Branch of Medicine.

ROYAL SOCIETY OF MEDICINE (Robert Barnes Hall), at 5.15.—Prof. E. D. Wiersma: The Psychology of Epilepsy.

FRIDAY, MAY 25.

UNIVERSITY COLLEGE, at 5.—Prof. C. Spearman: Psychology as a Career.